THE EFFECT OF LENDING PORTFOLIOS TO SMALL BUSINESSES ON BANK PROFITABILITY AND INTEREST MARGIN: STUDY ON STATE-OWNED BANKS AND LOCAL GOVERNMENT-OWNED BANKS IN INDONESIA

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ABSTRACT

This study examines bank lending portfolios devoted to small businesses and their relationship with bank performances during the period of 2002-2010.The study employed descriptive and inferential statistics to explain data characteristics of small business loans provided by Indonesian state-owned banks (SOBs) as well as local government-owned banks (LGOBs) and investigate their contribution on their profitability and interest margin.

The results of the study reveal that small business loans significantly affected Indonesian bank performances in terms of bank profitability and net interest margin over the study period. In addition, the findings testified that the magnitude of small business loans in affecting bank performances were higher than those of other loans in both models examined. Bank size and bank credit risk had also any impactson bank profitability and interest margin respectively. Small size banks were more effectively operated compared to their peers from large size banks over the study period. The other findings also show that a lower in bank default risk had an impact on the enhancement of bank profitability and net interst margin.

Key words: *Small business lending, bank profitability, bank interest margin*

INTRODUCTION

Small businesses play an important role in the development of Indonesia. Their contribution has impressively enhanced during the decades of 2000s. For an illustration, Tabel 1 demonstrates the contribution of micro, small businesses and other scale of businesses (medium and large enterprises) on the achievement GDP (gross domestic product) of Indonesia at current prices during the period 2006-2008:

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Table 1. TheContribution of Micro Small Medium Enterprises (MSMEs) and Large Businesses on Indonesian Gross Domestic Productover the period 2006-2008

No	Indicators	Unit	2006		2007		2008		Growth
			Amount	%	Amount	%	Amount	%	%
1	**Businesses:**								
	Micro and Small Businesses	Unit	48,985,040	99.92	50,107,518	99.91	51,369,895	99.91	2.41%
	Medium Scale Businesses	Unit	36,763	0.07	38,282	0.08	39,717	0.08	3.94%
	Large Scale Businesses	Unit	4,577	0.01	4,463	0.01	4,650	0.01	0.85%
	Total	**Unit**	**49,026,380**	**100**	**50,150,263**	**100**	**51,414,262**	**100**	2.41%
2	**Workforce:**								
	Micro and Small Businesses	Orang	85,210,855	94.31	87,730,795	94.31	91,330,209	94.37	3.53%
	Medium Scale Businesses	Orang	2,698,743	2.99	2,761,135	2.97	2,694,069	2.78	-0.06%
	Large Scale Businesses	Orang	2,441,181	2.70	2,535,411	2.73	2,756,205	2.85	6.28%
	Total	**Orang**	**90,350,779**	**100**	**93,027,341**	**100**	**96,780,483**	**100**	**3.50%**
3	**Gross Dpmestic Product:**								
	Micro and Small Businesses	Milyar Rp	1,346,654	42.46	1,596,027	42.61	1,982,886	42.24	21.38%
	Medium Scale Businesses	Milyar Rp	436,770	13.77	511,841	13.67	630,340	13.43	20.17%
	Large Scale Businesses	Milyar Rp	1,387,993	43.77	1,637,681	43.72	2,080,583	44.33	22.52%
	Total	**Milyar Rp**	**3,171,417**	**100**	**3,745,549**	**100**	**4,693,809**	**100**	**21.71%**

Sumber: Ministry of Cooperatives and SMEs

Table 1 reveals that the majority of businesses in Indonesia were dominated by micro and small businesses, amounting to 99.9% and leaving only 0.10% below the figure for medium and large businesses over the period 2006 to 2008. In terms of growth, the number of micro and small businesses continues to grow and increases with an average growth of 2.41% per year during the period 2006-2008. These showthat the micro and small business sector is a major player in the Indonesian national economy. Considering the importance of their contribution to the Indonesian economy, The Government of Indonesia (GOI) has put on top priority in the development of Indonesia over the long period.

In terms of workforce, the number of workers absorbed in the micro and small businesses stood at approximately 94% in 2006, which means that about 90 million workers were working on micro and small business sector over the period. This implies that the sector has provided very wide work opportunities for the Indonesian society during the period. Hence, the stability of the sector is very important to be maintained given the fact that the failure of the sector in economy could lead to the failure of the level of the employment in the country. Indeed, for the government's perspective, the development programme with more equitable orientation can stimulate economic and political stability of the country since the great majority of people equally enjoy the fruits of growth. In addition, the growth of employment in this sector was quite large with an average of 3.53% per

year during the period. It is not surprising, because small businesses are using more labor-intensive technologyrather than the capital-intensive one.

Meanwhile, in terms of their contribution to GDP (Gross Domestic Product) over the period 2006-2008, it appears that on average micro and small businesses' contribution stood at approximately 42-43% of the total national GDP. Although it was still below the large businesses' achievement (which accounted for an average 43-44% of the GDP), if they were combined with medium-sized enterprises (SMEs), thus they become micro and small medium enterprises (MSMEs), their contribution to GDP would be around 56% of the total national GDP. Thus, the MSMEs sector has become a major contributor to the national economic activity with the indicators of GDP. It could be stated that the structure of the Indonesian economy has changed from the domination of the large entities in the form of conglomerates in the the new order rezime to the MSMEs in the reformation rezime[2]. Evidently,through the structure that reliedupon a handful of conglomerates, the Indonesian economy was more vulnerable in turmoil and had fallen in the 1997-1998 Asian economic crises.

The achievement of small businesses in Indonesian economy certainly involved financial services as the main providers of external financing besides their equity financing. Those financial services (i.e commercial banks, rural banks, cooperatives, etc) provide lending facility to MSMEs through various financing programmes either by their own financing programme as well as the lending channel of the Government of Indonesia (GOI). Especially for commercial banks and rural banks, their contributions in supporting the development of micro and small business sector in Indonesia has been running very long time since the introduction of banking deregulation began in 1983.

Several banking policies devoted tomicro and small business sector are i.e the establishment of the provision constituted a minimum threshold of 20% of banks' loan portfolio should be distributed to small businesses (Pakto 1988); the training and technical assistance programmes arranged by the central bank of Indonesia (BI) to facilitate commercial banks as well as MSMEs in supporting the credit programme during the periods 1983-2000; the credit programmes from GOI through commercial banks (as channeling and executing agents) to MSMEs and cooperatives such as Credit to rural cooperatives, credit to cooperatives, Credit for Cooperative Members), Credit for farming, etc) during the period 1983-2000; the latest credit programme namely KUR (Credit for people's business), which was launched on November 5, 2007. Besides banking programme, the GOI also support MSMEs through state-owned enterprises (SOEs) by exerting obligatory clauses for SOEs to provide 5% of their profits to lend to micro and small businesses. The program has been operating successfully up to present. All these programmes have significantly improved the quality of MSMEs in Indonesia during the period 1983-2010. The performances of MSMEs in Indonesia are extremely well proven by their successful in passing through the Asian Financial Crisis of 1997-98 as well as the Global crisis of 2008.

Regarding the involvement of the commercial banks in providing financing to MSMEs, from the banks' point of view, the portfolio financing for MSMEs are also very important not only to support the Government programme in realizing the equitable

[3] Basic rules concerning the obligation of commercial banks to allocate minimum 20 per cent of their loan portfolios was first stipulated in one of the banking deregulation packages which was published in 1990 (PAKJAN 90)

development programme across the country but also to generate profits from the financing or lending transactions. Financial exposures on small business lending could enhance bank profit generating while at the same time they could reduce the risk exposures through the benefit of diversifications.

In the other hand, the legislation aspects also play an important role in stimulating the effectiveness of the financial scheme operated in commercial banks. Although Bank Indonesia (BI) as the supervisory board for the commercial banks in Indonesia during the period, has fully supported the Indonesian' MSMEs since the decades 1980s, it ever issued the contradictive policy in 2001 when the clauses 'the obligation for commercial banks to provide a minimum particular percentage[3] of their lending portfolio devoted to small businesses' was revoked by the BI Regulation Number 3/2/PBI/2001 about Small Business Finance on January 4, 2001.

The period of 2002 to 2010 testifies the conviction of Indonesian commercial banks' willingness to provide financing for small businesses with their own policies. In other words, the period reveals the genuine commitment level of Indonesian commercial banks in providing small business finance without supporting from the government (when the regulatory board relaxed the regulation of the minimum threshold that should be maintained by commercial banks).

Indonesian commercial banks have been established for decades. They experience several phases from the commencement to date. They provide lending products to support Indonesian economy serving many sectors and customer segments i.e micro, small, medium, and corporate ones. In terms of micro, small and medium enterprises (MSMEs) lending, Indonesian state-owned banks and local government banks show their high commitments to provide financing for the segment over the decade of 2000s (Anwar, 2012). It is very interesting to examine the lending portfolio of these banks particularly on micro and small business sector and investigate the association between these factors with banks' performance.

Those above circumstances led the author to examine Indonesian banks' lending portfolios to small businesses, particularly Indonesian state-owned banks (SOBs) and local government-owned banks (LGOBs) over the period 2002 to 2010. This study extends the analysis by investigating the effect of their small business lending portfolioson bank profitability and capital over the period. It is expected that the findings of the study could give benefit especially for commercial banks, as the evaluation tools for their small business lending programme, and for the GOI, as the considerations in making the decisions on small business lending.

The importance of this study comes in three folds. ***First*****;** there is scarce literature on the impact of SME's lending on bank performance. ***Second***; this study aim to investigate the effect of small business lending on bank performance. ***Third*****;** this study focuses on the performance of Indonesian State-Owned Banks and Local Government-Owned Banks where both Bank Groups are well-known as the highestproviders of small business finance in Indonesia.

Research Aims

This study aimed to examine small business lending and performance of Indonesian banks particularly state-owned

[3]. The package policy stated that banks are obliged to provide at least 20 per cent of their loan portfolio towards small business finance. The policy was later revised by the Decree of BI Directors No. 30/4/KEP/DIR on April 1997 which changed the minimum threshold to 22.5 percent of the net loan expansion. The latter regulation was applied onwards until 2001.

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banks and local government-owned banks. In details, the purposes of this study are as follows:

1. To examine small business lending undertaken by Indonesian commercial banks {particularly *State-Owned Banks (SOBs) and Local Government-Owned Banks (LGOBs)*} over the period 2002 to 2010?
2. To examine the performance of Indonesian banks {particularly *State-Owned Banks (SOBs) and Local Government-Owned Banks (LGOBs)*} in terms of net interest margin (NIM) and return on assets (ROA) over the period2002 to 2010?
3. To investigate whether small business lending and other control variables affected the Indonesian banks' profitability{particularly *State-Owned Banks (SOBs) and Local Government-Owned Banks (LGOBs)*} over the period 2002 to 2010?

Overview of Small Business Lending & Bank Performance in Indonesia

The definition of a small business and small business finance across the globe is different depending on the provisions prevailing in the country. Every country decides on their criteria for a small business and small businesses finance. The Indonesian government defines a small business as well as small business finance through the Indonesian government's laws notified by parliament as well as the regulations issued by the banks' supervisory board[4]. Accordingly, commercial banks then adjust their financing schemes to small businesses in accordance with prevailing regulations.

The Government of Indonesia (GOI) has defined a *small business* as follows:

"A s*mall business (SB) is an economic and productive entity, carried out by an individual or a business entity that is not a subsidiary or a branch of a company and is not owned and controlled or a part, directly or indirectly, of a medium or large enterprise that meets the following criteria: 1) It has a net worth of more than IDR 50 million up to IDR 500 million, not including its land and buildings. 2) It has the annual sales of more than IDR 300 million up to IDR 2,500 million* " (**The Law No. 20/2008** about micro, small, and medium enterprises, Ch. 1 article 1 page 2 and Ch. 4 article 6 page 5-6) .

Meanwhile the definition of *small business finance* in Indonesia is as follows:

"*Small business finance (SBF) is loans or financing facility provided by commercial banks for investment or working capital purposes to small businesses with a maximum amount of IDR 500 million*" (**Bank Indonesia Regulation No. 3/2/PBI/2001**[5]).

Based on those criteria and the definition of a small business above, commercial banks provide financing to small businesses along with other financings i.e. corporate financing and consumer financing. Then, commercial banks regularly report the exposures of their finance portfolios to the Central Bank of Indonesia on a monthly and yearly basis. Accordingly, the Central Bank of Indonesia announces the level of total small business finance maintained by all commercial banks in Indonesia in its reports.

Small businesses intensely need financing from commercial banks. Unfortunetely, because oftheir characteristics of their operations (more modest scale of operation, simple bookkeeping; asset values which are much smaller) have restricted their access to bank financing. Therefore, small business financing programs in the form of credit pro-

[4] It was Central Bank of Idonesia (BI) and now, The Financial Services Authority (OJK).

[5] BI Regulation No. 3/2/PBI/2001 on Small business loans (finance) on January 4, 2001

grams (source of funding comes from the government), as well as commercial loans (source of funds originally come from the bank itself) is very important and Strategically valuable in supporting the existence of small businesses themselves and the Indonesian economy as a whole. In addition, high commitments from commercial banks to finance small businesses are also important in stimulating the development of small businesses in Indonesia.

Consideringthe importance of small business finance in Indonesian commersial banks as well as their performance,it is essential to see the general overview of small business loans operated in Indonesian commercial banks as follows:

Table 2. The Highlights of Small Business Finance and MSMEs Finance in Indonesia over the period 2002 to 2009

IDR Billion

No	Type of finance	2002	2003	2004	2005	2006	2007	2008	2009
1	SBs Finance	62,266	72,647	85,191	96,580	102,028	112,575	132,115	153,553
2	MSMEs Finance	160,977	207,088	271,092	354,908	410,442	502,798	633,944	737,386
3	Total Finance	371,058	440,505	559,470	695,648	792,297	1,002,012	1,307,688	1,437,930
No	**%Type of finance**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
1	SBs Finance	16.78%	16.49%	15.23%	13.88%	12.88%	11.23%	10.10%	10.68%
2	MSMEs Finance	43.38%	47.01%	48.46%	51.02%	51.80%	50.18%	48.48%	51.28%
3	Total Finance	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Indonesian Bank Statistics, 2002-2009

Table 2 reveals that SBF has increased in the Indonesian Rupiahs (IDR) absolute value from IDR 62.27 trillion in 2002 to IDR 153.55 trillion in 2009. The average increased rate of SBF over the period is 13.84 percent a year. However in terms of the portfolio percentage, SBF of Indonesian commercial banks tended to decrease from 16.78 percent in 2002 to the only 10.68 percent in 2009. The regulation to revoke the obligation for commercial banks to maintain 20 per cent of their finance portfolios to small businesses[6] has impacted on the major decline in the SBF portions over time during the period 2002-2009.

On the other hand, MSMEs finance is likely to increase either in nominal value or in percentage terms. MSMEs finance of Indonesian commercial banks has increased from IDR 160.98 trillion in 2002 to IDR 737.39 trillion in 2009. An average increase rate of MSMs finance over the period was 24.43 percent, and that was higher than that of the average increase rate of SBF which achieved 13.84 per cent. In terms of the percentage of finance portfolio, MSMs finance also experienced a considerable increase from 43.38 percent in 2002 to 51.28 percent in 2009. Because MSMEs actually consists of micro, small and medium enterprises, then it can be concluded that a high increase rate of MSMEs finance is caused by a high increase in the financing portfolios of micro and medium enterprises.

The upward tendency of Indonesian commercial banks to provide MSMEs finance also indicates that there is a change

[6] BI Regulation Number 3/2/PBI/2001 about Small Business Finance on January 4, 2001.

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in the orientation of commercial bank financing in Indonesia. They are nowmore likely tofocusonfinancing micro, small and medium enterprises (MSMEs)rather than financing on small businesses (SBs) only. This tendency is in line with the new regulation issued by the GOI, namely the Law Number 20/2008[7] regarding micro, small and medium enterprises. Under the new rules, commercial banks should have adjusted their progress reports on the micro, small and medium enterprises (MSMEs) finance rather than on SBs finance only. These reports are submitted regularly at the end of the month. These policies are in line with the new regulations as stipulated in the BI Regulation No.14/22/PBI/2012 on 21 December, 2012 regarding commercial bank loans or finance for MSMEs and technical assistance for the development of MSMEs.

Table below highlights some of the performance measurements achieved by Indonesian banks over the period 2002 to 2014. :

Main Indicators	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Loans (IDR Trillion)	371.1	440.5	559.5	695.6	792.3	1,002	1,307.7	1,437.9	1,765.8
Loans to Deposits ratio (%)	44.4	49.6	58.1	61.7	61.6	66.3	74.6	72.9	75.5
Gross Non-Performing Loans (%)	7.5	6.8	4.5	7.6	6.1	4.1	3.2	3.3	2.6
Return on Assets (%)	2	2.6	3.5	2.6	2.6	2.8	2.3	2.6	2.9
Net Interest Margin (%)	4.1	4.6	6.4	5.6	5.8	5.7	5.7	5.6	5.7

Source: Indonesian Economic Report 2011, Bank Indonesia

Table 3 testifies the increasing tendency of the total loans of Indonesian commercial banks over the period 2002 to 2010 in terms of total absolute value of Rupiahs. It shows an upward tendency from IDR 371.1 trillion in 2002 to IDR 1.765.8 in 2010. In terms of loans to deposits ratio (LDR), it is also likely to increase over time from 44.4 per cent in 2002 to 75.5 per cent in 2010. These two indicators imply the upward propensity of all Indonesian commercial banks over the period 2002 to 2010. These also show that the function of banks as financial intermediary institutions has increased over the period particularly in the role of the provision of loans to lending customers. The increased trend of the banks' loans also reflects the revival phase of the Indonesian banking industry after suffering from the Asian crisis of 1997-98.

In terms of the loan quality, the table witnesses the increasing loan quality of Indonesian banks evidenced by the downward trend of the gross non-performing loans from 7.4 % in 2002 to the only 2.6% in 2010. In addition, in terms of bank profitability, the table shows a good performance of banks in terms of return on assets and net interest margin which obtained an average performance of 2.7 per cent and 5.5 per cent respectively.

In the assessment of the contribution of the commercial loans on the economy, it can be observed by their productive loans (working capital loans and investment loans) compared to the total loans (see table 4).

[7]As mandated by the Law No. 20/2008 regarding the micro, small and medium enterprises (MSMEs), the GOI has changed the focus of attention not only for small businesses but also for micro and medium enterprises.

Table 4. Productive Loans & Total Loans of Indonesian Banks

IDR Billion

Year	Working Capital Loans	Investment Loans	Total Productive Loans	TOTAL Loans
2002	282,486	82,924	365,410	371,058
2003	343,626	94,316	437,942	440,505
2004	436,684	116,864	553,548	559,470
2005	557,207	132,463	689,670	695,648
2006	405,551	148,770	554,321	792,297
2007	518,339	183,694	702,033	1,002,012
2008	668,007	254,373	922,380	1,307,688
2009	686,983	295,914	982,897	1,437,930
2010	868,356	345,700	1,214,056	1,765,845
Average	**529,693**	**183,891**	**713,584**	**930,273**

Source: Indonesian Banking Statistics, 2002-2010, Bank Indonesia

On average, of the total loans provided yearly over the period 2002 to 2010 by commercial banks which are accounted for IDR 930.27 trillion, an average of IDR 713.58 was bestowed to productive loans, and the rests are for consumptive purposes loans. Of all productive loans, commercial banks in Indonesia tend to finance predominantly to working capital purposes which accounted for an average of IDR 529.69 trillion a year over the period. While an average loan of IDR 183.89 was attributed to investment purposes.

Literature Review

Studies about small business finance have been done by several authors. They generally focused on the small business finance itself in their studies, i.e. the investigation about factors influencing small business financing (Strahan and Wetson, 1998; Peek and Rosengren, 1998; Berger et.al, 2001), the association between mergers and small business financing (Scott and Dulkenberg, 2003), the study about whether commercial banks in UK undertake small business financing (Berry and Grant, 2004), and the investigation whether any relationship between banks origin with the growth of bank lending to small businesses (Clarke et.al, 2005). From those researches, it seems the investigation about the influence of small business financing on bank performance is still scarce and it will be a challenge to undertake the research regarding the topic.

However, there are many researchers who have successfully carried out the researches that use financing or loans as one of the significant factors influencing bank performance. They generally employ loans to assets ratio as a proxy for financing. Several authors (Miller and Noulas, 1997; Kunt and Huizinga,1999; Maudos and Guevarra, 2004; Valverde and Fernandez, 2007; Sufian and Habibulah, 2009; Heffernan and Fu, 2010; Ametefe et.al, 2011) use that variable and have found that the variable has significantly influenced bank performance. Therefore, it will be enrichment to knowledge if there is a research which investigates the financing decomposition such as small business financing, other finance (corporate financing and consumer financing) and tests whether those financing components affect bank performance. Regarding that matter,

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in fulfilling the gap in that area of research, this study is carried out by investigating bank financing portfolio with the emphasis on small business financing and elaborate it by measuring the association between those variables with bank performance in Indonesia.

There are abundant researches about bank performance. The performance has been divided into two types of measurements. First; it is financial performance. This measurement demonstrates how strong is the financial condition of the company in terms of profitability and the ability to make its value added. The examples of this measurement are ROA (return on assets), ROE (return on equity), NIM (net interest margin) and EVA (economic value added). Many authors have employed those variables in their researches (Molyneux and Thornton, 1992; Miller and Noulas, 1997; Williams, 1998; Kunt and Huizinga, 1999; Kannan et.al, 2001; Maudos and Guevarra, 2004; Holden and El-Bannany, 2004; Bonin et.al, 2005; Valverde and Fernandez, 2007; Athanasoglou et.al, 2008; Sufian and Habibulah, 2009; Heffernan and Fu, 2010; Ametefe et.al, 2011). The second; it is efficiency performance. This performance demonstrates how efficient is the company in using the inputs in order to get outputs. The examples of this measurement are cost efficiency and profit efficiency. Several researchers who have utilize this measurement are Bonin et al., 2005; Mamatzakis et al., 2008; Hamiltona et.al, 2010; Chan and Abdul Karim, 2010; Margono, et.al, 2010; Fang et al., 2011; Fethi et.al, 2011; Hadad et.al, 2011.

The difference between this study and the previous studies is that (i) the data cover all state-owned commercial banks as well as local government-owned banks in Indonesia over the period of 2002-2010. (ii) This study also investigates the influence of small business financing on banks performance. These two aspects seem to differentiate the research compared to others.

Stephanou and Rodriguez (2008) studied to shed light on current trends and policy challenges in the financing of small- and medium-sized enterprises (SMEs) by banks in Colombia. Data was collected from the authorities, a representative sample of banks, and other relevant entities. The results of the research reveal that bank financing to SMEs was becoming the current business and risk management models for SME lending. Important institutional and policy constraints to SME lending remain, but are not yet binding.

Klapper et al. (2002) investigated the Small- and Medium-Size Enterprise Financing in Eastern Europe. The result showed that the size of the SME sector (as measured by the percentage of total employment) in Eastern European countries is smaller than in most developed economies. However, SMEs seem to constitute the most dynamic sector of the Eastern European economies, relative to large firms. In general, the SME sector comprises of the relatively younger, more highly leveraged, and more profitable and faster growing firms. But at the same time, these firms appear to have financial constraints that impede their access to long-term financing and ability to grow.

Alam (2008) investigated by comparative study of financing small and cottage industries (SCIs) by interest-free banks in different countries such as Turkey, Cyprus, Sudan and Bangladesh. The research result shows that the lender–borrower network relationship, especially in case of financing rural-based SCIs by interest-free banks, differ from one country to the other even though the basic principles of interest-free financing remains the same.

Chantapong (2005) studied the performance of domestic and foreign banks in Thailand in terms of profitability and other

characteristics after the East Asian financial crisis. The study is based on a micro bank-level panel data on financial statements by pooling cross-bank time series data with the major balance sheet and income statement ratios for domestic and foreign banks in Thailand for 1995–2000. All banks were found to have reduced their credit exposure during the crisis years, and to have gradually improved their profitability during the post-crisis years. The results indicate that foreign bank profitability is higher than the average profitability of the domestic banks although importantly, in the post-crisis period, the gap between foreign and domestic profitability become closer. This shows some positive results of the financial restructuring program.

Molyneux and Thornton (1992) identified the Determinants of banks performance in 18 European Countries for the period of 1986-1989. The result of the research showed that based on Return on Equity as proxy for bank performance, the significant determinants were Concentration Ratio, Interest Rate, and Government. Whereas based on Return on Assets, the significant determinants were Capital Ratio, Interest Rates, Government and Concentration Ratio.

Lyod-Williams et al. (1994) investigated the influence of market structure and market share on the bank profitability in Spain. The significant Predictors of the bank performance were Concentration Ratio, Capital Assets Ratio, and Assets Size (positive significant) and owner (negative significant). The Results of the Research showed that the research supported the Structure-Behavior-Performance which stated that the more concentrated the banks, the less competitive the banks and finally will enhance the performance.

Kunt and Huizinga (1998) also studied factors that determined the bank performance. By using pooled data of 80 countries for the period of 1988-1995, the result of this research showed that the significant predictors were loan to total assets, customer and short-terms funding to total assets, GDP per capita and Real Interest.

Guru et al. (1999) explored the Determinants of Commercial Bank Profitability in Malaysia. By using the dataset of 17 commercial banks for the period of 10 years (1986-1995), the findings reveal based on *ROA Measure*, significant variables were Loan to Total Assets (Assets Composition), Current Accounts to Total Deposits and Total Expenses to Total Assets. On the other hand, *based on ROE Measure*, significant variables were Loan to Total Assets, Inflation, Market Interest Rate, Total Expenses to Total Assets, Capital to Total Assets, and Market Growth.

Abreu and Mendes (2001) investigated the determinants of bank profitability which was located in 4 countries in Europe (Portugal, Spain, France and Germany) for the period of 1986-1999. The results of the sesearch reveal that based on ROA Measure, the significant variables were Equity to Assets, Loan to Assets, Bank Market Share, Inflation Rate and Dummy variables which showed significant in Spain and France. Whereas based on ROE Measure, the significant variables were Equity to Assets, Bank Market Share, Unemployment Rate, Inflation Rate, and Dummy Variable which showed significant in Spain.

Based on these studies, (especially Kunt and Huizinga, 1999and Abreu and Mendes, 2001) it is revealed that the financing provided by commercial banks through loans to total assets has a significant effect on the performance of banks. However, from these studies no one tried to decompose their financing portfolios and examine their influence on bank performance.

Methods

This study employs the standard mod-

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els commonly used in the literature to further investigate the effect SME's lending on bank profitability. Multiple regressions and panel data models will be tested in this study. The study will use data on commercial banks particularly state-owned banks and local government-owned banks in Indonesia during the period 2002-2010.

The research will follow the linear model by Heffernan and Fu (2010) below with further a modification.

$Y_{it} = b_0 + b_1\ SBLTA_{it} + b_2\ OLTA_{it} + b_3\ LNTA_{it} + b_4\ CAR_{it} + b_5\ NPL_{it} + b_6\ INFi_{it} + b_7\ RGDP_{it} + b_8 UNEMP_{it} + .!_{it}$.

Where:

Y_{it}	Bank i's performance in year t, namely $ROA_{i,t}$, $NIM_{i,t}$, which are return on Assets, Return on Equity, Net Interest Margin, respectively.
ROA_{it}	The measurement of banks profitability on assets employed. Calculated by profit divided by total assets.
NIM_{it}	The measurement of net interest margin gained by banks over the bank's operation. Calclated by net interest income divided by average earnings assets.
$SBLTA_{it}$	Small business lending to total assets. This is a proxy for bank lending exposure devoted to small businesses.
$OLTA_{it}$	Other lending to total assets. This reflects other bank lending portfolios besides small business lending. This covers corporate loans and consumer loans).
$LNTA_{it}$	Natural logarithm of total assets. This is a proxy for bank size.
CAR_{it}	Capital adequacy ratio (the adequacy measurement of banks capital). Calculated by bank capital to risky-weighted assets.
NPL_{it}	Non Performing Loan. This is the proxy for a bank risk.
INF_{it-1}	Annual inflation rate. This measures the overall percentage increase in the consumer price index for all goods and services n Indonesia.
$RGDP_{it-1}$	Annual real GDP (gross domestic product) growth rate. The growth of Indonesia's total goods and services adjusted for inflation.
$UNEMP_{it-1}$	Annual unemployment rate in Indonesia.
$.!_{it}$	Error term

This study employs data of commercial banks in Indonesia from the Central Bank of Indonesia and choses only commercial banks categorised as state-owned banks (SOBs) and local government-owned banks (LGOBs) in Indonesia.The idea behind the sample choice, is that, there was a previous study revealed that SOBs and LGOBs are the highest providers of small business lending in Indonesia compared to other group of banks during the period 2002 to 2010. The necessary requirements for the chosen sample are that they should have complete financial statements over the study period.

Results

Descriptive Statistics

There have some important characteristics of the data that should be remarked before the inferential statistics to be undertaken. That consists of the variable names, total observations, mean, standard deviation, minimum, and maximum of each variable included in the model.

Tabel 5. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
roa	270	0.0350	0.0140	0.0050	0.0710
nim	270	0.0973	0.0341	0.0241	0.2659
sblta	270	0.1261	0.1025	0.0048	0.4432
olta	270	0.3614	0.1671	0.0045	0.7207
lnta	270	15.4692	1.6403	12.4022	19.8264
car	270	0.2057	0.0672	0.1020	0.5850
npl	270	0.0148	0.0191	0.0000	0.1620
infl	270	8.0778	3.9414	2.8000	17.1000
gdp_gr	270	5.3889	0.6449	4.5000	6.3000
unemp	270	9.1889	1.1905	7.1000	11.2000

Tabel 5 displays some important information regarding variables included in the model. It covers dataset of 30 banks which consisted of 4 state-owned banks and 26 local government owned banks during 9 years from 2002 to 2010. Data indicate that they have positive profit over the study period with an average return on assets (ROA) and net interest margin (NIM) of 3.5% and 9.73% respectively. This reflects that both bank groups were generally successful in managing their operation during the period.

In terms of lending exposure, data show that they provided small business loans and other loans on average at 12.61% with a standard deviation of 10.25% and 36.14% with a standard deviation of 0.1671 respectively. These reflect that they still tended to finance dominantly on other sectors besides small business loans. However, these achievements of both banks in providing small business lending were higher than any other group of banks (Anwar et al, 2012). The change of regulation lauched by the Government of Indonesia (GOI) in 2001 has affected the lending portfolios of Indonesian banks over the period 2002 to 2010.

Those banks had also good performance in terms of capital adequacy and non-performing loans, reflected by their achievement of average capital adequacy ratio (CAR) of 20.57%and average non performing loans (NPL) of 1.48%over the period. These reflect their high commitment of those banks to comply with the Indonesian bank regulations as well as Basel International standards. The achievement of low NPL specified the statement that Indonesian SOBs and LGOBs operated their banking system successfully associated with the default risk in particular.g.ancing such as ing,ge.ndonesia (Bank Indonesia)

Inferential Statistics

The study employs two models with the differences between each model are that they employ different dependent variables. **Model 1** uses *return on assets* (ROA) as a dependent variable with some explanatory variables namely SBFTF, OFTF, LNTA, CAR, NPL, INFL, GDP_GR and UNEMP. On the other hand,**Model 2** uses *net interest margin* (NIM) as a dependent variable with similar explanatory variables to those of the model 1.

The study employs several techniques

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in revealing the determinants of the ROA and NIM, i.e. Pooled Ordinary Least Squares (Pooled OLS), Generalised Least Squares (GLS), Feasible Generalized Least Squares(FGLS). After undertaking some testings to discover the fittest model including some classical assumption tests, the results specified that the FGLS model is the fittest one. Considering the circumstances, the explanation of the determinants of ROA and NIM only covers the interpretation of the findings generated by the FGLS.

Table 5. Regression Results with ROA and NIM as Dependent Variables

	(1)	(2)	(3)	(1)	(2)	(3)
	MODEL 1			MODEL 2		
	ROA as a Dependent Variable			NIM as a Dependent Variable		
VARIABLES	**Pooled_OLS**	**GLS**	**FGLS**	**Pooled_OLS**	**GLS**	**FGLS**
sblta	0.0302***	0.0173**	**0.0290*** **	0.0647***	0.0423**	**0.0721*** **
	(0.00806)	(0.00881)	**(0.00584)**	(0.0177)	(0.0206)	**(0.0126)**
olta	0.0319***	0.0196***	**0.0191*** **	0.0772***	0.0564***	**0.0543*** **
	(0.00563)	(0.00560)	**(0.00396)**	(0.0124)	(0.0130)	**(0.00852)**
lnta	-0.00181***	-0.00280***	**-0.00215*** **	-0.0107***	-0.0135***	**-0.0121*** **
	(0.000469)	(0.000782)	**(0.000414)**	(0.00103)	(0.00194)	**(0.000811)**
car	0.0658***	0.0253**	**0.0367*** **	0.0472*	0.0472*	**0.0161**
	(0.0121)	(0.0107)	**(0.00827)**	(0.0265)	(0.0248)	**(0.0169)**
npl	-0.172***	-0.158***	**-0.150*** **	-0.276***	-0.211**	**-0.127*** **
	(0.0394)	(0.0368)	**(0.0248)**	(0.0865)	(0.0851)	**(0.0444)**
infl	0.000621**	0.000456**	**0.000454*** **	0.000787	0.000723*	**0.000404** **
	(0.000240)	(0.000182)	**(9.62e-05)**	(0.000526)	(0.000418)	**(0.000206)**
gdp_gr	-0.00380***	-0.00231**	**-0.00155** **	-0.00479	-0.00278	**0.000210**
	(0.00135)	(0.00107)	**(0.000645)**	(0.00296)	(0.00247)	**(0.00136)**
unemp	-0.000804	-0.00125*	**-0.00190*** **	0.00344*	0.00165	**0.00130**
	(0.000808)	(0.000655)	**(0.000501)**	(0.00177)	(0.00151)	**(0.00105)**
Constant	0.0594***	0.0865***	**0.0748*** **	0.210***	0.268***	**0.238*** **
	(0.0135)	(0.0147)	**(0.00976)**	(0.0296)	(0.0355)	**(0.0201)**
Observations	270	270	270	270	270	270
R-squared	0.295			0.429		
Number of id		30	30		30	30
Standard errors in parentheses						
***** p<0.01, ** p<0.05, * p<0.1**						

ROA is return on assets; NIM is net interest margin; SBLTA is small business lending to total assets; OLTA is other lending to total assets; LNTA is the natural logarithm of total assets; CAR is capital adequacy ratio; NPL is non-performing loans; INFL is annual inflation rate; GDPGR is Gross Domestic Product at real prices growth rate; UNEMP is annual unemployment rate;

Table 5 reveals that all bank specific variables (SBLTA, OLTA, LNTA, CAR, NPL) as well as environmental variables have impacted on the ROA generated by Indonesian SOBs and LGOBs over the period. All bank specific variables were significant at the confidence level of 99%. Meanwhile, in terms of net interest margin (NIM) as a dependent variable, Table above exposes that among all bank specific variables, only CAR

which had no relationship with the NIM.

SBLTA and OLTA significantlyaffected banks profitability and bank interest margin with the positif signs respectively. These findings indicate that the increase of loan portfoliosperformed by those banks in terms of small business lending as well as other lending facilities (corporate, commercial and consumptive loans) have successfully increased the achievement of the banks in terms of return on assets. These finding also reflect the contribution of loan portfolios to the enhancement of the bank interest margin. Staring at the coefficients, it can be exposed that the magnitude of small business lending in enhancing bank profitability is higher than that of the other loans. These findings are interesting considering that small business lending has some advantages i.e. it benefits from diversifications hence the level of non-performing loans can be reduced. On the other hand, small business lending has also some drawbacks i.e it requires more personnel resources employed and it needs more monitoring costs. These limitations are inherently entitled to the characteristics of its lending technology as the relationship lending[8] (Berger et al, 2001). Again, the magnitude of SBLTA in affecting bank margin is higher than that of the OLTA. These findings led to a conclusion that Indonesian banks' loan portfolio impacted their net interest margin as well as their profitability with the small business loans had a higher magnitude than the other loans. These prevail for the SOBs and LGOBs during the period 2002 to 2010. These could lead to the recommendation for the Indonesian banks how important small business loans in their operation.

CAR also significantly affected Indonesian bank profitability with positive sign.These results confirmed that an increase in capital can reduce the risk of liquidity and solvency of banks that finally enhance the profitability of banks. These findings coincide with studies undertaken by Kunt and Huizinga (1999), Kannan et al. (2001) and Athanasoglou et al (2008). This also could be interpreted that bank capital are also important factor that should be maintained by bank management. Of course, bank should be paying more attention on managing the optimal level of bank capital since capital or equity is more expensive source of funds compared to debts or liabilities. On the other hand, although CAR also affected bank interest margin with a positive sign, it was not statistically significant.

LNTA as a proxy for bank size has a negative relation with bank profitability as well as with bank interest margin. These results coincide with a study of Kannan et al (2001). These findings could be the indication that on average small sized banks had a more effective management in their operations. These could also be interpreted that small banks operated more efficiently than those of the large ones. However, the investigation of bank efficiency among those banks is very important to examine whether small banks are more efficiently operated compared to large peers.

NPL as a proxy for the default risk has a negative association with bank profitability and with bank interest margin. These results coincide with the findings of Kannan et al (2001). An increase in NPL could escalate bank' default risks and eventually re-

[8] Smalll business lending uses soft lending technology namely a relationship lending technology which has the characteristics as follows: it requires more frequently visits; more interviews to collect data and information of the customers; the lending decisions are not solely based on the availability of the financial statements. These are contrasted with the hard lending technology which more applied to corporate and commercial lending facilities.

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duce bank profitability and bank interest margin. Bank management should effectively manage their loan portfolios by monitoring their loan exposures properly and timely in order to keep them in a safety credit-risk level.

Conclusions

Indonesian state-owned banks (SOBs) and local government-owned banks (LGOBs) are the highest providers for small business loans and other loans in Indonesia during the period 2002 to 2010. They provided small business loans as well as other loans (corporate, commercial and consumptive loans) with an average at 12.61% and 36.14% of their total assets for SOBs and LGOBs respectively. The change of bank regulation lauched by the Government of Indonesia (GOI) in 2001 seemed tohave affected lending portfolios of those banks over the period 2002 to 2010;hence the percentages of their small business loans were decline over time during the period.

However, small business loans and other loans have a significant impact on the Indonesian banks' profitability and net interest margin. It is also worthnoting that the magnitude of small business loans in affecting Indonesian banks' performance is higher than that of other loans both in terms of bank profitability as well as bank net interest margin. These findings were empirically derived from the inferential and statistical tests applied to state-owned banks (SOBs) and local government banks (LGOBs) in Indonesia during the period 2002 to 2010.

Among the control variables, bank size and bank credit risk had also an impact on bank profitability and bank interest margin respectively. These reflect that small size banks were effectively operated compared to their peers from the large ones over the study period. These also imply that a lower in default risk had an impact on the enhancement of bank profitability and net interst margin. Again, these results are empirically derived from the Indonesian SOBs and LGOBs over the study period.

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