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STRENGTHENING FINANCIAL SYSTEM STABILITY THROUGH ENHANCING INTERMEDIARY FUNCTION AND EFFICIENCY OF BANK PEMBANGUNAN DAERAH (REGIONAL DEVELOPMENT BANK)

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ABSTRACT

This paper analyzes the function of the regional development banks (BPD) as an intermediary institution using the loan to deposit ratio (LDR) and Bank Indonesia Certificate to deposit ratio (SDR) and efficiency performance with data envelopment analysis (DEA) approach with data during 2006-2007 covering 26 BPD in Indonesia. The result of study indicates that the regional development banks do not play its optimal role as the intermediary institution and efficiency performance do not achieve the level of maximum 100 persen. For getting the optimal function of banking intermediary and promoting better efficiencies, BPD needs to design some steps of the grand strategy that can be developed in the future, that is: the limitation of funds placed by BPD in Bank Indonesia Certificate notes, inter BPD networking, focus on market segmentation, diversification source of funds, and creating local credit guaranting institutions.

Keywords*: bank efficiency, bank intermediary, loan to deposit ratio (LDR), SBI to deposit ratio (SDR), data envelopment analysis (DEA)*

BACKGROUND

Financial system has very strategic roles in supporting economic activities. Financial system as part of economic system executes intermediary function to allocate funds from parties with surplus funds to those parties with funds deficiency. Therefore, for implementing its intermediary function optimally, a system which is stable and efficiently operated is needed. Unstable and inefficient financial system is very susceptible to various fluctuations so that it could obstruct economic activity. Financial system stability needs to be enhanced and retained as a very important aspect in developing and maintaining a sustainable economy.

BPD as a financial system element is asked for executing its intermediary function optimally and operating efficiently to support strengthening financial system stability. As a bank owned by regional government, BPD could play a bigger role in activating regional economy development through financing activities. Regional economy development is an interaction process between regional government and its people in managing existing resources and developing partnership pattern between regional government and private sectors to create new jobs and to stimulate economy development (economic growth) in the region. The more developed region will automatically support the achievement of a sustainable national economic development.

However, problems complained by businessmen in the region are lack of development financing sources. The lack of financing sources is not only in regions with limited natural resources but also in regions with abundant natural resource. Not only lack of regional development financing sources beside is caused by regional governments have not explored its all of regional potential revenues optimally, but also caused by central government who is not able to fully distribute funds, neither general allocation funds (DAU) nor special allocation funds (DAK). With the limited financing sources, it would be difficult to expect that regional government could play its role as the main supporter of regional development optimally.

The alternative to find financing sources for regions is by optimizing the role of regional development banks (BPD) in supporting regional development. Until May 2008, there are 26 BPD listed in Indonesia with the total assets of RP 176.279 trillion or 8.9 percent of the total assets of the whole conventional banks showing tendency to increase for years. With that immense total assets regional governments surely expect the BPD participation in accelerating regional development and economic activities. However, most problems complained by regional governments so far are that BPD donot participate optimally in allocating funds for financing regional development. It is a pity that the initial idea to establish BPD by respective regional government was to be able to support regional development optimally.

In connection with the condition written above and refer to the banking role, the demand for the availability of development financing sources in regions has prompted regional governments and regional house of representatives (DPRD) to review the effectiveness of the implementation of banking function as intermediary institution. Some observer said that BPD have not executed their function yet as intermediary institutions, which so far credit allocations are smaller than fund collections shown by very small BPD Loan to Deposit Ratio (LDR). Based on Bank of Indonesia (BI) data until May 2008 it is indicated that BPD LDR is the smallest, 54.48 percent, compared to other banks and far below the total LDR of the whole conventional banks which is 72.80 percent.

The low BPD's LDR is caused by nonperforming loan possibility, so that BPD liquidity surplus is placed in safer instument with fixed profit, BI certificate (SBI). Based on BI data as per May 2008, the deployment of BPD funds in SBI reached Rp 41.375 trillions or 27.82 percent of the total conventional banks funds deployed in SBI. BPD fund deployment in SBI has been flourishing since 2005. Compared to other banks, BPD funds deployment in SBI has increased the most indeed. Funds deployment with escalating tendency is caused by the lower purchase realization compared to revenue. In fact, this practice is responsible for inefficient BPD operation. Efficiency is vital to BPD who is plagued with very tight competition in national banking industry.

Anxiety of the more difficult to get development financing sources in regions create ideas of optimizing BPD intermediary function in the respective regions. One of developing ideas, extreme one, is to set a limit on BPD fund deployment in SBI, for example not more than 10 percent of DPK fund deployment in SBI. This idea is aimed that BPD could allocate its fund optimally as a vital financing source in regional development.

Beside the idea of setting a limit on BPD fund deployment in SBI and strengthenning its function as intermediary institution, BPD has to improve its efficient performance in its operation. So far, BPD is a big spender in achieving net interest margin (NIM), the biggest compared to other banks. Based on BI data as per May 2008, BPD NIM is 8.23 while conventional banks total NIM is 5.60. The

high BPD NIM ratio implicates that BPD cannot stand with small margin. So, to cope with such tighter competition in the national banking industry, BPD is urged to prepare itself to arrange a grand design of BPD development strategy to improve intermediary function and efficiency in the future.

Starting from the background and problems written before, this paper aims to:

1. Analyse intermediary function and efficiency performance of BPD.
2. Offer a new alternative in measuring banking intermediary function performance.
3. Recommend a policy, a grand design of the BPD development strategy in improving intermediary function and efficiency in the future.

THEORETICAL BACKGROUND

Regional Development Bank (BPD)

BPD is a bank group participating in activating regional economy. It is said so as BPD is regional cash keeper which in its operation financing the execution of business or projects in the region. Therefore following regional economic and banking development, some BPD have changed its legal form from regional companies (PD) to be limited companies (PT). BPD function is regulated by Law No.13 1962 on the basic terms and conditions of BPD.The law stated that BPD gives loan for investment, extending and renovating projects in the region, either done by regional government or done by a joint venture between regional government and private company. As bank whose assets come from regional governments, BPD management is subject to bureaucratic interference including in allocating credits as mentioned in Law No.8 1998 on banking, BPD is conventional bank responsible for alocating credits

BPD was set up based on provincial regulation and most of its share owned by district governments in the respected area and the share is the seperated property of regional governments. According to Haddad *et al*., (2003) BPD is fully owned by regional governments. However number of share holders is not concentrated on one hand as in private banks. Generally there are eight share holders consisted of a provincial government and some district governments.

Sugiarto (2003) stated that BPD is a bank in national banking system that has a significant function and role regional economic development as BPD is able to set service network in the region which economically cannot be possibly done by private banks.

The main BPD business is to provide financing development projects in the region in the framework of national development through:

1. Giving loans for investment, extending and renovating development projects in the respected region, either done by regional government or done by joints venture between regional government and private companies.
2. Giving loans for investment, extending and renovating regional development projects done by private companies approved by BI. BPD can only give investment credit to local private companies by focusing on middle to long term credit for development. Investment credit by BI liquidity credit is given after getting clearance in principle from BI.
3. For credits regulated by regional government, BPD acts as credits allocator for regional government projects.

Banking Intermediary Function

Law No.7 1992 on banking later revised by Law No.10 stated that a bank is a business enterprise collecting funds from society, in the form of savings, and distributing to society, in the form of credit or other forms in the framework to increase the society standard of living. It is concluded that a bank is an

institution which connect people with surplus funds (surplus spending unit) and those who need funds for developing their business (deficit spending unit).

Bank as a business institution is oriented its direction to increase profit through any operations, including in its function as financial intermediary that is to collect funds from the third party (DPK) and allocate it in the form of credit. Allocating credit is the main function of banks and generally as the main source of revenue. This revenue is got from the spread between interest of savings and credit charged by the banks.

In general there are some main options for banks to deploy its funds to get revenue:

a. Selected credit because of its better return, increasing profitability and escalating clients business prospect.
b. Purchasing SBI as an alternative of deploying funds which is safe, low risk and short term with a quiet high interest.
c. Purchasing government obligation is choosen as having relatively high interest So its profitability is quite good and its risk is low.

Banking Efficiency

1. Efficiency Concept

Efficiency is an important indicator in measuring the whole performance of company activity. Efficiency is often meant how a company could produce with the lowest cost, but it is not just like that, efficiency is also deal with input-output connection management, that is how to allocate available production factors optimally to be able to produce maximal output. A company is considered as having a higher level of efficiency if by a number of certain input could produce more output or for certain number of output could use fewer input.

Efficiency for a bank or banking industry as a whole is a very important aspect taken into account to create a healthy and sustainable financial performance. Banking industry efficiency can be under studied from micro or macro point of view (Berger and Mester, 1997).

From micro perspective, in a tighter competition atmosphere, for being able to keep going and developing a bank should be efficient in its operation. Inefficient banks are highly probable to exit from market for being unable to compete with its competitors either in pricing or product and service quality.Inefficient banks will find difficulties in maintaining its customer loyalty and also prospective customers for broadening its customer base are not interested.

Meanwhile from the macro perspective, an efficient banking industry could influence financial intermediary cost and financial system stability on the whole. This is caused by the banking industry strategic role as an intermediator and financial services producer. With the higher level of efficiency banking performance will be better in allocating financial sources and at the end is able to enhance investment and economic growth (Weill, 2003).

Wheelock and Wilson (1995) noted that efficiency is a vital sign of bank operational condition and one of success indicators of individual bank after examining the whole banking industry. Efficiency study is also important to measure appearing potential impacts from a particular central bank/ government policy toward banking policy adjustment.

Farrell (1957) revealed, that efficiency of a company consists of two components, those are technical and allocative efficiency. Technical efficiency indicates the company capacity in maximizing output produced with certain available input. While allocative efficiency indicates the company capacity to optimize the use of available input with pricing structure and its production tech-

nology. The combination of the two measures can be used to measure economic efficiency.

Kumbhaker dan Lovell (2000) said that technical efficiency is one of the economic efficiency components on the whole. Yet, in the framework to achieve its economic efficiency a company should be technically efficient. To gain a maximal level of profitability a company should be able to produce output at an optimal level with certain number of input (technical efficiency) and produce output with a proper combination on certain pricing level (allocative efficiency).

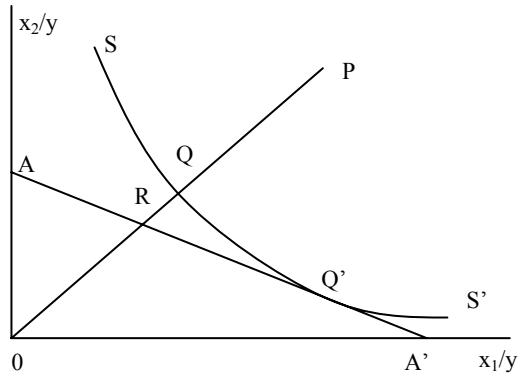
Basically benefits of measuring technical efficiency are: first, as a measuring tool to get relative efficiency for comparing inter activity units easily. Second, if varied level of efficiency found during examination of various activity units, so a research would be conducted to find out factors responsible for those variations. Therefore, a proper solution could be proposed. Third, information about inefficiency has policy implications. For that, the parties concerned could take proper policies.

2. Efficiency Measurement Model

Efficiency measurement concept can be overlooked clearly by focusing either on input (input oriented) or output approach(output oriented). The two approaches are analogous to primal and dual concept in operations research techniques, which likes two sides of a coin, so that these two approaches would consistently produce a same conclusion on relative efficiency of a company compared to its colleagues. The following is the summary of the two approaches on efficiency standard:

a. Input Approach

1. As an illustration, assumed that a company using two kind of input, x1 and x2, for producing one kind of output (y) with the assumption of constant returns to scale (CRS)[4]. Efficiency concept from input approach can be illustrated as the following Figure 1.



Source: Coelli (2005)

Figure 1. Efficiency Concept of Input Approach

In the illustration above, SS' is an isoquant curve that is an association of dots of fully efficient firms in its colleagues association or fully technically efficient firms. Firm in P dot is considered as less efficient firm.This firm could become a more efficient firm if could reduce the kind of input, x1 and x2, to produce one output unit so that the firm would be on Q dot. The distance between P and Q is called potential improvement, that is how much input quantity could be reduced proporsionally to produce the same output quantity. Technical efficiency size of a firm in a colleague group (TEi) generally measured by ratio:

$$TE_i = 1 - QP/OP = 0Q/0P \quad (1)$$

so $0 \le TE_i \le 1$. The value of $TE_i = 1$ indicates, that firm *i* is the most efficient among its colleague group.

AA' line is an isocost line showing price ratio between input 2 and input 1. Allocative

[4] CRS assumes that in addition of some percentage on x_1 dan x_2, (inputs) will impact on output addition in the equal percentage.

efficiency (AEi) of firm I is on P dot, indicated by ratio:

$$AE_i = 1 - RQ/0Q = 0R/0Q \quad (2)$$

RQ shows production cost would be reduced if production executed on efficient dot either technical or allocative,that is Q^2.

Economic Efficiency of firm I (EEi) is a product or the result of Technical Efficiency (TEi) multiplied by Allocative Efficiency (AEi), mathematically:

$$EE_i = TE_i \times AE_i = (0Q/0P) \times (0R/0Q)$$
$$= 0R/0P \quad (3)$$

Conditions: $0 \leq TE_i, AE_i, EE_i \leq 1$.

b. Output Approach

In contrast to input approach dealing with how much input quantity could be reduced proporsionally to produce the same output quantity, output approach is dealing with how much output quantity could be increased proporsionally with he same input quantity.

It is assumed, that a firm with 2 kind of output (y_1 and y_2) and 1 kind of input (x) in CRS. The following Figure 2 indicates efficiency size concept with output approach.

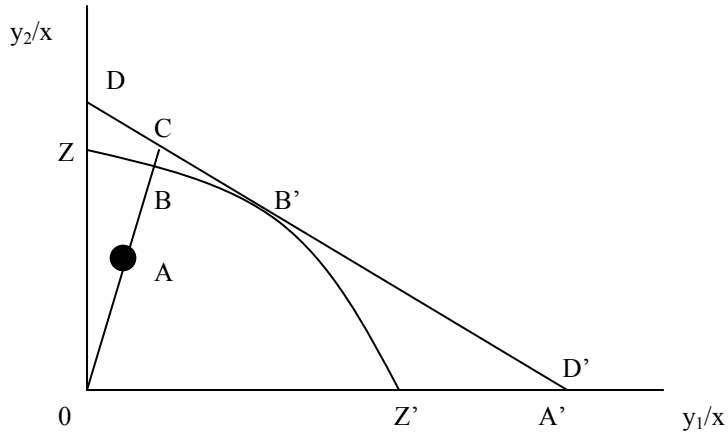
In the illustration above, ZZ' curve is a curve of Production Possibility (PPF), while DD' line is an isorevenue line showing the two output ratio. B dot is a technically efficient dot, while A dot is inefficient. The distance between A and B is the dimension of potential improvement that would be conducted by the firm on A dot to become a technically efficient firm. Technical Efficiency (TEi) size for a firm is:

$$TE_i = 1 - AB/0B = 0A/0B \quad (4)$$

If we have information on output value, so Allocative Efficiency (AEi) can be counted by:

$$AE_i = 1 - BC/0C = 0B/0C \quad (5)$$

Improvement to C dot means that firm in B dot can still increase its revenue by producing on technically and allocatively efficient dot, B'.



Source: Coelli (2005)

Figure 2. Efficiency Concept with Output Approach

Generally, Economic Efficient (EE_i) is a product or a result of multiplication of Technical Efficiency and Allocative Efficiency, mathematically:

$$EE_i = TE_i \times AE_i = 0A/0B \times 0B/0C = 0A/0C \quad (6)$$

Efficiency size is relative, either with input approach or output approach which together need to define a frontier line showing the most efficient firms among the group.

3. Input and Output Approach

So far experts have been arguing on determining input or output variable for determining efficiency performance of a bank. Quoting Leong *et al.,* (2003) and Barr *et al.,* (2002), there are three approaches such as production approach, intermediary approach, and asset approach.

a. Production Approach

The approach views financial institution as deposit accounts and loans producer so that output defined as total sum of accounts mentioned or related accounts. In the other side the input are the number of labour, funds spent at fixed assets, and other materials.In other words, production approach views bank activity as service production for depositors and debtors. This approach is more suitable for evaluating efficiency performance of branches of a respected bank.

b. Intermediary Approach

This approach views banks as intermediaries who change and transfer financial assets from surplus spending units to deficit spending units. Output of this approach is measured through loans and financial investments, while its input is labour cost and capital and deposit interest payment.

Basically intermediary approach and production approach are complementary. Intermediary approach explains banking activities as transfrmator of funds borrowed from depositors funds lended to debtors. This approach is more suitable for evaluating bank efficiency performance as intermediary institution or DMU.

c. Asset Approach

This approach views banks as institutions having primary function in creating loans. Assets efficiency measures banking capability in deploying funds in forms of credit, securities, and other alternative assets as output. Input is measured by labour costs, funds prices and physical capital prices.

Previous Studies

1. Banking Intermediary Function Study

Ismail (2002) conducted a research on SBI ownership of BPD in every province in Indonesia during 2001, indicated that BPD SBI ownership composition showed as having increased except in the province of Lampung, South Sumatera, South Kalimantan, and West Java. The increasing BPD SBI ownership has been taken place since regional autonomy application. This could happen based on background conditions assumed such as:

- BPD, since the application of regional autonomy got a quite immense funds on behalf of regional government, could not allocate those surplus funds in financing business activities (real sector) in the respected region. So, like steps taken by banks in crisis, BPD deployed its surplus funds in zero risk instrument, that was SBI.
- Assumed that regional governments would be able to use those funds optimally in the next year, so the most proper measure done by BPD was to deploy surplus funds in SBI with tenor 1 month or 3 months.
- The relatively short (1 to 3 months) SBI maturity made BPD more flexible to manage funds portofolio, especially when regional governments want to use the funds anytimes.

In the other hand, the reason why BPD in the four provinces (Lampung, South Sumatera, South Kalimantan, West Java) did not increase its SBI ownerships is, as predicted, that regional autonomy funds have been allocated evenly by regional governments, not only to BPD. The regional government of Lampung Province allocated its regional autonomy funds to a state owned bank. The regional government of South Kalimantan Province allocated its regional autonomy funds to a state owned bank (foreign exchange savings) and a national private conventional bank. The regional government of West Java Province allocated its funds in rupiah savings (deposit) and foreign exchange savings to a state owned bank. The regional government of South Sumatera Province allocated its funds to a state owned bank (account and deposit).

Abdullah and Suseno (2003) have conducted research to measure the execution of banking intermediary function in regions of 25 provinces in Indonesia in 2001 showed the result, that based on LDR, banking in the regions during the period of 2001 generally did not applicate yet its intermediary function effectively. Region where its banking have applicated its intermediary function quite well in the sense of having LDR quite high only 5 provinces, those are South Kalimantan, West Nusa Tenggara, North Sumatera, Riau and Nanggroe Aceh Darussalam (average LDR above 60 percent).

Wiwin (2007) examined conventional banks and Bank Perkreditan Rakyat (BPR) in Bali in applicating its financial intermediary function in Bali economy. By using LDR as proxy, it can be said that BPR is more capable in applicating its financial intermediary function compared to conventional bank. The prudential banking system principle is not optimally applicated become obstacle in both banks. The significant differences were related to available regulation and institution. In order to make banking sector able to applicate its intermediary function better, BI proclaimed the application of linkage programe between conventional banks and BPR.

2. Banking Efficiency Study

Jemric and Vujcic (2002) analyzed bank efficiency level in Croatia by using DEA approach during the period of 1995-2000. Efficiency measurement was based on bank size, ownership structure, year of foundation, and assets quality. The result of the study indicated that foreign banks had the highest level of efficiency and new banks were more efficient than those long operated banks. Generally, small banks were more efficient, but big banks were locally more efficient. The major reasons of banking inefficiency in Croatia were number of work force and fixed assets.

Yudistira (2003) conducted a research in 18 sharia banks in the world during the period of 1997-2000 by using DEA approach and input output specification based on intermediary approach. The result of the research indicated, that efficiency in 18 sharia banks observed showed a little inefficiency in normal level of 10 percent compared to conventional banks. This was caused by the global crisis during 1998-1999 which influenced their performances. Small scale sharia banks tended to be not economical. Therefore it is suggested that small scale banks to merge or to do acquisition.

Hadad *et al.,* (2003a) conducted a research in national conventional banks during the period of 1995-2003 using DEA approach. There were three important points of the result of the research: first, credit related to banks and securities had the highest development potential for upgrading efficiency, second, bank merged is not always making bank more efficient, and the third, national non-foreign exchange bank group could be said as the most efficient for three years (2001-2003) during the period of eight years of analysis (1995-2003) compared to other banks. The

affiliated foreign bank once was the most efficient in 1997, while national private bank in 1998 and 1999.

Astiyah and Husman (2006) conducted a study to analyse banking efficiency level in Indonesia using derivation of profit function. Profit efficiency measurement in this study includes model with stressing on intermediary function and without stressing on intermediary function. Bank efficiency measurement estimated by using stochastic frontier analysis method and monthly data during the period of 2001-2004 of 20 biggest assets banks. The result showed that average efficiency value using intermediary stressing model was lower than using model without stressing on intermediary. Average efficiency during the period of study without using intermediary stressing model was 92.4 percent compared to 91.4 percent by model using intermediary stressing. The higher average efficiency level without stressing on intermediary indicated that credit component had contributed lower profitability compared to other output. So this indicated that banks had not positioned credit as the main component in their business.

DATA AND RESEARCH METHOD

Data and Data Sources

Population in this study covered all of 26 BPD in Indonesia listed in BI by the end of 2007. The data used in the study was secondary data during the period of 2006-2007 taken from BI publication, those were balance sheet and income statement.

Measurement Method

1. Banking Intermediary Function Measurement

So far, the main tool used to measure banking performance, especially in conection with intermediary function application is loan to deposit ratio (LDR), that is ratio between funds allocation in credit form (funds allocation function application) and funds of the third parties (DPK) collected by bank (funds collection intermediary function application)

$$\text{LDR} = \frac{\text{Total Loans}}{\text{Total Deposits}} \qquad (7)$$

According to BI regulation, in normal condition, LDR percentage is between 85-110 percent. The number is in line with real sector expectation. If the number is below 85 percent, it could be said that the role of banking as intermediary institution does not work optimally.

By looking at its forming components, LDR is an ideal barometer that can be used to measure banking performance as intermediary institution. But, is LDR always the proper tool to measure banking performance, especially BPD whose DPK mostly deployed in SBI instrument? In order to optimize BPD DPK funds allocation for financing regional development and at once enhancing banking intermediary function, the writer offers new alternative of banking intermediary function measurement called BI Certificates to deposit ratio (SDR). SDR is a ratio between BPD funds deployed in SBI and the third parties funds collected by the bank.

$$\text{SDR} = \frac{\text{Total BI Certificates Fund}}{\text{Total Deposits}} \qquad (8)$$

As its cut-off, in normal condition, the writer suggested that SDR should be below 10 percent. It means that 10 percent of the total third parties funds collected by BPD could be deployed in SBI by the maximum, while the rest 90 percent should be allocated for financing various regional development programs. This determination could be made for BI standard references, if the SDR accepted and BPD must applicate it. The higher SDR number indicates BPD banking intermediary function does not work optimally, and on the contrary.

The use of SDR proposed, for the first time, to be implemented in BPD group, but it

is possible to be implemented in other bank groups. The purpose of using SDR is that BPD could optimize its intermediary function to allocate funds for financing various more productive activities in the regions such as real sector development, financing regional infrastructure and micro, small and medium enterprises (UMKM).

2. Banking Efficiency Measurement

Banking efficiency measurement using DEA method is frontier nonparametric method using linear program model to calculate output input ratio for all unit compared in a population. DEA method aims to measure efficiency level of a decision making unit (DMU ie. Bank) relatively compared to banks of the same kind when all units are on or below its frontier efficient curve. So, this method is used to evaluate relative efficiency of some objects (performance benchmarking).

The method was firstly introduced by Charnes, Coopes, and Rhodes (CCR) in 1978. Then, there has been a lot of DEA mathematical model development and mostly stated that DEA is a method not a model.

DEA approach stresses more on task oriented approach and focusing more on important task, that is to evaluate DMU performance. Analysis conducted based on evaluation toward relative efficiency of equal DMUs. Further on those efficient DMUs will form frontier line.

If DMU is on frontier line, that DMU can be said relatively efficient compared to other DMUs of its peer group. Beside producing efficiency value of each DMU, DEA also indicates units referenced as inefficient.

$$Efficiency\ of\ DMU = \frac{\sum_{k=1}^{p} \mu_k\, y_{k0}}{\sum_{i=1}^{m} v_i x_{i0}} \qquad (9)$$

Description: DMU = UPK; n = UPK that will be evaluated; m = different input; p = different output; x_{ij} = numbers of input I consumed by UPK_j; y_{kj} = numbers of output k produced by UPK_j.

Efficiency values in DEA are between zero and one. Efficient DMU will have value 1 or 100 percent, while value approaching zero indicates lowering DMU efficiency. There are two criteria of the efficient DMU, those are: first, there is no other unit or combined DMU using same numbers of input. Second, numbers of output produced at least the same as numbers of output produced by other DMU of 100 percent performance.

Input and Output Specification

According to Kwan (2002) and Berger and Humphrey (1997) intermediary approach is frequently used in bank efficiency studies. It is suggested that intermediary approach is the most suitable one to evaluate all bank efficiency where interest expense, half or two third of the total cost, is taken into account. The study also used intermediary approach since it was considered suitable to represent BPD characteristics as intermediary institution allocating funds from funds surplus parties to funds deserving parties. BPD output variables consisted of total credit allocated (Y1) and total revenue (Y2), input variables consisted of total savings (X1), work force cost (X2), and fixed assets (X3).

ANALYSIS

Assets Development, DPK, and Credit of BPD

Until May 2008, total assets of BPD in Indonesia hit Rp 176.279 trillion or 8.9 percent of the total assets of all conventional banks with escalating progress trend for years (see table 1). BPD assets increased at the average of 27.5 percent per year during the period of 2003-May 2008. Individually (see table 2), there were 7 BPDs posses assets above RP 10 trillion during the period of 2006-2007. BPD West Java had the biggest

assets of RP 23.12 trillion as per end of 2007. While there were 18 BPDs with assets between RP 1 – 10 trillion. There was only one BPD with assets below Rp 1 trillion, that is BPD Central Sulawesi with total assets of Rp 808.895 billion.

Table 1. Total Assets, DPK, and Credit of BPD 2003-May 2008

(in trillion rupiah)

Year	Total Assets	DPK	Credit
2003	66.418	58.474	28.348
2004	78.487	69.733	37.232
2005	106.411	95.688	44.931
2006	159.476	129.141	55.955
2007	170.012	134.287	71.881
May-2008	176.279	148.815	81,075

Source: Bank Indonesia

Table 2. BPD Total Assets 2006-2007

(in million rupiah)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	11.051.782	11.167.402
2	North Sumatera	7.668.325	8.749.419
3	Riau	14.327.957	11.882.597
4	West Sumatera	5.455.412	6.403.554
5	Jambi	1.459.010	1.561.456
6	Bengkulu	1.189.472	1.487.940
7	Lampung	6.847.128	7.443.451
8	South Sumatera	1.858.543	1.969.283
9	DKI Jakarta	11.186.893	11.838.239
10	West Java	21.290.573	23.122.845
11	Central Java	11.349.486	12.211.147
12	Yogyakarta	2.560.739	3.143.456
13	East Java	14.170.573	15.735.812
14	Bali	4.211.431	5.065.516
15	West Nusa Tenggara	1.822.577	1.922.791
16	East Nusa Tenggara	2.448.776	2.682.818
17	West Kalimantan	2.964.714	3.241.830
18	South Kalimantan	3.102.950	3.364.813
19	East Kalimantan	13.358.564	14.007.288
20	Central Kalimantan	2.278.774	2.590.071
21	North Sulawesi	1.955.154	2.249.548
22	South Sulawesi	3.777.207	4.787.713
23	Central Sulawesi	780.555	808.895
24	South East Sulawesi	1.154.090	1.102.839
25	Maluku	1.712.221	1.964.609
26	Papua	7.659.256	8.767.794

Source: Bank Indonesia

Funds collected fom third parties (DPK) either in the form of checking account, deposito or savings by BPD were also increasing considerably enough during the period of 2003-May 2008, that was 154.5 percent from Rp 58.474 trillion in 2003 to become Rp 148.815 trillion on May 2008. While credit allocation increased from Rp 28.348 trillion in 2003 become Rp 81.075 trillion until May 2008.

LDR Calculation Result

The result of LDR calculation (table 3) indicated that BPD had not executed optimally its function as banking intermediary institution. During the period of 2006-2007, although LDR increased from 43.33 percent in 2006 become 53.53 percent in 2007, but still far below BI regulation and real sector expectation of 85 percent by the minimum. BPD LDR number is also the smallest compared to other banks.The low LDR number indicated, that BPD is very cautious in allocating credits. It might be haunted by credit loss while third parties funds (DPK) is considerably increased. Therefore BPD had big surplus liquidity, idle or non-productive. The tendency was that BPD preferred to put the surplus liquidity in BI SBI which was more secure, low risk and fixed profit but its implication toward regional economy was not quite good.

Concerning with individual BPD LDR performance, in 2006 there were two BPDs hit LDR number of above 85 percent, those were BPD South Sumatera and West Nusa Tenggara. In 2007 there was increasing number of BPD hit LDR number of above 85 percent, those were BPD Lampung, West Nusa Tenggara, East Nusa Tenggara. BPD South Sumatera experienced decreasing LDR performance in 2007.

SDR Calculation Result

The low LDR number indicated, that society funds collected by BPD could not all

be allocated as credit. As a consequence of such low bank credit allocation, in the end surplus banking liquidity deployed in SBI as an investment instrument offerring quite competitive return and risk free. BPD funds deployment in SBI instrument tended to increase from year to year (see table 4). In 2003 BPD funds deployed in SBI was Rp 7.224 trillion or 7.13 percent of the total banking funds deployed in SBI. The number kept on increasing and reach the peak in 2006 by Rp 43.115 trillion. In 2007, the number decreased to be Rp 34.842 trillion and on May 2008 increased again to be Rp 41.375 trillion.

The reason of BPD to allocate its surplus liquidity to SBI were: first, SBI interest rate was higher than bank savings interest rate, so that BPD still gain interest margin. Second, being worried of credit loss. Third, recently BPD find difficulties in expanding credit commensurate with the amount of funds collected. Lastly, the big funds deployed in SBI presumed that there were regional government funds which could not be liquidated for financing projects.

Looking into individual bank (see table 5), BPD Riau had allocated the biggest funds to SBI, that was Rp 8.36 trillion in 2006 and Rp 5.60 trillion in 2007. While BPD which had allocated the lowest funds to SBI was BPD Central Sulawesi with Rp 6.155 billion and BPD Lampung with Rp 9.977 billion (2007).

Based on SBI to deposit ratio (SDR) calculation during the period 2006-2007 it indicated that BPD had not executed its function as banking intermediary institution optimally (see table 6). Although SDR number decreased from 33.39 percent in 2006 become 25.05 percent in 2007, but still far from ideal numbers, that was below 10 percent. It means that DPK collected by BPD were still deployed in SBI rather than to be allocated for financing regional development.

Looking into individual bank, in 2006 there were six BPDs with SDR number below 10 percent, those were BPD Lampung, Central Java, West Nusa Tenggara, West Kalimantan, South Sulawesi, and Central Sulawesi. In 2007, there were still six BPDs with SDR number below 10 percent but with different composition, those were BPD Lampung, Jakarta, West Nusa Tenggara, North Sulawesi, South Sulawesi, and South East Sulawesi.

Table 3. Individual BPD LDR Performance

(in percentage)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	19.88	30.54
2	North Sumatera	43.48	56.46
3	Riau	17.11	30.00
4	West Sumatera	69.28	75.70
5	Jambi	37.34	60.41
6	Bengkulu	72.19	79.02
7	South Sumatera	87.72	83.72
8	Lampung	70.07	103.97
9	Jakarta	52.40	68.58
10	West Java	75.67	79.02
11	Central Java	58.98	77.09
12	Yogyakarta	50.55	53.57
13	East Java	38.75	42.11
14	Bali	80.56	81.38
15	West Nusa Tenggara	87.68	113.06
16	East Nusa Tenggara	65.53	87.05
17	West Kalimantan	38.70	46.64
18	South Kalimantan	29.92	35.50
19	East Kalimantan	17.90	24.05
20	Central Kalimantan	21.18	29.14
21	North Sulawesi	58.78	74.50
22	South Sulawesi	61.18	65.75
23	Central Sulawesi	34.08	68.02
24	South East Sulawesi	49.53	60.53
25	Maluku	39.86	43.60
26	Papua	19.13	21.56
	Average	43.33	53.53

Source: Bank Indonesia

Table 4. BPD Funds Deployment in SBI, Period of 2003-May 2008

(in trillion rupiah)

Year	Total SBI	BPD SBI	BPD SBI / Total SBI (percent)
2003	101.374	7.224	7.13
2004	94.058	8.045	8.55
2005	54.256	17.297	31.88
2006	179.045	43.115	24.08
2007	203.863	34.842	17.09
May 2008	148.728	41.375	27.82

Source: Bank Indonesia

Table 5. Individual BPD Funds Deployment in SBI 2006-2007

(in million rupiah)

No	Bank Pembangunan Daerah (BPD)	2006	2007
1	Aceh	3.796.052	1.250.000
2	North Sumatera	1.880.153	1.534.830
3	Riau	8.355.720	5.579.668
4	West Sumatera	1.367.798	643.579
5	Jambi	-	175.000
6	Bengkulu	229.515	484.626
7	South Sumatera	1.550.346	2.398.162
8	Lampung	15,527	9.977
9	DKI Jakarta	2.737.720	399.818
10	West Java	4.898.256	2.013.781
11	Central Java	668.874	1.112.681
12	Yogyakarta	510.206	707.633
13	East Java	4.478.430	3.998.182
14	Bali	1.001.262	965.000
15	West Nusa Tenggara	95.193	19.942
16	East Nusa Tenggara	715.140	385.000
17	West Kalimantan	148.178	1.433.363
18	South Kalimantan	944.024	1.497.528
19	East Kalimantan	6.216.100	4.768.051
20	Central Kalimantan	674.410	1.000.000
21	North Sulawesi	440.589	40.000
22	South Sulawesi	22.525	249.941
23	Central Sulawesi	6.155	126.000
24	South East Sulawesi	140.690	50.000
25	Maluku	209.024	356.756
26	Papua	2.537.281	4.800.000

Source: Bank Indonesia

BPD DEA Efficiency Performance Calculating Result

In this study, the researcher divides BPD into three groups based on its own total assets. Bank with big assets with total assets bigger than Rp 10 trillion, bank with medium assets with the total assets between Rp 2-10 trillion and bank with small assets with total assets less than Rp 2 trillion. During 2006-2007 there were seven BPDs categorized in BPD group of big assets. BPD West Java was the bank with the biggest total assets among 26 BPDs in Indonesia by Rp 23.12 trillion reported at the end of 2007.

There were eleven BPDs of BPD group with medium assets in 2006 with BPD North Sumatera had the biggest total assets of Rp 7.67 trillion. While in 2007 the number of BPD with medium assets increased to twelve as BPD North Sulawesi joined in, but the highest position was turned to BPD Papua. The number of BPD with small asset was decreased from eight BPDs in 2006 to seven BPDs in 2007. The smallest BPD was BPD Central Sulawesi with the total assets of RP 808.895 billion in 2007.

Table 6. BPDs SDR Performance 2006-2007

(in percentage)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	37.58	12.59
2	North Sumatera	27.66	20.06
3	Riau	63.00	53.20
4	West Sumatera	31.76	12.14
5	Jambi	-	13.59
6	Bengkulu	23.13	40.00
7	South Sumatera	28.41	41.10
8	Lampung	1.02	0.81
9	DKI Jakarta	38.89	5.50
10	West Java	31.52	12.22
11	Central Java	6.69	11.21
12	Yogyakarta	22.66	27.22
13	East Java	37.42	30.38
14	Bali	29.66	23.21
15	West Nusa Tenggara	7.25	1.56
16	East Nusa Tenggara	34.66	18.15
17	West Kalimantan	5.79	50.51
18	South Kalimantan	34.00	49.84
19	East Kalimantan	56.55	41.41
20	Central Kalimantan	33.20	44.46
21	North Sulawesi	30.11	2.58
22	South Sulawesi	0.68	6.43
23	Central Sulawesi	1.00	20.89
24	South East Sulawesi	20.65	6.13
25	Maluku	14.80	22.70
26	Papua	41.46	66.17
	Average	33.39	25.95

Source: Bank Indonesia

The result of measuring efficiency performance of the whole BPDs by using DEA method during the period of 2006-2007 showed efficiency increase from 81 percent to 89 percent but still below the maximum number of 100 percent (see table 8). A bank could achieve the highest efficiency level of 100 percent if it had been able to be efficient in utilizing its input and or utilizing all of its potential to produce output. On the contrary,

bank whose efficiency number is below 100 percent has to be able to be efficient in utilizing input and or has to maximize all of its potentials to produce output.

Table 7. BPDs Total Assets

(in million rupiah)

No	Regional Development Bank (BPD)	2006	2007
1	West Java	21.290.573	23.122.845
2	East Java	14.170.573	15.735.812
3	East Kalimantan	13.358.564	14.007.288
4	Riau	14.327.957	11.882.597
5	Central Java	11.349.486	12.211.147
6	DKI Jakarta	11.186.893	11.838.239
7	Aceh	11.051.782	11.167.402
8	Papua	7.659.256	8.767.794
9	North Sumatera	7.668.325	8.749.419
10	South Sumatera	6.847.128	7.443.451
11	West Sumatera	5.455.412	6.403.554
12	Bali	4.211.431	5.065.516
13	South Sulawesi	3,777,207	4,787,713
14	South Kalimantan	3.102.950	3.364.813
15	West Kalimantan	2.964.714	3.241.830
16	Yogyakarta	2.560.739	3.143.456
17	East Nusa Tenggara	2.448.776	2.682.818
18	Central Kalimantan	2.278.774	2.590.071
19	North Sulawesi	1.955.154	2.249.548
20	Lampung	1.858.543	1.969.283
21	West Nusa Tenggara	1.822.577	1.922.791
22	Maluku	1.712.221	1.964.609
23	Jambi	1.459.010	1.561.456
24	Bengkulu	1.189.472	1.487.940
25	South East Sulawesi	1.154.090	1.102.839
26	Central Sulawesi	780.555	808.895

Source: Bank Indonesia

Table 8. DEA Efficiency Performance in BPD group in 2006-2007

(in percentage)

BPD Group	2006	2007
Big Assets BPD	0.93	0.96
Medium Assets BPD	0.78	0.80
Small Assets BPD	0.75	0.83
Whole BPD	0.81	0.89

Source: Bank Indonesia

Based on group assets, BPDs with big assets have far higher efficiency level compared with other BPD group and above the total BPD as the whole. In 2006, DEA efficiency level of BPD with big assets was 93 percent and was increased to be 96 percent in 2007. The result was consistent with Bos and Kolari (2005) and Rezitis (2006) which stated that the bigger bank assets, the more efficient the bank since bank with big assets would experience economic of scale in its operation.

In 2006, group of BPD with medium assets had better efficiency level compared with group of BPD with small assets, that was 78 percent. But efficiency performance of both groups were below the efficiency performance of the whole BPD. In 2007, efficiency performance of up of BPD with small asstes was higher than the one with medium assets, but DEA number of those two groups increased and were still below DEA number of the total BPD as a whole.

Individually, in 2006, DEA measurement result showed, that there were only three BPD (Bengkulu, West Java and Central Sulawesi) out of twenty four BPDs had met conditions of achieving target number, that was efficiency level of number 1 or 100 percent. While 21 BPDs had efficiency number below 100 percent. Two BPDs, South Sulawesi and South East Sulawesi, could not be assessed caused of data unavailable.

In 2007, the number of BPD with maximum efficiency number of 100 percent was increased to seven BPDs, those were Aceh, North Sumatera, Bengkulu, Jakarta, West Java, Central Sulawesi, and Papua. While the rest 18 BPDs efficiency numbers were below 100 percent. Four BPDs experienced efficiency performance increase to 100 percent compared with 2006, those were Aceh, North Sumatera, Jakarta, and Papua, while Bengkulu, West Java, and Central Sulawesi could maintain its efficiency performance number of 100 percent.

BPD not able to achieve efficiency number of 100 percent, for reaching maximal number, had to expand total credit allocation and total revenue as showed in table 10. For instance BPD Riau, to get maximal efficiency level, the bank had to expand its credit

allocation of Rp 7.93 trillion and its total revenue of Rp 76.69 billion.

Table 9. BPDs DEA Efficiency Performance

(in percentage)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	0.943	1
2	North Sumatera	0.974	1
3	Riau	0.984	0.952
4	West Sumatera	0.895	0.944
5	Jambi	0.478	0.672
6	Bengkulu	1	1
7	South Sumatera	0.833	0.765
8	Lampung	0.609	0.751
9	DKI Jakarta	0.890	1
10	West Java	1	1
11	Central Java	0.819	0.952
12	Yogyakarta	0.686	0.692
13	East Java	0.949	0.844
14	Bali	0.807	0.909
15	West Nusa Tenggara	0.748	0.869
16	East Nusa Tenggara	0.687	0.800
17	West Kalimantan	0.673	0.624
18	South Kalimantan	0.641	0.643
19	East Kalimantan	0.924	0.946
20	Central Kalimantan	0.630	0.591
21	North Sulawesi	0.859	0.845
22	Central Sulawesi	1	1
23	Maluku	0.541	0.694
24	Papua	0.945	1

Source: Bank Indonesia

CONCLUSION AND RECOMMENDED POLICY

Conclusion

Financial system has a very strategic role in supporting economic activities. The system as a component of economy system executes intermediary function for allocating funds from parties with surplus funds to parties with deficit funds. Therefore, to be able to execute its intermediary function, stable financial system and efficient operation are demanded. Financial system, which is not stable and not efficient, is very susceptible to various fluctuations so that could obstruct economic activities. Financial system stability always needs to be enhanced and maintained since it is a very vital aspect in forming and maintaining sustainable economy.

Table 10. Credit Growth and Total Revenue in 2007

(in million rupiah)

No	Regional Development Bank(BPD)	Credit	Revenue
1	Riau	7.927.698	76.691
2	West Sumatera	238.465	48.246
3	Jambi	654.881	78.819
4	South Sumatera	795.678	241.206
5	Lampung	421.950	79.522
6	Central Java	383.411	86.941
7	Yogyakarta	619.923	144.460
8	East Java	5.222.307	323.623
9	Bali	333.369	63.009
10	West Nusa Tenggara	217.976	43.624
11	East Nusa Tenggara	461.560	89.369
12	West Kalimantan	848.425	225.469
13	South Kalimantan	1.376.225	197.977
14	East Kalimantan	8.112.464	62.238
15	Central Kalimantan	1.025.508	162.973
16	North Sulawesi	612.935	60.537
17	Maluku	842.243	88.237

Source: Bank Indonesia

BPD, as a component of financial system, is demanded to be able to execute its intermediary function optimally and to operate efficiently to support strengthening financial sytem stability. As a bank owned by a regional government, BPD could play a big role in running regional economic development through financing activity. So, BPD is expected to optimize its intermediary function and to deliver the best efficient performance for being financial institution which is able to support maximally in financing regional development in the framework of improving social welfare.

Based on the result of the study on 26 BPDs in Indonesia during the period of 2006-2007, it is indicated that BPD banking intermediary function has not been executed optimally, although there was a tendency to increase. BPD used extreme caution to expand

credit allocation and preferred to deploy its funds in SBI instrument which was more secure and gave fixed returns. Meanwhile, the result of efficiency performance calculation showed, that BPD undergone operational efficiency increase, butits efficiency number was still below maximal number of 100 percent.

Recommended Policy

For improving banking intermediary function and efficiency performance, it requires to draft a grand design of BPD development starategy in the future. The grand design strategy is proposed, so that it could be implemented through various policy steps of BI, BPD and regional government. The purpose is that BPD could execute banking intermediary function optimally and highly efficient performance to fully support in financing regional development and improving social welfare.

1. Setting a limit to DPK deployment by BPD to SBI instrument

There are thee parties who could execute this policy:

a. Bank Indonesia as national banking regulator set a limit of deploying BPD funds in SBI by reducing BI rate so low until SBI interest rate finally below banking savings interest rate (funds cost). Since SBI is risk free investment, the given returns is lower than banking savings interest rate. If the condition could be materilized, it is estimated that BPD would immediately reduce its surplus liquidity deployment in SBI and would turn to another investment.

b. BPD management should be creative to look for credit allocation opportunities to support in financing real sectors in the region, possibly could get bigger returns than if the funds deployed in SBI.

c. Regional government as the owner of BPD beside ordering BPD management to limit its funds deployment in BPD, also has to be able to use BPD funds for financing various development projects, for example regional infrastructure.

2. Inter BPD networking

Inter BPD networking is meant to solve the problem of surplus liquidity of certain BPD (rich BPD) which has undergone financing in its region optimally by not deploying it in SBI but could shift it to finance another region that can not be fully supported by the BPD of that region (poor BPD). The networking could take form of syndicated credit of some BPDs in financing infrastructure development. Financing various infrastructure projects in regions will help to develop economy in the regions. Furthermore, financing done by syndication, its risk would be dispersed. Beside that, problem of maximum limit of credit allocation (BMPK), often to be BPD constraint, could also be solved.

3. Focusing on particular market segment

In API, that will be enacted by 2010, BPD is categorized as focused bank, that is bank focusing on particular segment suitable for regional potential. In this category, BPD expected to have core capital between Rp 100 billion and Rp 10 trillion.

a. Focus on credit allocation to UMKM

In the region micro, small and medium enterprises grow very fast and able to activate community economy. Therefore, BPD should focus on credit allocation to UMKM. Based on BI data, BPD is a bank group allocating biggest credit to UMKM in Indonesia. According to BI banking statistic per October 2007, it was said that BPD was a bank group allocating credit to UMKM with the biggest growth around 28.1 percent. In October 2006, credit allocated hit Rp 52.977 trillion and in

October 2007 increased to be Rp 67.915 trillion.

b. Sharia Banking

BPD can also focus on developing sharia banking business either with opening sharia business unit (UUS) or directly open sharia conventional bank (BUS). Sharia banking has immense potential in regions predominated by muslims, such as West Java, East Java, Aceh and West Sumatera. Beside, BI as monetary authority in Indonesia has also fully supported sharia banking development especially after regulation on sharia banking has been legalized by government and DPR, which are the highest legitimate institusions for sharia banking.

4. BPD Funds Sources Diversification

BPD can undergo various diversifications to improve funds source not only depend on DPK or regional government funds, for instance:

a. Privatization

BPD will release a part of its share to private sector by initial public offering (IPO). For that, regional government intervention could be reduced and the company could be managed professionally. For enlarging capital in the framework of IPO, BPD could establish a holding company.

b. Bond Issues

Beside issuing stocks in stocks market, BPD could also expand funds source by issuing bond. Bond is a kind of debt or certificate of long-term indebtedness issued by private sector/government who promised to pay to the holder amounting to interest yearly regulated before.

c. Merger and Acquisition

Merger and acquisition between BPDs in Indonesia could strengthenning company capital structure and economic scale. Beside, merging and acquisition are often considered as one of business strategies chosen by companies to win the competition.

5. Establishing Local Credit Security

In order to make BPD willing to allocate credit and avoid of being worried of credit loss, monetary authority and regional government naturally should think of establishing local credit security institution (LPKL). Credit security is a supplement of a credit system and could be functioned as pawn substitute, although cassie is still creditor task. It is expected that LPKL could maintain financing sustainability from regional banking sector to real sector in the local region. Particularly the presence of LPKL will help BPD to facilitate in accessing credit for small and medium enterprises (UKM) come out to have good business prospect in line with bank evaluation on banking credit but not bankable (having problem of pawn which do not meet the requirements).

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Appendix 1

Tabel 11. BPDs Deposit
2006-2007

(in million rupiah)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	10.101.641	9.924.834
2	North Sumatera	6.796.330	7.649.798
3	Riau	13.263.977	10.487.556
4	West Sumatera	4.306.786	5.301.174
5	Jambi	1.238.415	1.287.366
6	Bengkulu	992.226	1.211.509
7	South Sumatera	5.457.854	5.835.500
8	Lampung	1.520.773	1.226.215
9	DKI Jakarta	7.039.715	7.275.957
10	West Java	15.540.826	16.485.382
11	Central Java	10.001.009	9.926.456
12	Yogyakarta	2.251.295	2.599.991
13	East Java	11.969.553	13.161.136
14	Bali	3.375.342	4.157.643
15	West Nusa Tenggara	1.313.681	1.275.164
16	East Nusa Tenggara	2.063.429	2.121.066
17	West Kalimantan	2.557.888	2.837.531
18	South Kalimantan	2.776.704	3.004.428
19	East Kalimantan	10.992.438	11.513.262
20	Central Kalimantan	2.031.118	2.249.157
21	North Sulawesi	1.463.282	1.552.140
22	South Sulawesi	3.324.449	3.888.097
23	Central Sulawesi	613.769	603.295
24	Southeast Sulawesi	681.209	815.010
25	Maluku	1.412.155	1.571.386
26	Papua	6.119.623	7.254.133

Source: Bank Indonesia

Appendix 2

Tabel 12. Total Credit Distributed of BPDs
2006-2007

(in million rupiah)

No	Regional Development Bank (BPD)	2006	2007
1	Aceh	2.007.747	3.031.060
2	North Sumatera	6.796.330	7.649.798
3	Riau	13.263.977	10.487.556
4	West Sumatera	4.306.786	5.301.174
5	Jambi	1.238.415	1.287.366
6	Bengkulu	526.488	837.454
7	South Sumatera	5.457.854	5.835.500
8	Lampung	1.520.773	1.226.215
9	DKI Jakarta	3.688.791	4.990.293
10	West Java	15.540.826	16.485.382
11	Central Java	10.001.009	9.926.456
12	Yogyakarta	2.251.295	2.599.991
13	East Java	11.969.553	13.161.136
14	Bali	2.748.221	3.350.037
15	West Nusa Tenggara	1.313.681	1.275.164
16	East Nusa Tenggara	2.063.429	2.121.066
17	West Kalimantan	2.557.888	2.837.531
18	South Kalimantan	2.776.704	3.004.428
19	East Kalimantan	10.992.438	11.513.262
20	Central Kalimantan	2.031.118	2.249.157
21	North Sulawesi	1.463.282	1.552.140
22	South Sulawesi	3.324.449	3.888.097
23	Central Sulawesi	613.769	603.295
24	Southeast Sulawesi	681.209	815.010
25	Maluku	1.412.155	1.571.386
26	Papua	6.119.623	7.254.133

Source: Bank Indonesia