DUPONT ANALYSIS AS A MEASURE OF MANDIRI BANK'S PROFITABILITY AND EFFICIENCY BEFORE AND AFTER MERGER

A THESIS

Presented as Partial Fulfillment of the Requirements
to Obtain the Bachelor Degree in Accounting Department

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2005

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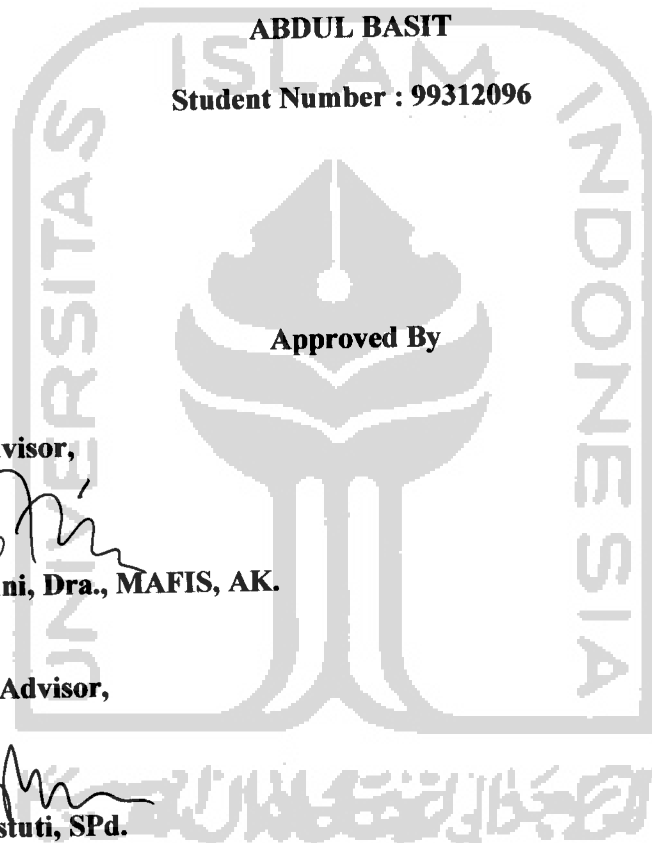

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A BACHELOR DEGREE THESIS

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Defended before the Board of Examiners
on June 27, 2005
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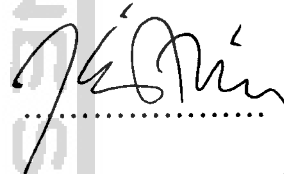
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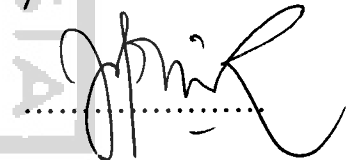
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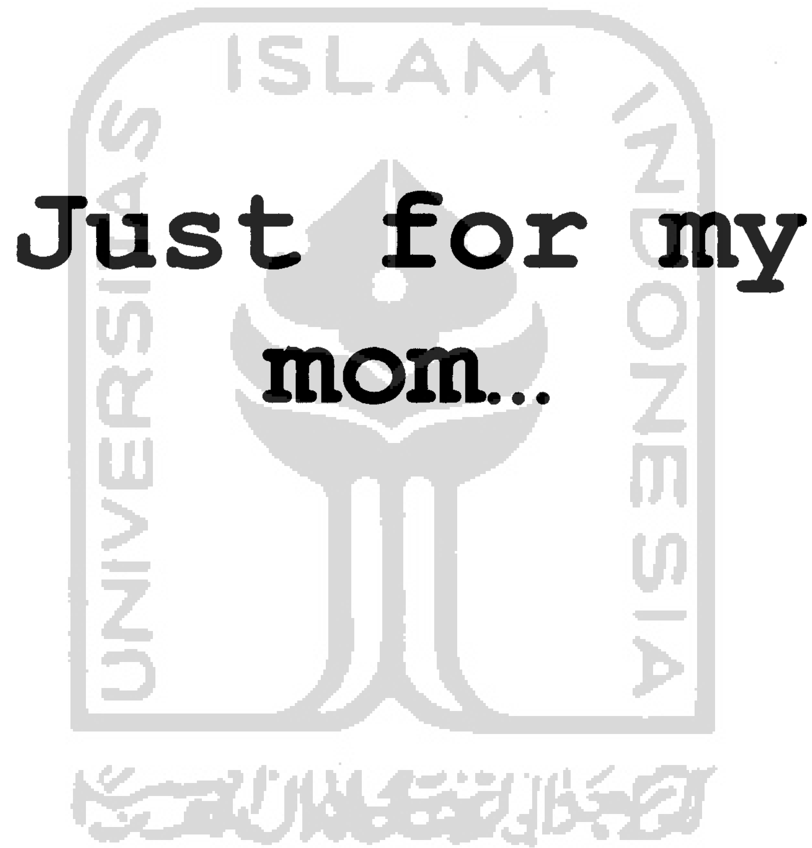


Just for my mom...

Also to those who have touched my life,
supported me and provided me with wonderful memories.

ACKNOWLEDGEMENT

In the Name of Allah the Compassionate and the Merciful

Praise be to Allah and prayers and peace be upon the master of messengers, and upon all His family and Companions.

This research would not have materialized without guidance, assistance, and encouragement from many lecturers, colleagues, friends, and families we studied with and learned from over the years. We are truly indebted to each of them.

I was most appreciated of the outstanding advise and invaluable suggestions provided by my thesis advisor: Mrs. Yuni Nustini, Dra., MAFIS., AK., my content advisor and Mrs. Any Pudjiastuti, Spd., my language advisor. Their insightful advises and suggestions were adopted with gratitude.

We are sincerely grateful for the following organizations and individuals who have brought so much life's lessons, foundation, joy, and happiness.

To The International Program Management: Mr. Asma'i Ishak, Ph.D, M.Bus., Mrs. Yuni Nustini, Dra., MAFIS., Ak., Mr. Sahabudin Sidiq, Drs., MA., Mbak Fanny, Mr. Irwan, and others, I owe special thanks to them for their valuable dedication.

International Program (IP) Lecturers: Mr. Akhyar, Mr. Arief Bachtiar, Mr. Yunan, Mr. Syamsul, Mr. Sugiarto, Mr. Alwar, Mrs. Yuni, Mr. Muhlison, Mr. Tohirin, Mr. Sugeng, Mr. Johan, Mr. Winarno, Mr. Arief Rahman, Mr. Soeparno, Mr. Ida Fajar, Mr. Syafar, Mr, Munrokhim, Mr. Suwaldiman, Mr. Dafri, Mr. Widarjono, Mr. Moin, Mr. Muqodim, Mr. Rizal, Mr. Ciptono, Mr. Bachrudin, Mrs. Endang Sih Prapti, Mr. Elan Satriawan, Mrs. Primanita, Mr. Minhaji, Mrs. Tri Utami, and others.

International Program (IP) 99 students majoring in accounting: Eti, Mia, Genia, Lia, Andi, Ely, Hery, Tantyo, Nendra, Fahmi, Eko, Ipin, Ryo, Fajar, Yuyun, Kiki, Fery, Dewi, Wulan, Bambang, Ibnu, Kholil, Dani, Aryana, Petty, Prima, Vita, Cynthia, Dian, Ayu Noviani, Ulfia, Rizka, Aulia Muhammad, Hani, Metty, Melia and others.

The Eight Emperors: Hery Prasetya, S.E. (Hery), Ranendra (Nendra), Arifin Yulianto (Ahong), Ari Widodo, SE. (Dodod), Hartantyo, SE. (Tyo), Venerdi Faizal Fahmi, SE, Akt. (Fahmi) , and Sayed Ahmad (Eko). "Nice friendship we have, we'll keep it"

The Sawit sari community: Mas Edo, Cak Mudofir, Lek Arief, Moron the Anto, Coy Adji, Gus Mamat, Kang Ali and the new kids on the block Joe and Jarkasih, we are family. The Tegalese Boarding house occupant: Dany, Albar, Hans, Mas Didik, Mas

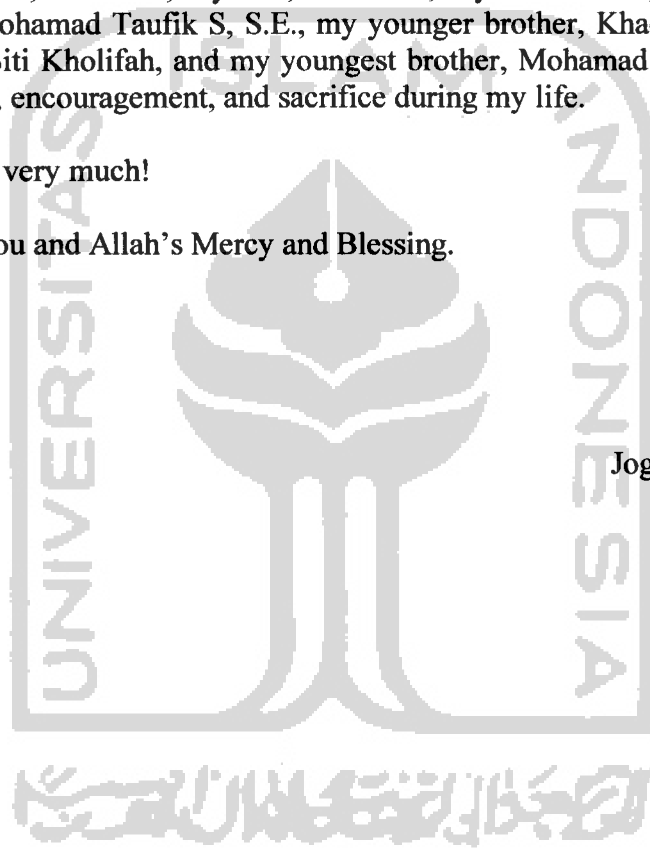
Budi, Dedy 'Begold', Koko, and Fauzan. "Thank you for the moment when we were together"

The list of friends is too long to include here, but they know who they are and so do I. They are persons with ever-present smile and its joy to play, study, and work with them. I am grateful to them who are always stimulate me and brought new ideas and approaches.

Finally, I wish to express a very special word of my sincere appreciation to my beloved families: my mom, Sarmini , my dad, Sami'an , my elder sister, Siti Juweriyah, my elder brother, Mohamad Taufik S, S.E., my younger brother, Khaerul Hisam, S.H. my younger sister, Siti Kholifah, and my youngest brother, Mohamad Faiq Faizal for their constant support, encouragement, and sacrifice during my life.

Thank you very, very much!

Peace be upon you and Allah's Mercy and Blessing.



Jogjakarta, June 4, 2005
Abdul Basit

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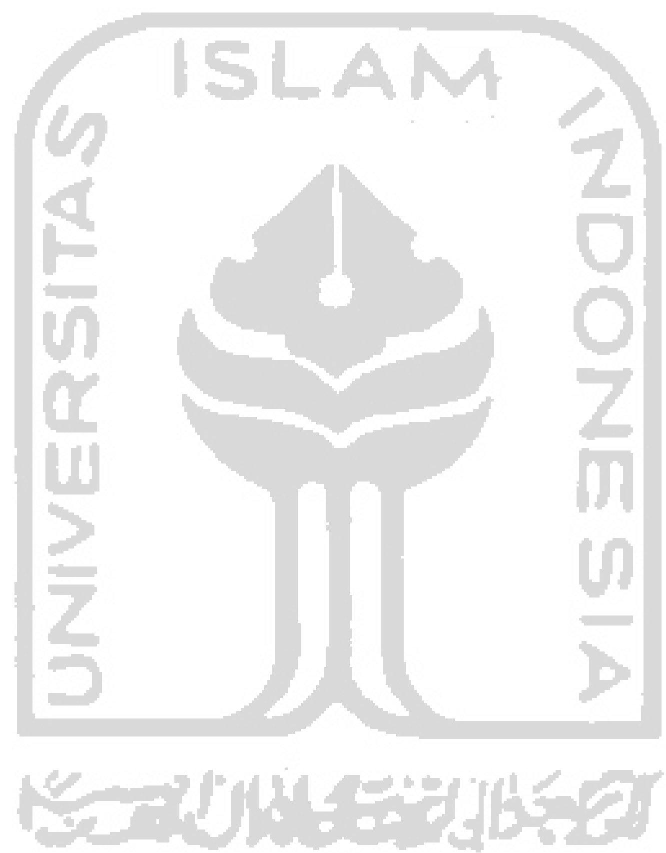

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ABSTRACT

Basit, Abdul (2005). ***DuPont Analysis as a Measure of Mandiri Bank's Profitability and efficiency before and after Merger***. Jogjakarta, Accounting Department, Faculty of Economics, Islamic University of Indonesia.

Established in October 1998, in the aftermath of the Asian financial crisis of 1997 and 1998, Bank Mandiri is a product of a merger of four state-owned banks: Bank Bumi Daya (BBD), Bank Dagang Negara (BDN), Bank Ekspor Impor (Exim) and Bank Pembangunan Indonesia (Bapindo). In the depths of the crisis, at Government instigation, sixty-seven banks were closed, merged or acquired by other institutions. To restore bank balance sheets and public confidence, the Government implemented a radical restructuring and recapitalization program, directed by the Indonesian Bank Restructuring Agency (IBRA). Government priorities were to reduce overlap in the banking sector and to create much larger, stronger entities that could serve the needs of a modernizing economy.

The research examined Bank Mandiri and the four state-owned banks: BBD, BDN, Exim, and Bapindo from 1994 to 2003. The research arranged into two groups. The first group, Bank Mandiri before merger, was the simulation of merger of four state-owned banks. The writer combined the resume of financial statement of those four state-owned banks from 1994 to 1998. The second, Bank Mandiri after merger, was compiled from 1999 to 2003. Thus it places a major emphasis on examining whether the profitability and efficiency before merger is different significantly from the profitability and efficiency after merger.

Return on Assets (ROA) decomposition (DuPont Analysis) allows financial statement users to examine what is the profitability, measured by Net Profit Margin (NPM) and efficiency, measured by Total Assets Turnover (TATR) difference between before and after merger.

The hypothesis was then tested with a different paired t-test using statistical Package for Social Science (SPSS) 11.0 software for windows. We found that profitability and efficiency of Bank Mandiri before merger were not significantly different from profitability and efficiency after merger. It means that the merger of banks in Indonesia still become the last choice for government to keep unhealthy banks operating activities rather than liquidate them.

Key words: Information technology, Competitive advantage
DuPont analysis, Return on assets.

ABSTRAK

Basit, Abdul (2005). ***Analisi Dupont untuk Mengukur Profitabilitas dan Efisiensi Bank Mandiri sebelum dan setelah Merger***. Jogjakarta. Jurusan Akuntansi. Fakultas Ekonomi. Universitas Islam Indonesia.

Didirikan pada bulan Oktober tahun 1998, sebagai akibatnya krisis keuangan Asia di tahun 1997 dan 1998, Bank Mandiri adalah suatu produk dari penggabungan empat bank milik pemerintah: Bank Bumi Daya (BBD), Bank Dagang Negara (BDN), Bank Ekspor Impor (Exim) dan Bank Pembangunan Indonesia (Bapindo). Dalam krisis yang amat parah, oleh campur tangan pemerintah, 67 bank ditutup, merger atau diakuisisi oleh institusi lain. Untuk mengembalikan saldo bank dan kepercayaan publik, Pemerintah menerapkan suatu program penyehatan dan restrukturisasi yang radikal, melalui Badan Penyehatan Perbankan nasional (BPPN) pemerintah memprioritas akan mengurangi tumpang-tindih di sektor perbankan dan untuk menciptakan kesatuan yang lebih besar dan lebih kuat yang bisa melayani kebutuhan suatu modernisasi ekonomi.

Riset ini meneliti Bank Mandiri dan empat bank milik pemerintah: BBD, BDN, Exim, dan Bapindo dari 1994 sampai dengan 2003. Riset dibentuk ke dalam dua kelompok. Yang pertama, Bank Mandiri sebelum merger, dengan cara simulasi penggabungan empat bank milik pemerintah. Penulis mengkombinasikan ringkasan laporan keuangan ke-empat bank milik pemerintah dari 1994 hingga 1998. Kelompok yang kedua, Bank Mandiri setelah merger, dari 1999 sampai 2003. Dengan begitu kita mampu mengetahui apakah efisiensi dan profitabilitas sebelum merger berbeda secara signifikan dengan keadaan setelah merger.

Return on Asset (ROA) dan komposisi yang membentuknya (DuPont analysis) memungkinkan para pemakai laporan keuangan untuk menguji seberapa besar profitabilitas, dengan Net Profit Margin (NPM) dan seberapa efisien, dengan Total Assets Turnover (TATR) berbeda antara sebelum dan setelah merger.

Dugaan tersebut kemudian dites menggunakan uji beda rata-rata 2 sample berpasangan.Hasilnya menunjukkan bahwa profitabilitas dan effisiensi bank Mandiri sebelum dan sesudah merger tidak berbeda secara signifikan. Hal tersebut mengindikasikan bahwa merger antar bank di Indonesia merupakan pilihan terakhir selain dilikuidasi atau dibekukan opersasinya, bukan merupan pilihan untuk meningkatkan kinerja keuangan terutama profitabilitas dan effisiensi.

Kata kunci: Merger, Profitabilitas dan effisiensi, Analisis DuPont
Return on assets.

CHAPTER I

INTRODUCTION

1.1 Study Background

Economics crisis which knocked over in Indonesia since the middle of the 1997 has caused all economic potencies to face stagnancy and bankruptcy. In Indonesia the financial service (banking industries), which had direct influence to real sector activities had to be closed or frozen their activities because of their disability in managing its operation. In fact, there were large number of banks with various easy access given by government appeared in every area.

One of the reasons why government froze the banks activities was because of the banks' foreign debt which became tripled as the effect of rupiah's exchange rates to dollar which risen up drastically. Beside that, there was also distribution of credit conducted by bankrupt banks for the industries which relates, even the same ownership with the banks. Credit distribution which indicated corruption collusion and nepotism (KKN) was not only done by private banking, but also followed by the state-owned banks (BUMN). Government tended to freeze the activities of private banks, meanwhile state-owned banks were restructured by merger and recapitalized through government's bonds to increase the bank's capital. The implementation of bank recapitalizations program was one of Indonesian governmental commitments as listed in Letter of Intent (LoI) by IMF is called the banking reform.

Pringle and Harris defined merger as a combination of two or more firm in which one company survives under its own name while any others cease to exit as legal entities. When two or more companies agree to combine their operations, where one company survives and the other loses its corporate existence, a merger is affected. The surviving company acquires all the assets and liabilities of the merged company. The company that survives is generally the buyer and it either retains its identity or the merged company is provided with a new name.

For the purpose of merger, at the end of February 1998, government had announced the plan for restructuring the state-owned banks by merger. Those four state-owned banks are: Bank Bumi Daya (BBD), Bank Dagang Negara (BDN), Bank Ekspor Impor (Exim) and Bank Pembangunan Indonesia (Bapindo). Officially in October 2, 1998 the four government banks merger and changed their name into Mandiri Bank. While the consolidation of financial statement effectively started in the end of July 1999 in the same time with the decreasing amount of office branches.

By conducting merger of the four state-owned banks, government expected; *first*, The Indonesia banking industry will be stronger and more stable if it is sustained by big reputable banks. *Second*, interventions of the government to the state-owned banks were decreased, if bank restructuring succeed, big possibility that Mandiri Bank would be privatized in order to strengthen the capital structure, improving liquidity, and business development. *Third*, Mandiri Bank's financial performance was expected to be better compared to the

condition before merger. *Fourth*, as Mandiri Bank gets healthier, hence real sector that requiring the bank finance service will progressively grow and at the end the national economy would be better in the next period.

According to Mochtar Riady (*Kompas* January 3, 1998), there were three common targets which will be reached by the merger among banks, those are: realizing synergy, efficiency, and enlarge the capabilities and bank capacities. All of those targets are directed to create healthy financial position and operational so they can be involved in the other competitions, especially to face the free market.

Based on the research made by Vennet (1996), merger between banks will have significant impact in improving its profitability and efficiency level, however the merger trend which was forced by government to banks in Indonesia during that time which was intended to fulfill the condition for minimum level of capital to be deposited, to avoid the liquidation, and not directly to increase profitability and efficiency.

Unlike the United States, especially in case of bank merger, it has been disappearing since 1990's (Mc Kinsey Quarterly Number 1 Year 2004). One of the reasons is because its advance potential synergy expected from a merger happened day after day is less satisfying. Recently, it is quite difficult for a bank to increase its book value only by merger without the significant increasing on organic development. Therefore, according to McKinsey, "the old game (increasing book value trough merger) winds down (not relevant any more)". One of banks that exist now as the result of bank merger is Mandiri Bank.

1.2 Problem Identification

Merger with other bank, in that time, became the only choice for unhealthy banks to make their activities keep going rather than being liquidated by government. Especially when the regulation of Indonesia Bank, PP No. 38 / 1998, concerning the paid-in capital for Rp. 3 Trillion for new bank established and Rp. 1 Trillion for bank that already operates their activities. Beside that, according to Wiraatmaja (Indonesia Business, 20 February 1997) the reasons for bank merger were also accordance with the regulation for improving the Capital Adequacy Ratio (Minimum CAR) 8% from its assets

By the merger of four government banks, is there any guarantee that Mandiri bank will be healthier in its performance? This research will analyze the impact of merger conducted by the four government's banks to increase their profitability, and efficiency.

To study whether the merger of five Government banks will give the better synergy or not, in this research the writer used profitability and deficiency approach. By using Du Pont analysis, profitability is represented by the number of Return On Equity (ROE). While efficiency represented by Total Assets Turnover Ratio (TATR).

1.3 Problem Formulation

Based on the explanation in the study background and problem identification, this study attempts to obtain possible answers for the following question:

"Is there any significant differences in profitability and efficiency in Mandiri bank before and after merger?"

1.4 Limitation of Research Area

In order to provide a clear description and to be able to impart useful information, restrictions on this research are outlined as follows:

1. The element of financial statement that chosen as the object of this research are total assets, income, equities and net profit.
2. The performance variables used in this research are Return on Equity (ROE), return on Assets (ROA), Financial Leverage Net Profit Margin (NPM), and Total Assets Turnover (TATR).
3. The Object of this research are,
   - Banks recognized before being merged; Bank Bumi Daya, Bank Dagang Negara, Bank Ekspor Impor and Bank Pembangunan Indonesia.
   - Bank recognized as form of merger, Mandiri Bank.

The statistical method used to test the hypothesis is paired t test, the recommended test in case of paired data where the distribution of the data is normal.

1. The period of observation was 1994 – 2003.
2. Variables other than chosen are assumed to be constant and stable. Those variables are political conditions, fluctuation of Indonesia currency, economics conditions, etc.

1.5 Research Objectives

To determine the profitability and efficiency of the Mandiri bank which differ significantly before and after merger.

1.6 Research Contribution

1. The results of the thesis carry an important message for bank managers and other institutions that consider merger as their strategies to increase competitive advantage.
2. Theses findings are important to financial statements users that may be looking for bank to invest their money that are likely to choose healthier bank using financial condition as indicator.

1.7 Definition of Terms

Profitability

Profitability ratios reflect the overall performance of the business. Profit must be compared with other information to evaluate the firm's profitability.

Efficiency

Input cost for every output produced

Merger

A combination of two or more firm in which one company survives under its own name while any others cease to exit as legal entities

ROE

Return on Equity, Also known as the *return on net worth,* this measure is an important indicator of profitability. It indicates the productivity of the owners' capital employed.

ROA

Return on Assets, income available to total assets from continuing operations divided by average total income

Financial Leverage

Financial Leverage (FL) measured from total assets divided by total equities. The use of fund source that have fixed burden in order to have addition of advantage larger than its fixed burden, so the profit for stockholder can increase

NPM

Net Profit Margin, income from continuing operation divided by net sales, measures income from ongoing operations per dollar of sales.

TATR

Total Assets Turnover, net sales divided by average total assets, measures how many dollars in sales the firm is able to produce for

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

To see the efficiency of some banks in Indonesia, Goeltom and Jasmina's conducted research at 45 banks in Indonesia during the period of 1985 - 1992 by using function of frontier expense approach, found that the bank with the small assets are relatively more efficient than bank with the big assets. Bank with small assets can generally give credit with relatively smaller amount than banks that have big assets. This will minimize the credit risk stuck in bank group with the small asset so that banking cost is also relatively lower.

According to merger that represents the combination among bank assets, from empiric study result which had been conducted by John H. Boyd in United States in the year 1976 - 1990, it was also known that the merger will decrease the amount of institution, expanding the business, minimizing expense and improving the profitability. Profitability measured by rate of Return On Assets (ROA) and rate of Return of Equity (ROE). Generally, the rate of profitability will increase as the size of the bank get increase. But, according to economies of scale principle, maximal profitability will be reached before bank reaching the biggest size, which is before $ 100 Million of assets. After the amount of assets exceed from $ 100 Million, hence the increasing of assets is not economist anymore.

The same result is also obtained from Clark's survey (1988), found that from the 13 studies concerning banking economics of scale, it was found only 2 economics scale with assets more than $ 100 Million.

Furthermore, it be identified from Clark's research (1996), by using data of 111 bank during the period 1988 - 1991, it was assumed that all banks operate along with efficiency frontier. By using the Thick Frontier approach, it was found that bank with total asset less than $ 3 Billion can operate efficiently.

From the effect of merger to efficiency, proposed by Stephen R. Rhoades for merger of 898 bank during 1981 - 1986 by using Analysis of OLS and Logit, in the reality, refusing its hypothesis expressing merger will improve the efficiency or in other word, there is no indication of efficiency increased from merger of bank.

Rudi Vander Vennet that analyzed the bank take over activities in Europe during 1988-1992 by using 442 samples of domestic merger and 70 multinational mergers also conducted similar research. The result indicated that the bank merger decreased the inefficient and represented the synergy process between the banks. Bank with bad financial performance after doing merger its efficiency and its profitability would increase significantly.

Fixler and Zieschang (1992) stated that there is an influence from merger to efficiency from relative productivity side. By using *Superlative Index Number Approach*, measuring efficiency with the gap between banks frontier compared to bank frontier reference. The data that was used on the

basic reason is to eliminate costs of searching for prices, contracting, payment collection and advertising and may also reduce the cost of communicating and coordinating production. Both production and inventory can be improved on account of efficient information flow within the organisation.

Unlike horizontal mergers, which have no specific timing, vertical mergers take place when both firms plan to integrate the production process and capitalise on the demand for the product. Forward integration take place when a raw material supplier finds a regular procurer of its products while backward integration takes place when a manufacturer finds a cheap source of raw material supplier.

3. Conglomerate Mergers

Conglomerate mergers are affected among firms that are in different or unrelated business activity. Firms that plan to increase their product lines carry out these types of mergers. Firms opting for conglomerate merger control a range of activities in various industries that require different skills in the specific managerial functions of research, applied engineering, production, marketing and so on. This type of diversification can be achieved mainly by external acquisition and mergers and is not generally possible through internal development. These types of mergers are also called concentric mergers. Firms operating in different geographic locations also proceed with these types of mergers. Conglomerate mergers have been sub-divided into:

A. Financial Conglomerates

These conglomerates provide a flow of funds to every segment of their operations, exercise control and are the ultimate financial risk takers. They not only assume financial responsibility and control but also play a chief role in operating decisions. They also:

- Improve risk-return ratio
- Reduce risk
- Improve the quality of general and functional managerial performance
- Provide effective competitive process
- Provide distinction between performance based on underlying potentials in the product market area and results related to managerial performance.

B. Managerial Conglomerates

Managerial conglomerates provide managerial counsel and interaction on decisions thereby, increasing potential for improving performance. When two firms of unequal managerial competence combine, the performance of the combined firm will be greater than the sum of equal parts that provide large economic benefits.

C. Concentric Companies

The primary difference between managerial conglomerate and concentric company is its distinction between respective general and

compete with the other companies. Through merger, both companies will create new strategy to avoid the bankrupt risk.

4. Tax consideration. When companies doing merger, the company can get advantage from the existence of loss from company which is acquired. Net income of acquire result high tax, but by the entry of acquired will decrease the obligation. The advantage of tax can also gained from allocating the company's income to cover the loss of the acquired company so the tax will decrease accordance with the decrease in its net income.
5. Diversification. Basically diversification is intended to minimize risk. When two or more companies in one same business doing merger, so the company as the result of the merger will own the product in various.
6. Increased debt capacity. Bank and or other financial institute usually give the loan to a company by considering the level of company's assets. The greater the assets owned by the company the greater the credit will be given. Thereby through merger, company extends its business by increasing its debt capacity.
7. Undervalued assets
8. Manipulating earning's per share
9. Management desires and
10. Replacing inefficient management.

Thereby, company motif to [do/conduct] the merger [is] in fact based [by] for economic consideration and in order to winning emulation in business which progressively competitive.

2.2.4 Traditional View on Merger

Merger and acquisition activity results in overall benefits to shareholders when the consolidated post-merger firm is more valuable than the simple sum of the two separate pre-merger firms. The primary cause of this gain in value is supposed to be the performance improvement following the merger. The research for post-merger performance gains has focused on improvements in any one Barton Crockett, "First Bank Claims Wells Overstates Deal Savings," American 1 Banker (November 20, 1995). Kenneth Cline, "NationsBank Sees Boatmen's Revenue Potential," American Banker 2 (September 26, 1996). of the following areas, namely efficiency improvements, increased market power, or heightened diversification.

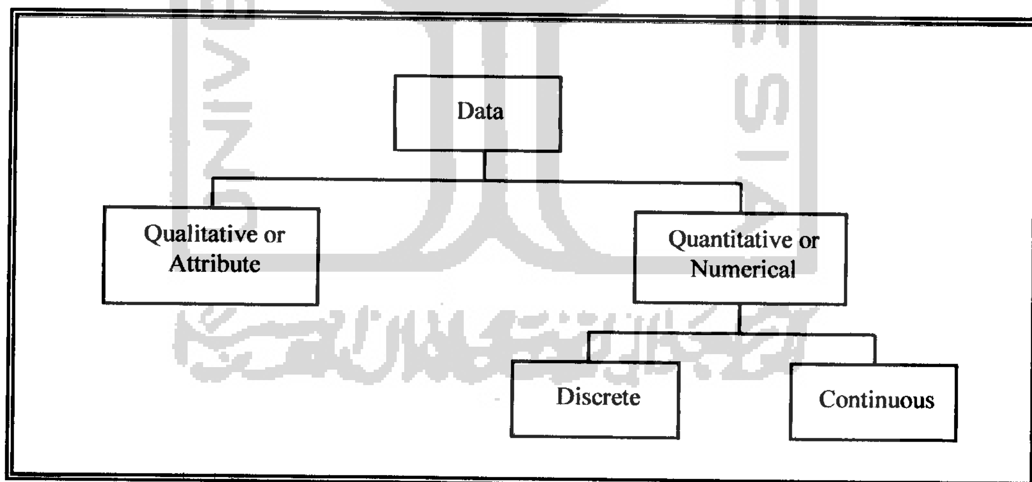
Several types of efficiency gains may flow from merger and acquisition activity. Of these, increased cost efficiency is most commonly mentioned. Many mergers have been motivated by a belief that a significant quantity of redundant operating costs could be eliminated through the consolidation of activities

CHAPTER III

RESEARCH METHOD

3.1 Research Method

This thesis used the quantitative analysis method because the characteristic or variable being studied can be reported numerically. There are two basic types of data: (1) those obtained from a qualitative population and (2) those obtained from quantitative population. Quantitative variable were either discrete or continuous. The discrete variables can assume only certain values, and there were usually gaps between the values. While continuous variables can assume any values within specific range. This study used the continuous one. The types of the variables were summarized in the figure 3-1[1]



[1] Figure 3-1

The Types of Variables

Source: Mason, Lind, and Marchal *Statistical Techniques in Business and Economics* Irwin Mc Graw-Hill 10th edition page 9, adapted.

3.2 Research Subject

3.2.1 Source of Data

This study was based on secondary data obtained from first, Directory of Indonesian Bank, in the form of balance sheet and income statements from 1994 to 2003. . While other supporter data obtained from study of related literature and institution. Data used in this analysis was data of cross section in the year 1997 - 2002. The time is pursuant to the period before the merger of the four government banks (Bank Bumi Daya, Bank Dagang Negara, Bank Ekspor Impor and Bank Pembangunan Indonesia), compared with the financial performance after merger during 1999 until 2003.

3.2.2 Population and Sample

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate. In this thesis the writer try to investigate whether the merger contribute significant profitability and efficiency in term of financial performance. The populations in this research are Mandiri Bank itself and the four banks that were merged; Bank Bumi Daya (BBD), Bank Dagang Negara (BBD), Ekspor Impor Bank (Exim), and Pembangunan Indonesia Bank (Bapindo).

A sample is a subset of the population. It comprises some members selected from the population. In other words, some elements of the population would form the sample. This thesis used the financial statements of Mandiri bank

and the four government banks that are formed into Mandiri Bank as the elements that observed to have some ratios for the samples. The ratios used by the writer is similar to Dupont analysis method; Return on Equity (ROE), Return on Assets (ROA), Net Profit Margin (NPM), Total assets Turnover (TATR), and Financial Leverage (FL). Those ratios reflect the profitability and efficiency of the company.

Profitability ratios reflect the overall performance of the business. Profit must be compared to the other information to evaluate the firm's profitability. There are two types of profitability ratios

1. *Profit margin ratios*, which indicate the relationship between profit and sales. The important profit margin ratios are: -

a. Gross profit margin ratio

This ratio computes the margin earned by the firm after incurring operational costs. It measures the efficiency of the production process and pricing policy of the firm. It is calculated as –

$$\frac{\text{Gross Profit}}{\text{Income}} \times 100\%$$

Figure 3 – 2

Gross Profit Margin ratio Equation

Where

Gross profit is the difference between Income and Operational cost.

b. Net profit margin ratio

The net profit margin ratio gives the earnings available for shareholders as a percentage of net sales. It is calculated as –

$$\frac{\text{Net Profit}}{\text{Income}} \times 100\%$$

Figure 3 – 3

Net Profit Margin ratio Equation

Where

Net profit is the difference between Income and Operational and Non Operational cost.

It measures the overall efficiency of the firm in relation to production, administration, selling, financing, pricing and tax management.

The gross and net profit margin ratios taken together provide an understanding of the firm's cost and profit structure. It also helps identify the sources of the firm's efficiency or inefficiency

2. *Rate of return ratios,* which examine the relationship between profit and investment. The important rate of return ratios are: -

a. Return on assets (ROA)

This ratio measures the degree to which capital is efficiently employed by the firm. It is calculated as –

$$\frac{\text{Net Profit}}{\text{Total Assets}}$$

Figure 3 – 4

Return on Assets ratio Equation

b. Earning power

Earning power is a measure of operating profitability. It is calculated as –

$$\frac{\text{Earnings before Interest and Tax}}{\text{Average Total Assets}}$$

Figure 3 – 5

Earning Power Equation

It measures the business performance, which is not affected by interest charges and tax payments and thus focuses on operating performance.

c. Return on equity

The return on equity measures the earnings from shareholders' investment and from the Dupont analysis ratio is calculated as

$$\frac{\text{Net Profit}}{\text{Total Equities}} \times 100\%$$

Figure 3 – 6

Return on Equity Equation

This measure is an important indicator of profitability. It indicates the productivity of the owners' capital employed. The return on equity is influenced by the firm's earning power, debt-equity ratio, average cost of debt to the firm and the tax rate.

Using Dupont analysis ratio the researcher find two kinds of profitability as well. *Profit margin ratio* represented by Net Profit Margin (NPM) and *rate of return ratios* are represented by Return on Assets (ROA) and Return on Equities (ROE).

A sample is a subset of the population. It comprises some members selected from the population. In other words, some elements of the population would form the sample.

3.2.3 The Period of Observation

This study was administered to the four state-owned banks; BankBumi Daya (BBD), Bank Dagang Negara (BDN), Ekspor Impor Bank (Exim), and Bank Pembangunan Indonesia (Bapindo) during 1994 – 1998 and Mandiri Bank during 1999 – 2003 based on their Financial Statement stated in Directory of Indonesian Banking.

3.3 Research Setting

This research was done in the environment of Faculty of Economics, Islamic University of Indonesia, Jogjakarta. Research was also done in the library of Bank Indonesia located in Jakarta.

3.4 Research Instrument

Data collection was executed by gathering secondary data that was available and quoting properly from data sources in the Directory of Indonesia

5. Financial Leverage (FL) measured from total assets divided by total equities. The use of fund source that have fixed burden in order to have addition of advantage larger than its fixed burden, so the profit for stockholder can increase.

3.7 Research Procedures

In order to answer the research problems it is imperative to construct research procedures. The procedures are arranged as follows:

1. Doing the statistical test to find out whether there were significant differences on the relationships among the seven variables
2. Analyzing and interpreting data.
3. Deriving conclusion and any other findings.

3.7 Techniques of Data Analysis

3.7.1 Method of Analysis

1. Dupont Analysis

Dupont analysis makes possible a simultaneous analysis of efficiency and profitability, and its show how they interact to determine ROE. Using Dupont analysis enable the researcher developed general approach that shows the return on equity is affected by total assets turnover (TATR), the net profit margin (NPM), and financial leverage (FL). ROE measures an important indicator of profitability. It indicates the productivity of the owners' capital employed.

The return on equity measures the earnings from shareholders' investment and from the Dupont analysis ratio is calculated as

$$ROE = \frac{\text{Net Profit}}{\text{Total Equities}} \times 100\,\%$$

Figure 3 – 7

ROE Equation

ROA measures the accounting income return to a company for each dollar of assets employed in the business. As shown in Figure 3 - 4, this can be expressed as a mathematical formula, consisting of profitability measure (NPM) and efficiency measure (TATR).

NPM measures income from on going operations per dollar of sales. TAX measures how many dollars in sales the firm is able to purchase for each dollar invested in total assets, or in other words, how efficient the management utilized assets to generate sales.

The DuPont analysis was proposed in this thesis in order to find profitability and efficiency simultaneously as explained above. The Dupont analysis decomposition allows financial statement users to measure what is the difference in profitability (NPM) and efficiency (TATR).

The Du Pont Company of the US pioneered a system of financial analysis, which has received widespread recognition and acceptance. This system of

analysis considers important interrelationships between different elements based on the information found in the financial statements.

3.7.2 Analysis Steps

The analysis steps to recognize this research were described as follows:

1. Identifying the financial statement element (Net Profit, Total Assets, Income, and Total Equities) of the four state-owned banks as required for Dupont analysis from 1994 to 1998.
2. Identifying the financial statement element (Net Profit, Total Assets, Income, and Total Equities) of the Mandiri Bank as required for Dupont analysis from 1999 to 2003.
3. Comparing the results of step 1 and 2 to ascertain where merger can give changes in profitability and efficiency of that bank..

3.7.3 Hypotheses Testing

H1o: ROE of banks before merger is not different significantly from ROE after merger.

H1a: ROE of banks before merger is different significantly from ROE after merger.

H2o: ROA of banks before merger is not different significantly from ROE after merger.

H2a: ROA of banks before merger is different significantly from ROE after merger.

H3o: NPM of banks before merger is not different significantly from NPM after merger.

H3a: NPM of banks before merger is different significantly from NPM after merger.

H4o: TATR of banks before merger is not different significantly from TATR after merger.

H4a: TATR of banks before merger is different significantly from TATR after merger.

H5o: Financial Leverage of banks before merger is not different significantly from Financial Leverage after merger

H5a: Financial Leverage of banks before merger is different significantly from Financial Leverage after merger

3.7.4 Statistical Test

Those hypotheses were tested with a two sample *t*-test using Statistical Package for Social Science (SPSS) 10.0 software for windows, the recommended test in case of paired data where the distribution of the data is normal. A two sample *t*-test is a hypothesis test for answering questions about the mean where

CHAPTER IV

RESEARCH FINDINGS, DISCUSSION, AND IMPLICATIONS

4.1 Research Description

In order to find out the profitability and efficiency of Mandiri bank before and after merger the writer compared the performance of Mandiri Bank during 1999 - 2003 and the fourth state-owned banks: Bank Bumi Daya (BBD), Bank Dagang Negara (BDN), Expor Impor Bank (Exim) and Bank Pembangunan Indonesia (Bapindo) from year 1994 to 1998

The reason why the writer used those four union banks is because there was no Mandiri Bank before 1999 and each bank operates separately. With the simulation merger by summarizing them before government officially announced the merger, the writer expected to get the fair comparison.

The researcher used the *t* test to compare the means of two groups. If the two sample means are far enough apart, the *t* test will yield a significant difference, thus permitting the researcher to conclude that the two populations probably do not have the same mean.

4.2 Profitability and Efficiency of Mandiri Bank before Merger

4.2.1 Profitability and Efficiency of BBD, BDN, Exim Bank and Bapindo

To know the profitability and efficiency of the four government banks before merger the researcher used some ratios in Dupont analysis system as explained on figure 4-1, figure 4-2, figure 4-3 and figure 4-4. Some indicators

that were used for example Return on Assets (ROA), Return on Equity (ROE), Total Assets Turnover (TATR) Net Profit Margin (NPM) and Financial Leverage (FL).

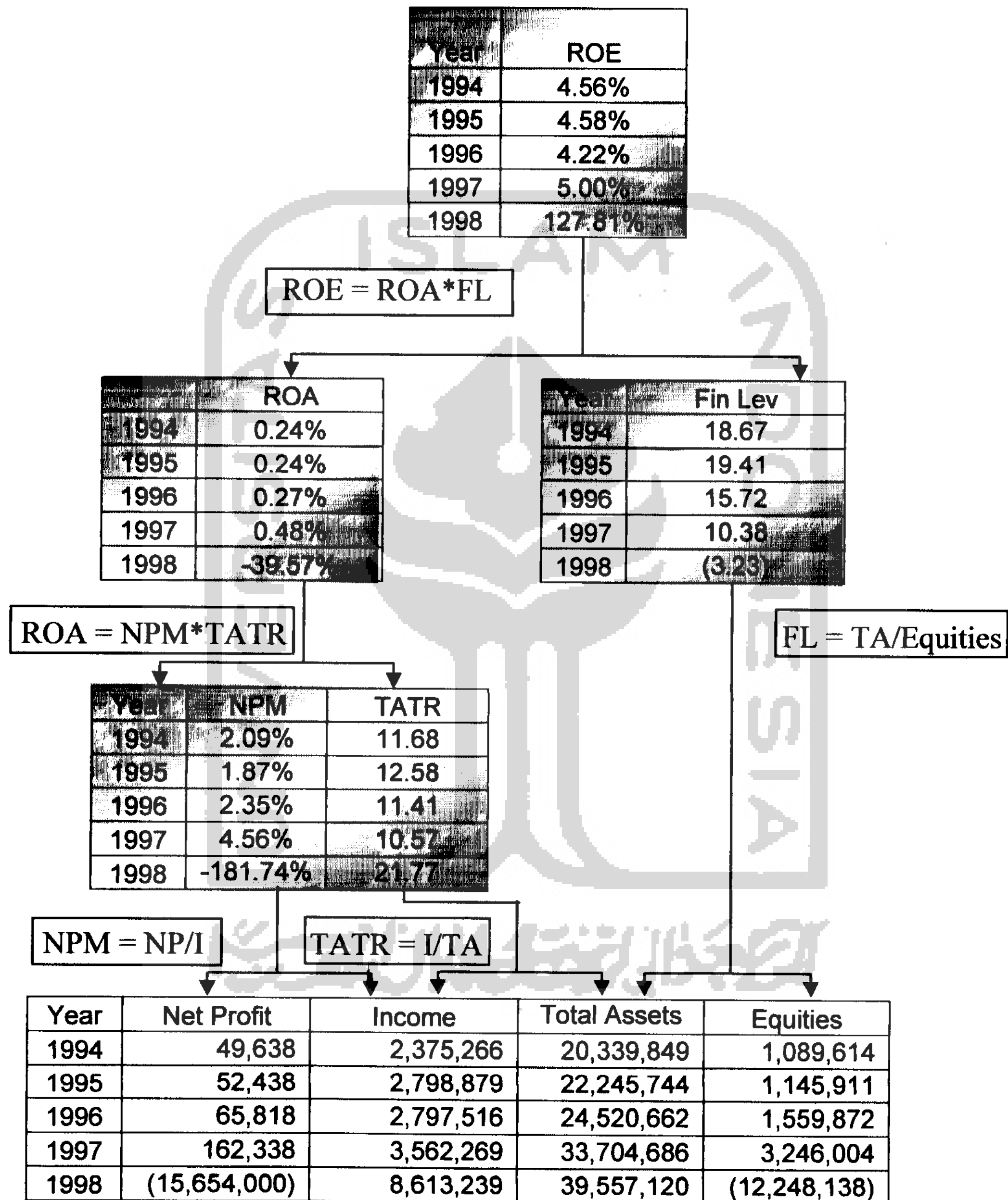
It seems that the financial performance of BDN bank (see figure 4-1) is better compared to BBD (figure 4-2) Bank in general. BDN Bank yield ROE which always above 11%, even in 1997 can yield the ROE for 17.31% increased from the previous year which only 11.72%, while ROE of BBD only obtain its best result in 1997 for ROE 5%. This result tells us that the profitability of BDN is better than BBD.

BDN yield ROE that was obtained from ROA and FL, which was also better than BBD. BDN seems to be more efficient compared to BBD. By its assets, which were larger, BDN is able to create the NPM to be bigger as well. BDN had the FL larger than BBD, it means that the comparison of asset owned by their equities was better.

It seems that the key factor for the financial performance of BDN was obtained from their ability to yield better NPM. From 1994 to 1997, their NPM increased from 5.90% becoming 6.93% in 1997. It was predicted that BDN was able to obtain more result that was profitable because their income was much the same, but their Net Profit was much bigger.

We try to compare the performance of these banks to find which bank was better. Bapindo bank represented the bank that was least healthy among the other three banks (figure 4-4). Dupont Analysis ratio in figure 3 and 4 tells

Figure 4-1
Dupont Analysis of BBD
1994 - 1998



Year	ROE
1994	4.56%
1995	4.58%
1996	4.22%
1997	5.00%
1998	127.81%

Year	ROA
1994	0.24%
1995	0.24%
1996	0.27%
1997	0.48%
1998	-39.57%

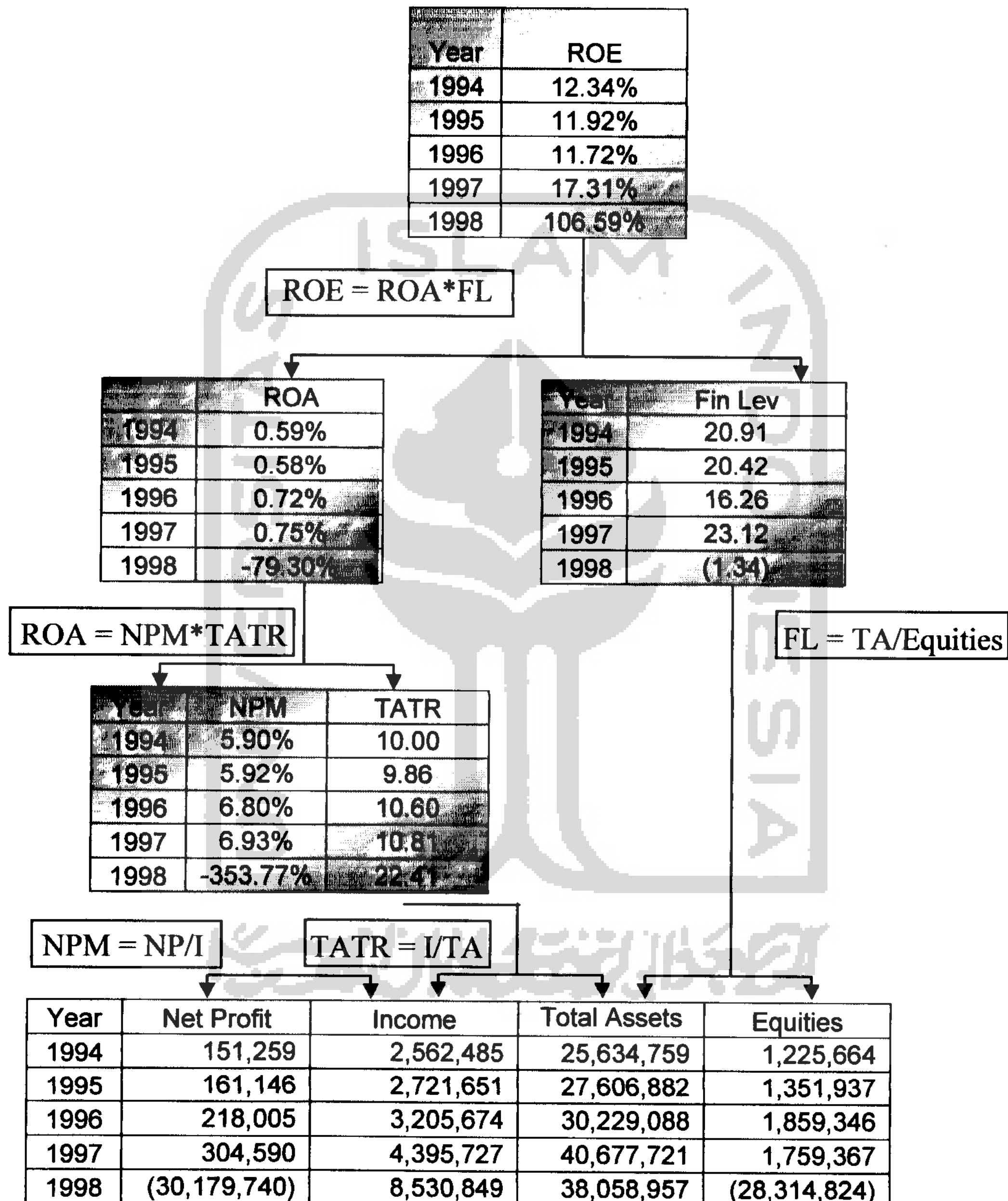
Year	Fin Lev
1994	18.67
1995	19.41
1996	15.72
1997	10.38
1998	(3.23)

Year	NPM	TATR
1994	2.09%	11.68
1995	1.87%	12.58
1996	2.35%	11.41
1997	4.56%	10.57
1998	-181.74%	21.77

Year	Net Profit	Income	Total Assets	Equities
1994	49,638	2,375,266	20,339,849	1,089,614
1995	52,438	2,798,879	22,245,744	1,145,911
1996	65,818	2,797,516	24,520,662	1,559,872
1997	162,338	3,562,269	33,704,686	3,246,004
1998	(15,654,000)	8,613,239	39,557,120	(12,248,138)

ROE: Return On Equity
ROA: Return On Assets
FL: Financial Leverage
NPM: Net Profit Margin
TATR: Total Assets Turnover
TA: Total Assets
I : Income

Figure 4-2
Dupont Analysis of BDN
1994 - 1998



Year	ROE
1994	12.34%
1995	11.92%
1996	11.72%
1997	17.31%
1998	106.59%

Year	ROA
1994	0.59%
1995	0.58%
1996	0.72%
1997	0.75%
1998	-79.30%

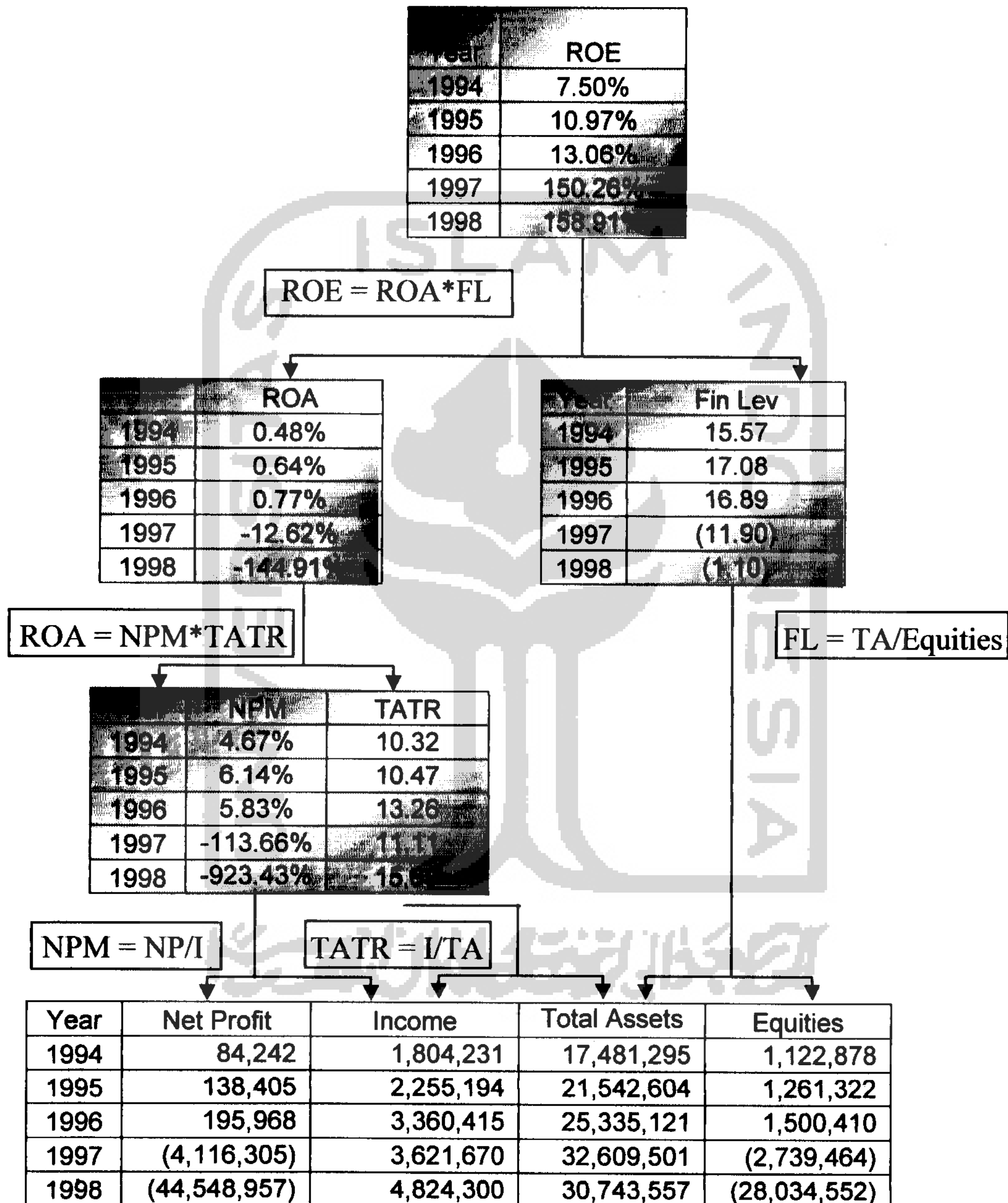
Year	Fin Lev
1994	20.91
1995	20.42
1996	16.26
1997	23.12
1998	(1.34)

Year	NPM	TATR
1994	5.90%	10.00
1995	5.92%	9.86
1996	6.80%	10.60
1997	6.93%	10.81
1998	-353.77%	22.41

Year	Net Profit	Income	Total Assets	Equities
1994	151,259	2,562,485	25,634,759	1,225,664
1995	161,146	2,721,651	27,606,882	1,351,937
1996	218,005	3,205,674	30,229,088	1,859,346
1997	304,590	4,395,727	40,677,721	1,759,367
1998	(30,179,740)	8,530,849	38,058,957	(28,314,824)

ROE: Return On Equity
ROA: Return On Assets
FL: Financial Leverage
NPM: Net Profit Margin
TATR: Total Assets Turnover
TA: Total Assets
I : Income

Figure 4-3
Dupont Analysis of Exim Bank
1994 - 1998



Year	ROE
1994	7.50%
1995	10.97%
1996	13.06%
1997	150.26%
1998	158.91%

Year	ROA
1994	0.48%
1995	0.64%
1996	0.77%
1997	-12.62%
1998	-144.91%

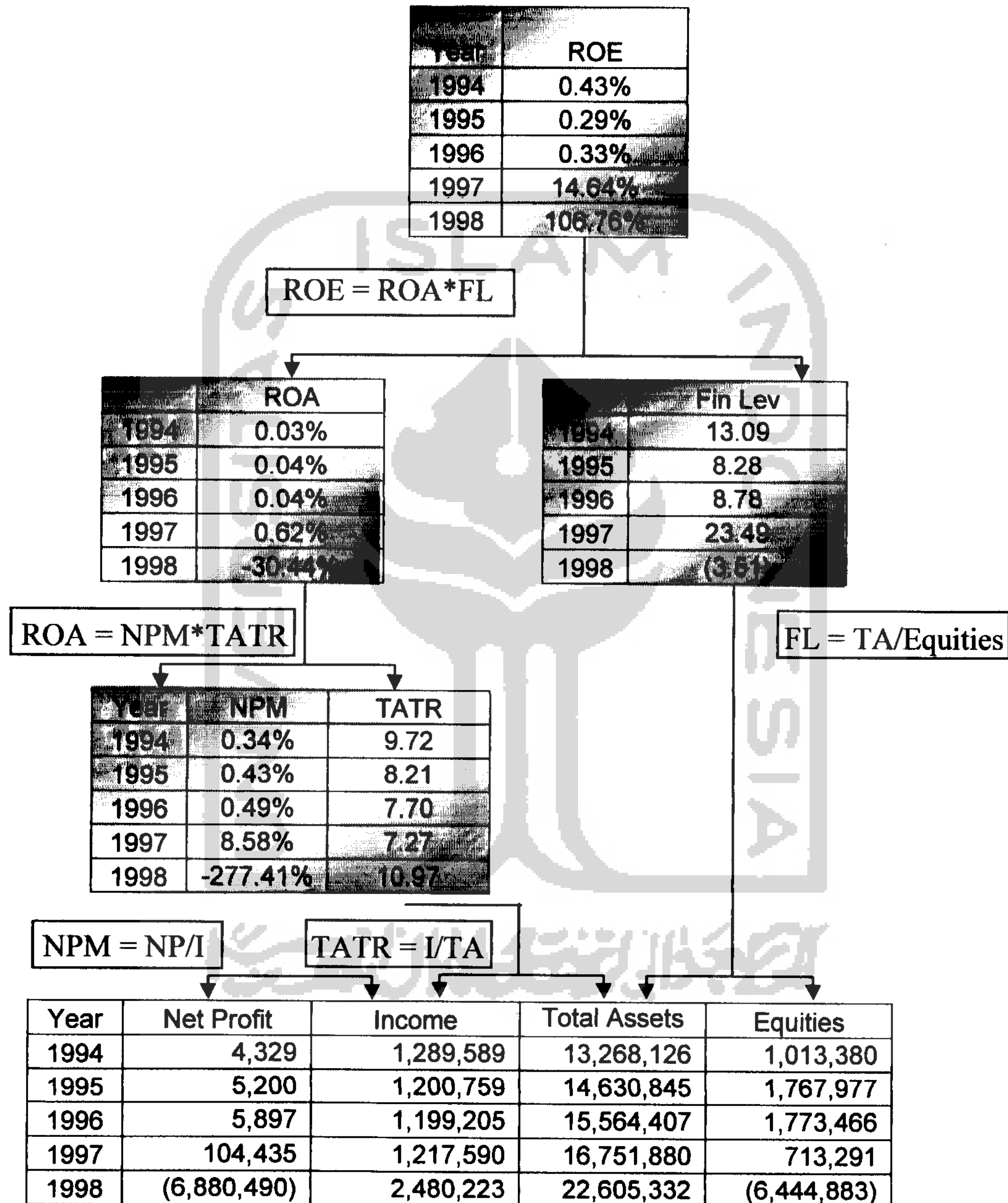
Year	Fin Lev
1994	15.57
1995	17.08
1996	16.89
1997	(11.90)
1998	(1.10)

Year	NPM	TATR
1994	4.67%	10.32
1995	6.14%	10.47
1996	5.83%	13.26
1997	-113.66%	11.11
1998	-923.43%	15.6[illegible]

Year	Net Profit	Income	Total Assets	Equities
1994	84,242	1,804,231	17,481,295	1,122,878
1995	138,405	2,255,194	21,542,604	1,261,322
1996	195,968	3,360,415	25,335,121	1,500,410
1997	(4,116,305)	3,621,670	32,609,501	(2,739,464)
1998	(44,548,957)	4,824,300	30,743,557	(28,034,552)

ROE: Return On Equity
ROA: Return On Assets
FL: Financial Leverage
NPM: Net Profit Margin
TATR: Total Assets Turnover
TA: Total Assets
I : Income

Figure 4-4
Dupont Analysis of Bapindo Bank
1994 - 1998



Year	ROE
1994	0.43%
1995	0.29%
1996	0.33%
1997	14.64%
1998	106.76%

Year	ROA
1994	0.03%
1995	0.04%
1996	0.04%
1997	0.62%
1998	-30.44%

Year	Fin Lev
1994	13.09
1995	8.28
1996	8.78
1997	23.49
1998	(3.51)

Year	NPM	TATR
1994	0.34%	9.72
1995	0.43%	8.21
1996	0.49%	7.70
1997	8.58%	7.27
1998	-277.41%	10.97

Year	Net Profit	Income	Total Assets	Equities
1994	4,329	1,289,589	13,268,126	1,013,380
1995	5,200	1,200,759	14,630,845	1,767,977
1996	5,897	1,199,205	15,564,407	1,773,466
1997	104,435	1,217,590	16,751,880	713,291
1998	(6,880,490)	2,480,223	22,605,332	(6,444,883)

ROE: Return On Equity
ROA: Return On Assets
FL: Financial Leverage
NPM: Net Profit Margin
TATR: Total Assets Turnover
TA: Total Assets
I : Income

4.2.2 Profitability and Efficiency Analysis of BDN, BBD, Exim, and Bapindo (in average) before Merger

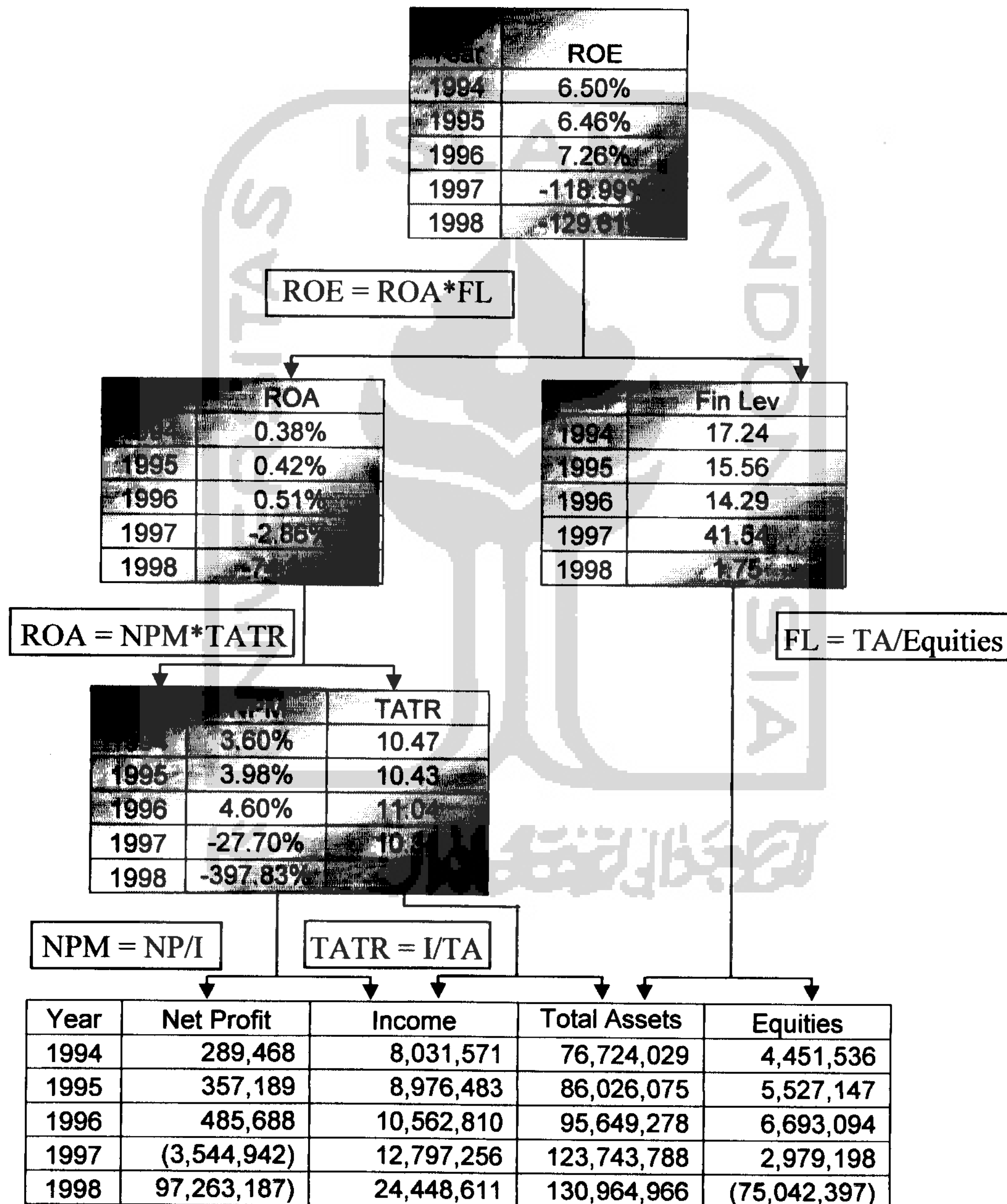
After we analyzed the performance on each bank, we try to analyze the performance if thet were combined together (figure 4 – 5). With the simulation of merger before officially announced by government in 1998, since year 1993 - 1998, Dupont analysis ratios by combining the four banks (figure 4-5) not significantly different with the previous analysis where the result these combinations of four government banks represent as the unhealthy bank. Therefore, merger of the four unhealthy banks is still about to be questioned by public until today.

We combined the Net Profit, Income Total Assets, and Equities of the four banks (see appendix 3), than analyzed them into the same way. The Dupont Analysis ratio for the combination of those for banks showed poor performance, since those four banks were categorized as unhealthy bank before they merged. ROE of Mandiri before merger indeed increased from 1994 to 1996, but decreased along the crisis in 1997 and 1998. The increased seems gathered from the increasing of profitability and efficiency represented by return on assets (ROA), while the financial leverage decrease from 1994 to 1996.

The decreasing of financial leverage represent the increasing of its equity compare to its assets, hence the debt for financing their operation decreased. Financial leverage measures ratio of total assets to its equity, if their

debt decrease the equity will increased, hence the ratio of financial leverage will decrease.

Figure 4-5
Dupont Analysis BBD, BDN, Exim Bank & Bapindo in average
1994 - 1998



Year	Net Profit	Income	Total Assets	Equities
1994	289,468	8,031,571	76,724,029	4,451,536
1995	357,189	8,976,483	86,026,075	5,527,147
1996	485,688	10,562,810	95,649,278	6,693,094
1997	(3,544,942)	12,797,256	123,743,788	2,979,198
1998	97,263,187)	24,448,611	130,964,966	(75,042,397)

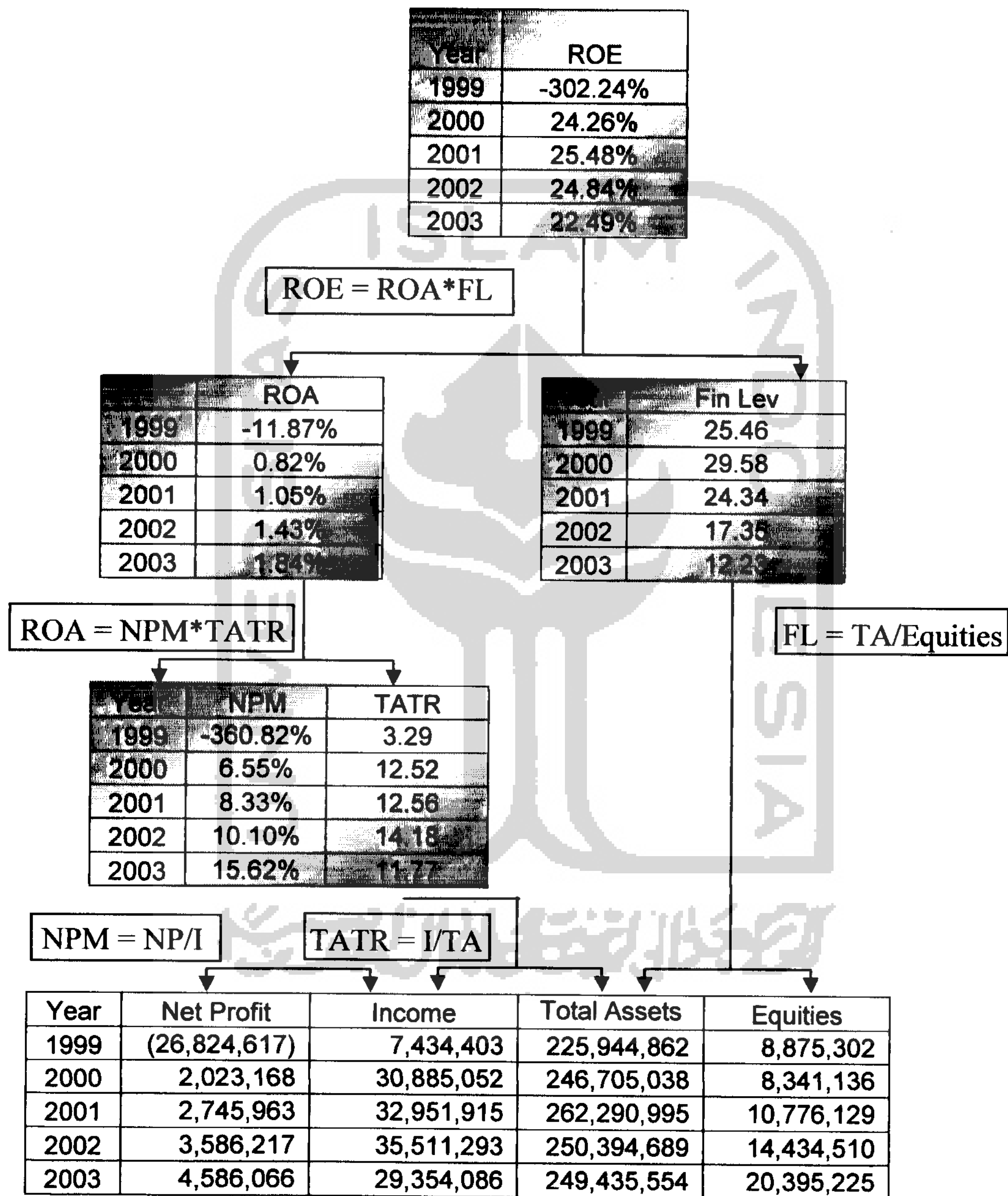
4.3 Profitability and Efficiency Analysis of Mandiri after Merger

The return on total assets (ROA) ratios of Mandiri banks for five years since its first operation was good (see figure 4-6). Even they performed in small amount, the ratio of Mandiri Bank on its profitability and efficiency tend to increase. From only -11.87% in 1999 became 1.84% at the end of 2003, but they still categorized as poor financial performance.

The financial leverage (FL) ratios of Mandiri bank during 1999 – 2003 decreased, that represents the debt of Mandiri bank also decreased. The financial leverage measures the comparison of total assets to its total equity. If the company has no debt, it means its assets financed only by common equity, the return on assets (ROA) and the return on equity (ROE) would be the same, because the total assets would equal to the common equity. The more the debt, the less the equity, hence the higher the financial leverage.

The profitability of Mandiri bank from 1999 to 2003 indicate a good progress. The ratios are increasing for only -360.82% in 1999 into 15.62% in 2003. while the efficiency of Mandiri bank which is represented by its total assets turnover ratio (TATR), also getting increased. TATR of Mandiri bank performed from only 3.29 in 1999 became 14.18 in the end of 2002, but decreased in 2003.

Figure 4-6
Dupont Analysis of Mandiri Bank
1999 - 2003



Year	ROE
1999	-302.24%
2000	24.26%
2001	25.48%
2002	24.84%
2003	22.49%

	ROA
1999	-11.87%
2000	0.82%
2001	1.05%
2002	1.43%
2003	1.84%

	Fin Lev
1999	25.46
2000	29.58
2001	24.34
2002	17.35
2003	12.2[illegible]

Year	NPM	TATR
1999	-360.82%	3.29
2000	6.55%	12.52
2001	8.33%	12.56
2002	10.10%	14.18
2003	15.62%	11.77

Year	Net Profit	Income	Total Assets	Equities
1999	(26,824,617)	7,434,403	225,944,862	8,875,302
2000	2,023,168	30,885,052	246,705,038	8,341,136
2001	2,745,963	32,951,915	262,290,995	10,776,129
2002	3,586,217	35,511,293	250,394,689	14,434,510
2003	4,586,066	29,354,086	249,435,554	20,395,225

ROE: Return On Equity
ROA: Return On Assets
FL: Financial Leverage
NPM: Net Profit Margin
TATR: Total Assets Turnover
TA: Total Assets
I : Income

Summary of Kolmogorov-Smirnov Test

For Mandiri Bank before Merger

Variable	Absolute	Asymp. Sign.
ROE	[illegible]	0.515
ROA	0.445	0.275
[illegible]	[illegible]	[illegible]
NPM	0.422	0.335
[illegible]	[illegible]	[illegible]

Figure 4-7
Summary of Kolmogorov-Smirnov Test for Mandiri Bank before Merger

Summary of Kolmogorov-Smirnov Test

For Mandiri Bank after Merger

Variable	Absolute	Asymp. Sign.
[illegible]	[illegible]	[illegible]
ROA	0.443	0.279
[illegible]	[illegible]	[illegible]
NPM	0.465	0.230
[illegible]	[illegible]	[illegible]

Figure 4-8
Summary of Kolmogorov-Smirnov Test for Mandiri Bank after Merger

Next, we have to calculate Kolmogorov Smirnov Table. It can be obtained from the formula:

$$D = \frac{1{,}36}{\sqrt{n}}$$

Figure 4-9

The Formula of Kolmogorov Smirnov Table.

Where n = 5,

we can find that the amount of Kolmogorov Smirnov Table (D) was 0.608

In testing the normality, we compared the test statistic to the formula result. If Kolmogorov Smirnov Statistic (Absolute) is less than Kolmogorov Smirnov Table (D) 0.608, the distribution of data was normal or if the probability (Asymp. Sig.) was higher than the level of significance, for example 0.05 or 0.01, the distribution of the data was normal.

Based on comparison of the data above, we can state that, most of Kolmogorov Smirnov Count (Absolute) of each variable was less than Kolmogorov Smirnov Table (D) 0.608 and most of the probability (Asymp. Sig.) of each variable was higher than 0.05 significant levels. Therefore, we can conclude that the distribution of the data was normal.

4.5 Research Findings

To test the hypothesis whether there were significant differences on profitability and efficiency from Mandiri bank before merger compare to Mandiri bank after merger, the researcher use paired sample t-test. The paired sample t-test is probably the most widely used statistical test of all time, and certainly the most widely known. It is simple, straightforward, easy to use, and adaptable to a broad range of situations.

The researcher used the t-test to compare the means of two groups. If the two sample samples means are far enough apart, the t-test will yield a significant difference, thus permitting the researcher to conclude that the two populations probably do not have the same mean.

The significance level of a statistical hypothesis test is a fixed probability of wrongly rejecting the null hypothesis H_0, if it is in fact true. The significance level that probably most widely used by researchers is 5% or 1% that set before testing the hypothesis. The researcher here used level of significance (α) at 0.05 (equivalently, 5%), which has smaller range of acceptance of H_0 which also means bigger standard error than α at 1%.

If our observed value of **t** had ended up more than 0.05, the result of the experiment would be non-significant on the contrary, if our observed value ended at 0.05 or less than, so the result of the experiment would be significant.

Results reported are the α value from

Paired t-test between Mandiri Bank before and after Merger

α Value	Sig. (2-tailed)
Hypothesis 1 ROE	0.958
Hypothesis 2 ROA	0.432
Hypothesis 3 FL	0.62[illegible]
Hypothesis 4 NPM	0.887
Hypothesis 5 TATR	0.60[illegible]

Figure 4-10
Results reported are the ρ value from paired t-test between Mandiri Bank before Merger and After Merger

Whenever you perform a statistical test, what you are testing, fundamentally, is the null hypothesis. In general, the null hypothesis is the logical antithesis of whatever hypothesis it is that the investigator is seeking to examine. For the present thesis, the research hypothesis is that the merger has different effects on its ROE, ROA, FL, NPM, and TATR, so the null hypothesis is that they do not have different effects. Its immediate implication is that any difference we find between the means of the two samples should not significantly differ from zero.

Interpreting Weight of Evidence Against Ho

If the ρ-value is less than (α = 10%)

a. 0.10 we have *some* evidence that *Ho* is not true

b. 0.05 we have *strong* evidence that *Ho* is not true

c. 0.01 we have *very strong evidence* that *Ho* is not true.

d. 0.001 we have *extremely strong* evidence that *Ho* is not true.

Figure 4-11

Interpreting Weight of Evidence Against Ho

Source: Mason, Lind, and Marchal *Statistical Techniques in Business and Economics* Irwin Mc Graw-Hill 10th edition page 317, adapted.

Results of paired t-test were presented briefly in figure 4-10 (See appendix 1, 2, and 3 for the long form test result). The result showed that the profitability and performance of Mandiri Bank was not differs significantly from the profitability and performance of Mandiri Bank before merger. The performance of Mandiri bank before merger and after merger as measured by ROE, ROA, FL, NPM, and TATR from 1997 to 2002, showed the same result.

Hypothesis 1, which is related to ROE, H1o was accepted (ρ = 0.958), means there was no significant difference between ROE before merger

compare to ROE after merger at 5% level on the paired t-test. (ρ value which is greater than 0.05 in all years).

Hypothesis 2, which is related to ROA, H1o was accepted (ρ = 0.432), means that there was no significant difference between ROA before merger compare to ROA after merger at the 0.05 level on the paired t-test. (ρ value greater than 0.05 in all years)

Hypothesis 3, which is related to financial leverage, H3o was accepted (ρ = 0.626), means there was no significant difference between ROE before merger compare to financial leverage after merger (ρ value greater than 0.05 in all years).

Hypothesis 4, which is related to NPM, H4o was accepted (ρ = 0.887), means there was no significant difference between NPM before merger compare to NPM after merger at the 5% level on the paired t-test. (ρ value greater than 0.05 in all years)

Hypothesis 5, which is related to TATR, H1o was accepted (ρ = 0.605), means there was no significant difference between TATR before merger compare to TATR after merger

The hypothesis could also be tested by comparing t (count) statistic with t table. With the df (n-1) 4, we could find that the value of the t table was 2.262 (α = 5%, two-tailed test). If t counts less than t table, the null hypothesis was not rejected (see appendix 1, 2, 3 for t count). From the comparison, we could conclude that all of the data showed that t count was less than t table or all of them were not significant at the 0.05 levels.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Based on the study result we can learn a great deal about merger and its implications to the profitability and efficiency. We found that the profitability and efficiency of Mandiri Bank before merger was not differ significantly from profitability and efficiency after merger. Some of the findings that can be gleaned from the financial data and statistical test result are as follows:

1. There was no significant difference in ROE between Mandiri Bank before merger and after merger.
2. There was no significant difference in ROA between Mandiri Bank before merger and after merger.
3. There was no significant difference in Financial Leverage between Mandiri Bank before merger and after merger.
4. There was no significant difference in NPM between Mandiri Bank before merger and after merger.
5. There was no significant difference in TATR between Mandiri Bank before merger and after merger.

The ROA performance of Mandiri bank can be determined by the behavior of its profitability (NPM) and efficiency (TATR). In cases when both measures moves in opposite direction or stay the same, ROA will follow the

same path. The behavior of ROA during periods when profitability and efficiency measures move in the opposite directions will be determined by the direction and magnitude of these changes.

5.2 Recommendation

Considering the possibilities that will be faced by Mandiri Bank in Asian Free Trade Agreement (AFTA) and as a privatized Bank, hence the writer made the following recommendations:

For this kind of research, it will be necessary for managers or decision makers to consider about the reality that merger will increase profitability and efficiency instead of avoiding liquidation by the government. To achieve a higher level of profitability (NPM), Mandiri Bank has to improve the income by increasing the desire of customers in using its products and services. Improving income can also be achieved by developing new segment of customers that may not already be seriously served, so that Mandiri bank can use the customers as the engine growth.

There are two suggestions that expectedly can give contribution for the future researchers. First, this research employs Dupont analysis which is only one of the other analysis systems. It suggests the next researchers to consider applying another analysis system for giving stronger evidences. Second, the period of sample that was taken should be extended.

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Appendix 1

Resume of Financial Statement of BBD, and BDN before Merger

(in million rupiah)

No	BANK	Income	Net Income Before Tax	Tax	Net Income After Tax	Total Assets	Current Liuabilities	Long-Term Liabilities	Total Liabilities	Equities	Dividen	Tenaga Kerja	Tingkat Kese-Hatan
1	BBD												
	1994	2,375,266	74,274	24,636	49,638	20,339,849	-	-	19,250,235	1,089,614	13,676	7,756	S
	1995	2,798,879	91,209	38,771	52,438	22,245,744	-	-	21,099,833	1,145,911	37,719	7,835	S
	1996	2,797,516	102,629	36,811	65,818	24,520,662	-	-	22,960,790	1,559,872	-	7,585	S
	1997	3,562,269	236,578	74,240	162,338	33,704,686	24,442,392	6,016,290	30,458,682	3,246,004	64,928	8,353	TS
	1998	8,613,239	(15,654,000)	-	(15,654,000)	39,557,120	44,145,989	7,659,269	51,805,258	(12,248,138)			
2	BDN												
	1994	2,562,485	227,930	76,671	151,259	25,634,759	-	-	24,409,095	1,225,664	13,904	5,708	S
	1995	2,721,651	236,106	74,960	161,146	27,606,882	-	-	26,254,945	1,351,937	50,000	8,860	S
	1996	3,205,674	305,000	86,995	218,005	30,229,088	-	-	28,369,742	1,859,346	53,689	9,051	S
	1997	4,395,727	444,430	139,840	304,590	40,677,721	28,873,018	10,045,336	38,918,354	1,759,367	72,351	9,113	S
	1998	8,530,849	(30,042,544)	137,196	(30,179,740)	38,058,957	53,241,599	13,132,182	66,373,781	(28,314,824)	23,712	8,923	KS

Appendix 2

Resume of Financial Statement of Exim, and Bapindo before Merger

(in million rupiah)

No	BANK	Income	Net Income Before Tax	Taxes	Net Income After Tax	Total Assets	Current Liabilities	Long-term Liabilities	Total Liabilities	Equities
3	**Bank Exim**									
	1994	1,804,231	186,217	101,975	84,242	17,481,295	-	-	16,358,417	1,122,878
	1995	2,255,194	212,838	74,433	138,405	21,542,604	-	-	20,281,282	1,261,322
	1996	3,360,415	290,390	94,422	195,968	25,335,121	-	-	23,834,711	1,500,410
	1997	3,621,670	(4,116,305)	-	(4,116,305)	32,609,501	28,347,588	7,001,377	35,348,965	(2,739,464)
	1998	4,824,300	(44,548,957)	-	(44,548,957)	30,743,557	46,223,293	12,554,816	58,778,109	(28,034,552)
4	**Bapindo**									
	1994	1,289,589	17,302	12,973	4,329	13,268,126	-	-	12,254,746	1,013,380
	1995	1,200,759	10,410	5,210	5,200	14,630,845	-	-	12,862,868	1,767,977
	1996	1,199,205	11,794	5,897	5,897	15,564,407	-	-	13,790,941	1,773,466
	1997	1,217,590	199,437	95,002	104,435	16,751,880	9,000,768	7,037,821	16,038,589	713,291
	1998	2,480,223	(6,880,490)	-	(6,880,490)	22,605,332	22,942,149	6,108,066	29,050,215	(6,444,883)

Appendix 3

Net Profit, Income, Total Assets, and Equities of Mandiri Bank before Merger

Net Profit of BBD, BDN, Exim, and BPND 1994 – 1998 in average

	BBD	BDN	EXIM	BPND	MNDR
1994	49,638	151,259	84,242	4,329	289,468
1995	52,438	161,146	138,405	5,200	357,189
1996	65,818	218,005	195,968	5,897	485,688
1997	162,338	304,590	(4,116,305)	104,435	(3,544,942)
1998	(15,654,000)	(30,179,740)	(44,548,957)	(6,880,490)	(97,263,187)

Income of BBD, BDN, Exim, and BPND 1994 – 1998 in average

	BBD	BDN	EXIM	BPND	MNDR
1994	2,375,266	2,562,485	1,804,231	1,289,589	8,031,571
1995	2,798,879	2,721,651	2,255,194	1,200,759	8,976,483
1996	2,797,516	3,205,674	3,360,415	1,199,205	10,562,810
1997	3,562,269	4,395,727	3,621,670	1,217,590	12,797,256
1998	8,613,239	8,530,849	4,824,300	2,480,223	24,448,611

Total assets of BBD, BDN, Exim, and BPND 1994 – 1998 in average

	BBD	BDN	EXIM	BPND	MNDR
1994	20,339,849	25,634,759	17,481,295	13,268,126	76,724,029
1995	22,245,744	27,606,882	21,542,604	14,630,845	86,026,075
1996	24,520,662	30,229,088	25,335,121	15,564,407	95,649,278
1997	33,704,686	40,677,721	32,609,501	16,751,880	123,743,788
1998	39,557,120	38,058,957	30,743,557	22,605,332	130,964,966

Equities of BBD, BDN, Exim, and BPND 1994 – 1998 in average

	BBD	BDN	EXIM	BPND	MNDR
1994	1,089,614	1,225,664	1,122,878	1,013,380	4,451,536
1995	1,145,911	1,351,937	1,261,322	1,767,977	5,527,147
1996	1,559,872	1,859,346	1,500,410	1,773,466	6,693,094
1997	3,246,004	1,759,367	(2,739,464)	713,291	2,979,198
1998	(12,248,138)	(28,314,824)	(28,034,552)	(6,444,883)	(75,042,397)

BBD : Bank Bumi Daya
BDN : Bank Dagang Negara
EXIM : Exim Bank
BPND : Bank Pembangunan Indonesia
MNDR : Mandiri Bank. = BBD + BDN + EXIM + BPND

Appendix 4

Resume of Financial Statement of Mandiri Bank after Merger

(in million rupiah)

No	BANK	Income	Net Income Before Tax	Tax	Net Income After Tax	Total Assets	Total Liabilities	Equities
1	**BDN**							
	1999	7434403	-26820313	4304	-26824617	225,944,862	217,069,560	8,875,302
	2000	30885052	2023479	311	2023168	246,705,038	238,363,902	8,341,136
	2001	32951915	3850438	1104475	2745963	262,290,995	47,950,226	10,776,129
	2002	35511293	5809970	2223753	3586217	250,394,689	235,960,179	14,434,510
	2003	29354086	7031524	2445458	4586066	249,435,554	229,040,329	20,395,225

NPar Test

Appendix 5

One-Sample Kolmogorov-Smirnov Test ROE, ROA, Financial Leverage, NPM, and TATR of Mandiri Bank Before Merger

		ROE (%)_ Before Merger	ROA (%)_ Before Merger	Financial Leverage_ Before Merger
N		5	5	5
Normal Parameters[a,b]	Mean	-45.6760	-15.1640	18.0760
	Std. Deviation	71.8724	33.0721	14.4781
Most Extreme Differences	Absolute	.366	.445	.323
	Positive	.246	.318	.323
	Negative	-.366	-.445	-.197
Kolmogorov-Smirnov Z		.818	.995	.722
Asymp. Sig. (2-tailed)		.515	.275	.674

One-Sample Kolmogorov-Smirnov Test

		NPM(%)_ Before Merger	TATR_ Before Merger
N		5	5
Normal Parameters[a,b]	Mean	-82.6700	12.1900
	Std. Deviation	176.7161	3.6329
Most Extreme Differences	Absolute	.422	.424
	Positive	.311	.424
	Negative	-.422	-.305
Kolmogorov-Smirnov Z		.944	.949
Asymp. Sig. (2-tailed)		.335	.329

Appendix 6

One-Sample Kolmogorov-Smirnov Test ROE, ROA, Financial Leverage, NPM, and TATR of Mandiri Bank After Merger

		ROE (%)_ After Merger	ROA (%)_ After Merger	Financial Leverage_ After Merger
N		5	5	5
Normal Parameters[a,b]	Mean	-41.0228	-1.3460	21.7920
	Std. Deviation	146.0228	5.8958	6.9239
Most Extreme Differences	Absolute	.468	.443	.244
	Positive	.324	.294	.139
	Negative	-.468	-.443	-.244
Kolmogorov-Smirnov Z		1.047	.991	.545
Asymp. Sig. (2-tailed)		.223	.279	.928

One-Sample Kolmogorov-Smirnov Test

		NPM (%)_ After Merger	TATR_ After Merger
N		5	5
Normal Parameters[a,b]	Mean	-64.0440	10.8640
	Std. Deviation	165.9376	4.3244
Most Extreme Differences	Absolute	.465	.383
	Positive	.316	.222
	Negative	-.465	-.383
Kolmogorov-Smirnov Z		1.039	.856
Asymp. Sig. (2-tailed)		.230	.456

a. Test distribution is Normal

b. Calculated from data

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T-Test

Appendix 8

Paired Samples Statistic

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	VAR.1 ROE (%)_Before Merger	-45.6760	5	71.8724	32.1423
	VAR_1 ROE (%)_After Merger	-41.03	5	146.02	65.30
Pair 2	VAR.2 ROA (%)_Before Merger	-15.1640	5	33.0721	14.7903
	VAR_2 ROA (%)_After Merger	-1.3460	5	5.8958	2.6367
Pair 3	VAR.3 FL (%)_Before Merger	18.0760	5	14.4781	6.4748
	VAR_3 FL (%)_After Merger	21.7920	5	6.9239	3.0965
Pair 4	VAR.4 NPM (%)_Before Merger	-82.6700	5	176.7161	79.0298
	VAR_4 NPM (%)_After Merger	-64.0440	5	165.9376	74.2096
Pair 5	VAR.5 TATR_Before Merger	12.1900	5	3.6329	1.6247
	VAR_5 TATR_After Merger	10.8640	5	4.3244	1.9339

T-Test

Appendix 10

Paired Samples Test

		Paired Difference					t	df	Sig (2-tailed)
					95% Confidence Interval of the difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	VAR.1 ROE (%)_Before Merger - VAR_1 ROE (%)_After Merger	-4.6420	186.8709	83.5712	-236.67	227.3889	-.056	4	.958
Pair 2	VAR.2 ROA (%)_Before Merger - VAR_2 ROA (%)_After Merger	-13.8180	35.3800	15.8224	-57.7480	30.1120	-.873	4	.432
Pair 3	VAR.3 FL_Before Merger – VAR_3 FL_After Merger	-3.7160	15.7407	7.0394	-23.2606	15.8286	-.528	4	.626
Pair 4	VAR.4 NPM (%)_Before Merger - VAR_4 NPM (%)_After Merger	-18.6260	275.4349	123.1782	-360.6236	323.3716	-.151	4	0887
Pair 5	VAR.5 TATR_Before Merger - VAR_5 TATR_After Merger	1.3260	5.2867	2.3643	-5.2383	7.8903	-.561	4	.605

T-Test

Appendix 11

Case Summaries

	VAR.1 ROE (%)_Before Merger	VAR.1 ROA (%)_Before Merger	VAR.1 Financial Leverage_ Before Merger	VAR.1 NPM (%)_Before Merger	VAR.1 TATR _Before Merger
1	6.50	0.38	17.24	3.60	10.47
2	6.46	0.42	15.56	3.98	10.43
3	7.26	0.51	14.29	4.60	11.04
4	-118.99	-2.86	41.54	-27.70	10.34
5	-129.61	-74.27	1.75	-397.83	18.67
Total N	5	5	5	5	5

Case Summaries

	VAR_1 ROE (%)_After Merger	VAR_2 ROA (%)_After Merger	VAR_3 Financial Leverage_ After Merger	VAR_4 NPM (%)_After Merger	VAR_5 TATR _After Merger
1	-302.24	-11.87	25.46	-360.82	3.29
2	24.26	0.82	29.58	6.55	12.52
3	1.28	1.05	1.22	8.33	12.56
4	24.84	1.43	17.35	10.10	14.18
5	22.49	1.84	12.23	15.62	11.77
Total N	5	5	5	5	5