

# Analysis of the implementation of green banking in achieving operational cost efficiency in the banking industry

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## ABSTRACT

Green banking is a banking decision to provide banking programs or services to the only customers who consider about environmental and social impacts. The purposes of this study are to obtain empirical evidence that PT Bank Rakyat Indonesia (Persero) Tbk has implemented green banking and to find out the relationship between the implementation of green banking and the efficiency of operational cost in PT Bank Rakyat Indonesia (Persero) Tbk in the period of 2014 – 2016. This study is a qualitative research, which uses case study method for research method. The result of this study shows that BRI Kertajaya Surabaya Branch has not officially implemented green banking yet. The policy is only limited to the use of paperless program. However, based on the efficiency that is counted with operating costs and operating income (BOPO), the bank is included in a category of efficient.

## ABSTRAK

Green banking (perbankan hijau) adalah keputusan perbankan untuk menyediakan program atau layanan perbankan bagi satu-satunya pelanggan yang mempertimbangkan dampak lingkungan dan sosial. Tujuan dari penelitian ini adalah untuk memperoleh bukti empiris bahwa PT Bank Rakyat Indonesia (Persero) Tbk telah menerapkan perbankan hijau dan untuk mengetahui hubungan antara penerapan perbankan hijau dan efisiensi biaya operasional di PT Bank Rakyat Indonesia (Persero) Tbk. pada periode 2014 - 2016. Penelitian ini adalah penelitian kualitatif, yang menggunakan metode studi kasus untuk metode penelitian. Hasil penelitian ini menunjukkan bahwa BRI Kertajaya Cabang Surabaya belum secara resmi menerapkan perbankan hijau. Kebijakan ini hanya terbatas pada penggunaan program tanpa kertas. Namun, berdasarkan efisiensi yang dihitung dengan biaya operasional dan pendapatan operasional (BOPO), bank tersebut termasuk dalam kategori efisien.

## 1. INTRODUCTION

The more active the economy runs, such as in the industrial sector, the greater the environmental damage will occur. One party that seeks to show its concern for the environment is the banking sector. This sector seeks to develop environmentally friendly banking, commonly known as green banking. At present there are too many sectors of the economy that use paper in its operational activities, which in turn will have an impact on the environment. This is in accordance with the data shown by the Indonesian Pulp & Paper Association Directory.

The increasing level of paper use in Indonesia requires the implementation of an environmentally

friendly activity, particularly in the banking sector, by implementing a green banking system, which indirectly provides benefits to the ecosystem in Indonesia. Green banking is a concept of a financial institution that gives priority to sustainability in its business practices. Green banking is based on four elements of life, namely nature, well-being, economy, and society. A "green" bank will integrate the four elements in business principles that care about ecosystems and the quality of human life which ultimately result in the emerge of output in the form of efficiency in operating costs, competitive advantage, corporate identity, and strong brand image and the achievement of balanced business

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targets. (World Bank 2010). Green banking can also be interpreted as a greening that balances the use of natural resources to the preservation of the environment.

The Financial Services Authority (OJK) states that there are eight banks with the largest assets in Indonesia that are committed to being the prime movers in financing green banking project. The commitment was stated in the signing of the green banking pilot project by eight banks, namely; Bank Mandiri (Persero) Tbk, Bank Rakyat Indonesia (Persero) Tbk, Bank Central Asia Tbk, Bank Negara Indonesia (Persero) Tbk, Bank Muamalat, BRI Syariah, Bank Jabar Banten Tbk, and Bank Artha Graha Internasional (Monday, 11/23/2015). The signing of the pilot project which is based on the organization's ability to manage environmental, social and governance aspects in banking business decisions will be carried out in accordance with the sustainable financial roadmap.

One of the eight banks that apply green banking is PT Bank Rakyat Indonesia (Persero) Tbk, a State-Owned Enterprise. This company has applied the concept of green banking since 2014 through the Business Process Improvement Program. This program is a strategic step to improve the quality of BRI's banking services, such as optimizing the speed and accuracy of services. The implementation of this program will lead to customer satisfaction. Therefore, BRI consistently implements the program through internal business process improvements for all back office transactions and enterprise reconciliation.

Some studies refer to various social, ethical and environmental practices, but this study tends to look into environmental aspects, particularly green banking. Green banking mainly describes the impact of banks on the environment. From the background described above, the research is given the title "Analysis of the Implementation of Green Banking in Achieving Operational Cost Efficiency in the Banking Industry."

## 2. THEORETICAL FRAMEWORK AND HYPOTHESIS

### Legitimacy Theory

Legitimacy theory is very useful for analyzing organizational behavior. Legitimacy is an important aspect for an organization, because it includes some limitations that are emphasized by social norms and values. Legitimacy can encourage organizational behavior to emphasize the importance of environment. In addition, legitimacy theory encourages companies to continuously convince the pub-

lic that the activities and performance of the companies can be accepted by the community because they are seen in accordance with the norms and limitations of the community in which the company is located.

Ghozali and Chariri (2007: 412) state that legitimacy theory is based on the existence of a social contract between the company and the community, where the company operates using economic resources. In this situation the company uses an annual report to describe the environmental responsibility so that the company will be accepted by the community. The acceptance by the community is expected to increase the value of the company so that the profits earned will increase. This serves to encourage and assist investors in making investment decisions.

The relationship between legitimacy theory and this research is to encourage companies to ensure that their activities and performance can be accepted by the community. Companies use their published annual reports to illustrate the impression of environmental responsibility so that they can be accepted by the community.

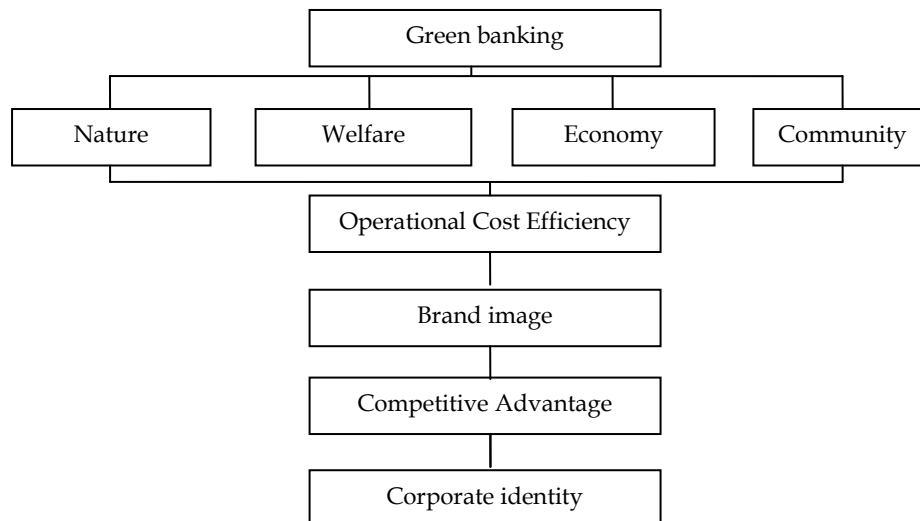
### Operational Costs

Operational costs are costs that are not directly related to the company's products but are related to the company's daily operating activities (Jopie and Jusuf 2014: 41). Business costs are often referred to as SGA (Selling, General, and Administrative Expenses). Sofyan Syafri Harahap (2012: 86) explains that operational costs are divided into two, namely: sales costs or distribution costs or marketing costs and general and administrative costs. Sales costs are all costs incurred for sales activities until the goods are in the hands of consumers such as shipping costs, taxes imposed on sales, promotions and salaries of salespeople. General and administrative costs are costs incurred for activities other than sales activities such as administrative activities, personnel activities, and general activities, such as general employee salaries, water, telephone, taxes, fees, consumables, and office costs.

### Operational Cost Efficiency

Operational cost efficiency is the most appropriate step to reduce costs associated with the company's daily operational activities. Operational cost efficiency can be done by reducing costs but maintaining the level of product and service quality (Koch et al. 2011: 188).

Operational cost efficiency is measured by using Operational Cost of Operating Income (or bet-



**Figure 1**  
**Thought Framework**

ter known in Indonesia as BOPO). Based on Circular No. 15/7/DPNP issued on March 8, 2013, Bank Indonesia has determined that the BOPO ratio does not exceed 85%. If it exceeds 85%, the bank can be categorized as inefficient. If the income is greater than the operational costs, the company will get a big profit, but if the company cannot control its operating costs, it will have a bad impact on the company itself. For example, it can reduce the company's performance which can be seen from the company's profits which are decreasing so that the company will experience a loss.

### **Green Banking**

Green banking is a financial institution that gives priority to sustainability in business practices (Leonard 2015: 48). Another opinion is expressed by Leonard (2015) in Bouma, Jeucken, and Klinkers 2001, that Green banking is the decision of banks to provide banking products or services only to customers who consider the environmental and social impacts of their activities. Sustainable finance is a term that describes practices similar to green banking. Sustainable finance is the provision of capital and risk management products to projects and businesses that promote, or do not harm, economic prosperity, environmental protection and social justice (Leonard 2015 in the Forum for the Future 2002).

The concept of green banking is actually not entirely about new things. This concept studies the impact of development on the environment and the impact of environment on the development based on the concept of ecology. Ecology is the study of the interaction between living things and their environment. Green banking is also part of the devel-

opment ecology that studies the good reciprocal relationships or interactions between development and living things or the environment.

### **The Implementation of Green Banking in Achieving Operational Cost Efficiency**

Green banking aims to run bank-friendly operations through reducing paper usage, electricity efficiency, environmentally friendly offices and others. Operational cost efficiency is the most appropriate step to reduce costs associated with the company's daily operational activities. Operational cost efficiency can be done by reducing the use of paper, electricity efficiency, environmentally friendly offices, making products with internet-based transactions and others. The implementation of green banking in operational cost efficiency will have an impact on the efficient use of consumables and electricity to save the environment and reduce bank operating costs.

The benefit of implementing green banking in environmental efficiency is that banks are more concerned with the environment and can increase banks' revenues by reducing operational costs incurred without reducing the quality of banking products and services. The benefit of implementing green banking for other parties is that they can feel the good and quality products and services provided by banks. In addition, they indirectly also play a role in environmental care programs.

The framework of this study is shown Figure 1.

## **3. RESEARCH METHOD**

### **Research Design**

Research design serves as a basic benchmark in conducting research so that its implementation

**Table 1**  
**Data on Operating Income and Operating Expense of BRI Kertajaya Branch Period 2014 -2016**

	2016	2015	2014
Interest Income	26.597.826.484	24.743.087.246	26.236.399.760
Provision and Commission Income	3.354.828.795	3.132.854.787	2.626.416.545
Gains /Losses of foreign exchange transaction and Derivatives	(97.194.134)	(25.656.886)	(2.767.253)
Other Operating Income	15.078.131.265	22.147.311.853	19.899.809.616
Interest Expense	21.721.603.081	19.245.160.595	15.959.434.441
Gift / Guarantee Expenses	480.124.038	505.839.054	708.548.786
Charges for Allowance for Credit and Accounting Losses	13.310.575.747	13.601.333.037	14.735.473.415
General and Administrative Expenses	3.659.364.450	7.175.587.044	4.825.554.413

Source: Processed data.

runs according to the planned stages. The research design has an important role in the success of the research. The research design used in this study is qualitative research with the viewpoint of positivistic case studies. Qualitative research is descriptive research and is more likely to use analysis. In qualitative research, the theoretical foundation is used as a reference so that the focus of the research is in accordance with the facts that occur in the field. In addition, the theoretical basis is also used as a general description of the research setting and as a discussion of research results.

According to Yin (2014: 1), case study is a study that systematically investigates phenomena in real life contexts when the boundaries between phenomena and context do not appear explicitly, and when multiple sources of evidence are utilized. Case study research is divided into three types: First, explanatory type is to explain causal relationships in real life contexts. Second, exploratory type is used to explore a situation that cannot be evaluated with intervene or based on a single point. Third, descriptive type is used to describe phenomena that occur in real life (Yin 2014: 9).

#### Research Limitation

The banking company referred to in this study is PT Bank Rakyat Indonesia (Persero) Tbk located in Surabaya area, while the operational cost efficiency referred is the operational cost management strategy by using the green banking concept to streamline the operational costs incurred by the Banking Industry. The object of research is limited to the problem of measurement, calculation, disclosure and implementation of green banking in the process of operational cost efficiency.

#### Data Analysis Technique

The data analysis technique used in this study is a

qualitative data analysis of the Spradely (ethnographic) model in (Emzir 2010: 209). Spradely explains that qualitative data analysis is adjusted to the stages of the study.

#### 4. DATA ANALYSIS AND DISCUSSION

##### The Implementation of Green Banking in BRI Kertajaya Branch

The research informant was the operational manager of BRI Branch Kertajaya, Surabaya, Mr. Indra Prasetya. BRI Kertajaya Branch itself has not fully implemented green banking activities officially but there are several policies that have led to green banking activities, such as the use of ATM machines. Management of environmentally friendly operational costs at BRI's Kertajaya Branch is on paper savings and operational activities only.

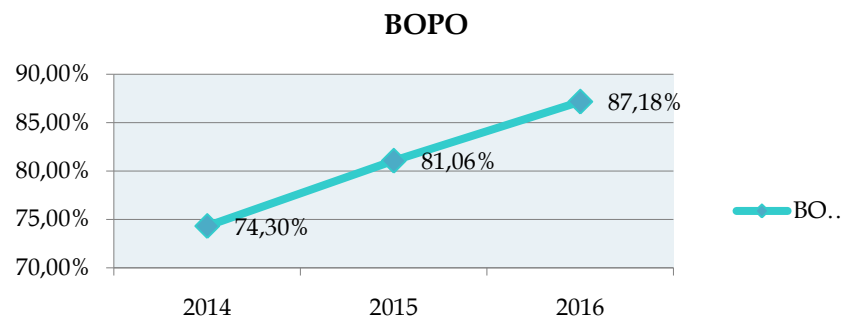
According to Mr. Indra, in BRI Kertajaya Branch there is no significant relationship between green banking and operational cost efficiency. The implementation of green banking, for the purpose of operational cost efficiency, carried out by BRI Kertajaya Branch is an important job but not urgent, therefore the implementation is still lacking.

##### Operational Cost Efficiency Ratio Test in BRI Kertajaya Branch

The implementation of green banking activities in the banking industry can also be known by calculating the operational cost efficiency ratio of the banking industry. Operational cost efficiency is measured by using operational cost of income operating (BOPO) which affects the level of efficiency and ability of the bank to carry out operational activities by comparing the amount of operating costs and operating income (BOPO). If the BOPO result is less than 85%, the company is included in the category of efficient in carrying out its operational activities.

**Table 2**  
**Operational Income, Operational Expenses, and Operating Expenses of Operating Income (BOPO) of BRI Kertajaya Surabaya Branch Period 2014 –2016**

	2016	2015	2014
Total Operational Income	44,933,592,410	49,997,597,000	48,759,858,668
Total Operational Expenses	39,171,667,316	40,527,919,730	36,229,011,055
BOPO	87.18%	81.06%	74.30%



**Figure 2**  
**BOPO of BRI Kertajaya Surabaya Branch Period 2014 – 2016**

The information obtained by the researchers are only the data of operating expense and operating income of BRI Branch of Kertajaya, Surabaya for three consecutive years starting from 31 December 2014 to 31 December 2016. So, this study conducts operational cost efficiency ratio testing for three years, as provided by BRI Kertajaya Branch. Table 1 is the data of operating income and operating expenses of BRI Kertajaya Branch, Surabaya:

Operating income of BRI Kertajaya Surabaya Branch consists of interest income, provision and commission income, gains (losses) of foreign exchange transaction and derivatives, and other operating income. Operating expenses/BOPO of BRI Kertajaya Surabaya Branch include interest expense, gift/guarantee expenses, charges for allowance for loan and accounting losses, and general and administrative expenses. For three consecutive years, interest income became the highest income among other operating incomes, amounting to IDR. 26,236,399,760 in 2014, while in 2015 amounting to IDR 24,743,087,246 and IDR 26,597,826,484 in 2016. Interest expense is the highest expense value among other operating expenses for three consecutive years, that is, in 2014 amounting to IDR 15,959,434,441, while in 2015 amounting to IDR 19,245,160,595 and in 2016 amounting to IDR 21,721,603,081.

The total amount of operating income and operating expenses obtained or generated by BRI Kertajaya Surabaya Branch from 2014 to 2016 had increased and decreased or unstable but the BOPO

ratio of BRI Kertajaya Surabaya Branch from 2014 to 2016 experienced successive increase from 74.30% in 2014, 81.06% for 2015 and 87.18% in 2016 (see Table 2).

BOPO value increased 74.3% in 2014, 81.06% in 2015 and 87.18% in 2016. This shows that the level of operating cost efficiency from 2014 to 2016 experienced a drastic increase (see Figure 2). BOPO value increase can be caused by the effectiveness of operational costs due to technological transformation, development of innovation, network expansion, strengthening of human resources, improvement in service quality, and increased provision costs to increase the ratio of non-performing loans (NPL).

### **Green Banking Implementation Policy**

Green banking is a bank's decision to provide banking products or services only to customers who consider environmental and social impacts. In 2013, BRI stepped toward green banking program. Since 2014, BRI has implemented the green banking program. The green banking program carried out by BRI is in the form of e-office applications, in which the administration system in BRI is done electronically (paperless), the BRISTARS application which is related to the fulfillment of BRI employee service needs can be accessed by self-service, the development of an Automatic Tax System which is directly connected with a system of Generation II of State Revenue Modules owned by the Ministry of Finance that allows to pay taxes directly, the devel-

opment of income tax (PPH 21) reporting with e-filing, and the provision of proof of deduction automatically ([www.bri.co.id](http://www.bri.co.id)).

Related to the implementation of green banking, BRI Kertajaya Surabaya Branch has not implemented the program officially, but there are several bank policies that have led to green banking activities. The policies carried out by BRI Kertajaya Branch are only limited to paper savings and ATM usage in various transactions. BRI Kertajaya Surabaya Branch has a paper use savings program in the form of the implementation of digital office which in turn leads to the implementation of digital banking. So, directly and indirectly the use of paper is eliminated in banking transactions. The savings made by BRI's Kertajaya Surabaya Branch are not included in energy savings in the use of lamps, solar panels, and solar ATM booths, but in e-banking programs. The CSR program carried out by BRI Kertajaya Branch is only limited to providing assistance related to clean water in areas that are still difficult to obtain clean water. The existence of this CSR program is also a manifestation of green banking activities carried out by PT. Bank Rakyat Indonesia/BRI (Persero) Tbk. One of the goals is that PT. Bank Rakyat Indonesia (Persero) Tbk is better known by people in various parts of the village so that PT. Bank Rakyat Indonesia (Persero) Tbk can reach more people who are far from urban areas by setting up their units there. Loan distribution by BRI Kertajaya Branch has not been classified as an environmentally friendly loan distribution and also has not made debt collection via the internet.

### **The Relationship between Green Banking and Operating Cost**

Based on the results of the calculation, the BOPO of BRI Kertajaya Branch experienced a continuous increase from 74% in 2014 to 87% in 2016. The increase in BOPO is the results of technological transformation, development of innovation, network expansion, strengthening of human resources, improvement of service quality, and increased provision costs to increase the ratio of non-performing loans (NPL) and in July 2016 BRI installed new satellites. This increase in BOPO causes a reduction in the efficiency of the company because if viewed based on the criteria set by Bank Indonesia that is not exceeding 85%, the BOPO owned by BRI Kertajaya Branch annually increases to a predetermined criteria. And even in 2016, the BOPO percentage exceeds the criteria determined by Bank Indonesia, that is, 87%.

Based on the results of research conducted in BRI Kertajaya Branch on green banking and its relationship with operational cost efficiency, BRI Kertajaya Surabaya Branch has not fully implemented green banking because the company is still limited to paper savings (paperless) in its operational activities. Based on the results of BOPO calculations, the percentage of BOPO of BRI Branch Kertajaya experienced an increase in operational cost efficiency each year during the study period, which means that the level of efficiency in the company's operational costs is decreasing. This can affect the brand image of PT Bank Rakyat Indonesia/BRI (Persero) Tbk in winning the competition among banking companies because brand image is basically an identity or special characteristic inherent in the company. Brand image can affect public trust sustainably.

### **5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS**

The purpose of research is to obtain empirical evidence that PT Bank Rakyat Indonesia/BRI (Persero) Tbk has implemented green banking and to obtain empirical evidence that there is a relationship between the implementation of green banking and the operational costs of PT Bank Rakyat Indonesia (Persero) Tbk. The research sample used is PT Bank Rakyat Indonesia (Persero) Tbk located in the Surabaya area.

The results of the research show BRI Kertajaya Branch officially has not fully implemented green banking. The policies carried out are only limited to the use of the paperless program or paper savings in the company's operational activities. Based on the results of the calculation of BOPO of BRI Kertajaya Branch during the observation period, its operational costs in 2014 and 2015 are categorized efficient because the value does not exceed 85%, but in 2016, the percentage of BOPO owned by BRI's Kertajaya Branch exceeded the predetermined limit of 85% so that its operational cost was not categorized efficient. Every year of observation, the ratio of BOPO owned by the company has increased so that the level of efficiency of the company's operational costs decreases every year.

This research has several limitations that can be taken into consideration for further research to be better, such as:

1. Conditions during the interview are less conducive so that the information obtained is not entirely able to represent what the researcher wants.
2. There is difficulty in obtaining information

about the company's financial statements because the statements are not published publically so that it takes a long time to obtain a permit to get the information.

3. Not all branches or units of research objects know about green banking and apply the green banking so that this can cause information inequality in the head office and branches.
4. Not many units in the banking industry have implemented green banking programs so that researcher has difficulty finding the research objects.

Suggestions that can be put forward in connection with the research that has been carried out are as follows:

1. Further research is expected to add to the question frame when conducting interviews because this research is still relatively new and also adds a variety of informants so as to create conducive conditions during the implementation.
2. Further research is expected to collect information about the financial statements or request permission in advance before carrying out the research so that it does not take long to obtain personal information.
3. Further research is recommended to conduct research at the head office and units to reduce the inequality of information.
4. Further research is expected to conduct research in other industries other than banking industry, such as property and real estate, infrastructure, transportation, pharmaceuticals, automotive, mining, and others to find out whether other industries have implemented green banking.

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