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Moral Hazard Problems in Branchless Banking – Empirical Evidence from Indonesia

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ABSTRACT

The aim of the research was to identify behaviors related to the temptation of fraud in branchless banking activities on the example of rural areas in Indonesia. A description of economic phenomena was used using the questionnaire method. It is established that in most cases, a representative of a branchless bank (agent bb) is a man running a business at home or close to home. Branchless banking clients are usually farmers, local translators, housewives and students. The most common types of transactions used within "branchless banking" are paying for electricity bills and other bill payments as well as savings transactions and current savings payments. Research shows that this type of banking is associated with the constant temptation of various types of fraud on the part of the bank's agent. The most important types of fraud in branchless banking in Indonesia were characterized.

Keywords: branchless banking, financial transaction, bank's agent, moral hazard

INTRODUCTION

The financial sector is the parent of the development process [Demirgüç-Kunt 2008]. The development of the financial sector by providing services and financial products that can be accessed by everyone is one way to overcome poverty. Sanjaya [2014] and Jain [2015] stated that even distribution of financial services will create a new source of rapid and comprehensive economic growth, thus creating a more equitable growth. However, a survey conducted by the World Bank in 2014 showed that about 50 percent of the world's adult population that have access to formal financial institutions. The survey results explain that in some areas of high-income countries, such as North America, western Europe and Australia, the accessibility rate of adults who have access

to formal financial institutions reached 92 percent. In contrast, countries in the Sub-Saharan Africa region have just reached 12 percent. On the other hand, the percentage of Indonesian adult population who have access to formal financial institutions reaches 20 percent [World Bank 2014].

Financial institutions that have the ability to distribute financial services opportunities equally, including to the low-income groups and those living in remote areas are bank institutions. However, banks typically concentrate their operations in the cities with great opportunities to get customers and earn high profits. Hisighsuren (2006) stated that those with low access to formal financial institutions are usually located in rural areas. Major constraining factors are extensive geographic spread, low population density, limited transaction volume resulting in expensive operating costs, and are costly to build bank branches physically in rural areas. McKay and Pickens [2010] argued that one approach to stimulating financial inclusion is branchless banking, i.e. financial services provided by financial providers to customers without going to the bank; They use information communication technology e.g. computers, electronic data capture (EDC), mobile phones, and other information communication technologies. Jain [2015] explained that although financial transactions in remote areas provide relatively low margins, but high transaction volumes promises the benefits and may become commercially profitable businesses. The use of IT in branchless banking is in line with The Long Tail of Banking theory which is widely used to explain retail product offerings. Using the Internet, retail companies can earn extra revenue by selling large quantities of small items in the skinny part of the tail, in addition to selling large items to a small number of buyers in the wide part of the tail [Weber 2012]. This theory suggests that information technology (IT) potential to improve access to financial services for the population on the right of the curve. The condition occurs because the perceptions of loan risk to unbanked populations are reduced by the increase in familiarity in doing business between customers and microfinance institutions and the availability of transparent data with the help of IT, as well as improving the ability to analyze potential borrowers [Weber 2012].

Branchless banking practices have been conducted in several countries, especially in countries where adult population access to formal financial institutions is still low. Mobile banking such as M-Pesa is more popular in Africa, such as in Kenya and Tanzania as well as in most of Asian countries. However, in South Africa, like Colombia, Chile, and Brazil, they used POS-Based Agent Networks. The branchless banking system involves three actors, i.e. service providers, service users or consumers, as well as agents. The branchless banking provider is an institution that provides financial transaction services to the people in remote areas. Providers of branchless banking may come from a bank or non-bank institution such as a telecommunication company. However, in this study the provider to be analyzed is a provider which is a bank institution. On the other hand, branchless banking service users are those who live in remote areas. People in remote areas can make financial transactions such as saving, withdrawing cash, making transfers, or making payments for electricity, water, or other payments obligation. They can do those things by using mobile phones, ATM cards, passbooks, or just proof of the transaction, as determined by the bank. In addition, people who meet the requirements of banks can make credit loans, either through agents or directly from the bank office.

In running a branchless banking system, the bank cooperates with a third party, called a branchless banking agent (Agent BB), which acts as an extension of the bank to the customer. The role of agents is to serve the financial transactions of people in remote areas, such as saving, withdrawing cash, making transfers, or making payments for electricity, water, or other payments. Agents BB are domiciled or have a place of business around the community. The Bank provides digital devices for use by agents to perform financial transactions, and banks provide incentives to agents for any transactions conducted by agents. There is a partnership or agency relationship between banks and agents. In agency relationships, there are two parties who make an agreement or contract, namely the party giving authority or power (called the principal) and who receive the authority (called the agent). The agency relationship between banks and agents in branchless banking system is worth to be investigated as it relates to the success of the program. This research will review the behavior of Agent BB in carrying out its role as a bank partner in serving financial transactions to communities in remote areas.

Branchless banking in Indonesia is a new delivery channel. It is one of the programs in the National Strategy of Financial Inclusion¹ launched in 2012. One of the institutions that initiated the branchless banking program is the Financial Services Authority (OJK), the program is called the "Layanan Keuangan Tanpa Kantor (Lakupandai)." The objective of the program is to provide simple, easy-to-understand and appropriate financial products that meet the needs of people who have not been able to reach the current financial services, and with the increasing number of members of various community groups in different part¹ of Indonesia using financial or banking services, then the economy of society can be more smoothly so it can encourage economic growth and equitable development among regions in Indonesia, especially⁵ between villages and cities [OJK 2015]. The products offered in the program are: (a) Savings with the characteristics of Basic Saving Account (BSA), (b) Credit or Micro Financing, and (c) Other financial products such as Micro Insurance.

In the Quarter III-2016 Report of OJK (table 1), it is known that the number of agents of "Lakupandai" reaches 160,489 agents consisting of 159,521 individual agents and 968 outlets of legal entities. The total amount of funds and customers collected amounted to Rp 93.79 billion and 1,948,99¹ customers, respectively, with coverage of savings-related services with BSA characteristics, including account opening, deposit and¹ cash withdrawal, book-entry, bill payment, funds transfer, and / or account closure. The largest spread of agents is in Java (68.92%), while 16.41% are in Sumatra, 5.54% in Sulawesi, 3.57% in Kalimantan, 2, 2% in Maluku and Papua, and the remaining 3.34% are in NTB-NTT¹ Bali (OJK, 2016). The data shows that agent deployment is still centered on Java. Therefore, to achieve program objectives requires the right approach so that the program can be sustainable.

Table 1. Realization of program of "Laku Pandai" Quarter III-2016

Type of Agent		Data of Customer	
Individual	Legal entity	No of Account	BSA Outstanding
159,521	968	1,948,995	Rp 93.79 billion

Source: OJK Quarter III-2016 report.

Some researchers revealed that branchless banking is a cost-effective solution to provide financial services for people living in remote places as compared to opening a conventional branch office (Kumar, 2006 in Khattab, 2012; Littlefield, 2006; and Ivatury and Mas, 2008). The cost of basic banking services with branchless banking is at least 50 percent lower than the cost incurred to serve them through traditional channels. In Philippines, the transaction costs such as cash deposits or withdrawals made through traditional banks are around \$ 2.50 whereas the same transaction via mobile is only charged

\$ 0.50 [Ivatury and Mas 2008]. In addition to the low cost of services, with branchless banking technology consumers benefit from low of time travel and waiting time as well as transportation costs as they are closer to the agents and do not have to queue up as often happens in the bank office [Mas 2009]. Besides the benefits of lower transaction costs and lower access to financial services, the flow of funds through branchless banking is expected to increase production, boost economic growth, reduce poverty, create equity of income, and create financial system stability [BI 2014]. There are three models of branchless banking service providers. The models are differentiated based on the principal actors of branchless banking service providers. The branchless banking model held by mobile operators, has the advantage of having a strong distribution channel and many customers who are generally unbanked. But the model has a weakness, i.e. not having the ability to run the core banking process.

A model of Branchless banking in which banks as financial service providers have some advantages. Banks have licenses and are subject to the supervision of banking authorities, as well as having financial system, risk management, and possessing advanced fraud detection skills. However, the bank model also has some disadvantages: banks profits are based on fluctuating interest rates and cross-selling products which reducing the chances of for the poor as well as the high of infrastructure cost of the front end and back end offices. Another model is a branchless banking service run by third parties, such as WIZZIT in South Africa. The model comes out in line with increasing technology and is more eager to encourage interoperability with banks and telecommunications companies, and more willing to partner with organizations serving the poor. But disadvantage of this model is that they do not have the ability to compete with banks and telecommunications companies that are much larger.

The agency theory or principal-agent theory analyzes the contractual relationship between two or more individuals, groups, or organizations. A principal makes a contract and delegates its duties and powers to the other party (agent) in the hope that the agent will act or do the work as the principal wishes. Stiglitz [1987], Pratt & Zeckhauser [1985] and Gilardi [2001] suggest that principal-agent relationships occur when a person's actions have an impact on others or when a person is heavily dependent on the actions of others. This influence or dependence is manifested in agreements in institutional structures at various levels, such as behavioural norms and contract concepts. In delegating tasks there can occur an asymmetric information condition, where the Agent assigned and authorized by the principal knows more about the conditions in the field than the principal. Such asymmetric information conditions can lead to negative agent behaviour, called moral hazard. Petrie [2002] and Halim [2006] defines: "Moral hazard refers to the tendency of an agent, after the contract is entered

into, to shirk or otherwise not fully seek to promote the principal's interests." ¹⁶ Moral hazard arising in the principal-agent relationship will benefit the agent but may be detrimental to the principal. Moral hazard behaviour may be preceded by adverse selection behavior before the contract, or it may occur without initiation of such behaviour, but triggered by opportunities or the loosen in the rules. This can happen because the principal can not monitor the activities performed by agents in the field with details.

To serve financial transactions in remote areas, the bank recruits agents, who are domiciled around target communities. Thus, the agency relationship in the branchless banking system is the bank that organizes the BB program is the principal, and the individual among community that recruited by the bank is as the agent. Agents of branchless banking (Agent BB) act as an extension of a bank that serves several financial transaction services for the benefit of the local community, such as savings, cash withdrawals, transfers, and other financial transactions such as serving the purchase of electronic pulses, water, electricity and other obligations. To perform the transaction, the bank gives incentives to agent. The Bank monitors the activities of financial transactions of the society and the Agent BB through online financial transaction reports using information technology owned by banks.

THE SCOPE AND METHODS OF RESEARCH

The selection of research sites was preceded by the selection of banking institutions as providers of branchless banking programs with the highest number of agents, namely bank BRI—based on ojk performance report report in 2015. West Java province was selected as a province with a number of agents that pretty much, 5,514 agents out of 50,259 Agents BB in all of Indonesia - based on data of BRI, 2016. Hereinafter area of bogor regency is selected which have active agent in relatively large amount.

The data used are primary data obtained by using survey method, with interview technique. Data were collected using a prepared questionnaire. The respondents of Agent BB were selected purposively, ie from 11 selected sub-districts, then selected a fairly active agent located in the operational area of the bank unit. Then, as supporting data the respondent of business actors involved in transactions in agent bb are selected.

As of April 2016, the number of agents BB from Bank BRI were 62,036 agents spread throughout Indonesia (Warta BRI, 30 June 2016). While the number of BB Agents in West Java as of September 2016 amounted to 5707 agents, and 360 agents of which are spread in Bogor Regency and 86 agents in the city of Bogor. (Data obtained from the Division of Policy and Micro Business Development, BRI, October 2016). The study was conducted on 32 BB Agents in 27 Villages from 11 District in Bogor Regency. Additional sources of information were obtained from 97 business actors who transacted the agency.

Table 2. Characteristics of Agent BB

Characteristic	Average
Age (year)	39.84
Formal education (year)	12.0
Agent BB – Male (%)	68.8
Agent BB – Female (%)	31.2

The characteristics of BB Agents include average age, formal education level, and sex, as well as the types of business activities undertaken by agents, as presented in table 2 and table 3. The average age of Agents BB is the productive age category (39.84 years), and the average level of formal education is equivalent to a senior high school graduate (12 years). Most (68.8%) of the BB Agents in the study area were male or head of household. This condition illustrates that the main business undertaken by BB Agent is a small business in their home. Field observations illustrate that although those who are registered as Agents are husbands, wives generally also act as agents, and vice versa. All Agent respondents have production business, so it can support its activity as Agent BB. Agents generally have one type of production business that is stall. However, some agents have two or more types of businesses at once. The type of business of Agent BB is presented in table 3.

Table 3. Type of Business of Agent BB

Type of business	No. of Agent
Stalls - sells household staple goods	17
Distributors of SIM Cards and top-up voucher	6
Agent of Water Refill	3
Photocopy and stationery motorcycle workshop	2
Electronic Equipment Store	2
Financial Transaction Services	2
Goods and Money Credit Services	2
Other	5

FINDINGS

Financial Transaction Activities

Each Agent BB is equipped with an EDC (Electronic Data Capture) device and supporting tools such as phone cards, transaction printing paper, chargers, transaction fee lists, certificates or member cards as official Agent BB, as well as banners. The provider of phone card selected is tailored to the signal condition at that location and which is widely used by the surrounding community. Some agents use two types of cards from different providers. It aims to avoid or reduce the occurrence of failed transactions due to unstable signals. In general, business as a Agent BB is a side business of its core business. As Agent BB, they have obligations and rights. The obligation of Agent BB is to serve people living around them who will conduct financial transactions, such as checking savings balance, saving, withdrawing cash, serving bill payment, phone purchase and electrical token. Transaction is done by using EDC machine.

For transaction purposes, Agent BB must have sufficient funds, either cash or funds in savings account. When people will withdraw their savings through the Agent BB, they swipe their ATM card through an EDC machine. In that way they transfer funds to the Agent account, so that the Agent account increases and the customer account decreases. Furthermore, the Agent give a number of cash funds to the customer as much as fund that has been transferred. Conversely, if the customer will increase the balance of his savings through the Agent BB, then the Agent receives their cash. Furthermore, by using an agent ATM card and through an EDC machine, the Agent transfers some funds

to the customer's account. Thus, the Agent account balance will go down and become cash. The proof of a transaction is indicated by a final check balance. For such transactions, the customer pays a certain amount of funds as a transaction service fee to the agent in accordance with the applicable tariff. Customers may also transfer by using their ATM card through an EDC machine available at the agent, to the same bank account or to another bank account. In this case there is no change in the savings account and cash funds of the agent. The customer only pays the transfer service at the applicable rate.

Customers can also transfer using cash. Upon receipt of cash, Agent BB transfers to the destination account via EDC machine using agent ATM card. As a result, the agent account balance is reduced and replaced by cash. Mechanisms for changes in cash and agent account balances can also occur for payment and purchase transactions made by customers through agents using EDC machines. Transactions that occur indicate that financial transactions conducted on branchless banking program using cash and funds in the account Agent BB. Therefore, Agent BB must have sufficient funds and must be able to balance between money and funds in his account. If the cash is excessive, the agent must go to the bank to deposit it in a savings account. Conversely, if existing cash is insufficient to serve financial transactions in the community, agents must go to the bank to withdraw their savings.

Agent BB serves financial transactions in the community around his residence. The frequency of public financial transactions serviced by Agent BB varies, as shown in table 4. Most (40.63%) of Agents BB serve 6 to 15 transactions for three consecutive days and only a small number (6.22%) of agent BB that serves 100 to 400 transactions in three days consecutively. For financial services provided by Agents BB to customers, the Bank grants the right of incentives or commissions from any transactions conducted using EDC machines. The Bank provides a commission of 50% of the bank's administrative fees for each financial transaction using an agent ATM card. In other words, the bank returns 50% of the bank administrative fees imposed from each transaction using an agent ATM card. On the other hand, Agent BB receives payments from customers for each transaction service provided at the rates set by the bank.

Table 4. Agent Transaction Activity in Three Days Consecutively

Frequency of transaction in 3 days period	%
≤ 5	15.63
6 – 15	40.63
16 – 30	15.63
31 – 70	21.88
100 – 200	3.11
200 – 400	3.11

Officially, tariff charged to the customer for any financial transactions conducted through the Agent BB are described in table 5. In addition to financial transactions, branchless banking program “Layanan Keuangan Tanpa Kantor Dalam angka Keuangan Inklusif (Laku Pandai)” also provides other financial products such as micro insurance and microcredit. In this case the role of Agent BB is to provide information about the product to the community around the location. On the other hand, since the agent is familiar with the people who live nearby, the agent BB is expected to provide recommendations to the bank especially regarding the credibility of those who

apply for credit through the agent. Thus, it is expected the society feel more comfortable to deal with the bank. On the other hand, banks will be able to recognize prospective borrowers through recommendations from agents BB, enabling banks to grant leeway on formal requirements that are generally not owned by rural communities when applying for loans. Thus, it is expected to reduce their interest in non-formal loans. However, conditions in the field show microinsurance and microcredit products have not run, and still some business actors around Agent BB who perform financial transactions through Agent BB. Based on observations in the field, there are three to five business actors who perform financial transactions at the nearest BB Agent.

Table 5. Tariff Charged For Each Transaction Conducted Through The Agent BB

Type of Transaction	Official Tariff (Rp)	Unofficial Tariff (Rp)
1. Balance Info of Bank BRI	0	2.000
2. Balance Info of other Bank	1.000	N/A
3. Electricity payment:		
-Postpaid	3.500	3.500 – 5.000
-Prepaid	3.500	3.500 – 5.000
4. Transfer ^{a)}		
-bet. BRI accounts	2.000	5.000 – 15.000
-non-BRI	2.500	7.500 – 15.000
5. Cash deposit	3.500	5.000 – 15.000
6. Cash withdrawal	3.500	5.000 – 15.000
7. Cash Transfer ^{b)}		
-bet. BRI accounts	3.500	5.000 – 15.000 7.500 –
-non-BRI	N/A	15.000

The survey results toward 97 household business actors who transacted at BB Agent showed that the number of transactions conducted was still low, with the average of 27.59 transactions per household per year or 2-3 transactions per month. The most common types of transactions used by the society are transactions to pay bills, such as electricity bills (pre or post paid) and other bills payment. While the savings and withdrawals transactions which expected to be used often by small businesses is very rare. The frequency of transactions conducted by business actors on the agents BB is presented on table 6. Agents BB serve more people who are not productive entrepreneurs, such as factory employees, housewives, or other people who live not around the Agent site. Some respondents who already have credit at the bank, utilize BB agents to pay off their credit to the bank. Credit payments made through Agent BB can be a potential for micro credit development through Agent BB.

Table 6. Frequency of Transaction conducted by the Household of Business Actor on the Agent BB

Type of Transaction	Frequency/year	Percentage
Saving	187	6.46
Withdrawal	144	4.84
Transfer	576	27.13
Electricity payment	1.346	45.59
Top-up mobile voucher	422	15.89

Moral Hazard Behavior Analysis BB in Branchless Banking Transactions

In activities as an Agent, banks equip agents with EDC (Electronic Data Capture) devices or are called Mini ATMs and Transaction Fee List. Agents BB get a

commission from the bank in the form of 50% return from the administrative costs of transactions charged by the bank, as well as incentives in the form of tariffs charged to customers. Accordingly, for any transaction performed using an Agent ATM and through an EDC machine, the Agent will earn an income equal to the tariff rate specified by the bank to the customer plus 50% of the administrative fee of the bank returned to the agent. The tariff rate on Agent BB is presented on table 8. In the activities of financial transactions conducted, Agent BB has the potential to conduct activities that harm the banks and the communities it serves. Such behavior is called moral hazard. The behavior appears to be triggered by asymmetric information. Some moral hazard behavior that occurs in financial transactions in the BB program.

Table 7. Official, Unofficial Tariff and Incentives to Agent

Type of Transaction	Official Tariff (Rp) (1)	Bank Administration fee charged to Agent ¹⁾ (Rp) (2)	Bank Administration Fee returned to Agent ²⁾ (Rp) (3)	Incentives to Agents with Official tariff ³⁾ (Rp) (4)	Unofficial Tariff ⁴⁾ (Rp) (5)	Incentives to Agent with Unofficial Tariff ⁵⁾ (Rp) (6)
1. Balance Info of Bank BRI	0 1000	0 N/A	0 0	0 1000	2000 N/A	2000 2000
2. Balance Info of other Bank	3500	2500	1250	2250	3500 – 5000 ⁺	N/A
3. Electricity payment:	3500	2500	1250	2250	3500 – 5000	2250 – 3750 ⁺
-Postpaid	2000	0	0	2000	5000 – 15000	2250 – 3750
-Prepaid	2500	0	0	2500	7500 – 15000	5000 – 15000
4. Transfer ^{a)}	3500	1000	500	3000	5000 – 15000	7500 – 15000
-bet. BRI accounts -non-BRI	3500	0	0	3500	5000 – 15000	4500 – 14500
5. Cash deposit	3500	1000	500	3000	5000 – 15000	5000 – 15000
6. Cash withdrawal	N/A	6500	3250	3250	7500 – 15000	4500 – 20000
7. Cash Transfer ^{b)} -bet. BRI accounts -non-BRI						4250 - 11750

1) From Agent monthly report; ²⁾ = 50% of Bank Administration Fee. ³⁾ = (1) – (3), ⁴⁾ Tariff charged by Agent to Customres, ⁵⁾ = (5) – (3), ⁺ Beberapa Agen memperoleh tambahan dari pembulatan nilai, ^{a)} Transfer using Customer's ATM, ^{b)} Transfer using Agent's ATM

Of the 32 respondents of the BB Agent who became respondents, there was no agent who placed a list of tariffs where it could be seen by consumers. From the interviews it is known that the agents charge rates that vary and are higher than the tariffs specified in the official rate list set by the bank. The results of in-depth interviews are known that, for customers who know the official tariff list, the agent argue that the official rate list issued by the bank does not include the bank's administrative fees imposed on the agent because it uses an Agent ATM card In the transaction, plus the agent's costs such as Electricity costs to operate EDC machines, as well as other costs due to transactions using the funds of the agent. For people who are domiciled away from the bank office, this reason can be accepted so willing to do financial transactions in the Agent BB. Consumer consideration is because the distance is not far away from their residence or place of business, not formal, no need to queue, can transact outside working hours and holidays, and no transportation fees and parking fees, compared with transactions in the bank office. Table 7 presents the data of bank administrative costs and incentives received by the agent for each type of transaction as well as the official tariff data and unofficial tariff. The behavior of Agent BB that does not show a list of official rates to customers and impose transaction fees that exceed official fees leads customers to bear higher transaction costs. For the business actor, the Agent's behavior will increase the production cost, which may prevent them from performing financial transactions related to their business activities to the Agent BB. Agent behavior can hinder the program's goal of reaching people who are price sensitive.

The type of transfer transaction is a transaction using a customer ATM card, where the customer diverts funds from his or her savings account to another designated savings account using an agent EDC machine. By using a consumer ATM card, Agent BB does not get a commission in return for 50% of bank administrative fees, because 100% of bank administrative costs are charged to consumers. Since the transaction does not use an Agent ATM card, the Agent has difficulty charging an additional fee from the official fee set by the bank. This condition encourages some agents to refuse transfers using consumer ATM cards, or BB agents charge the same fees as transactions made using agent ATM cards. Thus, consumers bear a greater cost burden because in addition to transaction costs set by the Agent, consumers also bear the administrative costs of the bank for using their ATM card to transact. Transaction fees become even higher if the transfer transactions are addressed to a different bank account, because the administrative fees charged are much higher than the transfers to the same bank account. The behaviour of Agent BB may prevent consumers from making transactions using their ATM cards. The data shows that all (69.07%) of business actors who transact at BB agents use cash, and 31.25% of respondents use their ATM cards to transact (table 8). The results of interviews with business actors who transact at BB agents, about the reason for not using their ATM cards to transact in the Agent is because they have to check the balance account both before and after the transaction to ensure the correctness of the transaction. According to them, although the balance check rate is free for customers who make transactions, but consumers feel 'uncomfortable' when the balance of their savings is known by others, i.e. Agent BB. If they have to use an ATM card to transact, they choose to transact at a bank ATM machine. This condition supports the results of research by Mangani et al. (2017), most business actors conduct financial transactions in BB Agents doing it for activities that are not related to their

business activities, but for other activities such as pay the electricity obligation, purchasing electric vouchers, or purchasing top-up vouchers, and they do so by using cash.

Table 8. Instruments used by consumers to transact in the Agents

Instrument	Amount	%
ATM	30	31,00
Cash	67	69,00
Mobile phone	0	0,00

To being awarded to BB agents, banks also provide EDC loan facilities to facilitate mini / super market transactions. To that end, the owner of the mini / super market provides a security deposit of Rp. 3,000,000. The administrative fee of the bank is levied on the consumers who transact using the machine. In other words, mini / super market owners are not subject to transaction fees on the use of EDC machines, and banks get all the bank administrative fees imposed on consumers. In branchless banking program, the bank does not impose a security deposit on an EDC machine lent to the BB agent. In addition, the bank only receives 50% of the administrative costs of each transaction made through the agent because a portion (50%) of the bank administrative fee charged to the use of the ATM card is returned to Agent BB. It shows that banks incur higher costs to Agent BB for the same transaction performed by other bank partners. However, according to agent BB, the 50% incentive of administrative fees returned by banks to agents is still considered too small, as transactions use agent's funds. If the customer makes many payments or transfers or deposits in cash, then the funds in the agent's account will turn into cash. In addition, if the agent's savings account becomes reduced and insufficient to service the customer's transaction request, the agent must make a deposit to the bank's office. Conversely, if the consumer makes many cash withdrawal transactions, the agent needs to have sufficient cash, so the agent must use cash from their main business activities. If there is not enough cash to meet the transaction request, the agent will go to the bank office and withdraw their savings. Thus, the consumer transaction activity in the agent will affect the activity of the agent transaction to the bank office to withdraw or to store the funds. This condition prompted Agent BB to impose a surcharge from the tariff set by the bank. Another thing that also potentially occurs from those condition is, if the agent is quite busy with the main business, then the agent becomes passive so that financial transactions that are done very minimal, as happened with the type of agent BB in the form of business entities, where income from their main business is very high. As a result, the bank's goal of reaching out to the unbanked and underbanked societies is difficult to achieve. On the other hand, banks have incurred substantial costs to run branchless banking programs. The number of transactions that occur in Agent BB for three consecutive days, i.e. Friday as well as Saturday and Sunday when the bank office is not operating.

Agent BB with the number of transactions less than five transactions for three consecutive days in this study is an agent with the type of business entity, such as CV Usaha Bangunan that has a busy daily activity so that transaction activities as a BB agent is not their main focus. Actually, their role as BB agents in low-income communities is very good, because they have large funds to conduct financial transactions, but low incentives do not encourage them to educate the society in their environment. On the other hand, the results of interviews with small business actors

who have transacted to those agent said that they feel embarrassed and uncomfortable transacting with small values and dealing with big business entity. The agent's role as an extension of the bank's reach to unbanked and underbanked societies becomes passive. The results of interviews with those agent, the low interest of surrounding communities to transact through them, encourage them to use the facility for their own business activities. It was also found that Agents BB in the form of a business entity (CV) were closed in the visit on Sunday, while the presence of agents is very needed by the surrounding community, especially by small business actors because the bank office is closed on Sunday. This condition makes the bank's goal to reach people in remote areas difficult to achieve, while the bank has spent a lot of funds for the program.

To encourage BB agents to perform their role as an extension of the bank in remote areas, in addition to providing incentives in the form of a 50% return on bank administration fees, banks also provide various forms of prizes. As many as 25% of respondents said that one of the incentives given by banks to agents is a 100% bank administrative refund if the agent can reach the target of 200 transactions or more per month. Results of interviews with resource person from bank, it is said that the number of transactions 200 per month is the number of break-even transactions of the cost incurred by the bank for each agent. To achieve these targets, the BB agent must be able to meet the target of at least 6 to 7 transactions per day. On the field observations, such incentives create moral hazard behavior from agents. To meet the target number of transactions, BB agents potentially make a 'pseudo' transactions, which are doing internal transactions between families and / or between agents who knew each other. As an illustration, if on a given day the agent only acquires five transactions, then in order to meet the daily transaction targets, the agent on behalf of his family conducts cash deposit transactions to other family members. Although the agent does not receive additional fees from the consumer because it is the agent's family, all bank administrative fees that imposed on the transaction by the agent are returned 100% to the agent with the fulfillment of the target of 200 transactions. Such behavior increases the number of transactions recorded in the bank, but the behavior is detrimental to the bank, since recorded transactions are 'pseudo' transactions and do not affect the increase in the number of communities participating in the program.

The main activities of the BB agents vary. As many as 17% of them have activities as collectors of postpaid electricity payment from the surrounding households and some of them are administrators from local household groups. Like banks and other institutions, such as the post office or mini market, which are authorized to receive electricity payments, charge a fee of Rp 2,500 per customer per transaction. In addition, collecting agents typically charge additional fees and receive incentives in the form of rounding off values. By becoming a BB Agent, postpaid electricity collectors get more profit than before with an incentive of 100% returns of bank administration fees. Therefore they are very proactive to encourage their customers to pay electricity through them to reach the target of at least 200 transactions per month. However, the high number of transactions that occur does not show the success of the program, because the behavior of people in making electricity payment transactions do not change, that is they pay it to the same collection agent, but not in direct contact with the program. Thus, the bank's goal of reaching out to the community is not achieved if the agent BB does not do other education to increase public participation in conducting other financial transactions. In addition, BB Agents who are also collectors of

postpaid electricity payments have the potential to conduct 'pseudo' transactions, to meet the minimum transaction targets to increase their revenues. Other respondents are also likely to make 'pseudo' transactions. As many as 10% of respondents of agents BB previously were financial transaction agents using internet / electronic banking facility. They charge their bank administrative fees and services to consumers. In that case, the bank accepts all bank administrative costs of each transaction used. However, after becoming an agent BB and using a bank EDC machine, with the same activity they could receive an additional 50% of the income of the administrative costs of the bank. In addition, they also have the opportunity to conduct 'pseudo' transactions to earn additional revenues in the form of 100% bank administrative fee refunds by meeting the minimum transaction target. In that case, the transaction cost incurred is a burden to be borne by the bank because it receives a lower bank administrative fee.

The Bank in this study authorizes each bank unit office in each sub-district to recruit a BB Agent without specifying the location of the agent's residence. The regulation allows the location of Agent BB adjacent to each other. A total of 32% of the respondents had a distance of between 50 and 100 meters, and 10% of agents had a distance of 100 to 200 meters, and the rest (58%) were more than 1 km between agents (table 9).

Table 10. The Distance Between Agents

Distance to BB Agent (meter)	%
50 - 100	32,00
100 - 200	10,00
> 1000	58,00

Conditions of proximity of locations between agents can be a positive factor for the people around who do financial transactions through Agent BB. Competition between agents located in adjacent locations will make the agent BB must consider the amount of additional transaction costs imposed outside the official rate. The results of Interview and field observations; Agents who live close to other agents, charge a lower transaction fee than agents with a distance. This lowers the real transaction costs that agents incur to consumers. Another potential behavior that arises from BB agents living close to each other, or having family ties, is the emergence of mutually beneficial transactions between them, but has a negative impact on bank. As an illustration, if the first agent lacks cash to fulfill its daily transactions, they can obtain it from a second agent by do the transfer transaction from the first agent's account to the second agent using the first agent ATM card. Thus, the first agent can increase the number of transactions and earn cash. Conversely, if the first agent has excess cash and requires funds in his account to make a transfer at the request of the customer, the first agent may increase his savings by depositing cash into a second agent, so the number of transactions of the second agent will increase. The activity can increase the number of transactions made by the agent and achieve the target minimum transaction amount (200 transactions per month) and increase its revenue, through 100% return of bank administrative costs. Such behavior is detrimental to the bank because the transaction does not involve the target community of the bank. The behavior will get worse if both agents pursue the target number of transactions through the behavior of 'pseudo' transactions. The results of interviews with business actors respondents, obtained information that as many as 3% of respondents BB agents have business as lenders to the surrounding community. Although this does not affect the number of transactions

that occur in the Agent BB, but those type of business can hinder the purpose of banks in channeling credit through Agent BB.

Some of the respondent of Agent BB (31.25%) have less than 1 km distance from the nearest bank office (terrace or bank office or bank unit), and 12,5% of them are less than 500 m. An active BB agency respondent stated that proximity to the bank office had a positive impact. Long waiting times and parking fees to be borne by customers when going to transactions in the bank office encourage them to perform the simple financial transactions at the agent BB, even though they have to bore the higher cost. Such a condition could have a negative impact for bank, as the bank's customer will turns to the agent, so that the income from the administrative costs of the bank shifts by the number of transactions that move from the bank office to the agent BB. Table 10 gives an overview of the distance of the agent with the nearest bank office.

Table 11. Distance of Agent BB to the Nearest Bank Office

Distance to the nearest Bank (km)	%
< 0,5	12,50
0,5 – 1,0	18,75
2,0 – 5,0	47,00
6,0 – 10,0	18,75
> 15,0	3,00

CONCLUSIONS

1. Field data shows that the average number of business actors who transact on Agent BB as many as three business actors per agent. In addition, the types of financial transactions conducted by business actors in BB Agents are more related to consumption activities, especially non-food consumption, such as paying electricity or buying vouchers, few financial transactions related to production business such as saving and withdrawing savings. Such conditions need to be an important note for the bank as program organizer. Behavioral analysis of Agent BB is something that needs attention.
2. Development of a branchless banking program is not enough to be measured by the number of transactions taking place in the Agent BB. The low number of business actors to transact in BB Agents indicates the reluctance of business actors to conduct BB Agent transactions, as potential targets for program development.
3. Negative Behavior of Agents BB in running the business as an extension of the bank to reach people in remote areas, can hamper the community and business actors to conduct financial transactions in the Agent BB. For businesses in remote areas not only require facilities to conduct financial transactions, but the confidentiality of their information and prices should be considered.
4. There are various reasons why business Actors who transact on BB Agents are more transacting for consumptive activities. Such conditions may be explained in relation to the transaction costs occur in the branchless banking program. The results show that there are at least seven types of moral hazard behavior that can hinder the development of the program, namely: (1) Additional fees charged by the agent, (2) Barriers to using a consumer ATM card at an agent, (3) Agents who are passive and use the facility for their own business interests, (4) The

existence of incentives to conduct financial transactions activities that are 'pseudo', (5) The proximity of the location between agents triggers behavior that harms the bank, (6) The type of business of agent or his/her spouse as informal credit lender is hampering the program, and (7) The closeness of the agent's location to the nearest bank office harms the bank.

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