



In e-Banking We Trust

Surya Setyawan

suryasetyawan@yahoo.com

Maranatha Christian University, Bandung, Indonesia

Abstract

This research describes the usage of Indonesia's electronic banking (e-banking) i.e. automated teller machine (ATM), debit card, cash deposit machine (CDM), non-cash teller machine, and Internet banking. The usage of internet and advanced gadget for telecommunication force banking industry to enhance their facilities in serving their customers better. In addition, customers are easier to gain their banking information and also their banking transaction. On the other hand, the security of electronic banking become more important to increase customer's believe. I conduct questionnaire to randomized respondents via electronic and manual. The questions depict their trust in using electronic banking such as transfer or electronic payment. It shows that bank customer still have trust in using e-banking for their banking transaction.

Keywords: e-banking, automated teller machine (ATM), debit card, cash deposit machine (CDM), non-cash teller machine, Internet banking, financial behavior.

Introduction

Banking industry competition is getting tighten nowadays. Commercial bank competes to reach better service to fulfill customer's satisfaction. One of the bank's strategies to develop customer's satisfaction is enhancing bank's information technology.

The rapid of telecommunication technology pushes banking industry to enhance its information technology. Allen, McAndrews and Strahan (2002) suggest that banking industry should apply e-finance to run their business in this sophisticated information technology. Starting from the usage of automated teller machine (ATM) in 1970s, the e-finance started to develop to phone banking, mobile banking and Internet banking (Allen *et al.*, 2002; Rose & Hudgins, 2013).

Lin, Wu and Tran (2014) state that Internet banking is growing faster than other e-commerce sectors and has emerged as an evolution in applied banking technology. It is also believed that e-banking decrease cost of banking transaction (Angelakopoulos & Mihiotis, 2011; Beck, 2001; Cyree, Delcoure & Dickens, 2009; Narayanasamy, Rasiah & Tan, 2011; Onay & Ozsoz, 2013), although there is lower profit for several first year in applying e-banking (Onay & Ozsoz, 2013). Moreover, customer's satisfaction can be increase for they can access their financial transaction everywhere (Angelakopoulos & Mihiotis, 2011).

On the other hand, Internet banking also has its dark side. Secure issue such as fraud, misused, hackers threat consumer's faith (Momparker, Lassala & Ribeiro, 2013; Sadeghi & Hanzaee, 2010). Customer becomes dissatisfied and refuses to use e-banking. In addition, customer can directly change to other bank (i.e. competitor) for safety reason. Moreover, it can form a negative financial behavior.

The big question in this research is the security of internet banking. Is the customer believes in e-banking in the middle of sophisticated information technology? This research describes whether customer still believe in e-banking, i.e. ATM, debit card, cash deposit machine (CDM), non-cash teller machine, and Internet banking.





Literature Review

Nowadays banking industry cannot separate with the development of e-finance. Allen *et al.* (2002: 6) define e-finance as the provision of financial services and markets using electronic communication and computation. Application of e-finance includes the usage of computer, telephone, and Internet in banking industry. Customer realizes the e-finance as e-banking, i.e. the bank service that can be access without going to 'brick and mortar' bank.

E-banking consists of the usage of ATM, debit card, phone banking, and Internet banking. The growing of e-finance is very influenced by the development of Internet technology. And the Internet also can be accessed if telecommunication technology of one's country develops rapidly.

The usage of ATM began at a branch office of Britain's Barclays Bank in 1967 (Rose & Hudgins, 2013: 114). The development of ATM is growing faster in the beginning of 21st century. Nowadays almost commercial banks in Indonesia have their own ATM. The ATM are placed in strategic area such as airport, train station, gas station, malls, convenience store, market, education institution, apartment, and also at the bank itself.

I adopt the advantages and disadvantages of ATM from Rose and Hudgins (2013: 115) define the advantages and disadvantages of bank in installing ATM. The advantages are:

- a. reduce the number of bank personnel;
- b. reduce the amount of rented space inside each branch office;
- c. reduce about 50 percent salary expense;
- d. can be placed outside bank office, i.e. strategic places; and
- e. operate 24 hour, even weekend and public holiday.

The disadvantages are:

- a. miss of human touch in serving customer;
- b. bank should replace old machine frequently; and
- c. increase criminal risk such as robbery and vandalism.

I can conclude that the advantages and disadvantages related to human resource and humanity itself.

The ATM technology also developed into many types such as non-cash teller machine and cash deposit machine (CDM). Non-cash teller machine is teller machine that has no ability to withdraw money. It only can be used to transfer, pay e-commerce transaction (e.g. pay online ticket, prepaid electricity, prepaid mobile phone token) pay credit card, check balance inquiry, deposit store card, information about foreign exchange rate and other non-cash transaction. In my opinion, non-cash teller machine has the lowest risk for it has no contain cash.

CDM is teller machine that can receive cash deposit and other simple transaction. The cash deposit also can transfer directly to other account instead of customer's individual account. However, CDM is very risky for it receives lots of cash. It should be placed with high secure system. Nowadays banks install non-cash teller machine and CDM in several strategic places. Probably the installation of non-cash teller machine and CDM are expensive.

Telephone banking is banking service via telephone. It is very popular in the end of 20th century. Customer can ask banking information and even banking transaction from one's phone only. Rose and Hudgins (2013: 117) state that telephone banking is more humanists for customer can communicate with bank better than ATM. However, this kind of service has a high risk in fraud. Bank cannot recognize their customer only from one's voice.

The development of Internet technology brings bank service into Internet banking era. Customer can access banking transaction by using computer, mobile phone, PDA, tablet, or



smart phone. It is believe that this service is the easiest way for customer beside ATM and phone banking. Rose and Hudgins (2013: 119) state that through the Internet a customer can usually:

1. verify in the real time account balances at any time and from any location;
2. move funds instantly from one account to another;
3. confirm that deposits of funds have been received, checks have cleared, and online transactions have been completed;
4. view and print images of checks that have passed through a customer's account;
5. submit an application for loans and credit cards; and
6. carry out online bill paying (such as telephone and utility bills).

Data and Questionnaire

This research is a descriptive research. I have spread 200 questionnaires to randomized people. The questionnaires also spread both in manual and electronic (Google Forms). There are 106 people (only 57%) who response the questionnaire. The response rate is shown in Table 1.

Table 1
Response Rate

Type of Questionnaire	Distributed	Responded	Response Rate
Manual	65	56	86.15%
Electronic	135	50	37.04%

The questionnaire consists of respondent demographic data and opinion about e-banking. The respondent demographic data's form is multiple choices. It consists of gender, age, bank, Internet banking usage, occupation and education.

The opinion questions are scale-form questions that consist of the usage of ATM, debit card, CDM, non-cash teller machine, Internet banking, and also the usage of teller and the denial of using e-banking. The scale is 1 for totally disagree, 2 for disagree, 3 for slightly agree, 4 for agree and 5 for totally agree.

Result

This part discuss about respondents' characteristic, result of ease to use, ease to understand, secure in using e-banking, effectiveness of e-banking, comparison between e-banking and teller, security of non-e-banking service and denial of using e-banking.

Table 2 shows the respondent characteristic. There are about 2/3 male and 1/3 female. The majority of respondent are student with 20 to 24 years old, i.e. university student who is graduated from senior high school.





Table 2
Respondents' Characteristic

Gender	Percent	Age	Percent	Number of Bank	Percent	Duration using Internet banking	Percent
Male	66.04%	Under 20	16.04%	One	44.34%	Never	35.85%
Female	33.96%	20-24	41.51%	Two	30.19%	Below one year	13.21%
		25-29	15.09%	Three	11.32%	1-2 years	18.87%
		30-34	12.26%	Four	8.49%	3-4 years	15.09%
		35-39	7.55%	Five	4.72%	5-6 years	5.66%
		40-44	5.66%	None	0.94%	Above 6 years	11.32%
		Above 45	1.89%				

Career	Percent	Education	Percent
Student	53.77%	Elementary	0.00%
Full-time entrepreneur	2.83%	Junior High School	0.00%
		Senior High School	50.00%
Half-time entrepreneur	3.77%	Diploma	3.77%
State employees	1.89%	Bachelor	28.30%
Private employees	30.19%	Master	15.09%
Professionals	2.83%	Doctor	2.83%
Other	4.72%		

There are more than 38 percent workers and professionals in this research sample. Most of their salary, wages, and other income are transferred to specific bank. Several of them also have about two or three bank account for they avoid clearing time. This group of sample also only about one to two years experience in Internet banking. I do an informal interview to several of them, and I found that most of them check their salary in ATM, and several of them using Internet banking to check their salary.

The entrepreneur group, both full-time and half-time, has a different characteristic. Their experience in using Internet banking slightly higher than workers and professionals. Moreover, they have about three or four bank account with different bank for the same reason with workers and professionals. Unfortunately, the sum of this group only six percent for I cannot discuss further.

It is also shown that the respondents who are above 40 years old are rarely using Internet banking, except those are who has master and doctor background. This group can be classified as a conservative in using e-banking.

The next discussion (Table 3) is about ease to use e-banking. Most of respondent agree that ATM and debit card are easy to use. The sophisticated teller machine, i.e. CDM and non-cash teller machine, is not quite agree for they are relative new and installed at only several places. The CDM and non-cash teller machine are popular among student and youngster.





Table 3
Ease to use

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	0.00%	0.94%	7.55%	33.02%	58.49%
Debit Card	0.00%	0.94%	15.09%	37.74%	46.23%
Cash Deposit Machine (CDM)	3.77%	3.77%	31.13%	40.57%	20.75%
Non-Cash Teller Machine	1.89%	6.60%	27.36%	35.85%	28.30%
Internet Banking	1.89%	4.72%	26.42%	34.91%	32.08%

The usage of Internet Banking is not quite easy to use, but most of respondent tend to agree. It could be the step to do the transaction is more complicated than ATM and debit card.

Table 4
Ease to understand

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	0.00%	2.83%	9.43%	38.68%	49.06%
Debit Card	0.94%	0.94%	16.98%	44.34%	36.79%
Cash Deposit Machine (CDM)	3.77%	4.72%	31.13%	40.57%	19.81%
Non-Cash Teller Machine	1.89%	6.60%	27.36%	39.62%	24.53%
Internet Banking	1.89%	9.43%	26.42%	31.13%	31.13%

Table 4 describes about ease to understand the e-banking. ATM is the easiest way to understand, follow by debit card. CDM and non-cash teller machine a little bit easy to understand, but Internet banking is easier than CDM and non-cash teller machine.

Table 5
Secure in using e-banking

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	0.00%	11.32%	25.47%	34.91%	28.30%
Debit Card	0.94%	1.89%	28.30%	44.34%	24.53%
Cash Deposit Machine (CDM)	3.77%	9.43%	37.74%	34.91%	14.15%
Non-Cash Teller Machine	1.89%	10.38%	28.30%	36.79%	22.64%
Internet Banking	1.89%	10.38%	32.08%	32.08%	23.58%

The secure in using e-banking is almost 'slightly agree' to 'agree'. It is because there are lots of criminals who are using technology or even hypnotize and psychology to cheat bank customers. The criminals can crack the Internet banking so that they can steal money from



customers. The criminals also use SMS or telephone to contact customers and pretend there is an accident or false SMS; in addition, they ask customers to transfer money to them. This kind of cheating obviously decreases the trust in using e-banking. Nevertheless, there are only a few respondents who are 'disagree'.

Table 6
Effectiveness of e-banking

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	0.94%	7.55%	16.04%	33.96%	41.51%
Debit Card	0.94%	1.89%	19.81%	40.57%	36.79%
Cash Deposit Machine (CDM)	2.83%	3.77%	27.36%	37.74%	28.30%
Non-Cash Teller Machine	4.72%	3.77%	24.53%	39.62%	27.36%
Internet Banking	0.94%	2.83%	16.98%	31.13%	48.11%

Table 6 shows that most of respondents agree that e-banking is more effective than go to bank. The most effective is Internet banking, follow by ATM. Respondents also think that debit card is effective, but not totally agree. It can be said that respondents think that cash method is more effective than debit card.

Table 7
Comparison between e-banking and teller

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	0.94%	1.89%	16.04%	38.68%	42.45%
Debit Card	0.94%	5.66%	23.58%	35.85%	33.96%
Cash Deposit Machine (CDM)	4.72%	12.26%	30.19%	32.08%	20.75%
Non-Cash Teller Machine	1.89%	9.43%	26.42%	38.68%	23.58%
Internet Banking	3.77%	4.72%	23.58%	38.68%	29.25%

Table 7 shows that e-banking still more applicable than go to bank. Nevertheless, Internet banking, non-cash teller machine and CDM are not too popular to be used by respondents. It confirms the traditional banking can be accepted by respondents.

Table 8
Security of non-e-banking service

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Withdraw money from teller	6.60%	23.58%	37.74%	18.87%	13.21%
Deposit money to teller	2.83%	16.98%	33.02%	31.13%	16.04%
Pay cash	8.49%	18.87%	35.85%	26.42%	10.38%

Table 8 discusses about the security of using the non-e-banking. Respondents are 'slightly agree' and tend to 'disagree' to withdraw money from teller.



Moreover, respondents are 'slightly agree' and tend to 'agree' to deposit their money to teller. This response is a little bit contrary with Table 5 that shows slightly agree to agree feeling secure in using e-banking

Table 9
Denial of using e-banking

	Totally disagree	Disagree	Slightly agree	Agree	Totally agree
Automatic Teller Machine (ATM)	64.15%	26.42%	3.77%	3.77%	1.89%
Debit Card	56.60%	26.42%	8.49%	4.72%	3.77%
Cash Deposit Machine (CDM)	45.28%	21.70%	19.81%	6.60%	6.60%
Non-Cash Teller Machine	44.34%	26.42%	18.87%	5.66%	4.72%
Internet Banking	49.06%	22.64%	17.92%	5.66%	4.72%

Last table shows that most respondents are totally disagree that they do not need particular e-banking products, although they are not familiar with CDM and non-cash teller machine. Still, respondents need e-banking to fulfill their banking transaction.

Conclusions

This research intends to know whether bank customers are using e-banking in their everyday life. In addition I would like to conclude the behavior of bank customers related to financial behavior.

In general, respondents are realize that e-banking is important and being their part of banking activity. The development of Internet technology, telecommunication technology and gadget also drive e-banking technology getting sophisticated. E-banking being more recognize to people who understand technology.

Nowadays, the usage of e-banking has not reach 100 percent. Bank customers have not recognized all e-banking products. They almost know ATM and use it for transaction, but not all of them recognize CDM and non-cash teller machine.

E-banking also can be misused by criminals. This makes customers doubt to use e-banking. It can also make e-banking as negative service and form negative behavior (Bons, Alt, Lee & Weber, 2012; Sadeghi & Hanzae, 2010). This threat can be reduce by clear information about how to use e-banking properly.

Although e-banking is efficient, customers also need 'human touch' by doing transaction in bank for certain purpose, despite of using e-banking. Customers still need oral explanation about banking product or services. Hence, 'human touch' cannot replace by e-banking entirely.

At the end, this research shows that bank customers still believe that e-banking can be trusted. There are only fewer respondents who directly very disagree about security of e-banking.

Suggestions

The result shows that CDM and non-cash teller machine are not too popular for customer. Bank should give general education or advertisement about CDM and noncash



teller machine, include Internet banking. I believe bank has spent big sum of money to invest CDM and non-cash teller machine for make better service to their customers.

It is also believe that bank invest sophisticated e-banking to fulfill customer's satisfaction (Beck, 2001; Bons *et al.*, 2012; Sadeghi & Hanzaee, 2010). Bank should make their customer safe so that they can form their financial behavior by using e-banking for simple and certain transaction.

This research can be developed into better research such as the influence of e-banking to customer satisfaction, the impact of e-banking to financial decision, the influence of e-banking to certain financial behavior and others.

References

- Allen, F., McAndrews, J. and Strahan P. (2002), "E-Finance: An Introduction", *Journal of Financial Services Research*, Vol. 22 No. 1, pp. 5-27.
- Angelakopoulos, G. and Mihiotis, A. (2011), "E-Banking: Challenges and Opportunities in the Greek Banking Sector", *Electronic Commerce Research*, Vol. 11, pp. 297-319.
- Beck, H. (2001), "Banking in Essential, Banks are Not. The Future of Financial Intermediation in the Age of the Internet", *Netnomics*, Vol. 3, pp. 7-22.
- Bons, R.W.H., Alt, R., Lee, H.G. and Weber, B. (2012), "Banking in the Internet and Mobile Era", *Electronic Markets*, Vol. 22, pp. 197-202.
- Cyree, K.B., Delcuore, N. and Dickens, R. (2009), "An Examination of the Performance and Prospects for the Future of Internet-Primary Banks", *Journal of Economics and Finance*, Vol. 33, pp. 128-147.
- Lin, F.T., Wu, H.Y., Tran, T.N.N. (2014), "Internet Banking Adoption in a Developing Country: An Empirical Study in Vietnam", *Information Systems and e-Business Management*, on-going publishing.
- Momparler, A., Lassala, C. and Ribeiro, D. (2013), "Efficiency in Banking Services: A Comparative Analysis of Internet-Primary and Branching Banks in the US", *Service Business*, Vol. 7, pp. 641-663.
- Narayanasamy, K., Rasiah, D. and Tan, T.M. (2011), "The Adoption and Concerns of e-Finance in Malaysia", *Electronic Commerce Research*, Vol. 11, pp. 383-400.
- Onay, C. and Ozsoz, E. (2013), "The Impact of Internet Banking on Brick and Mortar Branches: The Case of Turkey", *Journal of Financial Services Research*, Vol. 44 No. 2, pp. 187-204.
- Rose, P.S. and Hudgins, S.C. (2013), *Bank Management and Financial Services*, McGraw-Hill, New York.
- Sadeghi, T. and Hanzaee, K.H. (2010), "Customer Satisfaction Factors (CSFs) with Online Banking Services in an Islamic Country: Islamic Republic of Iran", *Journal of Islamic Marketing*, Vol. 1, No. 3, pp. 249-267.

