

## CHAPTER I

### INTRODUCTION

#### A. Background

In the world of business and economics nowadays, for the sake of fluency in debt and credit payments, needed some of financial institutions which the activities are to raising funds, to deliver or transfer funds, or even both which means to raise and transfer funds.<sup>1</sup> It means that the financial institutions giving their services in form of payment services between one party and to the other party, example in market activity, the buyer transferred the funds to the seller. Financial institutions who are banks in common, in their services they prefer the face to face service method and based to paper document for the sake of customers' safety and convenience on their transaction.<sup>2</sup>

But as the time goes by into the reformation era, those transactions which based on paper document have been difficult to be implemented especially for the transactions which related from one city to the others city or even between countries. In the reformation era, financial institutions in giving their services for the sake of customers' convenience have been switched to the utilization of information technology. The

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<sup>1</sup> Kasmir, *Bank dan Lembaga Keuangan Lainnya*, (Jakarta: PT. RajaGrafindo Persada, 2013), pg. 3.

<sup>2</sup> Landasan Teori, "Pengertian Internet Banking Tujuan dan Manfaat Sistem Keamanan Untuk Nasabah Menurut Para Ahli" <http://www.landasanteori.com/2015/10/pengertian-internet-banking-tujuan-dan.html>, accessed on 30<sup>th</sup> April 2016.

switching happened due to the mindset of the customers who always needed amenities and simplicities on their transactions.<sup>3</sup>

Information revolution showed by the emergence of the internet has been giving the impact to every sector of human life's aspects, started from security sector until to the banking sector, or even for private matters.<sup>4</sup> On the banking sector, the result of the information revolution was founded a new concept of doing transactions in banking activity which customers just using electronic medias such as mobile phone or even computer which connected into an internet connection. This information revolution was called as internet banking. This term also known as cyber banking, electronic banking, virtual banking, home banking, or online banking. Internet banking facility was designed by the banks as good as possible to give a good service quality to the customers to ensure them that by using internet banking their transactions was done easier, faster, more convenience, more accurate, cheaper and so on.

But aside from the conveniences of using internet banking, definitely there are negative impacts that may happen today or even in the future. Negative impacts are risk of threats of using internet banking such as smuggling, piercing, fraud, carding, cybercrime, cracking, and so on.<sup>5</sup>

Theses impacts showed that the security of information system based on

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<sup>3</sup> Kasmir, *op.cit.*, pg. vi.

<sup>4</sup> Agus Raharjo, *Cybercrime Pemahaman Dan Upaya Pencegahan Kejahatan Berteknologi*, (Jakarta: PT. RajaGrafindo Persada, 2002), pg. 13.

<sup>5</sup> Dudung, 2015, "20 Dampak Positif dan Negatif Teknologi Informasi di Bidang Ekonomi" <http://www.dosenpendidikan.com/20-dampak-positif-dan-negatif-teknologi-informasi-di-bidang-ekonomi/>, accessed on 30<sup>th</sup> April 2016.

internet connection become a needs to pay attention to, because internet connection usually was not secured because it was opened in public or global.<sup>6</sup>

Indonesia is a vast equatorial archipelago of 17.000 islands extending 5.150 kilometers (3.200 miles) east to west, between the Indian and Pacific Oceans in Southeast Asia.<sup>7</sup> Indonesia in 2016 has about 258.316.051 (two hundred fifty eight million three hundred sixteen thousand fifty one) population which made Indonesia as the number fourth country out of ten countries.<sup>8</sup>

Table 1.1

Top Ten Countries with the Highest Population in the World of 2016

<b>TOP TEN COUNTRIES WITH THE HIGHEST POPULATION</b>					
#	Country	2000 Population	2010 Population	2016 Population	2050 Expected Pop.
1	<a href="#">China</a>	1,268,853,362	1,330,141,295	<b>1,378,561,591</b>	1,303,723,332
2	<a href="#">India</a>	1,004,124,224	1,173,108,018	<b>1,266,883,598</b>	1,656,553,632
3	<a href="#">United States</a>	282,338,631	310,232,863	<b>323,995,528</b>	439,010,253
4	<a href="#">Indonesia</a>	213,829,469	242,968,342	<b>258,316,051</b>	313,020,847
5	<a href="#">Brazil</a>	176,319,621	201,103,330	<b>206,050,242</b>	260,692,493
6	<a href="#">Pakistan</a>	146,404,914	184,404,791	<b>192,758,348</b>	276,428,758
7	<a href="#">Nigeria</a>	123,178,818	152,217,341	<b>186,879,760</b>	264,262,405
8	<a href="#">Bangladesh</a>	130,406,594	156,118,464	<b>162,855,651</b>	233,587,279

<sup>6</sup> Onno W. Purbo dan Tony Wiharjito, *Buku Pintar Internet Keamanan Jaringan Internet*, (Jakarta: PT. Elex Media Komputindo, 2001), pg. 1.

<sup>7</sup> National Geographic, "Indonesia Facts"

<http://travel.nationalgeographic.com/travel/countries/indonesia-facts/>, accessed on 8<sup>th</sup> December 2016.

<sup>8</sup> Internet World Statistics, "The World Population and The Top Ten Countries with The Highest Population" <http://www.internetworldstats.com/stats8.htm>, accessed on 8<sup>th</sup> December 2016.

9	<a href="#">Russia</a>	146,709,971	139,390,205	<b>146,358,055</b>	109,187,353
10	<a href="#">Japan</a>	126,729,223	126,804,433	<b>126,464,583</b>	93,673,826
<b>TOP TEN Countries</b>		3,618,894,827	4,016,489,082	<b>4,249,123,407</b>	4,950,140,178
<b>Rest of the World</b>		2,466,012,769	2,829,120,878	<b>3,091,036,085</b>	4,306,202,522
<b>TOTAL World Population</b>		6,084,907,596	6,845,609,960	<b>7,340,159,492</b>	9,256,342,700

Source: <http://www.internetworldstats.com/stats8.htm><sup>9</sup>

For those who are using internet banking itself in 2015, around 13.300.000 (thirteen million three hundred thousand) Indonesian people were using it so it took about 6 % of the whole population in Indonesia.<sup>10</sup>

With this many people were using internet banking, Indonesia will also be the biggest possibility as the one of the targeted countries by the criminals to do the crime and some of them had to face the threats of using internet banking.

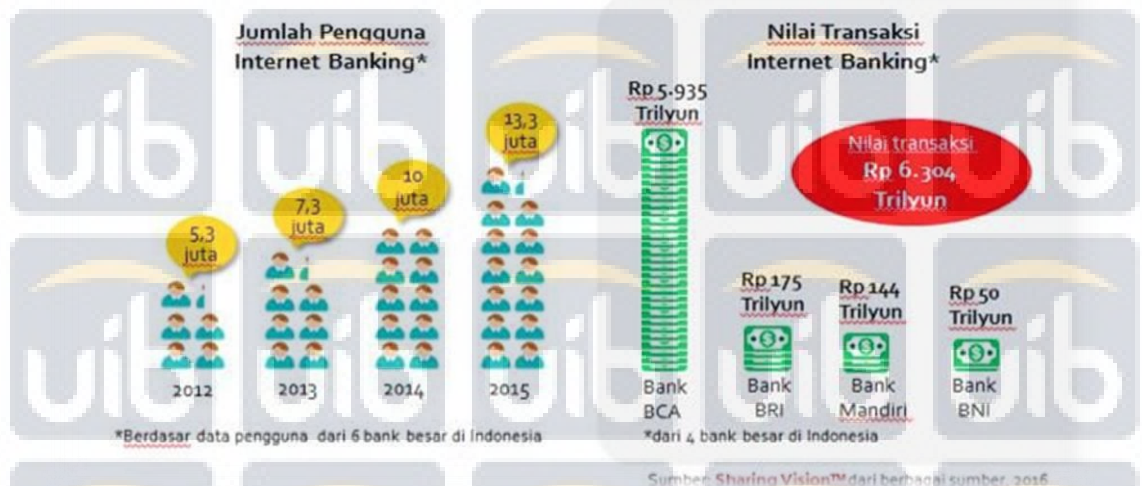


Figure 1.1 Amount of Internet Banking Users from Top 6 Banks and Numbers of Internet Banking Transaction from Top 4 Banks in Indonesia,

<sup>9</sup> *Ibid.*, accessed on 8<sup>th</sup> December 2016.

<sup>10</sup> USSI, 2016, "Akankah Financial Tech Menggeser Perbankan Konvensional?" <http://ussi-software.com/blog/2016/06/09/akankah-financial-tech-menggeser-perbankan-konvensional/>, accessed on 8<sup>th</sup> December 2016.

source: <http://ussi-software.com/blog/2016/06/09/akankah-financial-tech-menggeser-perbankan-konvensional/><sup>11</sup>

Regional Police of Kepulauan Riau stated that the amount of cybercrime generally including act of humiliation, fraud, harassment which by done through social media, online gambling in total around 400 (four hundred) above cases in every and for cases which inflict a financial loss in banking sector total around 103 (one hundred and three) to 120 (one hundred twenty) cases in a year in the period last five years since 2010 until 2015.<sup>12</sup>

In March 2015, a cybercrime happened on BCA Bank where an information was known from the social media about a BCA Bank customer admitted that his/her bank's account has been smuggled after he/she failed repeatedly from doing transaction on BCA Internet Banking.

When the customer tried to login to his/her internet banking account, suddenly a small pop up displayed on the monitor where contained words such as "token synchronization" and caused the customer's computer hanged. After he/she did a restart on his/her computer and try to login to his/her BCA's internet banking account again, he/she founded that her funds in his/her account were reduced for Rp. 13.000.000,- (thirteen millions rupiah).<sup>13</sup>

<sup>11</sup> *Ibid.*, accessed on 8<sup>th</sup> December 2017.

<sup>12</sup> Delfind Kiweikhang, "Tinjauan Yuridis Penanganan Kejahatan Siber (Cyber Crime) di Sektor Perbankan Indonesia dan Amerika," (Undergraduate Final Project Universitas Internasional Batam, Batam, 2015), pg. 46.

<sup>13</sup> Yoga Sukmana, 2015, "BCA Minta Nasabah Waspadai "Sinkronisasi Token" Saat Membuka Internet Banking"

Another same case happened on Mandiri Bank on 8<sup>th</sup> April 2015 where a customer of Mandiri Bank was using Mandiri's internet banking and the process of the case totally same with the case that happened in BCA Bank and this customer from Mandiri Bank has lost for Rp. 40.000.000,- (forty millions rupiah).<sup>14</sup>

President Director of BCA Bank named Jahja Setiaatmadja said that this token synchronization case happened was due to a viruses or malwares that attacked on customer's personal computer.<sup>15</sup> The cases that have been outlined before were the sample of the cases that real happened and definitely the banks need to double cross check the chronological case to ensure that the customer's loss was under bank's responsibility or not. At the moment banks only could mediation to the funds receiver of token synchronization case, but the bank itself does not guarantee that those lost funds are return to the customer.<sup>16</sup>

In this condition, how were with the loss of the customers if the banks could not successfully mediated the receiver? As the customers who were using bank facility, do they have to responsible for they own because

<http://bisniskeuangan.kompas.com/read/2015/03/04/144553726/BCA.Minta.Nasabah.Waspadaai.Sinkronisasi.Token.Saat.Membuka.Internet.Banking>, accessed on 6<sup>th</sup> May 2016.

<sup>14</sup> HowMoneyIndonesia, "*Uang Hilang Setelah Sinkronisasi Token di Internet Banking Bank Mandiri*" <https://howmoneyindonesia.com/2015/04/09/uang-hilang-setelah-sinkronisasi-token-di-internet-banking-bank-mandiri/>, accessed on 6<sup>th</sup> May 2016.

<sup>15</sup> Stefano Reinard Sulaiman, 2015, "*BCA: 1000 Nasabah Terkena "Sinkronisasi Token" Saat Akses Internet Banking*" <http://bisniskeuangan.kompas.com/read/2015/03/06/061800526/BCA.1.000.Nasabah.Terkena.Sinkronisasi.Token.saar.Akses.Internet.Banking>, accessed on 12<sup>th</sup> May 2016.

<sup>16</sup> Ika Suryani Syarief, 2015, "*Situs BCA Terserang Virus? Nasabah Kehilangan Rp18,9 Juta*" [http://www.suarasurabaya.net/print\\_news/Kelana%20Kota/2015/156303-Situs-BCA-Terserang-Virus?-Nasabah-Kehilangan-Rp18,9-Juta](http://www.suarasurabaya.net/print_news/Kelana%20Kota/2015/156303-Situs-BCA-Terserang-Virus?-Nasabah-Kehilangan-Rp18,9-Juta), accessed on 6<sup>th</sup> May 2016.

they were not caution when doing the transactions on internet banking or caused by viruses or malwares from the customer's personal computer?

According to Article 19 in the Indonesian Law Number 8 of 1999 concerning Consumer Protection banks as the service providers of internet banking have to give compensation to the customers which were loss due to the usage of internet banking which provided by the banks. But in the reality there are still more customers did not manage to get their money back safely or the banks could not do much to help those customers either.

There is a difference between what has been explained in the law and the facts that happened in reality and it caused many questions which the answers could be done by a research. Therefore, the researcher is interested to do a research which entitled "**Legal Protection to Bank Customers against Malware Trojan in Indonesia**".

## **B. Research questions**

1. What laws that could be imposed to handle Malware Trojan cases in Indonesia?
2. How do banks protect their customers against Malware Trojan attacks?
3. What efforts could bank customers do to deal with Malware Trojan attacks?

## C. Research objectives and benefits

### 1. Research objectives

The purposes of this research are:

- a. To analyze what laws that could be imposed against Malware Trojan cases in Indonesia.
- b. To find out how do banks protect their customers against Malware Trojan attacks.
- c. To analyze what efforts could bank customers do to deal with Malware Trojan attacks.

### 2. Research benefits

The benefits of this research are:

- a. Theoretical benefits which from this research could be expected to give information or to develop the knowledge of Indonesia's society who as the bank's customers or even non-customers especially about the legal protection to the customers who as the victims of token synchronization case of some banks in Indonesia. This research also could be used as references and case study for the next research in the future.
- b. Practical benefits which from this research could be expected to be implemented by all banks which located in Indonesia and could give legal protection to their customers who suffering loss due to the token synchronization case.

This research also to let us know how far the law



enforcement in Indonesia to handle token synchronization cases. This research hopefully could be as a consideration to Indonesia's government to renew the current cyber law and more specific concerning to consumer protection towards cybercrime.