### **CHAPTER I**

#### INTRODUCTION

### 1.1. Background of Study

Social media is the fastest growing platform on the Internet. The statistical data present the number of social network users worldwide in 2017 is 2.46 billion users (Statista, 2018b). The users have their own social media preferences. For example; YouTube is a platform where people make videos and upload them for people to watch. From YouTube also, people can get a helpful tutorial, tips, product updates, or entertainment.

Another social media platform which is well-known among internet users nowadays is Instagram. Instagram has a different concept from YouTube. Instagram is focused more on picture features, and it is called with a photo-sharing social network. People can upload their pictures and edit them before they post them on their Instagram accounts. Then, people can see the pictures, leave a "like". And leave a comment on them.

On the other side, there is another social media platform named Twitter. According to Statista (2018a) with the percentage of 27% from the internet users, Twitter is placed on fifth place of the most used social media in the world after Facebook, WhatsApp, Facebook Massager, and Instagram. Furthermore, Chang (2010) stated in Twitter, people can share what happens in the world with real-time content sharing. This means that people can share their thoughts about the events happening, as Twitter described itself as "what's happening in the world and what people are

talking about right now" (Twitter, 2018a).

Number of monthly active Twitter users worldwide from 1st quarter 2010 to 4th quarter 2017 (in millions)

400

300

2284

302

307

310

317

327

330

231.7

255

401

100

304

40 49 54

85

Additional Information:
Worldwide; Twitter, 0120 10 to 04 2017; excluding SMS fast followers

Figure 1.1 Number of Monthly Active Twitter Users Worldwide

Source: Statista (2018)

Recently at the end of the year of 2017, a new cryptocurrency named Bitcoin, which was previously introduced in 2009 gained in popularity. It has become a popular online payment system and virtual currency (Gandal, Hamrick, Moore, & Oberman, 2018). The popularity of Bitcoin is reasonable since the market capitalization of Bitcoin reached the number of \$15 billion as of December 2016 (Bariviera, Basgall, Hasperué, & Naiouf, 2017). Moreover, at the end of September 2017, the market capitalization for cryptocurrency rose \$145 billion (Gandal et al., 2018), indicating that cryptocurrency becomes popular nowadays.

The popularity of cryptocurrency, especially Bitcoin, has evoked presumptions,

one of them which is that Bitcoin is a form of fraud. There is no exact research which corroborates this presumption. In spite of the fact, there are several central banks worldwide and other government's official institutes of business and economics which officially issue reports on Bitcoin. For example; central bank of United Kingdom, New Zealand, Zimbabwe, USA, Germany, and Japan. The official reports are trusted guide for those who want to know more about Bitcoin.

In relation to Bitcoin's popularity, there must be a reason why it has attracted people with an interest in finance and business. One of the reasons is because of social media. When the news on Bitcoin has blown up both on online and offline news sites, people talk about it and interact with each other for discussing the hot news.

Twitter as a microblogging site, provides its users an opportunity to talk about it. The choice of people using Twitter as a platform where they can share and discuss Bitcoin is supported by the fact that Twitter is one of the social media with real-time content sharing. If there is a new trend about Bitcoin, people can talk about it through Twitter in line with the time as news and trend about Bitcoin arises.

The abundant comments and discussions through Twitter, have generated many opinions regarding Bitcoin. Because of the anonymity of bitcoin (Nakamoto, 2008) has evoked a range of presumptions whether it is negative or positive ones. One of the negative presumptions is that Bitcoin carries fraud inside the system. Unfortunately, because Twitter can be accessed by everyone, most Twitter users are those who are not experts on financial issues, especially Bitcoin. Therefore, in order to make the presumption is clear between them, official reports about Bitcoin from the central bank

and other government's official bodies of business and economics are used as the basis for the comparison.

### 1.2. Problem Identification

The first problem identification in this research focuses on the statement of official reports of central banks and other government's official bodies of business and economics about Bitcoin. The researcher narrowed the problem identification by focusing only on what the experts said about the Bitcoin and its relation to fraud, which usually leads to other forms of cyber-crimes.

The second problem identification focuses on Twitter's users' opinion about the presumption of fraud in Bitcoin. The backgrounds of Twitter users are diverse, and some of them are not from a business or economic background. Consequently, their opinions are different. The researcher utilized this opportunity by analyzing their opinions about the presumption of fraud in Bitcoin.

In the first problem identification, what the experts said about Bitcoin and its relation to fraud are analyzed. Meanwhile, in the second problem formulation, the researcher analyzes Twitter's user opinions on the presumption of fraud in Bitcoin from the point of view of, basically, non-expert. In the third problem formulation, the researcher analyzes and discusses the comparison of opinions between official bodies and Twitter users. Finally, the final conclusions are drawn from the three problem formulations.

### **1.3.** Problem Formulation

There are three problem formulations in this study. Each of the problem formulations has its main question. The problem formulations for this research are;

## 1. What are the opinions of government bodies regarding the risk of fraud in Bitcoin?

Even though the presumption of fraud in Bitcoin arises and the alleged fraud is still unknown clearly, since the Bitcoin's name emerged as a cryptocurrency in 2009, some of the central banks and other government's official bodies of business and economics around the world already released the official report about Bitcoin. From this perspective, we discuss and analyze what the experts said about Bitcoin.

# 2. What are the opinions of Twitter users about the presumption of fraud in Bitcoin?

The second problem formulation is about the opinion of Twitter users on the presumption of fraud in Bitcoin. Twitter users, who mostly are not experts on financial issues surely have their opinions from a non-expert perspective. In this section, the opinion of Twitter users on fraud-related Bitcoin is discussed.

# 3. What is the comparison of fraud related opinion between Twitter users and official bodies? What are the opinions which both sides agree with?

The third problem formulation is about the comparison opinion between the official bodies and Twitter users. The comparison opinion itself focuses on the fraud-related opinion of Bitcoin. The opinions are from the pro and con side. From this point,

the opinion that both official bodies and Twitter users voiced in the same frequency will be found out.

#### **1.4.** Problem Limitation

This research has several problem limitations. They are;

### a. The time limitation when the data are collected from Twitter.

Although the data collected from Twitter originate from the Twitter users around the world, they still have a limitation which is the data collection interval. The data were collected starting from January 10<sup>th</sup>, 2018 through January 19<sup>th</sup>, 2018.

### b. The limitation of reports on Bitcoin issued by official business and economics bodies worldwide.

The researcher collected the official reports on Bitcoin issued by government bodies worldwide. The reports collected from Asia, America, Europe, Africa, and Australia.

### 1.5. Research Objectives

The objectives of this research are as follows;

- To know what the experts say about Bitcoin and its correlation to fraud, which usually leads to cyber-crimes.
- 2. To know the Twitter user's opinion about the presumption of fraud in Bitcoin.
- 3. To know whether the Twitter users have the same opinion with the experts related to Bitcoin especially of its presumption of fraud.

### 1.6. Research Contribution

This research provides benefits theoretically and practically. Theoretically, it would make a significant contribution to the field of finance, especially a virtual currency with its problems in the current advanced technology. Thus, students can expand their horizons by learning the research findings, which in turn can more understand of virtual currency and possible fraud in financial cybercrime. Furthermore, it can be a reference for other researchers to conduct further research on digital currency and fraud with a different time range and specific place.

Practically, the society may take advantage of the research findings as they can be a reference in preventing the possibility of fraud both in the transaction and in investments.

### 1.7. Systematics of Writing

The systematics of writing for this research are as follows:

### **CHAPTER I: INTRODUCTION**

This chapter presents the background of the study, the problem identification, the problem formulation of the research, problem limitation of the research, the research objectives, the research contribution, and the systematics of writing.

### CHAPTER II: REVIEW OF RELATED LITERATURE

This chapter consists of literature review used as the research base. The literature being used in this research is from the previous studies of Fraud Triangle theory, internet fraud, financial technology, cryptocurrency, Bitcoin and its blockchain

technology, social media, Twitter, and official bodies.

#### CHAPTER III: RESEARCH METHOD

This chapter describes the method being used to conduct the research. It explains qualitative research, research's systematical process, data collection method, data analysis technique, research objects, and validity testing.

### CHAPTER IV: DATA ANALYSIS AND DISCUSSION

In this chapter, the data are analyzed which in turn discussed. The data analyzed later discussed to answer problem formulation. The discussion based on the prior studies which are already reviewed in Chapter II. We would know what the expert says about the Bitcoin and its correlation to fraud, what is the opinion of Twitter's users about the presumption of fraud in Bitcoin.

### CHAPTER V: CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusions, recommendations, and limitations of the research. The conclusions are based on the data analysis and discussion. The recommendation of this research would be kinds of research that future possible research can be conducted in the future. Meanwhile, the limitations of this research that the future researcher can cover in the future.