Chapter 84
Gambling Behaviour in the Cryptocurrency Market

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ABSTRACT

This article examines whether the investment strategies of cryptocurrency market involve high-risk gambling. Results show that the cryptocurrency risk premiums co-move closely with the return on CBOE Volatility Index (VIX). As such, the strategies of cryptocurrency trading closely resemble that of high-risk gambling. In other words, traders' expectations co-move closely (significantly) with the expected future payoffs from gambling. The co-movement is more pronounced when the gambling offers gains rather than losses and the payoffs are above average. VIX index returns significantly Granger-cause CSAD of returns (with and without Bitcoin) indicates that the cryptocurrency trading constitutes a form of gambling where the motivation for gambling comes from the amount of variation (i.e. riskiness) in the gambling payoffs. These findings warrant policymakers of countries to revisit the existing regulatory framework governing the conduct of electronic finance in the financial services industry.

INTRODUCTION

The legalization governing the conduct of cryptocurrency exchanges around the world has a long way to go. Cryptocurrency as a digital currency facilitates instant settlement of commercial transactions without the control of any central authority. Since the cryptocurrency transactions are recorded in a blockchain, it is impossible for governments to interfere the operation of cryptocurrency. Although the main purpose of introducing cryptocurrency is to facilitate the settlement of commercial transactions, it has now become an instrument for speculative trading rather than a medium of exchange. In addition to the anonymity of transactions, cryptocurrency offers a wide array of advantages. It is easily accessible at any time via internet and no market infrastructure is needed. More importantly, the pseudonymity can be maintained from initiation of a transaction to its ultimate settlement.

However, the cryptocurrency as a virtual currency uses decentralized peer-to-peer settlement system to authorize transactions, and as such, there is no recourse available to market participants in the case of disputes or error trades (i.e. transactions) due to the absence of a regulatory authority to guarantee the value of cryptocurrency transactions. On the other hand, cryptocurrency does not have an underlying asset and its ultimate price is determined by a number of factors including, but not limited to, demand and supply, macroeconomic events and regularity restrictions by governments etc. As such, cryptocurrencies are highly volatile and can fluctuate significantly within a fraction of time. Numerous incidents show that the cryptocurrency breaches anti-money laundering and combating financing of terrorism laws. More recent research by Chainalysis has discovered that $1 billion worth of money had been laundered in the year 2018 simply by depositing funds onto cryptocurrency exchange and trading them in the name of commercial transactions. As such, cryptocurrencies may pose a significant threat to financial services industry operation, customer protection as well as the economy. Figures 1 and 2 exhibit the behaviour of Bitcoin price charges and the association between cryptocurrency portfolio return (with Bitcoin) and VIX index return.

Figure 1. Bitcoin price (Source: Author's presentation)
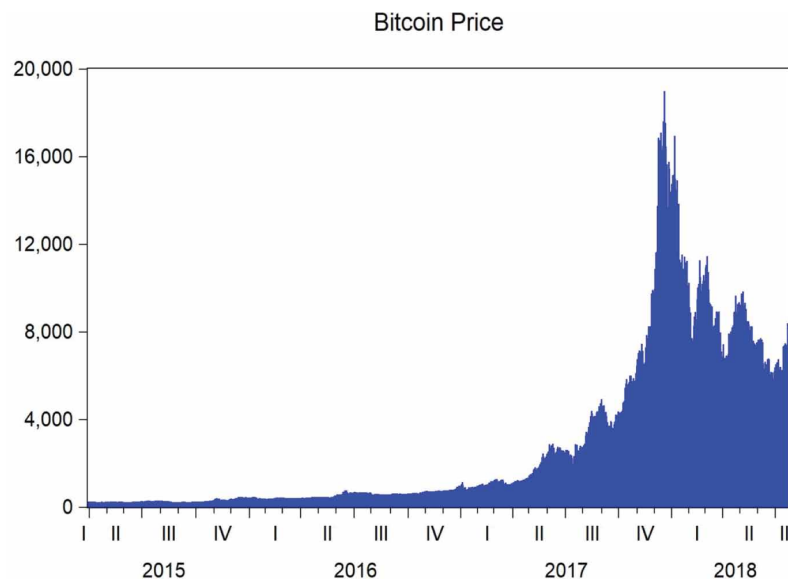
According to Figure 1, Bitcoin as the largest instrument in the cryptocurrency exchange exhibits a large cluster of price changes during 2017 and 2018. The time series data shows that the bullish period begins in April 2017 and ends in December 2017 (approximately). The crisis period starts in December 2017 and shows a continued decline during the first half of 2018. The largest bullish and crisis cluster ends in February 2018, followed by two other small clusters of price changes. Note that the distribution of the average price (in the absence of a common market index) of the cryptocurrency exhibits the same pattern.

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