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Extended Abstract of Thesis

Economic Analysis of Bitcoin as an Investment Vehicle

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1. Introduction

In the modern-day economy, it has become inevitable that technology will begin its overtake on the attainment of wealth and more specifically wealth attained through investments. While in the past, investors had a narrow range of physical commodities that would often take significant amounts of time to exchange, modern day investments are more instantaneous due to technology such as the internet. With investors having many traditional choices of investments to choose from, the economy with the help of technology and the internet has begun to develop so much as to have modern day "digital" commodities. At the forefront of these digital commodities is "Bitcoin". With the rise of digital commodities comes with new challenges as well as new benefits. Security, anonymity, governance, are all concerns with digital currencies such as Bitcoin. Fortunately for investors that are willing to consider Bitcoin, there are many benefits. The lack of a central exchange keeps the currency in the power of the people that hold them, and not in the power of a central entity. User to user transactions keep out unwanted influence on the currency and its exchanges.

Bitcoin was first presented in 2007 and has slowly gained respectability and interest within the past decade since its first presence. With a small investment at the beginning only ten years ago, to becoming worth thousands of percentages more now, it's not a surprise that Bitcoin has many investors attention.

2. Keywords

Bitcoin, Investment, Crypto-Currency, Portfolio, Risk, Value, Money, Volatility, Appreciate, Exchange

3. Objectives

The main objective of this diploma thesis is to determine Bitcoins position as an investment vehicle. With its significant media attention in recent years, the underlying economic factors of Bitcoin have been very interesting and therefore this thesis is to bring to light some of these factors. The primary questions to be answered are the following.

- What role does Bitcoin play in an investor's portfolio?
- Based on a time series analysis, where is the price of Bitcoin likely to go?
- What effect do the amount of Transactions per Block, Costs per Transaction, and amount of Transactions have on the price of Bitcoin?

4. Methodology

The first part will be done by analyzing relevant available information in the form of literature both digitally and physically. With Bitcoins popularity rising, there have been significant amounts of literature produced about the topic. The second part (Analytical section) will be achieved by regression analysis such as forecasting, moving averages, and econometrical models will be used to achieve the goal of determining Bitcoins place as an investment vehicle.

5. Findings

In the first part of the analytical section (the fundamental analysis), the number of stores that accept Bitcoin was analyzed. This was done to determine whether or not there is any legitimacy outside of Bitcoin being an investment tool. This can be useful because if investors feel there is no value to Bitcoin in the real world, they are less likely to invest. It was found that over the course of 2017 there was a steady increase of the number of stores that accepted Bitcoin as a form of payment. The second factor that was analyzed in the fundamental section was the trading volume. This is an important fundamental factor because it helps give a viewpoint of how much Bitcoin is being transacted. If Bitcoin has significantly low amounts of transactions or a significant decrease in transactions this can be a sign that there is a loss interest. Another reason volume is important is because it is used with prices to help determine whether there is significant change. In the first part of the technical section, the position of Bitcoin in an investor's portfolio was evaluated and discussed. This was done by using historical Bitcoin pricing data (to the USD), and then it was compared to historical Euro (to the USD) pricing. This was done to compare a longer more stable currency to a more recent modern one. What was found was that Bitcoin/USD had a very high standard deviation in both the short term and long term. This is important because its showing how much the values would sway away from the trend. In comparison the EURO/USD exchange rate significantly lower (meaning the values were not that far from the trend line). This shows that when compared to other currencies Bitcoin can be seen as a risky investment for investors. The second section of the analytical section of this dissertation was an experiment showing what kind of return an investor would get at the end of a month (starting at November 1st and ending November 30th). This was done by converting an initial investment of $10,000 into Bitcoin at the beginning of November. Then every day the change in value of Bitcoin was evaluated according to the amount of Bitcoin that was purchased with the initial investment of $10,000. What was found was that the difference between the ending of the investment period (November 30th) and the beginning (November 1st) was a profit of $4726.56192. Following that was a time series forecast based on historical pricing data of Bitcoin to USD. What was found was according to the trend, Bitcoins price was likely due to increase. Following the time series was a regression analysis based on the dependent variable being the price of Bitcoin/USD and the independent variables being the amount of Transactions per Block, the costs per Transaction, and the amount of Transactions per day. After running and analyzing the regression, it was believed that the regression is spurious, and therefore appears to have a relationship theoretically but practically it appears to be incorrect (Spurious) and therefore there is no genuine relationship among the variables.

6. Conclusion

To conclude this thesis, the reader should know have an in depth understanding of both the theoretical and technical investment views of Bitcoin as an investment vehicle. In the theoretical section, Bitcoin was explained simply and thoroughly, a brief history was given, how to acquire, store, transact, exchange for tangible currency were also explained. Bitcoin security, skepticism and similar cryptocurrencies were also discussed. Then in the analytical section more detailed analysis took place. This consisted of determining the role Bitcoin plays in an investor's portfolio, a "real life" simulation of investing in Bitcoin, analyzing trading volumes of Bitcoin, a times series prediction and an econometric model to determine if there was a relationship between the price of Bitcoin and transactions per block, costs per transaction and transactions per day. It appeared that the relationship among the variables was Spurious, meaning it showed a relationship but in reality, its likely a coincidence.

7. Selected References

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