



Bitcoin price prediction

Anjum A Tadvi

Research Scholar JJTU, Jhunjhunu, Rajasthan, India

Abstract

The present paper deals with the practical tools that enable the researcher to predict the future prices of Bitcoins. Bitcoins are very popular Cryptocurrencies. They have grown in prominence due to various factors which include the ease and cheap rates with which it can be used, transferred and stored. Bitcoins have also helped remove the intermediaries who are earning a significant commission for doing the above functions. Besides this, most people are attracted by the significant returns on the investments Bitcoins have given over last two years. Bitcoins have beaten all other forms of investments hands down, and despite the warning of trade Bubble, Bitcoins have come across as a real winner for investors. In 2018, Bitcoins prices have seen a reversal from uptrend to a significant downtrend. From a sub \$20000 per Bitcoin, the prices have come down to sub \$8000 in March 2018. Most of the investors have started to panic and selling off this asset in a bid to protect the profit. Unlike the stock market, no research is carried on the expected prices of Bitcoins. This study aims to determine the future rates of Bitcoins in coming years using the scientific method of waves.

Keywords: bitcoins, elliot waves, neo waves

Introduction

Bitcoin is one of the most popular Cryptocurrencies which have over 6.9 million users, and it continues to grow increasingly. Bitcoin is gained a substantial public attraction due to its wild price volatility and transaction volumes per a day. For instance, the bitcoin price was \$11 in 2011, and it increased up to \$400 in 2016. One of the sharp fluctuations was seen in the year 2013 followed by the most prominent rise in 2017. The year 2013 and 2017 are the most popular period of bitcoin. It rose from a low of \$963 on 1.1.17 to close at \$ 9475 on 31.12.17 after touching a high of \$ 19186 on 17.12.17. The return of bitcoin was approximately 883% year on year for 2017. The gains are handsome and alluring. Investors don't want to lose any earning opportunity and are lapping Bitcoins in large numbers. Stories of people who had bought Bitcoins for a pittance, forgotten the same and now earned a vast fortune is further garnering public interest. There is no shortage of volume in the daily transaction which shows that price fall has evinced interest for the investors who had lost out investing in the past. People are investing blindly without understanding the price dynamics and the variables which have effects on the prices. Given the same, it becomes essential to understand the price dynamics of the Bitcoin.

Exploring the dynamics of the Bitcoin Prices: Bitcoins do not earn any interest on savings like in case of Fiat currencies. Bitcoins' value is determined by its active user's buying, selling, trading and investing in the same. Market fundamentals and forces thus determine the price of Bitcoins even though there is no underlying value. Prices of bitcoin are currently based on daily prices on the Bitcoin exchanges. The price of Bitcoins depends on the social, economic and physiological condition of the traders on the exchange to buy and sell the Bitcoins. The prices are determined by people

who wish to sell and buy their Bitcoins. Merchants regularly increase the price of their Bitcoins held by them whenever they find buyers who are willing to pay more than its' real value (Rzepczynski *et al.*, 2004). The bitcoin currency rates are determined according to the strong expectations of the investors' of the future high or low prices. It is the Investors' feelings about the price of the currency which is the prime factor in the current price. Greed plays an essential role in this. There is not an objective value of price (Kristoufek, 2013). According to some studies bitcoin prices are negatively affected by the exchange rate between the dollar and euro currencies. It is the number of Bitcoins in circulation that affects the rates positively. (Georgoula *et al.*, 2015).

When Bitcoin investors/holders see Bitcoins as a valuable investment opportunity, they will start to hoard or accumulate it, and its price will rise or drop sharply due to unreal speculations. This sharp change in Bitcoin prices have in fact been a roadblock for the bitcoin to be accepted, in general as a medium of exchange. Many people, therefore, see it more as a commodity for speculation and not as a monetary system. Bitcoins were supposed to be an alternative or a supplement to the existing currency, and therefore sharp fluctuations in prices occur (Neslund, 2014). Bitcoins have a very volatile chart and around 26 times more volatile than the S&P500 index. Most of the transactions on the Blockchains are in respect of trades and not for payments, and thus Bitcoins are still perceived as a speculative vehicle by its users. Bitcoins will become less volatile when a majority of the population accepts the same as currency. Political factors play a considerable role in price fluctuation. Bitcoin may gain widespread attention when critical external variables initiate to effect bitcoin in the future (Baek and Elbeck 2015). The volatility of bitcoin prices don't cause to preserve Bitcoins'

instant values for a long time, and it may lead to drop in purchasing power of bitcoin. When the value of the currency may decrease in a short period, the people can feel aggrieved if they couldn't exchange their Bitcoins for worth (Segendorf, 2014).

Materials and Methods: - In case if future price forecasting a realistic approach by the technical traders is to use both the price and time as important factors. The price for entry and exit and the time of entry and exit are essential factors to be taken into account while forecasting the future prices. While there is no specific formula governing the price forecasting, the time factor is a critical determinant of price factor as predicting the next price without a determined or specified time frame makes no sense in the forecast. Many theories allow the price forecast using time frame for the same and Elliot wave is one of the dominant trading theories that help a researcher arrive at the same. In the current study, Elliot wave theory has been adopted to predict the future prices of Bitcoins. The theory of Elliott Wave is based on the concept that market always moves on impulsive and corrective waves. Impulsive waves are strong upward or downward movement in a stock's price which coincides with the market trend and forms the main direction. In Elliot wave theory these are five-wave structures. Corrective waves are movements against the trend. There are three-wave patterns in corrective waves. Both the waves together form the backbone for Elliot wave trading and forecasting. It is essential for both the waves to use the time element for accurate prediction of prices. The Elliot wave theory has a rule regarding the price targets which must be met for the method to initiate. Under the Elliot wave, strategy time holds importance as compared to the price. This is the key to analyzing Elliot wave charts. Time has to confirm the pattern or else the same is invalidated. Invalidation indicates

the wrong count of the pattern. The reference to the time element is derived from the principle of alternation. Alternation means two corrective waves in an impulsive move and is mainly referred to the 2nd and the 4th wave.

NeoWave theory is an expansion of Elliot's wave theory. The method of NeoWave was advocated by financial analyst Glenn Neely. The Neo wave has its technique to analyze waves. It aims at reducing the contradictions and subjectivity of Elliot's wave theory by which its predictive power gets better results as compared to Elliot's wave. Though NeoWave is considered an extension to the Elliot's wave in actual, it is a discipline in itself. It brings forth many additional requirements and draws new rules. Under the NeoWave theory, time factor plays a critical part in the evaluation of data. It takes the help of the pattern emerging in a duration of time to ascertain if the pattern is complete or is a false pattern. NeoWave is used with other technical tools in the future price determination.

Result of the Technical analysis: The technical analysis using the NeoWave analysis was done by plotting the rates of Bitcoins in US Dollars over a time frame From June 2011 to Dec 2017. The intermittent rise and fall in the levels is projected by the waves. As seen from the chart, the third wave is above the 2nd wave and much higher than the first wave and thus confirming that the trend is positive. This also indicates that the 5th wave in the NeoWave will be higher than the 3rd wave thus the fall in the 4th wave as projected by the NeoWave is confirmed by the fall in the rates of Bitcoins. From 4th Wave to the 5th Wave (5th will be higher than the 3rd wave as per the NeoWave Principles) has to show a corrective phase and 5 smaller time cycles within the 4th and 5th wave is projected.



Fig 1

In terms of the same the smaller time cycle also showed the rise in 1st and 3rd wave and correction in the 2nd Wave. During the 3rd smaller time cycle the prices of Bitcoins crossed \$19000. The 4th smaller time frame will see a correction phase like the bigger wave and this is confirmed by the current fall in the prices. It is thus projected that the prices of Bitcoins will fall to around \$6000 before commencing its journey to the upward trajectory of the 5th wave in the smaller time frame. The smaller time frame will converge with the 5th Wave of the bigger time cycle to give a rate of \$28000 per Bitcoin by December 2019. It is thus prudent to stay invested or buy during the dips around \$6000 dollars now.

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