

Resilience of Islamic cryptocurrency markets to Covid-19 shocks and the Federal Reserve policy

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Abstract

Purpose – After the COVID-19 outbreak, the Federal Reserve has undertaken several monetary policies to alleviate the pandemic consequences on the stock markets leading to a misunderstanding on the cryptocurrency market response. This paper aims to evaluate the effects of the Federal Reserve monetary policy on the Islamic and conventional cryptocurrency dynamics during the COVID-19 pandemic. We, specifically, examine the associate bubbles and feedbacks effects.

Design/methodology/approach – This paper developed a novel methodology that detects market bubbles using the statistical indicators defined by Psychological (PSY) tests. It also investigated the effect of the Federal Open Market Committee (FOMC) announcements on conventional and Islamic cryptocurrencies compatible with Islamic laws “Shari’ah” by using the event-driven regression.

Findings – The empirical results show that the FOMC announcements have a positive significant effect after one day of the event and a negative effect before two days of the announcement on the conventional cryptocurrency markets. However, the reaction of Islamic cryptocurrencies to these events is not significant except for Hello Gold after one day of the announcement. Besides, the Hello Gold and X8X cryptocurrencies present no bubbles during this period. However, Bitcoin and Ethereum markets have short-lived bubbles.

Research limitations/implications – The main contribution of this study is the investigation of the response and vulnerability to pandemic shocks of a new category of cryptocurrencies backed by tangible assets. This work has practical implications as it provides new insights into trading opportunities and market reactions.

Originality/value – To our knowledge, this work is the first study that compares the response of Islamic and conventional cryptocurrency markets to FOMC announcements during the COVID-19 pandemic and examines the presence of bubbles in these markets. Besides, the originality of this work is derived from the novelty of the data employed and the method used (PSY tests) in this study.

Keywords Islamic cryptocurrency, Market bubbles, COVID-19, PSY tests, FOMC announcements

Paper type Research paper

1. Introduction

The latest coronavirus outbreak has harmed the global economy. To stimulate activity and avoid deflation, central banks have adopted highly flexible monetary regulations. These different initiatives raise several concerns about their impact on the real economy, as well as the possibility that they could lead to the emergence of speculative bubbles in diverse financial assets. For a variety of factors, analysing market efficiency and anomalies is a crucial topic. Market efficiency and microstructure research have significant implications for developing successful hedging strategies and trading decisions from asset pricing. Exploring

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market bubbles and incidents that can lead to market crashes is beneficial in avoiding future crises from financial stability. Several reports have looked at how the financial markets in the United States reacted to the FOMC announcements (Lucca and Moench, 2015). Other studies have explored the reaction of Islamic stock markets to the interest rate announcement by the FOMC (Akhtar *et al.*, 2017). Recent works have examined the response of cryptocurrencies to US monetary policies (Corbet *et al.*, 2020). To the author's knowledge, however, the response of the Islamic cryptocurrency market has not been investigated. The aim of this research is to find some answers by looking at how Islamic and conventional cryptocurrency markets respond to the American monetary policy initiatives to combat the pandemic. The lack of metrics in measuring fundamental value in traditional cryptocurrency assets is a common theme in most studies (Chen and Hafner, 2019). They illustrated speculative properties in cryptocurrencies (Baur *et al.*, 2018) and justified the presence of market bubbles (Cheah and Fry, 2015; Jarboui and Mnif, 2021). In 2009, Taylor highlighted the contribution of the monetary policy in the creation of bubbles between 2001 and 2004. Unlike traditional cryptocurrencies, Islamic cryptocurrencies are supported by financial quantifiable fundamentals that maintain their value. Islamic cryptocurrencies are novel technical applications that take advantage of the existing blockchain to cater to the religious requirements of certain investors. The OneGram is the first cryptocurrency to be accredited in accordance with ancient Islamic laws by Al Maali Consulting. Amanie Advisors has approved HelloGold [1]. Similarly, the Shariyah Review Bureau ("SRB") certified X8X currency, as it provides an alternative to value preservation properties. The most common cryptocurrencies that are compliant with Islamic laws are X8X, HelloGold and OneGram. (Lahmiri and Bekiros, 2019). The Islamic cryptocurrency is based on gold, which is one of six "rabawi" commodities approved to be traded by Muslim investors. For those seeking to satisfy religious needs, investing in these emerging innovations is an intriguing proposition. Nonetheless, there are few investigations on the reaction of Islamic and conventional cryptocurrencies to the Federal Reserve's policy. To fill this gap in the existing literature, this study aims to investigate the response of Islamic cryptocurrency markets to American monetary policies, as well as the formation of bubbles during this pandemic. The empirical findings show that monetary policy announcements have a positive significant impact on the traditional cryptocurrency markets after one day and a negative significant effect before two days. However, except for HelloGold, after one day of the announcement, the reaction of Islamic cryptocurrencies to these events has been minimal. Some bubbles in the price behavior of conventional cryptocurrencies are detected in this analysis. The bursting of these bubbles has been discovered to occur on the same days as some FOMC announcement. Islamic cryptocurrencies, on the other hand, show no signs of bubbles. The findings of this study are crucial for cryptocurrency strategists and traders when it comes to analyzing and forecasting market returns.

This paper added to the current literature in a variety of unique directions. It first explored the complexities of a modern cryptocurrency family with distinct characteristics. In reality, it looks into the efficiency of Islamic cryptocurrencies backed by gold and currencies and has financial quantifiable fundamentals. Second, this paper used a novel pandemic virus case as well as two foreign cryptocurrencies that are Shariah-compliant. Third, during the pandemic, this research used a sophisticated approach to determine the vulnerability of Islamic cryptocurrencies to monetary policies as well as the existence of bubbles in these markets. To put it another way, it investigated their dynamics using a regression model in event-driven analysis and PSY tests. Fourth, it examines how two separate family markets reacted to the COVID-19 pandemic. From an economic standpoint, Islamic cryptocurrencies have various complexities and reactions to COVID-19. The variation in the structure associated with this cryptocurrency family may explain these results. As a result, investors, politicians and traders will profit from this research.

The remainder of this paper will be structured in the following manner: a brief literature review and hypotheses development are gathered in the second section. The third section discusses the data, while the fourth section discusses the methodology. In the fifth part, the empirical findings were discussed. The final section comes to a conclusion.

2. State of the art and hypotheses development

From a theoretical perspective, a suitable monetary policy gives investors more flexibility with lower rate funding. Empirical studies show that there is an inverse association between policy announcement and stock prices shifts. [Pearce and Roley \(1983\)](#) analyzed the responses of US financial markets to weekly monetary policy announcements from 1977 to 1982 as part of these investigations. They came to the conclusion that an unforeseen increase in the policy rate reduces stock prices, while a decrease in the rate increases them. [Pearce and Roley \(1983\)](#) investigated the predicted responses of the US financial markets using a large database of different event announcements. They showed that unexpected FOM events can still have a significant impact. Recent research has included cryptocurrency reactions to monetary policy announcements. They were primarily concerned with verifying the impact of these incidents on cryptocurrency volatility. They looked at how monetary and macroeconomic policy announcements can affect Bitcoin prices by using an event analysis approach to justify these connections ([Jarboui and Mnif, 2021](#)). Previous financial market research has largely focused on market performance ([Fama, 1970](#); [Fama and French, 1998](#)) to detect the presence of bubbles ([Fry and Cheah, 2016](#)). As a new technology, cryptocurrencies have sparked a discussion on assessing the risks associated with their control. Market instability and threats have harmed cryptocurrency markets. In comparison to stock and commodity markets, they are called young markets. Many studies have shown that COVID-19 events have a negative impact on financial markets ([Zaremba et al., 2020](#); [Liu et al., 2020](#); [Mnif and Jarboui, 2021](#)). Over the COVID-19 pandemic, however, cryptocurrency prices have behaved differently ([Mnif et al., 2020](#)). Using the multifractal detrended fluctuation analysis (MF-DFA) technique, they demonstrated that the top five cryptocurrencies (Bitcoin, Ethereum, Ripple, Litecoin and Binance) became more effective after the COVID-19 outbreak. Many studies have focused on the stability and reaction to the FOMC of several cryptocurrency markets, such as [Hashemi Joo et al. \(2020\)](#), who showed that abnormal returns are higher for negative event announcements than positive ones using an event study approach. Most of these studies justified the vulnerability of cryptocurrencies to changes in macroeconomic policies. When looking at pricing anomalies and bubbles, it's crucial to look at the uncertainty of these assets. The bulk of the study has either centred on the bubbles and anomalies that occurred during the coronavirus crisis ([Corbet et al., 2020](#); [Pyo and Lee, 2019](#)) or has done so without accounting for monetary policy events ([Fry, 2018](#)). As a result, this study aims to fill a void in the literature by first looking at market reactions to American economic strategy in combating the current pandemic and then looking at cryptocurrency dynamics through the identification of bubbles and anomalies. Recent studies have justified the negative impact of this pandemic on Islamic cryptocurrencies ([Mnif and Jarboui, 2020](#)). However, the vulnerability of these markets to FOMC announcements has not been explored during pandemics. Therefore, we can ask whether Islamic cryptocurrencies are vulnerable to Federal monetary policies. To deal with this question, we put forward the following hypothesis.

H1. The Islamic cryptocurrency markets are vulnerable to FOMC announcements.

Similarly, the vulnerability of conventional cryptocurrencies has created a debate between academic researchers ([Hashemi Joo et al., 2020](#); [Corbet et al., 2020](#); [Pyo and Lee, 2019](#);

Corbet *et al.*, 2017). In the light of the above, the second hypothesis, formulated as follow, investigates whether these markets are vulnerable to the FOMC events during pandemics.

H2. The conventional cryptocurrency markets are vulnerable to FOMC announcements.

Market anomalies were also the focus of many studies because of their usefulness in making the best decisions. The inefficiency of Islamic markets and the associated bubbles from herding behavior were explored by several works (Mnif *et al.*, 2019; Din *et al.*, 2021; Bougatef and Korbi, 2018). However, there is no evidence in the literature whether Islamic cryptocurrency markets experienced bubble periods, especially during the COVID-19 pandemic. For this reason, we statistically check the presence of bubble periods during pandemics through the third hypothesis.

H3. The Islamic cryptocurrency markets present no bubbles.

The presence of bubbles and the investigation of their bursting time is a fundamental focus for both academic research and trading matters. Despite a considerable number of studies in this field (Fry and Cheah, 2016; Chen and Hafner, 2019; Gronwald, 2021), there is no evidence of the presence of bubble periods during the COVID-19 pandemic. To have a precise answer to this questioning, we put forward the following hypothesis.

H4. The conventional cryptocurrency markets present no bubbles.

3. Data

Cryptocurrencies, according to the Islamic doctrine, are unpredictable and lack a governing body. As a result, Islamic cryptocurrencies were developed to address these concerns. We used "HelloGold" and "X8X" cryptocurrency data to explore their behavior and compare their dynamics and their reaction to FOMC announcements during the coronavirus pandemic. Furthermore, the financial data includes two types of conventional cryptocurrencies, Bitcoin and Ethereum, which have the largest market capitalization. As a result, data from Islamic and traditional forms, namely the X8X, HelloGold, Bitcoin and Ethereum, were obtained on a daily basis from www.coinmarketcap.com between December 31, 2019EE, and December 24, 2020, according to their availability.

Cryptocurrency standard returns are measured as follows:

$$r_t = \text{Log} \left(\frac{p_t}{p_{t-1}} \right) \quad (1)$$

where r_t is the cryptocurrency return at date t , and p_t represents the cryptocurrency price at time t . The major FOMC announcement is extracted from the Federal Reserve's website (<https://www.federalreserve.gov/covid-19.htm>). The main events related to the COVID-19 pandemic are occurred on the following dates in 2020: *March 3; March 15; March 23; April 29; June 10; July 29; September 16; November 5; and December 16.*

4. Methodology

In this paper, we start by applying a regression model to consider the shock of the nine announcements on cryptocurrency dynamics as engaged by Chen and Clements (2007). Dummy variables ($D_0, D_1, D_{-1}, D_2, D_{-2}, D_3, D_{-3}$) indicate whether an event has occurred on the respective date. R_t describes the cryptocurrency returns, which are the dependent variable in Eqn (2). If the event occurs, the dummy variable is set to one; otherwise, it is set to zero. We use three days of lag after, before and on the day of the FOMC announcement, as

used by [Chen and Clements \(2007\)](#). The dummy variable is set to 1 if the occurrence occurs; otherwise, it is set to 0. We use [Chen and Clements' \(2007\)](#) three-day lag after, during, and on the day of the FOMC announcement. As shown in [Eqn \(2\)](#), the variance error term (ε_t) follows the GARCH (1,1) model. The intercept (β_0) represents the cryptocurrency's anticipated return if the event is not released $\beta_{0,t,i}$ of the cryptocurrency i if the event happens on the date of the announcement. Similarly, when an event happens within a day of the announcement date, $\beta_{1,t,i}$ is the anticipated return of the cryptocurrency i .

$$R_t = \beta_0 + \beta_{0,t,i}D_0 + \beta_{1,t,i}D_1 + \beta_{-1,t,i}D_{-1} + \beta_{2,t,i}D_2 + \beta_{-2,t,i}D_{-2} + \beta_{3,t,i}D_3 + \beta_{-3,t,i}D_{-3} + \varepsilon_t \quad \text{model (1)}$$

And

$$\varepsilon_t = \sigma_t Z_t, \sigma_t^2 = \alpha_0 + \alpha_1(\varepsilon_{t-1})^2 + \omega\sigma_{t-1}^2 \quad (2)$$

In the second stage, we test the robustness of our findings by introducing two control variables: the global economic policy uncertainty index (EPU) and the volatility index (VIX), both of which are used by [Shaikh \(2020\)](#) and [Bouri et al. \(2017\)](#) and explained in the following [Eqn \(3\)](#).

$$R_t = \beta_0 + \beta_{0,t,i}D_0 + \beta_{1,t,i}D_1 + \beta_{-1,t,i}D_{-1} + \beta_{2,t,i}D_2 + \beta_{-2,t,i}D_{-2} + \beta_{3,t,i}D_3 + \beta_{-3,t,i}D_{-3} + \beta_{01}VIX + \beta_{02}EPU + \varepsilon_t \quad \text{model (2)}$$

And

$$\varepsilon_t = \sigma_t Z_t, \sigma_t^2 = \alpha_0 + \alpha_1(\varepsilon_{t-1})^2 + \omega\sigma_{t-1}^2 \quad (3)$$

The next move is to look into the possibility of bubbles in the aforementioned cryptocurrency markets. The PSY test is used for this reason ([Phillips et al., 2015](#)) functional to the Log price, as explained by [Enoksen et al. \(2020\)](#). Finally, we look at how these bubble dates correspond to FOMC announcement dates.

5. Empirical results

[Tables 1 and 2](#) show the results of the regression models in [Eqs \(2\) and \(3\)](#). When the event is not published, β_0 is found to be significant in the Ethereum and X8X markets, indicating that prices are expected to increase by 0.002606 in the case of Ethereum and decrease by 0.025557 in the case of X8X. After one day, the corresponding figures for Bitcoin, Ethereum and HelloGold are only relevant, suggesting that the corresponding prices will increase by 0.009719, 0.008343 and 0.022881 on this date, respectively. Until two days before the case, the forecasts are pessimistic for traditional cryptocurrencies, with estimated declines of 0.020607 for Bitcoin and 0.020607 for Ethereum, respectively. [Tables 1 and 2](#) illustrate that volatility in t is stationary and recurrent, based on the estimate of the GARCH (1,1) parameters ω , α_0 , and α_1 . Furthermore, the empirical findings in [Tables 1 and 2](#) show that Bitcoin and Ethereum react similarly to these events. During the FOMC announcements, however, Islamic cryptocurrency markets seem to respond differently. The robustness of these results is checked in [Tables 1 and 2](#), with the model (2) showing similar results to those resulted on the basis of the model (1). Consequently, these findings authorize us to partially confirm our first hypothesis and totally accept the second assumption. In other words, HelloGold, as an Islamic cryptocurrency, is vulnerable to some FOMC events. However, the X8X, as another Islamic cryptocurrency, is immune to the FOMC events during the COVID-19 pandemic. These findings are acceptable and deal with most studies on Islamic cryptocurrency analysis

Table 1.
Conventional
cryptocurrency
responses to FOMC
announcements with
the robust standard
error regression

Estimates Model	Bitcoin		Ethereum	
	(1)	(2)	(1)	(2)
β_0	0.001506 (0.000987)	0.010679 (0.015205)	0.002606*** (0.000983)	0.010679 (0.004588)
$\beta_{0,t,i}$	0.006268 (0.008101)	0.001864 (0.008994)	0.001348 (0.008764)	0.001864 (0.008994)
$\beta_{1,t,i}$	0.014997 (0.010156)	0.009719*** (0.004433)	0.008343*** (0.004219)	0.009719 (0.004433)
$\beta_{-1,t,i}$	0.012560 (0.009812)	0.004504 (0.004046)	0.003745 (0.004369)	0.004504 (0.004046)
$\beta_{2,t,i}$	-0.008065 (0.006913)	0.007811 (0.015837)	0.006468 (0.015961)	0.007811 (0.015837)
$\beta_{-2,t,i}$	-0.017238 (0.016753)	-0.020607* (0.011773)	-0.020458** (0.010226)	-0.020607** (0.011773)
$\beta_{3,t,i}$	-0.002986 (0.010114)	-0.004351 (0.009599)	-0.004509 (0.009941)	-0.004351 (0.009599)
$\beta_{-3,t,i}$	0.022350 (0.023678)	0.024513 (0.014919)	0.023987** (0.011115)	0.024513 * (0.014919)
VIX		-0.000164 (0.000291)		-0.000164 (0.000291)
EPU		-0.000012 (0.000042)		-0.000012 (0.000042)
Ω	0.000015 (0.000046)	0.000014 (0.000036)	0.000018 (0.000034)	0.000014 (0.000036)
α_0	0.279812** (0.138539)	0.152644** (0.063058)	0.153697 (0.106196)	0.152644** (0.063058)
α_1	0.719188** (0.339713)	0.844059*** (0.104745)	0.832715 (0.128319)	0.844059*** (0.104745)

Note(s): *, **, *** indicates significance at the 10%, 5% and 1% level, standard deviation values are between parenthesis

Table 2.
Islamic cryptocurrency
responses to FOMC
announcements with
the robust standard
error regression

Estimates Model	HelloGold		X8X	
	(1)	(2)	(1)	(2)
β_0	-0.001881 (0.001599)	-0.006000 (0.013662)	0.002176 (0.002685)	-0.025557** (0.011358)
$\beta_{0,t,i}$	-0.001845 (0.008982)	0.000597 (0.007570)	-0.014964 (0.022583)	-0.013668 (0.020147)
$\beta_{1,t,i}$	0.021536** (0.009240)	0.022881** (0.009044)	-0.003848 (0.011690)	-0.003756 (0.012390)
$\beta_{-1,t,i}$	0.008084 (0.017298)	0.009634 (0.017978)	0.013085 (0.021394)	0.013192 (0.021968)
$\beta_{2,t,i}$	0.015709 (0.018929)	0.018221 (0.019184)	0.014425 (0.024457)	0.016346 (0.023899)
$\beta_{-2,t,i}$	0.005144 (0.029907)	0.007166 (0.028611)	-0.013160 (0.029552)	-0.011016 (0.028094)
$\beta_{3,t,i}$	0.037011 (0.022748)	0.039418* (0.023266)	-0.012934 (0.016275)	-0.010340 (0.017921)
$\beta_{-3,t,i}$	0.003866 (0.006212)	0.005809 (0.007122)	0.004207 (0.012032)	0.004625 (0.013986)
VIX		-0.000304* (0.000156)		-0.000500* (0.000281)
EPU		0.000041 (0.000047)		0.000139** (0.000054)
Ω	0.000001*** (0.000000)	0.000001 (0.000000)	0.000351 (0.000460)	0.000338 (0.000422)
α_0	0.000000 (0.000148)	0.000000 (0.000142)	0.116118 (0.077880)	0.121855 (0.087107)
α_1	0.999000*** (0.000274)	0.999000 (0.000277)	0.830517*** (0.128837)	0.829837*** (0.122504)

Note(s): *, **, *** indicates significance at the 10%, 5% and 1% level; standard deviation values are between parenthesis

(Mnif and Jarboui, 2020). Conventional cryptocurrency markets, on the other hand, are found to be affected by FOMC announcements. As a result, conventional crypto markets are vulnerable to these events, especially during the COVID-19 pandemic. These results are

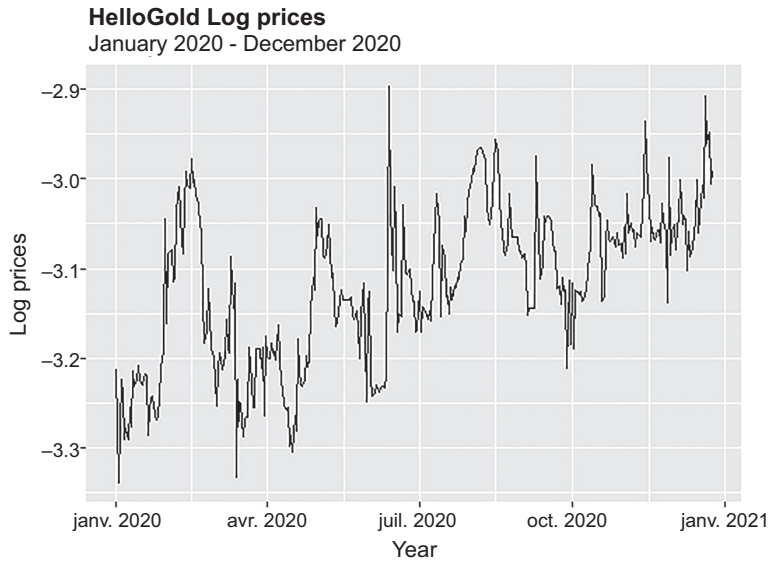
consistent with [Pyo and Lee \(2019\)](#) and [Lucca and Moench \(2015\)](#), who discovered that traditional cryptocurrencies are vulnerable to monetary policies in the United States. In summary, Islamic cryptocurrency markets are more immune to monetary policies than conventional ones. These results can be supported by the fact that Islamic assets are usury-free and are independent of the interest rate variations ([Akhtar et al., 2017](#)).

To examine price fluctuations and bubbles, we employ the PSY test, which can identify the datestamping of cryptocurrency markets. [Table 3](#) summarizes the findings, which are depicted in [Figures 1 and 2](#) (displaying the dates of the bubbles). In [Figures 1 and 2](#), the horizontal axis reflects time from December 31, 2019, to December 24, 2020. The Log prices are highlighted by the vertical. The volatile phases arise while the PSY test values given by the black lines surpass the critical value at the 95% level of the bootstrapped Dickey–Fuller test. The colored areas in [Figures 1 and 2](#) depict the PSY test-identified explosive times in each cryptocurrency.

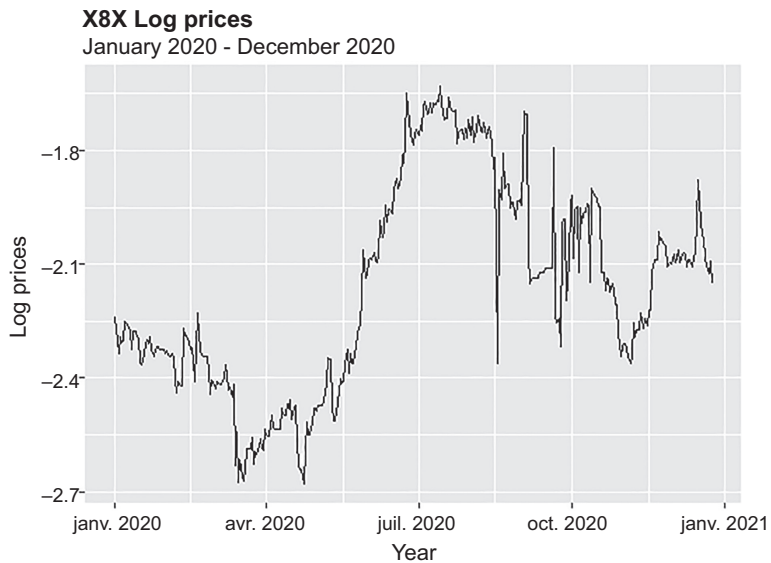
[Table 3](#), [Figures 1 and 2](#) reveal no bubbles or bursting periods in the HelloGold and X8X markets. These results confirm our third assumption and allow us to conclude that these cryptocurrencies are not subject to speculation and behavioral bias. These results are in line with most studies on Islamic financial markets, such as [Mnif et al. \(2019\)](#), who found that these biases are reduced in Islamic markets. However, the Bitcoin and Ethereum markets are characterized by short-term bubbles that last just a few days, allowing us to reject our fourth hypothesis and conclude that conventional cryptocurrencies present some periods with bubbles, especially during the COVID-19 pandemic. These findings are consistent with the results of the majority of studies on conventional market bubbles during the COVID-19 pandemic, such as the work of [Gharib et al. \(2021\)](#), who found that several conventional market bubbles mark this period. These findings are also consistent with [Jarboui and Mnif \(2021\)](#) study, which detected several short-lived bubbles in cryptocurrency markets during the COVID-19 pandemic.

Cryptocurrency	Bubbles detection		FOMC announcements
	Start date	End date	
<i>Hellogold</i>	<i>No bubbles</i>		
Bitcoin	2020-03-13	2020-03-13	March 15, 2020
	2020-07-28	2020-07-31	July 29, 2020
	2020-07-30	2020-08-02	
	2020-10-22	2020-10-23	
	2020-10-25	2020-10-25	
	2020-10-28	2020-10-28	
	2020-11-06	2020-11-07	November 5, 2020
	2020-11-09	2020-11-09	
	2020-11-12	2020-11-14	
	2020-11-12	2020-11-14	
	2020-11-17	2020-11-26	
	2020-11-30	2020-12-04	
	2020-12-06	2020-12-08	
	2020-12-17	2020-12-24	December 16, 2020
<i>X8X</i>	<i>No bubbles</i>		
Ethereum	2020-02-13	2020-02-13	
	2020-02-15	2020-02-15	
	2020-03-13	2020-03-13	March 15, 2020
	2020-07-26	2020-08-11	July 29, 2020
	2020-08-13	2020-08-19	
	2020-11-24	2020-11-25	

Table 3.
Bubbles datestamping

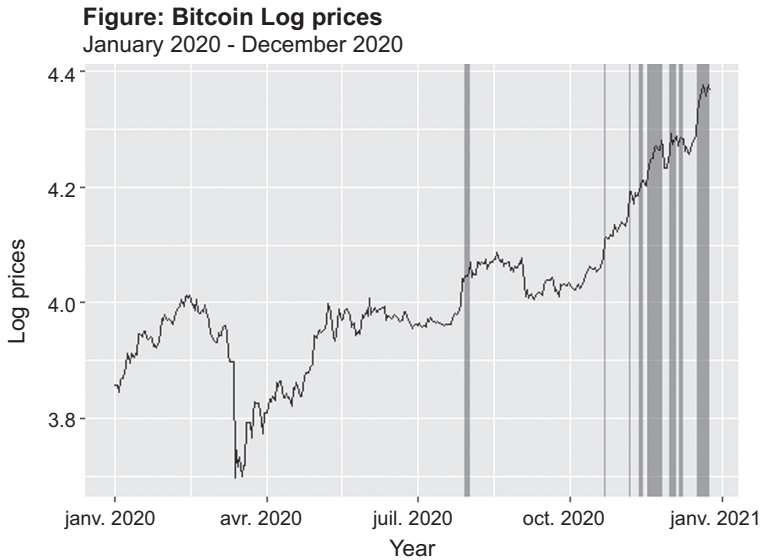


Note(s): The solid line is the HelloGold Log prices and the shades areas are the periods where the PSY statistic exceeds its 95% bootstrapped critical value

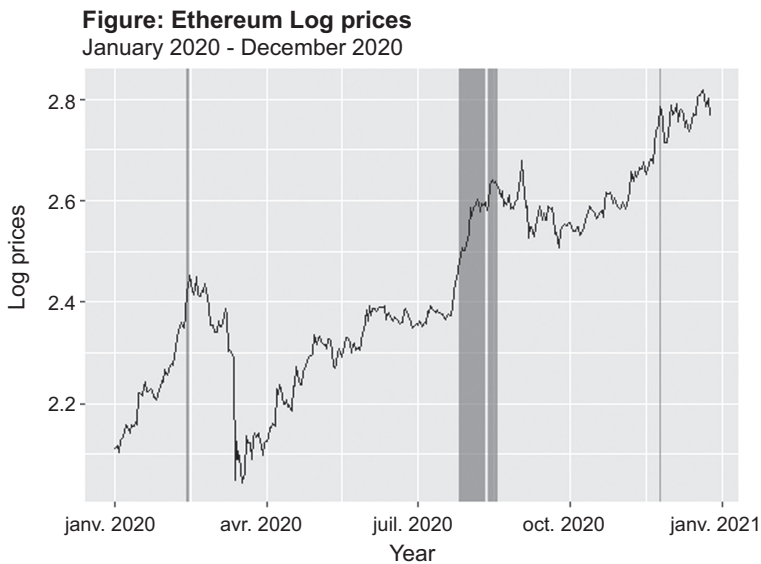


Note(s): The solid line is the X8X Log prices and the shades areas are the periods where the PSY statistic exceeds its 95% bootstrapped critical value

Figure 1.
Islamic cryptocurrency
bubbles



Note(s): The solid line is the Log price of Bitcoin and the shades areas are the periods where the PSY statistic exceeds its 95% bootstrapped critical value



Note(s): The solid line is the Log price of Ethereum and the shades areas are the periods where the PSY statistic exceeds its 95% bootstrapped critical value

Figure 2.
Conventional
cryptocurrency market
bubbles

Table 3 shows that the FOMC statements on March 15, 2020, and July 29, 2020, are the most reflective when liquidity facilities are being considered. In addition, the FOMC's decision on March 13, 2020, would have the most impact on Ethereum and Bitcoin.

6. Conclusion

We analyze investors' interest and reaction to the FOMC announcement in minimizing the COVID-19 consequences using an event analysis. As a result, we show that with different delays, these announcements have major consequences. In conclusion, the responses to Bitcoin and Ethereum are close. According to our results, cryptocurrency price bubbles are short-lived, permanent just a few days in the Bitcoin and Ethereum. However, there are no bubbles or explosive phases in the HelloGold and X8X markets.

Furthermore, the relationship between date stamping bubbles and event dates suggests that the most significant active events are related to liquidity. The markets are categorized according to their vulnerability to FOMC announcements using an event study methodology, which can aid cryptocurrency traders in developing future trading strategies. Investors can time their trades and decisions based on the study's listed delays. Furthermore, the study pinpoints the emergence and date stamping of bubbles in each market during the COVID-19 pandemic, highlighting the effect of the crisis on cryptocurrency prices and classifying them as fragile or shock-resistant, which can be useful in making monetary, political and trading decisions.

Besides, following the COVID-19 outbreak, conventional cryptocurrencies were found to be more vulnerable than Islamic markets, suggesting that the information on conventional cryptocurrencies is less transparent than that on Islamic ones. In times of crisis, details on conventional cryptocurrency markets could be more accessible and transparent to help policymakers make better decisions. As a result, this paper may make available useful information to marketers, helping them to make the right and potential alternative.

In Islamic markets, there are no bubbles, meaning that there are no irrational investors or traders. On the other hand, the bubbles in conventional markets show that people prefer to spend their money in the same way as most investors. They merely follow the crowd's lead, resulting in price rises and market bubbles. As a consequence of the Islamic and ethical standards that regulate these markets, investors in Islamic cryptocurrency markets are treated more fairly.

Consequently, this empirical research may offer valuable insights to advertisers, allowing them to make the most effective tactics and decisions. In terms of COVID-19, potential research will look at the effect of fiscal and monetary policies on other financial markets.

Note

1. The « fatwa » is detailed in reference to this link.

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