



**EFFECT OF DIGITAL CURRENCY ON FINANCIAL MARKETS: Analysis of Private Banks in  
Kurdistan Region of Iraq**

**Rizhin Nuree Othman**

Department of Information Technology, College of Engineering and Computer Science, Lebanese French University, Kurdistan Region, Iraq.

[Rezhin.othman@lfu.edu.krd](mailto:Rezhin.othman@lfu.edu.krd)

**Khowanas Saeed Qader**

Department of Accounting and Finance, College of Administrations and Economics, Lebanese French University, Kurdistan Region, Iraq.

[Khowanas.qader@lfu.edu.krd](mailto:Khowanas.qader@lfu.edu.krd)

**Sanarya Adnan Anwer**

Department of Business Administration, College of Administrations and Economics, Lebanese French University, Kurdistan Region, Iraq.

[Sanarya.adnan@lfu.edu.krd](mailto:Sanarya.adnan@lfu.edu.krd)

**Hawkar Anwar Hamad**

Department of Accounting and Finance, College of Administrations and Economics, Lebanese French University, Kurdistan Region, Iraq.

[Hawkar@lfu.edu.krd](mailto:Hawkar@lfu.edu.krd)

**Hamin Khasrow Ibrahim**

Department of Accounting and Finance, College of Administrations and Economics, Lebanese French University, Kurdistan Region, Iraq.



[Hamin.khasrow@lfu.edu.krd](mailto:Hamin.khasrow@lfu.edu.krd)

**Bayar Gardi**

Department of Accounting, College of Administration and Financial Sciences, Knowledge University, Kirkuk Road, 44001 Erbil, Kurdistan Region, Iraq.

[Bayar.gardi@knu.edu.krd](mailto:Bayar.gardi@knu.edu.krd)

**Pshdar Abdalla Hamza**

Department of Business Administration, Kurdistan Technical Institute, Sulaymaniyah, Iraq.

[Pshdar.hamza@kti.edu.krd](mailto:Pshdar.hamza@kti.edu.krd)

**Dashty Ismil Jamil**

Department of Marketing, College of Administrations and Economics, Lebanese French University, Kurdistan Region, Iraq.

[Dashty@lfu.edu.krd](mailto:Dashty@lfu.edu.krd)

**ARTICLE INFO**

**ABSTRACT**

**Article History:**

Received:16/6/2022

Accepted:30/8/2022

Published:Autumn2023

**Keywords:** *Digital Currency, Supply Side, Demand Side, Financial Market.*

**Doi:**

10.25212/lfu.qzj.8.4.48

The influence that digital currency has had on the activities of platform companies are discussed in this article. Companies employ digital platforms to increase productivity, strengthen client relationships, and cut expenses. The study applied quantitative method by collected 116 questionnaires. Finally, the findings revealed that, demand side and the demand side the study focused on (Security, Usability, Irrevocability, Marketing and reputational effects) positively and significantly have influence on financial market. Moreover, it was found that the supply side had more influence than demand side on financial market.

## **1. Introduction**

Multiple forces are currently driving the banking business, including technology advancements, initiatives to reduce costs, and the desire to increase product personalization. Globalization, coupled with decentralization, the spread of networking, and attempts to impose more control over business, makes it difficult to accomplish foresight. It appears that the development of virtual currencies is a reflection of the changes occurring in the current world. The fact that their popularity continues to rise demonstrates that they provide the most effective solution to rising issues. Despite this, the relevant authorities continue to exert considerable effort to maintain control and combat the market's continued expansion. The article examines the advantages and disadvantages of utilizing virtual currency systems as an alternative to "real" money and traditional methods of monetary exchange (Altan et al., 2019). In addition, the report covers the market's potential and threats. All of this lays the groundwork for the creation of plausible market shift scenarios and calculates their likelihood of occurring in the future. This study project's principal purpose is to determine what function digital currencies will play in the future financial system. Digital currencies, particularly those with a decentralized payment system based on the use of a distributed ledger, have the potential to have far-reaching implications for financial markets and the economy as a whole. It is feasible that these effects will destabilize business models and processes in addition to fostering new economic exchanges and connections. Digital currencies and distributed ledgers could have significant ramifications for retail payment systems. Additionally, these methods may facilitate particular retail payment processes (for example, cross-border transactions and person-to-person payments). Nevertheless, the implications for the efficacy of payment systems are not yet fully understood, and the operation of these schemes may result in unforeseen effects or problems. Moreover, they may pose a number of policy challenges for financial institutions such as commercial banks and other government agencies (Legotin et al., 2018). It is projected that in the not-too-distant future, commercial banks' policy concerns will revolve around the effects of the payment system. Nonetheless, if digital currencies and distributed ledgers become more prevalent, Currently, digital money systems are not extensively utilized or

recognized, and a number of obstacles may hinder their eventual adoption on a large scale. As a result, their current impact on traditional financial services and the economy as a whole is low, and it is probable that they will continue to operate as a specialized product for a limited customer base on the periphery of traditional financial services in the long run. Even so, the fact that several digital currency systems have been running for the past ten years shows that distributed ledgers can be used for peer-to-peer value transfers without a trusted third party.

### **1.1 The Aim of the Research:**

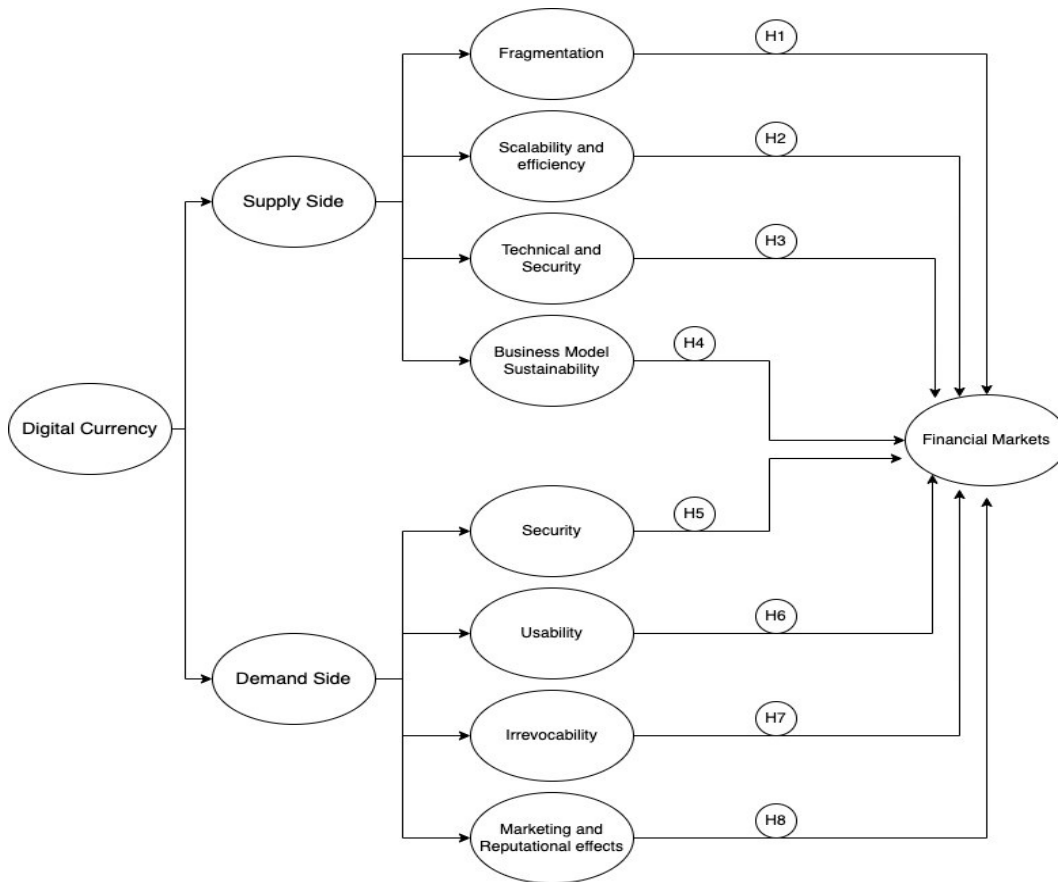
Especially in light of the most recent crises that have befallen economies all over the world, accurate price projections for digital currencies traded on the financial market are of the utmost significance. As a result of this, the purpose of the study was to investigate the impact that digital currency has had on the financial markets in the Kurdistan area of Iraq. The current study focused on the supply side of digital currency as well as the demand side of digital currency and how their influence on financial markets differs. This was done so that the study could quantify the impact that digital currency has on financial markets. On the supply side, on the other hand, there is the matter of the demand side.

### **1.2 Research Problem**

The study of digital currency's impact on financial markets is piquing the interest of academic, technological, and policy practitioner groups all over the world. Digital currency research has been going on for decades, but the development and widespread use of Blockchain technology has made it easier for businesses and banks to implement the concept. This has prompted both academic studies on the benefits and drawbacks that the deployment of digital currency would have for financial and monetary stability, as well as moves by central banks in numerous nations to formulate a digital currency strategy and conduct pilot projects. Despite decades of scholarly research and experimental programs by central banks, the literature is divided on fundamental questions, including the concept of digital currency. As a result, there is no one formula for an effective digital currency, and discussions continue regarding paying or not paying interest; having a quantitative limit on

production; allowing broad or restricted access only to financial institutions; and regarding anonymity or non-anonymity. In addition, the research is fairly dispersed and focuses mostly on currency value, technological features (cryptocurrency), implementation tactics, and application situations. To date, practitioners' research has concentrated on the characteristics of digital currency, including its accessibility, interest-bearing capacity, goals, and underlying technology. In addition, the vast majority of the study is devoted to comparing digital money to the other digital currencies already in existence. Less studied are the risks and unknowns that digital currency poses to economies around the world.

### 1.3 Conceptual Framework



#### **1.4 Research Hypotheses**

Research hypothesis (1): Fragmentation as supply side factor has a significant and positive impact on financial market.

Research hypothesis (2): Scalability and efficiency as supply side factors has a significant and positive impact on financial market.

Research hypothesis (3): Technical and security as supply side factors has a significant and positive impact on financial market.

Research hypothesis (4): Business model sustainability as supply side factor has a significant and positive impact on financial market.

Research hypothesis (5): Security as demand side factor has a significant and positive impact on financial market.

Research hypothesis (6): Usability as demand side factor has a significant and positive impact on financial market.

Research hypothesis (7): Irrevocability as demand side factor has a significant and positive impact on financial market.

Research hypothesis (8): Marketing and reputational effects as demand side factors has a significant and positive impact on financial market.

## **2. Literature Review**

### **2.1. Definitions of Digital Currency**

Ever since the beginning of the information technology revolution in the 1990s, the definition of digital money has evolved throughout the course of time. It is described as digital money, which refers to a prepaid payment terminal for holding monetary value that might be delivered via electronic devices with Internet access. Digital money has been increasingly popular in recent years (Senou et al., 2019). After that, the European Commercial Bank and the Bank for International Settlements (BIS) produced publications that demonstrated the involvement of a third party. These

publications provide evidence that digital currency is "an electronic store of monetary value on a technical device" (Li et al., 2019). It can be used as money as a means of exchange that is based on the Internet was endorsed by the International Monetary Fund (IMF), which also urged that the term be simplified (Yu et al., 2019).

### **2.1.1 Classifications of Digital Currency**

The realm of finance is home to a plethora of distinct categorizations of digital money, each of which is founded on a unique combination of difficult technologies and procedures. The International Monetary Fund (IMF) (Stolbov, 2019) distinguished between two varieties of digital money on the basis of the differences in the terminals that are now in use: In most cases, commercial banks will issue plastic cards to customers as a physical representation of prepaid digital currency. On the other hand, it is commonly used for making remote payments via the internet. On the other hand, Maniff and Wong (2020) described holdings in the form of cash within commercial bank accounts. Using the International Monetary Fund's classification, Griffith (2014) distinguished between online and offline electronic payment systems when discussing digital money. Due to the fact that the purpose of this study is to investigate the effects that digital currency has had on the monetary system in the KRG, the classification of digital currency has been narrowed down. One example of digital currency that is provided by a commercial bank is the smart card, which is most commonly used in transactions that take place in person. Examples include internet banking on the platforms offered by commercial banks; debit and credit cards; and online banking. According to Mancini-Griffoli et al. (2018), non-financial entities have the ability to issue digital money without the need for explicit government regulations. This makes it possible for a whole new kind of currency to be created. As a result of this, the third category is an advanced type of digital currency that has eliminated the function of commercial banks as a third party in order to achieve peer-to-peer online (Chen & Sivakumar, 2021). Both of these subcategories can be further broken down into smaller subcategories. Bitcoin is a great example of this idea because it is a new kind of currency that can't be measured in terms of fiat currency but has a value similar to that of a currency (Khiaonarong & Humphrey, 2019).

### **2.1.2 Key Features and Uses of Digital Currencies**

The rapid advancement of technology, which has an impact on many facets of contemporary society, including economics, education, administration, and culture, has remodeled our world (Vyhovska et al., 2018). According to studies on technological foresight, computing power will increase in accordance with Moore's law and the creation. This is expected to occur in the not too distant future. As more advanced software is developed at a faster rate, users will have an increased capacity to operate newly developed devices (Wójcik & Ioannou, 2020). This is one of the reasons why the creation of supporting information technology (IT) infrastructure is considered to be one of the most important factors of sustainable development and the knowledge-based economy (Lekashvili & Mamaladze, 2018). It refers to the highly destabilizing advancements associated with digital currency schemes (payment mechanisms based on a distributed ledger that allow peer-to-peer transfers without the involvement of trusted third parties). There are certain implementations of digital money, such as Bitcoin, in which these two characteristics are intimately linked to one another. However, this is not always the case. In principle, digital currencies and distributed ledgers may function in a variety of ways, with varying degrees of involvement with existing infrastructures and payment service providers. These potential outcomes are all based on speculation. Many decentralized record of transactions digital currency schemes attempt to build a network that can function independently of existing payment systems, or with only a fragment of them, in order to achieve their goals. Users of the system would sign up for accounts on a centralized distributed ledger in order to make and receive payments in the system's native cryptocurrency. These transactions would take place on a peer-to-peer basis (Hamad et al., 2021). Exchanges and trading platforms would be the only points of contact with the legacy payment system. This is because the units of digital currency would be exchanged into sovereign currency at free-floating prices that reflect supply and demand (less the service fee that would be charged by the exchanges and trading platforms). In other instances, traditional payment service providers (Gardi et al., 2021) may employ digital currencies that are based on distributed ledgers in order to increase the efficiency of particular operations (Qader et al., 2021).



## **2.2 Factors Influencing the Development of Digital Currencies**

In the realm of payment, the idea of digital currencies whose value is determined by their circulation throughout a distributed network is an entirely novel one. Many of the same drivers that have fuelled the emergence of digital currencies have also fostered innovation in more traditional payment systems. These forces include innovation in blockchain technology, distributed ledgers, and distributed computing. One of the primary motivating factors for the expansion of digital currency and the broader innovation of payment systems is the reduction of transaction costs and the acceleration of transaction times, particularly in e-commerce and international transactions. It is essential to place a strong emphasis on the significance of technology in the creation of digital money as well as other advances, in particular (Hamza et al., 2021). According to the CPMI research innovations in retail payments (Hamad et al., 2021), technological developments were highlighted as a significant enabling factor for changes in payment services. These changes had an effect on both the demand for and supply of these services. However, digital currencies that are based on distributed ledgers have a number of features that are exclusive to them, the most notable of which are those that are tied to the fact that they are decentralized (Hamza et al., 2021).

### **2.2.1 Supply Side Factors**

On the supply side of the equation, the creation of virtual currencies predicated on the utilization of a distributed ledger has been predominantly pushed by non-bank private sector entities. Banks have decided not to interact directly with digital currency intermediaries, and some have even opted to avoid cooperation altogether owing to the uncertainty and risk surrounding various regulatory and compliance problems (Altan et al., 2019). It has been reported that private banks are investigating the potential business opportunities presented by digital currencies and distributed ledgers. These banks may do so in a number of ways, including making investments in businesses that specialize in providing services related to digital currencies; providing their customers with integrations to virtual currency exchanges; conducting an investigation into the use of distributed ledgers for back-office applications. Banks and any other parties involved may need to assess the potential increase in security

risks posed by the deployment of digital currency-linked services before making a decision on whether or not to do so. The objectives that drove these organizations to construct digital currency systems are also varied, and a significant number of the design variances that may be observed across separate efforts can be linked back to these reasons. One key contrast is made between profit-driven and altruistic motivations. (Corbet et al., 2021) When money is the main reason for a company's actions, it can use a number of different strategies to make money from crypto currency systems.

The below are just some supply-side challenges that, depending on whether or not a shared database is used, might potentially have an influence on the outcome of the rise of digital currencies:

- **Fragmentation:** There are currently over 599 different digital currencies in use, each having their own clearing, settlement, and validation procedures, as well as a variety of methods for expanding the available supply of virtual currency units (Latimer & Duffy, 2019).
- **Scalability and efficiency:** Due to the limited scope and acceptability of digital currency schemes, the number of trades that are successfully completed using these systems is orders of magnitude lower than those that are handled by regularly employed retail payment methods. It is not yet known if or to what extent digital currency systems will be able to advance to the point where they can process a much greater number of transactions (Sun et al., 2020).
- **Technical and security concerns:** Digital currencies based on the usage of a distributed ledger are required to reach a consensus among members of the network. This is needed to make sure the ledger, which keeps track of transactions and accounts and is shared across the network (Li et al., 2018), is accurate.
- **Business model sustainability:** It's possible that certain virtual currency systems will encounter unique challenges while attempting to formulate a long-term economic strategy. This is one example of a scenario in which the currency's issuance is linked to the scheme. On the other side, the cost that

certain individuals are responsible for bearing in certain digital currency schemes may be substantial (Andolfatto, 2021).

### **2.2.2 Demand Side Factors**

To achieve broad acceptance and also use, digital currencies based on distributed ledgers need to provide their end users with benefits superior to those offered by conventional services. Here is a list of some of the most likely things that could affect how popular digital currencies and other payment networks become with consumers:

- **Security:** When it comes to the usage of digital currencies that are based on distributed ledgers, one of the most significant demand-side concerns is the possibility of loss for users. The trust of users in the digital currency system might be damaged if there are any security breaches. This would hurt not only the scheme itself but also the middlemen with whom a final user does business in units of virtual currency (Qian, 2019).
- **Usability:** Whether or not a payment method is used depends on a number of things, such as how many steps it takes, how easy it is to use, and how well it works with other methods (Yang & Zhang, 2020).
- **Irrevocability:** Digital currency systems that are based on a distributed ledger often do not include dispute resolution processes as well as provide irreconcilability of the payment, so the payee has a lower chance of having a payment reversed as a result of fraud or chargebacks (Wajdi et al., 2020).
- **Marketing and reputational effects:** A record of all transactions that are shared. Schemes based on virtual currencies are frequently viewed as a forward-thinking and fascinating method of making payments (Yao, 2018).

### **2.3 Digital Currency and Money Supply**

If digital money were issued by either financial or non-financial institutions, the consequences for the value of fiat currency and for monetary policy would be very different. Because of the efforts of the financial institution, the amount of free cash on the market will steadily decrease as digital money based on the electronic platforms of commercial banks becomes more prevalent (da Gama et al., 2019). On

the other hand, non-financial institutions' production of digital currency, which is not constrained by commercial bank regulations and cannot be created through commercial bank loans, has the potential to change the stock of fiat currency and, as a result, influence monetary policy. This is because digital currency is not constrained by commercial bank regulations (Bindseil, 2019). In a classical monetary system, the commercial banks control the economy by altering the amount of fiat currency in circulation through a process known as monetary policy. At the same time, commercial banks increase the amount of money available by reducing interest rates to a level that is low enough to entice other commercial banks to provide bank loans in order to satisfy market needs (Lipton et al., 2020). However, when the amount of digital currency in circulation increases, the assets and liabilities held by commercial banks will decrease, which will result in management challenges. Specific alterations are going to be made to the money reserve that commercial banks rely on to carry out monetary policy (Saito & Iwamura, 2019).

### **3. Research Methodology**

#### **3.1 Research Design**

It is necessary to develop a research design in order to gather and analyze data effectively. When it comes to research design, it's "a blueprint for the collection, measurement, and analysis of data that is based on the research questions that are being investigated" (Kruglova & Dolbezhkin, 2018). Making decisions about the study's aim, strategy, location, extent to which it is managed and controlled by the researcher, temporal aspect, and level at which the data will be evaluated are all part of the research design process. In addition, the study design defines all of the actions and processes that need be carried out by the researcher in order to accomplish the research objectives and testing the hypotheses.

#### **3.2 Population and Sampling**

The process of collecting data requires the selection of the study's population, the size of the sample, and the sampling procedure.

### **3.2.1 Population**

The private banks that have been considered for the current study comprise all private banks that have been registered in the Kurdistan Region's banking sector (KR). Currently, there are 49 private banks in Erbil. The study selected five private banks to analyze the influence of digital currency on financial markets, these banks include (RT bank, Kurdistan Bank, Al-taif Bank, Is Bank, and Cihan Bank). This research is relevant because leaders' perceptions are critical in understanding their environment and in encouraging private banks to become more engaged in that environment, respectively. Top private bank executives were chosen as respondents because they possess greater knowledge and expertise in the operation of private banks, as well as other factors that influence their ability to meet the firm's objectives. Additional selections were made from the senior management of private banks in the three provinces of Erbil, Sulaymaniyah, and Duhok.

### **3.2.2 Sample Size**

The sample size can sometimes be determined by the number of indicators/items that are included in the research. This big sample size has been chosen in order to ensure statistical significance, as well as because a larger sample size may be more appropriate for structural equation models than a smaller one. Therefore, private banks are included in the current study, with one respondent from each private bank being selected to participate in the survey. Calculating the sample size for the current study was accomplished by dividing the target population by the total number of people in the population and then multiplying that figure by the total sample size to obtain the individual sample for each province. The study was able to gather 116 properly filled questionnaires from private banks in Kurdistan region of Iraq.

#### 4. Findings and Data Analysis

Table (1): SAS PCA Output

Eigenvalues of the Correlation Matrix: Total = 10 Average = 1				
Items	Eigenvalue	Difference	Proportion	Cumulative
Fragmentation	1.022951142	1.44685511	.02144	.06119
Scalability and efficiency	1.4774511	0.29223589	.35661	.81991
Technical and security	0.1569199	1.393522191	.36988	.91521
Business model sustainability	1.7497449	0.461147184	0.0812	.94385
Security	1.8015911	1.783522336	.07256	1.0000
Usability	0.1127199	1.553522191	.36988	.91521
Irrevocability	0.7927449	0.651147184	0.0812	.94385
Marketing and reputational effects	0.8475911	0.443522336	.07256	1.0000

Table (1) displays the results of the principal component analysis (PCA) conducted out using factor analysis for each individual factor (Fragmentation, Scalability and efficiency, Technical and security, and Business model sustainability, Security, Usability, Irrevocability, Marketing and reputational effects). According to the conclusions drawn from the research, it is possible to assess the financial market using all of the factors.

Table (2): Correlation Analysis

		Correlations							
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fragmentation (1)	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	116							
Scalability and efficiency (2)	Pearson Correlation	.587**	1						
	Sig. (2-tailed)	.000							
	N	116	116						
Technical and security (3)	Pearson Correlation	.529**	.611**	1					
	Sig. (2-tailed)	.000							
	N	116	116	116					
Business model sustainability (4)	Pearson Correlation	.638**	.609**	.575**	1				
	Sig. (2-tailed)	.000	.000	.000					
	N	116	116	116	116				
Security (5)	Pearson Correlation	.511**	.478**	.591**	.501**	1			
	Sig. (2-tailed)	.000	.000	.000	.000				
	N	116	116	116	116	116			

Usability (6)	Pearson Correlation	.632**	.603**	.509**	.573**	.599**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000			
	N	116	116	116	116	116	116		
Irrevocability (7)	Pearson Correlation	.528**	.518**	.637**	.605**	.571**	.566*	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		
	N	116	116	116	116	116	116	116	
Marketing and reputational effects (8)	Pearson Correlation	.593**	.612**	.525**	.553**	.478**	.611*	.604**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	116	116	116	116	116	116	116	116
Financial Market	Pearson Correlation	.632**	.661**	.622**	.593**	.628**	.691*	.633**	.614**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	116	116	116	116	116	116	116	116
**. Correlation is significant at the 0.01 level (2-tailed).									

Table (2) demonstrates the correlation analysis between each variable as independent variables and financial market as dependent factor. The results showed that: There was a high and positive link between the Fragmentation feature of supply side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.632^{**}$ ,  $p<0.01$ ). There was a high and positive link between the Scalability and efficiency features of supply side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.661^{**}$ ,  $p<0.01$ ). There was a high and positive link between the Technical and security features of supply side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.622^{**}$ ,  $p<0.01$ ). There was a high and positive link between the



Business model sustainability features of supply side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.593^{**}$ ,  $p0.01$ ). There was a high and positive link between the Security feature of demand side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.628^{**}$ ,  $p0.01$ ). There was a high and positive link between the Usability feature of demand side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.691^{**}$ ,  $p0.01$ ). There was a high and positive link between the Irrevocability feature of demand side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.633^{**}$ ,  $p0.01$ ). There was a high and positive link between the Marketing and reputational effects features of demand side for digital currency and financial market, as demonstrated by the value of Pearson correlation ( $r=.614^{**}$ ,  $p0.01$ ).

Table (3): Reliability Test

Models	Fixed Effects Model			
		Coefficient	T-ratio	P-value
Model 1 (Fragmentation)	Const	1.8821	1.0025	.0012
	Beta	.602		.0000
	Size	1.456	1.639	.0002
	Adj R2		.612	
	F-Value		10.117**	
	Durbin-Watson		1.528	
Model 2 (Scalability and efficiency)	Const	9.285	.05265	.001
	Beta	.612		.000
	Size	.2153	.0119	.002

	Adj R2		.631	
	F-Value		11.323**	
	Durbin-Watson		1.141	
Model 3 (Technical and security)	Const	2.211	.2365	.0012
	Beta	.628		.000
	Size	1.132	.0411	
	Adj R2		.617	
	F-Value		11.334**	
	Durbin-Watson		1.526	
Model 4 (Business model sustainability)	Const	3.2562	.2114	0.004
	Beta	.609		.000
	Size	1.0252	.7011	
	Adj R2		.699	
	F-Value		11.393**	
	Durbin-Watson		1.932	
Model 5 (Security)	Const	2.454	.3266	0.004
	Beta	.663		.000
	Size	1.696	.6229	
	Adj R2		.699	
	F-Value		13.521**	

	Durbin-Watson		1.177	
Model 6 (Usability)	Const	4.2522	0.2396	0.004
	Beta	.583		.000
	Size	1.747	0.6322	
	Adj R2		.635	
	F-Value		13.521**	
	Durbin-Watson		1.177	
Model 7 (Irrevocability)	Const	4.2522	0.2396	0.004
	Beta	.583		.000
	Size	1.747	0.6322	
	Adj R2		.608	
	F-Value		13.521**	
	Durbin-Watson		1.177	
Model 8 (Marketing and reputational effects)	Const	4.2522	0.2396	0.004
	Beta	.583		.000
	Size	1.747	0.6322	
	Adj R2		.644	
	F-Value		11.441**	
	Durbin-Watson		1.644	

Dependent Variable: Financial Market

\* significant at 0.10, \*\* significant at 0.05 and \*\*\* significant at 0.01

After applying multiple regression analysis to measure developed research hypotheses, the results showed that, Fragmentation as a demand side of digital currency influences significantly and positively financial market at 5% level. Scalability and efficiency as a demand side of digital currency influences significantly and positively financial market at 5% level. Technical and security as a demand side of digital currency influences significantly and positively financial market at 5% level. Business model sustainability as a demand side of digital currency influences significantly and positively financial market at 5% level. Security as a supply side of digital currency influences significantly and positively financial market at 5% level. Usability as a supply side of digital currency influences significantly and positively financial market at 5% level. Irrevocability as a supply side of digital currency influences significantly and positively financial market at 5% level. Marketing and reputational effects as a supply side of digital currency influences significantly and positively financial market at 5% level. Moreover, all beta value is higher than .001. All models have very high adjusted R2 (.612, .631, .617, .699, .699, .635, .608, and .644) resulting the ability of the models clarifying the difference of digital currency's supply and demand side.

## **Conclusion**

New technologies such as distributed ledgers and digital currencies have the potential to have a broad range of effects, notably on the payment systems and services that are now in place. The disruption of traditional business models and systems, as well as the emergence of new financial, economic, and social connections and linkages, might be among the potential outcomes of this event. Even if the present plans for digital money don't work out, it's probable that other plans will be developed in the future that are based on the same fundamental principles and distributed ledger technology. These new plans will likely be successful. There are parallels to be drawn between the asset component of digital currencies and past study that was carried out in various contexts. In contrast to traditional forms of electronic money, digital

currencies are neither a liability of an individual or a corporation, nor are they supported by any central authority. In addition, they have no value that is drawn from the world outside of themselves; rather, their worth is derived solely from the anticipation that they would, at some point in the future, be traded in for other goods or services, or a predetermined amount of a sovereign nation's currency. As a consequence of this, holders of digital currencies may be subject to much larger expenses and losses than holders of sovereign currencies as a direct result of the price and liquidity risk.

### **References**

Altan, A., Karasu, S., & Bekiros, S. (2019). Digital currency forecasting with chaotic meta-heuristic bio-inspired signal processing techniques. *Chaos, Solitons & Fractals*, 126, 325-336.

Anagnostopoulos, I. (2018). Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business*, 100, 7-25.

Andolfatto, D. (2021). Assessing the impact of central bank digital currency on private banks. *The Economic Journal*, 131(634), 525-540.

Bindseil, U. (2019). Central bank digital currency: Financial system implications and control. *International Journal of Political Economy*, 48(4), 303-335.

Bordo, M. D., & Levin, A. T. (2019). Improving the monetary regime: The case for US digital cash. *Cato J.*, 39, 383.

Chen, Y., & Sivakumar, V. (2021). Investigation of finance industry on risk awareness model and digital economic growth. *Annals of Operations Research*, 1-22.

Chiu, J., Davoodalhosseini, S. M., Hua Jiang, J., & Zhu, Y. (2019). Bank market power and central bank digital currency: Theory and quantitative assessment.

Corbet, S., Hou, Y. G., Hu, Y., Oxley, L., & Xu, D. (2021). Pandemic-related financial market volatility spillovers: Evidence from the Chinese COVID-19 epicentre. *International Review of Economics & Finance*, 71, 55-81.



Corbet, S., Lucey, B., Urquhart, A., & Yarovaya, L. (2019). Cryptocurrencies as a financial asset: A systematic analysis. *International Review of Financial Analysis*, 62, 182-199.

da Gama Silva, P. V. J., Klotzle, M. C., Pinto, A. C. F., & Gomes, L. L. (2019). Herding behavior and contagion in the cryptocurrency market. *Journal of Behavioral and Experimental Finance*, 22, 41-50.

Gardi, B., Hamza, P. A., Qader, K. S., Anwar, H., Hamad, D., & Anwar, G. (2021). Factors affecting the quality of financial statements on investment decision making.

Guesmi, K., Saadi, S., Abid, I., & Ftiti, Z. (2019). Portfolio diversification with virtual currency: Evidence from bitcoin. *International Review of Financial Analysis*, 63, 431-437.

Hamad, H. A., Hamza, P. A., Gardi, B., Saeed, K., Qader, D., & Anwar, G. (2021). The influence of accounting software in minimizing business costs.

Hamad, H. A., Qader, K. S., Gardi, B., Abdalla, P., Hamza, D., & Anwar, G. (2021). The essential variables to consider before investing in financial markets during Covid-19.

Hamza, P. A., Hamad, H. A., Qader, K. S., Gardi, B., & Anwar, G. (2021). Management of outsourcing and its relationship with hotels' performance: An empirical analysis of selected hotels in Erbil. *International Journal of Advanced Engineering Research and Science*, 8, 10.

Abdalla Hamza, P., Gardi, B., Hamad, H., & Anwar, G. (2021). Analysis the impact of Information technology on Efficient tax Management. *Bayar and Hamad, Hawkar and Anwar, Govand, Analysis the impact of Information technology on Efficient tax Management (December 6, 2021)*.

Haryanto, S., Subroto, A., & Ulpah, M. (2020). Disposition effect and herding behavior in the cryptocurrency market. *Journal of Industrial and Business Economics*, 47(1), 115-132.

Jiang, Y., Wu, L., Tian, G., & Nie, H. (2021). Do cryptocurrencies hedge against EPU and the equity market volatility during COVID-19?—New evidence from quantile

coherency analysis. *Journal of International Financial Markets, Institutions and Money*, 72, 101324.

Khiaonarong, T., & Humphrey, D. (2019). Cash use across countries and the demand for central bank digital currency. *Journal of Payments Strategy & Systems*, 13(1), 32-46.

Arjun, R., & Suprabha, K. R. (2020). Innovation and Challenges of Blockchain in Banking: A Scientometric View. *International Journal of Interactive Multimedia & Artificial Intelligence*, 6(3).

Kulyasov, N. S., Opekunov, V. A., & Tikhonov, Y. P. (2022). The Role of Digital Assets in Transforming Corporate Relations. In *Proceedings of the International Scientific Conference “Smart Nations: Global Trends In The Digital Economy”* (pp. 72-79). Springer, Cham.

Latimer, P., & Duffy, M. (2019). Deconstructing digital currency and its risks: Why ASIC must rise to the regulatory challenge. *Federal Law Review*, 47(1), 121-150.

Legotin, F. Y., Kocherbaeva, A. A., & Savin, V. E. (2018). Prospects for cryptocurrency and blockchain technologies in financial markets. *Revista Espacios*, 39(19).

Lekashvili, E., & Mamaladze, L. (2018). Crypto currency—a new challenge for the economy of Georgia. *Copernican Journal of Finance & Accounting*, 7(4), 87-97.

Leshchenko, O., Trush, O., Dahno, N., Dudnik, A., Kazintseva, K., & Kovalenko, O. (2020, November). Methods for predicting adjustments to the rates of modern “digital money”. In *2020 IEEE 2nd International Conference on Advanced Trends in Information Theory (ATIT)* (pp. 222-226). IEEE.

Li, C., Pervaiz, K., Asif Khan, M., Ur Rehman, F., & Oláh, J. (2019). On the asymmetries of sovereign credit rating announcements and financial market development in the European region. *Sustainability*, 11(23), 6636.

Li, Z., Dong, H., Huang, Z., & Failler, P. (2018). Asymmetric effects on risks of Virtual Financial Assets (VFAs) in different regimes: A Case of Bitcoin. *Quantitative Finance and Economics*, 2(4), 860-883.



- Liang, J., Li, L., Chen, W., & Zeng, D. (2019, July). Towards an understanding of cryptocurrency: a comparative analysis of cryptocurrency, foreign exchange, and stock. In *2019 IEEE International Conference on Intelligence and Security Informatics (ISI)* (pp. 137-139). IEEE.
- Lipton, A., Sardon, A., Schär, F., & Schüpbach, C. (2020). From Tether to Libra: Stablecoins, Digital Currency and the Future of Money. *arXiv preprint arXiv:2005.12949*.
- Manavi, S. A., Jafari, G., Rouhani, S., & Ausloos, M. (2020). Demythifying the belief in cryptocurrencies decentralized aspects. A study of cryptocurrencies time cross-correlations with common currencies, commodities and financial indices. *Physica A: Statistical Mechanics and its Applications*, 556, 124759.
- Mancini-Griffoli, T., Peria, M. S. M., Agur, I., Ari, A., Kiff, J., Popescu, A., & Rochon, C. (2018). Casting light on central bank digital currency. *IMF Staff Discussion Notes*, 18(08).
- Maniff, J., & Wong, P. (2020). Comparing means of payment: what role for a central bank digital currency?. *FEDS Notes*, (2020-08), 13-2.
- Mhlanga, D. (2020). Industry 4.0 in finance: the impact of artificial intelligence (ai) on digital financial inclusion. *International Journal of Financial Studies*, 8(3), 45.
- Popescu, A. D. (2021). Central Banks Digital Currency-Opportunities and Innovation. *Ovidius University Annals, Series Economic Sciences*, 21(1).
- Qader, K. S., Hamad, H. A., Gardi, B., Abdalla, P., Hamza, D., & Anwar, G. (2021). The role of sophisticated accounting system in organizational planning.
- Qian, Y. (2019). Central Bank Digital Currency: optimization of the currency system and its issuance design. *China economic journal*, 12(1), 1-15.
- Risman, A., Mulyana, B., Silvatika, B., & Sulaeman, A. (2021). The effect of digital finance on financial stability. *Management Science Letters*, 11(7), 1979-1984.
- Saito, K., & Iwamura, M. (2019). How to make a digital currency on a blockchain stable. *Future Generation Computer Systems*, 100, 58-69.





Salisu, A. A., & Ogbonna, A. E. (2021). The return volatility of cryptocurrencies during the COVID-19 pandemic: Assessing the news effect. *Global Finance Journal*, 100641.

Sapovadia, V. (2018). Financial inclusion, digital currency, and mobile technology. In *Handbook of Blockchain, Digital Finance, and Inclusion, Volume 2* (pp. 361-385). Academic Press.

Senou, M. M., Ouattara, W., & Acclassato Houensou, D. (2019). Financial inclusion dynamics in WAEMU: Was digital technology the missing piece?. *Cogent Economics & Finance*, 7(1), 1665432.

Stolbov, M. I. (2019). The 10th anniversary of the cryptocurrency market: Its current state and prospects. *Voprosy ekonomiki*, (5), 136-148.

Sun, W., Dedahanov, A. T., Shin, H. Y., & Kim, K. S. (2020). Switching intention to crypto-currency market: Factors predisposing some individuals to risky investment. *PloS one*, 15(6), e0234155.

Vyhovska, N., Polchanov, A., Frolov, S., & Kozmenko, Y. (2018). The effect of it-transformation of the country's financial potential during the post-conflict reconstruction. *Public and Municipal Finance*, 7(3), 15-25.

Wajdi, M., Nadia, B., & Ines, G. (2020). Asymmetric effect and dynamic relationships over the cryptocurrencies market. *Computers & Security*, 96, 101860.

Wójcik, D., & Ioannou, S. (2020). COVID-19 and finance: market developments so far and potential impacts on the financial sector and centres. *Tijdschrift voor economische en sociale geografie*, 111(3), 387-400.

Yang, L., & Zhang, Y. (2020). Digital financial inclusion and sustainable growth of small and micro enterprises—Evidence based on China's new third board market listed companies. *Sustainability*, 12(9), 3733.

Yao, Q. (2018). A systematic framework to understand central bank digital currency. *Science China Information Sciences*, 61(3), 1-8. Yu, J. H., Kang, J., & Park, S. (2019). Information availability and return volatility in the bitcoin market: analyzing differences of user opinion and interest. *Information Processing & Management*, 56(3), 721-732.

### پوخته

لهم وتاره دا باس له کاریگه ریبی دراوی دیجیتال له سهر چالاکیه کانی کۆمپانیاکانی پلاتفۆرم کراوه کۆمپانیاکان پلاتفۆرمی دیجیتال به کاردینن بۆ زیادکردنی به رههم هینان و بهرزکردنه وهی په یوه ندی کرپاره کان و که مکردنه وهی خه رجیه کان. توژیینه وه که به کۆکردنه وهی 116 پرسیارنامه وه شیوازی چه ندایه تی جیبه جی کرد. له کۆتاییدا ئه نجامه کان ده ریانخست که لایه نی داواکاری (تاکفروشی، پیوانه یی و کارایی، ته کنیکی و ئاسایش، جیگیربوونی مۆدیلی بازارگانی) و لایه نی داواکاری که توژیینه وه که سه رنجی خسته سه ر (ئاسایش، توانای به کارنه هینانی، که می پیدچوونه وه، به بازارکردن و تیکه وته ناوبانگیه کان) کاریگه ری له گه ل ئه وه شدا، لایه نی دا بینکردن نیشان دراوه که کاریگه ری زیاتر له سه ر بازاری دارایی هه یه به داواکاری.

### خلاصة

تتم مناقشة تأثير العملة الرقمية على أنشطة شركات المنصات في هذه المقالة. تستخدم الشركات المنصات الرقمية لزيادة الإنتاجية وتعزيز علاقات العملاء وخفض النفقات. طبقت الدراسة الطريقة الكمية من خلال جمع 116 استبياناً. وأخيراً، كشفت النتائج أن جانب الطلب الذي يشمل (التجزئة، قابلية التوسع والكفاءة، التقنية والأمنية، استدامة نموذج الأعمال) وجانب الطلب الذي ركزت عليه الدراسة (الأمن، قابلية الاستخدام، عدم المراجعة، التسويق وأثار السمعة) لها تأثير إيجابي وكبير على السوق المالية. وعلاوة على ذلك، تبين أن جانب العرض له تأثير أكبر من جانب الطلب على السوق المالية.