

12-7-2022

## Investigating Mainstreaming Strategies of Hot Cryptocurrencies-wallet

Cheuk Hang Au  
*National Chung Cheng University, allenau@ccu.edu.tw*

Kris M. Y. Law  
*Deakin University, kris.law@deakin.edu.au*

Dickson K. W. Chiu  
*The University of Hong Kong, dicksonchiu@ieee.org*

Kevin K. W. Ho  
*University of Tsukuba, kevinkho@uqam.uog.edu*

Follow this and additional works at: <https://aisel.aisnet.org/acis2022>

---

### Recommended Citation

Au, Cheuk Hang; Law, Kris M. Y.; Chiu, Dickson K. W.; and Ho, Kevin K. W., "Investigating Mainstreaming Strategies of Hot Cryptocurrencies-wallet" (2022). *ACIS 2022 Proceedings*. 1.  
<https://aisel.aisnet.org/acis2022/1>

This material is brought to you by the Australasian (ACIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ACIS 2022 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# Investigating Mainstreaming Strategies of Hot Cryptocurrencies-wallet

## Research-in-progress

### **Cheuk Hang Au**

Department of Information Management  
National Chung Cheng University  
Chiayi, Taiwan  
Email: allenau@ccu.edu.tw

### **Kris M. Y. Law**

School of Engineering  
Deakin University  
Melbourne, Australia  
Email: kris.law@deakin.edu.au

### **Dickson K. W. Chiu**

Faculty of Education  
The University of Hong Kong  
Hong Kong  
Email: dicksonchiu@ieee.org

### **Kevin K. W. Ho**

Graduate School of Business Sciences  
University of Tsukuba  
Tsukuba, Japan  
Email: ho.kevin.ge@u.tsukuba.ac.jp

## Abstract

The proliferation of cryptocurrencies in recent years has prompted the launching of many hot cryptocurrencies-wallets (known as “hot crypto-wallet”, permanently connected to the Internet) services to facilitate the management of cryptocurrencies assets. However, the dark side of cryptocurrencies, such as possible illegal activities and difficulties of key management, may hinder the broader cryptocurrency adoption. Therefore, some hot crypto-wallet services providers have adopted different measures to mainstream their services. Using a qualitative approach, we identified four mainstreaming strategies of hot crypto-wallet services, which may hint at some practical implications for hot crypto-wallet service providers.

**Keywords** FinTech, cryptocurrencies, crypto-wallet, mainstreaming.

## 1 Introduction

The increasing popularity of cryptocurrencies (known as “crypto”) in recent years, as reflected by the growing number of owners, may be explained by their advantages, such as lower transaction fees and faster transaction speed (Hendershott et al. 2021). As of June 2022, The global cryptocurrency market capitalization has reached 966.22 USD billion (CoinMarketCap 2022). The adoption of cryptocurrencies may be resisted by barriers, such as key management issues (Li and Whinston 2020) and stereotypes created by illegal applications such as money laundering (Brenig et al. 2015) and illegal drug sales (Foley et al. 2019). Recognising these barriers, some firms have introduced crypto-wallet services, which help users manage their cryptocurrencies keys and link the applications with different cryptocurrencies services such as debit cards (Lövhall 2017) and lending services (Zhang et al. 2021). These service providers also argue against critics related to cryptocurrencies and emphasise the bright sides of cryptocurrency applications. Such efforts may result in mainstreaming cryptocurrency applications. However, a more comprehensive range of mainstreaming strategies, including their strengths, is yet to be understood. Such a lack of understanding in this aspect may eventually fail all hot crypto-wallets and possibly other cryptocurrencies applications. In fact, we have observed the failures of similar crypto-services, such as Mt. Gox, due to the lack of these understandings (Vigna 2014).

By reviewing several successful hot crypto-wallets, we aim to identify their different strategies that bring cryptocurrency into the mainstream (i.e., mainstreaming strategies) that can change public perceptions of cryptocurrencies and their related services. In turn, the benefits of cryptocurrencies, such as financial inclusions (Lee and Teo 2015), poverty reduction (Dierksmeier and Seele 2018), and accelerated transactions (Hendershott et al. 2021), may be widened. Accordingly, our research question is: “How can hot crypto-wallet service providers mainstream their services?”.

## 2 Literature Review

### 2.1 Cryptocurrencies and Crypto-wallets

Cryptocurrency is a type of digital money that relies on cryptography to secure token transfers and record transactions on decentralised digital registers. Its root may be traced back to the introduction of the fundamental blockchain technology in 2008, which enabled Bitcoin’s launch (Li and Whinston 2020). Researchers are interested in the advantages of applications, their dark sides, and associated business opportunities of cryptocurrencies (See Table 1 and Table 2).

Advantages	Arguments
Financial inclusion	Cryptocurrencies may help reduce daily financial transaction costs (Dierksmeier and Seele 2018) and thus harness financial inclusion, foster human development, and address poverty (Lee and Teo 2015; Qureshi and Xiong 2018).
Privacy protection	Privacy is supreme in cryptocurrencies by default. The transactions are stored on distributed ledgers, which do not keep users’ information (Herskind et al. 2020).
Reduced transaction time	With blockchain technologies behind, cryptocurrencies may shorten the time required for financial transactions (Hendershott et al. 2021). For example, a Bitcoin payment can be confirmed within 30 minutes (Dumitrescu 2017).

Table 1. A Selected List of Advantages of Cryptocurrencies

Previous literature indicated both advantages of cryptocurrencies which drove new business opportunities, and their dark sides which may harm their long-term proliferation. Given that cryptocurrencies may not be directly used like fiat currencies in daily life (Levulyté and Šapkauskienė 2021), some hot crypto-wallet service providers have introduced measures that fit the mainstream needs. And yet, previous literature demonstrated a limited understanding of promoting cryptocurrencies applications beyond earlier adopters. While we may view cryptocurrencies as a type of FinTech, previous FinTech theories do not fully apply to crypto-wallet service providers. For example, cryptocurrency applications may be more related to social issues (e.g., electricity wastage), negatively influencing different stakeholders’ adoption and recognition of cryptocurrencies. Therefore, we need to identify distinctive strategies for mainstreaming hot crypto-wallet services. As the adoption of hot crypto-wallet services may be regarded as switching behaviours (from conventional financial management options), we reviewed previous literature related to users’ switching behaviours to guide our study.

Dimensions	Arguments
Dark Side	
Illegal activities	Cryptocurrencies have been accused of financing illegal activities, such as unlawful drug sales (Foley et al. 2019), money laundering (Brenig et al. 2015), and tax evasion (Dierksmeier and Seele 2018).
Electricity wastage	Given the advantages and opportunities brought by cryptocurrencies, the proliferation of cryptocurrencies-mining activities has created significant electricity consumption (Li et al. 2019)
Price volatility	The values and transaction costs of some of the cryptocurrencies may fluctuate heavily (Qureshi and Xiong 2018). Some users may mistake all cryptocurrencies as volatile and resist accepting all of them (Sabah 2020).
Adoption difficulties	Cryptocurrency adoptions may be barred by the lack of user-friendly interfaces, the difficulties of key management, and the costs of switching to cryptocurrencies-based systems. These issues have made cryptocurrencies less usable and should be addressed to ensure their continuous adoption (Frizzo-Barker et al. 2020).
Business Opportunities	
Cryptocurrencies wallet services	Crypto-wallet services may help manage private keys remotely while ensuring the accessibility of cryptocurrencies. Some of these are permanently connected to the network, possibly integrated with other services to cater to users' needs, and are also known as hot wallets (Kazan et al. 2015)
Enabling new and impacting business models	The emergence of cryptocurrencies has empowered new and alternative business models (e.g., crypto-wallet services) and enabled variants of existing FinTech business models. (Li and Whinston 2020)

Table 2. A Selected List of Arguments around Cryptocurrencies

## 2.2 User Switching Behaviours

Switching behaviour is defined as users' choices among alternatives to replace previously adopted service providers (Bansal and Taylor 1999). Given the lowering switching costs and users' dissatisfaction with incumbent options, these behaviours are commonly seen in the information systems (IS) context. Therefore, service providers must pay attention to these behaviours (Au et al. 2018). Among different theoretical frameworks for studying these behaviours, the push-pull-mooring (PPM) framework is one of the most commonly used frameworks developed by Bansal et al. (2005). Under this framework, push factors indicate the forces that drive people away from their original place, while pull factors reflect the forces that attract people to a destination. Furthermore, mooring factors refer to personal, situational, and contextual constraints that facilitate or hamper migration decisions. Previous literature (e.g., Cheng et al. 2019; Fang and Tang 2017) identified various more specific factors in these three categories (see Table 3 for a summary).

Category	Examples of Factors
Pull Factors	Alternative attractiveness, Enjoyment, Similarity, Opportunities for alternatives, Price benefits, Favorable social norm toward the substitute, Convenience, Economic benefits, Gamification, Motivation, Enjoyment, Monetary rewards, Perceived complementarity, Perceived ease of use, Perceived usefulness
Push Factors	Inconvenience, Dissatisfaction with quality (technical, information, system, service), Regret, Perceived risk (security and privacy), Low perceived value
Mooring Factors	Switching cost, Low need for variety, Prior switching experience, Trust, Privacy and security, Sunk cost, Setup cost, Perceived substitutability, Inertia, Learning engagement, Social presence, Habit, continuity Cost, Inertia

Table 3. A Summary of Factors related to IS Switching Behaviours under the PPM Model

### 3 Research Method

We adopted qualitative methods for a few reasons. First, since the targeted phenomenon is multi-dimensional and includes both external and technological dimensions, an objective approach may be too complex to be adopted (Gable 1994). Second, qualitative methods are more robust in identifying the development of specific outcomes (Markus and Robey 1988). Since the sector is still emerging, the service options offered by different providers are still expanding. Therefore, we analysed multiple cases of successful hot crypto-wallets to identify more possibilities for mainstreaming measures. We began by selecting the successful wallets based on various sources (such as websites, social media channels, and blogs of different hot crypto-wallets and cryptocurrencies-related educational websites). Selecting successful cases would ensure the established implications are based on proven, if not the best practices (Pan and Tan 2011). To take advantage of the flexibility of qualitative research methods, we identified new successful crypto-wallets and analysed the data concurrently (Eisenhardt 1989).

We established an initial set of theoretical lenses based on the literature on cryptocurrencies and users' switching behaviour (Pan and Tan 2011). Examples of lenses included dark sides and business opportunities for cryptocurrencies, and similarity, convenience, and benefits for users' switching behaviour. The data collected was then coded using a mix of open, axial, and selective coding (Strauss and Corbin 1998). More specifically, open coding was first used to apply conceptual labels to the relevant excerpts of our data to form first-order concepts (see van Maanen 1979). The first-order concepts were then grouped into second-order themes via axial coding. In particular, if the first-order concept fitted an existing second-order theme within our coding structure, the concept was assigned to the theme directly. Conversely, if the fit was not exact or if the concept related to a non-existing theme, an existing or new second-order theme would be modified or created before restarting coding based on the changes made. Finally, selective coding was used further to abstract the second-order themes into several aggregate dimensions. We also created visual maps, tables, and narratives to help us make sense of the data collected (Pan and Tan 2011). Currently including 14 hot crypto-wallet service providers (e.g., Uphold, Binance, AAX, Coinbase and Crypto.com), we will identify and analyze more providers until we reach the point of theoretical saturation, which means the induced implications comprehensibly accounted for the data on-hand, and additional data will not provide new insights (Eisenhardt 1989).

### 4 Results

These hot crypto-wallets services are established in response to the need of tools for cryptocurrency key management (Kazan et al. 2015), which may otherwise lead to adoption difficulties (Frizzo-Barker et al. 2020). Our findings suggested at least four strategies that may facilitate the mainstreaming of hot crypto-wallet services (See Figure 1): (1) Compliance-oriented Strategy, (2) Customer-oriented Financial Management Strategy, (3) Daily-life Driven Strategy, and (4) Habit-oriented Strategy.

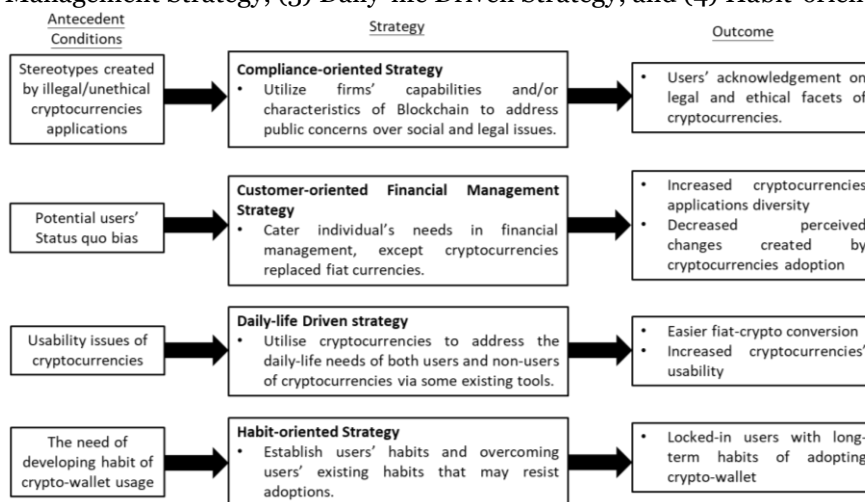


Figure 1: Summary of Identified Strategies

#### 4.1 Compliance-oriented Strategy

This strategy refers to applying Blockchain and firms' other capabilities to address public concerns, fulfil relevant legal requirements, or mediate the stereotypes about cryptocurrencies created by illegal or controversial cryptocurrency applications (Dierksmeier and Seele 2018; Foley et al. 2019). In fact,

stereotyping of cryptocurrencies was not uncommon. For example, Elon Musk, the CEO of Tesla, once openly expressed concern over the environmental impact of Bitcoin, such as crypto-mining issues (Li et al. 2019). Uphold, one of the crypto-wallets in this industry, has recognised this problem and worked with other Blockchain initiatives to launch some carbon-neutral cryptocurrencies tokens. In response to Elon's criticism, Uphold openly challenged him using their carbon-neutral tokens.

*"We have the solution. .... Rather than waiting for Bitcoin to draw from more sustainable sources for electricity, we've gone out and done something we believe is much better. We've put the highest-quality rainforest preservation derived credits there to mitigate emissions completely."*

In addition, some service providers (e.g., Binance) have launched some Blockchain-enabled charity platforms (Dierksmeier and Seele 2018), which support charity projects related to the COVID-19 pandemic, worldwide hunger, and other aspects and enable transparency tracking of the capital flow. By showing the alternative legal and ethical facets of cryptocurrencies to the customers, this strategy may mediate the stereotypes, which also aligns with the compliance-easy dimension of the LASIC principle (Lee and Teo 2015).

## 4.2 Customer-oriented Financial Management Strategy

This strategy refers to the measures that cater to an individual's needs in financial management by crypto-variants of traditional investment options. Given some customers prefer options similar to their current choice (Fang and Tang 2017; Loh et al. 2021), these crypto-variants may be understood more quickly and more likely to be adopted, especially when more attractive interest rates are offered (Hou et al. 2011). For example, crypto-based lending services refer to loan services with cryptocurrencies as loan collateral and/or currencies (Zhang et al. 2021). Customers may secure the loan quickly (Dumitrescu 2017) while continue to benefit from the appreciation of collateral cryptocurrencies. On Binance's website, they included a video to explain the service, using an imaginary character called Bob.

*"Bob urgently needs a working capital to make a turnover. At present, he holds 5 BTC and hopes to hold BTC for a longer time and does not want to sell. At this time, he can use the 5 BTC as collateral to loan out crypto assets of corresponding value."*

Some service providers may also offer crypto-based saving services (e.g., AAX and Coinbase), which offer more favourable interest rates than traditional financial institutions. In addition, some providers (e.g., Uphold) offer crypto-enabled investment services, which allow customers to purchase equities of listed companies, ETFs, and precious metals by cryptocurrencies. In turn, users may secure profits and better manage the risks of their crypto investment. The outcome of this strategy is the increased diversity of cryptocurrency applications and decreased perceived changes in adoption, which may encourage the wallet's adoption of variety-seeking users (Hou et al. 2011).

## 4.3 Daily-life Driven Strategy

The volatility issue of cryptocurrencies has decreased public acceptance of and, thus, the usability of them (Sabah 2020). This strategy focuses on utilising cryptocurrencies to address the daily-life needs of both users and non-users of cryptocurrencies via some existing tools such as crypto-linked debit/credit cards. More specifically, when these cards are used for payment, an equivalent amount of cryptocurrencies in users' crypto-wallet will be converted to fiat currencies for payment. Various forms of rebates and benefits may be included, similar to the cards offered by traditional banks (Worthington 1990). This type of card has been offered by, for example, Binance and Crypto.com.

In addition, some service providers (e.g., Uphold) may support their customers to use cryptocurrencies to redeem gift cards from major merchants (e.g., Starbucks, Verizon, and xBox). These cards may be easily consumed and simulate further purchases from the merchants' perspective (Khouja et al. 2011). As a result, the conversions between fiat currencies and cryptocurrencies are facilitated. Merchants will receive the payment in fiat currencies, while individual users may also use cryptocurrencies. Both parties may perceive these cards' options as similar to existing options (Hou et al. 2011). With more channels and mediums enabled, the overall cryptocurrencies usability is increased.

## 4.4 Habit-oriented Strategy

Considering habit as a mooring factor in IS switching behaviour (Cheng et al. 2019), this strategy can establish users' long-term usage habits, possibly reinforced by some incentives. For example, some service providers (e.g., Coinbase.com) have launched online courses related to cryptocurrency and their services, allowing users to earn some free cryptocurrencies upon accomplishing the courses. In addition, some service providers (e.g., AAX and gate.io) have launched some progressive paths, which help new users overcome switching and adoption barriers (Frizzo-Barker et al. 2020)

Moreover, some hot crypto-wallet service providers have introduced lotteries and gaming options, with cryptocurrencies as rewards. Taking Uphold as an example, they have worked with Skillgaming.com to offer the gaming option so that their users can earn cryptocurrencies by playing online games. On Uphold's website, they introduced Skillgaming.com as follows,

*"SkillGaming.com is the first unique skills-based gaming network where gamers play for free or with real money. Gamers can compete with other users for money in either single-player or multi-player mode. It supports free-to-play and buy-to-play games."*

Upon earning cryptocurrencies through these options, users may perceive an enjoyable experience, and their long-term habits of using the services are gradually developed (Cheng et al. 2019). These earned cryptocurrencies may also offset the costs of switching to a hot crypto wallet (Frizzo-Barker et al. 2020). Thus, they are locked in by the service providers and are less likely to switch to other options.

## 5 Discussion and Concluding Remarks

Our preliminary theoretical implications are primarily around the mainstreaming strategies of hot crypto-wallet services, with the antecedent conditions and outcomes of these strategies indicated. From practitioners' perspective, these strategies may provide development directions for hot crypto-wallet services, so that they can address the needs of different users, including the less innovative ones, more comprehensively. In turn, their user base will significantly grow. Our strategies are indeed linked to the known factors related to IS switching behaviour. For example, habit-oriented strategies established foster users' habits, which make them less likely to switch. In the future, we will extend and validate our implications with the collection and analysis of additional data from various hot crypto-wallet services providers. The boundary conditions of our implications will also be explicated through an ongoing literature review and further data analysis. In turn, we hope to further refine our theoretical model so that a more holistic understanding of hot crypto-wallet services and their strategic and organisational implications can emerge.

## 6 References

- Au, C. H., Tan, B., Leong, C., and Ge, C. 2018. Disrupting the Disruptor: The Role of IS in Facilitating Second-Mover Advantage," (available at <https://aisel.aisnet.org/icis2018/crowd/Presentations/3/>).
- Bansal, H. S., and Taylor, S. F. 1999. "The service provider switching model (spsm) a model of consumer switching behavior in the services industry," *Journal of service Research* (2:2), pp 200-218.
- Bansal, H. S., Taylor, S. F., and St. James, Y. 2005. "“Migrating” to new service providers: Toward a unifying framework of consumers' switching behaviors," *Journal of the Academy of Marketing Science* (33:1), pp 96-115.
- Brenig, C., Accorsi, R., and Müller, G. 2015. "Economic Analysis of Cryptocurrency Backed Money Laundering," (available at [https://aisel.aisnet.org/ecis2015\\_cr/20/](https://aisel.aisnet.org/ecis2015_cr/20/)).
- Cheng, S., Lee, S.-J., and Choi, B. 2019. "An empirical investigation of users' voluntary switching intention for mobile personal cloud storage services based on the push-pull-mooring framework," *Computers in Human Behavior* (92), pp 198-215.
- CoinMarketCap 2022. (available at <https://coinmarketcap.com/>).
- Dierksmeier, C., and Seele, P. 2018. "Cryptocurrencies and business ethics," *Journal of Business Ethics* (152:1), pp 1-14.
- Dumitrescu, G. C. 2017. "Bitcoin—a brief analysis of the advantages and disadvantages," *Global Economic Observer* (5:2), pp 63-71.
- Eisenhardt, K. M. 1989. "Building theories from case study research," *Academy of management review* (14:4), pp 532-550.
- Fang, Y.-H., and Tang, K. 2017. "Involuntary migration in cyberspaces: The case of MSN messenger discontinuation," *Telematics and Informatics* (34:1), pp 177-193.
- Foley, S., Karlsen, J. R., and Putniņš, T. J. 2019. "Sex, drugs, and bitcoin: How much illegal activity is financed through cryptocurrencies?," *The Review of Financial Studies* (32:5), pp 1798-1853.

- Frizzo-Barker, J., Chow-White, P. A., Adams, P. R., Mentanko, J., Ha, D., and Green, S. 2020. "Blockchain as a disruptive technology for business: A systematic review," *International Journal of Information Management* (51).
- Gable, G. G. 1994. "Integrating case study and survey research methods: an example in information systems," *European journal of information systems* (3:2), pp 112-126.
- Hendershott, T., Zhang, X., Zhao, J. L., and Zheng, Z. 2021. "FinTech as a Game Changer: Overview of Research Frontiers," *Information Systems Research* (32:1), pp 1-17.
- Herskind, L., Katsikouli, P., and Dragoni, N. 2020. "Privacy and cryptocurrencies—A systematic literature review," *IEEE Access* (8), pp 54044-54059.
- Hou, A. C., Chern, C.-C., Chen, H.-G., and Chen, Y.-C. 2011. "Migrating to a new virtual world': Exploring MMORPG switching through human migration theory," *Computers in Human Behavior* (27:5), pp 1892-1903.
- Kazan, E., Tan, C.-W., and Lim, E. T. K. 2015. "Value Creation in Cryptocurrency Networks: Towards A Taxonomy of Digital Business Models for Bitcoin Companies," (available at <https://aisel.aisnet.org/pacis2015/34/>).
- Khouja, M., Pan, J., Ratchford, B. T., and Zhou, J. 2011. "Analysis of free gift card program effectiveness," *Journal of Retailing* (87:4), pp 444-461.
- Lee, D. K. C., and Teo, E. G. 2015. "Emergence of FinTech and the LASIC Principles," *Journal of Financial Perspectives* (3:3).
- Levulytė, L., and Šapkauskienė, A. 2021. "Cryptocurrency in context of fiat money functions," *The Quarterly Review of Economics and Finance* (82), pp 44-54.
- Li, J., Li, N., Peng, J., Cui, H., and Wu, Z. 2019. "Energy consumption of cryptocurrency mining: A study of electricity consumption in mining cryptocurrencies," *Energy* (168), pp 160-168.
- Li, X., and Whinston, A. B. 2020. "Analyzing Cryptocurrencies," *Information Systems Frontiers* (22:1), pp 17-22.
- Loh, X.-M., Lee, V.-H., Tan, G. W.-H., Ooi, K.-B., and Dwivedi, Y. K. 2021. "Switching from cash to mobile payment: what's the hold-up?," *Internet Research* (31:1), pp 376-399.
- Lövhall, J. 2017. *Analysis of a Bitcoin debit card: Design of a novel Bitcoin payment system*, Linköping University.
- Markus, M. L., and Robey, D. 1988. "Information technology and organizational change: Causal structure in theory and research," *Management science* (34:5), pp 583-598.
- Pan, S. L., and Tan, B. 2011. "Demystifying case research: A structured–pragmatic–situational (SPS) approach to conducting case studies," *Information and Organization* (21:3), pp 161-176.
- Qureshi, S., and Xiong, J. 2018. "Global Financial Inclusion and Human Development: The Bitcoin Effect," (available at <https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1007&context=globdev2018>).
- Sabah, N. 2020. "Cryptocurrency accepting venues, investor attention, and volatility," *Finance Research Letters* (36), p 101339.
- Strauss, A., and Corbin, J. 1998. *Basics of qualitative research techniques*, Sage publications Thousand Oaks, CA.
- van Maanen, J. 1979. "The fact of fiction in organizational ethnography," *Administrative Science Quarterly* (24:4), pp 539-550.
- Vigna, P. 2014. "5 Things About Mt. Gox's Crisis," (available at <https://www.wsj.com/articles/BL-263B-352>).
- Worthington, S. 1990. "Retailer credit cards: a competitive threat," *International Journal of Bank Marketing* (8:4).
- Zhang, S., Hou, X., and Ba, S. 2021. "What determines interest rates for Bitcoin lending?," (available at <https://www.sciencedirect.com/science/article/abs/pii/S0275531921000647>).



## Acknowledgements

This study is supported by a research grant awarded by the National Science and Technology Council (NSTC) of Taiwan (ID: 110-2410-H-194 -109 -). We gratefully thank for their support.

## Copyright

**Copyright** © 2022 Cheuk Hang Au, Kris M. Y. Law, Dickson K. W. Chiu, and Kevin K. W. Ho. This is an open-access article licensed under a [Creative Commons Attribution-Non-Commercial 3.0 Australia License](https://creativecommons.org/licenses/by-nc/3.0/australia/), which permits non-commercial use, distribution, and reproduction in any medium, provided the original author and ACIS are credited.