



Abstract

Background/Rationale: In recent years, the popularity of cryptocurrency has grown substantially. Increasingly, young adults are engaging in the volatile and dynamic cryptocurrency market. Given their highly volatile nature, investors/traders of cryptocurrencies may bear considerable financial risk. Congruently, early evidence indicates that engagement with higher speculative activities (e.g., cryptocurrency trading) is associated with involvement in other risky practices (e.g., stock trading, gambling). Yet, risk-taking in cryptocurrency users remains poorly understood. The goal of this study was to compare risk-taking engagement of cryptocurrency users and non-users.

Methods: A university-based sample of young adult cryptocurrency users and non-users took an online survey that assessed cryptocurrency involvement, risk-taking, and demographic characteristics. Risk-taking in five domains (financial, health/safety, recreational, ethical, and social) was assessed using the Domain-Specific Risk-Taking (DOSPERT) scale.

Results: DOSPERT scores will be reported in relation to cryptocurrency use vs. non-use, investment intensity/strategy, and demographic characteristics.

Conclusions/Impact: Understanding risk-taking in young adults using cryptocurrency may aid in identifying those at greatest risk for financial loss and problematic behaviours. This data can help inform future policy.

Introduction

Background Information

- Cryptocurrencies are digital money systems that use cryptography to secure transactions between users¹
- Verified transactions are stored on the blockchain (i.e., a large public ledger), allowing these systems to be open and transparent, and operate on a peer-to-peer basis, eliminating the need for a central authority (e.g., a central bank)¹
- With a global user base of about 300 million people³, the growing presence of thousands of new cryptocurrencies¹, and developing new technology (e.g., non-fungible tokens (NFTs), blockchain-based games, etc.)⁴, research within this financial sector has become increasingly necessary
- Recent research has also found links between cryptocurrency investing and gambling behaviour (e.g., frequency of use, concurrent engagement of the two, etc.)^{5,6}, as well as other high risk financial activities⁶
- Despite its widespread popularity and volatile nature, risk taking attitudes in cryptocurrency investors remain poorly understood
- Gaining a better grasp of individuals' level of risk-taking as overlaps with cryptocurrency use would allow for a better understanding of its rising popularity, and may help identify those more likely to purchase it, and possibly develop problematic future behaviours



The Current Study

- The main goal of this exploratory research was to compare levels of risk-taking propensity between cryptocurrency investors and non-investors



Methodology

Participants

Eligibility:

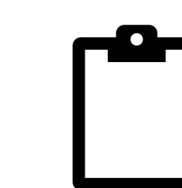
- Aged 18- to 30-years-old
- Verified U of C students



Sample:

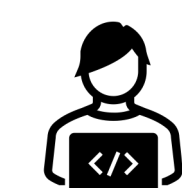
- The overall sample ($n = 219$) included two subgroups: cryptocurrency users ($n = 117$, $M_{age} = 20.94$ years, $SD = 2.71$, 60.7% male) and cryptocurrency non-users ($n = 102$, $M_{age} = 19.39$ years, $SD = 1.61$, 81.4% female)

Procedure



- An online cross-sectional survey (separate for users and non-users)
- Risk-taking was evaluated using the Domain-Specific Risk-Taking (DOSPERT) scale, spanning ethical, financial, health/safety, recreational, and social domains

Analysis



- Differences in risk-taking were assessed using a t-test

Results: Investment Behaviour

Table 1. Cryptocurrency behaviour amongst users ($n = 117$).

	n	% / $M(SD)$
Frequency of Use		
Less than once per month	50	42.7%
Once per month	30	26.6%
2-3 times per month	17	14.5%
Once per week	9	7.7%
2-3 times per week	4	3.4%
4-6 times per week	4	3.4%
Daily	3	2.6%
Money Spent (CAD)	--	\$1,823 (3990) (range \$10-30,000)
Frequency of Price Checking		
Less than daily or never	59	50.4%
Every few hours	47	40.2%
Hourly	5	4.3%
Multiple times per hour	6	5.1%
Coins Purchased		
Ethereum	82	70.1%
Bitcoin	77	65.8%
Dogecoin	46	39.3%
Cardano	24	20.5%
XRP	18	15.4%
Litecoin	16	13.7%
Solana	12	10.3%
Other(s)	30	25.6%



Results: Risk-Taking Propensity

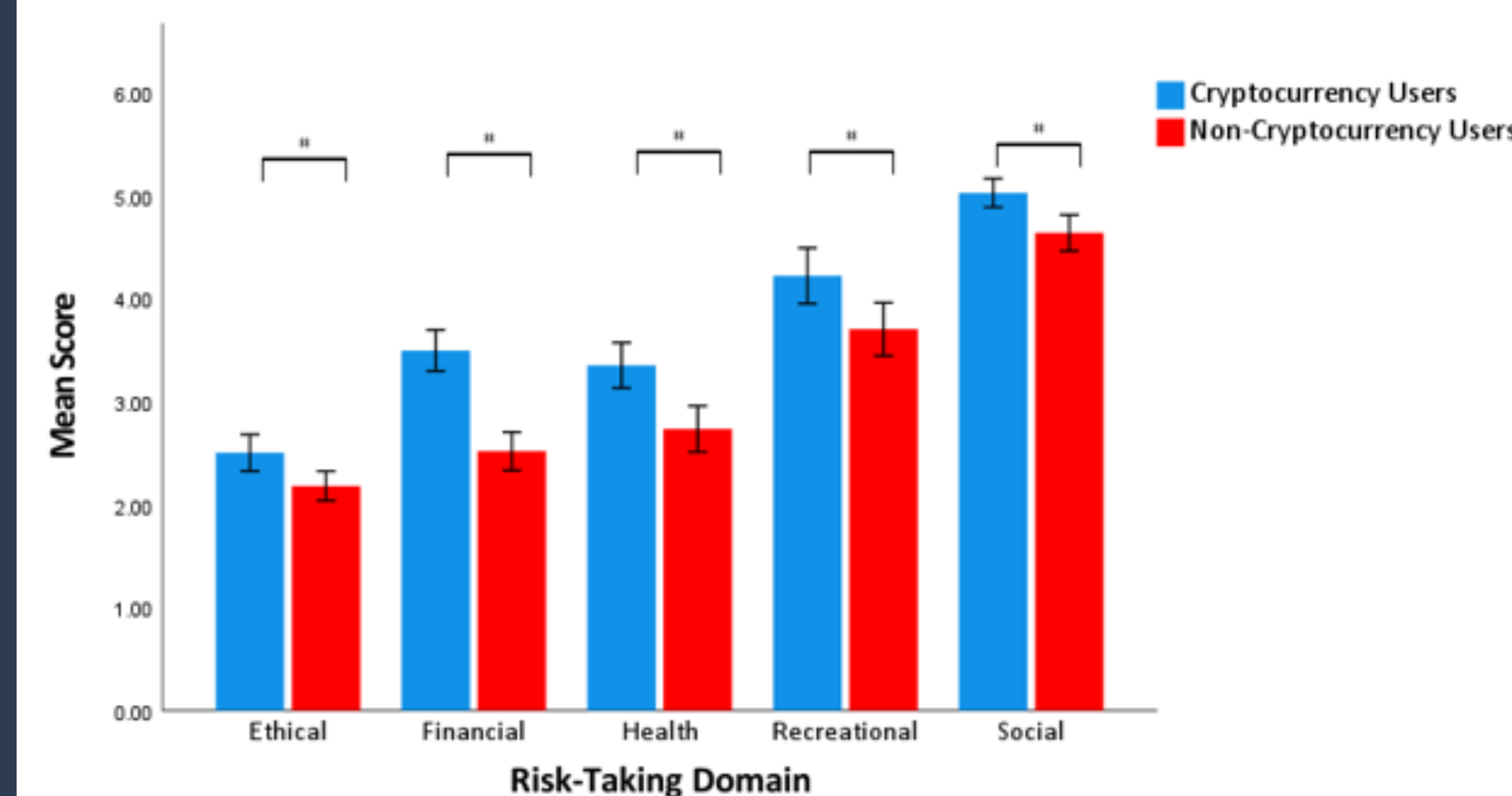
Table 2. Risk-taking propensity amongst cryptocurrency users and non-users across five domains (measured on a 7-point Likert scale).

Risk-Taking Domain	Cryptocurrency Users ($n = 117$) $M(SD)$	Non-Cryptocurrency Users ($n = 102$) $M(SD)$	T-Test Value
Ethical	2.50 (0.97)	2.18 (0.73)	2.80***
Financial	3.49 (1.09)	2.51 (0.95)	7.03***
Health	3.35 (1.20)	2.73 (1.14)	3.89***
Recreational	4.22 (1.47)	3.70 (1.31)	2.73***
Social	5.02 (0.78)	4.63 (0.89)	3.50***

Note. *** indicates a significant difference at the 1% level.



Figure 1. Risk-taking propensity of cryptocurrency investors and non-investors across five domains (measured on a 7-point Likert scale).



Note. Error bars represent 95% confidence intervals.

Discussion

Conclusions/Impact



- In general, cryptocurrency investors are more inclined to take risks
- These findings:
 - Help explain why and which individuals are more likely to engage in this space
 - Clarify the established links between cryptocurrency use and other financially risky activities (e.g., gambling, stock trading, etc.)^{5,6}
 - Can be used by researchers to apply in more robust studies that can study the relationships between risk-taking and other financial activities within this space (i.e., quantity invested, motivations for use, problem behaviours, etc.)

Limitations



- External validity (due to young sample of mostly undergraduates)
- Testing conditions were uncontrolled
- Some subsample sizes too small to draw meaningful conclusions

Future Directions and Closing Remarks



- A larger, more robust sample such be recruited to validate and expand upon this exploratory research
- Studies targeting more specific groups of investors/traders such be explored (e.g., comparing risk taking across investment intensity/strategy, motives, etc.)
- In such a rapidly developing field of consumer behaviour, research on the psychological and financial impacts of cryptocurrency use is warranted
- Data from this study can help inform future research studies, which will be necessary to inform cryptocurrency policy measures

References

- Wu, J., Liu, J., Zhao, Y., & Zheng, Z. (2020). Analysis of Cryptocurrency transactions from a network perspective: an overview. *Journal of Network and Computer Applications*.
- Liu, J., & Serletis, A. (2019). Volatility in the cryptocurrency market. *Open Economies Review*, 30(4), 779-811. <https://doi.org/10.1007/s11079-019-09547-5>
- Crypto.com. 2022. 2021 Crypto Market Sizing Report 2022 Forecast. Retrieved May 24, 2022, from https://assets.ctfassets.net/hfyg42jmx/518TeNIQYDjn82pSuZB55/85c7c9393f3ee67e456ec780f9bf1e3/Cryptodotcom_Crypto_Market_Sizing_Jan2022.pdf
- Dhaliwal, S. (2021). Benzinga: NFT growth remains strong as shown by Axie Infinity, OpenSea, CryptoPunks, says analyst. In *Newstex Finance & Accounting Blogs*. Newstex.
- Delfabbro, P., King, D., Williams, J., & Georgiou, N. (2021). Cryptocurrency trading, gambling and problem gambling. *Addictive Behaviors*, 122, 107021-107021. <https://doi.org/10.1016/j.addbeh.2021.107021>
- Mills, D. J., & Nower, L. (2019). Preliminary findings on cryptocurrency trading among regular gamblers: A new risk for problem gambling? *Addictive Behaviors*, 92, 136-140. <https://doi.org/10.1016/j.addbeh.2019.01.005>

Contact

- Daniel.Andruchow@ucalgary.ca