

# Open Payments Network White Paper

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# 1 Introduction

## 1.1 Background

Satoshi Nakamoto's vision for blockchain was to decentralise some of the most centralised, and alarmingly powerful, networks around the world. While the popularity of cryptocurrencies has skyrocketed in the past few months, they have been used for speculative trading instead. At the same time, there are many decentralised finance (DeFi) projects, mainly in the Ethereum ecosystem, which promise to democratise the world of finance. Yet, one component of this still remains widely centralised - card payments networks. Visa and Mastercard dominate, with 60% and 30% of the market share<sup>1</sup> respectively. These giants control the world's money, with 71% of people preferring to use either debit or credit cards for payments<sup>2</sup>. They also charge merchants exorbitant fees, much higher than proof-of-stake (PoS) blockchains.

## 1.2 The Solution

The solution I propose is a decentralised protocol made for payments. Decentralising the network will ensure that no one can interfere with a transaction and at the same time will reinforce each transaction's validity. In terms of conventional credit products, lending pools can be set up, allowing people to deposit tokenised fiat coins that will be used to pay merchants whenever a credit product is used. In return for the risk of lending their money, the merchant will pay a fee which will be distributed relative to the contribution made by the user. While this fee is similar to the issuing bank's fees, it will be much less when compared to current payment card networks. The network also charges a fee, which is distributed to the nodes that verify the transactions. Once again, this fee is minuscule when compared to current fees.

## 1.3 Benefits

The proposed method allows all parties involved in a card transaction to benefit when compared to using a conventional payment card network. The general public is able to earn a higher interest rate on their money by depositing in lending pools. Merchants benefit through payment processing lower fees and therefore increased profits. Consumers also benefit through fairer financial products.

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<sup>1</sup>Krauskopf, L. (2020, January 31). Swiping their way higher: Visa, Mastercard could be the next \$1 trillion companies. Reuters. <https://www.reuters.com/article/us-visa-mastercard-stocks-idUSKBN1ZU0JA>

<sup>2</sup>O'Brien, R. K. A. S. (2019, June 26). 2019 Findings from the Diary of Consumer Payment Choice. Federal Reserve Bank of San Francisco. <https://www.frbsf.org/cash/publications/fed-notes/2019/june/2019-findings-from-the-diary-of-consumer-payment-choice/>

## 2 Technology