

QuadrigaCX: A Ponzi Scheme embedded project

QuadrigaCX was originally a Bitcoin exchange platform developed and maintained by Quadriga Fintech Solutions in December 2013. Initially, the company marketed itself as a business that streamlined the process of buying and selling cryptocurrency and hosted itself as an exchange platform for trading Bitcoins with other forms of cryptocurrencies as well. Due to providing a convenient service in the early days of Bitcoin, QuadrigaCX was able to ride the Bitcoin market boom and become Canada's largest Bitcoin exchange platform in only a few years. However, the lack of transparency and dubious company leadership meant that the fate of Quadriga was manipulated by their CEO, Gerald Cotten who was later revealed to be using his platform as a means to steal Bitcoins from his customers, taking advantage of Bitcoin's anonymity to hide Quadriga's history up until the CEO's alleged death and company dissolution. As a result, QuadrigaCX has built itself a notorious reputation for leaving approximately \$180 million dollars' worth of money either missing or inaccessible through cold and hot storage wallets, marking this company's venture as one of the largest exit scams and Ponzi schemes in the history of cryptocurrency¹.

One of Bitcoin's hurdles is its relative difficulty of trading and acquiring Bitcoins. To enter the Bitcoin market, one has to acquire Bitcoins from either finding a merchant who is willing to trade Bitcoins in exchange for physical currency or investing hardware power to mint a new set of Bitcoins to inject into the market. Due to the large amount of resources needed for a chance to mine Bitcoins, trading would be the most accessible means for a user to enter the cryptocurrency market². QuadrigaCX was created to ease the process of purchasing Bitcoins by serving as an exchange platform for Bitcoins and other cryptocurrencies. Users could send a

¹ <https://mashable.com/article/quadrigacx-exit-scam-podcast-interview>

² <https://archive.ph/I4Rc6>

deposit to the company which the company would use to purchase Bitcoins from other Bitcoin merchants and allow the users to use the funds to either trade or withdraw for physical currency. In addition to exchanging money for Bitcoins, Quadriga allowed users to trade their Bitcoins with other forms of cryptocurrencies, notably Ether as well. Quadriga Solutions would essentially serve as a middleman service and an exchange platform which handled the monitoring and exchange from physical money to Bitcoins between users and merchants³.

However, Quadriga's services as a middleman exchange service were the result of the company trying to bypass Canada's law regarding money laundering. Taken from QuadrigaCX's about us page, Quadriga Solutions were not licensed to accept deposits and provide money similar to how a bank operates⁴⁵. This is because Quadriga Solutions didn't want to identify themselves as a bank or financial deposit institution because they would be subjected to Canada's anti-laundering policies for financial institutions. To circumvent this regulation, Quadriga would sell its goods in the form of a token called QuadrigaCX Bucks which were used to exchange for Bitcoins, other cryptocurrencies, or money. While this was a questionable inconvenience for users, it was a major issue that granted financial leverage to the company, as all users who wanted to deal with Quadriga Bucks had to do so on Quadriga's platform. This issue led to concerns of money laundering using cryptocurrencies which is most likely what pushed the Canadian government to integrate cryptocurrencies as part of the regulating authority⁶.

³ https://www.youtube.com/watch?v=rjklZ_C6rU

⁴ [https://ca.practicallaw.thomsonreuters.com/1-386-3580?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://ca.practicallaw.thomsonreuters.com/1-386-3580?transitionType=Default&contextData=(sc.Default)&firstPage=true)

⁵ <https://archive.is/8yPsB>

⁶ <https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/canada#chaptercontent5>

This circumvention meant that anyone who traded with Quadriga had their funds retained by Quadriga Solutions. This issue was demonstrated by a concern regarding withdrawal for physical currency. Quadriga users couldn't immediately withdraw their funds from the company. Users could trade Quadriga Bucks for other forms of cryptocurrencies, but to withdraw for physical money, users had to submit a withdrawal request and wait for Quadriga Solutions to acquire the money needed to physically hand over to the user. The exchange for physical cash wasn't done through bank accounts or any means that could be documented and recorded. Originally, users had to meet with an associate from Quadriga, provide proof of ID and proof of their withdrawal request before they could pick up their money up until 2018 where users could withdraw their money from associated stores. However, 2018 was only one year before Quadriga would declare bankruptcy⁷. Regardless of the process of withdrawal, all users' assets were under control of Quadriga Solutions, undocumented and unaccounted for until the actual money was given to the user⁸.

The transfer of physical money was an ambiguous process because Quadriga Solutions had no affiliation with any Canadian banks and were not licensed to operate as a financial institution. Funds were held behind third-party payment processors because the Canadian banks refused to handle any payments relating to Quadriga Solutions. Payments were held within credit cards, overseas wire transfers, and most of the company's payments were done in cash. The company never had a bank account to hold and manage funds, and Quadriga Solutions never had an accounting ledger to record its financial history because most of the company's

⁷ Canadian Imperial Bank of Commerce v. Costodian Inc. et al, 2018 ONSC 6680 (CanLII), at para 8, <<https://canlii.ca/t/hw142#par8>>, retrieved on 2021-08-02

⁸ <https://www.osc.gov.on.ca/quadrigacxreport/quadriga-launch-continued.html#how-it-worked>

operations were done under the CEO's watch. As a result, it is uncertain how the company handled its funds during the company's history due to the lack of official accounting records⁹.

Regardless of Quadriga Solution's questionable methods of handling their funds, the company became successful as the value of Bitcoin grew. Shortly after the company's official entrance into the cryptocurrency market, Quadriga rose in popularity, taking up between 60 to 90 percent of all virtual exchanges in Canada. They entered the market while it was still relatively new, so there weren't many options to buy Bitcoins, allowing Quadriga to fill a niche in the market. In a few years, QuadrigaCX became Canada's largest Bitcoin platform exchange service¹⁰.

It was around this time when the company began to take advantage of the flaws in its service for profit. The CEO created at least 14 known puppet accounts and injected several million dollars' worth of Quadriga Bucks into each of these accounts which he used to trade for Bitcoin and Ethereum on his own platform¹¹. One of the most notable accounts was the name Chris Markay which held over \$100 million in Quadriga Bucks and was the main account used to exchange for other forms of cryptocurrencies. This meant that anybody trading on QuadrigaCX at this time were competing with the CEO's puppet accounts which had virtually infinite funds to compete with¹². Nobody at the company noticed Gerald Cotten's behavior because there was nobody left leading the company. All heads and accountants left the company

⁹ <https://www.osc.gov.on.ca/quadrigacxreport/quadriga-launch-continued.html#how-it-worked>

¹⁰ <https://financialpost.com/technology/blockchain/how-gerald-cotten-built-quadriga-and-created-the-ensuing-crypto-storm>

¹¹ <https://amyhcastor.files.wordpress.com/2019/06/fifth-report-of-the-monitor.pdf>

¹² <https://beincrypto.com/quadrigacx-operated-like-a-revolving-door-before-going-bankrupt-canadian-regulators/>

meaning that the CEO was in full control of the company and that there was nobody keeping track of Cotten's dubious behavior as well¹³.

Around the same time this occurred, the Canadian Imperial Bank of Commerce froze QuadrigaCX's funds in January 2018 due to a dispute regarding the ownership of the accounts containing the money. Quadriga's CEO directly cited this incident to be the reason why his company was unable to process the growing number of withdrawal requests. These outstanding requests lasted from days to weeks to even months as users were unable to get their money back¹⁴. In order to offset the requests and improve the company's image on March 2018, Quadriga would take the deposits from incoming consumers and use their money to pay for some of the withdrawal requests for the exiting users, effectively turning the company into a Ponzi scheme that could only sustain itself as long as there were incoming users¹⁵. However, the model was unsustainable as the reputation of Quadriga plummeted and the outstanding withdrawals outweighed the deposits. Before QuadrigaCX's inevitable dissolution, the CEO withdrew the remaining assets and access to the accounts containing the funds and exited the market. The CEO withdrew the remaining assets and left on a trip to India where he was later declared dead due to Chron's disease, leaving behind the rest of Quadriga's funds with his grave¹⁶.

Approximately \$115 million Canadian dollars were stolen through these accounts while \$215 million Canadian dollars were still missing from the customers' own accounts. It is uncertain where this money is located because the Quadriga Solutions officially declared their

¹³ <https://www.osc.gov.on.ca/quadrigacxreport/growth-of-quadriga.html>

¹⁴ <https://www.theglobeandmail.com/business/article-vancouver-crypto-exchange-cibc-clash-over-frozen-accounts/>

¹⁵ <https://www.osc.gov.on.ca/quadrigacxreport/downfall-of-quadriga.html>

¹⁶ <https://www.cbc.ca/news/canada/british-columbia/quadriga-cryptocurrency-bitcoin-exchange-gerald-cotten-death-india-1.5002955>

CEO dead in January 2019 from Chron's disease¹⁷¹⁸. Gerald Cotten's alleged death left the company with no leader and no access to their funds. This made it difficult for the company to process the increasingly large number of outstanding withdrawals because the company now had no access to their funds. The company had to apply for the Companies' Creditors Arrangement Act on January 31, 2019, placing it under the jurisdiction of the Canadian government to investigate the handling of Quadriga Solutions¹⁹. This prompted the Ontario Securities Commission to investigate the company and provide a report on the history of Quadriga Solutions, declaring the company's acts as "An old-fashion Ponzi-Scheme wrapped in modern technologyⁱ." Since then, the Canadian government and the FBI are still currently investigating the whereabouts of the missing money and the missing Bitcoin funds, but both entities struggle with unraveling Bitcoin's security²⁰. Meanwhile, Quadriga Solutions officially transitioned into bankruptcy shortly after in April 2019, marking an end to the company's services²¹.

Bitcoin's security of handlings its exchanges and wallets serve as a double-edged sword for cases of fraud and illegitimate trading. While the company's transactions of physical money are unknown due to the lack of accounting ledgers, the company's exchanges with cryptocurrencies are difficult to trace due to Bitcoin's security in handling funds. While the whereabouts of the company's funds are uncertain, there are two possibilities of where the money is and why they are inaccessible. One possibility is that private keys needed to access the money is currently being held in cold wallets. Cold wallet storage means that authorities need to

¹⁷ <https://www.reuters.com/article/us-crypto-currencies-quadriga/canadian-cryptocurrency-firm-collapsed-due-to-ponzi-scheme-by-late-founder-regulator-says-idUSKBN23I3AF>

¹⁸ <https://archive.is/BAxxo>

¹⁹ <https://www.coindesk.com/quadrigacx-officially-enters-bankruptcy-with-millions-still-missing>

²⁰ <https://www.coindesk.com/the-fbi-is-now-reaching-out-to-quadrigacx-victims>

²¹ <https://financialpost.com/pmnbusiness-pmn/quadrigacx-cryptocurrency-exchange-officially-placed-in-bankruptcy>

find the offline hardware that contains access to the Cotten's private keys²². The whereabouts of these private keys are unknown due to the information regarding these cold wallets dying with Gerald Cotten. The finances were managed entirely by Gerald Cotten, so only the CEO had access to the private keys necessary to access these cold wallet storages. With the CEO deceased, the only clue regarding the location of the CEO's cold wallet storage unit would be the laptop he left behind. However, the laptop is encrypted and locked behind a password, making it inaccessible as well²³. As a result, there are currently several addresses possibly under Gerald Cotten's name that contains a majority of the customers' missing funds that cannot be accessed by anyone other than the CEO, leaving the funds inaccessible²⁴.

Another possibility is that the money is emplaced within several hot wallets that are being used by Cotten. These hot wallets may have been found due to a few handful of addresses that have been discovered to be tied to Gerald Cotten's name. Some of these addresses appear to still be in-use and carry an unusually large amount of cryptocurrencies which some believe were received from Cotten's assets during the exit scam. One notable address identified under Cotten's name still retains 67,000 Ether using this address and was used only 1 year ago: <https://etherscan.io/address/0x1e143b2588705dfea63a17f2032ca123df995ce0#code>. The location of these wallets can't be traced because Bitcoin's network is decentralized and anonymous. Even though these addresses are publicly visible, we can't definitively identify these hot wallets to be owned by Cotten unless we can find evidence of Cotten accessing and using these wallets²⁵. In either scenario, the rest of the defunct QuadrigaCX's funds are

²² <https://www.gemini.com/cryptopedia/crypto-wallets-hot-cold#section-cold-wallets-pros-and-cons>

²³ <https://www.bbb.org/ca/bc/vancouver/profile/currency-exchange/quadrigacx-0037-1281832/details>

²⁴ <https://www.theglobeandmail.com/business/streetwise/article-quadriga-cant-access-190-million-following-ceos-death-court/>

²⁵ <https://newsinteractives.cbc.ca/longform/bitcoin-gerald-cotten-quadriga-cx-death>

inaccessible due to the company's funds being under control by one person who is either dead or missing. As a result, approximately \$215 million Canadian dollars are missing. Of the missing \$215 million, only \$46 have been recovered by the company's bankruptcy trustees with the remaining \$143 million hidden behind a series of inaccessible wallets²⁶.

²⁶ <https://www.cbc.ca/news/business/osc-quadrige-gerald-cotten-1.5607990>

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ⁱ <https://www.osc.gov.on.ca/quadrigacxreport/index.html#executive-summary>