



Coinbase is the largest mainstream digital currency exchange in the US built on financial technology (FinTech). It was incorporated on June 20, 2012 in San Francisco, CA, where its headquarters are presently located. Aside from the US, it currently has offices in the UK, Ireland and Japan, and serves over 35 million users in over 100 countries.

Coinbase was co-founded by a former Airbnb engineer Brian Armstrong, former Goldman Sachs trader Fred Ehrsam and Blockchain.info's Ben Reeves (who departed early on prior to funding). Presently, Armstrong continues to serve as its Chief Executive Officer. He and Ehrsam also act as Directors of the Board.

The idea for the Coinbase initially came from Brian Armstrong, who, while working at Airbnb became aware of the challenges of traditional fiat transactions- many complex (international) networks, multiple fees and waiting periods. Having had some exposure to bitcoin, Armstrong felt that an anonymous, encrypted government-free online version would simplify that. It would be faster, more secure and vastly cheaper. Armstrong's idea faced many challenges such as obtaining bitcoin from reliable sources, its storage in wallet software, limited retail familiarity and desired usage. In the early stage of exploration, he met Reeves who was more immersed in the subject. He has been running a bitcoin transaction-tracking site, Blockchain; and built a functioning bitcoin wallet. Together Armstrong and Reeves has a vision- a PayPal like service for bitcoin with low to no fees and fast turnaround. The idea was pitched to highly competitive tech start-up incubator, Y Combinator, which helped facilitate the development of Coinbase. The conflict in visions between Armstrong, who wanted to create a user-friendly service for the masses by storing their private keys, and Reeves, who believed that it infringed on user's privacy and made the service more susceptible to hacking and government regulations, led to Reeves's parting. At Y Combinator Armstrong joined forces with Fred Ehrsam, who became a key player in the company's Corporate Development.

Coinbase is the most funded blockchain company in the US. Over 10 rounds it raised a total of 547.3 million in funding. In the seed round as a start up, it raised \$600 k, majority of which came from Y Combinator, followed by 5 million in Series A. After Coinbase launched its instant bitcoin

buys for verified buyers in 2013, it raised another 25 million in Series B. Both Series A and Series B were the largest fundings received by a cryptocurrency venture up to the date. On October 30th, 2018 Coinbase received its largest funding of 300 million in Series E. Among Coinbase's 59 investors are Andreessen Horowitz, Union Square Ventures, Ribbit Capital, New York Stock Exchange, Tiger Management Global, Wellington Management and DFJ Growth. Currently, Coinbase successfully funds itself by charging fees for its variety of brokerage and exchange services.

Coinbase successfully solves a number of financial problems through the services offered. The platform with its simple, streamlined process gives its users a secure digital currency space for trading, investment, custody and diversification. Its dominant service is consumer-facing, regulated brokerage- like platform Coinbase, which enables its users to purchase and sell bitcoin as well as other 20 + supported cryptocurrencies such as etherium, litecoin and ripple, using a bank account, debit or credit card. The company hosts Digital Currency wallets for holding Digital Currencies and a hosts US Dollars wallet for holding USD. Coinbase Card is a credit card service that allows its customers to make purchases using crypto. CoinbasePro (formerly GDAX) is an exchange that allows investors with limited experience to buy and sell digital currencies from each other. Coinbase Commerce, which enables merchants and developers to use cryptocurrency payments within their businesses. Coinbase also has an investment arm, Coinbase Ventures, which was launched in 2018 to fund blockchain startups and protocols.

The main and intended Coinbase customers are retail users, who are not technically inclined, and are seeking cryptoassets on a simple and insured platform, which Coinbase successfully provides. The company is a dominant player amongst its competitors. Unlike a number of other digital currency platforms, it has never been hacked and It holds less than 2% of customer funds online. It ardently pursues compliance with existing regulations and law enforcement, putting itself on the right side of the law in the often gray area of crypto. The majority of users are male, between 25-34 years old, followed by 18-24, 35-44 and 45-54 age categories that are equally represented. The platform does between 1-2 billion worth of transactions daily with over 550 million in annual revenue. Its assets under custody have grown to \$20 billion from \$7 billion in 2019. Coinbase's most recent valuation by research company Messari puts it at 28 billion pre-IPO (after it filed its pre-draft registration for public offering cryptocurrency asset management), substantially beating its prior 8 billion value from October 2018.

Coinbase has many competitors among them are Binance, Kraken, Gemini, Coinmama, Robinhood, Atomic Wallet, Chanegelly. Most are substantially smaller in size and do not offer the same user-friendly platform made Coinbase an onto-ramp for crypto currency investors on a vast scale. Binance, its main competitor, has become the largest international exchange surpassing Coinbase. It offers low fees compared to both Coinbase and Coinbase Pro. Binance US's trading fees begin at 0.1% while Coinbase Pro's fees start at 0.5%,(although both offer fees as low as 0% to their top tier customers). Binance allows for trading over 100 different digital currencies and allows purchase of the most popular coins like bitcoin, etherium, ripple and litecoin using a credit or debit card. Recently, however, Binance pending regulatory issues

and possible investigation has banned US users from its global exchange. Furthermore, Binance has a history of data breach and 40 million crypto hacking theft.

Kraken is another competitor that offers substantially lower fees and unlike Coinbase, supports additional fiats like JPY (Japanese yen) and CAD (Canadian dollar) and wider range of available digital assets for trading. Its trading platform is more complex for crypto novices. Additionally, funding a trading account via fiat is very limited- only via bank transfer with few selected banks. This process is inconvenient, costly and time consuming in comparison to Coinbase. Kraken also isn't available to users in New York and Washington states.

Changelly, another competitor to Coinbase, designed to be globally available while protecting users' privacy. Changelly also enables its users to buy and sell dozens of cryptocurrencies, however, unlike Coinbase and other exchanges, Changelly lets users complete most of their purchases without identity checks or other KYC procedures. Fees at Changelly are 0.5 percent for every trade like Coinbase. However, credit card fees can be significantly higher. The anonymity provided by the service is a strong selling point. It works well for users who want to trade quickly without waiting for lengthy verification procedures.

Since its inception, Coinbase's main focus was to create products that were straightforward and easy to use and staying compliant on the side of the regulators. This ensured Coinbase became the first stop for millions of novice crypto investors, while also avoiding the legal issues that sidelined competitors. Coinbase's heavy presence, blue-chip backing and solid brand recognition along with a simplified trading platform is what gives it a clear advantage over its competitors. The unfair advantage Coinbase utilizes over others is its access to the users keys, which on one hand, offers its users additional protection, and on the other, gives the company a total power over their funds. This paradox puts Coinbase in the middle between a heavily regulated traditional bank and a digital currency exchange...

Coinbase is at the forefront of FinTech innovation promoting the adoption of blockchain, which enables easier adaptation, growing value through development of new apps and use-cases, and minimizes the risks associated with the new technology. Coinbase utilizes many technological products and services including HTML5 (a markup language used for structuring and presenting content on the World Wide Web); Google Analytics (which tracks and reports website traffic); jQuery (JavaScript library designed to simplify HTML DOM tree traversal and manipulation); PostgreSQL (free and open-source relational database management system emphasizing extensibility and SQL compliance); Java and Javascript (which provides a system for developing application software and deploying it in a cross-platform computing environment); React (which is open-source, front end, JavaScript library for building user interfaces or UI components); Swift (multi-paradigm, compiled programming language); Node.js (open-source, cross-platform, back-end, JavaScript runtime environment that executes JavaScript code outside a web browser); Go (statically-typed, compiled programming language); Sinatra (software web application library and domain-specific language written in Ruby); Docker (set of platform as a service products that use OS-level virtualization to deliver software in packages called containers); Python (interpreted, high-level and general-purpose programming language); Django (Python-based free and open-source web framework that follows the model- template-

views architectural pattern); React Native (open-source mobile application framework); Kotlin (cross-platform, statically typed, general-purpose programming language with type inference); zkSNARKS (non-interactive zero-knowledge proofs); Ruby (interpreted, high-level, general-purpose programming language); Mongo DB (cross- platform document- oriented database program); P2P (distributed application architecture that partitions tasks or workloads between peers); DLT (consensus of replicated, shared, and synchronized digital data geographically spread across multiple sites, countries, or institutions); AWS (evolving cloud computing platform provided by Amazon that includes a mixture of infrastructure as a service).

Coinbase has emerged as a pioneer in both blockchain and crypto exchange domains, and became its industry's dominant player. Its philosophy, innovation as well as aggressive growth and development have opened doors for many other digital currency platforms and contributed to compounded innovation. Interestingly enough, Coinbase beat Charles Schwab, the second largest (traditional) brokerage firm in the US with the most active users in 2019. As the interest of traditional institutions continues to rise and explore digital assets, particularly bitcoin, Coinbase is in an advantageous position to continue securing its dominance and growth. To stay above its competition, I would make the following recommendations. First, expand the number of cryptoassets it offers. Two, lower its fees to be more competitive with those of its competition. Three, offer users an option to maintain their own private keys. Four, make the site more informative for novice investors. Five, innovate a more secure method for wallet to wallet transactions. Six, develop a platform offering crypto currency management (similar to Grayscale). Six, retract its IOP and stay true to its mission to "... create an open financial system for the world".

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