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## Coinbase: The Exchange of the Cryptos

*Trading and speculation were the first major use cases to take off in cryptocurrency, just like people rushed to buy domain names in the early days of the internet.<sup>1</sup>*

— Brian Armstrong, CEO of Coinbase

On April 14, 2021, the attention of investors around the world, fiat and crypto alike, was focused on Wall Street for the public market debut of Coinbase Global, Inc. (Coinbase) via direct listing. Widely characterized as cryptocurrencies' major advance towards mainstream adoption, the listing symbolized the next step in a decentralization revolution in which cryptocurrencies were becoming increasingly relevant.<sup>2</sup> Center stage was Coinbase, an exchange-like platform dedicated to crypto trading and established, according to co-founder Brian Armstrong, as "a leading provider of end-to-end financial infrastructure and technology" for the "cryptoeconomy,"<sup>3</sup> a term spawned by the birth of Bitcoin, the first cryptocurrency.

Since the groundbreaking proposal in 2008 credited to Satoshi Nakamoto,<sup>4</sup> an internet persona unidentified to this day,<sup>a</sup> Bitcoin and other cryptocurrencies had not been strangers to headlines. Though often attended by eye-catching annual returns unparalleled in the fiat space, participation remained largely limited to the niche crypto community as mainstream investors continued to exercise caution. The excitement generated was nonetheless palpable, and the green light by the capital market could not have come at a better time following the massive monetary easing<sup>5</sup> that again cast doubt on central banks' monopolistic power. On its first day of trading, Coinbase closed at \$328.28, or a market cap of \$85.8 billion on a fully diluted basis, briefly touching as high as \$429.54 and as low as \$310,<sup>6</sup> both well above the reference price of \$250 (**Exhibit 1**).<sup>7</sup>

The stunning growth figures were among a number of factors contributing to the fuss. According to Coinbase's filing with the Securities and Exchange Commission (SEC), the company averaged 2.8

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<sup>a</sup> The name Satoshi Nakamoto nevertheless made a cameo appearance in Coinbase's SEC filing along with what's believed to be his/her/their Bitcoin wallet address, "1A1zP1eP5QGefi2DMPTfTL5SLmv7DivfNa," a code associated with the genesis block of Bitcoin, the first 50 block rewards of which were mined in 2009. Source: Coinbase Global, Inc., February 25, 2021 Form S-1 (filed February 25, 2021), <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed September 2021.

Also see "Genesis Block," *Bitcoin Wiki*, [https://en.bitcoin.it/wiki/Genesis\\_block](https://en.bitcoin.it/wiki/Genesis_block), accessed September 2021.

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million monthly transacting users in 2020 and was sitting on \$90 billion in assets on platform at the end of the year.<sup>8</sup> It had from its inception to December 31, 2020 generated more than \$3.4 billion in total revenue, mostly in the form of transaction fees earned on the \$456 billion in lifetime trading volume.<sup>9</sup> But the company's influence in the crypto space reached far beyond the trading business. By the end of 2020, Coinbase was serving 43 million retail users, 7,000 institutions, and 115,000 ecosystem partners.<sup>10</sup> Retail users were finding it a safe and accessible platform on which to open and hold a crypto account, institutions like hedge funds and asset managers a one-stop shop for advanced trading and custody technology, and ecosystem partners like crypto developers and merchants a provider of crypto infrastructure on which new protocols could be developed and payments made.<sup>11</sup>

While enthusiasts celebrated, skeptics deemed Coinbase yet another instance of an overvalued public market debut, trading at outrageous price multiples justified by unsustainable growth fantasies.<sup>12</sup> Competition was already fierce, with institutional and retail investors targeted by existing players that had been eyeing the space for some time, among them, Grayscale Bitcoin Trust (GBTC)<sup>13</sup> and Bitcoin futures,<sup>14</sup> with Bitcoin ETFs knocking at the door.<sup>15</sup> Robinhood, the commission-free broker, had also expanded into crypto trading services.<sup>16</sup> Nor was Coinbase the only, or even the largest by trading volume, crypto exchange, that distinction belonging to its main rival, Cayman Islands-based Binance.<sup>17</sup> Meanwhile, a new breed of automated market makers (AMMs), pioneered by Uniswap, was striving to quickly to fill the void of decentralized exchanges (DEXes) that connected buyers and sellers in a way not so different from order book-based exchanges, but without the need for a central authority.<sup>18</sup>

The pros and cons resolved into the question of how much value a centralized exchange added to the cryptoeconomy given that cryptocurrencies' most compelling narrative revolved around being a decentralized, peer-to-peer form of money. The crypto crash of May 2021, in which most major cryptocurrencies plunged by more than 40%, put the stock price under intense pressure. When the dust settled, what future would await Coinbase and its investors?

## Direct Listing vs. Initial Public Offering (IPO)

Direct listing, or direct public offering (DPO), was one option for bringing a company's shares to trade on the stock market, in other words, of going public.<sup>19</sup> A Direct listing was similar to an initial public offering (IPO)<sup>20</sup> save that usually no new shares were created in the process. Instead, existing shares owned by investors and employees were listed on an exchange to be traded on the secondary market.

Direct listing had both advantages and disadvantages.<sup>21</sup> On the plus side, direct listing liberated a company from the onerous and expensive IPO process, which could take from several months to years and typically cost from 5% to 7% of the IPO price in commissions paid to underwriters (e.g., investment banks). Moreover, as no new shares were created there was no dilution for existing shareholders who might wish to retain controlling interest in the company. Additionally, not being subject to lockup periods, shares could be sold on day one. An obvious downside to direct listing was that the company might not be able to raise additional capital to fund operations and expansion, which were generally key motivators for going public.

Early adopters of direct listing included Spotify<sup>22</sup> and Slack,<sup>23</sup> which directly listed their shares on the New York Stock Exchange (NYSE) in April 2018 and June 2019, respectively. SEC approval of the NYSE's plan to allow companies to sell newly-issued shares to the public via direct listing, a move that could potentially disrupt the traditional IPO landscape, came in December 2020.<sup>24</sup> Coinbase chose not to raise money this way, instead floating existing shares on Nasdaq in April 2021.<sup>25</sup>

## A Brief History of Cryptocurrencies

At the core of cryptocurrencies, a form of digital currency in which transactions were verified and recorded in a decentralized system secured by cryptography,<sup>26</sup> and beneath an abundance of technical jargon lay the notion of trust building achieved by a system of mechanisms by which a common set of facts could be agreed upon.<sup>27</sup> In fiat finance, this mechanism was a trustworthy intermediary, usually a financial institution, which acted as a central counterparty and bookkeeper. In the crypto world, the ability to solve computationally expensive mathematical puzzles was initially proposed to be a sign of trustworthiness, as envisioned in the 2008 Satoshi Nakamoto whitepaper.<sup>28</sup> Commonly known as proof-of-work (PoW), the idea as well as its embodiment in blockchain became wildly popular with the success of Bitcoin, which, featuring a diminishing supply schedule by design, was often compared to digital gold due to its inherent scarcity.

Cryptocurrencies emerged at a time when concerns over the traditional financial system were growing. A group of centralized organizations that included banks, central banks, dealers, brokers, exchanges, and others dictated who was served by the industry and how and when transactions were settled and priced. The requisite unconditional trust implicit in reliance on these intermediaries could engender inefficiency, limited access, opacity, centralized control, and lack of interoperability.<sup>29</sup> Bitcoin was conceived to address such deficiencies. The public nature of a blockchain enabled anyone with internet access to immediately begin using the service, the entire history of transactions being recorded on-chain in immutable fashion supported auditing of the system, and fees were transparent and potentially much lower with there being no intermediaries to take a cut.

Burgeoning cryptocurrencies birthed an entire new ecosystem termed the cryptoeconomy. Trading, transacting, investing, borrowing, lending, and other activities common in traditional finance found counterparts in this new economy. Requisite to participation in the cryptoeconomy was cryptocurrency, which either had to be “mined,” a process involving considerable tech-savviness,<sup>30</sup> or purchased from others. Ownership of cryptocurrencies was proved by possession of a private key. Losing access to the key essentially wiped out one’s holdings.<sup>31</sup> Knowledge of recipients’ crypto wallet addresses was prerequisite to engaging in transactions, as funds sent to a wrong address would be irreversibly lost. Participation consequently not being for the faint of heart, an easier way to interact with cryptos was demanded by the broader community.

## A Brief History of Coinbase

Upon encountering the Satoshi Nakamoto manifesto in 2010,<sup>32</sup> Brian Armstrong began to conceptualize the idea of a crypto marketplace. He subsequently met on Reddit former Goldman Sachs trader Fred Ersam, who shared his vision of an accessible, secure, user-friendly way to trade Bitcoin.<sup>33</sup> When they launched Coinbase in a two-bedroom apartment in 2012, a Bitcoin was worth about \$6.<sup>34</sup>

As noted in its prospectus, Coinbase’s success or failure rode on the price cycles of the cryptocurrency industry.<sup>35</sup> The company expanded to a 1,000-employee operation in its first two years as the price of a Bitcoin climbed to three digits.<sup>36</sup> After soaring to nearly \$20,000 in 2017, the market suddenly collapsed, infamously losing a third of its value in a single day,<sup>37</sup> and reaching a low of \$3,122 in 2018.<sup>38</sup> Ersam recalled that a third of employees, himself included (although he remained on the board and retained his stakes), left at that time.<sup>39</sup> Bitcoin eventually recovered and took off in 2020, and Coinbase became a crypto juggernaut.

In contrast to many other crypto startups, compliance and regulation had always been top of mind for Armstrong. Even during its early days, the company reached out to regulators as “an educational

resource” and to “pursue licenses even before they were needed.”<sup>40</sup> Coinbase was required to comply with a number of federal and state laws, notably the Bank Secrecy Act and USA Patriot Act,<sup>41</sup> and in compliance with the IRS issued Form 1040 and/or Form 1099-MISC to all U.S. based customers who realized capital gains/losses and/or earned \$600 or more in rewards/fees during tax year 2020.<sup>42</sup> The regulator-friendly stance of the company ultimately paid off, paving the way for its public market debut.

## The Direct Listing of Coinbase

In December 2020, Coinbase announced that it had confidentially submitted to the SEC on Form S-1 a draft registration statement.<sup>43</sup> A month later, it further revealed that it sought to “become a publicly-traded company pursuant to a proposed direct listing of its Class A common stock.”<sup>44</sup> On April 1, 2021, the SEC declared Coinbase’s registration statement on Form S-1 to be effective and announced that its Class A common stock would be trading on the Nasdaq Global Select market under the ticker “COIN.”<sup>45</sup> On April 13, 2021, the company received from Nasdaq a reference price of \$250 per share, a number that reflected past private market transactions and input from investment bankers.<sup>46</sup> The first major direct listing on Nasdaq was imminent.

Coinbase went public on April 14, 2021.<sup>47</sup> As no new shares were issued, shares sold by existing shareholders became the main source of liquidity in the early days of trading. CEO Brian Armstrong reportedly sold 750 thousand shares, about 1.5% of his stake, for total proceeds of \$291.8 million, lead independent director Fred Wilson 4.7 million shares for total proceeds of \$1.82 billion, and board director Marc Andreessen and associated entities 1.18 million shares for total proceeds of \$449.2 million.<sup>48</sup>

### *Products and Services*

On the consumer-facing side, Coinbase offered products tailored to different demographics. Coinbase Wallet (formerly Toshi), a standalone mobile app, provided a means for users to store cryptocurrencies,<sup>49</sup> the Coinbase app constituted a simple entry point for retail users seeking to buy or sell cryptocurrencies directly from or to Coinbase,<sup>50</sup> and the Coinbase Pro app enabled sophisticated investors to place market, limit, and stop orders on its exchange (formerly the Global Digital Asset Exchange (GDAX)).<sup>51</sup> All three apps were available as free downloads. Transaction fees varied depending on factors like payment method, order size, and nature of the asset being traded.<sup>52</sup>

Coinbase also invested in external projects it deemed conducive to the long-term well-being of the crypto ecosystem. For example, Coinbase Ventures, the venture capital arm of Coinbase, made notable investments in Compound and BlockFi, two popular crypto lending platforms.<sup>53</sup> Coinbase was uniquely positioned through seamless integration with its trading services to spotlight some of the lesser-known crypto startups, and was one of the founding members of the Centre consortium, the organization behind USDC, the second largest stablecoin.<sup>54</sup>

### *Financial Highlights*

Its SEC filing for the year ending December 31, 2020 reported net income of \$322 million, up from a loss of \$30 million the year prior,<sup>55</sup> making Coinbase a profitable rarity among tech companies’ public market debuts (**Exhibit 2**, **Exhibit 3**, and **Exhibit 4**). Transaction revenue was the single biggest contributor, accounting for 86% of \$1.28 billion in total revenue.<sup>56</sup> Key business metrics including verified users (43 million), monthly transacting users (2.8 million), assets on platform (\$90 billion), and trading volume (\$193 billion) all hit record highs (**Exhibit 5**).<sup>57</sup>

According to its first quarterly earnings release after going public, Coinbase's Q1 2021 dwarfed the entire year of 2020.<sup>58</sup> For the three months ending March 31, 2021, net income jumped to \$771 million (**Exhibit 2, Exhibit 3, and Exhibit 4**).<sup>59</sup> Transaction revenue continued to dominate, accounting for 85% of \$1.8 billion in total revenue, and growth of key business metrics persisted (**Exhibit 5**) (e.g., verified users (56 million), monthly transacting users (6.1 million), assets on platform (\$223 billion), and trading volume (\$335 billion)).<sup>60</sup>

Coinbase delivered again in Q2 2021, the company earning \$1.6 billion in net income and \$2.23 billion in total revenue for the three months ending June 30, 2021, both new records (**Exhibit 2, Exhibit 3, and Exhibit 4**).<sup>61</sup> Key business metrics including verified users (68 million), monthly transacting users (8.8 million), and trading volume (\$462 billion) again hit new highs (**Exhibit 5**).<sup>62</sup> Assets on platform (\$180 billion) decreased quarter-over-quarter (**Exhibit 5**)<sup>63</sup> as a result of the crypto crash of May 2021.

### *Capital Structure*

Coinbase had a dual-class common stock structure, Class A and Class B, distinguished as follows.

The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion rights. Each share of Class A common stock is entitled to one vote. Each share of Class B common stock is entitled to twenty votes and is convertible at any time into one share of Class A common stock. [...] Prior to any sales of shares of Class A common stock, a registered stockholder who holds Class B common stock must convert their shares of Class B common stock into shares of Class A common stock.<sup>64</sup>

Coupled with Coinbase's dilution-free direct listing, the dual-class structure guaranteed tight control of the company by insiders.

### *Growth Strategy*

Expanding the crypto user base lay at the heart of the growth strategy for cryptocurrencies and Coinbase. The global population with smartphones was estimated to be 3.5 billion by the end of 2020.<sup>65</sup> Coinbase reached only about 68 million as of Q2 2021.<sup>66</sup> Bringing crypto service access to the crowd could be the first step in a series of network effects working in the company's favor. With more customers would come larger inflows of assets on platform, which, in turn, could facilitate Coinbase's service engagement and product adoption, leading to a positive feedback loop and potentially attracting more customers, a strategy laid out in the company's SEC filing (**Exhibit 6**).<sup>67</sup>

Two demographics, international and institutional customers, remained relatively untapped. Coinbase's global presence was largely limited to the United States and Europe, which generated 76% and 24%, respectively, of total revenue in 2020.<sup>68</sup> Competitors shared emerging markets like Asia. Assets on platform for institutional customers rose 590%, to \$44.8 billion from 2019 to 2020,<sup>69</sup> yet remained a tiny fraction of the gargantuan market size under management. Institutional investors were estimated to own 80% of the global equity market cap as of 2017,<sup>70</sup> and their entry to the crypto markets might have accounted for the new highs set by Bitcoin in early 2021.<sup>71</sup>

Coinbase aimed to transition from being overwhelmingly transaction revenue dependent to a more subscription/services revenue based business model. That speculation and trading by customers were almost its exclusive source of revenue (96% of net revenue in 2020)<sup>72</sup> didn't bode well for the company should the crypto frenzy inevitably cool at some point. Mitigation plans called for revenue generation

from a more diversified set of bets including custodial fees, staking, ad campaigns, and licensing (**Exhibit 7**, **Exhibit 8**, and **Exhibit 9**).<sup>73</sup>

### *Competitive Landscape*

Coinbase faced an assortment of competitors, crypto and conventional, foreign and domestic. Heavy hitters in the traditional finance/fintech space arguably posed the biggest threat. Robinhood, the brokerage service popular among young traders, began offering crypto trading as early as February 2018<sup>74</sup> and was rapidly expanding its customer base.<sup>75</sup> During the same year, Square began to enable users to buy Bitcoin directly via its Cash app.<sup>76</sup> PayPal's Venmo (April 2021)<sup>77</sup> and Interactive Brokers (September 2021) followed.<sup>78</sup> Publicly-traded funds designed for investors seeking exposure to, without owning, Bitcoin and Ethereum included the Grayscale Bitcoin Trust (GBTC) and Grayscale Ethereum Trust (ETHE),<sup>79</sup> and for those who preferred an exchange-traded financial instrument the Chicago Mercantile Exchange (CME) offered Bitcoin futures (BTC), micro Bitcoin futures (MBT), and options on Bitcoin futures.<sup>80,81</sup> But the holy grail of accessible crypto investment had to be the impending Bitcoin ETF, already a reality in Canada.<sup>82</sup> In the United States, Fidelity, VanEck, WisdomTree, Kryptoin, and others had filed with the SEC for Bitcoin ETF listing,<sup>83</sup> which would grant any U.S. equity investor immediate access to the crypto markets, alleviating to some extent the need to open and maintain an account with Coinbase.

Other crypto exchanges also posed challenges to Coinbase. In terms of trading volume, Coinbase ranked third after Binance and Huobi,<sup>84</sup> both founded in China before moving their headquarters, seeking more advantageous regulatory environments. Binance had a minor presence in the United States through its independent subsidiary, Binance.US, the main site blocking U.S. access due to insufficient compliance with SEC regulations.<sup>85</sup> Huobi had been listed on the Hong Kong Stock Exchange since August 2018 after acquiring public company Pantronics Holdings, an electronics manufacturer.<sup>86</sup> As they offered essentially similar services, the entry of these or any other crypto exchange to U.S. markets could precipitate a price war.

Additionally, a new form of decentralized exchanges (DEXes) known as automated market makers (AMMs),<sup>87</sup> led by Uniswap and followed by competitors like SushiSwap and PancakeSwap, was eliminating the need for a central counterparty, that is, the exchange itself, as an artificial authority<sup>88</sup> by virtue of operating as an autonomous protocol running on the blockchain. DEXes and other on-chain protocols were spearheading the decentralized finance (DeFi) movement whereby financial services that used to be impossible to perform without the help of one or more central financial intermediaries (e.g., trading, borrowing, and lending) could be replicated in a trustless, peer-to-peer fashion.<sup>89</sup> Despite relatively limited volume, the success of DEXes showed promise for a truly decentralized future and ultimately echoed the core narrative of cryptocurrencies.

### *Key Risks*

Coinbase also faced challenges in key areas outside competition. The success of Coinbase had been closely tied to the adoption of cryptocurrencies (**Exhibit 1** and **Exhibit 10**), specifically, Bitcoin and Ethereum, (**Exhibit 11**), which were still in early stages of development and known for their extremely high volatility, having experienced at least four boom-bust cycles since their inception (**Exhibit 12**).<sup>90</sup> The future popularity of cryptos was subject to numerous unforeseeable factors, not least, public interest, as partially reflected in trading volume, from which the company derived most of its revenue.

Regulatory uncertainty also continued to loom over the industry. Environmentalists had long been calling for tighter regulation of cryptocurrency mining in light of studies showing Bitcoin to consume

“more electricity annually than the whole nation of Argentina.”<sup>91</sup> China was among the first nations to wage war against Bitcoin, gradually escalating its crypto ban over the years.<sup>92</sup> Discussions among U.S. regulators were ongoing. In August 2021, the crypto community failed in an attempt to remove from an infrastructure bill “potentially harmful language” that could impose new tax reporting requirements on crypto miners, stakers, and software developers.<sup>93</sup> The following month, a group of U.S. senators pressed the SEC for guidance on crypto regulation.<sup>94</sup> Coinbase had responded with confusion and surprise to the SEC’s expressed intention to sue over the company’s Lend program (a 4% APY savings account for its stablecoin USDC).<sup>95</sup> According to Coinbase Chief Legal Officer Paul Grewal, the SEC, despite months of engagement on the matter, refused to provide the reasoning behind its decision and chose to “go right to litigation,”<sup>96</sup> leading Coinbase to delay launch of the product to at least October 2021.<sup>97</sup>

Additionally, cyberattacks remained a serious concern in the crypto space. The crypto community had a long and infamous track record of security incidents including the loss by Japanese crypto exchange Mt. Gox of \$460 million to hackers in 2014,<sup>98</sup> by Bitfinex of \$66 million in 2016,<sup>99</sup> and only a month later by Zaif, another Japanese exchange, of \$60 million to a security breach.<sup>100</sup> Coinbase claimed that thus far no customer had ever “lost funds due to a security breach of the platform,”<sup>101</sup> but it remained to be seen how effectively the company was safeguarding customer assets in the never-ending war against cybercrime.

## The Crypto Crash of May 2021

The crypto crash of May 2021, coming only a month after Coinbase went public, provided a thought-provoking case study for the capital markets. Over a span of several weeks, Bitcoin plummeted from its all-time-high of almost \$65,000 to less than \$38,000, a decrease of more than 40%.<sup>102</sup> Coinbase shares also suffered, declining from a closing price of \$328.28 on its first trading day to a record low of \$224.80 on May 19.<sup>103</sup> During the course of the crash, the assets’ prices moved in lockstep, exhibiting a remarkably high correlation that persisted even after the markets regained a foothold (**Exhibit 1**).

The collapse came amid a flurry of negative news regarding cryptocurrencies. On May 10, 2021, SEC Chairman Gary Gensler called for crypto regulation for purposes of investor protection and fraud prevention,<sup>104</sup> and U.S. Treasury Secretary Janet Yellen cited potential tax evasion risks.<sup>105</sup> Meanwhile, Tesla CEO Elon Musk tweeted on May 12 that the company would no longer accept payment in Bitcoin, backtracking on an earlier promise.<sup>b,106</sup> The following week, China doubled down on its ban of cryptocurrencies, prohibiting financial institutions from serving crypto transactions including “registration, trading, clearing and settlement.”<sup>107</sup> Then, on June 8, the FBI seized the crypto wallet related to the Colonial Pipeline ransom and recovered most of the funds.<sup>108</sup>

The markets digested the shocks with frantic trading. Volatility spiked and trading volume rose to a record high, circumstances from which crypto exchanges like Coinbase profited. But the temporary jump in transaction revenue appeared far short of outweighing the pessimistic sentiment plaguing Coinbase shares. Having pitched its long-term outlook based on the mainstream adoption of cryptocurrencies, Coinbase’s future was closely tied to their commercial success. It would be nearly impossible for the company to prosper long term if Bitcoin failed to become the medium of exchange it had promised to be, or continued to be a subject of news headlines associated with illicit activities.

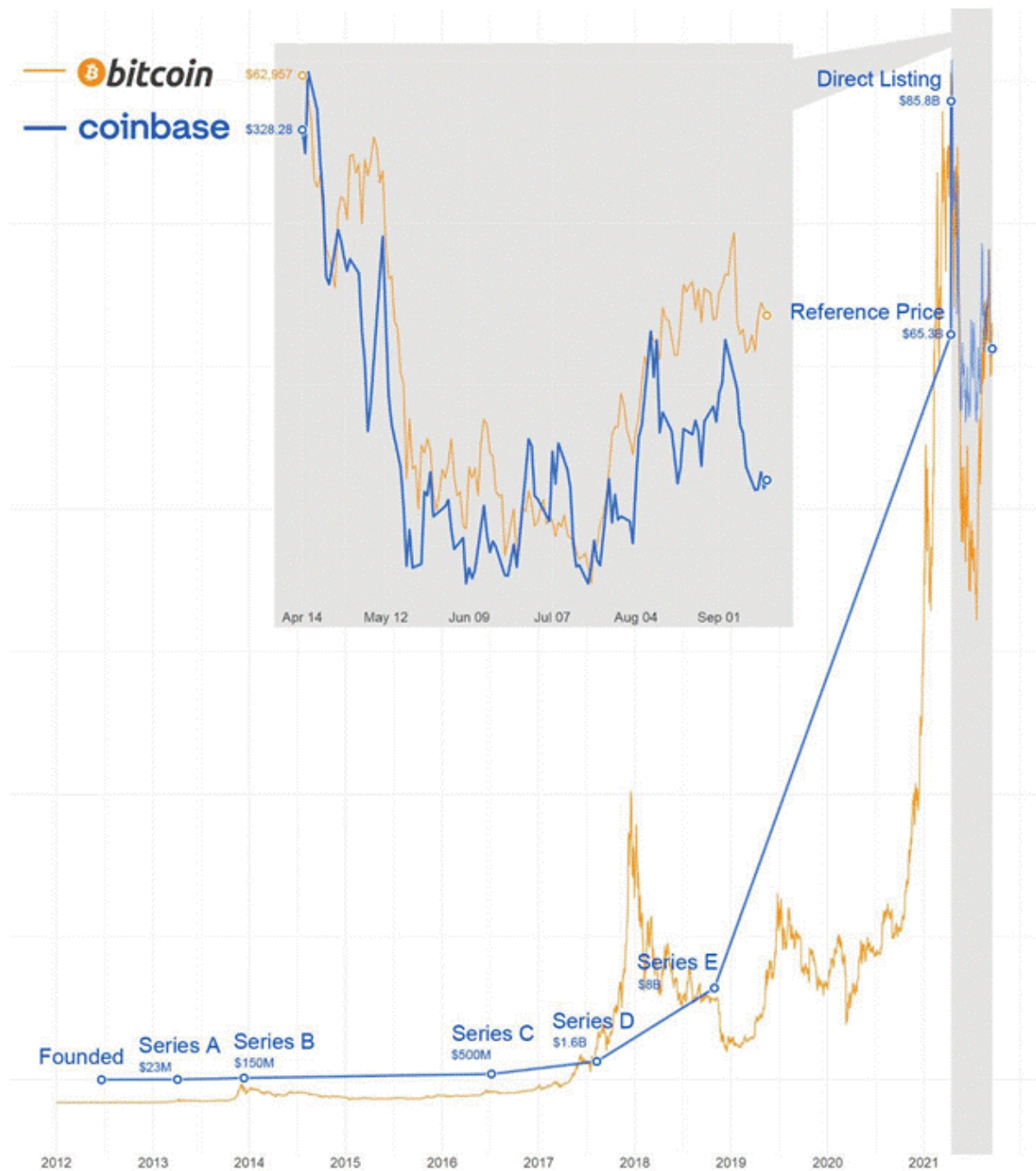
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<sup>b</sup> Tesla reversed course once again in July 2021 according to another tweet by Elon Musk. Source: MacKenzie Sigalos, “Elon Musk walks back his fossil fuel worries, says Tesla will likely start accepting bitcoin again,” CNBC, July 21, 2021, <https://www.cnbc.com/2021/07/21/elon-musk-says-tesla-will-likely-start-accepting-bitcoin-again.html>, accessed Sept. 2021.

## The Road Ahead

Uncertainty clouded Coinbase's path forward. Even as it tried to be the central character in a world that didn't need one, Coinbase was making the most convincing case to date for a future in which the cryptoeconomy thrived. After delivering outstanding financial performance in terms of revenue, profitability, and growth, the May 2021 crash gave Coinbase investors a first taste of the kind of volatility they should come to expect. A stake in Coinbase had become a bet less on the company itself than on cryptocurrencies in general. The future of all things crypto remained to be written.



**Exhibit 1** Coinbase's Valuation and the Price of Bitcoin

Source: Created by casewriters using Tiingo and Nasdaq.com.

Note: Shaded area indicates the period since Coinbase's direct listing (where price per share is shown). Data are scaled to match the range of the series.

**Exhibit 2** Coinbase Income Statements, 2019-2021 (in thousands of USD, except per share items)

For the fiscal period ending	12 months Dec-31-2019	12 months Dec-31-2020	3 months Mar-31-2021	3 months Jun-30-2021
Currency	USD	USD	USD	USD
Revenue:				
Net revenue	482,949	1,141,167	1,596,981	2,033,011
Other revenue	50,786	136,314	204,131	194,951
<b>Total revenue</b>	<b>533,735</b>	<b>1,277,481</b>	<b>1,801,112</b>	<b>2,227,962</b>
Operating expenses:				
Transaction expense	82,055	135,514	234,066	335,426
Technology and development	185,044	271,732	184,225	291,461
Sales and marketing	24,150	56,782	117,990	195,733
General and administrative	231,929	279,880	121,231	248,195
Restructuring	10,140	-	-	-
Other operating expense (income), net	46,200	124,622	155,887	282,422
<b>Total operating expenses</b>	<b>579,518</b>	<b>868,530</b>	<b>813,399</b>	<b>1,353,237</b>
<b>Operating income (loss)</b>	<b>(45,783)</b>	<b>408,951</b>	<b>987,713</b>	<b>874,725</b>
Other income (expense), net	(367)	(248)	8,953	(5,844)
<b>Income (loss) before provision for (benefit from) income taxes</b>	<b>(45,416)</b>	<b>409,199</b>	<b>996,666</b>	<b>868,881</b>
Provision for (benefit from) income taxes	(15,029)	86,882	225,203	(737,468)
<b>Net income (loss)</b>	<b>(30,387)</b>	<b>322,317</b>	<b>771,463</b>	<b>1,606,349</b>
Net income (loss) attributable to common stockholders:				
Basic	(30,387)	108,256	301,896	1,589,713
Diluted	(30,387)	127,471	387,719	1,593,150
Net income (loss) per share attributable to common stockholders:				
Basic	(0.50)	1.58	3.80	7.77
Diluted	(0.50)	1.40	3.05	6.42
Weighted-average shares of common stock used to compute net income (loss) per share attributable to common stockholders:				
Basic	61,317	68,671	79,373	204,728
Diluted	61,317	91,209	126,996	248,147
Pro forma net income per share attributable to common stockholders				
Basic		1.76		
Diluted		1.57		
Pro forma weighted-average shares of common stock used to compute pro forma net income per share attributable to common stockholders (unaudited):				
Basic		182,945		
Diluted		205,575		

Source: Compiled by casewriters from Coinbase Global, Inc., February 25, 2021 Form S-1 (filed February 25, 2021), <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>; Coinbase Global, Inc., May 13, 2021 Form 10-Q (filed May 13, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/cb843fec-ede4-4ff0-be56-a69062543e57.pdf>, and; Coinbase Global, Inc., August 10, 2021 Form 10-Q (filed August 10, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/dcec079b-3237-4ae0-a54d-479ded972ab8.pdf>, accessed Sept. 2021.

**Exhibit 3** Coinbase Balance Sheets, 2019-2021 (in thousands of USD, except par value data)

Balance sheet as of	Dec-31-2019	Dec-31-2020	Mar-31-2021	Jun-30-2021
<b>Assets</b>	USD	USD	USD	USD
Current assets:	548,945	1,061,850	1,983,318	4,365,982
Restricted cash	34,122	30,787	30,841	30,842
Customer custodial funds	1,201,350	3,763,392	6,291,776	8,961,812
USDC	88,429	48,938	102,118	144,993
Accounts receivable, net of	17,496	189,471	208,828	184,579
Income tax receivable	74,171			435,096
Prepaid expenses and other	22,433	39,510	55,662	114,751
<b>Total current assets</b>	<b>1,986,946</b>	<b>5,133,948</b>	<b>8,672,543</b>	<b>14,238,055</b>
Crypto assets held	33,932	316,094	651,356	585,846
Lease right-of-use assets	123,386	100,845	110,791	105,296
Property and equipment, net	47,117	49,250	50,331	52,175
Goodwill	54,696	77,212	481,379	501,259
Intangible assets, net	70,137	60,825	93,032	119,889
Other non-current assets	75,555	117,240	141,680	187,688
<b>Total Assets</b>	<b>2,391,769</b>	<b>5,855,414</b>	<b>10,201,112</b>	<b>15,790,208</b>
<b>Liabilities, Convertible Preferred Stock, and Stockholders' Equity</b>				
Current liabilities:				
Custodial funds due to customers	1,106,815	3,849,468	6,223,846	8,968,505
Accounts payable and accrued	45,453	85,111	373,955	266,655
Crypto asset borrowings		271,303	543,820	366,991
Lease liabilities, current	23,775	25,270	29,695	30,933
Other current liabilities	47,401	15,703	84,832	44,480
<b>Total current liabilities</b>	<b>1,223,444</b>	<b>4,246,855</b>	<b>7,256,148</b>	<b>9,677,564</b>
Lease liabilities, non-current	106,542	82,508	88,519	82,292
Convertible senior notes, net, non-				1,406,927
<b>Total liabilities</b>	<b>1,329,986</b>	<b>4,329,363</b>	<b>7,344,667</b>	<b>11,166,783</b>
Commitments and contingencies				
Convertible preferred stock, \$0.00001 par value	564,697	562,467	552,037	
Stockholders' equity				
Class A common stock, \$0.00001				1
Class B common stock, \$0.00001				1
Additional paid-in capital	93,820	231,024	804,523	1,516,533
Accumulated other comprehensive income (loss)	(721)	6,256	2,118	2,774
Retained earnings	403,987	726,304	1,497,767	3,104,116
<b>Total stockholders' equity</b>	<b>497,086</b>	<b>963,584</b>	<b>2,304,408</b>	<b>4,623,425</b>
<b>Total liabilities, convertible preferred</b>	<b>2,391,769</b>	<b>5,855,414</b>	<b>10,201,112</b>	<b>15,790,208</b>

Source: Compiled by casewriters from Coinbase Global, Inc., February 25, 2021 Form S-1 (filed February 25, 2021), <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalinc-1.htm>; Coinbase Global, Inc., May 13, 2021 Form 10-Q (filed May 13, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/cb843fec-ede4-4ff0-be56-a69062543e57.pdf>, and; Coinbase Global, Inc., August 10, 2021 Form 10-Q (filed August 10, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/dcec079b-3237-4ae0-a54d-479ded972ab8.pdf>, accessed Sept. 2021.

**Exhibit 4** Coinbase Cash Flow Statements, 2019-2021 (in thousands of USD)

For the fiscal period ending	12 months Dec-31-2019	12 months Dec-31-2020	3 months Mar-31-2021	6 months Jun- 30-2021
<b>Cash flows from operating activities</b>				
Net income (loss)	(30,387)	322,317	771,463	2,377,812
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities				
Depreciation and amortization	16,878	30,962	10,922	23,534
Impairment expense	2,252	8,355	841	175,636
Stock-based compensation expense	31,147	70,548	104,628	293,963
Provision for transaction losses and doubtful accounts	(4,679)	(2,966)	2,503	9,797
Loss on disposal of property and equipment	9,073	355	11	11
Deferred income taxes	(20,903)	474	36	(93,328)
Unrealized loss (gain) on foreign exchange	(3,106)	1,057	(2,869)	2,392
Non-cash lease expense	13,323	25,012	9,050	19,338
Loss (gain) on investments	245	150	9,257	(10,271)
Change in fair value of contingent		3,281		
Realized (gain) loss on crypto assets	5,662	(23,682)	(32,769)	95,454
Crypto assets received as revenue	(11,408)	(94,158)	(180,109)	(418,871)
Crypto asset payments for expenses	11,622	40,205	154,989	364,772
Fair value adjustment on derivatives		5,254	(2,800)	(25,215)
Amortization of debt discount and				748
Changes in operating assets and liabilities:				
USDC	35,303	37,936	(64,064)	(118,156)
Accounts receivable	30,703	(157,156)	(11,976)	83,754
Income tax receivable	(1,912)	86,791	238,486	(437,287)
Other assets	(38,594)	(48,677)	(34,587)	(126,772)
Custodial funds due to customers	(130,122)	2,710,522	2,355,138	5,101,293
Accounts payable and accrued	(788)	20,837	45,180	184,488
Lease liabilities	(11,025)	(24,998)	(8,568)	(18,350)
Other liabilities	16,122	(8,349)	65,517	100,830
<b>Net cash provided by (used in) operating activities</b>	<b>(80,594)</b>	<b>3,004,070</b>	<b>3,411,765</b>	<b>7,394,664</b>
<b>Cash flows from investing activities</b>				
Purchase of property and equipment	(33,521)	(9,913)	(18)	(235)
Proceeds from sale of property and equipment	2,293		48	31
Capitalized internal-use software development costs	(6,950)	(8,889)	(4,388)	(9,787)
Business combination, net of cash acquired	(5,698)	33,615	(16,525)	(32,992)
Purchase of investments	(7,938)	(10,329)	(9,203)	(38,631)
Asset acquisition	(55,389)			(24,000)
Proceeds from settlement of	374	303		
Purchase of crypto assets	(271,266)	(528,080)	(553,012)	(1,100,865)
Disposal of crypto assets	272,742	574,115	545,188	937,472
Loans originated				(107,596)
Proceeds from repayment of retail loans				38,855
<b>Net cash provided by (used in) investing activities</b>	<b>(105,353)</b>	<b>50,822</b>	<b>(37,910)</b>	<b>(337,748)</b>
<b>Cash flows from financing activities</b>				
Issuance of common stock upon exercise of stock options, net of repurchases	4,353	20,731	59,387	149,865

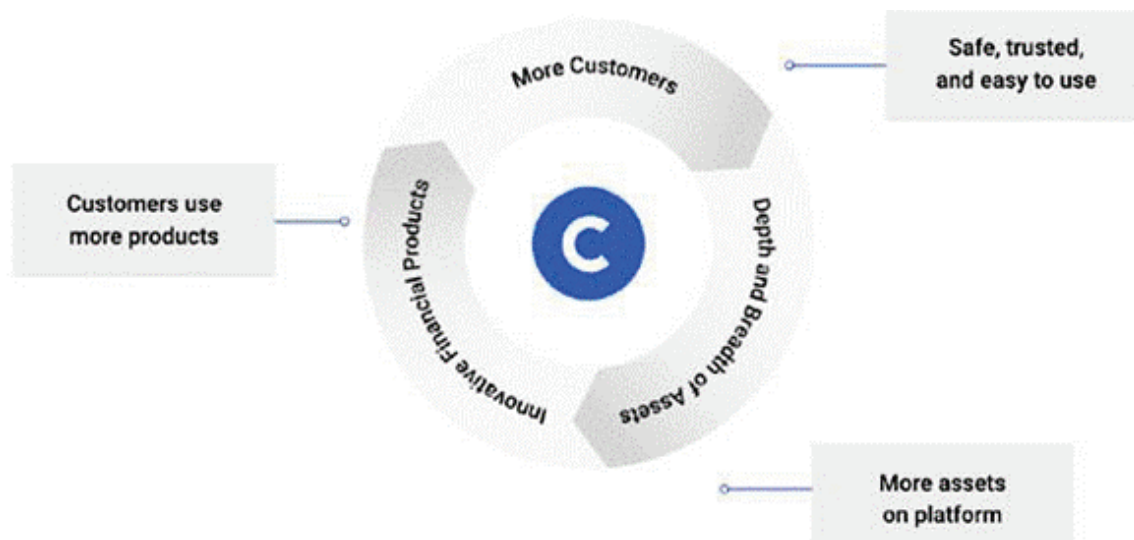
Taxes paid related to net share settlement of equity awards				(51,670)
Cash paid to repurchase equity awards	(20,958)	(1,930)		
Issuance of shares from exercise of warrants			433	433
Issuance of convertible senior notes, net				1,406,179
Purchase of capped calls				(90,131)
Proceeds from short-term borrowing				20,000
<b>Net cash provided by (used in) financing activities</b>	<b>(16,605)</b>	<b>18,801</b>	<b>59,820</b>	<b>1,434,676</b>
Net increase (decrease) in cash, cash equivalents, and restricted cash	(202,552)	3,073,693	3,433,675	8,491,592
Effect of exchange rates on cash	(170)	(2,081)	16,231	11,015
Cash, cash equivalents, and restricted cash, beginning of period	1,987,139	1,784,417	4,856,029	4,856,029
<b>Cash, cash equivalents, and restricted cash, end of period</b>	<b>1,784,417</b>	<b>4,856,029</b>	<b>8,305,935</b>	<b>13,358,636</b>
<b>Cash, cash equivalents, and restricted cash consisted of the following:</b>				
Cash and cash equivalents	548,945	1,061,850	1,983,318	4,365,982
Restricted cash	34,122	30,787	30,841	30,842
Customer custodial funds	1,201,350	3,763,392	6,291,776	8,961,812
<b>Total cash, cash equivalents, and restricted cash</b>	<b>1,784,417</b>	<b>4,856,029</b>	<b>8,305,935</b>	<b>13,358,636</b>
<b>Supplemental disclosure of cash flow information</b>				
Cash paid during the period for income taxes	2,165	62,060		51,504
Operating cash outflows for amounts included in the measurement of operating lease liabilities	14,356	40,011	7,490	13,413
<b>Supplemental schedule of non-cash investing and financing activities</b>				
Unsettled purchases of property and equipment	5,522			533
Right-of-use assets obtained in exchange for operating lease obligations	110,426	2,146	13,072	18,460
Issuance of common stock	5,000			
Non-cash consideration paid for business combinations				442,760
Purchase of crypto assets and investments with non-cash consideration	3,399	662	885	2,090
Crypto assets borrowed		194,696	9,158	290,449
Crypto assets borrowed repaid		59,171	16,437	59,348

Source: Compiled by casewriters from Coinbase Global, Inc., February 25, 2021 Form S-1 (filed February 25, 2021), <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>; Coinbase Global, Inc., May 13, 2021 Form 10-Q (filed May 13, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/cb843fec-ede4-4ff0-be56-a69062543e57.pdf>, and; Coinbase Global, Inc., August 10, 2021 Form 10-Q (filed August 10, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/dcec079b-3237-4ae0-a54d-479ded972ab8.pdf>, accessed Sept. 2021.

**Exhibit 5** Key Business Metrics (in millions)

Key business metrics as of	Dec-31-2019	Dec-31-2020	Mar-31-2021	Jun-30-2021
Verified Users	32	43	56	68
Monthly Transacting Users	1.0	2.8	6.1	8.8
Assets on Platform	\$ 16,969	\$ 90,307	\$ 222,748	\$ 180,000
Trading Volume	\$ 79,906	\$ 193,097	\$ 334,737	\$ 462,000

Source: Compiled by casewriters from Coinbase Global, Inc., February 25, 2021 Form S-1 (filed February 25, 2021), <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>; Coinbase Global, Inc., May 13, 2021 Form 10-Q (filed May 13, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/cb843fec-ede4-4ff0-be56-a69062543e57.pdf>, and; Coinbase Global, Inc., August 10, 2021 Form 10-Q (filed August 10, 2021), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001679788/dcec079b-3237-4ae0-a54d-479ded972ab8.pdf>, accessed Sept. 2021.

**Exhibit 6** Coinbase Growth Strategy

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.



## Exhibit 7 Coinbase's Revenue Sources

## Coinbase Product Portfolio Overview

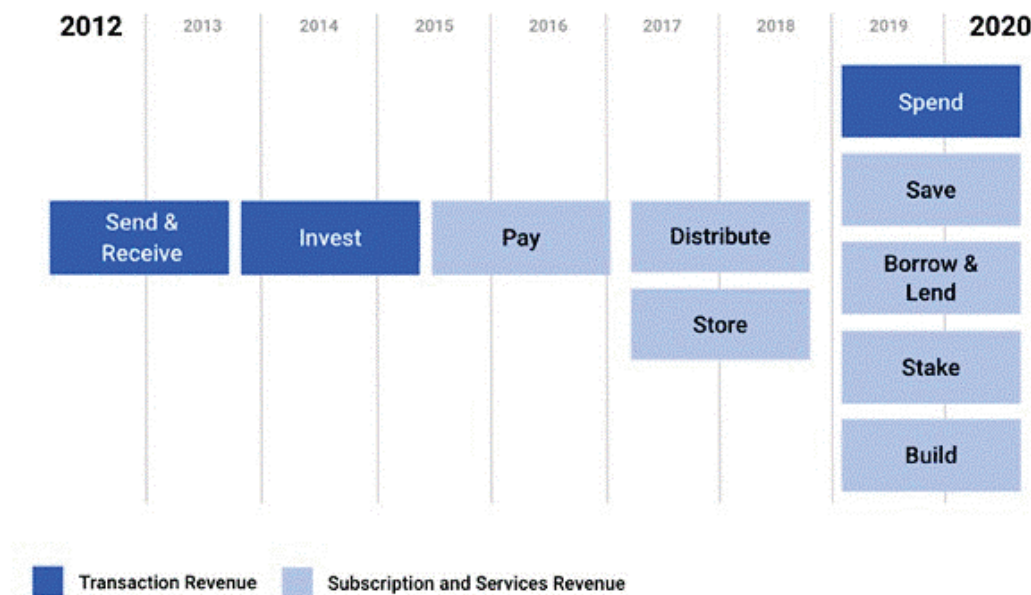
	Retail Users	Institutions	Ecosystem Partners
<b>Transaction Revenue</b>			
Invest	●	●	
Spend	●		
Send & Receive	●	●	●
<b>Subscription &amp; Services</b>			
Store		●	●
Save	●		
Stake	●	●	
Borrow & Lend	●	●	
Distribute			●
Build			●
Pay			●

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.

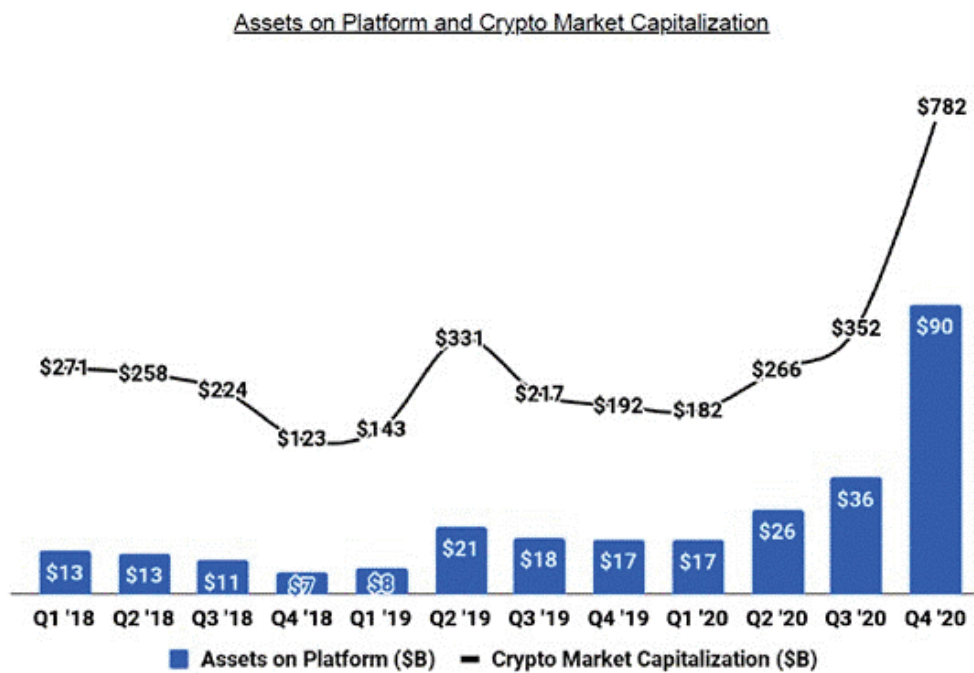
## Exhibit 8 Coinbase's Subscription and Services Revenue Explained

Product	Revenue	Description
Store	Custodial fee revenue	We derive custodial fee revenue based on a percentage of the daily value of customer crypto assets that we hold under custody in our dedicated cold storage solution. The value of crypto assets held under custody in our Store product is driven by the same factors as Assets on Platform – the quantity, price, and type of crypto asset.
Stake	Staking revenue	We derive staking revenue from transaction validation on a proof-of-stake blockchain when one of our nodes successfully creates or validates a block. Revenues are recognized at the point when the block creation or validation is complete and the rewards are available for transfer. Staking revenue is driven by the quantity, price, and rewards rate of the staked crypto asset.
Distribute	Earn campaign revenue	We provide asset issuers with a platform to engage with our users through educational videos and tasks where users can earn crypto assets that they learned about. We earn a commission based on the amount of crypto assets distributed to our users.
Build	License revenue	We generate license revenue from our Coinbase Analytics service. Customers pay upfront for unlimited access to the Coinbase Analytics platform until license expiration or termination. Revenue is recognized ratably over the service period. License revenue is driven by the number of licenses that we sell.

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.

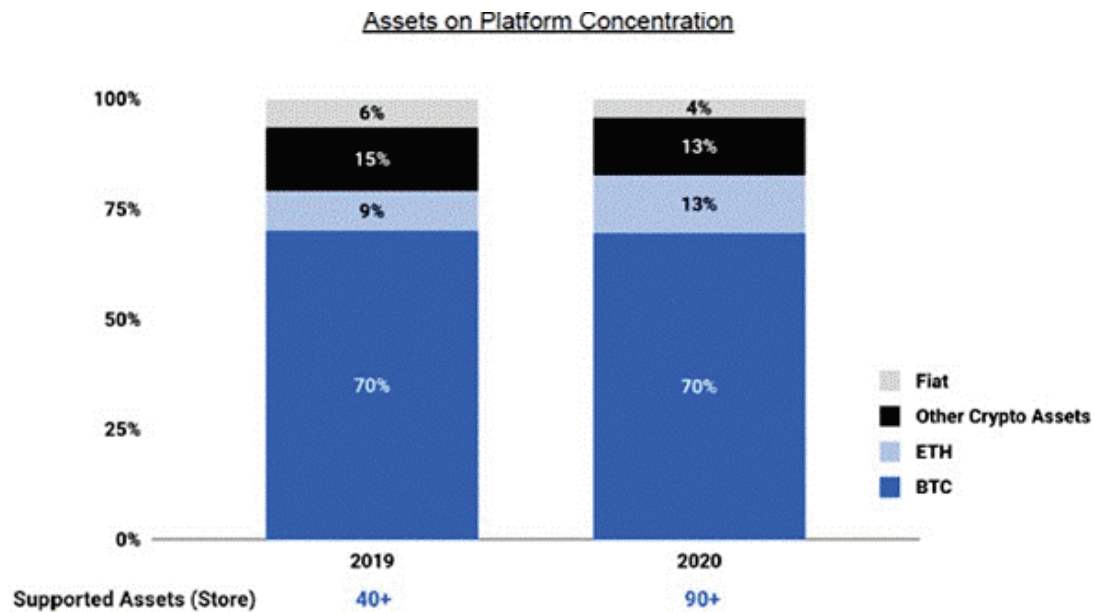
**Exhibit 9** Coinbase's Transition from Transaction Revenue to Subscription and Services Revenue

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.

**Exhibit 10** Assets on Platform and Crypto Market Cap

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.



**Exhibit 11** Assets on Platform Concentration

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.

**Exhibit 12** Bitcoin Price (Log Scale) and the Four Cycles

Source: Coinbase Form S-1, <https://www.sec.gov/Archives/edgar/data/1679788/000162828021003168/coinbaseglobalincs-1.htm>, accessed October 2021.

## Endnotes

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