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SUPREME COURT OF THE STATE OF NEW YORK COUNTY OF NEW YORK PEOPLE OF THE STATE OF NEW YORK, by LETITIA JAMES, Attorney General of the State of New York. AFFIDAVIT OF **BRIAN N. METZ** Petitioner, Index No. ____ - against -IAS Part Assigned to Justice VINO GLOBAL LIMITED d/b/a COINEX, Respondent. STATE OF NEW YORK SS.: COUNTY OF NEW YORK }

BRIAN N. METZ, being duly sworn, deposes and says:

- I am a Senior Detective with the Criminal Division of the Office of the Attorney General of the State of New York ("OAG") and have been employed by the OAG for approximately eight (8) years. I have training and experience in financial investigations including investigations of securities fraud and investment schemes. Prior to my employment with OAG, I worked in the financial sector for approximately 22 years, working for the New York Stock Exchange, NYFIX, Morgan Stanley, Tucker Anthony, EGS Partners, and Bear Stearns. I submit this Affidavit in support of OAG's Verified Petition for an injunction and other relief under New York Executive Law § 63(12). The facts set forth herein are true to my own knowledge.
- Exhibits 1.1 1.8 to this affidavit includes true and correct copies of an Article of Incorporation filed with the State of Colorado for Vino Global Limited obtained from the Colorado Secretary of State's website and screenshots obtained from www.coinex.com. On

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October 21, 2022, I conducted an investigation of Respondent, Vino Global Limited operating as COINEX, hereinafter "CoinEx," and examined CoinEx's website accessible at the URL address of www.coinex.com ("the Website"), for indications that CoinEx was carrying on, conducting or transacting business in commodities and securities in the State of New York. Exhibits 1.2-1.7.

According to the Website, CoinEx was founded in 2017. Exhibit 1.2. In addition to the Website, CoinEx has an application available for download on mobile phones through mobile application marketplaces such as the Apple and Google Play stores. CoinEx's terms of service downloaded on May 31, 2022 indicates that CoinEx is operated by Vino Global Limited which is an entity incorporated in the State of Colorado. Exhibits 1.1; 1.7. CoinEx's terms of service downloaded on February 17, 2023 is also attached as Exhibit 1.8.

from www.businesswire.com titled was_arrested_in_early_i_une_2022/ and https://bitcoinexchangeguide.com/is-coinex-and-viabte-ceo-haipo-yang-under-arrest-in-china-radio-silence-sparks-new-fears/. The investigation further revealed that CoinEx's founder and Chief Executive Officer ("CEO") is Haipo Yang and CoinEx's headquarters are located in Hong Kong. Exhibit 2.1. According to its CEO, CoinEx is has a team of more than 200 employees across the globe and delivers cryptocurrency trading services to more than 200 countries and regions. Exhibit 2.1. My investigation into CoinEx included a review of the articles titled CoinEx included a review of the articles titled CoinEx/ViaBTC CEO was Arrested in Early June 2020, and Is CEO Haipo Yang Under Arrest in China? Radio Silence Sparks New Fears, discussing

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allegations that CoinEx's CEO Haipo Yang, was arrested in China in 2018 for money laundering. Exhibits 2.2-2.3.

- 4. Exhibit 3 to this affidavit is a true and correct copy of a screenshot of the results from an https://lookup.icann.org/en website domain registration data search that I conducted for www.coinex.com. The domain registrar of CoinEx's website is GoDaddy Inc.
- 5. The screenshots captured from the Website show that CoinEx holds itself out to the public as a "Global Cryptocurrency Exchange," promising to "[make] crypto trading easier"; allows the "[trading of] Cryptos, Anytime, Anywhere"; and boasts the platform as enabling "[v]ersatile asset collections" At the top of the webpage, CoinEx has section pages labeled "Market," "Fiat,", "Futures," "Finance," "Promotions, "Swaps," and "Exchange." Exhibits 1.2-1.7. The section page labeled "Exchange," accessible at www.coinex.com/exchange, displays a virtual currency programming interface that purports to stream real-time and historical data on the various virtual currencies available on the CoinEx platform, including but not limited to AMP, Bitcoin, Ethereum (ETH), LBRY Credits (LBC), LUNA, and \$RLY. Below is a screenshot of the "Exchange" page from CoinEx's website.

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Exhibit 1.4.

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- The Website states that users are able to "directly trade with third-party payment 6. partners to buy cryptocurrency at a mutually agreed price and payment method," and states "CoinEx ... support[s] more than 60 fiat currencies for buying mainstream cryptocurrencies such as [AMP, LBRY Credits (LBC), Luna, and RLY tokens (collectively "the Tokens")]." Exhibit 1.2. CoinEx lists the email addresses of support@CoinEx.com, pr@CoinEx.com, and bd@CoinEx.com and states that they may be used to contact CoinEx, Exhibit 1.3.
- 7. Exhibit 4 to this affidavit is a true and correct copy of blog posts downloaded from the Website. CoinEx's website includes a section labeled "Blog," where it markets itself and provides regular content and communications to its users. The CoinEx blog posts discuss topics such as staking; how investors can make passive income; cryptocurrency whales and how to track their transactions; tips on crypto price forecasts; and how investors can profit from their crypto holdings.

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8. **Exhibit 5** to this affidavit is a true and correct copy of a page downloaded from the Website titled *Introduction to Swap Trading*. Through the Website I had the option to engage in a variety of cryptocurrency transactions including swaps which CoinEx defines as "a fast exchange service, where you can exchange 2 different crypto assets in one single click." Exhibit 5. CoinEx claims to help "users swap between different assets with just a few clicks . . . [and that] users can swap their selected crypto into the target crypto simply and securely." Exhibit 5.

- 9. In order to purchase cryptocurrency, CoinEx required that I open an account.
- I created an email address connected to a name other than my own in order to engage in undercover cryptocurrency transactions with Coinex.com.
 - 11. On October 21, 2022, I visited the Website in order to purchase cryptocurrency.
- 12. I opened a CoinEx account ("Account No. 1") through the Website, while physically present in New York County, State of New York using a computer which showed a New York based IP address. To sign up for a CoinEx account I was required to enter an email address and create a password. I entered an email address ("Email No. 1"), created a password, checked the "I've read and agreed with CoinEx Terms of Service" box, and clicked the "Sign Up" button.
- 13. Next, a puzzle popped up on the screen with an arrow that required me to slide across the puzzle to verify my registration.
- 14. Thereafter, the Website sent a code to Email No. 1, which I entered into the website's security authentication box to complete my registration.
- 15. **Exhibit 6** to this affidavit is a true and correct copy of the welcome email CoinEx sent to Email No. 1 on October 21, 2022. CoinEx sent an email titled *Notification on Successful*

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Registration to Email No. 1 that read "Congrats! You've successfully signed up. Explore the crypto world with CoinEx now! Holding some cryptos is the first step in crypto trading, you can now (1) Buy Crypto (2) Deposit Cryptos". The welcome email also included hyperlinked instructions titled "(1) How to Deposit Cryptos to CoinEx Account; (2) How to buy cryptos; and (3) Instruction of spot trading."

16. After successfully registering for Account No. 1, I used the Website's "deposit" feature to deposit Ethereum ("ETH") tokens into a wallet address,

<u>0x5e431e628964c52c069cf0a53c9d44a34f3e8ec2</u>, ("Wallet No. 1") generated by CoinEx. I stored my ETH in Wallet No. 1 which I later used to place an order to buy another cryptocurrency on the Website.

- 17. The Website provides a list of many virtual currencies to choose from, including but not limited to cryptocurrencies such as the AMP, LBRY Credits ("LBC"), LUNA and Rally ("\$RLY") tokens. The Website further provides certain information on each token including but not limited to their issue date and a link to each token's "Official Website". For some of the tokens the website also provides information about total token supply, link to the relevant white paper, and introductions to their respective networks and the teams behind them.
- 18. **Exhibit 7** to this affidavit is a true and correct copy of a page downloaded from the Website dedicated to the AMP token. According to the Website, AMP is a "collateral token" on the Flexa payment network ("Flexa"). Exhibit 7. AMP "[u]sers can stake AMP to increase the capacity of the Flexa payment network . . . [and] [s]takers receive staking rewards from network transaction fees." Exhibit 7. The Website links to an AMP white paper 1, but the investigation

¹ Based on my training and experience, I know that a white paper in the cryptocurrency space is an informational document that describes a cryptocurrency project and details the terms of its launch and how it operates.

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further revealed a white paper to the "Flexa Network" dated May 2019 in which Flexa discusses its vision to become the open, seamless standard for cryptocurrency payments in physical retail.

- 19. Exhibit 8 to this affidavit is a true and correct copy of the Flexa Network white paper linked from Flexa's website at flexa.network. The Flexa Network white paper includes an introduction to its development team. The network's white paper shows that the individuals on Flexa's team are the same individuals on AMP's development team as described on the website in Exhibit 7.
- 20. **Exhibit 9** to this affidavit is a true and correct copy Flexa's September 8, 2020 blog titled Flexa Capacity is Migrating to Amp from flexa.network. AMP is the successor token to Flexa's original "Flexacoin" token. When Flexa changed to AMP it says it kept its fixed supply of tokens at 100 billion. Flexa also discussed the "time and effort that Flexa... committed to the development of the Amp platform . . ." and emphasized that ". . . the future of Flexa is even brighter now that [they're] building on Amp . . ." Flexa states that "At Flexa, [they] take [their] responsibility to the Flexa community very seriously . . ." According to Flexa, its team worked to achieve AMP liquidity in partnerships with the digital currency exchanges and shared "that [their] longstanding partners at [a well-known cryptocurrency trading platform] will be the very first market to support the new Amp token for exchange." Exhibit 9 (emphasis in original).
- 21. Exhibit 10 to this affidavit is a true and correct copy of Flexa's April 29, 2021 blog titled Introducing Flexacoin found on the flexa.network, explaining the distribution scheme for Flexa's fixed token supply. Flexa distributed 10% of its tokens to its Network Development Fund to "support the development of the network over the first decade of its operation"; 20% to token sales; 20% to Flexa's Founding Team and Employee Pool to "incentivize current and

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future Flexa team members, with a four-year vesting schedule"; 25% to its Merchant

Development Fund to "support merchant integrations and facilitate merchant acceptance of

Flexa-enabled applications"; and 25% to Developer Grants to "help increase the adoption of

Flexacoin for payment collateralization, with one billion per year to developers who wished to

enable the Flexacoin-collateralized payments in their applications."

- 22. Exhibit 11 to this affidavit is a true and correct copy of the AMP white paper linked through the Website. In the AMP white paper, the AMP token is described as a medium for accruing value i.e., profit. *Id.* at 1. The white paper states that "[e]conomically, . . . [AMP] serves as a vehicle for accruing value within a collateralized Network, aligning the interest of all participants." *Id.* at 4. The AMP white paper further states that "[t]he Amp . . . token value (i.e., the utility of the collateral itself) projections involve interpreting system dynamics such as *platform growth, staking composition*, and velocity/stability rates." *Id.* at 23 (emphasis in original).
- 23. Exhibit 12 to this affidavit is a true and correct copy of Flexa's January 28, 2021 blog post titled *Flexa's 2020 in Review* from flexa.network, where Flexa announced its team's efforts to improve and develop the network. My review of the Flexa website, flexa.network, revealed that Flexa makes and features blog postings that provide announcements, details about its team's labor, improvements, partnerships, and upgrades to the network, including technology innovations and changes. The blog also discussed how the Flexa team worked throughout the Covid-19 pandemic to ensure a "formative year in the network's history," "doubled down . . . to ensure Flexa payments remained reliable," and continued "Upgrading the network for the future." Exhibit 12.

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24. Exhibit 13 to this affidavit is a true and correct copy of a page from the Website dedicated to the LBC token. CoinEx described LBC as "the cryptocurrency used to make digital transactions on the [LBRY] blockchain." According the Website there is a fixed supply of 1,083,202,00 LBC tokens.

- 25. Exhibit 14 to this affidavit is a true and correct copy of What is LBRY doing with non-mined Credits? located at https://lbry.com/faq/credit-policy. As a part of my investigation, I visited the LBRY website at www.lbry.com. According to the LBRY website's frequently asked section titled What is LBRY doing with non-mined Credits?, the first 400 million of its LBC token supply was reserved for funds LBRY used to raise money and develop its network over time: 200 million were said to be allocated to a Community Fund for spreading usage and adoption; 100 million were said to be allocated to an Institutional Fund to allow for "the formation of institutional partnerships, as well as for grants and donations to nonprofits and other [NGOs] with similar values as LBRY"; and 100 million reserves were said to be allocated for an Operational Fund to be used for "operational purposes." LBRY states that its operational fund exists "[t]o allow LBRY to function and profit" and is "reserved for LBRY, Inc. itself."
- 26. **Exhibit 15** to this affidavit is a true and correct copy of *Quarterly Credit Report*: Second Quarter 2020 located at https://lbry.com/credit-reports/2020-q2 where it was stated that "no one believes in the LBRY protocol more or has more incentive for its success, than LBRY" and reported that LBRY sold 7,028,356 LBC from its operational fund token reserve on the open market and issued another 359,341 LBC to its employees.
- 27. Exhibit 16 to this affidavit is a true and correct copy of a post titled \$1.2B Market Cap and We Don't Care downloaded from https://lbry.com/news/1.2b-market-cap-we-dont-care from the LBRY website. My review of the LBRY website at www.lbry.com/team revealed that

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the LBRY team is said to be comprised of a Chief Executive Officer, Chief Technical Officer, Director of Operations, Protocol Engineers, Blockchain Engineers, App Engineer, and its Economic, Media, Legal and Ethics Advisors. According to LBRY "[o]ver the long-term, the interests of LBRY and the holders of Credits [also known as LBC] are aligned," its "...focus now and henceforth will be on the long-term value of the LBRY protocol." LBRY stated that the "long-term value proposition of LBRY is tremendous, but also dependent on our team staying focused on the task at hand: building this thing."

- Exhibit 17 to this affidavit is a true and correct copy of a page on the Website 28. dedicated to the LUNA token. Information about the LUNA token is also available on the Website. In addition to links to an "Official Website" and "Whitepaper," the Website provides the distribution scheme of the LUNA token notes about staking rewards and information about the supply of LUNA. Exhibit 17. The Official website link for LUNA available on the Website leads to the Terraform Labs ("Terraform") website at www.terra.money/about-terra. Exhibit 17. According to Terraform's website the Terra network runs on its native cryptocurrency, LUNA, which can be used to pay for transaction fees on the Terra blockchain, and LUNA holders can earn staking rewards. See Exhibit 18, a true and correct copy of the "About Terra" page on Terraform's website, attached to this affidavit.
- 29. Exhibit 19 to this affidavit is a true and correct copy of the Terraform whitepaper located through the link provided on the CoinEx website. The Terraform whitepaper issued in April 2019 explains that LUNA was "growth-driven" and further discussed the creation of applications to create demand and encourage its use."
- 30. Exhibits 20.1 – 20.3 to this affidavit are true and correct copies of postings from Twitter.com ("Twitter") by user handle @stablekwon, identified by the name Do Kwon. On

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March 22, 2021, Do Kwon, named in the published Terraform whitepaper, see Exhibit 19, described LUNA, on his Twitter platform, as being "designed to defend Terra stability at a diverse array of market conditions and accrue value to the moon at all of those market conditions." Exhibit 20.1. Do Kwon also used his Twitter platform, on November 20, 2021 to provide information on staking rewards, stating that "[t]he staking rewards are paid out in UST, which makes Luna pretty unique . . . paying out double digit . . . [t]his makes Luna "countercyclical* to market downturns- when Luna price goes down, staking returns go up linearly." Exhibit 20.2. Do Kwon also used his Twitter handle on March 9, 2022, to state that "[s]tatistically this community bought luna, so they definitely are not poor" in an argument with a critic. Exhibit 20.3.

- 31. Exhibits 21.1 – 21.2 to this affidavit are true and correct copies of articles titled LUNA Surges to 25% to New All-Time High of \$104, downloaded from https://www.coindesk.com/markets/2022/03/09/luna-surges-25-to-new-all-time-high-of-104/ and The Moonshot Case for Terra, downloaded from https://medium.com/coinmonks/the-moonshotcase-for-terra-luna-7759f2015335, discussing two Terraform applications alleged to create demand for the LUNA. The Anchor and Mirror Protocols were described as applications that were meant to drive the demand for LUNA and lead to a substantial increase in the value of LUNA. Mirror Protocol purported to allow users to invest in "synthetic stocks," using tokens that tracked the prices of stocks and allowed users to purchase and sell tokens. Exhibit 21.2. Anchor Protocol was said to allow users to make token deposits and receive 20% annual yields or interest (which were heavily subsidized by Terraform.). Exhibit 21.1.
- Exhibit 22 to this affidavit is a true and correct copy of the Terraform blog post 32. titled Introducing Project Dawn available at https://medium.com/terra-money/introducing-

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project-dawn-5c2c8440c982. Upon reviewing the blog post, I learned that Terraform used sales of LUNA to raise funds for its operations. Exhibit 22. According to Do Kwon, Terraform committed to "unlock at most 3 million LUNA per month for all operating costs..." and that it would "cover both expenditures in project dawn [which Terraform described as 'a new funding initiate for critical infrastructure improvements and core technologies to supplement the accelerating growth of the Terra ecosystem'] and "all other [Terraform] operating costs such as employee token distribution."

- 33. Exhibit 23 to this affidavit is a true and correct copy of a page from the Website dedicated to the \$RLY token. The Website provides information on the \$RLY token, that includes a link to the official Rally Network website and information about the \$RLY token distribution. CoinEx further provides an introduction that states that the Rally platform gives creators the ability to launch vibrant and independent economies and allow their fanbase to gain access to benefits.
- 34. Exhibit 24 to this affidavit is a true and correct copy of the Rally network blog titled RLY Governance Token Supply available at https://medium.com/rallycreators/rlygovernance-token-supply-8689734948f8. In its blog post dated October 8, 2020, Rally announced to its market that it created a fixed supply of 15billion \$RLY to be released over the course of eight (8) years. The post also stated the release would be structured with 70% of the total supply of \$RLY to the Rally community, that is its holders and just under 30% of its token supply to Rally team members and seed investors with a four (4) year vesting schedule beginning at launch. Exhibit 24. Of the 70% allocated to the community, only 50% was reserved for network usage rewards and the actual distribution of the remaining 50% was said to be as follows:

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a. Seed investors (15.4%);

- b. Rally Team (14.2%);
- c. Advisors (0.17%);
- d. Sidechain operations (1%);
- e. Treasury (3.3%);
- f. Liquidity mining (2.3%); and
- g. Advisors and future collaborators (3.3%). Advisors were required to commit to a length of service of twelve (12) months to realize token ownership.
- 35. **Exhibit 25** to this affidavit is a true and correct copy of the Rally whitepaper. The Rally whitepaper says that Rally is managed by a group of appointed executives and its whitepaper features its full executive lineup, showcasing their backgrounds and responsibilities within Rally. On April 28, 2021, in a Rally blog post Kurt Patat, the Global Head of Communications for Rally, promoted the experience and past accomplishments of Rally's newest additions to its management team and announced that Rally raised \$57 million in funding for its community treasury through \$RLY sales. *See* attached as **Exhibit 26** to this affidavit, a true and correct copy of the Rally blog post titled *Rally Raises \$57M for Community Treasury to Fund Community Driven Growth*, available at https://medium.com/rallycreators/rally-raises-57m-for-community-treasury-to-fund-community-driven-growth-8d856eb734d0.
- 36. **Exhibit 27** to this affidavit is a true and correct copy of a Twitter post by user handle @rlynetworkassoc, identified by the name RLY Network Association. In February 2022, the RLY Network Association used Twitter to publicize that \$RLY was "now supported on [a major cryptocurrency trading platform], the next generation cryptocurrency exchange & custodian for buying, selling, storing, & earning digital assets.
 - 37. Exhibit 28 to this affidavit is a true and correct copy of the Rally blog post titled

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\$RLY Liquidity Provider Rewards Program available at https://medium.com/rallycreators/rly-liquidity-provider-rewards-program-982f806286fa. Rally's management team promoted its \$RLY Liquidity Provider Rewards Program in its October 2020 blog post, as a means by which \$RLY investors could earn profit, i.e., rewards on the Rally Network. Rally's liquidity program promised to reward \$RLY investors who provided liquidity to its shared pools. According to Rally 350 million \$RLY was earmarked for distribution as LP rewards.

- 38. Exhibit 29 to this affidavit is a true and correct copy of the post titled *Community Treasury Fundraise Update... and Next Steps* available at https://forum.rally.io/t/community-treasury-fundraise-update-and-next-steps/378. Rally stated that as of that date, "of the \$RLY sold for [its] Community Treasury, over 97% [was] subject to a 24 month lock up as part of the Community Agent's priority to balance stability of the Rally Network," and that "the Rally Network is now holding robust funds that can enable the next level of growth and innovation." Rally further stated that "[w]ith this larger pool in the treasury, the community can begin planning ways to significantly scale the Rally Network and empower even more development and engagement."
- 39. **Exhibit 30** to this affidavit is a true and correct copy of a screenshot of the transaction execution report to the ETH sale and LUNA purchase executed under Account No. 1. On October 21, 2022, I deposited 0.03891914 ETH, \$50.10 from an external² wallet address, not affiliated with the CoinEx trading platform, into Wallet No. 1. I then simultaneously sold 0.01787024 ETH and placed an order for 9.99876497 LUNA using the "swap" feature on the website. CoinEx deducted an execution fee of 0.01999753 LUNA as its compensation for my ETH sale and a fee of 0.02999631 LUNA for my LUNA purchase.

² This external wallet address contained cryptocurrency that I purchased using actual currency, the U.S. dollar.

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40. Exhibit 31 to this affidavit is a true and correct copy of a screenshot of the transaction execution report to the LUNA sale and AMP purchase executed under Account No. 1. On October 21, 2022, I sold five LUNA to CoinEx and placed an order for 2333.08162911 AMP from CoinEx, transactions for which CoinEx charged my wallet an execution fee of 0.0343995 USDT for my LUNA sale and 6.99924489 AMP for my AMP purchase.

- Exhibit 32 to this affidavit is a true and correct copy of a screenshot of the 41. transaction execution report to the AMP sale and \$RLY purchase executed under Account No. 1. On October 21, 2022, I sold 500 AMP and placed an order for 158.02378628 RLY and CoinEx collected its execution fees of 0.0073065 USDT for my AMP sale and 0.47407136 \$RLY for my \$RLY purchase.
- 42. Exhibit 33 to this affidavit is a true and correct copy of a screenshot of the transaction execution report to the \$RLY sale and ETH purchase executed under Account No. 2. On October 28, 2022, I returned to Account No. 1, sold 100.05721674 \$RLY and simultaneously placed an order for 0.00091379 ETH, and CoinEx collected 0.00432368 USDT and 0.00000182 ETH in execution fees for my \$RLY sale and ETH purchase, respectively.
- 43. Exhibit 34 to this affidavit is a true and correct copy of a screenshot of the transaction execution report to the AMP sale and LUNA purchase executed under Account No. 2. I also sold 900 AMP and placed an order for 1.77862032 LUNA, for which CoinEx deducted 0.0130572 USDT and 0.00533587 LUNA in execution fees for my AMP sale and LUNA purchase, respectively.
- 44. Exhibit 35 to this affidavit is a true and correct copy of a screenshot of the transaction execution report to the aforementioned ETH sale and LBC purchase executed under

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Account No. 1. On January 3, 2023, I returned to Account No. 1, on the Website, while physically present in New York County, New York State using a computer which showed a New York based IP address, sold 0.00500124 ETH and CoinEx charged a fee of 1.21773302 LBC and simultaneously placed an order for 608.25237019 LBC tokens and CoinEx charged a fee of 1.82475712 LBC.

- 45. On January 3, 2023, I used the Website's sign-up feature and created a new CoinEx account ("Account No. 2") also funded with ETH by an external wallet. See attached as Exhibit 36 to this affidavit is a true and correct copy of the welcome email CoinEx sent to Email No. 2 on January 3, 2023. Using a second email address ("Email No. 2"), also connected to a name other than my own - and a name different from that used in connection with Account No. 1 – I created a second account to engage in additional undercover cryptocurrency transactions with Coinex.com. I created a new password, clicked the "I've read and agreed with CoinEx terms of service" acknowledgment box, and the "Sign Up" button. Exhibit 36. I was again required to complete a security authentication puzzle, after which Account No. 2 was established and CoinEx subsequently sent an email to Email No. 2 with the message that read "Congrats! You've successfully signed up. Explore the crypto world with CoinEx now! Holding some cryptos is the first step in crypto trading, you can now (1) Buy Crypto (2) Deposit Crypto."
- Again, CoinEx's email included hyperlinked instructions titled "(1) How to 46. Deposit Cryptos to CoinEx Account; (2) How to buy cryptos; and (3) Instruction of spot trading." Exhibit 36.
- 47. On January 3, 2023, I logged into Account No. 2 and deposited cryptocurrency into a newly created CoinEx wallet, with the address

³ This external wallet address contained cryptocurrency that I purchased using actual currency, the U.S. dollar.

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0x503a7f706a553888484f085a0cc221c4b99c248d, ("Wallet No. 2"). I executed a deposit of 0.04128819 ETH tokens, valued at \$50.0144, to fund wallet No. 2.

- 48. Attached as Exhibit 37 to this affidavit is a true and correct copy of a screenshot I made of the transaction execution report to the aforementioned ETH sale and LBC purchase executed under Account No. 2. On January 3, 2023, I sold 0.01 ETH tokens for which CoinEx charged a fee of 2.4352209 LBC, and simultaneously placed an order for 1217.60974648 LBC tokens for which CoinEx also charged a fee of 3.65282925 LBC.
- 49. Each of the aforementioned transactions were effected through CoinEx's website, which I accessed by means of a web browser on a computer provided to me by OAG for the purpose of my investigation, which externally showed a New York based IP address. I was physically present in New York County in the State of New York during each transaction.
- 50. I checked the website and logged into the accounts described herein on the date I signed this affidavit, while physically located in New York, and I found the Website and the accounts to be available and accessible.

Brian N. Metz

Senior Detective

New York State Office of the Attorney General

28 Liberty Street

New York, NY 10005

Sworn to before me

this /9th day of february 2023

Notary Public

ROSE CHERSON Notary Public, State of New York No. 01CH5013399 Qualified In Nassau County Certificate Filed in New York County Commission Expires July 15, 2023

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Word Count Certification Pursuant to NYCRR 202.8-b

I, Shantelee Christie, hereby certify that the word count of this document, as calculated by Microsoft Office, exclusive of the caption, table of contents, table of authorities, and signature block, is 4,641 words.

Chartalas Chaire

Shantelee Christie

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Exhibit 1.1

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Document must be filed electronically.
Paper documents are not accepted.
Fees & forms are subject to change.
For more information or to print copies of filed documents, visit www.sos.state.co.us.

Colorado Secretary of State

Date and Time: 12/20/2021 06:00 AM

ID Number: 20218179485

Document number: 20218179485

Amount Paid: \$50.00

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INDEX NO. 450503/2023

Articles of Incorporation for a Profit Corporation

filed pursuant to § 7-102-101 and § 7-102-102 of the Colorado Revised Statutes (C.R.S.)

1. The domestic entity name for the corp	oration is Vino Global Limited			
(Caution: The use of certain terms or abbrev	viations are restricted by law. Read	l instructions for	more information.)	
2. The principal office address of the cor	poration's initial principal off	ice is		
Street address	4255 South Buckley Road 1296			
	(Street	number and name)	
	Aurora	CO	80013	
	(City)	(State) United S	(ZIP/Postal Code)	
	(Province – if applicable)	(Countr		
Mailing address				
(leave blank if same as street address)	et address) (Street number and name		Box information)	
	(City)	(State)	(ZIP/Postal Code)	
	(Province – if applicable)	(Count	ry)	
3. The registered agent name and register	red agent address of the corpo	ration's initial	I registered agent are	
Name				
(if an individual)				
or	(Last)	(First)	(Middle) (Suffix	
(if an entity)	Conde Investments LTD			
(Caution: Do not provide both an indivi	dual and an entity name.)			
Street address	4255 South Buckley Roa			
	(Street number and name)			
	Aurora	CO	80013	
	(City)	(State)	(ZIP/Postal Code)	
Mailing address (leave blank if same as street address)	(Street number and na	me or Post Office	Box information)	
		CO_		
	(City)	(State)	(ZIP/Postal Code)	

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(The following statement is adopted by marking the box.)

The person appointed as registered agent above has consented to being so appointed.

4. The true name and mailing address of the incorporator are

Name (if an individual)	YANG	HAIPO			
,	(Last)	(First)	(Middle)	(Suffix)	
or					
(if an entity) (Caution: Do not provide both an i	individual and an entity nam	e.)			
Mailing address		ckley Road 1296			
	(Street n	(Street number and name or Post Office Box information)			
	Aurora	<u>co</u>	80013		
	(City)	(State) United S	(ZIP/Postal Cod States .	de)	
	(Province – if app	olicable) (Country	y)		
 5. The classes of shares and number follows. The corporation is authorized rights and are entitled to rece Information regarding shares attachment. 	to issue 20,000 covive the net assets of the	ommon shares that shal corporation upon dissol	l have unlimited vo lution.		
6. (If the following statement applies, adopt the This document contains addit	•	•			
7. (Caution: Leave blank if the document significant legal consequences. Read in			ed effective date has		
(If the following statement applies, adopt the The delayed effective date and, if		document is/are	e required format.) n/dd/yyyy hour:minute an		

Notice:

Causing this document to be delivered to the Secretary of State for filing shall constitute the affirmation or acknowledgment of each individual causing such delivery, under penalties of perjury, that the document is the individual's act and deed, or that the individual in good faith believes the document is the act and deed of the person on whose behalf the individual is causing the document to be delivered for filing, taken in conformity with the requirements of part 3 of article 90 of title 7, C.R.S., the constituent documents, and the organic statutes, and that the individual in good faith believes the facts stated in the document are true and the document complies with the requirements of that Part, the constituent documents, and the organic statutes.

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8. The true name and mailing address of the individual causing the document to be delivered for filing are

	YANG	HAIPO		
	(Last)	(First)	(Middle)	(Suffix)
	4255 South Buckley F	Road 1296		
	(Street number	and name or Post Offic	ce Box information)	
	Aurora	СО	80013	
	(City)	(State) United Sta	(ZIP/Postal Co	ode)
	(Province – if applicable)			
_ `'	opt the statement by marking the box and rue name and mailing address of this country of the statement by marking the box.		•	ıls

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This form/cover sheet, and any related instructions, are not intended to provide legal, business or tax advice, and are furnished without representation or warranty. While this form/cover sheet is believed to satisfy minimum legal requirements as of its revision date, compliance with applicable law, as the same may be amended from time to time, remains the responsibility of the user of this form/cover sheet. Questions should be addressed to the user's legal, business or tax advisor(s).

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Exhibit 1.2



Who We Are

Founded in December 2017, CoinEx is a professional global cryptocurrency exchange.

CoinEx core team members are from world-leading internet and finance companies, including the earliest adopters and professionals of cryptocurrency who boast rich experience in global operations and services in the industry. With our proprietary trade matching system and excellent user experience, we are dedicated to building a highly secure, stable and efficient cryptocurrency exchange for global users.



646

Amount

1053

Markets

434.76M

24H Value(USD)

14.45B

30-Day Value(USD)

Mission and Vision



Via Blockchain, Making The World A Better Place

CoinEx has established a complete industry ecological layout around crypto issuance, circulation, application, value discovery and the blockchain layer technology. Our vision is to become the infrastructure of the blockchain world.

Our Advantages

Secure, Stable & Efficient Cryptocurrency Exchange



Security & Stability

Supporting up to 10,000 TPS, with selfdeveloped proprietary trade matching engine



User-First

Professional customer service and strong community connections, with 2000+ communities worldwide



Global Operations

Global operational team with rich experiences in blockchain and Fintech industry, covering 15 language areas globally

CoinEx Token - CET

A Value-Added Services Privileges Scheme



Deducted as trading fees



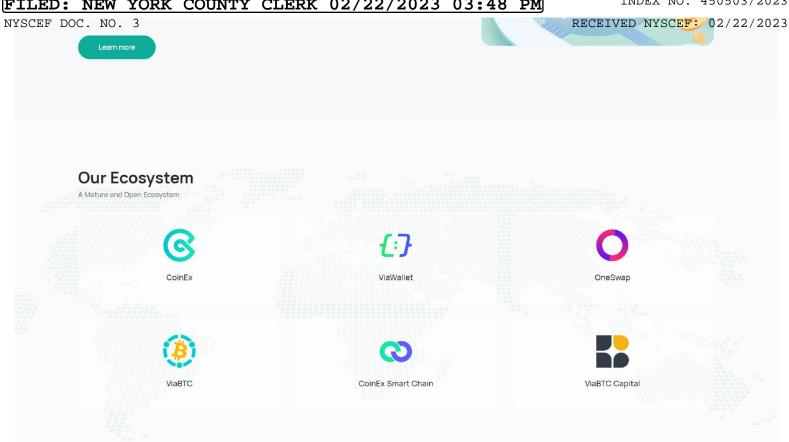
Exclusive promotional privileges

VIP services



Value added via daily repurchase





Partnership

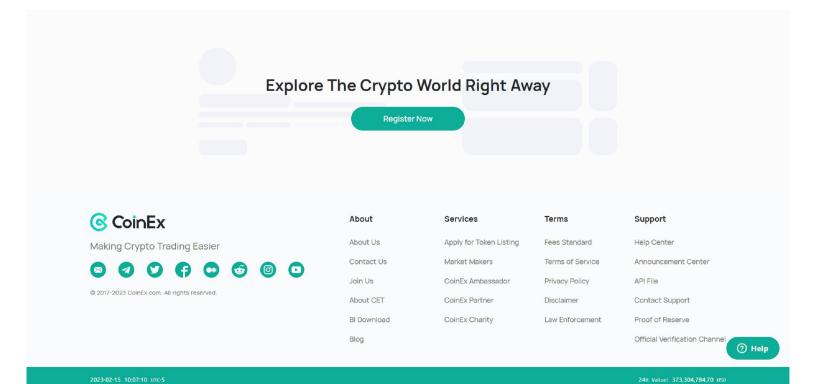
Dedicated to Open and Mutual Cooperation







17 TradingView



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Exhibit 1.3

INDEX NO. 450503/2023 RECEIVED NYSCEF: 02/22/2023 Exchange **Futures** Finance V ◆ Promotion ∨ CoinEx Help Center Search by keywords, e.g. deposit, futures, AMM Home > Get Ready on CoinEx > CoinEx Tutorials > How to Buy Cryptos with Fiat on CoinEx How to Buy Cryptos with Fiat on CoinEx Support Team Updated 3 months ago English (US) ~ ♠ CoinEx Help Center Get Ready on CoinEx CoinEx User Guide 3 Steps to Buy Cryptocurrency... Account Set-up CoinEx Tutorials ? Help How to Buy Cryptos with Fiat How to Sell Cryptos for Fiat CoinEx Deposit & Withdrawal Watch on PouTube CoinEx Spot Trading Guide Introduction to Buying Cryptos with Fiat on CoinEx CoinEx Margin Trading Guide CoinEx follows the "B2C" model to enable crypto trading with fiat currencies. Different from the "C2C" model, the "B2C" model allows users to buy BTC and CoinEx Swap Trading Guide other cryptos directly through the payment method provided by third-party fiat currency service providers on CoinEx. CoinEx Futures (Perpetual Contract) Guide Currently, CoinEx has teamed up with 10 third-party service providers which support over 60 fiat currencies to buy cryptos via VISA, Mastercard, etc. CoinEx Financial Account CoinEx Automated Market Making (AMM) Participation Guide Download App Account & Security Deposit & Withdrawal Spot Trading Margin Trading **Futures Trading** Swap

Service Provider	Payment Method	
Mercuryo	VISA, Mastercard	
XanPool	FPS, UPI, GoPay, DuitNow	
Guardarian	VISA, Mastercard, SEPA, SWIFT	
Banxa	VISA, Mastercard, SEPA, Bank Transfer	
MoonPay	VISA, Bank Transfer	
LoopiPay	PIX	
AdvCash	VISA	
Paxful	VISA, Mastercard	
Simplex	Simplex VISA, Mastercard, PIX	
Remitano	Remitano Pay, Bank Transfer	

How to Buy Cryptos with Fiat on CoinEx?

Now, ten third-party service providers are available on CoinEx for you to buy cryptos with fiat currencies:

- 1. How to Buy Cryptos via Mercuryo
- 2. How to Buy Cryptos via Moonpay
- 3. How to Buy Cryptos via Simplex
- 4. How to Buy Cryptos via Paxful
- 5. How to Buy Cryptos via AdvCash
- 6. How to Buy Cryptos via XanPool
- 7. How to Buy Cryptos via Banxa

Fiat

Finance

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Privileges

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- 8. How to Buy Cryptos via Guardarian
- 9. How to Buy Cryptos via LoopiPay
- 10. How to Buy Cryptos via Remitano

FAQ about Buying Cryptos with Fiat on CoinEx

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Q1: What fiat currencies are supported?

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A1: CoinEx has now supported more than 60 fiat currencies for buying mainstream cryptos such as BTC and ETH. Please check the Fiat page for more details.

Q2: What payment methods are supported?

A2: CoinEx works with 10 third-party service providers, which accept payments via Visa, Mastercard, etc. The payment methods may vary according to each payment partner. Please refer to the "Payment Methods" of your selected payment partner on the Fiat page.

Q3: What is the order limit?

A3: Different payment partners have different lowest and highest order limits. Please refer to the order limit of your selected payment partner.

Q4: When will I receive the cryptos after payment?

A4: The processing time of your transaction may be different according to each third-party platform. Normally you'll receive your cryptos within 30 mins after you complete the payment process. The actual arriving time shall prevail. You can check your deposit record on CoinEx.

Q5: Will CoinEx charge any fees?

A5: No, CoinEx will NOT charge any fees. All fees incurred are charged by third-party service providers. CoinEx only introduces third-party service providers for you to choose from. Please refer to the fee standard of your selected payment partner for the specific rules.

Q6: What should I do if any problem occurs?

Blog

A6: Please contact the customer service of the relevant third-party service provider if any problem occurs.

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60	Coinex

Making Crypto Trading Easier















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Exhibit 1.4

Contact Us

Join CoinEx for more cooperation opportunities



Media & Cooperation

PR@coinex.com 0 0 BD@coinex.com

Product & Support

support@coinex.com

Vulnerability Report

CoinEx Security Bounty Program

Law Enforcement

Law Enforcement Request Guide

More Cooperation



CoinEx Partner

CoinEx Partner is the overseas operating partner of CoinEx who directly participates in the operation and publicity of CoinEx Exchange and i...

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CoinEx Ambassador

As a global partner of CoinEx, a CoinEx Ambassador should be involved in the exchange's marketing operations and make joint efforts to create a...

If you are a big fan of the blockchain or cryptocurrency, willing to participate in the development, branding building and promotion of CoinEx, you are...

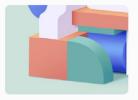
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Market Maker

CoinEx welcomes individual traders or professional trading institutions whose monthly spot/futures trading volume reaches a specified.

Learn more



Apply for Token Listing

CoinEx selects high-quality projects to provide users with diversified crypto assets. For project listing, you can submit relevant materials throug.

Learn more

Follow Us



















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Exhibit 1.5

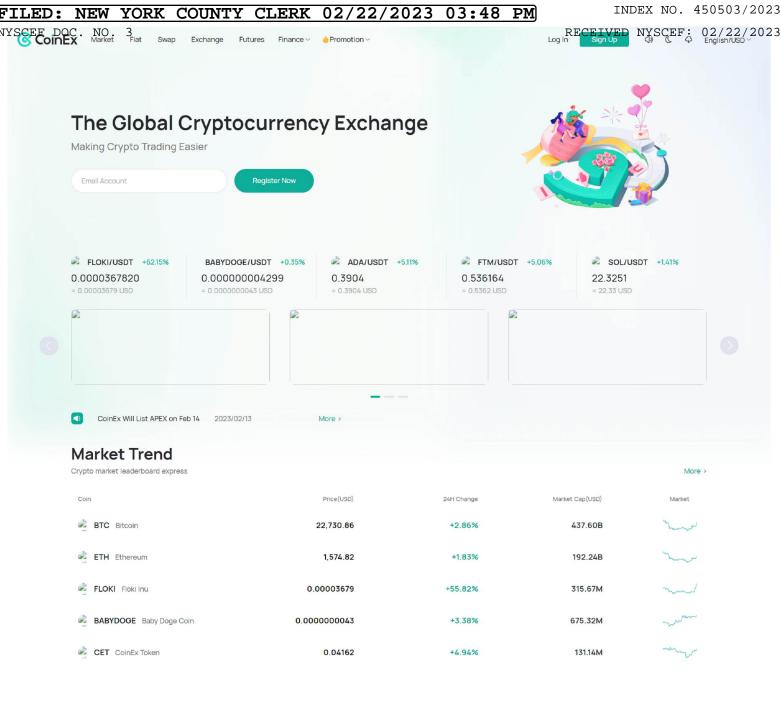
INDEX NO. 450503/2023 03:48 YORK COUNTY **CLERK** 02/22 NYSCEF: 02/22/2023 Futures Finance Promotion 24H Highest 24H Value BTC/USDT Y About Bitcoin 22,688.44 Q Search 22889.77 670.76 14.88M +2.13% 21860.22 Margin 15m 1h 4h 1d 1w 0 Candlesticks Depth U :: 60.57% 39,43% USDT USDC BTC BCH Amount(BTC) Total(BTC) Market: Price : 24H Change: = 0.00064940 13.0747204 T CET/USDT 3X 0.041644 4.47% 22755 6.07900000 13.0740710 22400.00 22749 0.00187440 6.9950710 # USDC/USDT 0.9993 -0.02% 0.00070772 22000.00 6.9931966 BTC/USDT 10X 22688.44 2.13% 22721 1.88500000 6 9924889 # BCH/USDT 5X 126.73 0.5% 22712 1.24000000 5.1074889 TETH/USDT 10X 1571.66 0.91% 22710 0.15000000 3.8674889 1 1INCH/USDT 3X 0.5413 0.14% 22709 0.15000000 3.7174889 * AART/USDT 0.003047 -1.48% 22703 1.80900000 3.5674889 * AAVE/USDT 3X 83.07 0.91% 0.11505578 1.7584889 ACA/USDT 0.127317 4,48% 22693 0.43851580 1.6434331 * ACH/USDT 0.017014 12 13 15 Ö 6.07% 14 15:00 22692 0.17110000 1.2049173 ACX/USDT 0.062210 0.76% 5y 1y 6m 3m 1m 5d 1d 15:08:48 (UTC) 0.43851578 1.0338173 % log auto * ADA/USDT 5X 0.3896 4.92% 22688 0.36217641 0.5953015 G = Margin Trading*10X **Spot Trading** * ADX/USDT 0.182747 4.23% 22683 0.23312515 0.2331251 * AE/USDT 1.56% 22688.44 Stop-Limit Index: 22695.62 Market Stop-Market ≈ 22,693.87 USD * AGIX/USDT 0.426410 -1.03% 22682 3.68393624 3.6839362 Advanced: AL V M @ # AGLD/USDT 22681 0.00220360 3.6861398 AIOZ/USDT 0.039324 22679 0.11505816 3.8011980 20.8375 USDT Price 22691.02 USDT Price 22691.02 22678 0.11868846 3.9198864 Latest Execution 22675 0.09202290 4.0119093 втс втс 22672 0.08300000 4.2993206 Price(USDT) Time Amount(BTC) 22671 0.15000000 4.4493206 10:08:39 0 0 0.00761678 4.4569374 22,688,46 0.00081659 10:08:37 Value USDT USDT 22662 0.00970496 4.4666424 22,687.20 0.03000000 10:08:33 22661 0.00314498 4.4697874 22.687.20 0.00880000 10:08:33 0.00270334 4.4724907 22,691.02 0.00172315 10:08:23 Log In or Sign Up Log In or Sign Up 22.691.03 0.00557687 10:08:23 22653 0.01473096 4.4872217 22,691.02 0.00880000 10:08:17 22652 0.00354319 4.4907649 22,700.51 0.00832337 10:08:17 22650 1.60641501 6.0971799 22,700.51 0.00148176 10:08:17 22645 0.00050098 6.0976808 22,700.52 0.00057179 : I: I: 22,700.53 0.00210000 10:08:09 Current Order(0) Order History **Execution History** Margin(P) Normal Order(0) Stop Order(0) Log In or Sign Up and Trade **CoinEx** About Services Terms Support About Us Apply for Token Listing Fees Standard Help Center Making Crypto Trading Easier Market Makers Terms of Service Announcement Center Contact Us CoinEx Ambassador Privacy Policy © 2017-2023 CoinEx.com. All rights reserved CoinEx Partner Contact Support About CET Disclaimer BI Download CoinEx Charity Law Enforcement Proof of Reserve Blog Official Verific ? Help

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Exhibit 1.6



646 1053 434.76M 14.45B

Coins Markets 24H Value (USD) 30-Day Value (USD)



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Delivering crypto trading services to 200+ countries and regions





global traders.







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Master the process of crypto exchange readily

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Advanced

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The blockchain industry has expanded to such a large scale that each new year brings many fresh developments and innovations. There are many...

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Exhibit 1.7

2/17/23, 2:03 PM CoinEx - Global Crypto Exchange SCEF DOC . NO . 3

The Wayback Machine - https://web.archive.org/web/20220701031928/https://www.coinex.com/

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Market

CoinEx - Global Crypto Exchange RECEIVED NYSCEF: 02/22/2023

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(I) (C

Terms of Service

1. Acceptance of Terms

- 2. Scope of Service and Your Rights and Obligations
- 3. Risks Disclosures and Acknowledgements
- 4. Transaction & Fees
- 5. Modification /
 Suspension /
 Termination of Service
- 6. Rules of Use
- 7. Intellectual Property
- 8. Privacy Policy
- 9. Disclaimer of Liability
- 10. Risks
- 11. Indemnity
- 12. Notifications
- 13. Disclosures to Legal Authorities and Authorized Financial Institutions
- 14. Jurisdiction
- 15. Miscellaneous

Terms of Service

Swap

Exchange

Futures

VINO GLOBAL LIMITED operates in conjunction with its affiliates (hereinafter jointly referred to as the "Company" or "CoinEx") the website www.coinex.com (hereinafter referred to as "Site") and related mobile applications (hereinafter referred to as the "Platforms" which expression, for the avoidance of doubt, shall include the "Site") to provide users digital assets-only transaction and related services. For the purpose of these Terms, affiliate means another entity that directly, or indirectly through one or more intermediaries, controls or is controlled by or is under common control with VINO GLOBAL LIMITED. By completing the registration as a user of our Platforms, you agree with and accept these Terms of Service (hereinafter referred to as the "Terms") and all policies published on this website. IF YOU DO NOT ACCEPT THESE TERMS OF USE, DO NOT ACCESS THIS SITE AND DO NOT USE ANY OF COINEX'S SERVICES, PRODUCTS AND CONTENT.

Finance ~

1. Acceptance of Terms

- 1.1 You are at least 18 years of age and have the full capacity to accept these Terms and enter into a transaction involving digital assets. You are not deprived the right to use our service and have the full capacity for legal action. If you do not meet the above condition, please do not register at our Platforms, otherwise the Company may suspend or terminate your account at any time.
- 1.2 Your entering into and performing these Terms are not prohibited by the laws and regulations of the country or region to which you belong, reside, pay tax or carry out business activities or other business. If you do not meet the above conditions, you should immediately terminate the registration or stop using our Platforms' services.
- 1.3 By completing the full registration process or continuing to use our Platforms' related services from time to time, you fully understand and accept the entirety of these Terms, as amended and published from time to time on the Platforms. The contents of these Terms include all the terms of these Terms and the various rules that have been released by our Platforms or may be released in the future. All the rules published on the Platforms from time to time are hereby expressly incorporated and form an integral part of these Terms and have the same legal effect as the body of these Terms.
- 1.4 Our Platforms have the right to modify these Terms from time to time or to formulate and modify various specific rules according to these Terms and publish them in the relevant system sections of Platforms without separately notifying you. You should pay attention to the changes in these Terms and the specific rules from time to time. If you continue to use the services after the changes in the content of these Terms and the specific rules, you are deemed to have fully read, understood and accepted the amended Terms and the specific rules and to use the services of our Platforms in accordance therewith.
- 1.5 By accepting these Terms and/or accessing the services of our Platforms from your account (either personally or through another person) in accordance with these Terms and the relevant rules and instructions of our Platforms, these Terms shall have legal effect between you and CoinEx. These Terms do not cover legal relationships or legal disputes between you and other users of our Platforms as a result of network services or transactions, if any.
- 1.6 You also agree that CoinEx may, by giving notice, at its sole discretion immediately terminate your access to our Platforms and to your account. You agree and acknowledge our right to limit, suspend or terminate the service and your user account, prohibit your access to our Platforms and their content, services and tools, delay or remove hosted content, and take technical and legal steps to keep you off our Platforms or any further steps to recover any loss or damages caused if we determine at our sole discretion that you are or may be in breach of any laws, regulations, the rights of third parties, or any of these Terms or Platform's policies. CoinEx shall not be liable for any loss or damage caused to you or any third party as a result of exercising our rights under this clause.

2. Scope of Service and Your Rights and Obligations

- 2.1 CoinEx provides you with the service of trading one type of digital asset for another type of digital asset. We do not purchase or sell digital assets directly from or to users as principal. Our services do not provide users with the ability to trade one form of fiat currency for another form of fiat currency.
- 2.1.1 Users have the right to browse the digital currency real-time market and transaction information on our Platforms, and have the right to submit digital currency trading instructions and complete digital currency trading through our Platforms.
- 2.1.2 Users have the right to view the information regarding their accounts on our Platforms, and have the right to operate the functions provided by our Platforms.
- 2.1.3 Users have the right to participate in the website activities organized by our Platforms in accordance with the activity rules published by our Platforms and other services undertaken by our Platforms.
- 2.2 The user understands and agrees that our Platforms can adjust the service content, service type and service form on the Platforms at any time according to the actual situation at our sole discretion. Our Platforms are not responsible for any negative impact or loss caused to you or any third party due to Platforms adjustments.

RECEIVED NYSCEF: 02/22/2023 2.3 Depending on your country of residence, you may not be able to use all the functions of our Platforms. Without prejudice to our right of suspending certain services to users from a specific country, it is your responsibility to ensure that in accessing our

- Platforms and services, you are complying with the laws and regulations in your country of residence and/or the country from which you access our Platforms and services.
- 2.4 In order to access and use our services, you must create an account with CoinEx. You agree to:
- (1) provide accurate, current and complete information when creating the account;
- (2) maintain and promptly update your account information to keep it accurate, complete, and current;
- (3) maintain the security and confidentiality of your login credentials and restrict access to your account and your computer;
- (4) promptly notify CoinEx if you discover or otherwise suspect any security breaches related to our Platforms;
- (5) take responsibility for all activities that occur under your account and accept all risks of unauthorized access.
- 2.5 In order to provide services to users, our Platforms may use user's personal information, non-personal information, and information provided by third parties (hereinafter collectively referred to as "user information"). Once the user registers, logs in, and uses our Platforms' services, the user will be deemed to fully understand, agree and accept the reasonable use of the user information by the Company including but not limited to collection, statistics and analysis thereof.
- 2.6 You acknowledge that the status of the transaction confirmed by you on our Platforms in accordance with our Platforms' service processes would be an explicit direction for our Platforms to conduct related transactions or operations for you. You agree that our Platforms have the right to deal with related matters in accordance with these Terms and/or relevant documents and rules in accordance with the relevant directions.
- 2.7 You are responsible for any disputes or losses caused by your failure to promptly modify or confirm the status of the transaction or failure to submit the relevant application. Our Platforms do not assume any responsibility.

3. Risks Disclosures and Acknowledgements

- 3.1 Loan and Margin Trading Risk Disclosures and Acknowledgements.
- 3.1.1 CoinEx launches a loan service to provide users with long/short margin trading services.
- 3.1.2 The maximum amount of coins borrowed by the user is determined by the highest loan multiple, and currently CoinEx supports up to 5 times margin trading services.
- 3.1.3 CoinEx provides risk management services for margin trading by monitoring and managing the risks of users' margin accounts in CoinEx.
- 3.1.4 When using a margin trading, you unconditionally authorize CoinEx to take actions such as reducing the position, or even completely closing the position, when the user's loan is due or the risk of the margin trading occurs, without liability whatsoever to you.
- 3.1.5 When using margin trading, you should abide by relevant national laws and ensure that the source of the transaction assets is legal and compliant. Users shall not use margin trading to commit any crime against the law of the country where you belong to, reside, pay tax, carry out business activities or any other activities. Crimes herein include but not limited to money laundry.
- 3.1.6 When using margin trading, you should fully recognize the risks of digital asset investment and the risks of margin trading, and exercise caution and do your best.
- 3.1.7 You agree that all investment operations conducted at CoinEx represent your true willingness to invest and unconditionally accept the potential risks and benefits of investment decisions.
- 31.8 You understand that there may be fees and other related fees arising out of loan and margin trading, and agree to pay the corresponding fees according to the requirements of our Platforms published from time to time.
- 3.1.9 You agree that CoinEx retains the rights and authority to, at its sole discretion and without liability whatsoever to you or any third party, reduce the position, close the position, and automatically repay the risk control operation when the margin account is at risk, and unconditionally accepts the final result.
- 3.1.10 When using margin trading, if there is a position the loan account asset < (lending assets + interest), the difference will be recorded as arrears incurred by you. As long as there are arrears outstanding, the use of the withdrawal function will be restricted without affecting the transaction. The withdrawal function will be resumed after the arrears are repaid.
- 3.1.11 CoinEx reserves the right to suspend or terminate the business of loan and margin trading. When necessary, the Platforms may suspend or terminate the loan and leverage trading business at any time.
- 3.1.12 Due to unexpected problems such as system failure, network reasons, denial-of-service attacks and other hacking attacks, abnormal transactions, market interruptions, or other possible abnormal conditions, we have the right to cancel the abnormal transaction results and roll back all the deals during a certain period of time according to the actual situation at our sole discretion without any liability whatsoever to you or any third party.
- 3.2 Perpetual Contract Risk Disclosures and Acknowledgements

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3.2.1 Digital assets themselves are risky. The price of digital assets is prone to fluctuate, there is no limit for prices to go up and down, and there are unlimited transactions 24 hours a day, 7 days a week worldwide. Prices are easily affected by the control of the dealer and global news events, national policies, market demand and other factors. It may happen that prices rise several times a day, and prices may fall by half in one day. Due to the high leverage of the perpetual contract, you may suffer a large loss,

so we strongly recommend that participate in trading within the risk range that you can afford.

- 3.2.2 Due to unexpected problems such as system failure, network reasons, denial-of-service attacks and other hacking attacks, abnormal transactions, market interruptions, or other possible abnormal conditions, we have the right to cancel the abnormal transaction results and roll back all the deals during a certain period of time according to the actual situation at our sole discretion without any liability whatsoever to you or any third party.
- 3.2.3 We strictly prohibit any unfair trading practices. We have the right to warn against all unscrupulous behaviors such as maliciously manipulating prices, maliciously affecting trading systems, and, when necessary, to restrict transactions, suspend transactions, cancel transactions, reverse closed transactions, freeze accounts, rollback time transactions, etc., to eliminate adverse effects at our sole discretion without any liability whatsoever to you or any third party.
- 3.2.4 When your position margin cannot meet the Platform's requirements, your position will be forced to close. If the price fluctuates drastically and loss is incurred after using all risk control methods, we shall have the right to recover the loss from you.
- 3.2.5 When the number of positions or the number of orders is too large and we believe that there may be serious risks to the system and other users, you understand and agree that we have the right to ask you to take measures such as cancellation, closing and other risk control measures. In addition, when we deem it necessary, we have the right to control the risk of individual accounts by limiting the total number of positions, limiting the total number of orders, limiting the opening of positions, withdrawing orders or forcibly closing positions at our sole discretion without any liability whatsoever to you or any third party.

4. Transaction & Fees

- 4.1 Our Platforms will provide services for your transactions, and collect necessary services or management fees, in accordance with these Terms, relevant documents, agreements and/or relevant rules and instructions on our Platforms during the service process. Please refer to the relevant documents and the rules and descriptions of the relevant pages of our Platforms which are hereby expressly incorporated into these Terms and may be amended from time to time.
- 4.2You agree that our Platforms reserve the right to adjust the specific types and amounts of the aforementioned services or management fees from time to time and to make announcements and amendments in accordance with the Terms and related rules, and your continued access to our services constitutes your acceptance to the relevant rules in their latest forms.

5. Modification/Suspension/Termination of Service

- 5.1 These Terms shall remain in force unless unilaterally terminated by our Platforms or upon your application to terminate these Terms and with the consent of our Platforms. In the event that you violate these Terms, relevant rules, any laws or regulations, or we reasonably suspect that you are involved in illegal or inappropriate conduct in using our services, or at the request of government authorities, our Platforms reserve the right to, at our sole discretion and without any liability whatsoever to you, terminate these Terms, close your account, or restrict your use of our Platforms. However, our termination does not relieve you of your obligations under these Terms or other agreements generated on our Platforms.
- 5.2 If you find that a third person fraudulently misappropriated or misappropriated your user account and password, or any other circumstances that are not legally authorized, you should immediately notify our Platforms in an effective manner, requesting our Platforms to suspend the related services. All the liabilities, losses, damages, claims, costs or expenses arising from or in connection with use of your account, whether authorized or unauthorized, shall be borne by you.
- 5.3 In view of the particularity of the network service, you agree that our Platforms have the right to change, discontinue or terminate some or all of the network services at any time without prior notification nor any liability whatsoever to you or any third party.
- 5.4 You understand that our Platforms need to be repaired or maintained on a platform that provides network services (such as Internet sites, mobile networks, etc.) or related equipment on a regular or irregular basis. If such a situation causes the network service to be interrupted within a reasonable period of time, our Platforms shall provide notice as soon as practicable but shall not be responsible for any loss, damage, claim or liability otherwise arising therefrom.
- 5.5 Our Platforms have the right to stop, suspend or terminate all or part of the services under these Terms without notice, to take any mitigation or interlocutory measures (including without limitation to canceling or reversing transactions and freezing accounts), and to remove or delete the registration data, at our sole discretion without any liability whatsoever to you or any third party. Without prejudice to the generality of the above, we may seek to enforce our right in the following scenarios:
- (1) Our Platforms believe that the personal data you provide is not authentic, valid or complete;
- (2) Our Platforms discover or suspect an abnormal or illegal transaction or unusual activities on your part;
- (3) Our Platforms consider that your account is suspected of money laundering, cashing, pyramid schemes, fraudulent use or other situations that our Platforms consider to be risky;

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- (4) Our Platforms believe that you have violated these Terms;
- (5) If you use the fee-based network service, you do not pay the corresponding service fee to our Platforms as required;
- (6) We detect unauthorized access to your account, or your account is subject to a governmental proceeding, criminal/regulatory investigation or any pending litigation;
- (7) Other circumstances in which at our Platforms' sole discretion, it is necessary to suspend, interrupt or terminate all or part of the services under these Terms and remove or delete the registration data.
- 5.6 You agree that the suspension, interruption or termination of your account or any other measures taken by us pursuant to the preceding clause does not release you from your liability, and you shall be liable for possible breach of contract or damages or any other cause of action during your use of the Platform's services, and our Platforms may retain your information.
- 5.7 If the account of the free network service you registered is not actually used for any consecutive 90 days, our Platforms have the right to delete the account and stop providing relevant network services for you.

6. Rules of Use

- 6.1 [Account Information Content Specification]
- (1) When applying for the Platforms' service, you should provide accurate personal information in accordance with the relevant rules of the platform. If there is any change in personal data, you should update it in time.
- (2) You should not transfer or lend your account number or password to others. If you find that others have illegally used your account, you should immediately notify the Platforms. Our Platforms do not assume any responsibility for the illegal use of accounts and passwords due to viruses, hacking or negligence of users.
- 6.2 [Service Operation Specifications]
- 6.2.1 Users shall abide by the provisions of laws, regulations, rules, regulatory documents and policy requirements to ensure the legality of all digital currency sources in the account. You may not engage in the following acts during the use of our Platforms and related services, except as permitted by law or with the written permission of the Platforms:
- (1) Use the Platforms' service to conduct any behavior that may adversely affect the normal operation of the internet or mobile network;
- (2) Upload, display or disseminate any false, harassing, slanderous, abusive, intimidating, vulgar information or speeches or any other information or speeches in violation of laws and regulations, by using the web services provided by the Platforms.
- (3) Use the Platforms' service system to conduct any behavior that is not conducive to the Platforms;
- (4) Infringe on the legal rights of third parties, such as reputation rights, portrait rights, intellectual property rights, trade secrets, etc. or infringe on the commercial interests of anyone;
- (5) Induce other users to click on the link page or share information, or use the Platforms' accounts and any features, as well as third-party operating platforms, for promotional purposes without written permission from the Platforms, or to publish commercials that are not licensed by the Platforms;
- (6) Produce or publish methods or tools related to the above acts, or operate or disseminate the methods or tools, whether or not they are for commercial purposes;
- (7) Other breach or potential breach of laws and regulations, rights of any third party, interference with the normal operation of the Platforms.
- 6.2.2 The user promises to comply with all the digital currency trading rules of the Platforms including but not limited to the following:
- (1) Browse transaction information

When users browse digital currency transaction information on the Platforms, they should carefully read all the content contained in the transaction information, including but not limited to digital currency price, request amount, handling fee, buying or selling direction, and the users shall fully accept all the content contained in the transaction information before entering into a transaction by clicking the button.

(2) Submit a request

The user can submit a transaction request after checking and confirming the transaction information. After the user submits the transaction request, that is, the user authorizes our Platforms to perform the corresponding matching transaction on behalf of the user, our Platforms will automatically complete the matching transaction when there is a transaction satisfying the user's requested price without notifying the user in advance.

(3) View transaction details

The user can view the corresponding transaction record through the account transaction details to confirm their detailed transaction records.

(4) Cancellation / modification of request

The user has the right to revoke or modify the request at any time before the matching transaction is executed.

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6.3 Our Platforms have the right to review and supervise your use of the Platforms' services (including but not limited to approving the content stored on our Platforms by you). If you use the Platforms' services in violation of any of the above provisions, our Platforms have the right to ask you to remedy your breach (if possible) or directly take all necessary measures (including but not limited to changing or deleting the content you posted, suspending or terminating your right to use the services) to mitigate the impact of your conduct.

- 6.4 Orders you place on CoinEx during regular operation will normally be executed if the market price is at a point within the limits of your order. However, we do not guarantee that your order will be filled even if the market price was within your limit at the time such order was placed or was otherwise open. Orders you place on CoinEx during planned or unplanned downtime will be processed on a commercially reasonable efforts basis once we resume operations. CoinEx reserves the right to reject or cancel orders made and/or pending during downtime.
- 6.5 Orders may be subject to, and CoinEx shall have no liability for, delays, difficulties, and/or conditions affecting transmission or execution of orders over which CoinEx has no control, including, but not limited to, mechanical or electronic failure or market congestion.

7. Intellectual Property

- 7.1 All content on our Platforms are the property of CoinEx and is protected by copyright, patent, trademark and any other applicable laws, unless otherwise specified hereby.
- 7.2 The trademarks, trade names, service marks and logos of CoinEx and others used on our Platforms are the property of CoinEx and its respective owners. The software, applications, text, images, graphics, data, prices, trades, charts, graphs, video and audio materials used on our Platforms belong to CoinEx. The trademarks and other content on our Platforms should not be copied, reproduced, modified, republished, uploaded, posted, transmitted, scraped, collected or distributed in any form or by any means, no matter manual or automated.
- 7.3 The use of any content from our Platforms on any other site or a networked computer environment for any other purpose is strictly prohibited; any such unauthorized use may violate copyright, patent, trademark and any other applicable laws and could result in criminal or civil penalties.
- 7.4 CoinEx is a trademark owned by the Company and allows no unauthorized use by any user or third parties.
- 7.5 CoinEx supports the protection of intellectual property. If you would like to submit (i) a trademark claim for violation of a mark on which you hold a valid, registered trademark or service mark, or (ii) a copyright claim for material on which you hold a bona fide copyright, please send us an email to support@coinex.com.

8. Privacy Policy

Once the user registers, logs in, and uses our Platforms' services, the user will be deemed to fully understand, agree and accept our Platforms' privacy agreement.

9. Disclaimer of Liability

Our Platforms are not giving investment advice, tax advice, legal advice, or other professional advice by allowing you to use our services or providing the services herein, the ability to purchase or sell digital assets or the storage of digital assets, and we do not recommend, or endorse that you purchase or sell digital assets, or make any investment. Before engaging in any transaction or investment activity, you should consult a qualified professional.

The services that we provide through CoinEx are provided to you on a strictly "as is," "where is" and "where available" basis. The company does not represent or warrant to the accuracy, completeness, currentness, non-infringement, merchantability, or fitness for a particular purpose of CoinEx or the information contained therein or services contained thereon. The company shall not be liable to you or anyone else for any loss or injury resulting directly or indirectly from your use of CoinEx or any services provided by CoinEx, including any loss caused in whole or part by any inaccuracies or incompleteness, delays, interruptions, errors or omissions, including, but not limited to, those arising from the negligence of the company or contingencies beyond their control in procuring, compiling, interpreting, computing, reporting, or delivering CoinEx, the services thereon or the information therein. In no event will the company be liable to you or anyone else for any decision made or action taken by you in reliance on, or in connection with your use of CoinEx, the services thereon or the information therein.

In no event will the company be liable to you, whether in contract or tort, for any direct, special, indirect, consequential or incidental damages or any other damages of any kind even if the company has been advised of the possibility thereof. This limitation on liability includes, but is not limited to, the transmission of any viruses which may infect a user's equipment, failure of mechanical or electronic equipment or communication lines, telephone or other interconnect problem, unauthorized access, theft, operator errors, strikes or other labor problems or any force majeure. We cannot and do not quarantee continuous, uninterrupted or secure access to CoinEx.

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10. Risks

- 10.1 Digital assets transaction may be subject to high risks.
- 10.1.1 The risk of loss in trading digital assets may be substantial and losses may occur over a short period of time.
- 10.1.2 The price and liquidity of digital assets have been subject to large fluctuations in the

past and may be subject to large fluctuations in the future.

- 10.2 You acknowledge that you are solely responsible for determining the nature, potential value, suitability, and appropriateness of these risks for you, and that CoinEx does not give advice or recommendations.
- 10.3 Legislative and regulatory changes or actions at the state, federal or international level may adversely affect the use, transfer, exchange and value of digital assets.

11. Indemnity

You agree to defend, indemnify and hold harmless CoinEx from any claim, demand, action, damage, loss, cost or expense, including without limitation reasonable attorneys' fees, arising out or relating to your violation of these Terms; or your violation of any laws, rules or regulations; or your violation of any rights of any other person or entity; or your use of all or part of the services provided by the Platforms.

12. Notifications

- 12.1 Notices under these Terms are made by way of public notice and are deemed to have been served as soon as they are published on our Platforms. In addition, other proprietary notices that are posted to you personally will be provided by our Platforms to the email address provided by you at the time of registration, or the in-site message in your personal account, or to the mobile phone provided to our Platforms after your registration. Once sent, it will be deemed to have been delivered. Please pay close attention to your email address, emails in the message system of the site, messages and SMS messages in your mobile phone.
- 12.2 You understand and agree that all communication with you will be via electronic communication, including emails, site messages and SMS, and we will use those means to provide you with account-related notices and order receipts. To ensure that you receive all of our communications, you agree to keep your email address up-to-date and notify us immediately if there is any change. Delivery of any notice to the email address/mobile number on record with your user account will be considered valid. If any email is returned as undeliverable, we retain the right to block access to your user account until you provide and confirm a new email address.

13. Disclosures to Legal Authorities and Authorized Financial Institutions

- 13.1 We may share your personal data with law enforcement agents, data protection authorities, government officials, and other authorities when:
- 13.1.1 required by law;
- 13.1.2 compelled by subpoena, court order, or other legal procedure;
- 13.1.3 we believe that disclosure is necessary to prevent damage or financial loss;
- 13.1.4 disclosure is necessary to report suspected illegal activity;
- 13.1.5 disclosure is necessary to investigate violations of these terms.

14. Jurisdiction

These Terms shall be governed by and construed in accordance with the laws of the Republic of Samoa. The courts of Samoa shall have exclusive jurisdiction to settle any dispute arising from or connected with these Terms (including a dispute relating to the existence, validity or termination of these Terms or the consequences of their nullity or any non-contractual obligation arising out of or in connection with these Terms).

15. Miscellaneous

Our Platforms reserve the right of final interpretation of these Terms within the scope permitted by law. These Terms and related pages of our Platforms may refer to each other. If there is any conflict, these Terms shall prevail. In addition, if some of the provisions in these Terms are deemed invalid or unenforceable, the other provisions in these Terms will remain in effect.

In the event of any conflict between these Terms and any other agreement you may have with CoinEx, the terms of that other agreement will prevail only if these Terms are specifically identified and declared to be overridden by such other agreement.

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Any failure or delay by CoinEx to enforce any of these Terms or to exercise any right hereunder shall not be construed as a waiver to any extent of our rights.



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2022-07-01 03:19:38 UTC+0 24H Value: 0.00 USD

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Exhibit 1.8

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Terms of Service

These CoinEx Terms of Use is entered into between you (hereinafter referred to as "you" or "your") and CoinEx operators (as defined below). By accessing, downloading, using or clicking on "I agree" to accept any CoinEx Services (as defined below) provided by CoinEx (as defined below), you agree that you have read, understood and accepted all of the terms and conditions stipulated in these Terms of Use (hereinafter referred to as "these Terms") as well as our Privacy Policy at https://www.coinex.com/privacy. In addition, when using some features of the Services, you may be subject to specific additional terms and conditions applicable to those features.

By completing the registration as a user of our Platforms, you agree with and accept these Terms of Service (hereinafter referred to as the "Terms") and all policies published on this website. IF YOU DO NOT ACCEPT THESE TERMS OF USE, DO NOT ACCESS THIS SITE AND DO NOT USE ANY OF COINEX'S SERVICES, PRODUCTS AND CONTENT.

1. Definitions

- 1.1 CoinEx refers to an ecosystem comprising CoinEx websites (whose domain names include but are not limited to https://www.coinex.com/), mobile applications, clients, applets and other applications that are developed to offer CoinEx Services, and includes independently-operated platforms, websites and clients within the ecosystem. In case of any inconsistency between relevant terms of use of the above platforms and the contents of these Terms, the respective applicable terms of such platforms shall prevail.
- 1.2 Coinex Operators refer to all parties that run Coinex, including but not limited to legal persons, unincorporated organizations and teams that provide Coinex Services and are responsible for such services. For convenience, unless otherwise stated, references to "Coinex" and "we" in these Terms specifically mean Coinex Operators. Under these Terms, Coinex Operators May Change as Coinex's Business adjusts, in which case, the Changed Operators Shall Perform Their Obligations under these Terms with you and Provide Services to you, and such Change does not affect your rights and interests under these Terms. Additionally, the scope of Coinex Operators may be expanded due to the Provision of New Coinex Services, in which case, if you continue to use coinex services, it is deemed that you have agreed to jointly execute these terms with the newly added Coinex Operators. In case of a dispute, you shall determine the entities by which these terms are performed with you and the counterparties of the dispute, depending on the specific services you use and the particular actions that affect your rights or interests.
- 1.3 CoinEx Services refer to various services provided to you by CoinEx that are based on Internet and/or blockchain technologies and offered via CoinEx websites, mobile applications, clients and other forms (including new ones enabled by future technological development).

2. Acceptance of Terms

- 2.1 You are at least 18 years of age and have the full capacity to accept these Terms and enter into a transaction involving digital assets. You are not deprived the right to use our service and have the full capacity for legal action. If you do not meet the above condition, please do not register at our Platforms, otherwise the Company may suspend or terminate your account at any time.
- 2.2 Your entering into and performing these Terms are not prohibited by the laws and regulations of the country or region to which you belong, reside, pay tax or carry out business activities or other business. If you do not meet the above conditions, you should immediately terminate the registration or stop using our Platforms' services.
- 2.3 By completing the full registration process or continuing to use our Platforms' related services from time to time, you fully understand and accept the entirety of these Terms, as amended and published from time to time on the Platforms. The contents of these Terms include all the terms of these Terms and the various rules that have been released by our Platforms or may be released in the future. All the rules published on the Platforms from time to time are hereby expressly incorporated and form an integral part of these Terms and have the same legal effect as the body of these Terms.
- 2.4 Our Platforms have the right to modify these Terms from time to time or to formulate and modify various specific rules according to these Terms and publish them in the relevant system sections of Platforms without separately notifying you. You should pay attention to the changes in these Terms and the specific rules from time to time. If you continue to use the services after the changes in the content of these Terms and the specific rules, you are deemed to have fully read, understood and accepted the amended Terms and the specific rules and to use the services of our Platforms in accordance therewith.
- 2.5 By accepting these Terms and/or accessing the services of our Platforms from your account (either personally or through another person) in accordance with these Terms and the relevant rules and instructions of our Platforms, these Terms shall have legal effect between you and CoinEx. These Terms do not

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and tools, delay or remove hosted content, and take technical and legal steps to keep you off our Platforms or any further steps to recover any loss or damages caused if we determine at our sole discretion that you are or may be in breach of any laws, regulations, the rights of third parties, or any of these Terms or Platform's policies. CoinEx shall not be liable for any loss or damage caused to you or any third party as a result of exercising our rights under this clause.

3. Scope of Service and Your Rights and Obligations

- 3.1 CoinEx provides you with the service of trading one type of digital asset for another type of digital asset. We do not purchase or sell digital assets directly from or to users as principal. Our services do not provide users with the ability to trade one form of fiat currency for another form of fiat currency.
- 3.1.1 Users have the right to browse the digital currency real-time market and transaction information on our Platforms, and have the right to submit digital currency trading instructions and complete digital currency trading through our Platforms.
- 3.1.2 Users have the right to view the information regarding their accounts on our Platforms, and have the right to operate the functions provided by our Platforms.
- 3.1.3 Users have the right to participate in the website activities organized by our Platforms in accordance with the activity rules published by our Platforms and other services undertaken by our Platforms.
- 3.2 The user understands and agrees that our Platforms can adjust the service content, service type and service form on the Platforms at any time according to the actual situation at our sole discretion. Our Platforms are not responsible for any negative impact or loss caused to you or any third party due to Platforms adjustments.
- 3.3 Depending on your country of residence, you may not be able to use all the functions of our Platforms. Without prejudice to our right of suspending certain services to users from a specific country, it is your responsibility to ensure that in accessing our Platforms and services, you are complying with the laws and regulations in your country of residence and/or the country from which you access our Platforms and services.
- 3.4 In order to access and use our services, you must create an account with CoinEx. You agree to:
- (1) provide accurate, current and complete information when creating the account;
- (2) maintain and promptly update your account information to keep it accurate, complete, and current;
- (3) maintain the security and confidentiality of your login credentials and restrict access to your account and your computer;
- (4) promptly notify CoinEx if you discover or otherwise suspect any security breaches related to our Platforms;
- (5) take responsibility for all activities that occur under your account and accept all risks of unauthorized access.
- 3.5 In order to provide services to users, our Platforms may use user's personal information, non-personal information, and information provided by third parties (hereinafter collectively referred to as "user information"). Once the user registers, logs in, and uses our Platforms' services, the user will be deemed to fully understand, agree and accept the reasonable use of the user information by the Company including but not limited to collection, statistics and analysis thereof.
- 3.6 You acknowledge that the status of the transaction confirmed by you on our Platforms in accordance with our Platforms' service processes would be an explicit direction for our Platforms to conduct related transactions or operations for you. You agree that our Platforms have the right to deal with related matters in accordance with these Terms and/or relevant documents and rules in accordance with the relevant directions.
- 3.7 You are responsible for any disputes or losses caused by your failure to promptly modify or confirm the status of the transaction or failure to submit the relevant application. Our Platforms do not assume any responsibility.

4. Risks Disclosures and Acknowledgements

- 4.1 Loan and Margin Trading Risk Disclosures and Acknowledgements.
- 4.1.1 CoinEx launches a loan service to provide users with long/short margin trading services.
- 4.1.2 The maximum amount of coins borrowed by the user is determined by the highest loan multiple, and currently CoinEx supports up to 5 times margin trading services.
- 4.1.3 CoinEx provides risk management services for margin trading by monitoring and managing the risks of users' margin accounts in CoinEx.
- 4.1.4 When using a margin trading, you unconditionally authorize CoinEx to take actions such as reducing the position, or even completely closing the position, when the user's loan is due or the risk of the margin trading occurs, without liability whatsoever to you.
- 4.1.5 When using margin trading, you should abide by relevant national laws and ensure that the source of the transaction assets is legal and compliant. Users shall not use margin trading to commit any crime against the law of the country where you belong to, reside, pay tax, carry out business activities or any other

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- 4.1.7 You agree that all investment operations conducted at CoinEx represent your true willingness to invest and unconditionally accept the potential risks and benefits of investment decisions.
- 4.1.8 You understand that there may be fees and other related fees arising out of loan and margin trading, and agree to pay the corresponding fees according to the requirements of our Platforms published from time to time.
- 4.1.9 You agree that CoinEx retains the rights and authority to, at its sole discretion and without liability whatsoever to you or any third party, reduce the position, close the position, and automatically repay the risk control operation when the margin account is at risk, and unconditionally accepts the final result.
- 4.1.10 When using margin trading, if there is a position the loan account asset < (lending assets + interest), the difference will be recorded as arrears incurred by you. As long as there are arrears outstanding, the use of the withdrawal function will be restricted without affecting the transaction. The withdrawal function will be resumed after the arrears are repaid.
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- 4.1.12 Due to unexpected problems such as system failure, network reasons, denial-of-service attacks and other hacking attacks, abnormal transactions, market interruptions, or other possible abnormal conditions, we have the right to cancel the abnormal transaction results and roll back all the deals during a certain period of time according to the actual situation at our sole discretion without any liability whatsoever to you or any third party.
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- 4.2.3 We strictly prohibit any unfair trading practices. We have the right to warn against all unscrupulous behaviors such as maliciously manipulating prices, maliciously affecting trading systems, and, when necessary, to restrict transactions, suspend transactions, cancel transactions, reverse closed transactions, freeze accounts, rollback time transactions, etc., to eliminate adverse effects at our sole discretion without any liability whatsoever to you or any third party.
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- 4.2.5 When the number of positions or the number of orders is too large and we believe that there may be serious risks to the system and other users, you understand and agree that we have the right to ask you to take measures such as cancellation, closing and other risk control measures. In addition, when we deem it necessary, we have the right to control the risk of individual accounts by limiting the total number of positions, limiting the total number of orders, limiting the opening of positions, withdrawing orders or forcibly closing positions at our sole discretion without any liability whatsoever to you or any third party.

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- 5.2You agree that our Platforms reserve the right to adjust the specific types and amounts of the aforementioned services or management fees from time to time and to make announcements and amendments in accordance with the Terms and related rules, and your continued access to our services constitutes your acceptance to the relevant rules in their latest forms.

6. Modification/Suspension/Termination of Service

- 6.1 These Terms shall remain in force unless unilaterally terminated by our Platforms or upon your application to terminate these Terms and with the consent of our Platforms. In the event that you violate these Terms, relevant rules, any laws or regulations, or we reasonably suspect that you are involved in illegal or inappropriate conduct in using our services, or at the request of government authorities, our Platforms reserve the right to, at our sole discretion and without any liability whatsoever to you, terminate these Terms, close your account, or restrict your use of our Platforms. However, our termination does not relieve you of your obligations under these Terms or other agreements generated on our Platforms.
- 6.2 If you find that a third person fraudulently misappropriated or misappropriated your user account and password, or any other circumstances that are not legally authorized, you should immediately notify our Platforms in an effective manner, requesting our Platforms to suspend the related services. All the

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network services at any time without prior notification nor any liability whatsoever to you or any third party.

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6.4 You understand that our Platforms need to be repaired or maintained on a platform that provides network services (such as Internet sites, mobile networks, etc.) or related equipment on a regular or irregular basis. If such a situation causes the network service to be interrupted within a reasonable period of time, our Platforms shall provide notice as soon as practicable but shall not be responsible for any loss, damage, claim or liability otherwise arising therefrom.

- 6.5 Our Platforms have the right to stop, suspend or terminate all or part of the services under these Terms without notice, to take any mitigation or interlocutory measures (including without limitation to canceling or reversing transactions and freezing accounts), and to remove or delete the registration data, at our sole discretion without any liability whatsoever to you or any third party. Without prejudice to the generality of the above, we may seek to enforce our right in the following scenarios:
- (1) Our Platforms believe that the personal data you provide is not authentic, valid or complete;
- (2) Our Platforms discover or suspect an abnormal or illegal transaction or unusual activities on your part;
- (3) Our Platforms consider that your account is suspected of money laundering, cashing, pyramid schemes, fraudulent use or other situations that our Platforms consider to be risky;
- (4) Our Platforms believe that you have violated these Terms;
- (5) If you use the fee-based network service, you do not pay the corresponding service fee to our Platforms as required;
- (6) We detect unauthorized access to your account, or your account is subject to a governmental proceeding, criminal/regulatory investigation or any pending litigation;
- (7) Other circumstances in which at our Platforms' sole discretion, it is necessary to suspend, interrupt or terminate all or part of the services under these Terms and remove or delete the registration data.
- 6.6 You agree that the suspension, interruption or termination of your account or any other measures taken by us pursuant to the preceding clause does not release you from your liability, and you shall be liable for possible breach of contract or damages or any other cause of action during your use of the Platform's services, and our Platforms may retain your information.
- 6.7 If the account of the free network service you registered is not actually used for any consecutive 90 days, our Platforms have the right to delete the account and stop providing relevant network services for you.

7. Rules of Use

- 7.1 [Account Information Content Specification]
- (1) When applying for the Platforms' service, you should provide accurate personal information in accordance with the relevant rules of the platform. If there is any change in personal data, you should update it in time.
- (2) You should not transfer or lend your account number or password to others. If you find that others have illegally used your account, you should immediately notify the Platforms. Our Platforms do not assume any responsibility for the illegal use of accounts and passwords due to viruses, hacking or negligence of users.
- 7.2 [Service Operation Specifications]
- 7.2.1 Users shall abide by the provisions of laws, regulations, rules, regulatory documents and policy requirements to ensure the legality of all digital currency sources in the account. You may not engage in the following acts during the use of our Platforms and related services, except as permitted by law or with the written permission of the Platforms:
- (1) Use the Platforms' service to conduct any behavior that may adversely affect the normal operation of the internet or mobile network;
- (2) Upload, display or disseminate any false, harassing, slanderous, abusive, intimidating, vulgar information or speeches or any other information or speeches in violation of laws and regulations, by using the web services provided by the Platforms.
- (3) Use the Platforms' service system to conduct any behavior that is not conducive to the Platforms;
- (4) Infringe on the legal rights of third parties, such as reputation rights, portrait rights, intellectual property rights, trade secrets, etc. or infringe on the commercial interests of anyone;
- (5) Induce other users to click on the link page or share information, or use the Platforms' accounts and any features, as well as third-party operating platforms, for promotional purposes without written permission from the Platforms, or to publish commercials that are not licensed by the Platforms;
- (6) Produce or publish methods or tools related to the above acts, or operate or disseminate the methods or tools, whether or not they are for commercial purposes;
- (7) Other breach or potential breach of laws and regulations, rights of any third party, interference with the normal operation of the Platforms.

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When users browse digital currency transaction information on the Platforms, they should carefully read all the content contained in the transaction information, including but not limited to digital currency price, request amount, handling fee, buying or selling direction, and the users shall fully accept all the content contained in the transaction information before entering into a transaction by clicking the button.

(2) Submit a request

The user can submit a transaction request after checking and confirming the transaction information. After the user submits the transaction request, that is, the user authorizes our Platforms to perform the corresponding matching transaction on behalf of the user, our Platforms will automatically complete the matching transaction when there is a transaction satisfying the user's requested price without notifying the user in advance.

(3) View transaction details

The user can view the corresponding transaction record through the account transaction details to confirm their detailed transaction records.

(4) Cancellation / modification of request

The user has the right to revoke or modify the request at any time before the matching transaction is executed.

- 7.3 Our Platforms have the right to review and supervise your use of the Platforms' services (including but not limited to approving the content stored on our Platforms by you). If you use the Platforms' services in violation of any of the above provisions, our Platforms have the right to ask you to remedy your breach (if possible) or directly take all necessary measures (including but not limited to changing or deleting the content you posted, suspending or terminating your right to use the services) to mitigate the impact of your conduct.
- 7.4 Orders you place on CoinEx during regular operation will normally be executed if the market price is at a point within the limits of your order. However, we do not guarantee that your order will be filled even if the market price was within your limit at the time such order was placed or was otherwise open. Orders you place on CoinEx during planned or unplanned downtime will be processed on a commercially reasonable efforts basis once we resume operations. CoinEx reserves the right to reject or cancel orders made and/or pending during downtime.
- 7.5 Orders may be subject to, and CoinEx shall have no liability for, delays, difficulties, and/or conditions affecting transmission or execution of orders over which CoinEx has no control, including, but not limited to, mechanical or electronic failure or market congestion.

8. Intellectual Property

- 8.1 All content on our Platforms are the property of CoinEx and is protected by copyright, patent, trademark and any other applicable laws, unless otherwise specified hereby.
- 8.2 The trademarks, trade names, service marks and logos of CoinEx and others used on our Platforms are the property of CoinEx and its respective owners. The software, applications, text, images, graphics, data, prices, trades, charts, graphs, video and audio materials used on our Platforms belong to CoinEx. The trademarks and other content on our Platforms should not be copied, reproduced, modified, republished, uploaded, posted, transmitted, scraped, collected or distributed in any form or by any means, no matter manual or automated.
- 7.3 The use of any content from our Platforms on any other site or a networked computer environment for any other purpose is strictly prohibited; any such unauthorized use may violate copyright, patent, trademark and any other applicable laws and could result in criminal or civil penalties.
- 8.4 CoinEx is a trademark owned by the Company and allows no unauthorized use by any user or third parties.
- 8.5 CoinEx supports the protection of intellectual property. If you would like to submit (i) a trademark claim for violation of a mark on which you hold a valid, registered trademark or service mark, or (ii) a copyright claim for material on which you hold a bona fide copyright, please send us an email to support@coinex.com.

9. Privacy Policy

Once the user registers, logs in, and uses our Platforms' services, the user will be deemed to fully understand, agree and accept our Platforms' privacy agreement.

10. Disclaimer of Liability

Our Platforms are not giving investment advice, tax advice, legal advice, or other professional advice by allowing you to use our services or providing the services herein, the ability to purchase or sell digital assets or the storage of digital assets, and we do not recommend, or endorse that you purchase or sell digital assets, or make any investment. Before engaging in any transaction or investment activity, you should consult a qualified professional.

The services that we provide through CoinEx are provided to you on a strictly "as is," "where is" and "where available" basis. The company does not represent or warrant to the accuracy, completeness, currentness, non-infringement, merchantability, or fitness for a particular purpose of CoinEx or the information contained therein or services contained thereon. The company shall not be liable to you or anyone else for any loss or injury resulting directly or indirectly from

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or anyone else for any decision made or action taken by you in reliance on, or in connection with your use of CoinEx, the services thereon or the information therein.

In no event will the company be liable to you, whether in contract or tort, for any direct, special, indirect, consequential or incidental damages or any other damages of any kind even if the company has been advised of the possibility thereof. This limitation on liability includes, but is not limited to, the transmission of any viruses which may infect a user's equipment, failure of mechanical or electronic equipment or communication lines, telephone or other interconnect problem, unauthorized access, theft, operator errors, strikes or other labor problems or any force majeure. We cannot and do not guarantee continuous, uninterrupted or secure access to CoinEx.

11. Risks

- 11.1 Digital assets transaction may be subject to high risks.
- 11.1.1 The risk of loss in trading digital assets may be substantial and losses may occur over a short period of time.
- 11.1.2 The price and liquidity of digital assets have been subject to large fluctuations in the
- past and may be subject to large fluctuations in the future.
- 11.2 You acknowledge that you are solely responsible for determining the nature, potential value, suitability, and appropriateness of these risks for you, and that CoinEx does not give advice or recommendations.
- 11.3 Legislative and regulatory changes or actions at the state, federal or international level may adversely affect the use, transfer, exchange and value of digital assets.

12. Indemnity

You agree to defend, indemnify and hold harmless CoinEx from any claim, demand, action, damage, loss, cost or expense, including without limitation reasonable attorneys' fees, arising out or relating to your violation of these Terms; or your violation of any laws, rules or regulations; or your violation of any rights of any other person or entity; or your use of all or part of the services provided by the Platforms.

13. Notifications

- 13.1 Notices under these Terms are made by way of public notice and are deemed to have been served as soon as they are published on our Platforms. In addition, other proprietary notices that are posted to you personally will be provided by our Platforms to the email address provided by you at the time of registration, or the in-site message in your personal account, or to the mobile phone provided to our Platforms after your registration. Once sent, it will be deemed to have been delivered. Please pay close attention to your email address, emails in the message system of the site, messages and SMS messages in your mobile phone.
- 13.2 You understand and agree that all communication with you will be via electronic communication, including emails, site messages and SMS, and we will use those means to provide you with account-related notices and order receipts. To ensure that you receive all of our communications, you agree to keep your email address up-to-date and notify us immediately if there is any change. Delivery of any notice to the email address/mobile number on record with your user account will be considered valid. If any email is returned as undeliverable, we retain the right to block access to your user account until you provide and confirm a new email address.

14. Disclosures to Legal Authorities and Authorized Financial Institutions

- 14.1 We may share your personal data with law enforcement agents, data protection authorities, government officials, and other authorities when:
- 14.1.1 required by law;
- 14.1.2 compelled by subpoena, court order, or other legal procedure;
- 14.1.3 we believe that disclosure is necessary to prevent damage or financial loss;
- 14.1.4 disclosure is necessary to report suspected illegal activity;
- 14.1.5 disclosure is necessary to investigate violations of these terms.

15. Jurisdiction

These Terms shall be governed by and construed in accordance with the laws of the Republic of Samoa. The courts of Samoa shall have exclusive jurisdiction to

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16. Miscellaneous

Our Platforms reserve the right of final interpretation of these Terms within the scope permitted by law. These Terms and related pages of our Platforms may refer to each other. If there is any conflict, these Terms shall prevail. In addition, if some of the provisions in these Terms are deemed invalid or unenforceable, the other provisions in these Terms will remain in effect.

In the event of any conflict between these Terms and any other agreement you may have with CoinEx, the terms of that other agreement will prevail only if these Terms are specifically identified and declared to be overridden by such other agreement.

Any failure or delay by CoinEx to enforce any of these Terms or to exercise any right hereunder shall not be construed as a waiver to any extent of our rights.



About

Services **Terms**

Support

Making Crypto Trading Easier











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2023-02-17 14:16:14 UTC-5 24H Value: 569,300,888.87 USD

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What Makes CoinEx Stand Out? Founder & CEO, Haipo Yang Answers **Users' Questions**



CoinEx Founder & CEO Haipo Yang (Photo: Business Wire)



January 12, 2022 09:00 AM Eastern Standard Time

HONG KONG--(BUSINESS WIRE)--On December 14, 2021, Haipo Yang, the founder of CoinEx, answered questions from netizens on Twitter. The questions center on the efforts CoinEx has made in the past four years to become the world's best crypto trading platform. In his answers, Haipo shared his views on crypto topics such as investment categories, regulation, and products & services.

1. Of the many ups and downs CoinEx has gone through in the past four years, what was the most complicated challenge? How did you meet it?

Feeling lost was the most complicated challenge we had. We struggled to find the answers to many questions, including: What kind of exchange should we be? How do we realize this? Does the future look good for the crypto industry? Personally, I felt lost, but the team was even more so. Many start-up teams will be able to relate to this. Fortunately, we pulled through.

In my view, the most crucial thing when we face such a challenge is to have faith. We must believe that blockchain could change the world, that we could find a suitable direction for growth, that the team will grow stronger, and that the market will usher into a bright future. I've also kept improving myself in different ways to study CoinEx's strategic goals and identify the right path while sharing my thoughts with the team.

2. As we all know, you aim to turn CoinEx into a mainstream exchange. In your view, what is needed to achieve this goal?

Yes, my goal is to help CoinEx grow into a great exchange, as well as the infrastructure of the blockchain world. To achieve this goal, we need to build a strong, global team. On the one hand, CoinEx should provide safe, stable, simple, and easy-to-use products to meet the demand for crypto trades among investors. On the other hand, in the inherently globalized blockchain market, we need a global team for promotion in different markets so that CoinEx will be available to users in more countries and

3. Right now, most investors are only concerned with their immediate profits while ignoring their long-term interests. What is your suggestion for such investors? Why should they choose to purchase and hold these tokens over the long run?

Investment is a highly specialized field. We all know that one needs to learn how to swim before jumping into the pool. However, most people have had no training before diving into the investment market. Throughout the years I spent in investment, it has become clear to me that the failure rate of short-term trading, especially highly leveraged trades, is staggeringly high, and only a few extremely gifted investors win the game. For most people, long-term investment promises a higher success rate. However, this is not to say that you can sit back and relax after making a purchase. Instead, we need to stay updated on the developments of the target project. More importantly, we should embrace new developments and concepts that keep popping up with an open mind and capture the latest crypto trends by adjusting our investment portfolio.

4. There must be an experienced team behind all the great features of CoinEx. Could you talk about your team and their background?

We do have rich experiences in the crypto industry. In the early days, I had worked as a software engineer at Internet giants like Tencent. After going into the blockchain space in 2014, I had been involved in the development of mining machines, mining pools, cloud hash rate services, wallets, exchanges, and public chains. To me, security and the relevant background are always a priority. As a result, CoinEx has never suffered any major security breach. I started my own company in 2016. Most of our staff are recruited and trained by me personally, and many of them have a strong background in their field. Over the years, the team has been fast-growing. Right now, CoinEx is powered by a team of more than 200 employees across the globe, over 60% of whom



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Guijun Guo guoguijun@viabtc.com

5. After the launch of many games that support cryptos, will CET offer more support for games?

I have strong faith in the prospect of GameFi because games and blockchain make for a perfect combination. Last year, we built CoinEx Smart Chain (CSC), which adopts CET as its built-in token. To expand the CSC ecosystem, we have launched investment and support programs worth \$50 million, with a focus on DeFi and GameFi. As the CSC ecosystem continues to develop, the value of CET will also grow higher.

6. What sets CoinEx apart from the many exchanges out there?

NYSCEF DOC. NO focus 3 n products and R&D.

If I was asked to summarize CoinEx in a few simple words, my answer would be secure, easy to use, reliable, and global. As the biggest threat in the crypto world, security is the top concern of CoinEx. Keeping your assets secure has always been our No.1 priority. Meanwhile, CoinEx is also striving to create products that are easy to use. We alm to offer improved user experiences and meet users' needs for crypto trades across the board. Additionally, to ensure that each asset listed on CoinEx meets our listing criteria, and to provide reliable options for users, CoinEx conducts extensive reviews for all assets on its platform. In the inherently globalized blockchain market, we have continued to localize our products so that they will be accessible to every person in the world.

 ${\it 7.}\ \ {\it Do\ you\ plan\ to\ create\ a\ CoinEx\ wallet\ where\ we\ can\ hold/stake\ CET\ and\ become\ long-term\ holders?}$

Apart from storing CET on CoinEx, we recommend using ViaWallet, which is a decentralized wallet developed by the CoinEx team that supports multiple cryptos. It allows users to manage multiple in-wallet assets on a single application. On ViaWallet, you can store and stake CET to get more benefits. Moreover, you can also tap into projects in the CSC ecosystem. In the future, as the CSC ecosystem matures, there will be a lot more scenarios where CET can be used.

8. As a CET holder, I'd like to find out more about CoinEx's launchpad.

The launchpad is a key product on any exchange. However, we are also very careful because investment involves great risks. To this end, we have made tons of preparations to make sure that the projects we launch promise high quality. What I can tell you is that launchpad is coming soon.

Founded in 2017 under ViaBTC Group, CoinEx is a professional crypto trading platform for the world. Its founder Haipo Yang had his first introduction to Bitcoin in 2011 and became a member of the Bitcoin community in 2013. In 2016, he deployed and developed a Bitcoin mining pool named ViaBTC Pool, which was launched two months later. It is noteworthy that all the codes of the mining pool were written by himself.

In the following year, Haipo started CoinEx. The exchange, born during the height of the crypto market, is a major part of the ViaBTC ecosystem. ViaBTC's influence and leadership in the field of mining pool offered strong backing for CoinEx in its early stage in terms of technical capacity, resource support, marketing & promotion, as well as its globalization strategy.

After four years of ups and downs, CoinEx has now evolved into a professional crypto trading platform that offers a wide range of crypto trade services, covering spot trading, margin trading, perpetual contract, AMM market making, mining, and financial service, to users in over 100 countries and regions. Aiming to build its own crypto ecosystem step by step, the exchange also launched the mainnet of CoinEx Smart Chain (CSC) last year.

Twitter: https://twitter.com/coinexcom

Website: https://www.coinex.com/

YouTube: https://www.youtube.com/c/CoinEx

Medium: https://medium.com/@coinex

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Guijun Guo
guoguijun@viabtc.com



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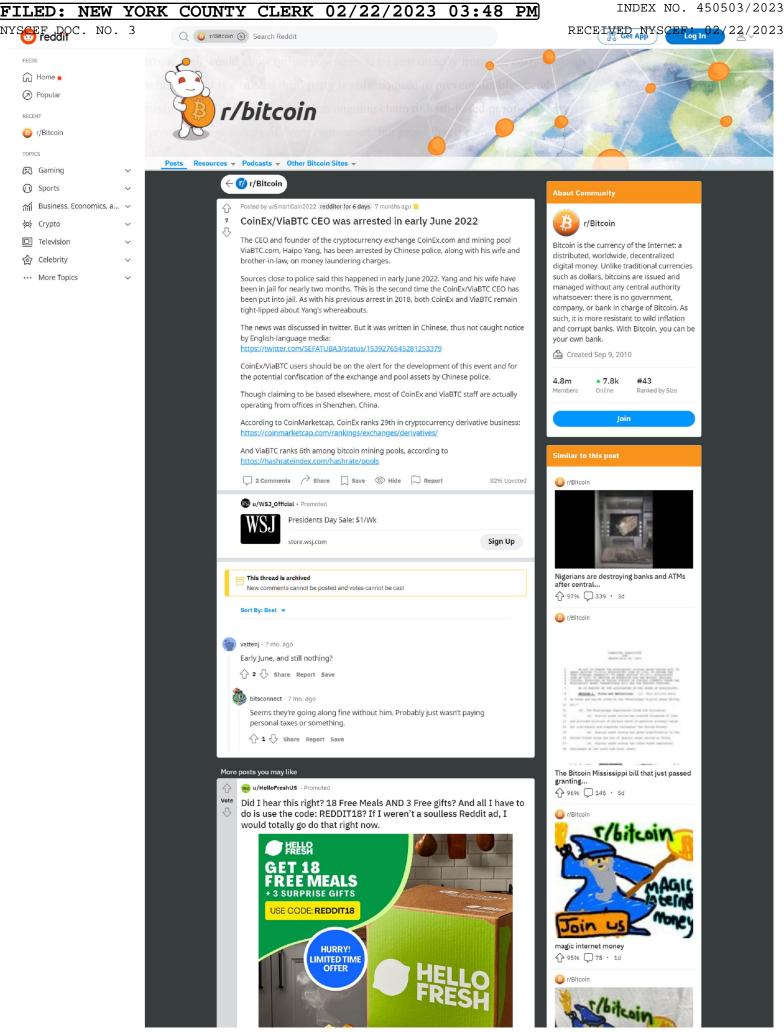
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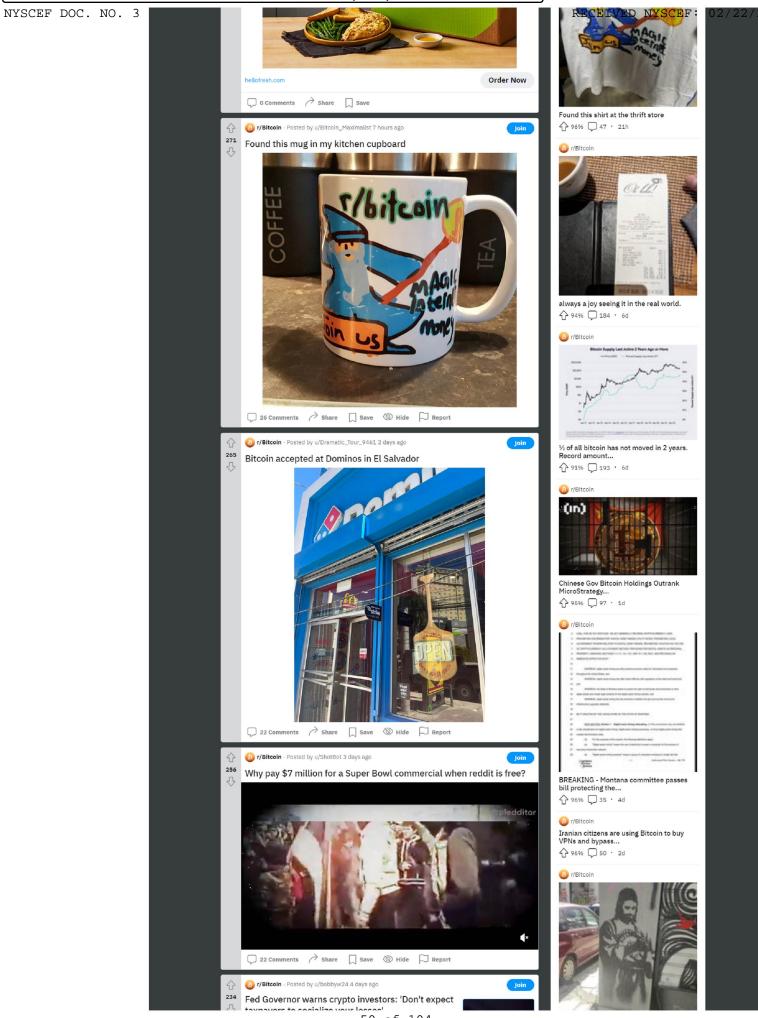
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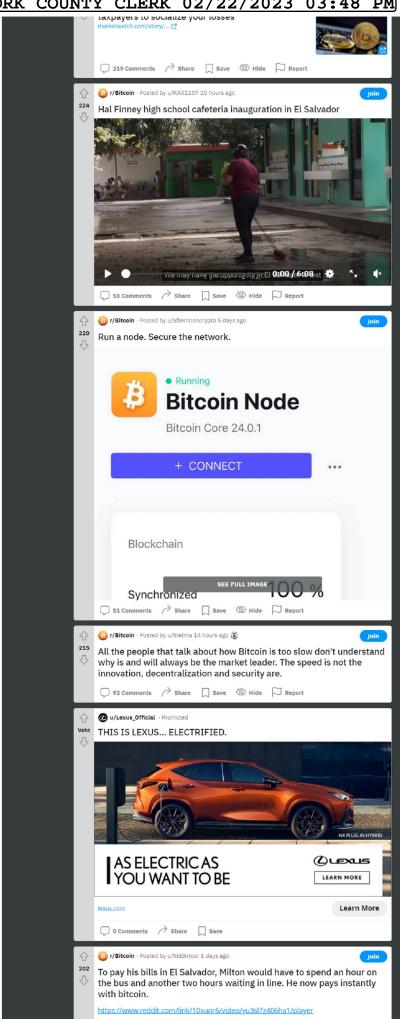
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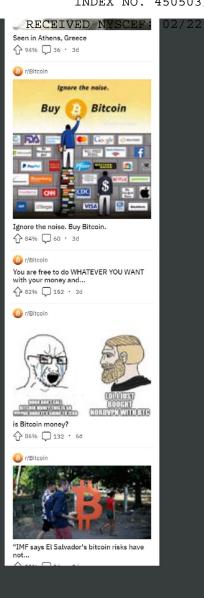
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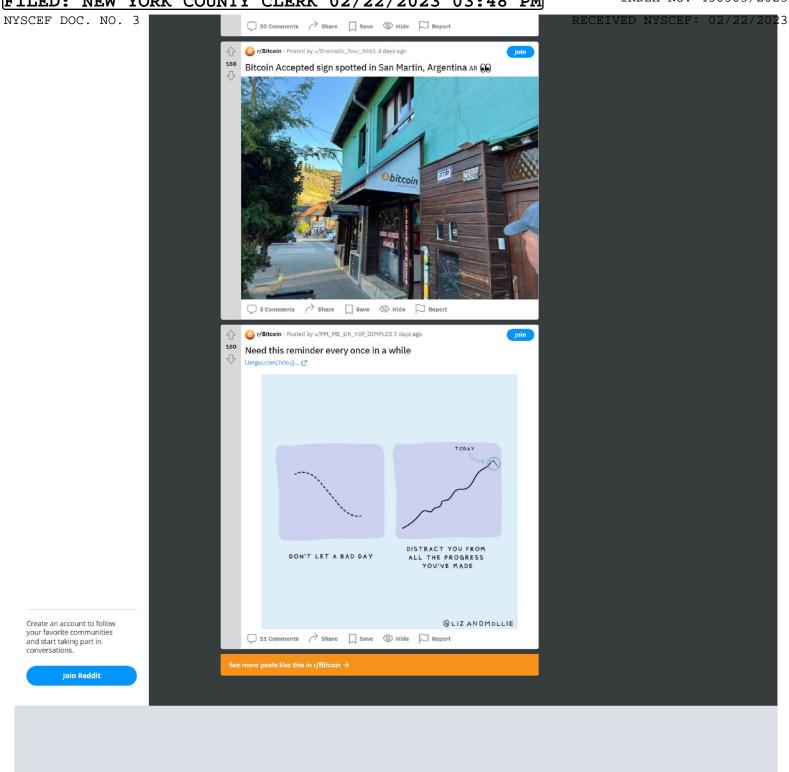


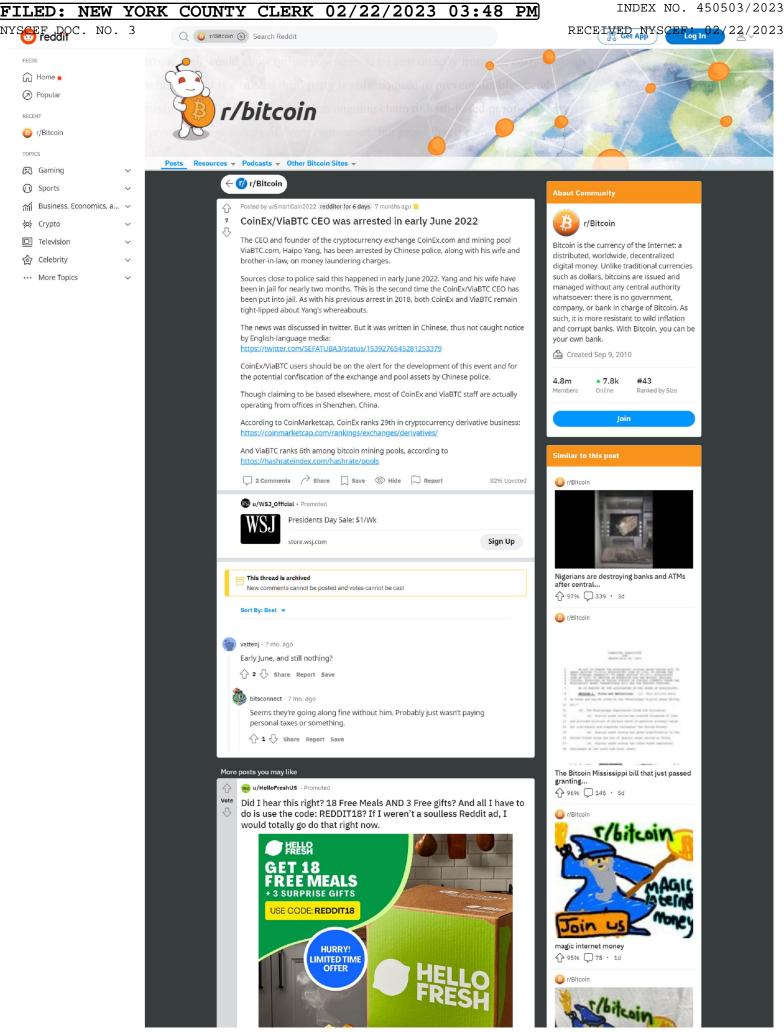


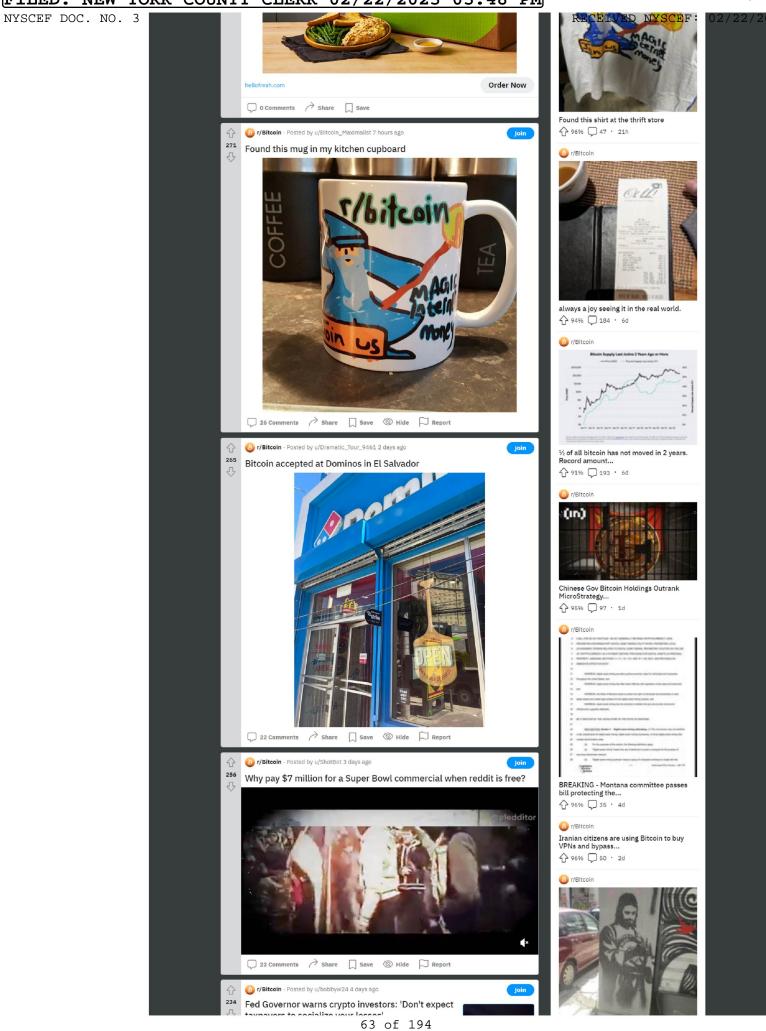
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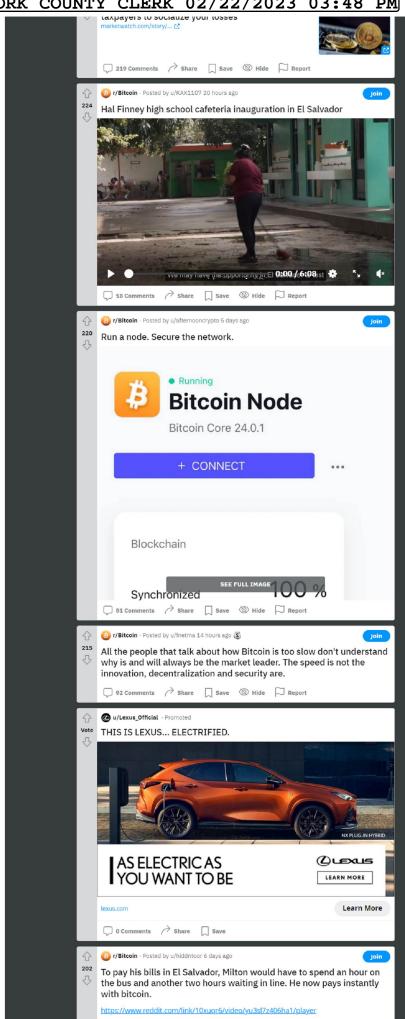


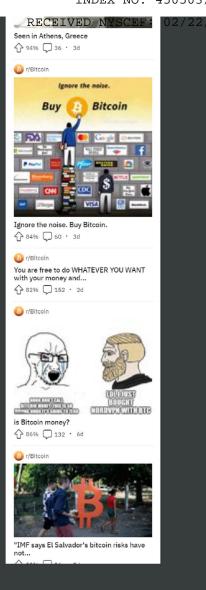


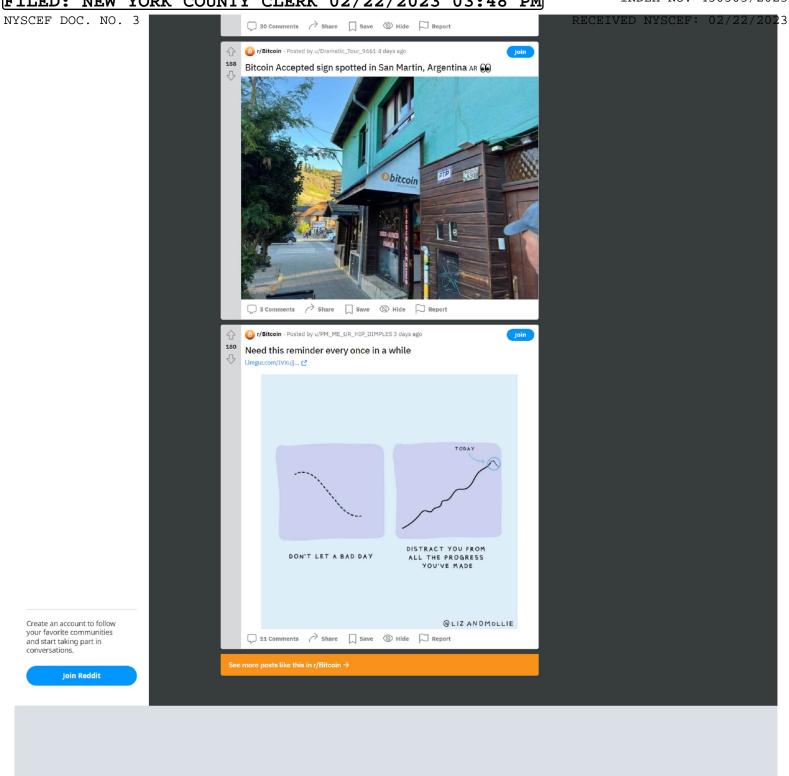




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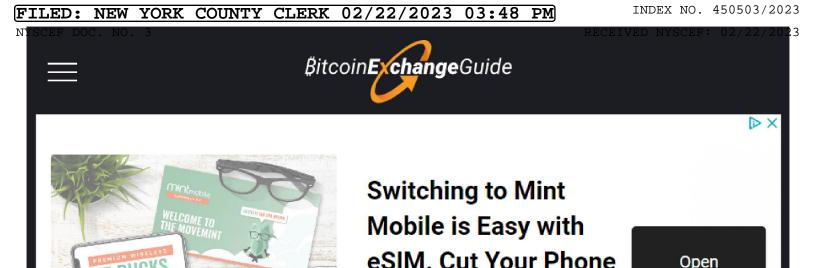


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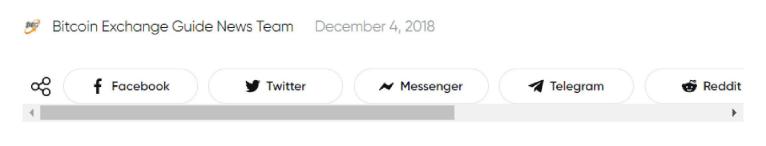
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Is CoinEx And ViaBTC CEO Haipo Yang **Under Arrest In China? Radio Silence Sparks New Fears**



A member of the Chinese internet community has reported that, Haipo Yang, the founder of both ViaBTC and CoinEx has been subject to arrest on October 30th. Later on, the CoinEx Telegram group administrator responded directly to these allegations, claiming that they were 'purely fictitious'.

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It was during that evening, however, that Haipo Yang's Twitter account forwarded the news and laconically commented 'interesting'. A few days later, a number of CoinEx users revealed that they were having issues with withdrawing tokens from their accounts, with some token withdrawals not being received for more than 24 hours. While Yang's Twitter account replied to the allegation, there has been no legitimate response from either of these organizations, we he arrested?





Win 500 Silver Eagle Coins



According to updates from November, there have been confirmations that <u>CoinEx is still</u> <u>processing BTC withdrawals</u> and users are still receiving them. BCH withdrawals, on the other hand, have been seeing an increased level of slowing and stalling.

Yang Disappears – Arrest Rumors Spread

Where did this rumor first emerge? It happened on a private WeChat group called 'Real China Power' which was hosted by the Chinese blockchain executive Elly Zhang. Zhang stated that Mr. Haipo Yang had since been arrested and was under the jurisdiction of the Nantou Police Station in Shenzhen.

The chat was then screenshotted by Bitcoin Gold founder Jack Liao — who is known to have long-term personal and business issues with Yang and <u>Bitmain CEO Jihan Wu</u>.



Haipo Yang @yhaiyang · Oct 30 Interesting



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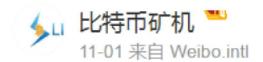
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网曝ViaBTC杨海坡被逮捕

近日,有社区网友爆料称,ViaBTC、CoinEx的创始人杨海坡被逮捕。针对此事,《币世界》向ViaBTC方求证,暂未得到回应。《币世界》将持续关注事态进程。

Q 46 ↑ 27 ♥ 81 🗹

Liao made sure to post the screenshot on his Weibo and WeChat moment, and soon thereafter, it began to rapidly spread within the Chinese crypto community.



杨海波确定被深圳公安局南头派出所逮捕。



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资利吗?@Global No.1 全球一侧

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Link To ICO Plans?

Sometime in October 2018, a user of Sina Weibo alleged that someone had reported CoinEx to the Shenzhen financial office, and mentioned that the investigation could be <u>related to the ICO of both ViaBTC</u> and CoinEx, Yang being the CEO of both organizations. Along with this, there are reportedly screenshots of a conversation in the CoinEx internal group, which claimed that it wouldn't be illegal to perform an ICO 'under the table'.

Haipo Yang's companies are established in China, and he also holds a Chinese passport. It's widely known that ICO activity has been banned in China since September 2017.



coinex有币的赶紧提吧》,海坡公司在国内,国籍在国内,发过两个币,现在被调查了。群里还有大陆狗在洗地说最多退币就完事了,妈的笑死我了邻《公还说只要偷偷私募就不违法》。



转发 0 评论 8 赞 5



夏日记忆协奏曲

他老婆晒的几百万钻戒图片给删了

NVCCHE DOC. NO. 3

source: Sina Weibo

No Comment From The ShenZhen Police Force

In order to try and confirm a number of these rumors, individuals have attempted to contact the Nantou police station in Shenzhen. The results were not exactly what journalists were hoping to hear, however, as a representative said that they would not disclose any private information unless the party's family members inquired, or were requested to do so by their immediate superior.

Attempts to communicate directly with Yang and Sara Ouyang, the COO of ViaBTC have proven useless, as their phones were switched off. As a result, there's no direct way to get in touch with those parties directly involved in this affair, meaning that there's no way to effectively confirm or deny any of the rumors or outstanding allegations, whatever they may be.





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The silence, however, could also be a sign – in most cases like this, an exchange would likely want to reassure users as soon as possible that all was well.

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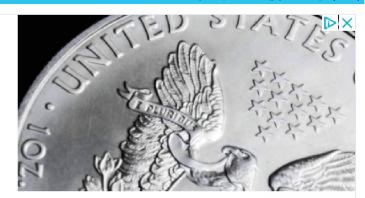
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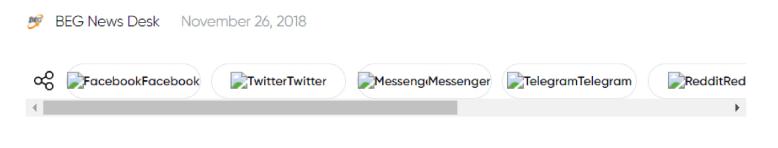
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COINEX

Bitcoin Cash Coins (BCH and BSV) Can Now Be Withdrawn On Coinex Exchange



It's been over 10 days since the <u>Bitcoin Cash hard fork</u> and exchanges have finally decided that the offsprings of the previous BCH, now known as BSV and BCH (BCHABC is being called BCH) are now stable enough for withdrawal.

Coinex becomes one of the first exchange to offer the withdrawals of BCH and BSV. Up till now, they were considering technical evaluations and tests which has now been passed. Notably, they are one of the few exchanges who agree to divide the tokens for users who send them as unsplit, pre-fork BCH coins.

Founded in December 2017, CoinEx is a global and professional digital coin exchange service

NYSCEF DOC: NO. 3 provider. CoinEx core team is from world leading internet and finance companies, including the earliest adopters/professionals of cryptocurrency who boast rich experience in R&D, global operations and services in the industry. With its proprietary trade matching system and excellent user experience, the exchange is dedicated to building a highly secure, stable and <u>efficient digital coin exchange</u> for global users. It supports multiple languages and provides trading services in about 100 locations around the world.

Although CoinEx has published the following reminder on their announcement:



"The prices of BCH and BCHSV may fluctuate drastically after the fork. Please evaluate and invest wisely based on your risk tolerance and financial resources."





BEG News Desk

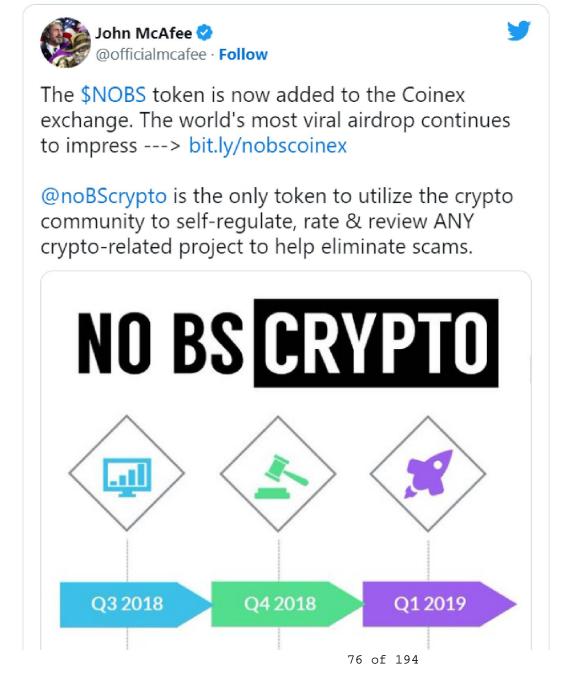
COINEX

Crypto Veteran John McAfee Shares NOBS Token Listing On Coinex Exchange

Bitcoin Exchange Guide News Team July 24, 2018

One of the biggest tech gurus in history, John McAfee announced on Twitter, the NOBS token would be available for trading on Coinex Exchange. The token is responsible for the largest airdrop in the world. Its impressive statistics can be seen on the company website or at Coinex.

If you didn't know, NOBS is short for No-BScrypto, and was created to be used as the token operated for the best self-regulation protocol in the cryptocurrency sphere.



AirDrop, Exchanges, Bidding Platform & Final Product

11:40 PM · Jul 23, 2018

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Why Create No-BScypto?

NOBS was created because of the <u>massive rate of scams taking place online</u> in the last twelve months or so. The project was designed to help improve crypto-security, giving users a solid token with excellent safety.

<u>The platform has been massively airdropped</u>, with total token distribution deployed via MVP. It's now listed on more than four major exchanges, used to make payments for goods, services and projects.

A BETA version of the platform will be released by the end of the year, 2018 – to give users an in depth look at the project. The reason is to make bidding on the various projects easier, while also providing a way to create a buzz in the media to help achieve what NOBS is seeking.

The final product will be released sometimes in the first quarter of 2019, with the product being used to help push projects to completion through an internal bidding system, where users can see ratings and details on the crypto-creations.

Lastly, they will be launching a massive marketing campaign to bring NOBS to all corners of the globe. With support from leaders like John McAfee, it's exciting to see where the NO-BS token will go.

Are you excited for NOBS? Or is it just another token being released for hype? Leave your thoughts in the comment section below.

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Frequently Asked Questions (FAQ)

www.coinex.com

By submitting any personal data, I acknowledge and agree that the personal data submitted by me will be processed in accordance with the ICANN <u>Privacy Policy</u>, and agree to abide by the website <u>Terms of Service</u> and the registration data lookup tool Terms of Use.

Domain Information

Name: COINEX.COM

Registry Domain ID: 75041026_DOMAIN_COM-VRSN

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clientRenewProhibited

clientTransferProhibited

clientUpdateProhibited

Nameservers:

NS-1214.AWSDNS-23.ORG

NS-1831.AWSDNS-36.CO.UK

NS-253.AWSDNS-31.COM NS-949.AWSDNS-54.NET

Dates

Registry Expiration: 2023-07-16 10:34:48 UTC

Updated: 2022-10-06 01:17:51 UTC Created: 2001-07-16 10:34:49 UTC

Contact Information

Registrant:

Handle: 1

Name: Registration Private

Organization: Domains By Proxy, LLC

Email: Select Contact Domain Holder link at https://www.godaddy.com/whois/results.aspx?domain=coinex.com

Mailing Address: DomainsByProxy.com 2155 E Warner Rd, Tempe, Arizona, 85284, United States

Administrative:

Name: Registration Private

Organization: Domains By Proxy, LLC

Email: Select Contact Domain Holder link at https://www.godaddy.com/whois/results.aspx?domain=coinex.com

Kind: individual

Mailing Address: DomainsByProxy.com 2155 E Warner Rd, Tempe, Arizona, 85284, United States

Technical:

Handle: 3

Name: Registration Private

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Billing:

Handle: 4

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Organization: Domains By Proxy, LLC

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Exhibit 4.1

Home > How Investors Make Passive Income on Metaverse?

CoinEx Academy

How Investors Make Passive Income on Metaverse?

2022-12-23 06:42:20

The emergence of the metaverse has opened up a new world of opportunities for entrepreneurs looking to make passive income. The metaverse is a virtual world, sometimes referred to as cyberspace, that is created and inhabited by its users. It is an ever-evolving digital realm where people can interact, create, and explore in real time its endless possibilities. The metaverse provides an ideal environment for those looking to make passive income without the hassle of traditional businesses. In this article, we'll explore what the metaverse is, the different ways you can make a passive income from it, and the future of the metaverse.

What is Metaverse?

The metaverse is a virtual world that combines elements of the physical world, the internet, and virtual reality. It is a global, interconnected network of virtual environments where people can interact, create, and explore in real-time. The term "metaverse" was first coined by Neil Stephenson in his novel Snow Crash in 1992, and has since been adapted to describe the ever-evolving digital realm we now see today. The metaverse is composed of virtual worlds, each with its own unique environment and rules. These virtual worlds can be used for a variety of purposes, such as gaming, socializing, or even creating businesses.

10 Ways of Making Passive Income in the Metaverse

- 1. Create and sell virtual items: Creating and selling items such as virtual land, digital artwork, digital currency, virtual pets, digital books, digital gaming assets, etc is a popular way to make money in the metaverse. You can create items in your own virtual world and then list them for sale in the metaverse. With the increasing popularity of virtual assets, creating and selling virtual items in Metaverse is becoming increasingly popular.
- 2. Develop and sell virtual real estate: You can make passive income by creating and selling virtual real estate in the Metaverse for gaming, socializing, and businesses. Its popularity is growing due to Decentraland, Cryptovoxels, etc. Metaverse inhabitants can buy, build, and rent real estate. The market is expected to expand as more virtual worlds emerge.
- 3. Offer virtual services: You can also make money by offering virtual services such as web design, programming, or even virtual consulting in the metaverse. The popularity of offering virtual services in the Metaverse is growing rapidly. Many businesses are now taking advantage of the virtual world to provide services such as virtual conferences, seminars, classes, and other events that can be accessed by users around the world
- 4. Create and sell virtual courses: Creating and selling digital courses in the Metaverse is an emerging trend quickly gaining traction. You can offer virtual courses to other users around the world in real time. You can offer access to a wide array of topics and courses for users and monetize the courses.
- 5. Earn money by playing Metaverse games: Earning money in the Metaverse through Play-to-Earn games is growing in popularity. Players can win money by competing in tournaments, completing challenges and missions, selling virtual items, or exchanging virtual currency for real-world money. Plus, they can earn rewards for achievements and referrals. All these opportunities make earning money through playing games in the Metaverse an attractive option.
- 6. Become a virtual influencer: Becoming a virtual influencer in the Metaverse can be a great way to make money. To become a successful virtual influencer, you need to have a strong presence in the Metaverse, create engaging content, and interact with your

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 ${\tt NYSCEF\ DOC.\ NO.\ 3} \\ {\tt audience.\ As\ a\ Metaverse\ virtual\ influencer}, you\ can\ make\ money\ through\ your\ network} \\$ by advertising both Metaverse and real-world brands.

> 7. Host virtual events: Hosting virtual events, such as virtual conferences, webinars, or even virtual concerts, is an excellent way to monetize within the Metaverse. Admission fees and sponsorships can be utilized as a form of revenue generation for these events. Furthermore, virtual events can assist in increasing brand awareness, as well as provide an enhanced user experience.

- 8. Develop virtual applications: Creating virtual applications in the metaverse can be a great way to make money within the Metaverse. You can create a wide range of apps, from games to virtual stores, interactive experiences, and more.
- 9. Offer virtual tours: Virtual tours can be a lucrative source of income for metaverse entrepreneurs. Utilizing advanced artificial intelligence (AI) technology, tours can be automated and narrated by a virtual guide, capable of responding to guestions from visitors in real time
- 10. Create and sell digital artwork: Creating and selling non-fungible tokens (NFTs) is a lucrative way to generate revenue in the metaverse. Digital artworks created in virtual worlds can be sold on popular NFT marketplaces such as Opensea, Rarible, and Binance. Non-fungible tokens can also be minted outside the virtual realm and then brought into the Metaverse and traded.

The Future of Metaverse

The metaverse is an expansive virtual universe made up of digital spaces, often referred to as 3D virtual worlds. This virtual space has been growing in popularity, as it allows its users to create and interact with each other in ways that are not possible in the real world. As technology advances, the metaverse is becoming an increasingly important part of our lives, and the future of the metaverse is looking bright.

One of the most exciting aspects of the metaverse is its potential for immersive gaming. With the development of virtual reality (VR) technology, gamers will be able to explore and interact with the metaverse in ways that have never been possible before. Not only will they be able to explore virtual worlds, but they will also be able to engage in activities such as sports, crafting, and even socializing with other players in the metaverse. This could open up entirely new genres of gaming, and could enable gamers to experience a truly immersive gaming experience.

The metaverse could also be used to create virtual communities and enable people to interact with each other. This could be done through virtual chat rooms, forums, and even virtual events. This would allow people to connect with each other and socialize. It could also make it easier for people to find like-minded individuals who share their interests and passions.

The metaverse could also be used to create virtual marketplaces that allow people to buy and sell goods and services. This could open up entirely new opportunities for entrepreneurs and small businesses, as they would be able to reach a wider audience and compete on a more level playing field. This could also be used to facilitate the trade of digital goods and services, such as artwork, music, and software.

Finally, the metaverse could also be used to create virtual classrooms. This could be used to facilitate distance learning, as well as to enable teachers and students to interact with each other in a virtual environment. This could make education more accessible to people all over the world, as they would not need to be physically present in a classroom to be able to participate.

The future of the metaverse is looking bright, as it has the potential to revolutionize how we interact with each other and experience the world. It could open up entirely new avenues for communication, gaming, commerce, and education. As technology continues to advance, the metaverse will become an increasingly important part of our lives, and it is sure to have a profound impact on the way we live, work, and play.

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Exhibit 4.2

Home > Crypto Lending: How Can You Incentivize Your Crypto Holdings

CoinEx Academy

Crypto Lending: How Can You Incentivize Your Crypto Holdings

2022-09-23 07:00:00

One of the main advantages of cryptocurrency is that it is decentralized. Decentralized finance (DeFi) is a term coined by the crypto community to characterize the burgeoning industry for financial services built on the blockchain.

More and more crypto exchanges and other crypto platforms are allowing users to borrow or lend money in the form of cryptocurrencies. Investors deposit cryptocurrency with the platform in exchange for interest payments, which are then loaned out to borrowers.

What is crypto lending?

Investors can use crypto lending to lend out their cryptocurrency holdings to borrowers. Regular crypto interest payments are sent out to lenders like traditional savings account interest payments are paid out.

Decentralized and centralized crypto lending platforms exist, and lenders may be able to earn APYs of up to 15% or more, depending on the platform and other conditions.

Borrowers can use a cryptocurrency lending platform to get cash loans based on the value of their bitcoin holdings.

The current volatility in the crypto lending sector demonstrates the enormous dangers inherent in the industry, which is good news for both lenders and borrowers.

How to lend crypto?

A lending platform for cryptocurrencies acts as an intermediary between lenders and borrowers. Borrowers receive loans from the lending platform after lenders deposit their crypto in high-interest lending accounts. These sites then use the crypto the borrowers have deposited to fund loans on these platforms.

The platform sets interest rates for both lending and borrowing to control net interest margins.

Different platforms and cryptocurrencies have different interest rates. Platforms can potentially charge a fee or offer better rates to lenders willing to lock up their crypto for a specific period.

Trusting a firm or other body to manage and support the loan and borrowing process is known as "centralized crypto lending." There is a registration process for both borrowers and lenders.

Using smart contracts, lenders and borrowers can connect their wallets to a decentralized crypto lending protocol, which automatically handles the loan and borrowing operations.

When criteria are met, a block of code known as a smart contract is automatically executed on blockchain networks.

Crypto lending platforms:

BlockFi

It is possible to borrow cryptocurrencies with the help of BlockFi, which is a cryptocurrency exchange. In return for their investments, it provides interest to investors who lend their money to borrowers. Lending platforms like BlockFi, which may offer an APR of 7.50 percent, are among the most lucrative (APY).

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Interest rates are calculated using a tiered approach, which changes depending on the type of asset you're lending money for. There is typically a better rate of return on stablecoins than on other purchases. If you're unfamiliar with stablecoins, start with Tether, the largest and most well-known stablecoin.

BlockFi Interest Account registration is required to participate in the loan program (BIA). At the beginning of each month, account holders receive their interest. Before getting involved with crypto lending, it's a good idea to brush up on your knowledge of what it is and how it operates.

Celsius

There are no costs to borrow, lend, or move cryptocurrency on Celsius, which is situated in the United States. It also has one of the highest rates of interest on the market.

You can rent out digital assets for up to 17 percent interest, depending on the one you choose. Regardless of the purchase, the rates are often more significant than on most other platforms. An additional 25 percent interest is available if you opt to earn Celsius' native CEL cryptocurrency.

Even before you invest, you may use the calculator on the website to see how much interest you're entitled to based on the asset you choose.

YouHolder

Cryptocurrency enthusiasts utilize YouHolder for a variety of purposes. In addition to being able to store, trade, and use bitcoins to pay for products and services, users can also do so. It's also one of the best places to make money while you sleep for individuals searching for a side hustle.

Cryptocurrency and stablecoin deposits at YouHolder can earn up to 12% APY. This includes Bitcoin (BTC), Pax Gold (PAXG), USDC, TUSD and many other supported cryptocurrencies. YouHolder, like BlockFi, offers the highest stablecoin rates but does not use a tiered system.

Nebeus

It is possible to borrow, earn, trade, and even insure your assets with Nebeus' all-in-one crypto platform. Nebeus has some of the best interest rates in the crypto lending market.

For renting out cryptocurrencies like Bitcoin (BTC), Ethereum (ETH), and stablecoins like Tether (USDT) and USD Coin, you can earn up to 12.85 percent RPY (USDC). No fees are charged by Nebeus when assets are deposited for this reason.

As a new crypto lender, you can use a platform interest rate calculator to see how much interest you're entitled to each month. In any cryptocurrency of your choice, interest is paid out each month. The claim can be withdrawn every day without incurring any additional expenses.

As a fully regulated lending site, users can rest easy knowing that their money is safe and sound. It also offers a wallet that makes it easy to move money between crypto and fiat accounts in real time.

Crypto.com

In addition to trading and financing, Crypto.com is one of the world's leading cryptocurrency exchanges. Renting digital assets for lending allows users to earn interest on their holdings. Renting your assets, including over 40 cryptocurrencies and stablecoins, can make you up to 14.5 percent.

You can check your interest rate based on the cryptocurrency you want to use. Concerning interest rates, Polkadot and Polygon are currently among the most attractive investments. To participate, you must first sign up for an account on Crypto.com and verify your identity. After that, you'll be able to put your money in a savings account and start collecting interest monthly.

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Nexo

It is possible to purchase, sell, and trade cryptocurrencies using Nexo. Nexo allows its users to earn money on their crypto assets by making them accessible for the loan, and Nexo supports more than 300 different assets.

The platform offers a compounding interest rate of up to 16% APY on cryptocurrency. Participants receive daily rewards, and no costs are associated with using this service. Your crypto assets can be used as collateral to secure a loan on this lending site.

With Polygon (MATIC) paying out the highest interest rate of 16 percent, renting out a cryptocurrency is a great way to earn some extra cash.

CoinLoan

To acquire, store, and trade cryptocurrencies, CoinLoan provides a safe and secure platform for doing so. As a popular crypto lending platform, it allows you to make passive income from your digital assets that are otherwise sitting on the sidelines. There are 23 assets available, each with a different interest rate.

CoinLoan, like most crypto lending services, pays the most effective interest rates on stablecoins and on fiat currencies like the pound sterling and the Euro. The maximum interest rate is 12.3 percent, and daily interest payments are made.

With CoinLoan, you can rest assured that your valuables are safe because the platform is registered and wholly regulated. You don't have to be concerned about the safety of your crypto assets because it is an insured, certified digital asset custodian.

Conclusion:

You may expect to pay a lot of interest in using any of these loan platforms. If that is your preference, there is nothing wrong with favoring one over the other. Nebeus or CoinLoan, for example, maybe more appealing to you if you are concerned about the safety of your assets. On the other hand, Nexo may be your best option if you're only seeking the best returns.

Those considering lending or borrowing cryptocurrency should be aware of the risks associated with the platform they intend to use before making any final decisions.

Also, be aware of the hazards of the unpredictable and unregulated cryptocurrency market and your lending account or loan terms. Do your own research before investing.

CoinEx Launches Markets Overview to Help Users Capture Real-time Market Movement

CoinEx Institution: A Review of the Native Projects on Aptos, a Public Chain Crowned with Fame

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Making Crypto Trading Easier



















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Exhibit 4.3

Home > Cryptocurrency Whales: How to Track Their Transactions

CoinEx Academy

Cryptocurrency Whales: How to Track Their Transactions

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What are a crypto whale and a bitcoin whale?

A crypto whale is a large investor who owns a considerable portion of the total cryptocurrency supply and has the power to influence the cryptocurrency market through trading actions. Since the identity of crypto whales is anonymous, they are tracked by their cryptocurrency wallets. The cryptocurrency ecosystem can be analogized to an ocean with little fishes as regular investors (wallet addresses with little or medium crypto worth) and whales as big investors (wallet addresses with enormous crypto worth).

crypto whale

Depending on the cryptocurrency, there are several parameters for whom qualifies as a "crypto whale". Whales are often referred to as investors, institutions, and crypto wallet addresses with more than 1000 Bitcoins. Crypto whales are typically wealthy individuals or organizations that own and transfer substantial amounts of cryptocurrency from one address to another.

The top 10 bitcoin owners, the top 50 owners, and the top 100 owners collectively possess around 5.69%, 11.04%, and 13.92% of all bitcoin in circulation as of November 2022, respectively, according to CoinMarketCap. These addresses hold a significant amount of the total bitcoin in circulation and they have an influence on the bitcoin price and community.

Bitcoin Top Wallets Balances

Top holders increase down the chart

Bitcoin top wallets balances chart

Chart Source: BitInfoChart

Who are the biggest crypto whales?

1. Michael J. Saylor

Michael J. Saylor is a business executive and entrepreneur from the United States. He is the co-founder and executive chairman of MicroStrategy, a firm that delivers corporate information, mobile applications, and cloud-based services. In 2020, MicroStrategy's chairman and chief executive officer, Michael Saylor, decided to start incorporating bitcoin into the company's balance sheet as part of an unconventional treasury management approach.

His enthusiasm for cryptocurrencies (more specifically bitcoin) is so great that he changed almost all of MicroStrategy's funds into bitcoin and purchased 17,732 BTC for about US\$175 million. He has remained influential in the cryptocurrency community since then and is considered one of the biggest known BTC whales.

2. Barry Silbert

Barry Silbert is the founder and CEO of Digital Currency Group (DCG), a group of five cryptocurrency-related businesses. Grayscale, a digital asset management that manages \$28 billion in Bitcoin, Ether, and other assets, is DCG's greatest revenue producer. Barry began buying bitcoin as early as 2012 and quickly advanced to become one of the most significant and early investors in the cryptocurrency industry.

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02-03 04:39

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NYSCEF DOG: Tyle and Cameron Winklevoss

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The twin brothers Tyler and Cameron Winklevoss were involved in a court dispute related to the creation of Facebook. When the brothers were students at Harvard University, they claimed that Mark Zuckerberg stole their concept for a social media site similar to Facebook.

A portion of the \$65 million court settlement Tyler and Cameron Winklevoss received from the Facebook CEO was utilized to begin buying up Bitcoin. The twins still possess other digital assets in addition to an estimated 70,000 Bitcoins. They co-founded Gemini and are said to be among the most prominent Bitcoin investors, having reportedly acquired 1% of the total supply in 2012.

4. Michael Edward Novogratz

Michael Edward Novogratz is a former partner of the financial firm Fortress Investment Group in the United States. He is presently the CEO of Galaxy Investing Partners, a cryptocurrency investment firm. In 2017, Michael indicated that Bitcoin and Ethereum accounted for 20% of his total wealth. He claims to have generated \$250 million from bitcoin between 2016 and 2017.

5. Timothy Cook Draper

Timothy Cook Draper is an American venture capital investor, and founder of Draper Fisher Jurvetson, Draper University, Draper Venture Network, Draper Associates, and Draper Goren Holm.

Tim Draper, best known for his early investments in firms such as Skype and Tesla, purchased bitcoin for the first time in 2012. He then purchased around 30,000 bitcoin confiscated by police from Silk Road (an infamous dark web marketplace), which were auctioned off by the US government in 2014 for a total of about \$18.7 million. Tim Draper believes that bitcoin will eventually displace the US dollar as the world's primary currency.

What is crypto whale tracking?

Crypto tracking is the act of keeping track of transactions done on a public blockchain. Crypto tracking can be done on any cryptocurrency wallet but is mainly done on whale addresses. Cryptocurrency traders and investors monitor whale trades because whale actions often impact cryptocurrency trading prices.

When a transaction is made by a wallet address, tracking is done with API tools that scan over a blockchain. The API finds the transaction in real time and tells the user. Users can examine whales' purchasing and selling trends by using crypto tracking to find trades that are larger than a certain threshold.

How to see what crypto whales are buying?

Since most cryptocurrency blockchains are public, balances and transactions are transparent, and the accounts holding the largest cryptocurrency can be publicly viewed and traced. APIs have been developed to track when big holders perform transactions. These APIs are linked to Twitter accounts and other web applications, for Twitter accounts, a bot is created and a tweet is automated when these whales make transactions.

What are the common crypto whale tracking tools?

Watcher.guru is an example of a website that keeps track of the transactions of the top 1000 holders for most cryptocurrencies. Custom cryptocurrency addresses can also be tracked and you get a notification when transactions are made with that address. Automated Twitter bots like @Whale_alert and @WatcherGuru tweet transactions made by crypto whales.

Cryptocurrency whales are mostly responsible for price fluctuations in the market. Keeping a record of these transactions is a smart idea. Keeping track of cryptocurrency whale transactions gives the sentiment of the whales. This can be used to know their flow of money which is helpful in cryptocurrency trading.

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Exhibit 4.4

Home > What Is Staking in Crypto?

CoinEx Academy

What Is Staking in Crypto?

2022-08-01 02:52:11

Staking is a method of putting your cryptocurrency to work and earning rewards.

You'll hear about staking a lot if you invest in cryptocurrencies. Many cryptocurrencies use staking to verify transactions and provide participants the chance to profit from their holdings.

And what exactly is crypto staking? Staking cryptocurrency entails using your crypto assets to authenticate transactions and maintain a blockchain network.

It works with cryptocurrencies that handle transactions using the proof-of-stake methodology. Compared to the previous proof-of-work paradigm, this is a more energyefficient option. Mining devices that employ computational power to solve mathematical problems are necessary for proof of work.

Because specific cryptocurrencies provide effective interest rates for staking, staking may be a terrific method to use your cryptocurrency to create passive income. It's crucial to comprehend how crypto staking operates before you begin thoroughly.

staking crypto

How Does Staking Function?

Only the proof-of-stake consensus mechanism, a technique employed by some blockchains to pick trustworthy participants and validate new data blocks being added to the network, makes staking feasible.

It is undesirable to behave dishonestly in the network by requiring these network participants, known as validators or "stakers," to buy and lock away a specific quantity of tokens. The native token linked to the blockchain would probably lose value if it were to be compromised by criminal activity, and those responsible would stand to lose money.

To guarantee that validators perform honestly and, in the network's, best interest, the stake is their "skin in the game." Validators are rewarded in the local coin as payment for their dedication. The more their investment, the more excellent their opportunity to suggest a new block and reap the benefits. After all, you are more inclined to play honestly if you have more at stake.

The coins of one individual do not have to make up the entire stake. Most frequently, validators manage a staking pool and collect money from several token holders through delegation (acting on behalf of others), decreasing the entry barrier for more users to engage in staking. Any holder can participate in the staking process by giving their coins to stake pool administrators, who handle the labor-intensive task of confirming transactions on the blockchain.

Validators may face fines for minor infractions, such as staying offline for prolonged periods, and may even face suspension from the consensus process and removing their cash to maintain control. The latter is referred to as "slashing," Although it is uncommon, it has occurred on several blockchains, including Polkadot and Ethereum.

Each blockchain has its own unique set of validator rules. As an illustration, the Terra network set a limit of 130 validators. Each validator of Ethereum's proof-of-stake (formerly known as Ethereum 2.0) protocol must stake at most minuscule 32 ether, which is now worth more than \$100,000.

What Digital Assets Are Available for Investment?

Staking is only feasible with cryptocurrencies connected to blockchains that employ the

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NYSCEF DOC proof of stake consensus method, as was already explained.

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The most well-known cryptocurrencies you may invest in are Ethereum (ETH).

- · Cardano (ADA).
- · Solana (SOL).
- Luna (LUNA)
- Avalanche (AVAX).
- · Polkadot (DOT).

Because it can now both "mine" and "stake," Ethereum is in an odd position.

The second-largest cryptocurrency by market capitalization is switching from a proof-of-work blockchain system to a proof-of-stake one, which means that both validation procedures are active simultaneously.

But eventually, when the latter more energy-efficient technology takes control, ether mining will be fully phased out.

Why Is Staking Present in Just Some Cryptocurrencies?

It starts to become more technical at this point. Staking is prohibited while using Bitcoin, for instance. It would help if you had a little backstory to comprehend why.

Decentralized, or the absence of a centralized authority, is a characteristic of cryptocurrencies. How, therefore, without having the solution provided to them by a centralized entity like a bank or credit card firm, do all the computers in a decentralized network reach the correct conclusion? A "consensus mechanism" is employed.

A consensus technique known as Proof of Work is used by several cryptocurrencies, including Bitcoin and Ethereum 1.0. The network uses Proof of Work to solve issues like authenticating transactions between strangers on different sides of the world and ensuring that no one attempts to spend the same amount of money twice. "Miners" from around the globe compete to be the first to solve a cryptographic challenge as part of the process. The winner wins some cryptocurrency and the opportunity to add the most recent "block" of validated transactions to the blockchain.

Proof of Work is a scalable method for a relatively basic blockchain like Bitcoin, which tracks incoming and departing transactions like a bank's ledger. However, Proof of Work can lead to bottlenecks when there is too much activity for something more complicated like Ethereum, which has a wide range of apps operating on top of the blockchain, including the entire world of Defi. Transaction times may lengthen as a result, and costs may increase.

How Do You Begin Staking?

You must first own digital assets that may be staked to start staking. If you have already purchased any, you must move the coins from the exchange or application you used to buy them to an account that supports staking.

Most more extensive cryptocurrency exchanges, like Coinbase, Binance, and Kraken, provide internal staking options on their platforms, making it simple to invest your funds.

Some sites specialize in locating the most effective interest rates for your digital assets if you're seeking a technique to maximize benefits. Overtake is one of these staking-as-a-service systems.

It's important to note that any coins you transfer to a staking pool remain your own. You may always withdraw your staked assets, although each blockchain often has a different waiting period (days or weeks).

You may also work as a validator and manage your staking pool. This requires a lot more time, effort, and resources to be effective. You must first get enough funding from delegate stakers to start working as a validator on some blockchains.

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What Benefits Does Staking Offer?

Many long-term cryptocurrency owners view staking to put their holdings to use by producing rewards rather than letting them sit dormant in their wallets.

Staking also helps the blockchain projects you support by enhancing their effectiveness and security. You may increase the blockchain's security and transaction processing capacity by staking some of your money. (Some projects also distribute "governance tokens" to betting participants, letting holders vote on upcoming protocol updates.)

What Are Some Staking Risks?

Staking sometimes necessitates a lockup or "vesting" period during which your cryptocurrency cannot be moved. This might be a disadvantage since even if prices change, you won't be able to swap staked tokens during this time. It is crucial to familiarize yourself with the individual staking standards and regulations for any project you are considering participating in before staking.

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What is WalletConnect? The Ultimate WalletConnect Guide

What Is Airdrop in Cryptocurrency? Complete Beginner's Guide to Airdrops

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INDEX NO. 450503/2023 RECEIVED NYSCEF: 02/22/2023 Exchange **Futures** Finance V Promotion V CoinEx Help Center Search by keywords, e.g. deposit, futures, AMM Home > Swap > About Swap Trading > Introduction to Swap Trading Introduction to Swap Trading Support Team Updated 3 months ago English (US) ~ ♠ CoinEx Help Center What is CoinEx Swap? Get Ready on CoinEx CoinEx Swap is a fast exchange service, where you can exchange 2 different crypto assets in one single click. The latest quotation for Swap is systematically calculated, and after confirming the quotation, you don't need to perform operations, such as submitting Account & Security orders and waiting for your transactions to be executed, since your swap will be automatically settled in the Spot account. Deposit & Withdrawal ? Help How to use CoinEx Swap? Spot Trading Step 1: Log in to CoinEx official website (https://www.coinex.com), click [Swap] on the navigator bar to visit the Swap page Margin Trading The Global Cryptocurrency Exchange **Futures Trading** Swap **About Swap Trading** Introduction to Swap Trading Fiat Finance Step 2: Choose "From" the coin/token you have, "To" what you'd like to swap. Or, you can select the direction you want from the trendy swaps below, for a Referral E.g. To swap from USDT to CET. 1. Select [USDT] under [From] Promotion 2. Select [CET] under [To] Privileges Services @ CET

Step 3: Enter the amount of coin/token to swap, or directly enter the coins/tokens to receive after the swap.

E.g. To swap from USDT to CET.

1. Enter the amount [4.06] next to USDT, and the amount of CET to receive will be automatically calculated.

2. Or, you can enter the amount [100] next to CET, and the amount of USDT to swap will be automatically calculated.



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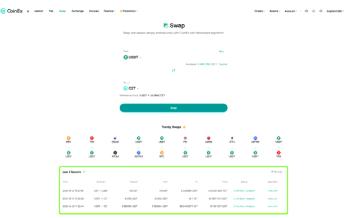
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Finally, you can see your swap status in the last 5 swap records.



The status of Swap orders

- 1. In progress: The swap will be complete soon, please wait a moment.
- 2. Completely swapped: All your assets are swapped to the target coins.
- 3. Partially swapped: Due to the insufficient market depth, only some of your assets are swapped to the target coins, and the remaining assets will be given back to your Spot account.
- 4. Unsuccessful: Due to the insufficient market depth, your swap wasn't executed, and all your assets will be given back to your Spot account.

Swap FAQ

1. What is the advantage of Swap compared to Spot trading?

With Swap trading, any combination of crypto trading can be achieved within seconds, without manual order submission, as long as the market depth permits.

2. Do I need to transfer the coins before Swap?

No transfer is required. The assets will simply be deducted from and added to your Spot account.

3. What are the minimum and maximum limits per time?

The minimum limit for a single swap is equivalent to 1 USD, while the minimum and maximum limits vary according to the specific cryptos. Please refer to the page display for the specific limit.

(1) When the crypto to swap is less than the minimum value, the minimum order amount will be prompted immediately.



(2) Click the [Max.] button on the right side to automatically fill the maximum amount.



4. How is the swapped price calculated?

The swapped price will be calculated by the system based on the current market depth, and the final amount is subject to the actual transaction.

5. How often is the reference price updated?

The reference price is updated every 5 seconds.

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6. Is there a daily limit to swap orders?

No, but there is a maximum amount for a single swap.

7. Is there any fee for swap orders?

Yes. The swap fee is shown on the page. VIP discount and CET deduction can be used at the same time for non-AMM trading pairs, Please refer to "Fees" for details.

- 8. Why can't I use CET as transaction fees for the swap order?
- (1) You didn't enable [Use CET as Fees] in [Preferences Settings].
- (2) The CET balance in the Spot account is not sufficient.
- 9. What should I do if it says "Balance Insufficient"?

When the balance is insufficient, you can click [Deposit] to deposit more assets, or simply reduce the amount you to swap.



10. What should I do if it says "Market depth insufficient"?

Swap service will be unavailable in some markets due to insufficient depth. In this case, please trade directly in [Exchange] section.

- 11. Where is Swap Order Record?
- (1) On Swap page, you can see [Last 5 Swap Records] at the bottom of it. If you want to check all records, please click [All Records] instead.



(2) On the navigator, you can see your [Swap Orders] under [Orders]





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matthew Jones <mjwassup@gmail.com>

[CoinEx] Welcome to CoinEx

1 message

CoinEx <noreply@mail.coinex.com> To: mjwassup@gmail.com

Fri, Oct 21, 2022 at 11:37 AM

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Thank you for signing up in CoinEx

Dear user mjwassup@gmail.com:

Welcome to CoinEx. Your registration code is: 234560

For security reason, the code will be expired in 30 minutes.

CoinEx Team 2022 / 10 / 21

If you have any questions, please submit a ticket or contact our support Support@coinex.com

This is an automatically generated email, please do not reply.



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Finance ~

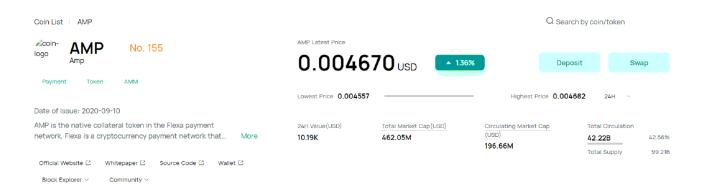
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Price



Markets

Market	Price	24H Change	24H Lowest	24H Highest	24H Volume	24H Value	
Exchange							
AMP/USDT	0.004669	+1.36%	0.004555	0.004676	1.11M AMP	5.16K USDT	Trade
AMP/BTC	0.000000205020	-1.16%	0.000000202464	0.000000210044	1.06M AMP	0.2206 BTC	Trade

Coin Introduction

1. Project introduction

AMP is the new digital collateral token offering instant, verifiable assurances for any kind of value transfer. Using AMP, networks like Flexa can quickly and irreversibly secure transactions for a wide variety of asset-related use cases.

AMP offers a straightforward but exceptionally versatile interface for verifiable collateralization through a system of collateral partitions and collateral managers. Where collateral partitions can be designated to collateralize any account, application, or even transaction, and carry balances which are directly verifiable on the Ethereum blockchain, collateral managers are smart contracts that can lock, release, and redirect collateral in these partitions as needed in order to support value transfer activities. AMP supports a wide variety of use cases for collateralization, and also introduces the concept of predefined partition strategies, which can enable special capabilities such as collateral models through which tokens can be staked without ever leaving their original address.

Flexa is a payments network that enables fast and fraud-proof payments for merchants all over the world. By using AMP partitions as collateral pools, Flexa can secure payment authorizations while the underlying asset remains unconfirmed, and approve merchant transactions in close to real-time. In helping to develop the AMP token, Flexa contributed two years of research and development to the token architecture and design, and developed and released the first AMP collateral manager contract as open source.

2. Team introduction

Co-founder: Daniel C. McCabe

Linkedin: https://www.linkedin.cn/incareer/in/danielcmccabe

Co-founder: Trevor Filter

Linkedin: https://www.linkedin.cn/incareer/in/trevorfilter

Co-founder: Zachary Kilgore

Linkedin: https://www.linkedin.cn/incareer/in/zacharykilgore

3. Investment institution

1kx, Access Ventures, Nima Capital, Pantera Capital, Robot Ventures, etc.

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? Help

Total supply: 100 billion

Token application:

(1) Collateral: On the Flexa payment network, AMP is staked by users to provide the sellers with collateral to unconfirmed cryptocurrency payments. For each transaction, an equal value of AMP

is locked in a smart contract before the cryptocurrency payment (e.g. Bitcoin) is confirmed. If the payment ends up not being confirmed, the AMP token staked is used to repay the sellers. (2) Staking: Users can stake AMP to increase the capacity of the Flexa payment network. Stakers receive staking rewards from network transaction fees.

(3) Governance: Users can vote on governance proposals including future grant recipients, partnerships, cross-chain integrations, and DeFi collaborations.

Merchant Development Fund: 25% Developer Grants: 25%

Flexa Founding Team and Employee Pool: 20% Token Sales with a one year lock up: 20%

Network Development Fund: 10%



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Flexa Network Whitepaper

May 2019 · flexa.network



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Executive summary

At Flexa, we believe that the best way for global commerce to become more efficient and accessible is by making cryptocurrency spendable everywhere.

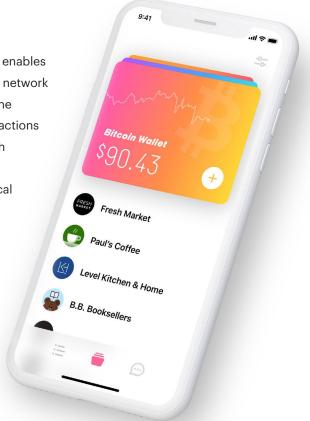
With cryptocurrency transactions exceeding 20 billion USD each day,¹ it's simply a matter of time before digital commodities become a central part of global commerce. And yet, cryptocurrency's collective value of 0.25–0.5 trillion USD² remains practically unusable in physical retail.

Considering that 90.9 percent of retail sales in the US still take place offline,³ brick-and-mortar payments are the primary hurdle in realizing the true utility of cryptocurrencies. Furthermore, widespread retail acceptance of cryptocurrency is critical for its sustainable value.

The solution to blockchain payments

We have developed the Flexa network as an open standard that enables instant cryptocurrency payments in stores and online. This new network is designed to act as an intermediary between merchants and the blockchain, offering them inexpensive and fraud-resistant transactions without volatility exposure. Flexa enables consumers to pay with their preferred cryptocurrency while preserving their freedom, security, and data privacy. And, Flexa doesn't require any physical cards or merchant point-of-sale upgrades.

Flexa was developed from decades of experience in fintech, retail, and payments. Today, Flexa features many high-profile merchants on its platform, the launch of which marks the first real instance of a decentralized, global payment network with the power to make commerce more efficient and accessible for billions of people.



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We're making cryptocurrency useful

The blockchain as the future of commerce

A framework for consumer adoption

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Scalable retail payments for any app

The Flexa payment experience

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The present state of digital payments

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Vision

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We're making cryptocurrency useful

In the original Bitcoin whitepaper, Satoshi Nakamoto outlined a perspective on the fallacies of modern-day commerce, which relies "almost exclusively on financial institutions... to process electronic payments."⁴

Digital payment instruments in the United States and around the world consist of complicated financial settlement processes—costing merchants *up to 4 percent in processing fees* for purchases and involving up to twelve different entities (each a discrete point of failure) to process a single exchange. Meanwhile, retail fraud losses in the US alone continue to reach all-time highs, claiming more than 48.9 billion USD in 2016.⁵

However, present-day payment instruments are extremely useful to consumers because they have widespread merchant acceptance. And in order for cryptocurrencies to realize similar real and sustainable value, it is critical that they become spendable everywhere.

Many companies have recently developed wallets and apps that enable retail blockchain payments, but they are *universally dependent on existing payment networks*. The promise of cryptocurrency is not being realized when it also requires physical debit cards, linked accounts, or centralized payment infrastructure to facilitate the purchase of a cup of coffee.

Flexa is the first network specifically designed to facilitate practical cryptocurrency payments by enabling instant, no-fee transactions at stores, restaurants, and online. Flexa represents a milestone in the utility of cryptocurrency—payments that are both consumer and merchant

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6 We're making cryptocurrency useful

friendly. With a simple SDK, Flexa allows developers to add retail payment features to any app, streamlining acceptance of cryptocurrencies for merchants and eliminating volatility exposure.

Flexacoin (FXC) is the new digital collateral token for facilitating retail cryptocurrency payments on the Flexa network. Flexacoin is staked to collateralize every payment on the Flexa network, enabling instant, fraudfree point-of-sale transactions at merchants worldwide—helping to achieve a long-term vision of making cryptocurrency spendable everywhere.

As a simple, neutral, fixed-supply ERC20 token, Flexacoin ensures that the network itself is blockchain-agnostic, and allows people to spend the cryptocurrencies that are meaningful to them. Anyone can use Flexacoin to stake wallets on the Flexa network. Stakers help to collateralize payments made by those wallets, and in return, they earn stake rewards based on transaction volume.

By connecting merchants, banks, and the blockchain with this open network, we're building a new, global payment system to challenge the status quo.

We envision that the Flexa network will ultimately come to represent open network infrastructure for any blockchain payment, similar to how card associations such as Visa, Mastercard, UnionPay, and American Express offer closed payment rails for credit cards. Beyond that, with digital global payments *in excess of 10 trillion USD each day*,⁶ this retail platform will make cryptocurrency more valuable, meaningful, and useful.

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The blockchain as the future of commerce

The limitations of traditional payment instruments—fraud and cost—are solved by the primary strengths of blockchain technology. Accordingly, merchants and the greater blockchain community each stand to benefit from making cryptocurrency spendable everywhere.

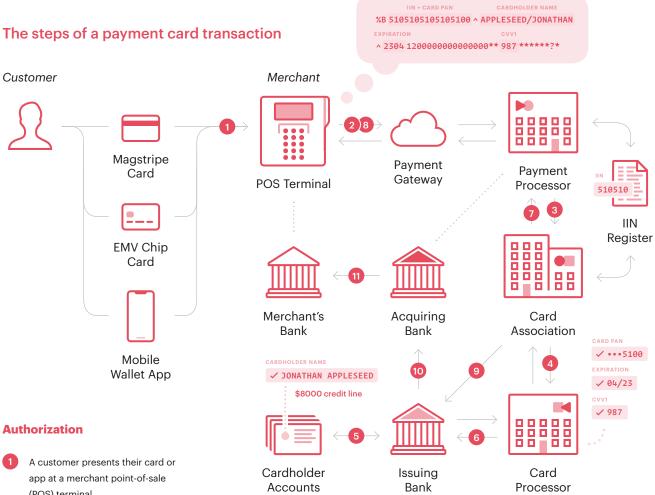
For many merchants, payment card fraud and transaction expense are two of the most significant operating costs to manage and actively reduce (e.g., in 2017, losses due to payment card fraud amounted to an estimated 28 billion USD worldwide). Payment card fraud today takes many forms, from stolen account numbers to abuse of marketing incentives. Even chargebacks, initially developed as a consumer protection over forty years ago, have become a vehicle for malicious activity. And smaller merchants ultimately share a disproportionate share of the damages, as they have fewer resources to counter sophisticated fraud or defend themselves in the case of a dispute.

In addition to the costs of fraud, the very act of processing a payment can be extremely expensive, due to the variety of fees and operating expenses involved in handling cash, payment cards, and other payment instruments. For instance, in 2016, the top twenty-five merchants by revenue worldwide spent a collective 19 billion USD to accept payments.⁸ In general, these expenses are a result of complex settlement processes across a variety of network participants, including payment gateways, processors, card associations, and financial institutions. Due to this complexity, a standard payment card transaction in the United States involves more than ten discrete steps.

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The blockchain as the future of commerce



- (POS) terminal.
- The terminal reads the magnetic stripe or embedded signature data from the card and transmits it through a payment gateway to a payment processor.
- The processor uses a list of Issuer Identification Numbers (IINs) to route data through the appropriate card association, or network.
- The card association sends the transaction to the bank that issued the card through a card processor.
- The issuing bank reviews the transaction data, metadata, and internal risk models to determine whether the transaction should be authorized.

- The issuing bank returns an approval or decline to the card association, along with any other verification data as requested by the merchant.
- The card association relays the authorization to the processor, which sends a transaction success message back to the POS terminal.
- Based on the merchant's decision to complete the transaction, the POS terminal sends the payment processor instructions to "settle" the prior authorization amount, which are then relayed to the card association.

Clearing & settlement

- The card association directs the issuing bank to transfer a final purchase amount (minus interchange) to the processor's own bank, called the "acquiring bank." It returns a success message to the payment processor.
- The acquiring bank receives funds within 2 business days. Meanwhile, the issuing bank resolves the customer's pending record of charge, and appends it to their statement.
- The acquiring bank initiates a daily transfer for funds collected minus any fees for processing.

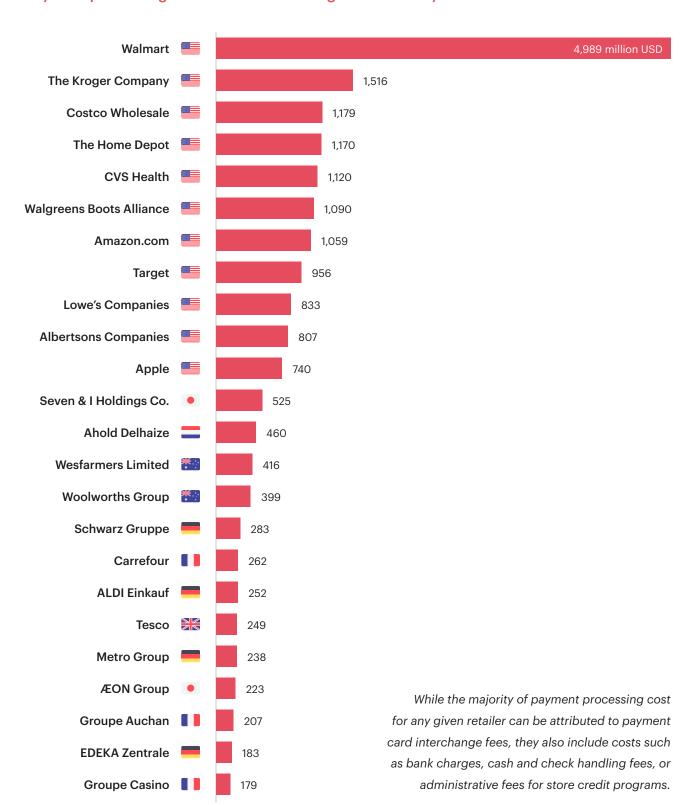
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The blockchain as the future of commerce

Payment processing costs of the world's largest retailers by revenue in 20169



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10 The blockchain as the future of commerce

How merchants and the blockchain stand to benefit

The blockchain offers a practical solution to merchant concerns of fraud and cost. It dramatically reduces the number of possible fraud vectors by enforcing tamper-proof transactions on a ledger, and it decentralizes transaction verification—creating an open market for processing that more closely represents the actual computation cost. As an added benefit, the blockchain provides native support for borderless payments, which opens merchants to a global community of customers without requiring additional payment infrastructure or currency exchange.

Meanwhile, the blockchain needs merchant adoption in order to become a viable supplement to other payment methods. Additionally, with this increased utility comes more straightforward cryptocurrency valuation, reduced volatility, and market stabilization. Growing merchant acceptance will make cryptocurrencies substantially more valuable, and truly enable the globalizing effects of peer-to-peer electronic cash that Satoshi Nakamoto envisioned.

Blockchain adoption is inevitable

For these reasons, we believe that the blockchain complements the infrastructure of traditional payment instruments. However, due to the operational and technical complexity in managing native cryptocurrencies at scale, many merchants will require an intermediary service. This service must be designed so that it cannot compromise the core principles of data protection, decentralization, and choice that have bolstered the cryptocurrency community since its inception.

We believe that the Flexa network offers the first practical cryptocurrency payments service for retail, dining, groceries, fuel, travel, and more. We remove the complexities of acceptance to bring fraud resistance and low-fee processing to merchants, while still protecting consumer tenets of privacy, decentralized governance, and freedom of choice. By allowing merchants and their customers to engage directly as buyers and sellers, global commerce becomes vastly more efficient.

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A framework for consumer adoption

The software that moves the vast majority of money around the world today still uses legacy standards created during the late 1970s,¹⁰ but in the absence of a compelling alternative, consumers are trapped into maintaining the status quo.

Since the creation of Bitcoin in 2008, blockchain communities have attempted to make cryptocurrencies a useful complement to traditional payment instruments like credit cards, debit cards, and cash. However, fundamental user-experience challenges such as unintuitive QR code interfaces, complex address strings, new security protocols, and network capacity issues have hindered commercial adoption. Various scaling solutions such as multi-layer protocols and Proof of Stake consensus algorithms show considerable promise for improving the speed and utility of blockchain transactions, but create issues of complexity and compatibility for merchants.

A variety of mobile wallets are promoting cryptocurrency payment solutions, but unfortunately, they are completely reliant on existing legacy infrastructure. These wallets utilize high-fee virtual Visa and Mastercard debit cards—requiring bank accounts, physical cards, and multiple tiers of centralization. Digital payments on these platforms are subject to low transaction limits (in some cases, less than \$100),¹¹ as well as Apple's restrictions for NFC access on iOS devices.¹² Justifiably, these systems have extremely low consumer adoption due to the increased friction compared to a typical payment card.

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12 A framework for consumer adoption

The solution to blockchain payments is not building cryptocurrency acceptance on top of the existing multi-layer networks, but creating a *new network* that solves merchant and consumer needs alike.

While decades of retail payments experience confirm the pain points of fraud and processing cost, we find that consumers' needs are distinctly different. Consumers evaluate payment instruments against an individual framework of five basic criteria:

Basic consumer criteria	Bank transfers	Payment cards	Mobile wallets	Flexa
Freedom of choice				
The need to avoid fees, and	×	×	×	✓
mechanisms of unwarranted control				
Security				
The need to use a system without	✓	✓	×	✓
fear of loss by deception or failure				
Speed				
The requisite convenience of instant	×	×	✓	✓
confirmation, often lost to security				
Usefulness				
The need for widespread acceptance	✓	✓	✓	✓
of a particular payment instrument				
Value				
Any incentive to use a payment	×	✓	×	✓
instrument (e.g., rewards, no fees)				

Speed, usefulness, and value are often the most critical factors in choosing a particular payment instrument at retail. Each of these features must be addressed for cryptocurrencies to see widespread adoption.

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13 A framework for consumer adoption

In order for a viable blockchain cryptocurrency payment network to achieve meaningful scale, the table stakes for consumers are the following:

1 Real-time transactions

Merchants and their customers need to receive confirmation that a transaction was successful in less than one second.

2 No consumer-facing fees

Consumers will not pay a premium to use blockchain cryptocurrencies, because such a cost represents negative value in their decision-making framework. The fee must be zero on the consumer side of the transaction, and ultimately provide competitive spending incentives.

(3) Broad acceptance

In order to see widespread consumer adoption, it must be possible to use cryptocurrencies for the majority of daily expenditures. Any less than that, and the mindshare required to maintain "front of wallet" utility will not be attainable.

Meeting and dramatically exceeding these expectations will be challenging, but any new payments network must comprehensively solve both consumer and merchant needs. We believe that Flexa satisfies all of the core consumer requirements necessary to break the legacy payments status quo.

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Product

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Introducing Flexa

Flexa is an open network for enabling instant cryptocurrency payments in stores and online, allowing merchants to receive secure cash deposits via their existing points-of-sale.

Scalable retail payments for any app



Flexa is designed to facilitate payments from any wallet, in any coin, to any merchant, across the globe. Flexa's network is already integrated with many high-profile merchants, offering instant acceptance of potentially hundreds of cryptocurrencies to developers all over the world.

The vision for this new network is to become the open, seamless standard for cryptocurrency payments in physical retail.

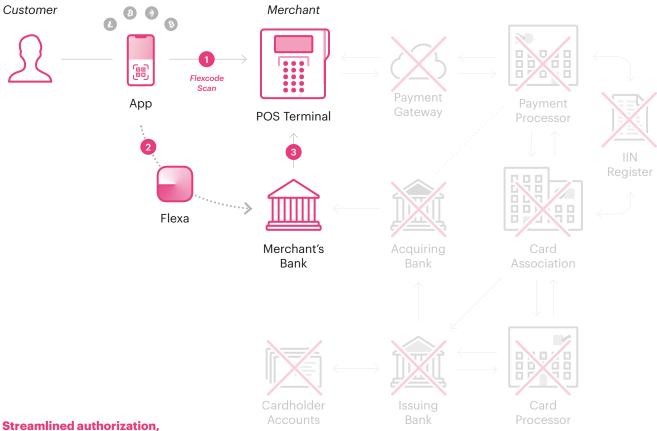
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16 A new network

Flexa will enable developers to integrate retail cryptocurrency payments within their own apps. By creating the most simple, direct network, Flexa enables broad cryptocurrency acceptance with the least complexity—no longer requiring the variety of payment gateways, processors, associations, and financial institutions.

Sample Flexa transaction flow



Streamlined authorization, clearing & settlement

- A customer scans their app at merchant POS for payment in any cryptocurrency supported by Flexa.
- The app requests the current conversion rate for the customer's desired cryptocurrency, and submits a blockchain transaction via Flexa.
- 3 The Flexa network transmits a one-time authorization code (FPAN) in real time to authorize the transaction on the merchant's POS terminal, then pushes fiat funds to the merchant's bank account. The customer's purchase is complete.

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17 A new network

The Flexa payment experience

Flexa payments are designed to be as simple as possible. With just a single tap and scan, Flexa verifies your cryptocurrency balance against a public index rate and generates a proprietary flexcode for payment.

Because Flexa payments do not require NFC (like traditional payment cards), they are not restricted by Apple's requirements for payment cards to be loaded into the Wallet app, nor by tap-to-pay (contactless) implementation timelines or transaction limits. This greatly reduces the network's risk as compared to other cryptocurrency payment solutions.

A Flexa transaction has two primary components, which are delivered to client apps through the Flexa Wallet SDK:

- The first is called an FPAN, or flexible primary account number, which
 is a one-time authorization that allows a merchant to debit local fiat
 currency against the selected cryptocurrency wallet balance.
- The second is called a **flexcode**, which is a proprietary and backwards-compatible barcode format that is scannable by standard point-of-sale barcode readers. Each flexcode conveys the FPAN with any user-authorized metadata through the merchant's point-of-sale system.

Because all Flexa transactions use the same authentication process for payments, they represent the only interface that is just as secure—and just as usable—whether used in stores or online.

Online Flexa transactions will make use of identical FPAN provisioning mechanisms and back-end integrations. In fact, online Flexa transactions will differ from physical Flexa transactions only in their form of approval. Instead of using a flexcode, virtual Flexa transactions will relay an FPAN via an account-linked device.

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18 A new network

Principles for network development

Flexa has presented six principles for the network, representing our vision for its ongoing development and sustained platform growth.

In order to become a trusted, public cryptocurrency payment rail, we believe that Flexa must be:













Compliant

Secure

Instant

Open

Simple

Useful

We present these principles to help guide the development of Flexa, and we hope to build trust and transparency with the blockchain community by articulating them as the ongoing intentions guiding the network:



Compliant

We designed Flexa to support local compliance requirements and data protection regulations. Notably, unlike alternative solutions for institutional cryptocurrency payments, the network does not require Flexa or third parties to act as custodian of funds; the technology functions as a direct payments processor without volatility exposure for merchants.



Secure

The Flexa network has been designed with open-source, end-to-end encryption for resilience from man-in-the-middle attacks and other forms of surveillance or tampering, and exposes only non-sensitive information in the course of completing a transaction.

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19 A new network



Instant

Flexa is the only network to offer instantaneous conversion of cryptocurrency via direct bank deposits at merchant point-of-sale, regardless of block time. End users need only one tap to authorize payment, with transactions (confirmed by point-of-sale) currently measured at less than a second. Flexa transactions are designed to be the absolute fastest payment solution available in the world.



Open

Flexa is designed to enable the free and open use of cryptocurrency at retail. The network will be accessible to a wide variety of developers and merchants around the globe. To support this widespread acceptance, the network community need only stake Flexacoin. Therefore, Flexa requires no proprietary license or gateway in order for developers to integrate their wallet or transmit cryptocurrency transactions.



Simple

From tap to transaction, Flexa supports simple, straightforward API methods for exchange and payment. Because the network is not reliant on existing payments infrastructure, payments are pre-authorized in a single message, enabling authorization signatures and settlement to be combined into one fraud-resistant transaction. Flexa's simplicity of integration, operation, and settlement makes cryptocurrency payments easy for merchants and their customers alike.



Usefu

Finally, Flexa is designed to be backwards-compatible with existing POS systems, and as interoperable with as many partners and platforms as possible. We have developed the Flexa network toward broad accessibility and widespread acceptance—starting with the very first apps on the network, which take advantage of existing POS integrations and require no new hardware or merchant upgrades.

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People

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Our team

The people behind Flexa combine more than twenty decades of experience in technology, retail and payments at American Express, Bloomberg, the MIT Media Lab, NASA, Starbucks, and Warby Parker.



Tyler SpaldingCo-Founder

Tyler has founded and invested in various blockchain projects since 2011. He was previously the CTO of Raise, Co-Founder and CTO of Tastebud Technologies, and an Engineering Lead with the United Space Alliance, US Air Force, and NASA's Space Shuttle Program. He holds two Masters degrees from MIT and UIUC.

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Trevor Filter

Co-Founder

Trevor began his career at the MIT Media Lab, and has been designing award-winning, customer-centric experiences for over a decade. He was previously Head of Product & Design at Raise, Head of Product at Slide Network, and a Senior Product Manager at American Express. He holds a Bachelors from MIT.

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Zachary Kilgore

Co-Founder

Zach has more than eight years of experience engineering front-end and back-end software platforms and infrastructures for payments and mobile. He was previously an Engineering Manager at Raise, Director of Engineering at Slide Network and a Front-End Engineer at Warby Parker. He holds a Bachelors from Duke University.

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Daniel C. McCabe

Co-Founder

Daniel has 20 years of experience across finance, technology, and private equity law. He was formerly a partner at Greensfelder and holds a JD from the Chicago Kent College of Law with a Bachelors from Northwestern University.

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Ryan Records

VP of Partnerships

Ryan led the creation, rollout, and consumer growth strategies for the Starbucks mobile app, one of the most successful mobile payment platforms in the world. He holds a Masters degree from Washington State University.

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Caitlin Skulley

Sr. Director of Merchant Dev.

Caitlin built and grew the merchant B2B program from the ground up for a leading payments distributor, and boasts nearly 20 years of experience in client services. She holds a Bachelors degree from Colby College.

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Alex Disney

Blockchain Engineer

Alex is a blockchain engineer with ten years of experience developing cryptocurrency mining and trading operations at DRW. He implemented EIP-758 for Parity and holds a Bachelors degree from UIUC.

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Chris is a financial software engineer with seven years of experience building distributed data storage and analysis systems and infrastructure at Bloomberg. He holds a Bachelors degree from UIUC.

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People

Advisors

To guide the growth and scale of our products, we have also assembled a group of talented individuals across blockchain development, consumer retail, hardware, machine learning, marketing, and payments. Our advisors bring the experience of leadership positions with some of the most notable companies in the world, including:

Amazon.com	Google	Tesla
American Express	Mastercard	Venmo
Apple	Nike	Visa
Capital One	PayPal	Walmart / Store No. 8
Citigroup	Pinterest	Warby Parker
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The present state of digital payments

Digital payments take many forms around the world and move a collective 10 trillion USD each day.¹³ The majority of these transactions are conducted using one or any combination of three instruments:



Direct bank



Payment cards



Mobile wallets

e.g., SWIFT, Fedwire, ACH

Global and domestic bank clearing networks that move 3.6 quadrillion USD in 102 million transactions per year¹⁴

Common throughout Europe for all transaction sizes, and in the US and Canada for large and commercial transactions

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e.g., Visa, American Express

Plastic cards leveraging credit and debit networks to move small purchases of 26 trillion USD in 257 billion transactions per year¹⁵

Common in most geographies throughout the world for small transactions, especially the US, Canada, Europe, and Asia-Pacific

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e.g., Apple Pay, Google Pay, Alipay

Mobile apps that proxy traditional payment instruments to move more than 8 billion USD in 300 million transactions per year¹⁶

Common in Asia-Pacific for all transactions (via bank transfers); gaining broad acceptance in the US, Canada, and Europe

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The present state of digital payments



Direct bank transfer

In general, non-cash payment instruments are underpinned by a traditional account held at an insured financial institution, such as a commercial bank or credit union. Whenever money is exchanged via one of these payment instruments, whether electronically or by an offline ledger, it is ultimately transmitted between financial institutions. To reconcile these payments, a variety of domestic and international standards are used for direct bank transfer between businesses and consumers (also sometimes called "electronic funds transfer"), such as ACH/IAT, CHIPS, SWIFT, RTGS, Fedwire, BEPS, NEFT, and KFTC.

Despite their ubiquity, each of these systems rely on legacy infrastructure that remains vulnerable to fraud and transaction inefficiencies.

Legacy infrastructure

The underlying technology of the global financial network is difficult to navigate, consisting of a variety of incompatible legacy protocols and standards; many of the current electronic settlement systems have remained relatively unchanged for 40 years. For instance, Automated Clearing House (ACH) transactions in the United States are still conducted via fixed-width text files (with precisely 94 characters per line), uploaded to various FTP servers and downloaded at specific times of day for settlement. Until 2016, these transactions cleared the following business day, when NACHA announced an update allowing for same-

Daily processing volume

SWIFT

5 trillion USD¹⁷ 30.7 million transactions¹⁸

Fedwire

2.1 trillion USD²¹
528,000 transactions

CHIPS

1.4 trillion USD²¹
430,000 transactions

ACH

120 billion USD¹⁹70.1 million transactions

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day payments.²⁰ This "upgrade" involved no changes to the underlying specification; rather, banks were required to process transactions twice instead of once daily.

Other clearing systems include the Society for Worldwide Interbank Financial Telecommunication (SWIFT); the New York Clearing House Association's CHIPS network; and the Federal Reserve's Fedwire network. Each involve substantially more robust checks and balances than ACH and benefit from greater speed, increasing the complexity of the global financial system. Together, these systems transmit a staggering 3.6 quadrillion USD in global volume.²¹

Fraud vulnerability

Despite the additional supervision involved in these ledger systems, their protocols and networks are vulnerable to fraud. In a 2016 survey of the largest financial institutions, "cybersecurity concerns" was the most-responded challenge that bank executives said they faced in their day-to-day role,²² and many such instances of theft have recently become public.

In 2016, thieves made off with 81 million USD by impersonating Central Bank SWIFT operators.²³ Throughout a single weekend, they routed four transactions through the New York Fed's mostly automated system, moving 101 million USD from Bangladesh to the Philippines. It was only when a New York Fed official caught a thief's misspelling of the beneficiary name that they were able to alert Bangladesh Bank officials and prevent the transit of an additional 920 million USD.

In 2018, a larger heist was discovered involving the Punjab National Bank and promissory "letters of understanding" issued through SWIFT, where funds were laundered by using a password provided by bank officials for direct access to the SWIFT network.²⁴ Letters of understanding were issued for the equivalent of nearly 1.77 billion USD, and they were not correlated with the lesser amount that was registered via SWIFT in the bank's holdings. Despite repeated warnings against fraudulent SWIFT messaging from the deputy governor of the Reserve Bank of India, the scam went undetected for nearly seven years.²⁵

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Transaction inefficiency

Despite the underlying fraud vectors, funds transmitted over SWIFT, Fedwire, CHIPS, and ACH incur costs of approximately 18 billion USD every day.²⁶ Additionally, transfers require three to five days for settlement, and up to 4 percent of payments fail due to technical reasons.²⁷

The blockchain could potentially offer several enhancements in these systems, namely cryptographically secure transactions, immutability, and data redundancy. For instance, Ripple, a prominent US startup, allows financial institutions to quickly settle cross-border payments using its xCurrent network, claiming a 60 percent reduction in net cost.²⁸ Remittance providers such as Western Union and Moneygram have also piloted using native Ripple blockchain tokens (XRP) for settlement.²⁹ Using products such as these, we believe that blockchains have the potential to influence well beyond the primary layer of the global financial network.

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Payment cards

Direct bank transfers are just one of the several steps involved in conducting a standard transaction with a payment card (e.g. a credit or debit card). In practice, the payment card authorization and settlement framework implemented throughout the United States and Europe involves the coordination of no fewer than six parties in order to transmit and guarantee funds.

Although payment cards offer universal acceptance and consumer benefits, they are prone to many single points of failure as well as the rising costs of fraud and incentive fees.

Many single points of failure

The companies involved in payment card processing serve mutually exclusive roles and extract a share of the transaction fee. This fee is called "interchange," and has been variously regulated by the European Union (Interchange Fee Regulation, April 2015), and the Federal Reserve (Durbin Amendment, July 2010).

Payment cards also mandate a secondary network provided by entities called "card associations." Card associations work with payment processors to conduct the three broad stages of a payment card transaction: authorization (verifying funds in accounts on either side of a transaction), clearing (transferring funds between banks after the exchange of goods or services) and settlement (paying a merchant).

Daily processing volume

Union Pay

41 billion USD³⁰ 105 million transactions³¹

Visa

20 billion USD³²305 million transactions

Mastercard

12 billion USD³³184 million transactions

American Express

3.2 billion USD³⁷19.8 million transactions

JCB

731 million USD³⁷
8.1 million transactions

Discover

466 million USD³⁷
6.4 million transactions

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In order to accept payment cards, merchants incur disproportionately high processing fees which are often one of their largest operational costs.

In 2012, responding to these rising processing fees, some of the largest merchants in the US—including Walmart, Target, Best Buy, CVS and 7-Eleven—created a cooperative organization called Merchant Customer Exchange (MCX), with the charter of developing an ACH-backed payment instrument to avoid interchange fees.³⁴ After three years of continuous merchant investment and delayed development, the MCX mobile app never exited a pilot phase. Although it was successful at reducing merchant costs of processing, MCX was never able to deliver a compelling consumer value proposition. In 2017, JP Morgan Chase acquired the MCX technology to integrate with its existing Chase Pay system.

In the past decade, payment card processing fees have skyrocketed for two main reasons: first, because of an increase in fraud, including losses that are paid by issuing banks when they reimburse their customers for unauthorized charges; and second, because of the consumer demand for better card benefits and rewards on high-end credit card products.

Rising costs of fraud

EMV (Europay Mastercard Visa) chip cards have found mainstream adoption in Europe, Asia and the US, but payment card fraud in aggregate has continued to rise. Despite broad acceptance of the card-based technology, 2.8 million fraudulent accounts were created in 2018,³⁵ and account takeovers cost merchants 5.1 billion USD.³⁶ Additionally, transactions made online (i.e., "card-not-present") have seen fraud losses increase more than 100 percent since the introduction of the EMV standard.³⁷ Chip-enabled cards have subsequently increased payment security, but are still vulnerable to man-in-the-middle attacks, especially when merchants don't upgrade their systems to support encrypted transaction data from EMV-capable terminals. Cards can also be cloned from unsophisticated account enumeration, physical card skimmers, RFID readers, or simply a restaurant waiter with a cell phone camera.

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In 2016, the total fraud losses for payment cards worldwide was estimated at 22.80 billion USD,³⁸ with 46 percent of all US citizens reporting card fraud within the past five years.³⁹

Recently, the rate of identity theft has soared, with more than 1,500 corporate data breaches,⁴⁰ including the theft of 143 million credit reports from Equifax⁴¹ and 40 million credit card numbers from Target.⁴²

Yahoo—now part of Verizon—also revealed that hackers obtained the personal information of its entire database of 3 billion worldwide users during an attack in 2013.⁴³

Incentive fees

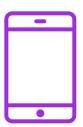
Credit card rewards points also contribute to the high fees incurred by merchants to accept these payment instruments. Originally introduced by American Express in 1991,⁴⁴ these points have since become a cornerstone of consumer marketing for major credit card products. Today, travel and dining bonuses have become extremely competitive for the major credit card issuers: Chase, Capital One, and American Express are each vying for coveted "front of wallet" placement by offering up to 5× points or five percent cash back on various purchase categories.

As a result, many industries have developed to help the affluent consumer "optimize" their spend for maximum returns, perhaps without realizing that the true cost of these rewards is subsidized either by the small merchant businesses (which lack the required leverage to negotiate more affordable interchange rates), or the other payment card consumers who finance debt through high monthly APR interest. Many small businesses ultimately choose to avoid payment cards altogether and revert to cash-only transactions, putting them at a significant consumer disadvantage.

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Mobile wallets

More and more, third-party mobile wallets are becoming mainstream payment instruments, capitalizing on their ability to aggregate various aspects of bank accounts and payment cards and offer even more consumer choice and convenience. While some (like Apple Pay, Google Pay, and Samsung Pay) simply serve as vehicles for virtual cards by proxying existing payment cards' primary account numbers, or PANs; others (such as Alipay, WeChat Pay, PayPal, Venmo, Square Cash, and Apple Pay Cash) have built a suite of value-added services and integrations on top of what is essentially a stored value account.

Many of these mobile wallets have seen substantial growth in recent years—especially in China—but their traditional payment instrument underpinnings present limitations on the ability to provide meaningful incentives, grow internationally, and manage fraud vulnerabilities.

Limited incentives

Today, even the largest and most successful mobile wallet apps and services enable the vast majority of their transactions by proxying an underlying insured or regulated payment instrument, such as a bank account or payment card. By functioning as this abstraction layer, services like Apple Pay and PayPal are able to offer value-added features like enhanced security or purchase protection, but are limited in their ability to provide unique incentives or sustainable bonus structures beyond what the underlying instruments already support natively.

Daily processing volume

Alipay

4.7 billion USD⁴⁵175 million transactions

WeChat Pay

3.3 billion USD⁴⁶130 million transactions⁴⁷

PayPal (incl. Venmo)

425 million USD⁴⁸ 8.3 million transactions⁴⁹

Paytm

55 million USD⁵⁰11 million transactions

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International incompatibility

Moreover, mobile wallets have seen substantial growth in markets without entrenched financial institutions. For example, in the absence of traditional, credit-based payment infrastructure throughout China, companies like Alipay and WeChat Pay have built a direct system that facilitates mobile transactions on a private payment network over the internet. The rapid growth of these platforms—in terms of both scale and versatility—is impressive. But because the underlying financial infrastructure is still provided by domestic financial institutions, international growth is encumbered by the overhead of adapting these systems to foreign banks and exchanging currencies.

Outside of payments, the major value in third-party mobile wallets is their usefulness for internal or peer-to-peer transactions via network effects. Many people join Alipay, WeChat, Venmo or Square Cash because their friends are there, or because it's easier to send money to a phone number or username than it is to share account numbers. These features build community, but ultimately limit platform growth to these regional groups because users have limited incentive to interact internationally.

Fraud vulnerability

Mobile wallets are essentially an interface to existing payment instruments, which can make them vulnerable to certain types of fraud. By storing many payment instruments behind a single online account and password, these apps create an opportunity for account takeovers, which in 2018 amounted to 5.1 billion USD in losses.⁵¹ Many apps also distinguish between peer-to-peer payments and payments for goods and services because of their inability to mitigate buyer fraud, such as chargebacks and ACH returns.

For example, due to its ACH underpinnings, Venmo's terms and conditions explicitly warn against using the app for retail payments. When a fraudster reverses an ACH transaction used to load a Venmo account, the company is forced to reverse the transaction within its own ecosystem, sometimes by directly debiting beneficiaries' bank accounts.

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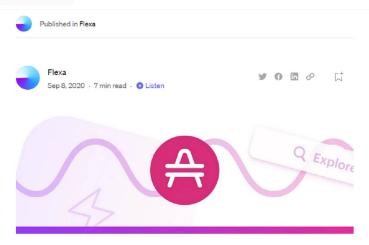
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Exhibit 9



Flexa Capacity is migrating to Amp

Announcing the most fundamental upgrade to Flexa since the release of the Flexa payments network itself

At <u>Flexa</u>, our mission is to make payments more efficient and accessible for people all over the world. To accomplish this, we work to build technology that makes any asset spendable in any app at any store. And as a result, we spend a lot of time thinking about how to decentralize payments while making them even more efficient and secure.

Almost a year ago, we embarked on a project to improve the transparency and security of Flexacoin, the collateral at the heart of the Flexa network. We wanted to determine if it was possible to stake collateral to Flexa-enabled apps in an entirely verifiable way—on chain — and further, to build a form of collateral that could be staked to the Flexa network without ever leaving its original wallet address.

Today, we're delighted to share the outcome of these efforts, in the form of a new digital collateral token that's been in development for more than eight months and is even more extensible and powerful than what we ever envisioned back when we first set out to build it.

Introducing Amp, the new digital collateral token

Developed in close partnership with ConsenSys, <u>Amp (AMP)</u> is a new token and staking platform that has been designed to support the instant, transparent, and verifiable collateralization of any type of value transfer — whether fast or slow, digital or physical, like-kind or multi-asset.







As the leading Ethereum-focused software engineering organization, ConsenSys helped push the development of Amp to the very forefront of the Ethereum development landscape. Truly, Amp is as cutting-edge and extensible as any ERC20-compliant token available today. The Amp token's implementations of newer Ethereum technologies like partitions and operators, along with its collateral management interfaces and partition strategies, offer capabilities that have never before been deployed on Ethereum at this scale.

Amp's universal extensibility and ERC20-compliant framework introduce new opportunities to improve the speed and security of asset transactions across a vast set of financial use cases — including payments, exchange,



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NYSCEF DOC. NOlending, remittance, and beyond. The Amp smart contracts have been thoroughly audited by leading security research firms <u>ConsenSys Diligence</u> and <u>Trail of Bits</u>. And because Amp is <u>open source</u>, its code is freely available to be integrated and extended by any third-party platform or application.

What's happening to Flexacoin?

Because of the nature of the interfaces required to implement the new capabilities of Amp, it wouldn't have been possible to simply upgrade the Flexacoin token using its existing smart contract or at its existing contract address. Therefore, Amp was necessarily developed as a <u>new, separate token</u>, which is now available to be migrated from Flexacoin at a rate of 1:1.

Although the functionality of Amp as collateral vastly exceeds that of its predecessor, the supply and economics of Amp remain identical to that of Flexacoin. Amp will retain Flexacoin's fixed and fully diluted supply of 100 billion tokens, as well as the same long-term token distribution and supply curve that have previously been outlined.

As of today, Flexa has begun using Amp as the primary collateral for securing all transactions on its pure-digital payments network. Starting now and continuing for the next three weeks, <u>Flexa Capacity</u> will use a combination of Flexacoin and Amp to collateralize payments on the Flexa network, and Flexa will continue to distribute network rewards based on any wallet's combined FXC and AMP balance.

On Wednesday, September 30, 2020, Flexa Capacity will stop supporting Flexacoin as collateral, and Flexa will destroy its ownership of the Flexacoin token contract. At that time, network rewards in Flexa Capacity will begin to be distributed on the basis of AMP balances alone. Any Flexacoin remaining in Flexa Capacity after September 30 will still be available to migrate to Amp; however, at that time, Flexacoin will stop being used by the Flexa network as collateral for payments, and Flexacoin balances will no longer earn any network rewards.

How to migrate to Amp

To migrate your existing Flexacoin holdings to Amp at a rate of 1 FXC = 1 AMP, connect your MetaMask, Coinbase Wallet, or Wallet Connect-enabled digital asset wallet to the **new Flexa Capacity dApp** at app.flexa.network and follow the simple steps to migrate. (If you have your Flexacoin tokens stored on a Ledger or Trezor, you can also connect your wallet to Flexa Capacity via MetaMask by following the steps in this.guide.)

Please note that there is no deadline for migrating Flexacoin to Amp.

Because the migration from Flexacoin is supported directly within the Amp token contract, it will always be possible to migrate from FXC to AMP for as

long as the Ethereum blockchain is online.

The *only* important date related to the migration from Flexacoin to Amp is September 30, which is the date at which the Flexa network will stop using Flexacoin as collateral, and after which Flexa Capacity will no longer distribute network rewards based on Flexacoin balances.

We believe that Amp improves upon Flexacoin in every way, and opens up endless new possibilities for improving collateralization on the Flexa

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NYSCEF DOC. NOnetwork that were never possible with Flexacoin. As a result, we have no plans to support Flexacoin in any Flexa products after September 30, 2020.

The bottom line: While there is no requirement to do so, you can ensure that you don't miss out earning any Flexa network rewards by migrating your Flexacoin balance to Amp no later than September 30, 2020.

Improving the liquidity of Amp as collateral

In order for Amp to effectively collateralize the Flexa network (or any other high-volume value transfer application), it must maintain a sufficient amount of exchange liquidity relative to other assets. As part of executing this fundamental upgrade to Flexa Capacity, the Flexa team has also been working to achieve Amp liquidity in partnership with the most regulated and aboveboard digital currency exchanges.

That's why we're delighted to share that our longstanding partners at Gemini will be the <u>very first market</u> to support the new Amp token for exchange. Founded in 2014 by twin brothers Cameron and Tyler Winklevoss to empower the individual through crypto, Gemini is often regarded as the most secure and compliant digital asset exchange in the world. Gemini has worked closely with the New York State Department of Financial Services to obtain approval to offer trading and custody services for Amp, and will share more details regarding the availability of Amp on the Gemini exchange soon.

And finally, a brief message of thanks

Since day one, the level of support shown by the community of Flexacoin holders for Flexa and its mission has been downright inspiring. After all, very few DeFi communities have ever approached half of their circulating token supply staked back into the network, much less the two thirds that we saw on Flexa Capacity just days before this migration to Amp.

At Flexa, we take our responsibility to the Flexa community very seriously, and want to make the process of migrating the FXC staked on Flexa Capacity as simple as possible. Earlier this morning, we distributed a small amount of ether to every Flexacoin holder who was staking Flexa Capacity at the time of Amp's release on the Ethereum mainnet. As a small gesture of appreciation for the support of those contributing their assets directly to the Flexa network, this ether should serve to offset the gas costs of Flexacoin holders who would like to migrate their tokens to Amp as early as possible during this period of increased activity on the Ethereum network.

We're incredibly grateful to the entire Flexa community for their support along this remarkable journey, and couldn't be more excited about the new forms of decentralized finance that will be made possible on top of this new platform. Going forward, Flexa will remain intensely focused on making payments more efficient and accessible for buyers and sellers all over the world, and we will continue to devote the majority of our effort to the development and adoption of our <u>Spend</u> and <u>Connect</u> platforms.

At the same time, we recognize our great fortune in being able to build the future of payments on top of revolutionary software like Bitcoin, Ethereum, and the various platforms that collectively represent DeFi. The time and effort that Flexa and ConsenSys have committed to the development of the Amp platform pales in comparison to the collective efforts of the broader digital currency development community, but is one of the main reasons that we've chosen to open source the Amp token and related smart contracts so that other developers might find value in its capabilities for their own projects.

We know that the future of Flexa is even brighter now that we're building on Amp, and we can't wait to see what unfolds on the <u>Amp platform</u> in the near future. To stay up-to-date with uncoming Amp-related developments.

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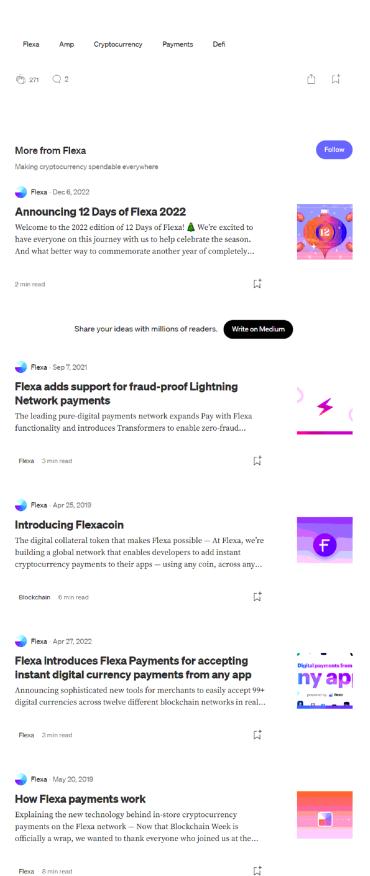
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NYSCEF DOC. NO. including new resources for developers and network participants, we hope you'll join us in following Amp on Twitter, Medium, and Discord. And we

thank you, as always, for your continued support!



Read more from Flexa

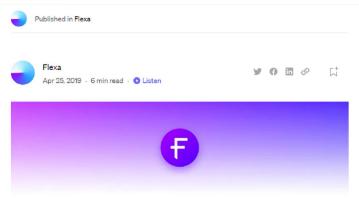
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Exhibit 10



Introducing Flexacoin

The digital collateral token that makes Flexa possible

At <u>Flexa</u>, we're building a global network that enables developers to add instant cryptocurrency payments to their apps — using any coin, across any border, and by any individual.

After announcing <u>our private token sale</u> two weeks ago, we felt it would be helpful to share a little bit more about the purpose of <u>Flexacoin</u> (FXC), as well as how the current Flexacoin supply has been distributed and how it will be deployed in the future.

What's Flexacoin?

As we <u>set out to build Flexa</u>, we quickly realized that a neutral collateral token was going to be necessary in order to support instant payments at retail points-of-sale, and to make cryptocurrencies like Bitcoin acceptable to large, multinational retailers. We also discovered that although there were thousands of cryptocurrencies in the ecosystem already, none of them offered the ideal combination of neutrality, simplicity, security, and utility that we believed could collateralize a global retail payments network. Therefore, in February 2018, we developed the collateral-specific Flexacoin token smart contract.

Now, when we talk about Flexacoin being used for collateral, what we mean is that the Flexacoin token's utility in the Flexa network is to temporarily secure cryptocurrency transactions while they are awaiting confirmation on the blockchain. To put it another way, Flexacoin represents the assurance that any given Flexa network transaction will settle, which enables Flexa to advance fiat to a merchant in real time in order to complete a retail transaction. In the unlikely event that a cryptocurrency transaction is never confirmed — e.g., due to malicious activity or blockchain vulnerabilities — Flexacoin collateral can be liquidated to cover this fiat advance.

But who would "stake" Flexacoin as collateral for app payments in the first place, and why?

The short answer is that anyone can stake Flexacoin and support an app on the open Flexa network. In return for using their collateral to secure Flexa payments, stakers are paid a small percentage of each transaction that's processed through the app they choose to collateralize. What's more, stakers will soon be able to select projects from a transparent network index representing how much stake is allocated across the network at any given point in time (look out for details of this process in a forthcoming update).

In this way, Flexa really represents the first-ever participatory payments network — wherein the total value of Flexacoin staked is exactly equivalent to the total amount of payment volume that can flow through the system.



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How has Flexacoin been distributed?

From the beginning, Flexacoin was developed to be easy to obtain and simple to use. Since our goal is to make Flexa a useful payments platform for developers and consumers alike, we needed to get Flexacoin tokens into the hands of as many developers and community members as possible. Therefore, we opted not to develop a new blockchain, and instead decided to deploy an ERC20 token on top of the popular and well-tested Ethereum network.

In 2018, we completed a private sale of Flexacoin tokens to a group of accredited investors and established token funds. The proceeds from this token sale have helped us continue to build out the Flexa network through additional merchant integrations and relationships with critical infrastructure partners.

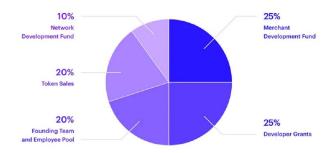
How will the Flexacoin token supply be distributed in the future?

Note: for the purpose of clarity, we've adopted the <u>Messari token supply definitions</u> for the supply tranches outlined in this post.

The maximum and diluted supply of Flexacoin will always be 100 billion tokens, as there are no mechanisms within the ERC20 smart contract that enable Flexa or any other party to issue additional tokens now or in the future. The Flexa team has allocated these 100 billion tokens to be used for the following purposes through 2045:

Flexacoin Token Distribution

Allocation and fully diluted supply, circa 2045



The 25% Merchant Development Fund is an allocation of 25 billion Flexacoin tokens that have been designated solely for supporting merchant integrations with the Flexa network. These tokens are generally reserved for longer-term efforts to facilitate merchant acceptance of Flexa-enabled apps, such as large-scale hardware deployments or software upgrades.

The 25% Developer Grants allocation consists of 25 billion Flexacoin tokens that will be used to help increase the adoption of Flexacoin for payment collateralization. Starting in January 2020, 1 billion FXC will be granted each year to developers who are interested in enabling Flexacoin-collateralized payments in their apps. These tokens will be stake-locked for a period of twelve months upon granting, after which they will be unlocked for general circulation by the developers who receive them.

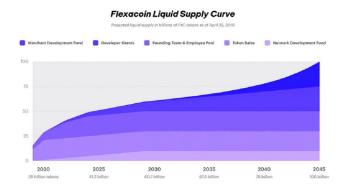
The 20% Founding Team and Employee Pool is reserved for incentivizing current and future Flexa team members. All supply from this allocation will be distributed on a four-year vesting schedule with a one-year cliff in order to ensure ongoing involvement with the project. To date, approximately 15%

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NYSCEF DOC. No. 3 of these tokens have been allocated to team members, but none have yet vested. The next major vesting date is May 1.

The 20% Token Sales allocation includes all Flexacoin tokens that have been externally distributed thus far. Of this token sale allocation, 16.5 billion tokens have been distributed to date, including a tranche of 4.5B tokens held in a smart contract vault that will become unlocked and available to token buyers on January 4, 2020.

Finally, the 10% Network Development Fund is an allocation of 10 billion Flexacoin tokens that will be used to support the development of the Flexa network over the first decade of its operation, which are to be disbursed at a rate of roughly 1 billion tokens per year.



Currently, the liquid (and circulating) supply of Flexacoin tokens is approximately 12 billion FXC, which consists solely of tokens distributed through the private token sale. On May 1, 2019, the liquid supply will increase to 15.75 billion tokens, as the first tranche of team tokens vests; and the next major increase in liquid supply will occur on January 4, 2020—when the token sale vault unlocks, and an additional 4.5 billion tokens become available for circulation (on this date, inclusive of additional vested team tokens, the liquid supply is estimated to be 26.37 billion FXC).

Where do we go from here?

At Flexa, we often talk about the gravity of what we're building. After all, the merchants who have partnered with us in order to support instant cryptocurrency payments in their stores are among the most well-known and reputable retailers and restaurants in the world. It should therefore come as no surprise that we hold the trust of these brands in the highest esteem — which is why we've been so careful to build out the Flexa network in the most compliant way possible.

As Flexa grows and matures over the course of the next several decades, we aspire to never compromise on these values, and we believe that we've allocated the Flexacoin token supply to best facilitate this mission. We welcome your feedback, and as always, if you have any questions about the purpose of Flexacoin or the current supply, please don't hesitate to reach out to us on Twitter. Thank you for your support!

Blockchain Cryptocurrer	ncy Bitcoin	Ethereum	Flexacoin	ů ば
Mana 40000 Flassa				Fallow

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Exhibit 11

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Amp: A digital collateral token to enable immediate settlement of payment transactions

November 24, 2020 amptoken.org

Abstract

Digital assets are quickly becoming the predominant medium of exchange for global commerce, but their universal acceptance is limited by the high cost of transaction validation. The key to unlocking ubiquitous digital payments is to efficiently mitigate the uncertainty of achieving transaction finality. These problems are economically resolved through an open, extensible collateral system utilizing public verification of state via distributed convergence mechanisms. Amp is a collateral token designed to decentralize the risk in a payment transaction, dramatically reducing the assurance cost from existing counterparty networks.

Amp incorporates a novel partition interface within an original framework of partition strategies to facilitate the interoperability of staking contracts for any surety mechanism. Using specific partition strategies, Amp can enable tokens to be conditionally allocated as collateral without requiring transfers to another smart contract. In this way, the system preserves asset custody, substantially improving the simplicity and safety of staking collateral.

Within distributed tokenized financial networks, Amp serves as a medium for accruing value while aligning the incentives of all participants. This is achieved via virtuous feedback loops of increasing spending capacity coupled with a non-inflationary reward distribution. Fundamental economic models are derived to demonstrate that Amp functions as low-volatility collateral, with its value compounding exclusively as a result of the utility it provides. By enabling decentralized ownership and participation in financial networks, applications built on Amp can become orders of magnitude more costefficient than existing systems, and help eliminate the overwhelming deadweight loss of traditional social and economic structures for financial transactions.

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1 Introduction

Global payment networks were created by an alliance of the largest financial institutions in the world. After decades of operating with resilient oligopoly power, these networks have designed impenetrable barriers to entry by implementing closed and inaccessible infrastructure, capital clearing requirements, commercial complexity, and restrictive counterparty fragmentation. This has resulted in a platform optimized for rent-seeking and scale, but susceptible to fraud and irreversible social cost.

The typical network architecture for state-of-the-art merchant payment systems includes a linear sequence of service providers (e.q., gateway, acquirer, processor, issuer), each maintaining their own data repositories and bespoke data security (e.g., PCI DSS¹, GDPR²) environments. In order to conduct a financial transaction through these systems, sensitive payment information must be interpreted and analyzed by each service provider, often in-the-clear, resulting in inevitable data breaches that lead to identity theft and fraud loss on a massive scale. Despite international regulatory structures that incentivize financial institutions to further develop the speed, efficiency, and cost-effectiveness of their own systems, the majority of technological advancement in recent decades has been driven by private-sector technology companies. Still, financial transactions today are plagued by convoluted pricing models and conflicting specifications³ for integrated circuit, contactless, and QR code implementations; due to these complex interdependencies and the prevalence of fraud, merchant settlement requires an average of two days for deposits (minus restricted rolling reserves) and three to six months for dispute finality. Most merchants have no alternative but to accept the myriad integration³ and compliance costs, fees, and fraud liabilities continuously imposed by payment networks; a distinct minority have opted to develop their own proprietary payment interfaces that sideline the existing networks entirely. As a result, merchants shoulder the burden in funding layers of global payment services, but the much greater deadweight loss is ultimately borne collectively.^{5,6}

The primary function of existing payment networks is to *only* facilitate transaction-related messaging, while relying on financial institutions (associations, issuing banks) to mitigate risk for both the merchant and payer. At a fundamental level, the legitimacy and fungibility of money requires universal verification. Unequivocally, this is the primary value of distributed ledger technologies; this singular feature has the potential to open financial infrastructure and eliminate

¹Payment Card Industry Data Security Standard (PCI DSS) [49]

²General Data Protection Regulation (GDPR) requirements [26]

³EMVCo, the privately-owned consortium created by payment networks, currently manages seven overlapping specifications for various forms of payment [20]

⁴Merchant Customer Exchange and various sole-entity payment services currently live or in development [64]

⁵Estimated 2% of United States GDP, Measuring the Costs of Retail Payment Methods [34]

⁶Estimated 1% of European Union GDP, Social Cost of Retail Payment Instruments [52]

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the fraud and cost persistent within the existing oligopoly. To substantially increase commerce efficiency, the centralization of various service providers within the process is immaterial – the risk needs to be decentralized.

Amp is a digital token designed to universally decentralize risk in a financial transaction. It includes a novel interface to allocate condition-specific collateral for payments with potential Byzantine participants. Economically, Amp also serves as a vehicle for accruing value within a collateralized network, aligning the interests of *all* participants. By enabling decentralized ownership and participation, a new payment network has the potential to become orders of magnitude more efficient [15].

2 Digital payments and the Flexa network

Flexa is a merchant payment network designed to enable universal acceptance of digital assets. Payments for goods and services are authorized instantly (in-store or online) without fraud and at net cost less than interchange. The network includes various exchanges and financial institutions to provide compliant settlement⁷ across multiple jurisdictions.⁸ Flexa integrates natively with existing point of sale (POS) systems⁹ and online platforms to enable payment in a typical checkout experience. The network Spend SDK is permissionless; mobile wallets or applications can create unique, interoperable authorization codes for conveyance.¹⁰ In order to unconditionally and immediately guarantee all merchant payments without trusting external protocols and network participants, decentralized collateral is the critical foundation of Flexa. By requiring each transaction to be fully collateralized, the predominant costs associated with the challenges of funds verification and payment fraud are eliminated.

The Amp token serves as the singular type of collateral within Flexa to decentralize risk within the network. To enable payment functionality, applications and communities can collectively stake Amp tokens on behalf of users. As incentive for supplying collateral, the entirety of network transaction revenue funds the continuous open-market purchase of Amp tokens for redistribution as network rewards. Flexa effectively decentralizes transaction insurance, decoupling merchant settlement from the initial consumer payment to provide immediate *finality-as-a-service*.

2.1 Prevalence of digital assets

Physical cash is effectively unusable online, but meaningful digital proxies are quickly evolving, facilitated by the growth of electronic and contactless payments. Billions of people currently use

⁷Flexa offers merchant settlement via digital assets or fiat bank transfers

⁸As of September 2020 Flexa is permitted to operate in the United States and Canada

⁹Compatible with ISO/IEC 8583 messaging standard [40]

¹⁰Digital scans via backwards compatible continuous/discrete symbologies (e.g., Code 128)

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mobile apps for closed-network P2P payments and bank transfers, assuring digital payments will soon become ubiquitous. This is more evident when considering the recent proliferation of digital stored-value payments, loyalty/point programs, and direct-to-consumer incentives. Additionally, record low interest rates and unprecedented levels of fiscal stimulus have attracted considerable attention to new digital asset classes. The popularity of speculative token networks has also fostered a spectrum of innovative projects with features specific to spending utility, inter alia, low-volatility protocols, pegged assets, and synthetic commodities. Decentralized finance communities continue to accelerate mainstream adoption through robust capital services, liquidity protocols, and novel intra-platform incentive mechanisms. The inevitable release of digital currencies by sovereign nations, financial institutions, social platforms, and corporate consortiums further defines the evolution of international commerce.

3 Decentralized collateral

With macroeconomic demand for an array of numeraire goods, Flexa is designed to support many types of digital assets; Amp as decentralized collateral completely abstracts the finality risk from the merchant transaction, providing a universal medium-of-exchange framework. With traditional payment networks, verifying the state of digital assets is a complex and expensive process. This is compounded as merchants scale and provide international services, and prohibits acceptance of a variety of available assets (§2.1). Accordingly, transactions require intermediaries to provide third-party verification of sufficient funds, exchange rates, and authenticity of assets. Decentralized networks can uniquely allow for independent verification of state via open validator sets and distributed convergence mechanisms. This dramatically lowers the cost of verification, while also eliminating fraud, information asymmetry, and moral hazard risk. With a universal foundation of trust, digital assets can be safely authenticated and used more broadly in commerce. An open collateral system can be used to secure all payment transactions in a financial network, with all participants able to transparently verify a spectrum of digital assets. In this manner, decentralized collateral serves to remove expensive intermediaries, and efficiently distributes risk.

3.1 Finality assurance and scale

Within a distributed ledger technology (DLT) platform, a finality guarantee is that well-formed blocks will not be revoked from the chain at a future point, ensuring that transactions are permanent and can be trusted. However, in the absence of an organization endorsing transactions, absolute finality generally cannot be achieved regardless of the consensus mechanism. Transactions are typically considered irrevocable through various degrees of probabilistic finality, an empirical requirement of network block confirmations. A more pragmatic approach is economic finality, wherein requisite confirmations are based on transaction value and the explicit cost in updating

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the ledger versus the potential yield from its reversal [10]. DLT assets vary tremendously in the time-inclusive economic quality of ledger security, resulting in discontinuities in measuring finality assurance. Digital retail payments require real-time settlement and universal economic finality; DLT native transactions are generally not feasible at scale.

3.1.1 Proof-of-work and alternative scaling layers

Retail payments are impractical using 0/unconfirmed transactions due to double spend exploits or explicit/inherited replace-by-fee. Finality is achieved probabilistically and is insufficient for inperson payments due to network latency. At the scale of global commerce, reorganization via majority attacks is also possible under certain economic conditions. Scaling layers are intended to provide more immediate, localized finality, but are generally not designed to reach assured finality (e.g., settlement inevitably requires on-chain transactions). Off-chain bilateral ledgers with hashed time lock contracts (HTLCs) are inefficient for one-time payments, requiring prospective-cost security deposits, and introducing non-trivial complexity of opening/closing states. Sequential payments are not possible within the same channel, and locked funds in multi-hop transactions (especially with sequential HTLCs in parallel channels) elicit untenable griefing attacks. Specific to retail payments, free-option problems and dispute windows upon settlement create inaccurate finality assumptions. Commitments to multiparty off-chain state require participants to fully validate all computations and remain online; otherwise, intermediary nodes with autonomous access to private keys (to rebalance channels) are required. The practical usability of retail digital payments is often trivialized; DLT transactions are not merely replicable data. Existing methods of scaling data transfer (e.q., packet switching) are not entirely applicable to one-way discrete transfers of ownership. In this sense, payments represent immutable value, a fundamentally more complex problem.

3.1.2 Proof-of-stake and high throughput networks

Proof-of-stake consensus algorithms attempt to reach absolute finality at the base layer with high levels of transaction throughput. The source of finality in a PoS blockchain ledger is derived from validator assurances of its integrity. While these networks¹¹ generally provide faster economic finality than PoW at scale, for payment network utility there exist myriad attack vectors and misaligned incentives. Validators themselves create new vulnerabilities such as precomputation attacks, stake bleeding, selfish endorsing, and P+epsilon attacks. Connectivity issues and node

¹¹Applicable to the spectrum of existing PoS consensus protocols for linear chains and Directed Acyclic Graph (DAG) structures (e.g., Delegated Proof-of-Stake (DPoS), Nominated Proof-of-Stake (NPoS), Proof-of-Authority (PoA), Proof-of-History (PoH), and Asynchronous Byzantine Fault Tolerance (aBFT)). The specific implementations are beyond the scope of this paper.

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desynchronizations can momentarily disrupt the validation process; weak subjectivity is excellent for longer time spans but generally ineffective for instantaneous consensus. Low latency protocols tend to be effectively centralized (e.g., utilizing collectively trusted sub-networks or membership nodes) or susceptible to collusion due to short-term metastability. At retail scale, the economic incentive for long-range attacks and posterior corruption also becomes non-trivial. PoS networks are inherently vulnerable since native tokens are liquid; validators have low opportunity cost to sell assets due to minimal infrastructure expenditure. Additionally, networks that assert immediate and absolute finality also have administrative exceptions to create discretionary ledger modifications.

3.1.3 Merchant acceptance

Native DLT-based settlement at scale is beyond the economic reality for multinational merchants. Finality assurance is paramount to mitigate coordinated fraud (e.g. simultaneous transactions online) and the financial incentives for attack. Beyond the lack of universal assurance, digital asset payments are also limited by deposit requirements, security concerns, regulatory uncertainty, and volatility. Operational complexity due to tax and accounting complications is intractable, especially for synthetic assets that consistently rebase units of account. Sustainable PoW/PoS protocols are not designed for instant, absolute finality. However, with sufficient duration, persistent economic finality is achieved based on a variety of empirical network factors (e.g., consensus protocol, validator decentralization, hardware requirements, transaction value, ledger settlement cost). Collateral allows for the entirety of transactions (regardless of consensus scheme) to reach appropriate levels of economic finality while providing immediate finality from a merchant perspective.

3.2 Meta-staking and risk distribution

To access the Flexa network, applications can supply Amp to a designated smart contract. In this implementation, collateral is supplied via meta-staking; participants stake Amp into pools that secure the network. Collateral pools are permissionless and participants can supply/withdraw without time, financial, or competitive restriction. Network rewards are distributed pro rata within the pool, self-enforcing the decentralization of risk. The Amp token contract is immutable (i.e., no administrative privileges exist), ensuring arbitrary collateral managers can perform various delegation functions (§4.2.2). For instance, custodial platforms can create interfaces for non-technical users to easily stake Amp. Meta-staking only involves contract execution, not requiring configuration processes, node/server hosting, or validator service. This is accomplished by calling the standard transfer method [23] or by using the novel, partition-based implementation transferByPartition to grant conditional access rights within the token contract

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itself (§4.2.1). When using transferByPartition, participants can collateralize the network while maintaining custody of Amp tokens (i.e., the tokens are not transferred), analogous to vote delegation in decentralized governance systems.

3.2.1 Microeconomic utility

Software wallets can provide spending utility to users by integrating the network Spend SDK and staking Amp. Network rewards are based on transaction volume, so wallets have continuous financial incentive (coalesced with Amp capital cost) to be rational actors. Individuals within the ecosystem may also participate in collateral pools for financial incentive and to provide spending capacity for desired assets or communities. Amp holders individually choose which wallets to collateralize, and earn network fees, augmenting token demand.

The Amp token partition interface enables efficient asset utilization by implementing novel partition strategies (§4.2), granting stake permissions rather than transfers, mint contracts, or proxy assets. Holders can maintain custody of assets while staking, eliminating the risk of destination errors (e.g., sending directly to a token contract address) and potential loss of funds due to insecure contracts or compromised gateways. Further, Amp can also temporarily collateralize unrelated transactions in discrete instances such as deposits/withdrawals on exchanges, or the acceleration of margin relief. This transitivity explicitly allows for greater decentralization and network resilience, in addition to ideal technical and economic utility, similar to yield-generating tokens minted from liquidity provider contracts. The economic value of Amp is underpinned through its utility within the Flexa network, but holders minimize potential time-value opportunity cost.

3.2.2 Collateral integrity

A purpose-built staking token enables maximum technical extensibility while reducing integration complexity and multivariate attack surfaces. Amp is also critical for capturing the entirety of the value that Flexa creates via virtuous feedback cycles, continuously increasing spending capacity and counteracting volatility (§5.4). However, network utility is exclusively dependent on ensuring the integrity of the collateral itself. The economic framework for meta-staking ensures that the mechanics for verifying and valuing Amp are transparent, creating opportunities for sufficient liquidity. The market supply of Amp is distributed within the ecosystem and staked as collateral for wallets to provide payment services. By comparison, the inductive incentives of this scheme diverge from traditional PoS networks. Most PoS participants lack non-financial utility from validating transactions, optimizing instead for financial yield. Accordingly, valuation models for staking tokens approximate only the net present value of future transaction fees. Staking tokens actively held in an inflationary protocol are numerically dilutive, and the network is not a long-

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term store of value. Amp was designed for the specific utility of collateral: token supply is fixed, and network rewards are *non*–zero-sum distributions (§5.2).

The value of Amp is derived entirely from its use, and successful collateralized transactions result in open-market token purchases. Other collateralized transactions can be subject to procyclicality and uncorrelated supply and demand; multi-collateral derivatives exponentially compound these effects. By insulating the network with one collateral type, risk parameters are constrained to provide more efficient network stability. If a negative price shock occurs, more network-specific collateral needs to be staked (i.e., increasing capacity), stabilizing price movement. Also, since collateral value is directly correlated to network spending volume, there is low covariance between a discrete transaction not settling (i.e., resulting in consumed stake) and Amp utility value. Persistent collateral loss would be suboptimal a priori; defecting at scale devalues the entirety of self-supplied collateral, notwithstanding the significant opportunity cost of initial token acquisition. The re-deployability of an asset is also a major factor of its collateral quality; Amp is valuable to be sold intra-network because it provides staking utility. In the event of hypothecation, Amp is autonomously sold to the open-market, and cyclically repurchased as rewards. Ultimately, consumed Amp is transferred to the participants most financially motivated to use it, completely avoiding deadweight transfer cost. Thus, the Flexa network ensures a reliable collateral asset with low volatility is created via micro-prudential efficiencies in obtaining/staking Amp for Spend SDK pools, and macro-prudential distribution of rewards to ensure aggregate collateral liquidity in public markets.

4 Amp token contract

Amp is an ERC20-compatible [23] token that implements conditional access rights via smart contracts within a partition scheme. The token interface allows for universal interoperability with external transaction protocols. A conventional ERC20 token assigns balances to hexadecimal Ethereum addresses, and the aggregate amount of those balances is the total supply of the token.

Table 1: Token balance distribution for arbitrary addresses (truncated).

Address	Balance
0x67b14331	100
0xd2b96fdd	200
0x4ffb3f00	300

Amp resembles a rudimentary token in that balances are assigned to Ethereum addresses, but the tokens also belong to a particular 32-byte partition which effectively serves as a second-dimension in the distribution array of the balances. Tokens are not reciprocal across partitions (consistent

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with address parameters), so the sum of the balances across all addresses and partitions is the total supply of the token.

Table 2: Token	balance	distribution f	for addresses	(column 1)	and partitions.

Address Partition	0x00000000	0x0a652da9	0x6c1a4750
0x67b14331	0	50	50
0xd2b96fdd	100	100	0
0x4ffb3f00	300	0	0

Amp supports transfers between addresses and partitions through the transferByPartition function, and includes the approveByPartition function that authorizes an address to transfer tokens on behalf of the caller, but only from a particular partition. To maintain backwards compatibility with ERC20, the zero partition (i.e., the default partition) is used for all ERC20 operations, including transfer and approve. In Table 2, address 0xd2b9...6fdd cumulatively holds 200 tokens, but can only transfer 100 tokens via the ERC20 transfer method. The transfer ByPartition function could be used to transfer the 100 tokens allocated to the 0x0a65...2da9 partition.

For tracking balances off-chain, two events are emitted with every transfer:

- Transfer: contains the to and from addresses, as well as the amount. If the transfer only changes the partition and not the address, the event will be emitted, but the principal addresses will be the same.
- TransferByPartition: contains the same data as Transfer, as well as the to and from partitions and any metadata or operatorData parameters (§4.1).

Operators and partition scopes

In addition to the approve and approveByPartition functions that authorize transfers up to a maximum amount, holders can designate an operator for their tokens within a particular partition. This grants the operator the ability (until revoked) to transfer an unlimited number of tokens from the delegating address and partition. The partitions themselves have semantic meaning. The first 4 bytes of the partition (the partition prefix) correspond to a partition scope, which can be used to apply a custom set of rules to transfers to and from partitions in the space (e.q., a partition prefix that matches the partition scope). Below is a representation with aff8...ed6b partition and prefix of aff82582.

Prefix |----|

0x aff82582 98ef1148f5e95598d0dde87c55853a9207f3c0d94ff43c33c517ed6b

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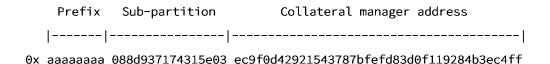
4.2 Partition strategies

The core innovation of Amp is the partition strategy, an external contract that implements the IAmpPartitionStrategyValidator interface, which can be encoded with special rules (e.g., to automatically grant operator statuses, call other hooks, and authorize discrete transfers based on external oracles). Partition strategies can be used to systematically grant controller-like permissions to various actors in the ecosystem. This enables the Amp contract to execute common implementation situations for collateral managers, creating a more efficient developer experience and permitting additional trust to be incorporated within the contract itself. To support flexibility in strategy implementations, the transferByPartition method contains an open operatorData field; this can be used by callers to embed data for the partition strategy used to validate transfers. As external communities identify new approaches and advancements within base layer technologies, entirely new strategies can be assigned to partition prefixes via the setPartitionStrategy function. The set of partition strategies is append-only (i.e., the base rules for a partition are immutable), and a strategy can never be set for the zero prefix 0x00000000, as this scope includes the default partition used for ERC20 compatibility. Transfers to partitions within a scope but without an assigned strategy is disallowed. This prevents a strategy from being added that would retroactively control tokens within its partition scope. Beyond defining strategies for new prefixes, the Amp contract owner has no ability to limit Amp transfers between addresses or partitions.

4.2.1 Distinct partition validator

The distinct partitional validator is a partition strategy that defines a collateral manager with control of tokens within the <code>0xaaaaaaaa</code> partition scope. A collateral manager is an external contract that has operator permissions on a subset of the partitions within the scope. The partition itself defines the delegated collateral manager <code>HolderCollateralPartitionValidator</code> as an operator.

Below is a partition with the 4-byte prefix <code>0xaaaaaaaa</code>. The 20-byte suffix is the address of the collateral manager, also called the *partition owner*. This implies that the contract <code>0xec9f...c4ff</code> is an operator on all <code>0xaaaaaaaa</code> partitions that include its address. The 8 bytes between the prefix and suffix (the sub-partition) can be used in any way the collateral manager wishes to manage the tokens.



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This scheme allows a single collateral manager to control a large number $(2^{64} \text{ or } 1.8 \times 10^{19})$ of partitions. Upon a transfer from a partition in the scope of this strategy, the AmpTokensSender transfer hook of the partition owner will be called. This enables the collateral manager to restrict a transfer, even if it is not from its address, if any tokens in its collateral partitions should not be moved by the holder (e.g., due to staking conditions). The partition owner is given permission to call transferByPartition for any address for any partition within its owned space. This strategy allows for a stake-in-place collateralization mechanism where a holder retains the tokens at their address while simultaneously providing the tokens as collateral to the delegated manager. Any changes that affect the balance (e.g., if staking rewards are granted or collateral is consumed) are reflected directly in the partition by on-chain transfers executed by the collateral manager.

In the example shown in Table 3, collateral manager <code>@xec9f...c4ff</code> controls 300 tokens (denoted with an asterisk*) across two partitions; the amount staked by each address in each partition is recorded independently. The three addresses have total balances of 100, 200 and 300 tokens, respectively, and each have delegated control of only a portion of their tokens to the collateral manager.

Table 3: Token balance distribution	s with partitions	and collateral manager.
--	-------------------	-------------------------

Address Partition	0x00000000	0x0a652da9	0xaaaac4ff	0xaaaac4ff
0x67b14331	0	50	50^*	0*
0xd2b96fdd	0	50	50^*	100*
0x4ffb3f00	200	0	0^*	100*
0xec9fc4ff	1000	0	0*	0*

The collateral manager itself holds 1000 tokens in the default partition, which it could use to grant additional tokens as network rewards to stakers. For example, if <code>0xec9f...c4ff</code> granted 25 tokens to each non-zero staked address-partition combination, participants could observe their distributions on chain within the scope of their own addresses; Amp ensures the total supply remains unchanged. Table 4 shows collateral manager <code>0xec9f...c4ff</code> with control of 400 tokens across two partitions after staking rewards of 100 tokens have been distributed.

Table 4: Token balance distributions with rewards transfers.

Address Partition	0x00000000	0x0a652da9	0xaaaac4ff	0xaaaac4ff
0x67b14331	0	50	75*	0*
0xd2b96fdd	0	50	75*	125^*
0x4ffb3f00	200	0	0*	125^*
0xec9fc4ff	900	0	0*	0*

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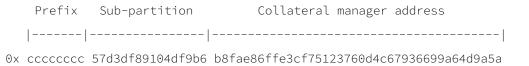
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To unstake, a holder can invoke the transferByPartition function to transfer the tokens from the <code>0xaaaaaaaa-prefixed</code> partition to the default partition (or any other partition). The collateral manager will receive the <code>tokensToTransfer</code> hook, which is capable of rejecting the operation if the transfer is not authorized. This could be used to enforce rules custom to the collateral manager, such as staking duration requirements or withdrawal limits.

4.2.2 Pool partition validator

The pool partition validator partition strategy defines a collateral manager with control of tokens within the <code>@xccccccc</code> partition scope. Similar to the distinct partition validator (§4.2.1), the partition itself defines the delegated collateral manager <code>CollateralPoolPartitionValidator</code> as an operator.

Below is a partition with the 4-byte prefix <code>@xccccccc</code>. The 20-byte suffix is the address of the collateral manager, also called the *partition owner*. This implies that the contract <code>@xb8fa...9a5a</code> is the collateral manager for all <code>@xcccccccc</code> partitions that include its address. The 8 bytes in between the prefix and suffix (the sub-partition) can be used in any way the collateral manager wishes to manage the tokens. In this strategy, tokens delegated to the collateral manager must be transferred to the collateral manager address, constituting a single pool of collateral per sub-partition.



In the example shown in Table 5, a total of 300 tokens have been delegated across two partitions belonging to the 0xb8fa...9a5a collateral manager. The balances within each pool can be tracked within the collateral manager contract, or by off-chain methods. To maintain solvency (*i.e.*, ensuring cumulative staking rewards and principal is withdrawable by all participants), the collateral manager can transfer additional tokens to the partitions as required.

Table 5: Token balance distributions with partitions and collateral pool manager

Address Partition	0x00000000	0x0a652da9	0xcccc9a5a	0xcccc9a5a
0x67b14331	0	50	0*	0*
0xd2b96fdd	0	50	0*	0*
0x4ffb3f00	200	0	0*	0*
0xb8fa9a5a	1000	0	100*	200*

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Table 6 shows that the <code>0xb8fa...9a5a</code> manager has granted 50 tokens in rewards for each pool. The immutability of Amp total supply is guaranteed by the token contract, while participants can observe the overall pool balances increase. Every address is considered to be an operator on all partitions within the <code>0xccccccc</code> prefix scope; limits on transfers out of these partitions are

completely delegated to the collateral manager. Therefore, although Amp enforces standard limits on balances within a given address and partition (*i.e.*, transfers cannot exceed the balance), the collateral manager is responsible for tracking the amount transferrable out of 0xb8fa...9a5a

 Table 6: Token balance distributions with pool-based rewards transfers.

Address Partition	0x00000000	0x0a652da9	0xcccc9a5a	0xcccc9a5a	
0x67b14331	0	50	0*	0*	
0xd2b96fdd	0	50	0*	0*	
0x4ffb3f00	200	0	0*	0*	
0xb8fa9a5a	900	0	150*	250*	

Although collateral manager implementations using the pool strategy have more complexity than distinct strategies, there are opportunities for augmenting throughput as illustrated in the reference Flexa collateral manager implementation (§4.4).

4.3 Token hooks

partitions for individual stakers.

Amp supports token transfer hooks¹³ on chain, with time-of-transfer calls to external (non-Amp) smart contracts that are configured to receive and react to individual transfer operations. All metadata included with the Amp transfer (e.g., from, to, operator, amount, and partitions) are included as parameters in the transfer hook calls. This enables the hook implementations to act/react on the full breadth and scope of individual transfers. For instance, the data and operatorData parameters included within the transferByPartition method are principal to the hook implementations.

All transfer and transferByPartition calls will invoke the following hooks if an implementation is present and has registered the supported interface. [25]

• tokensToTransfer is called on behalf of the token sender (from address). If an implementation of AmpTokensSender has been registered by or on behalf of the sender, this transfer hook will be called; this hook is generally used to gate/block a transfer.

¹³Inspired by concepts introduced in EIP777: ERC777 Token Standard [24]

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• tokensReceived is called on behalf of the token receiver (to address). If an implementation of AmpTokensRecipient has been registered by or on behalf of the receiver, this transfer hook will be called. This hook is used to perform additional processing of transfer data such as storing on-chain versions or propagating the data to an off-chain system through the emission of a bespoke event, or reject an invalid transfer (e.g., lack of appropriate data or unsupported partition).

In either case, both the sender and receiver hook implementation can revert the transaction. This is possible since ownership of the tokens is not retroactively removed (*i.e.*, a sender can block their own transfer, or the receiver can block the reception of Amp from a third party, but not *vice versa*). Token transfer hooks are not required for standard account transfers, but are critical for smart contract collateral managers to react to new collateral and perform scope specific features (*e.g.*, withdrawal, authorization and processing rewards).

4.4 Flexa collateral manager

In the reference implementation of the Flexa collateral manager staking Amp provides real-time finality assurance of network payments subject to the following constraints:

- The network must be able to liquidate supplied collateral if a payment is not settled.
- Amp rewards are distributed to suppliers based on successful payments facilitated by the staked collateral.

For Flexa enabled payments, the maximum payment rate, (and therefore collateral-related operations) may exceed the maximum transaction throughput of Ethereum, necessitating the use of the pool partition validator strategy. Network rewards are calculated on a per-transaction basis in an off-chain oracle system, and represented on chain using periodic batch transactions. As platform scalability increases, Flexa can release an updated collateral manager to leverage distinct collateral partition validator strategies, enabling simplified collateral transfers and on-chain balances.

4.4.1 Staking

To access the open network, each mobile wallet application generates a unique partition within the scope of the strategy and collateral manager to which application-specific rewards are deposited (successful settlement) and from which consumed collateral is transferred (failed settlement). These pools are represented as sub-partitions within the partition scope for the collateral manager.

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	Prefix	Application	Collateral manager address
Θx	ccccccc	57d3df89104df9b6	b8fae86ffe3cf75123760d4c67936699a64d9a5a
0x	ccccccc	ed03f1d5186ea41a	b8fae86ffe3cf75123760d4c67936699a64d9a5a

0x ccccccc 400f04ddc7aebbeb b8fae86ffe3cf75123760d4c67936699a64d9a5a

To stake collateral to a particular application on the Flexa network, Amp token holders transfer tokens to the partition corresponding to the desired application using the transferByPartition function. Valid partitions must be registered within the collateral manager, and transfers to partitions outside of the allowlist are blocked by the transfer validation hook from the Amp contract. There are no other restrictions on Amp token holders supplying tokens to the Flexa collateral manager.

4.4.2 Unstaking

Since all addresses are operators on the partitions within the collateral manager partition scope (per the collateral pool partition validator registration), any user can call transferByPartition on Amp, with the from address of the collateral manager, the from partition (a Flexa collateral pool), and any to address. The validation of the transfer includes calling the tokensToTransfer hook on the collateral manager to approve/disapprove the transfer.

To approve transfers, Flexa maintains a set of authorized outgoing transfers on the collateral manager contract. In order to handle frequent requests, withdrawal authorizations are hashed [4] within Merkle trees, and corresponding roots are published regularly within the contract itself. Proofs supplied to holders are not valid for subsequent trees, so a continuous set of valid roots is available to provide adequate time to execute withdrawals (inclusive of on-chain confirmation). To ensure a withdrawal is authorized and multiple valid roots can only be executed once, a withdrawal authorization ledger is maintained across the trees.

Withdrawal authorization ledger The transactions recorded within the Merkle tree represent an updated, withdrawable balance for a given account (e.g., 300 wei of tokens at address 0x6c41...5b9e and partition 0xcccc...f418). If the account balance increases by 100 wei, another transaction will update the total balance of 400 wei. To ensure that multiple instances of balance updates cannot be claimed, each transaction includes a nonce and a maximum last-nonce. The latest used nonce for every address/partition combination is stored within the collateral manager contract. For the preceding example, the authorizations would be:

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Withdrawal authorization 1:

Supplier: 0x6c41...5b9e
Partition: 0xcccc...f418

Balance: 300 wei

Nonce: 1

MaxLastNonce: 0

Withdrawal authorization 2:

Supplier: 0x6c41...5b9e
Partition: 0xcccc...f418

Balance: 400 wei

Nonce: 2

MaxLastNonce: 0

If the user executes a withdrawal based on either authorization above, the other is effectively invalidated, since MaxLastNonce will be exceeded. A new authorization with an increased maximum last-nonce will allow the user to execute a new withdrawal. If the balance of 300 wei was withdrawn, a new authorization can be made for the remaining 100 wei:

Withdrawal authorization 3:

Supplier: 0x6c41...5b9e
Partition: 0xccc...f418

Balance: 100 wei

Nonce: 3

MaxLastNonce: 2

In addition to tracking the last withdrawal nonce used by each account and partition, the contract also tracks the cumulative sum of executed withdrawals. This is not applicable to the standard process, but is used for fallback withdrawals (§4.4.3).

Recording withdrawal authorizations When a withdrawal authorization balance is updated, its hash is stored in a Merkle tree along with previous balance updates for batch inclusion. The complete withdrawal authorization data included in each leaf node hash is:

- Supplier: the token staker address
- Partition: the partition from which the tokens will be withdrawn
- Token amount: the number of tokens to be authorized for withdrawal

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 Maximum last nonce: the maximum nonce value of the last executed withdrawal authorization for the user and partition

The nonce is stored with the Merkle tree root, and is homogenous for all authorizations contained within the tree.

Executing a withdrawal After a collateral withdrawal has been authorized, the user can execute it using the transferByPartition method. This is similar to a standard transfer, except that the withdrawal authorization data is included in the operatorData field (an open bytes parameter) and is passed to the collateral manager for the explicit purpose of opening a channel to the supplier.

The data included in the field for withdrawals include:

- Withdrawal type (32-byte 0xaaaa...aaaa to signal the transfer is a user withdrawal)
- Supplier
- Maximum last nonce
- Merkle tree proof

These values are encoded using the standard Ethereum ABI specification [55]. Note, this scheme is not enforceable by the Amp contract, but it is preferred for all collateral manager implementations to ensure compatibility with standard tools such as web3.js.

As an example, if the values were:

- Withdrawal type (32-byte 0xaaaa...aaaa)
- Supplier (20-byte address 0xd0e3d9e8d595279615bb29884f2242ace5d8db33)
- Maximum last nonce (uint256 0)
- Merkle tree proof (bytes32[] with a single element of 0xd29e4d9dd8f4cd0bcfd77e51c6143d1201dca026f71bb6e218054299302fdeb3)

Then, the operatorData would be a 192-byte array containing the following:

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The Amp contract passes the operator data (along with the source, destination, and number of tokens as separate parameters) to the collateral manager through the standard token transfer hooks, and the validation of the supplied data against the set of current Merkle roots is performed on chain. This approach demonstrates the extensibility of the open interface between Amp and various collateral manager contracts, and gives Flexa the ability to rapidly authorize transfers regardless of Ethereum network conditions.

Requesting withdrawal authorizations A possible attack against the collateral manager could be as follows:

- 1. Create a new application on the Flexa network
- 2. Supply Amp as collateral backing the new app
- 3. Complete payments without the intention to settle
- 4. Withdraw the collateral before Flexa can consume it

As a result, staked collateral is not automatically authorized for withdrawal, and must be requested. Prior to releasing collateral and appending a withdrawal authorization Merkle tree, all payments backed by the collateral must be settled (or if not settled, then the Amp must be consumed). After this process is completed, the requested or maximum allowed withdrawal (whichever is less) is authorized on chain, and is considered released. Stakers request a withdrawal by calling the requestRelease function on the Flexa collateral manager. Once the collateral is released, Flexa provides the amount authorized, nonces, and Merkle tree proof; on-chain release requests ensure that account authentication cannot be compromised (e.g., via replay or man-in-the-middle attacks). The response from Flexa is safe to broadcast publicly, as the collateral manager only allows withdrawal transfers to be initiated by the original staker or approved operators of the collateral manager contract (i.e., operators are immutable for withdrawal authorizations).

Withdrawal automation The release request function and event contain an open data field that can be used to incorporate destination information. This metadata can be used by Flexa to autonomously complete withdrawal transfers. The specification for this field is developed as open source, allowing for custom implementations for particular suppliers (e.g., a custody provider that balances supplied collateral determinant on user preferences). Irrespective of the contained data, it will be based on the ABI-encoding scheme used for the transferByPartition method operator data.

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4.4.3 Fallback withdrawals

Given the permissionless platform that decentralized finance provides, withdrawal functions were designed to ensure autonomous operation in the unlikely scenario that Flexa ceases to publish withdrawal roots for any reason (i.e., tokens will always remain recoverable from collateral managers). The contracts include a time-locked fallback withdrawal mechanism that allows users to recover funds after a period of inactivity. The fallback mechanism achieves this by proactively tracking the number of unreleased tokens available for withdrawal on chain (inclusive of balance updates due to collateral consumption and earned rewards), as well as which supply receipts have been unrecognized and are therefore reversible.

Supply receipt tracking The tokensReceived hook from Amp is designed to not only seek authorization for the receipt of tokens from collateral managers, but also to store metadata for received transfers. This is leveraged in the Flexa collateral manager by storing a record of every received transfer along with a nonce. For example, the first three deposits might be:

Table 7: Collateral manager supply receipts by partition and amount.

Nonce	Address	Partition	Amount
1	0x30964abf	0xcccc5f5a	500
2	0x1cd01f00	0xcccc5f5a	10000
3	0x7076401e	0xcccc5f5a	500000

The same data is also emitted in an event that is observable off-chain, which is useful for tagging aggregate data published asynchronously to the contract.

Authorizing fallback withdrawals To authorize the retrieval of the balance of all accounts and partitions in the event that Flexa discontinues operating the collateral manager contract, the full set of balances is preemptively and routinely published. A fallback Merkle tree is generated (separately from the standard withdrawal authorization Merkle trees) and published to the contract. Each leaf in the tree contains the following data:

Address: 0x6c41...5b9e
Partition: 0xccc...f418

Maximum cumulative withdrawal amount: 400 wei

The maximum cumulative withdrawal amount is the sum of all previous withdrawal amounts, currently authorized withdrawal amounts, and the current number of unreleased tokens for the address and partition. Note this value increases geometrically, but given Amp total supply of

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100,000,000,000 tokens, approximately 10⁴⁸ withdrawals of total supply are required prior to uint256 value overflow. This data is generated for all addresses and partitions, and subsequently hashed to generate the fallback withdrawal authorization Merkle tree. The root of the fallback tree is published, along with the latest observed supply receipt nonce to reset the configured fallback time-lock period. Unlike the standard withdrawal process, this does not require a ledger of authorized trees; only the most recent values are stored on-chain.

Executing fallback withdrawals After the configured time-lock period has expired, stakers can withdraw their full balances using the Amp transferByPartition function. Similar to standard withdrawals, the authorization data validated against the current fallback authorization Merkle tree is ABI-encoded and sent in the operatorData parameter:

- Withdrawal type (always 32-byte 0xbbbb...bbbb to signal that the transfer is a fallback withdrawal)
- Supplier
- Maximum cumulative withdrawal amount
- Merkle tree proof

As an example, if the values were:

- Withdrawal type (32-byte 0xbbbb...bbb)
- Supplier (20-byte address 0xa34d6a2d9c7db5e3cdb2a533be9c1786e455ac07)
- Maximum cumulative withdrawal amount (uint256 200)
- Merkle tree proof (bytes32[] with a single element of 0x68610245b27875a95c607cac04283c2d1f121786e8936d81061c5cb085372bcc)

Then the operatorData would be a 192-byte array containing the following:

The Amp contract passes the operator data (including the source, destination, and number of tokens) to the collateral manager through the standard token transfer hooks, and its validation against the current Merkle root is performed on chain.

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Reversing supply receipts All stake receipts with nonce value less than or equal to the record highest deposit nonce are accounted for within the fallback withdrawal data, while supply receipts with higher nonces are not. It is possible that transfers are made to the collateral manager contract after the last fallback withdrawal authorization root is published; those stakes should also be unlocked. To make these tokens available in the fallback scenario, there is an additional withdrawal type that can be executed by stakers to reverse transfers via the standard Amp transferByPartition function with the following operatorData:

- Withdrawal type (always a 32-byte 0xcccc...ccc to signal that the transfer is a supply refund)
- Supply receipt nonce

As an example, if the values were:

- Withdrawal type (32-byte 0xcccc...ccc)
- Supply receipt nonce (uint256 3)

Then, the operatorData would be a 64-byte array containing the following:

The entire fallback withdrawal mechanism is natively integrated with the hooks provided by the Amp token. Although there is no protocol enforcement for the existence of fail-safe retrievals from collateral managers, it is a recommended approach to minimize collateral management contract risk.

4.5 Further extensibility

The Amp token smart contract has been designed with consideration of existing network limitations, and is compatible with scaling enhancements such as zero-knowledge proof (ZKP) systems, optimistic rollups, and Ethereum 2.0. It is expected that at scale, collateral managers will have access to secure micro-collateralization transactions on-chain. Additionally, future Amp rewards distributions can be made using verifiable and trustless ZKPs to decrease transaction costs as well as preserve network data privacy. Token partitions can also enable the issuance of new types of collateral assets for simultaneous use across platforms. Collateral managers can mint bearer tokens based on any staked collateral; for instance, allowing non-custodial transfers of proxy yield tokens derived from Amp. This method is also practical for DLT-based networks to facilitate cross-chain token minting for rapid collateral deployment.

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5 Token economics

Amp has been designed as a low-volatility collateral token that continuously appreciates in value as a direct result of its utility. It mirrors a shift toward open token networks wherein users create and derive all intrinsic platform value through endogenous economic incentives. Since Amp is backed only by its literal use and not extrinsic assets, it is critical to model its economic foundation. Ultimately, this model is more cost efficient and productive than existing business models. Amp employs simple and transparent financial primitives (e.g., fixed supply, rudimentary staking mechanics), and avoids complicated synthetic or derivative instruments, rebasing mechanisms, multi-asset algorithmic models, and artificial constraints that are overly complex to users. Instead, Amp focuses on providing high-quality collateral, stability, and self-sustaining characteristics to create exponentially more utility.

Flexa network collateral Amp is the fundamental collateral token used to secure retail payments within the Flexa network, wherein wallets/applications are staked with Amp to enable spending capacity. For each successful transaction, merchants are charged a small percentage-based fee (for comparison, less than the prevailing interchange rate). This remuneration is the only acceptance expense for the finality-as-a-service and elimination of fraud that Flexa provides. These proceeds are then used to open-market purchase Amp tokens for autonomous distribution to collateral contracts. Network participants directly receive these non-inflationary network rewards pro rata based on the quantity of Amp staked. This self-reinforcing cadence of increasing payment utility (spending throughput), collateral requirements, and compounding rewards is the framework to ensure all Flexa network value is captured within Amp tokens.

Amp is the first project to enable participants to stake collateral while maintaining custody of the underlying assets. This novel implementation of partition schemes and modular collateral managers (§4.3) allows for dramatically simplified user interactions to facilitate mass adoption and decentralization of the Flexa network. Participants can stake Amp to provide universal, permissionless spending utility while also earning the entirety of network proceeds. This virtuous cycle is fundamental to innovative token networks that are required to challenge and circumvent the existing system (§1.0). Various models are explored to determine the relationship between payment utility and expected aggregate network value. The Amp cryptoeconomic model is explicit, but corresponding token value (*i.e.*, the utility of the collateral itself) projections involve interpreting system dynamics such as platform growth, staking composition, and velocity/stability rates. Amp collateral value is analyzed using an amalgamation of existing models for economic growth, capital asset pricing, continuous market buy-pressure, and discounted cash flow.

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5.1 Production model

Flexa is assumed to be a genericized economy with conventional elements of input (capital, labor) and output. Traditionally, this can be modeled using a production function to determine how various consumption factors contribute to resultant utility. A straightforward approach is the use of the Cobb-Douglas production function (CDPF) [60] to analyze a production process. The CDPF represents the technological relationship between production output as a function of economic inputs as:

$$Y = AL^{\beta}K^{\alpha} \tag{1}$$

In this relationship, Y is the total production (i.e., value of goods produced), and L, K are the labor inputs and capital inputs, respectively. A is the total-factor productivity (i.e., the ratio of aggregate output to aggregate input) while constants α and β are the output elasticities of capital and labor, respectively. While not directly applicable to the Flexa network and its parameters, this is a reasonable introductory foundation. Accordingly, the AK model (Equation 2) of economic growth [60] (a specialized case of CDPF) is more amenable as it incorporates high endogenous development [62] due to technological change and the absence of diminishing returns to capital. This allows for the microeconomics of network growth to be a viable proxy for the macroeconomics of economy gross production. For instance, allocative efficiency can be represented as Amp staking propensity, along with Y as the cumulative output of more efficient spending utility. The AK model also integrates the time series of output, encompassing the long-term growth of technology innovation, network participants, and capital investment.

$$Y = AK^{\alpha}L^{(1-\alpha)} \tag{2}$$

For the Amp-specific scenario, define A as technology efficiency: the ratio of human capital invested to total network value. Increases in A result in growth from both sides of the network (i.e., wallets and merchants), compounding transaction volume. As payments become more efficient, technological innovation ultimately preserves value by protecting network effects produced by Amp economic incentives. An economy is fundamentally based on transactions in a market; Amp enables spending which drives the microeconomy.

5.2 Tokenization model

Production functions provide an overview of the network economy for estimates of total platform value. However, spending/rewards utility is achieved at the individual level; analysis of asset pricing specific to token networks is required. Amp generates the entirety of value within the

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network, and a novel valuation approach is considered, as tokenization creates alignment between technology, labor, and capital within the ecosystem.

Symmetric incentives A distributed token network allows for powerful, mutual incentive structures among its users. Amp token economics align the incentives of each network participant (i.e., the literal owners of the protocol), eliminating the principal-agent problem. In this sense, Flexa maximizes user value and protocol value; these two concepts are equivalent. Amp is designed to incentivize and reward value creation, generating efficient payments that are the essence of productivity growth. [43] A token network avoids value extraction, the systematic process of appropriating portions of platform value through economic rent-seeking. Amp represents a more circumscribed value creation and value capture structure than traditional equities.

Non-zero-sum participation Proof-of-stake block rewards are generated by minting new tokens as staking incentives. Due to capital infrastructure costs and minimum ownership requirements, validators exclusively receive these rewards, maintaining or increasing their percentage ownership of the network. Correspondingly, individuals are subjected to universal dilution rates; non-stakers inherently lose financially and have no economic incentive to hold tokens. The only counter to this zero-sum dilemma is to delegate/bond tokens and be subject to fees, extensive lock-up periods, and surrendering custody. Validator networks also have a propensity to supplement the wealth of only the largest holders, where only participants with significant investment will reap staking rewards.

As a fixed-supply contract token, Flexa-generated Amp rewards are non-inflationary and distinctly non-zero-sum. No taxation, subsidies, or seigniorage is required; the virtuous Amp repurchase and distribution model does not reward participants as a corresponding loss for others. Additionally, open market re-purchases are economically superior to burning tokens (i.e., permanently removing tokens from circulation) since this action has no direct contribution to the productive capability of the network. Token burning ultimately does not incentivize behaviors that create network utility (or demand for network utility) and is primarily a signaling technique, since the tokens are non-transferable, but still technically exist. By contrast, Flexa implements an efficient smart contract staking/reward process, focused on democratically increasing direct utility for the network.

5.2.1 Asset pricing

A fundamentals-based asset pricing model for tokenized networks is considered, where the value of Amp is explicitly anchored to its spending utility. Tokens can be modeled as a numeraire commodity, providing platform-specific convenience yield when staked. Necessarily, platform

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adoption and growth in the network economy proportionally stimulate these utility incentives. The recent model proposed by Cong, Li, and Wang (CLW) [16] incorporates these endogenous network effects into an otherwise canonical dividend growth formula. Incorporating elements of a multi-projection consumption capital asset pricing model (CCAPM) and consumer utility flow, a model is developed using platform productivity as a state variable. For a generic token network, the asset price P_t can be expressed as follows:

$$P_t = \frac{N(A_t)S(A_t)A_t}{M} \left(\frac{1-\alpha}{r-\mu_p(A_t)}\right)^{\frac{1}{\alpha}} \tag{3}$$

where the aggregate transaction need $S(A_t)$ is defined by:

$$S(A_t) = \int_{u(A_t)}^U e^u dG(u) \tag{4}$$

In these identities A_t is platform productivity, N is the platform user base, and M is the total fixed token supply. Further, μ_p is the expected price appreciation (a univariate function of A_t), and $\alpha \in (0,1)$ is an autoregressive constant. The user type u has distribution G(u) (e.g., normal distribution of an adoption curve) with transaction need e^u , a log-normal distribution which drives token demand.

The general CLW model can be used to estimate a similar relationship for Amp token dynamics. In this scenario, tokens are *not* transactional, but instead create spending utility (proportional to A_t). For simplicity, user types are standardized so $\int dG(u) = 1$, implying $S(A_t)$ is constant, an intuitive observation since aggregate transaction need can be defined as required utility. Further, A_t can be refined to represent the unconditional payment volume of the Flexa network at time t. This yields a derivative model inclusive of dynamic adoption where utility flow is derived by staking Amp as follows:

$$P_t = \frac{N_t U_t^P A_t}{M_t} \left(\frac{1 - \alpha}{r - \mu_t^P}\right)^{\frac{1}{\alpha}} \tag{5}$$

Amp token pricing is based on user demand for staking yield, spending utility, and, expectation of future productivity growth. In this model, A_t is the total network payment volume, U_t^P is the aggregate collateral utility (staked value), with M_t equal to the circulating token supply with fixed maximum. The effective carry cost $r - \mu_t^P$ is due to expected returns at time t (μ_t^P) with a risk neutral return rate r (i.e., the hurdle rate).

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This modified Flexa network pricing model accounts for total users, representing their willingness to pay for the utility flow of the platform. Accordingly, as capacity is created there is net capital increase to the network: the systematic design of collateralization. Staking Amp increases overall utility, rising proportionally as more transactions and users (e.g., consumers, wallets, merchants) join the network. [28] Self-enforcing network rewards in the form of Amp compound adoption, since participants perpetually share the economic benefits created. Economic growth of the network comes from adoption and payment volume (i.e., productivity output) as a result of new technology innovations that provide simplified access across new wallets and asset types (§2.1). [59] Ostensibly, as token price increases, adoption (i.e., staking) increases, and the Amp staking cycle becomes systematic and more correlated to consumption (§5.3).

5.2.2 Continuous-time liquidity

An important model to consider is the effect of continuous buy pressure on the token due to platform use. As the network completes payments, a percentage of each intra-network transaction takes liquidity for open-market Amp token purchases. These rewards are autonomously distributed and capitalized on a regular basis, a process that can be replicated with a time-series model involving time-varying liquidity demand from Amp rewards. Since this mechanism has two core variables, stock (aggregate market order book) and flow (purchase volume) a multivariate intensity model is used to allow representation of intertemporal point processes. [6][21][22] The buy pressure can be measured using an autoregressive model which specifies the conditional intensity as follows:

$$\lambda(t_i, \mathcal{F}_t) = X_t \lambda_0(t) \tag{6}$$

 \mathcal{F}_t is conditional intensity of the counting process $\{N(t), t \geq 0\}$, with autoregressive component X_t and baseline intensity function $\lambda_0(t)$. X_t can be defined as a generic autoregressive model:

$$X_t = \phi_1 X_{t-1} + \cdots \phi_p X_{t-p} + \varepsilon_t \tag{7}$$

where μ_t is the process mean with stochastic term ϕ and noise function $\varepsilon_t = X_t - \mu_t$. By definition, the terms $X_{t-1}, X_{t-2}, \cdots X_{t-p}$ are lagging values. Since past values of μ_t (purchase volume) impact future activity a priori, the standard auto regressive moving average (ARMA) model of order (p,q) can be used for purchase data:

$$X_t = \phi_1 X_{t-1} + \cdots \phi_p X_{t-p} + \varepsilon_t + \theta_1 \varepsilon_{t-1} + \cdots + \theta_q \varepsilon_{t-q} \tag{8}$$

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where (p,q) is the order of the autoregressive polynomial X_{t-p} , and moving average polynomial $\theta_q \varepsilon_{t-q}$, respectively, with standard moving average model parameter θ . The ARMA model realizes the resultant purchase intensity based on the conditional mean of the process (*i.e.*, the time dependent market purchases based on Flexa payment volume). [56] Evaluating continuous purchases at points in time would follow a positively autocorrelated process, a direct indication of increased asset value. [42] Intuitively, buy pressure $X_t \lambda_0(t)$ will be a significant determinant of volatility (§5.4) and returns. This implies that each transaction (as part of a time-intensity series) has significant predictive power for both the conditional mean and the conditional volatility of asset value.

5.3 Network efficiency model

The marginal value of network productivity is positive (Equation 5), inferring that equilibrium dynamics of user adoption and token valuation will be achieved. At maturity, the complete network model is best represented by direct consumption. Since the Flexa collateral manager is public and permissionless (with no staking restrictions), large collateral positions (*i.e.*, staked wallets) will assuredly develop market efficiency with yields approaching parity to r. [9] The utility demand will determine Amp collateral requirements, with corresponding yield valued relative to network payment volume.

When a technology matures, its value more closely resembles its terminal discounted cash flow (DCF) value. [48] Applying previous consumption-based asset pricing models, the simple net return of an asset η at date t, is defined as:

$$\eta_t = \frac{P_t + \rho_t}{P_{t-1}} - 1 \tag{9}$$

where ρ_t is the reward distribution at date t. The natural logarithm of the gross return R_t is a continuously compounded return $\ln(R_t) = \log(1 + \eta_t)$, since Amp rewards distributed from the Flexa collateral manager are capitalized in real time with R_{t+1} as the gross return on an asset from t to t+1. Consumption-based asset pricing models normalize expected discounted returns to 1, providing the expectation: $E_t(M_{t+1}R_{t+1}) = 1$. The pricing kernel M_{t+1} is defined as:

$$M_{t+1} = \xi_t \frac{\tau(C_{t+1})}{\tau(C_t)} \tag{10}$$

Where the utility flow τ is a function with respect to the level of consumption C. By definition, M_{t+1} is equal to the intertemporal marginal rate of substitution (MRS) in consumption. ξ_t is

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defined as the *network efficiency ratio* given by $\prod_{i=1}^n F_{i,t}$, the product of n efficiency rates (e.g. wallet and contract collateralization ratios). The return on one-period, risk-free rate $R_{f,t+1}$ is substituted in Equation 10 with expectation E_t as: $1 + R_{f,t+1} = 1/E_t(M_{t+1})$. Rearranging and defining $\nu_t = (1/\xi_t)$ provides:

$$E_t(M_{t+1}) = \frac{\nu_t}{(1 + R_{f,t+1})} \tag{11}$$

Since the quantity of Amp staked is predominantly a function of network volume, it is relevant to further explore the i elements of efficiency rates F_i and their equilibria. At scale, there are four fundamental parameters in determining overall efficiency (collateralization) rate:

- Manager-specific, based on liquidity
- Wallet-specific, based on spending utility variance and expected growth
- Network-wide, based on fragmentation and disproportionate allocation
- Network-wide, based on staking and dormancy rates (inclusive of market liquidity)

The product of these rates, the network efficiency ratio, provides an estimate of the hypothetical aggregate collateral available (i.e., the total value of Amp supply). This demonstrates that given time t, the ratio of collateral value (predominant factor ν_t) to maximum transaction volume is of order 10^4 . Ultimately, this relationship requires that the network captures considerably more utility value than the sum of payment transactions alone. Notionally, the network is significantly capital inefficient, but reduces net costs exponentially.

5.4 Stability analysis

Due to the dynamics of staking collateral, the time-dependent utility efficiency decreases as network adoption increases. This inverse relationship yields an *over-capacity* condition with respect to total protocol value (*i.e.*, aggregate value of circulating Amp tokens). However, this results in multiple reinforcing mechanisms and is an optimal state of the platform. The primary function of Amp is to decentralize payment risk; axiomatically the more inefficient the network is the more distributed the collateral will be. Given a more heterogeneous staking gradient, collateral quality (§3.2.2) increases due to greater stability against price shocks.

Accordingly, Amp provides sustained stability through its economic model and supply inelasticity (fixed issuance). Since collateral needs to be staked indefinitely to provide perpetual spending utility, Amp tokens are likely to have significant holding duration. Using the monetary equation of exchange (MV = PQ), [63] this implies that tokens with low velocity (i.e., staked tokens) will

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be more valuable than other comparable assets. It is also noted that utility is maximized further due to Amp partition functionality; tokens can seamlessly and safely be used as auxiliary collateral.

All of these factors actively contribute to minimize collateral value deviations during dynamic periods. In this context, to model the volatility of Amp due to a market variance, a general autoregressive conditional heteroscedasticity (GARCH) model of order (p,q) can be used. [19] [47] Assuming a time series $t \in \{0,1,\dots\}$, the period t return on a financial asset (Equation 9) can be expressed as:

$$\eta_t = \mu_t + \varepsilon_t \tag{12}$$

where $\mu_t = E_t(\eta_t)$, $\varepsilon_t = \sqrt{h_t} s_t$, subjected to random shocks with $E_t(s_t) = 0$ and $Var_t(s_t) = 1$. The linear function of the conditional variance h_t can be expressed as:

$$h_t = \omega + \alpha_1 \varepsilon_{t-1}^2 + \dots + \alpha_g \varepsilon_{t-g}^2 + \beta_1 h_{t-1} + \dots + \beta_p h_{t-p}$$

$$\tag{13}$$

using (p, q) = (1,1),

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$$h_t = \omega + \beta h_{t-1} + \alpha \varepsilon_{t-1}^2 \tag{14}$$

with positive constants ω , β , and α . Initializing the volatility shock with a stochastic variable such that h_t is the conditional variance of η_t , the relationship becomes:

$$h_t = \omega + (\alpha + \beta)h_{t-1} + \alpha(\varepsilon_{t-1}^2 - h_{t-1})$$
 (15)

The conditional variance of the asset return h_t is the sum of a constant autoregressive term $(\alpha + \beta)h_{t-1}$ and recursive shock term $\alpha(\varepsilon_{t-1}^2 - h_{t-1})$. This demonstrates that h_t is of the same order of Equation 8. Therefore, network payment volume (regardless of market conditions) has the potential to yield buy pressure of similar magnitude to stabilize shocks. Intuitively this is reasonable, since active utility requirements and expectation of future token yield (aligned with longer duration hold time) stabilizes token value in the presence of platform productivity shocks. Correspondingly, this implies the majority of a liquid market consists of tokens re-circulated from yield, minimizing equilibrium disturbances. Ultimately, economic models demonstrate that a virtuous cycle of price support can be guaranteed by the use of the asset itself, a hallmark of decentralized token networks.

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6 Summary

Amp

- ERC20-compatible, fixed-supply, immutable token (no admin privileges)
- Designed as low-volatility collateral with compounding value, backed only by its utility
- Implements token partition framework to allow restricted access (staking) without transfer
- Can resolve practicality issues by retaining staked assets at an owner address
- Open-source collateral manager contracts are extensible to any project
- Robust withdrawal and fallback system to ensure security and custody of staked assets
- Amp is the exclusive collateral token of the Flexa network

Flexa network

- Existing payment networks are vulnerable to fraud, data breaches, and structural cost
- Digital assets/currencies are quickly becoming the predominant form of global spending
- Native DLT payments are not tenable at scale due to finality assurance complexity
- Flexa is a merchant network that accepts low-cost digital payments without fraud
- Payments are guaranteed in real-time using Amp as collateral, decentralizing risk
- Amp is permissionlessly staked for wallet applications to enable consumer spending
- Proceeds from merchant fees are used to autonomously open-market purchase Amp tokens
- Stakers receive all Amp re-purchased, retaining aggregate network value
- Virtuous cycle of staking and rewards distribution supports collateral integrity
- Production models for economic growth can serve as a proxy for estimating network utility
- Token pricing models predict positive correlation of payment volume and utility
- Intertemporal market buy-pressure models demonstrate resilience to market shocks
- Maturity models predict broad, inefficient collateral distribution is utility maximizing

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