

HT BLOCKCHAIN BI-WEEKLY NEWSLETTER

Editor's Note

Date 9th August, 2021

Edition 1, Volume 4

Dear Reader,

This week it is my pleasure to introduce you to another contributor to our news letter - Dr. Derrick Bonyuet! Dr. Bonyuet is a professor the HT School of Business and Technology. He is a fintech researcher who recently published a journal article on cryptocurrency. In this

week's article he will introduce you to cryptocurrency wallets. This article features our first "Hands-on" exercise. Use this [link](#) to jump to the hands-on section. In the exercise, you will learn how to create a cryptocurrency wallet step-by-step! Be sure to use the



The creation of a hosted wallet is very straightforward like opening a bank account. Don't forget your keys though...

article survey (link here: <https://forms.gle/yThHkVtX6oYVwqit5>) to tell us how you like it.

The winner of the last article survey is Mr. Oluwapelumi Dada. Oluwapelumi is a undergraduate Computer Information Systems major

at HT. Congratulations to him!

For your chance to win a \$50 gift card, please be sure to complete the post-article survey.

Editor:

Dr. Abena Primo from the School of Business & Technology

**And The
Winner
is. . .**
*Mr. Oluwapelumi
Dada*

HOW DO YOU CREATE A CRYPTOCURRENCY WALLET?

By Derrick Bonyuet, PhD, CFA, CFP, CPA

Cryptocurrencies are becoming very popular. Investing in cryptocurrencies could be very profitable, and therefore, it is critical we understand how to create a wallet so we can keep our investments safe. If you have any questions about this article, please contact Dr. Bonyuet at dbonyuet1@htu.edu.

OVERVIEW

A cryptocurrency wallet is a place where we can keep our cryptocurrencies safe. It is a software or program that allows us to manage our cryptocurrencies, such as viewing balances and making transactions like sending and receiving cryptos. Due to their virtual nature, cryptocurrencies exist as data of transactions that are stored on the blockchain. The wallet enables users to complete transactions on the blockchain through a private key and a public address. Transactions are recorded on blockchain with the private key associated with the public address. The private key is a secret key consisting of a hexadecimal string. Since it is difficult to remember, the private key is stored on the wallet. The public address is also a hexadecimal string which is shared publicly to perform transactions with cryptocurrencies. In other words, a wallet is similar to your online bank account, your public address is like your account numbers, the

private key is the secret key that will allow you get access to your bank account, and the blockchain is similar to the bank's ledger (Suratkar, Shirole & Bhirud, 2020).

TYPES OF CRYPTOCURRENCY WALLETS

Before creating a cryptocurrency wallet, it is important to understand the features available, including user authorization, key generation, key management, user anonymity, multicurrency support, coin or token conversion rates, crypto-exchange, QR code scan to facilitate transactions, push notifications, and backup and restoration facility of keys. According to Linda John (2020), cryptocurrency wallets can be classified as follows:

- Virtual wallets: also known as web or online wallets as they operate on the cloud and can be accessed from any location using any device without any restrictions. Since the private key can be stored

online, virtual wallets are very convenient. However, they are the least secure wallet as they are susceptible to hacking attacks.

- Mobile wallets: these are telephone applications on Android and iOS mobile operating systems that are accepted by vendors and merchants for payment processing. However, the risk of security breach is high and therefore, periodic data backup is critical.

- Desktop wallets: these are downloaded and used on a PC or laptop. They provide full control over keys and funds and, because they are only accessible from the computer on which it was originally installed, they are highly secured except in cases of virus or hacking attack on that computer.

- Hardware wallets: are offline devices, such as an USB drive, where the private keys are stored offline. Therefore, they are highly secured as cannot



be hacked. However, the compatibility of hardware wallets with different internet interfaces and the availability of wallet integration makes this wallet the most expensive option.

- Paper wallets: as the name indicates, these consist of a piece of paper on which a crypto address and the private key are reflected as a QR code. Users can then scan the QR code to perform cryptocurrency transactions. Since some paper wallet websites allow the generation of new addresses and key even when offline, paper wallets are considered highly secure and easy to use.

STEPS TO CREATE A CRYPTOCURRENCY WALLET

The easiest way to set up a cryptocurrency wallet is a hosted wallet ([see the hands-on exercise on the next page for a demo!](#)). In a hosted wallet, a third party keeps your crypto, knows your private keys and will send, receive and store transactions on your behalf like any bank would do with your money. So, if you lose your password, you will not lose your crypto. In a non-hosted wallet, the owner of the account only knows the private keys. Therefore, you may have full control of your crypto but, if you forget or lose your password (e.g., private key), you will not be able to access your crypto. To set up a hosted account, just follow these two steps:

1. First, select a platform you trust. Here you may want to look into security, ease of use, and compliance with government and financial regulations.

2. Then, create the account by entering your personal info and choosing a secure password. Also, if not enabled, make sure 2-step verification (a.k.a. 2FA) is turned on for an additional level of security.

If you wish to set up a non-hosted wallet, follow these steps:

1. First, download a wallet app. Some options available include Coinbase Wallet and MetaMask

2. Secondly, create your account. Here, there is no need to share your personal info for non-hosted wallets

3. Remember to write down and keep secure your private key, which consists of a random 12-word phrase. If you lose or forget this 12-word phrase, you will lose access to your crypto.

4. Transfer crypto to your wallet.

CONCLUSIONS

Investing in cryptocurrencies is becoming very popular. A cryptocurrency wallet is a software or program that allows users to manage their cryptocurrency transactions. There are different types of wallets along a variety of features

that users must be aware when selecting the right wallet. An important feature is whether the wallet is hosted vs. non-hosted. The creation of a hosted wallet is very straightforward like opening a bank account. On the other hand, a non-hosted wallet may be a more complex but also a more secure option though it opens to the possibility of losing access to your crypto if keys are lost or forgotten.

REFERENCES

John, L. "How to Create a Cryptocurrency Wallet?", 2020.

<https://readwrite.com/2020/12/23/how-to-create-a-cryptocurrency-wallet/>. [Accessed: 25-May-2021]

"How to set up a crypto wallet", 2021.

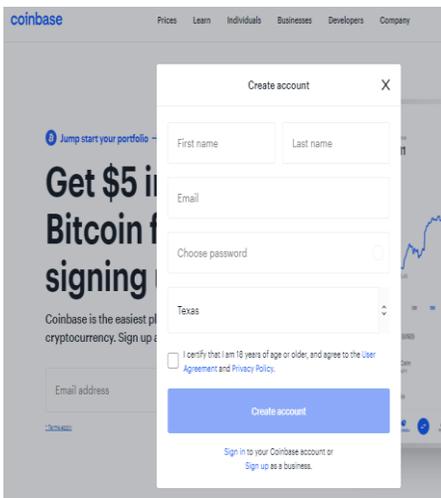
<https://www.coinbase.com/learn/tips-and-tutorials/how-to-set-up-a-crypto-wallet>. [Accessed: 29-May-2021]

S. Suratkar, M. Shirole and S. Bhirud, "Cryptocurrency Wallet: A Review," 2020 4th International Conference on Computer, Communication and Signal Processing (ICCCSP), 2020, pp. 1-7, doi: 10.1109/ICCCSP49186.2020.9315193

HOW TO CREATE A CRYPTOCURRENCY WALLET: A HANDS-ON EXERCISE

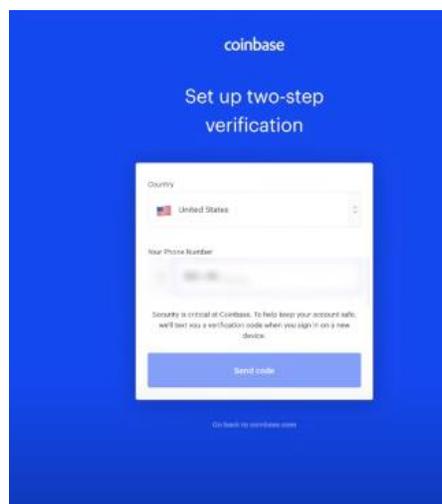
To set up a hosted account, you can use a platform like Coinbase (www.coinbase.com), which is extremely popular, and follow the steps below:

1. As you try to sign up, a screen will come up where you need to enter your information, like first and last name, email and password. Once you do that, check on the box to confirm you are 18 years or older and agree with their user agreement

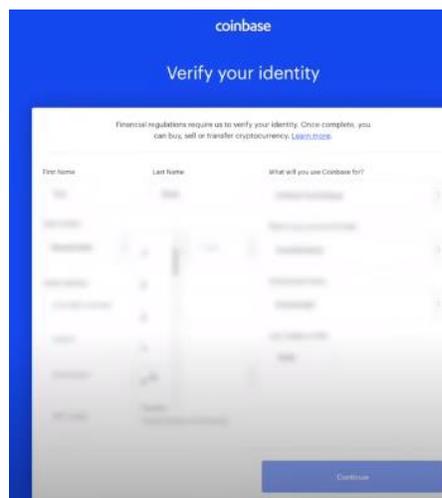


2. You will get a verification email in your email account. Be sure to check your email inbox and then, click on the link to confirm your email address
3. You will be redirected to the next step to set up your account. On that screen you will

need to enter your phone number so there is another layer of security (2-step verification) when performing transactions. Once you submit your phone number, you will get a text message with a verification code. Enter the code into the website to move to the next step

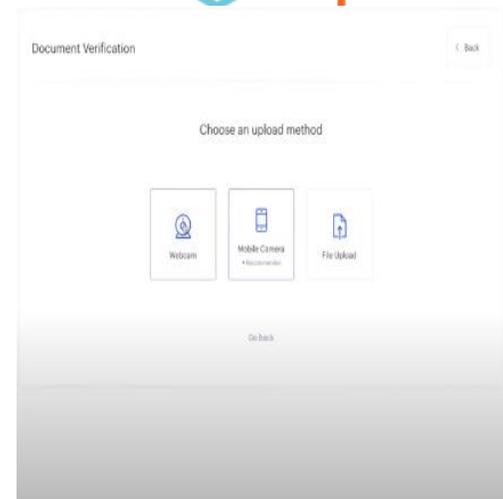


4. Next, you will be asked to provide additional information to create your profile like legal name, birthdate and address.



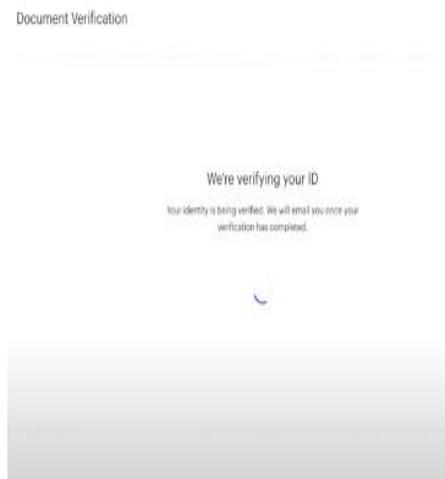
5. You will be asked to verify your identity by submitting your photo in an identification card (e.g., driver's license). There are several methods you can choose to submit your ID

- 5.1 You will need to enable the camera in your computer so it can capture an image of your ID

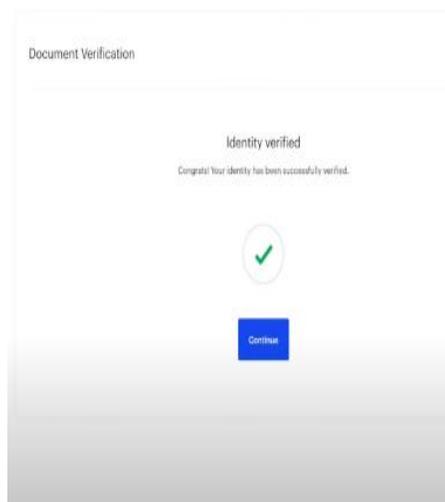


- 5.2 Follow the instructions to submit a photo of your ID

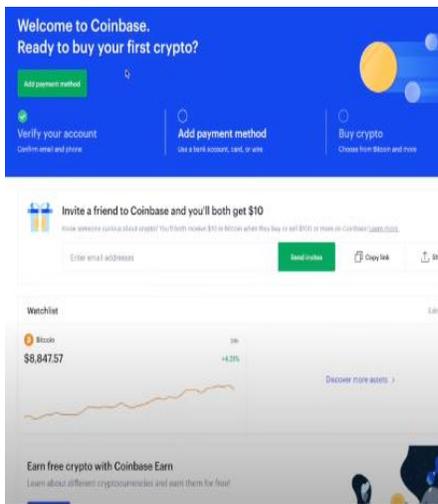




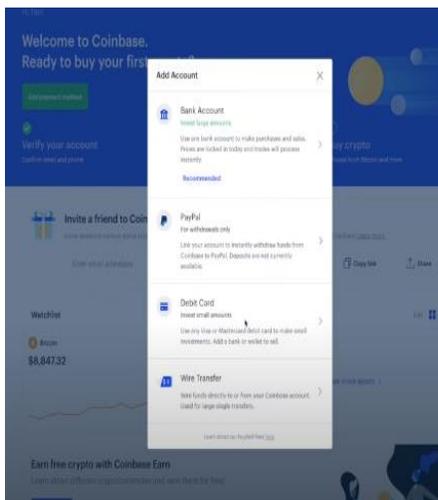
5.3 Once the document is readable and clear, you will be able to submit so your identity can be verified



6. It may take few minutes for the site to confirm your identity has been verified. Once this is done, you may want to proceed to enter a payment method

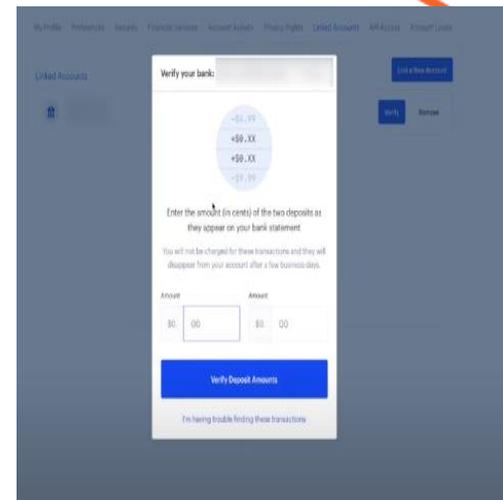


7. Several choices will be available, like adding a bank account, PayPal, Debit Card or Wire Transfer. Enter the information (e.g., bank name, back account, etc.) for the choice you select



8. There may be some additional security features like some small \$ amounts deposited in your

bank account that will require you to confirm to ensure your bank account information is accurate. This step may take few days but it is critical to ensure your account is set up correctly. Once this is completed, you are ready to do trades using your account.





Did you enjoy this article? Please let us know by following the link below and completing a short survey about this article. Survey participants will be entered to a draw to receive a \$50 gift card. The gift card winner will be announced in this section of the next article.

[Survey Link](#)

Previous Winner: Oluwapelumi Dada

This project was generously sponsored by the FinTech Center at Morgan State University. If you have any questions or concerns, please contact Dr. Abena Primo (email: acprimo@htu.edu).

