

**White Paper of
AML BitCoin (AMLBit) and its Business Model**

Abstract

The worldwide frenzy driving mass involvement in cryptocurrencies has drawn attention both to the exciting positive features of digital currencies, as well as those aspects that could hamper future expansion and development. Primarily, governments across the globe expressed concern that anonymous cryptocurrency – while innovative and auguring a new wave of future technology – serves as a medium of exchange that facilitates terrorism and criminal activity. AML BitCoin solves this concern and creates a platform for integration of digital currencies and the economy.

NAC Foundation, LLC (“NAC”) created AML BitCoin and its predecessor digital currency, the Aten Coin. Both coins contain the innovative safety and compliance features developed by NAC. AML BitCoin also provides a platform for approved third parties to utilize the AML BitCoin technology. AML BitCoin rests on a privately regulated public blockchain that facilitates AML-KYC (anti-money laundering – ‘know your customer’) compliance and identifies criminals associated with illicit transactions, while maintaining and strengthening the privacy protections for legitimate users.

AML BitCoin was created with anti-money laundering, anti-terrorism and theft-resistant properties built into the code of the coin, and as a result, it is compliant with a host of laws, including but not limited to: Anti-Money Laundering (AML), Counter Financing of Terrorism (CFT), Anti-Fraud and Financial Crimes (AFF), Office of Foreign Assets Control (OFAC), Bank Secrecy Act (BSA), USA PATRIOT Act and the FACT Act.

In addition, NAC will utilize a biometric identification system to verify owners of wallets that hold the AML BitCoin. This will provide additional security and safety features for ownership and use of the AML BitCoin (For more information on the DTN, please visit www.digitalidentitytrustnetwork.com)

The new AML BitCoin platform will also allow pre-approved persons and entities (but tied to an individual who has a certified digital identity profile) to utilize NAC’s privately regulated public blockchain.

The AML BitCoin is a virtual currency -- a payment system. It will be an open/transparent blockchain except for AML compliance, including suspicious activity reviews and reporting. Some AML BitCoin will be available for mining.

AML BitCoin will be a modified form of an “app coin” in that the underlying protocol includes AML compliance and only persons who obtain a certified digital personal identity can obtain and use a wallet to hold the AML BitCoin. But, there will be no functional business based on the AML BitCoin and no payout of business revenue from any business

to AML BitCoin holders. Any possible payout would derive from speculation by and under the control of the AML BitCoin holder.

AML Tokens (ATK) will be offered in a public sale on October 1, 2017. These tokens will not include monitoring or detecting of suspicious activities, or any of the other features of the AML BitCoin. Once NAC has completed and activated its features, AML BitCoin will replace the ATK and ATK holders will be able to exchange the ATK for AML BitCoins on a 1:1 ratio. In exchanging the AML Tokens for AML BitCoins, all owners will be required to have a certified digital identity as stated above and described in more detail below.

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1. NAC Foundation and Anti-Money Laundering Cryptocurrency

NAC Foundation, LLC (“NAC”) a U.S. organization registered in Las Vegas, Nevada, focuses on development and application of blockchain technology and digital currencies. NAC’s primary mission is to strengthen the social sector by advancing knowledge about the use of regulated digital currencies and blockchain technology in the U.S. and globally, facilitating and contributing to economic development through positive experiences and opportunities generated through online commerce, and creating an environment that inspires trust, credibility and confidence among organizations, financial institutions, individuals, partners and stakeholders in order to be recognized as the pre-eminent company in digital financial products and digital financial business in the world. NAC’s mission on AML-KYC compliance was first publicly reported in September 2014. After two years of engagement and inquiry, NAC’s dedication to its mission was recognized and NAC became a service member of the American Bank Association (ABA).

1.1 Meet the Team

- 1.1.1 Marcus Andrade, President and Chief Executive Officer
- 1.1.2 Hon. Angela Knight, CBE, Vice President of European Affairs
- 1.1.3 Hon. Carlos De La Guardia, Vice President of Latin America Affairs
- 1.1.4 Japheth Dillman, Chief Strategy Officer
- 1.1.5 John Szeder, Chief Technical Officer
- 1.1.6 Erwin Doornbos, Chief Marketing Strategist
- 1.1.7 Hung Q. Tran, Project Manager
- 1.1.8 Sergey Petkevich, Software Developer
- 1.1.9 Brandon Smietana, Software Developer
- 1.1.10 Jatin Babbar, Software Developer
- 1.1.11 Neha Verma, Software Developer

1.2 NAC Advisors

- 1.2.1 Ricaurte “Catin” Vasquez
- 1.2.2 Neil M. Sunkin, Esq.
- 1.2.3 Raymond Robertson
- 1.2.4 John Crawford
- 1.2.5 Natko Vlahovic

1.3 Legal Advisors

- 1.3.1 Law Office of Neil M. Sunkin, APC
- 1.3.2 Whitaker, Chalk, Swindle & Schwartz, PLLC

2. Business Model of AML BitCoin (AMLBit) Currency

2.1 Overview

Marcus Andrade invented and granted a license of technology to NAC (patent pending publication numbers: WO 2016156954 A1, EP3073670A1, US20160283941) that permits tracing and tracking of the identities of senders and receivers of a cryptocurrency when necessary. Subsequently, using this methodology, NAC developed its first digital currency, the Aten Coin. Aten Coin was the first cryptocurrency designed to be AML complaint, *i.e.*, anti-money laundering and anti-terrorist compliant, and theft-resistant. The supply of Aten Coin was limited to 26 million ATENC. Twenty-four million ATENC were created by the NAC, and Two million ATENC were set aside for PoS mining. On September 21, 2015, NAC officially publicly launched Aten Coin and about Nine million Aten Coins were acquired by the public and NAC employees.

2.2 AML BitCoin – A Successor of Aten Coin

AML BitCoin (unit: AMLBit) is the successor digital currency to the Aten Coin. Existing Aten Coin holders may exchange their ATENC units to AML BitCoin on a ratio of 1:1. Based on NAC's licensing agreement with BGCI for use of the personal legal identity-linked credential authentication protocol (patent pending publication numbers: WO 2016156954 A1, EP3073670A1, US20160283941), AML BitCoin will be developed with updated bitcoin protocol and PoW/PoS protocol. Therefore, AML BitCoin possesses all the unique properties of Aten Coin, including anti-money laundering, anti-terrorism and theft resistance, with an additional AML Platform that will permit others to utilize the White-labelled AML BitCoin technology. The maximum supply of AML BitCoin is 200 million AMLBits. Table 1 summarizes the basic specifications of AML BitCoin, and Table 2 summarizes its distribution plan.

Table 1. Basic Specifications of AML BitCoin	
Name:	AML BitCoin (unit: AmlBit)
AKA:	AML Coin
Abbreviation:	AML
Biometric Identifications	Mobile Application that uses blockchain technology with Biometric Identification Features.
Features:	Anti-Money Laundering
Features:	Know Your Client (“KYC”)
Features:	Anti-Theft Feature
Special Feature:	Anti-Criminal Features
Segregated Witness (SegWit):	Yes
Consensus Protocol:	PoW/PoS hybrid protocol, resistant to 51% attack
• Miner PoW Block Reward:	2 AML, multiplied by 0.9 every 0.5 million blocks
• Miner PoS Annual Stake Reward:	0.5%
Encryption Algorithm:	X15
Average Block Time:	1 minute
Total Coins:	200 Million
Pre-mined Coins:	145 Million
Total Available for PoW/PoS Mining:	55 Million
Transaction Fees:	0.0001 AML (0.1 mAML) Per Thousand Bytes
Number of Mined Block Confirmation:	240
Number of Transaction Confirmation:	6

Table 2. Distribution Plan for 200 Million AMLBits (AML BitCoins)	
76 Million	76 Million AML Tokens for Public to Purchase
9 Million	For Current Aten Coin Holders to Exchange for AML BitCoins
10 Million	NAC Administration Team
50 Million	Intellectual property licensing and acquisition, bounties for software debugging, employees and consultants
55 Million	For Decentralized PoW/PoS mining

2.3 Identity Verification: *The Digital Identity Trust Network (DTN)*

2.3.1 Select the DTN Option.

The user must confirm or deny if they already have a certified digital identity in association with DTN. If so, then user opens the biometric

mobile application and completes the biometric verification process. If the user already has such a digital identity, then the user already knows that they control the transfer of their AML-KYC data.

2.3.2 If the user does not have a certified digital identity associated with DTN, then they select their Country of residence, and State or Province, and then the user selects from a list of the approved locations where the user can create a certified digital identity profile.

2.3.3 The user must possess two forms of their current government-issued identification documents, such as a passport and a driver's license.

2.3.4 User will provide a biometric scan of face, Iris, and fingerprint. Upon completion, user will have a digital identification which can be used to verify their identity anytime in the future utilizing the biometric mobile application.

2.4 AML BitCoin / AML Tokens Pre-Sale

2.4.1 Public Sale

As stated in Table 2 above, there will be 76 Million AmlBits available for public purchase. Upon completion and activation of the AML BitCoin, AML Token holders will have the opportunity to exchange them for AML BitCoins on a 1:1 ratio. In making this exchange the token holder will have had to create a certified digital identity profile in association with the DTN.

2.4.2 Exchange of AML Token (ATK) for AML BitCoin (AMLBit)

After all of the features and the AML BitCoin platform are completed, users can exchange their AML Tokens for AML BitCoins. The exchange will be on a ratio of 1:1. This exchange feature will be available on participating trading websites. Within six (6) months after the announcement of the availability of the AML BitCoin, all owners of the AML Token must create a certified digital identity profile as set forth above, and exchange their AML Tokens for AML BitCoins.

2.4.3 Trading AML Tokens (ATK)

At the time of the Presale, ATKs only will be available for purchase. After the Presale, AML Tokens will no longer be issued or sold directly

by NAC, however, users may trade, sell and purchase ATKs as they desire, including on participating exchanges and trading websites. However, within six (6) months after the announcement that the AML BitCoin is available, holders of the AML Tokens must exchange their AML Tokens for AML BitCoins. After that six-month period, the AML Token will no longer be operational. Table 3 summarizes the buying price breakdown.

Phase	AML Tokens (million)	Price, USD	Status
Private Sale	2.5	0.60	Completed
Public Sale Phase 1	13.5	1.00	October 6, 2017
Public Sale Phase 2	20	1.25	After Completion of Phase 1
Public Sale Phase 3	40	1.50	After Completion of Phase 2

3. Aten Coin – First Cryptocurrency Designed for Anti-Money Laundering, Theft Resistance and Government Compliance

3.1 Government Compliance and The Creation of AML BitCoin-an AML and KYC Compliant Cryptocurrency.

In a nutshell, the dilemma presented by crypto-currencies: While, digital currencies have been gaining acceptance as a means of transacting commerce, these currencies have a reputation of facilitating criminal activity; and this has been the focus of financial regulators, legislative bodies, law enforcement, and the media. This concern has not been ill-founded, as there are notable cases of crimes facilitated by the use of bitcoin, as discussed in more detail below.

The development of the identity-based AML compliant digital currency commenced in 2012 and NAC was formed in 2014. Using proprietary technology, this identity-based digital currency is compliant with laws, statutes, rules, and regulations that govern, regulate, and relate to preventing money-laundering, terrorism, identity theft, financial crimes, and know-your-customer laws, and specifically (a) the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, aka the USA PATRIOT Act; (b) International Money Laundering Abatement and Financial Anti-Terrorism Act of 2001, aka Title III, of the USA PATRIOT Act, and subtitles that deal with International Counter Money

Laundering and Related Measures, Bank Secrecy Act Amendments and Related Improvements, and, Currency Crimes and Protection; (c) the Money Laundering Control Act of 1986; (d) provisions of the Fair and Accurate Credit Transactions Act of 2003, also known as FACT Act or FACTA, that pertain to the prevention of identity theft; (e) requirements related to economic and trade sanctions administered and enforced by the Office of Foreign Assets and Controls (OFAC) within the United States Department of Treasury; (f) the Bank Secrecy Act, aka BSA or the Currency and Foreign Transactions Reporting Act, which requires the reporting of certain transactions to the government.

The implementation of these features of the Aten Coin and the integration into the white label AML / KYC Platform gives birth to the innovation of AML BitCoin. To prevent criminal and terrorist use of digital currency, NAC uses an invention (patent pending publication numbers: WO 2016156954 A1, EP3073670A1, US20160283941) that permits the tracing and tracking of the identities of senders and receivers of a cryptocurrency when necessary to enable NAC to discover and prevent the use of the AML BitCoin for an illegal activity, as more particularly described below.

3.2 Privately Regulated Public Blockchain Technology.

The Bitcoin blockchain is considered to be a “Public Blockchain”. Anyone in the world can read, modify and verify it. No one can own and control the blockchain. Anyone can freely create bitcoin addresses and freely use their addresses to receive and send bitcoins. Moreover, anyone can participate in verifying bitcoin transactions (i.e., decentralization of the transaction verification process), but no one can change any transaction records on the blockchain.

Recently there has been discussion of how to modify and make use of the bitcoin’s blockchain technology. For example, The Bank of England has said that central banks are looking at ways to implement "hybrid systems" involving distributed ledger technology of the type currently used to record bitcoin transactions. Besides “Public Blockchain”, “Private Blockchain” and “Consortium Blockchain” have been created. The operation of a private/consortium blockchain, including transaction verification, will be controlled solely by either a private entity or a group of private entities. These approaches, however, do not allow for the decentralization of the transaction verification process; transaction records on a private/consortium blockchain can be easily manipulated or changed by the entities controlling the blockchain, resulting in a loss of public confidence of the

integrity of such blockchain.

3.3 Legal Identity-linked Credential Authentication Protocol – Core Proprietary Technology of AML BitCoin

On the basis of a privately-regulated public blockchain, NAC has introduced a personal legal identity-linked credential authentication protocol into the source code of AML BitCoin (patent pending publication numbers: WO 2016156954 A1, EP3073670A1, US20160283941). The protocol involves an integration of three major processes, including

- (i) personal identity verification,
- (ii) credential authentication, and
- (iii) a two-party signature scheme.

A tracing/tracking system is introduced at the blockchain level such that:

- (1) All AML BitCoin addresses are multi-signature addresses composed of a pair of public key and private key from NAC and at least one pair of public key and private key from an AML BitCoin user;
- (2) All AML BitCoin addresses can only be created by someone who has a certified digital identity that was created by a process using biometrics; and
- (3) Without NAC's authorization, no one can use any AML BitCoin address to transfer AML BitCoins that are recorded (stored) at AML BitCoin addresses.

In order to obtain authorization from NAC, each AML BitCoin user must have created a certified digital identity and must have agreed to comply with the terms and conditions on the AML BitCoin and related websites. This registration process assures that each potential AML BitCoin user will have presented valid documentation to confirm their legal identity. Once an AML BitCoin user has successfully registered in NAC's system, they will be provided with an AML BitCoin ID, and only then will they be allowed to create their private AML BitCoin credentials to create an AML BitCoin address with which to conduct AML BitCoin transactions.

The anonymity of the user and their digital address is maintained, as the passwords of AML BitCoin credentials are only known to the AML BitCoin user who created them and they are encrypted in NAC's system. No one from NAC would access or know the user's unique passwords for AML BitCoin credentials, with the limited exception discussed below.

3.4 Legal Identities of AML BitCoin Senders and Receivers are Traceable While Maintaining Privacy of AML BitCoin Users and AML-KYC Compliance

In the typical transaction process, NAC's authentication system will automatically provide authorization to any request for address generation or transaction creation upon the receipt of a valid AML BitCoin credential. Therefore, generally, AML BitCoin will function similarly to Bitcoin, except that AML BitCoin transactions are faster, cheaper and more secure. All transaction data is available in the AML BitCoin's blockchain, which is open to the public. As is the case with Bitcoin, the public will not know the identities of AML BitCoin senders and receivers; however, unlike Bitcoin, the actual identities of the senders and receivers are maintained in NAC's system. Using AML BitCoin Credentials and AML BitCoin IDs, NAC can trace the legal identities of any senders and receivers when necessary. This process enables AML BitCoin compliance with AML-KYC laws. NAC may reveal identities of senders and receivers associated with any transactions that rise to the legal definition of suspicious activities, such as association with money laundering, hacking or other illegal activities, while simultaneously maintaining privacy of AML BitCoin users. Senders and receivers of all transactions can be revealed; thus, any thieves or hackers who steal AML BitCoins can be easily traced and tracked by retrieving personal identity(s) of the receiver(s) from the client information database maintained by NAC. Moreover, the credential authentication mechanism behind AML BitCoin allows a user to change their credentials to prevent the transfer of AML BitCoins from a stolen wallet. As a result, NAC's innovations can thwart the theft of AML BitCoin.

3.5 Monitoring and Detection of Financial Crime Transactions

Furthermore, AML BitCoin's core technology allows NAC and other institutions/organizations/agencies to monitor every transaction and identify those involved in financial crimes, such as money laundering and terrorist financing, by analyzing individual AML BitCoin users' transaction records. NAC would be legally obligated to report to governmental authorities suspicious transactions and identities of the associated senders and receivers.

In addition to monitoring and preventing the completion of a suspicious transaction, such as money-laundering or facilitating terrorist financing, NAC can restrict AML BitCoin transactions to only authorized countries. In this way, NAC can prevent AML BitCoin from being used in jurisdictions sanctioned by the United States of America or the United Nations, by monitoring the location of senders. This process should greatly diminish the opportunity for use of AML

BitCoin in terrorist or criminal activities.

Thus, the systems innovated by NAC for the AML BitCoin, provide a real solution to the lack of AML-KYC compliance by Bitcoin and various alternative currencies.

3.6 Transaction Time- Control Option

3.6.1 AML BitCoin Wallet holders have an option to select a transaction time control feature, which will permit a delay of variable lengths, depending on the amount of the transaction in accordance with the chart below. This option is a high level additional security feature that reduces risk of unauthorized transactions. The feature is only an option, but is recommended for all merchants/slash exchanges/trading sights, and all other commercial use.

3.6.2 This time-lock option can be implemented at the wallet holder's discretion to control the transaction time. For transacting fewer than 1000 AMLBits, each transaction will be immediately subjected to validation and confirmation. A transaction of more than 1000 AMLBits, would be locked for a predetermined period of time, to allow time to validate and confirm the transaction. For example, if one minute is required for every additional 25 AMLBits over 1000, a transaction of 1,025 AMLBits would be locked for one minute before it is validated and confirmed. A transaction of 100,000 AMLBits would be locked for about three days, and a transaction of 0.5 million AMLBits would be locked for about two weeks. Table 4 summarizes the tentative time-lock rule and provides some examples on how the duration of the time-lock would vary depending on the transaction amount. If there were a hacker event, the time-lock function could provide time for a victim to discover cancel the transaction. Since most transactions would be in amounts less than 1000 AMLBits, the implementation of the time control will not significantly affect the daily use of AML BitCoins for making payment.

Table 4. NAC’s tentative time-lock rule and examples for duration of time-lock

AML BitCoin (AMLBits)		Time-lock
0 – 1000 AML		0 minute
> 1000 AML		1 minutes per every additional 25 AML
Example 1:	999 AML	0 minute
Example 2:	1,025 AML	1 minutes
Example 3:	1,100 AML	4 minutes
Example 4:	10,000 AML	6 hrs. <i>(10,000 – 1,000) /25 = 360 minutes</i>
Example 5:	100,000 AML	2.75 days <i>(100,000 – 1,000) /25 = 3960 minutes</i>
Example 6:	500,000 AML	13.86 days <i>(500,000 – 1,000) /25 = 19,960 minutes</i>
Example 7:	1,000,000 AML	27.75 days <i>(1,000,000 – 1,000)/25 = 39,960 minutes</i>

3.6.3 Alert System for Transactions Exceeding the Defined Limit

An alert system will be implemented to inform an AML BitCoin holder when the amount of AMLBits being sent from his/her wallet exceeds a predefined limit. Each AML BitCoin holder can set such a AML BitCoin limit. NAC will monitor every transaction for each AML BitCoin account. When NAC detects a transaction exceeding the predefined limit, NAC’s system will identify the AML BitCoin holder and an alert will be emailed to that AML BitCoin holder allowing them time to act, such as to cancel the transaction within time-lock period, or call NAC’s customer service center.

3.6.4 Locking the AML BitCoin Accounts of Suspected Criminals

Sometimes a victim may discover the AML BitCoin theft after the time-lock period has passed. Once NAC has confirmed that the victim has contacted the appropriate authorities, NAC will immediately identify the receiver(s). NAC may also lock the AML BitCoin account(s) of the receiver(s) if the stolen amount is substantial. Then the suspected theft cannot spend the stolen AMLBits or send to third persons. If the receiver(s) has already sent the stolen AMLBits, NAC could track and identify the third person receivers. Depending on the situation, NAC may also lock the accounts of those third persons to prevent further sending of the stolen AMLBits. Moreover, NAC will

collaborate with professional bodies to perform real-time monitoring for any suspicious AML BitCoin transactions, e.g. those which are likely to be involved in money laundering or financing terrorist activities. Once those suspicious transactions are identified, NAC would be obligated to report those suspicious transactions to the relevant governmental bodies. Upon a legitimate request from a governmental body, NAC will identify the suspects and lock their AML BitCoin accounts.

3.7 Stoppage of Financial Crime Transactions.

Bitcoin transactions cannot be stopped and are irreversible once initiated, except in cases of double spending. While this leads to increased transaction speed, fee-free transactions, and secure payments, in the ordinary Bitcoin transaction, this irreversibility and speed can be devastating to a digital currency owner whose coins are stolen, such as by a hacker. NAC employs a process, however, to overcome this problem.

4. White Label Blockchain Platforms for Digital Currencies and/or Tokens

NAC will make its white-labelled AML/KYC compliant platform available to pre-approved users. In that regard NAC will assist businesses, institutions, and governments interested in using NAC's AML-KYC compliant blockchain technology to create their own AML-KYC complaint solutions, including, by providing technical support services through NAC's white-labeled blockchain platform. (Those pre-approved users who create a modified AML compliant product may make the transaction time-lock feature referenced above mandatory or optional.) NAC will evaluate applications for participating in its platform to ensure compliance with NAC's legal and ethical standards.

5. Cross-Border Money Transfer (Sending Remittance) Business

There is an enormous global need for transferring money across countries' borders. According to estimates by the World Bank, global remittances, which include flows to high-income countries, amounted to \$575 billion USD in 2016. About 75% (\$429 billion USD) was remitted to developing countries. *"Remittances are an important source of income for millions of families in developing countries. As such, a weakening of remittance flows can have a serious impact on the ability of families to get health care, education or proper nutrition,"* said Rita Ramalho, Acting Director of the World Bank's Global Indicators Group. [<http://www.worldbank.org/en/news/press-release/2017/04/21/remittances-to-developing-countries-decline-for-second-consecutive-year>].

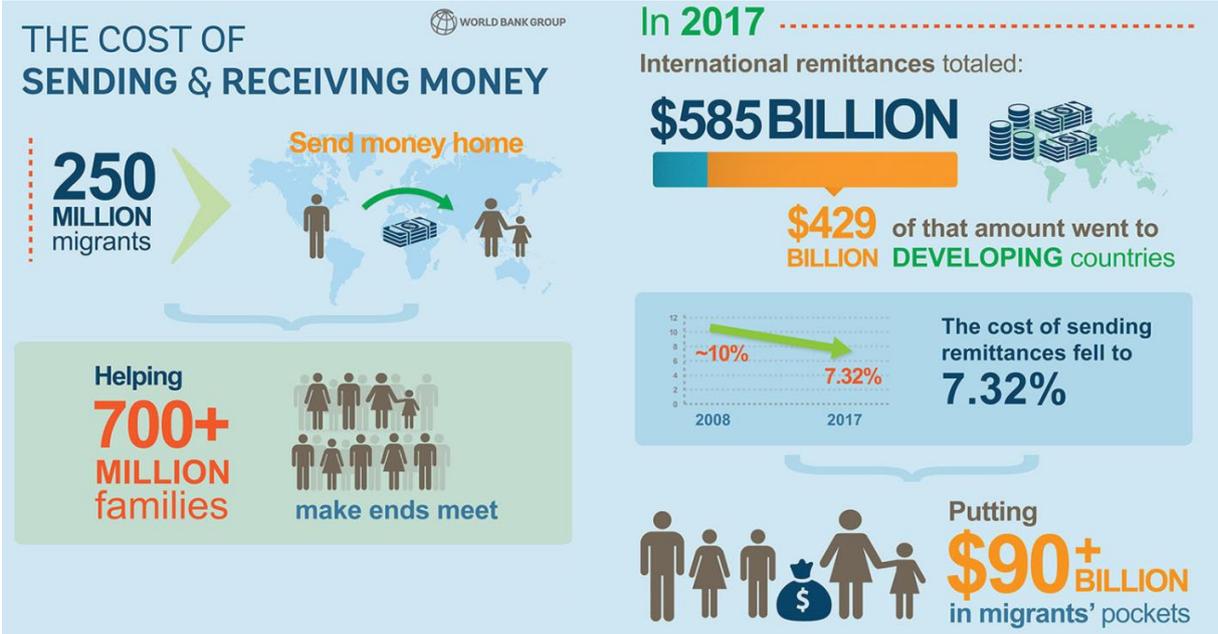


Figure 1. The Cost of Sending and Receiving Money [Image source: The World Bank]

The global average cost of sending remittances was 7.32% as of June 2017 (Figure 1). Blockchain technology facilitates cross-border transmission of cryptocurrency at extremely low costs. By introducing AML BitCoin into the international remittance industry, NAC plans to set-up a highly competitive AML-KYC compliant business for cross-border money transfer for low fees.

5.1 Low Cost Borderless Online Payment System

There is also a global need for a low cost borderless payment system. PayPal, a cross-border online payment system established in 1998, charges merchant transaction fees normally of between 2% and 3%. In 2016, PayPal had a total payment volume of \$354 billion USD in 26 currencies across more than 190 nations, generating a total revenue of \$10.842 billion USD. The average daily payment volume was \$967 million USD per day. In early 2017, Bitcoin transaction volume was \$260 million USD per day, with 27% of this volume resulting from daily Bitcoin trading in the exchange markets. Bitcoin transaction volume associated with illicit activities is not available. If one estimates the legal online commerce using Bitcoin to be ten percent of the total non-trading volume, then the average daily payment volume in early 2017 using Bitcoin for legal commerce would be approximately USD\$19 million, about 2% of PayPal’s volume. Therefore, the potential for AML BitCoin in online commerce is immense. NAC intends to create a new automated borderless online payment processing system for utilizing AML

BitCoin.

6. Bitcoin History

Invented in 2008, Bitcoin is the first cryptographic-based electronic money. It is also referred to as the first cryptocurrency. Cryptocurrencies, such as Bitcoin, are a new type of digital currency, and are known as “decentralized digital currencies.” Bitcoin is not only virtual money, but also a payment system composed of a decentralized peer-to-peer transaction network for recording and verifying money transactions. There is no central point of control over the Bitcoin supply and transaction verifications.

6.1 Bitcoin - The First Cryptocurrency

Bitcoins (i.e., units of Bitcoin) are stored in individual owners’ client wallets, but their ownership is recorded in a public ledger of all Bitcoin transactions, i.e., blockchain, using the Bitcoin addresses of the owners. A Bitcoin address is a 160-bit hash of the public portion of a public/private Elliptic Curve Digital Signature Algorithm (ECDSA) key pair. The private key for each Bitcoin address is stored in the client wallet of the address owner. Moreover, all client wallets are connected with each other through the Internet and form nodes of a transaction network to relay and verify the transactions. Using public/private-key cryptography, one can “sign” (i.e., use his/her private key) to send an amount of Bitcoins recorded at his/her Bitcoin address to another Bitcoin address, and in the transaction network anyone who knows his/her public key can verify whether the signature is valid.

Since Bitcoin, different cryptographic-based electronic currencies have been created; collectively they are called alternative cryptocurrencies. Some are modified forms of Bitcoin, using different cryptographic hash algorithms (e.g., Litecoin), having additional functions (e.g., Ethereum) or different signature technologies (e.g., CryptoNote).

6.2 Limitations of Bitcoin and Other Cryptocurrencies

6.2.1 Unstable Value of Cryptocurrency

Fiat money is the term used to describe currency that is issued because of a government's order — or fiat — that the currency must be accepted as a means of payment (such as the U.S. Dollar). The value of fiat money is based solely on the faith and credit of the economy; they are not backed by a precious asset such as gold. Similarly, most cryptocurrencies, including Bitcoin, are not backed by precious assets.

Their values are based solely on the faith and credit of individual cryptocurrencies. For example, the value of Bitcoin is based solely on the faith and credit of the Bitcoin decentralized transaction network, and the value is dictated primarily by the exchange market. The limited supply of Bitcoin (e.g. 21 million coins) has created a public perception that the value of Bitcoin will increase when demand increases. The transaction network of Bitcoin is maintained by new block generation (i.e. coin mining) by the public in a decentralized manner. The value of Bitcoin reflects the cost of the computational power contributed by the public in new block generation and transaction verification. When Bitcoin is no longer mined, the transaction network stops and the value of the Bitcoin can become zero.

6.2.2 Limited Decentralization

It is believed that the decentralization of ownership and control of a cryptocurrency and its transaction network is the most appealing feature of cryptocurrencies. For example, Bitcoin and its transaction network is neither owned nor controlled by any private or governmental bodies. Unfortunately, decentralization is restricted primarily to people who know how to perform mining with their computing devices, such as personal computers. There are two major types of cryptocurrency mining. One is proof-of-work (PoW), which is used in Bitcoin mining. Generally, in the process of PoW the amount of Bitcoin mined is proportional to the relative amount of the computing power in the Bitcoin transaction network which the miner has contributed to the process of block generation. Such mining processes can be monopolized by people having ASIC miners or computers with powerful GPUs or CPUs. Once a cryptocurrency has a recognized value, the number of miners increases. Subsequently, the mining difficulty increases, while the number of coins mined per day per miner decreases. Finally, less powerful miners have a very low incentive to continue the mining. Furthermore, for those cryptocurrencies having (or expected to have) low exchange value, the incentive for mining is also very low. The decentralization process then stagnates. The other significant manner of cryptocurrency mining is proof-of-stack (PoS), considered a better method than PoW, it is used in BlackCoin mining. In the PoS process, the computation power contributed to the mining is proportional to the amount of the cryptocurrency the miner owns. The

participation of numerous participants owning a cryptocurrency in a decentralized blockchain is beneficial to the process of new block generation and transaction verification. On one hand, the use of a powerful computing device benefits the process of PoS. On the other hand, it is relatively expensive to obtain sufficient units of a cryptocurrency to achieve over 50% of computing power in the whole cryptocurrency transaction network. Compared to PoW, it is believed that PoS can enable the operation of a cryptocurrency transaction network in a more economical and secure manner.

6.2.3 Pseudonymous/Anonymous Property of Cryptocurrency and Illegal Activities

By design, Bitcoin is pseudonymous, while all alternative cryptocurrencies are either pseudonymous or anonymous. Anonymous cryptocurrencies are susceptible to money laundering activities because all senders and receivers in money transactions are not traceable. As to pseudonymous cryptocurrency, an academic study (Meiklejohn S, et al. University of California, San Diego, 2013) shows that evidence of interactions between institutes could be identified by analyzing the pattern of Bitcoin addresses in empirical purchasing of goods and services. While this approach may be able to identify illegal activities at institution levels, it cannot do so at the individual level. A recent academic study (Koshy P, et al. Pennsylvania State University, 2014) has shown that it is possible to map a Bitcoin address to an IP address. However, this approach is applicable to less than 10% of the Bitcoin addresses. Therefore, Bitcoin has been used widely and successfully in illegal activities, such as money laundering (Bryans D, Indiana Law Journal, 89 (1):441, 2014), selling drugs from and online darknet market, as well as financing terrorist activities.

The pseudonymous/anonymous characteristic also makes Bitcoin and alternative cryptocurrencies attractive targets for hackers and thieves. For example, in February 2014, the Mt. Gox company, which was the world largest Bitcoin exchange company at that time, filed for bankruptcy protection because the company was hacked repeatedly, resulting in the loss of 850,000 Bitcoins (worth about US\$ 480 million). In January 2015, the Slovenian Bitcoin exchange Bitstamp, which was the world's third largest Bitcoin exchange at that time, was hacked, and

at least 19,000 BTC (worth about US\$ 5 million) was stolen. In August 2016, 119,756 Bitcoins (roughly equivalent to US\$ 72 million) of customer funds were stolen from the Bitfinex, the largest Bitcoin exchange by volume at that time. On May 12, 2017, there was a global wide-spread infection of a ransomware known as "WannaCry". "WannaCry" encrypted the files on computer systems, and hackers demanded a Bitcoin ransom in exchange for the decryption of files. On July 4, 2017, it was reported that millions of US dollars in Ethereum were stolen from the Bithumb, which is the largest Bitcoin and Ether exchange in South Korea by volume. On July 18, 2017, US\$ 7 million of Ethereum was stolen from the CoinDash ICO. On July 19, 2017, US\$ 30 million of Ethereum was stolen from many Ethereum wallets. Although the hackers/thieves must transfer the stolen Bitcoins or ethers (i.e. Ethereum tokens) to their wallet addresses, the identities of most of these hackers and thieves cannot be identified.

AML BitCoin is designed to avoid and prevent this illegal activity.

7. Cryptocurrencies and Regulated Securities

7.1 Is Bitcoin or AML BitCoin a Security?

7.1.1 Background

AML BitCoin, like Bitcoins, is a cryptocurrency payment systems. Like other currencies, they will be subject to speculation. But, no organization controls Bitcoin or controls its returns on speculative investment. NAC Foundation will administer AML BitCoin's anti-money laundering compliance and contract with transaction settlement platforms, but will not seek to affect pricing. U.S. Securities and Exchange Commission ("SEC") regulatory actions and reviews by the SEC's Division of Corporation Finance relating to Bitcoins have focused on intermediary business entities intending to invest in or trade Bitcoins,¹ but not actual Bitcoins. Treating AML BitCoin transactions as

¹ See e.g. *Securities and Exchange Commission v. Trendon T. Shavers and Bitcoin Savings and Trust*, Civil Action No. Civil Action No. 4:13-CV-416, E.D. Texas Sherman Division (SEC Litigation Release No. 23090, September 22, 2014); *Bats BZX Exchange, Inc.; Order Disapproving a Proposed Rule Change, as Modified by Amendments No. 1 and 2, to BZX Rule 14.11(e)(4), Commodity-Based Trust Shares, to List and Trade Shares Issued by the Winklevoss Bitcoin Trust*, SEC Release No. 34-80206, March 10, 2017).

securities transactions under U.S. law would impose considerable regulatory burdens on AML BitCoin transactions.

As a matter of background, U.S. securities regulation does not regulate the investment instrument, it regulates the transaction relating to the instrument. If the transaction involves a security, all transactions relating to the instrument must either be registered with the SEC or exempt from registration. If a securities instrument is sold once pursuant to a registration statement, it does not become “free-trading.” Instead all subsequent transactions in that instrument must also be either registered with the SEC or subject to an available securities exemption.²

Also, securities registration exemptions treat original issuances of securities differently from secondary sales by sellers who are not affiliated with the issuer. SEC Regulation D is the primary securities exemption for original issuances³ and generally requires purchasers to be “Accredited Investors”, that is individuals who have \$200,000 in annual income (\$300,000 in annual income with spouse”) or \$1 million in assets outside the home equity for the primary residence.⁴ Secondary transactions by issuer non-affiliates after a purchase from an issuer will generally be subject to one-year holding periods under SEC Rule 144.⁵ If a transaction involves a seller who is not the issuer or its affiliates, an underwriter (that is a securities holder who acquired the securities directly from the issuer or its affiliates) or a securities dealer, then secondary transactions will generally be exempt from U.S. securities registration requirements under Section 4(a)(1) of the Securities Act of 1933.⁶ Further, states can regulate secondary transactions. Many U.S. states have securities exemptions for limited secondary transactions exemptions.⁷

² *SEC v. Cavanaugh*, 155 F.3d 129, 133 (2d Cir. 1988),

³ 17 CFR §§500-508.

⁴ 17 CFR §502.

⁵ 17 CFR §144.

⁶ 15 U.S.C. §77d(a).

⁷ See e.g. 7 Tx. Admin. Code. 139.14.

Further, those being compensated for selling securities in U.S. transactions need to be registered to sell securities as a broker or dealer.⁸ Those being compensated by U.S. clients for advising on the purchase or sale of securities are required to be registered as investment advisers under U.S. federal or state law.⁹ Moreover, a business entity whose shares or units are sold to U.S. subscribers and whose business is to own securities of other issuers may be an “investment company,” thus imposing a system of complex regulation under the Investment Company Act of 1940.¹⁰ Finally, operators of facilities that provide for the purchase, sale and settlement of trades in securities sold or settled in the U.S. must register as exchanges or otherwise be exempt.¹¹

Finally, all these U.S. securities transactions, whether exempt or not, are subject to the anti-fraud provisions of federal and state securities law.¹² This means that the sellers are obligated to disclose all material facts and cannot misrepresent information about the security.

7.1.2 Bitcoin and AML BitCoin as a Security

So, the questions are whether a Bitcoin transaction is a securities transaction under U.S. state and federal law – and whether the AML BitCoin’s addition of AML compliance changes to the Bitcoin structure changes the calculus.

Bitcoin is a “decentralized peer-to-peer payment network that is powered by its users with no central authority or middlemen”¹³

The Bitcoin network is sharing a public ledger called the “block chain.” This ledger contains every transaction ever

⁸ 15 U.S.C. §78o(a).

⁹ 15 U.S.C. §80b-3.

¹⁰ 15 U.S.C. §80a-1 et seq.

¹¹ “*Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The Dao*,” SEC Release No. 34-81207 (July 25, 2017), pp. 16-17 (found at <https://www.sec.gov/litigation/investreport/34-81207.pdf>).

¹² See e.g. 15 U.S.C. §77q(a); 15 U.S.C. §78j; 17 CFR §240.10b-5.

¹³ What is Bitcoin? Bitcoin.org FAQs, <https://bitcoin.org/en/faq#what-is-bitcoin> (visited August 31, 2017).

processed, allowing a user's computer to verify the validity of each transaction. The authenticity of each transaction is protected by digital signatures corresponding to the sending addresses, allowing all users to have full control over sending Bitcoins from their own Bitcoin addresses. In addition, anyone can process transactions using the computing power of specialized hardware and earn a reward in Bitcoins for this service. This is often called “mining”.¹⁴

AML BitCoin will function similarly. AML BitCoin will have a public ledger as an open/transparent blockchain. For the public ledger, the authenticity of each transaction will be protected by digital signatures corresponding to the sending addresses, allowing users to have control over sending AML BitCoins from their own AML BitCoin addresses (subject to AML compliance). Further, participants can process transactions using the computing power of specialized hardware and are awarded AML BitCoins for such services.

7.1.2.1 – Bitcoin and AML BitCoin are not stock

The definition of a “security” under federal and state law includes stock. The US Supreme Court has held that stock’s characteristics include: (1) the right to receive dividends contingent upon the apportionment of profits; (2) negotiability; (3) can be pledged or hypothecated; (4) conferring voting rights in proportion to shares owned; (5) can appreciate in value.¹⁵ Bitcoin and AML BitCoin provide no right to receive dividends or any right to participate in the profits of an enterprise. Bitcoin and AML BitCoin also do not confer voting rights. Bitcoin and AML BitCoin are negotiable and can appreciate in value through speculative trading, and such trading will rely entirely on the expertise of the AML BitCoin’s holder. Under certain conditions complying with the Uniform Commercial Code, it might be possible to hypothecate Bitcoin and AML BitCoin. But, in the end, Bitcoin is not stock.

¹⁴ How does Bitcoin Work? Bitcoin.org FAQs, <https://bitcoin.org/en/faq#what-is-bitcoin> (visited August 31, 2017).

¹⁵ *Landreth Timber Co., v Landreth*, 471 U.S. 681, 686 (1985).

Likewise, AML BitCoin's additional features do not cause AML BitCoin to be stock. AML BitCoin's anti-money laundering compliance may enable easier transaction settlements, but should not affect pricing. AML BitCoin also is not stock.

7.1.2.2 Bitcoin and AML BitCoin are not a debt securities.

U.S. Courts use the *Reves* "family resemblance" test to determine whether a debt instrument is a security.¹⁶ First, U.S. Courts will look at whether the instrument is among the items that are deemed to not be a security, such as a consumer note issued in consumer finance. Then, Courts will look at a four-factor balancing test.

First, we examine the transaction to assess the motivations that would prompt a reasonable seller and buyer to enter into it. If the seller's purpose is to raise money for the general use of a business enterprise or to finance substantial investments and the buyer is interested primarily in the profit the note is expected to generate, the instrument is likely to be a "security." If the note is exchanged to facilitate the purchase and sale of a minor asset or consumer good, to correct for the seller's cash-flow difficulties, or to advance some other commercial or consumer purpose, on the other hand, the note is less sensibly described as a "security." Second, we examine the "plan of distribution" of the instrument, . . . , to determine whether it is an instrument in which there is "common trading for speculation or investment," Third, we examine the reasonable expectations of the investing public: The Court will consider instruments to be "securities" on the basis of such public expectations, even where an economic analysis of the circumstances of the particular transaction might suggest that the instruments are not "securities" as used in that transaction. . . . Finally, we examine whether some

¹⁶ *Reves v. Ernst & Young*, 494 US 56, 62-63 (1990).

factor such as the existence of another regulatory scheme significantly reduces the risk of the instrument, thereby rendering application of the Securities Acts unnecessary.¹⁷

Bitcoin and AML BitCoin sellers are not seeking to finance substantial investments in business enterprises. From FinCEN's perspective, Bitcoin and AML BitCoin that is not exchanged into legal tender will be typically used to purchase or sell goods and services. Bitcoin and AML BitCoin also do not pay a return on investment in the form of interest or otherwise. Indeed, debt securities include a promise to pay in return for the retirement of the debt security. Bitcoin and AML BitCoin have no promise to pay. Any return on investment would come from speculative trading by the Bitcoin and AML BitCoin holder. Bitcoin and AML BitCoin will have a broad distribution and common trading for speculation. Since Bitcoin is and AML BitCoin will be, a virtual currency, they are not like other instruments treated as securities. Finally, Bitcoin, and in particular, AML BitCoin, are subject to an anti-money laundering alternative regulatory regime, but such regulation is not meant to be for the protection of Bitcoin purchasers and sellers – the regulation is just intended to seek to prevent Bitcoin (and AML BitCoin) from being used for unlawful purposes. Consequently, there is no alternative regulatory regime providing protection to purchasers and sellers. Consequently, a balancing of the *Reves* factors shows that Bitcoin (and AML BitCoin) are not debt securities as two of the four balancing factors are not satisfied. In particular, any anticipated returns would come from the AML BitCoin purchaser's trading prowess, not any efforts by an issuer or other third parties. Plus, the issuer has no obligation to pay to retire the instrument as it would be obligated with a debt instrument.

7.1.2.3 Bitcoin and AML BitCoin are not investment contracts.

U.S. Courts use the *Howey* Test to determine whether an instrument is an "investment contract" as defined by federal and state securities laws. According to the US Supreme Court:

¹⁷ *Reves* at 62-63.

the basic test for distinguishing the transaction from other commercial dealings is whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others. . . . This test, in shorthand form, embodies the essential attributes that run through all of the Court's decisions defining a security. The touchstone is the presence of an investment in a common venture premised on a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others. By profits, the Court has meant either capital appreciation resulting from the development of the initial investment, . . . or a participation in earnings resulting from the use of investors' funds, In such cases, the investor is "attracted solely by the prospects of a return" on his investment. . . . By contrast, when a purchaser is motivated by a desire to use or consume the item purchased. . . . -- the securities laws do not apply.¹⁸

First, Bitcoin and AML BitCoin will be purchased for money. But, it is not quite an "investment" as the issuer will have no conditional or unconditional obligation to pay. Bitcoin and AML BitCoin are instruments that can be purchased for speculation (like baseball cards,¹⁹ tulips,²⁰ etc.) or as currency for payment for goods and services. Bitcoin and AML BitCoin will not pay a return on investment in the form of interest, dividends or distributions. Any return on AML BitCoin purchased in the initial coin offering or mined will not relate to the operation of any business by someone other than the purchaser or derive from the operation of any other security. In that sense, AML BitCoin is not an investment.

¹⁸ *United Housing Foundation, Inc. v. Forman*, 421 US 837, 852-853 (1975)/

¹⁹ See "The Baseball-Card Bubble" *The Economist*, December 17, 2014 found at <https://www.economist.com/news/christmas-specials/21636506-how-childrens-hobby-turned-classic-financial-mania-baseball-card-bubble>

²⁰ See https://en.wikipedia.org/wiki/Tulip_mania

Second, Bitcoin and AML BitCoin do not relate to common enterprises. Various courts recognize three types of common enterprise when applying the investment contract test.

Horizontal commonality (adopted in the First, Third, Sixth and Seventh Circuit Courts of Appeals) relates to a pooling of assets or funds “from multiple investors so that all share in the profits and risks of the enterprise.”²¹ Bitcoin and AML BitCoin do not involve the pooling of assets or funds for the sharing of profits and risks of an enterprise. They are just mediums of financial exchange.²² While the initial coin offering does result in the pooling of purchaser funds, it does not result in the sharing of profits and risks. The AML BitCoin holder may use it to purchase goods and services or to speculate based on his or her own judgment. For secondary transactions, each owner of AML BitCoins will be buying and selling them separately and the purchase or sale of one AML BitCoin will not be contractually connected the purchase or sale of another AML BitCoin. If a seller has no ongoing obligation to act for the benefit of the participants in the pooled investment vehicle, there is no horizontal commonality.²³ Finally,

²¹ *Milnarik v. M-S Commodities, Inc.*, 457 F.2d 274 (7th Cir. 1972), cert. denied 409 U.S. 887, *Hirk v. Agri-Research Council, Inc.*, 561 F.2d 96, 99-102 (7th Cir. 1977); *Curran v. Merrill Lynch*, 622 F.2d 216, 221-225 (6th Cir. 1980, *aff'd on other grounds* 456 U.S. 353 (1982)); *Salcer v. Merrill Lynch*, 682 F.2d 459 (3d Cir. 1982); *Hart v. Pulte Homes of Michigan Corp.*, 735 F.2d 1001 (6th Cir. 1984); *Secon Service Systems v. St. Joseph Bank & Trust*, 855 F.2d 406, 411 (7th Cir. 1988); *Deckebach v. La Vida Charters, Inc. of Florida*, 867 F.2d 278, 281-284 (6th Cir. 1989); *Newmyer v. Philatelic Leasing, Ltd.*, 888 F.3d 385, 395-397 (6th Cir. 1989) cert. denied sub nom., *Trager, Glass & Co., v. Newmyer*, 495 U.S. 930, *Wals v. Fox Hills Development Corp.*, 24 F.3d 1016 (7th Cir. 1995); *SEC v. Lauer*, 52 F.3d 667 (7th Cir. 1995), *SEC v. SG Ltd.*, 265 F.3d 42, 49 (1st Cir. 2001).

²² This is to be distinguished from business entities that use pooled funds to purchase Bitcoins – which have drawn SEC scrutiny. See *Securities and Exchange Commission v. Trendon T. Shavers and Bitcoin Savings and Trust*, Civil Action No. Civil Action No. 4:13-CV-416, E.D. Texas Sherman Division (SEC Litigation Release No. 23090, September 22, 2014); *Bats BZX Exchange, Inc.; Order Disapproving a Proposed Rule Change, as Modified by Amendments No. 1 and 2, to BZX Rule 14.11(e)(4), Commodity-Based Trust Shares, to List and Trade Shares Issued by the Winklevoss Bitcoin Trust*, SEC Release No. 34-80206, March 10, 2017).

²³ “(T)o satisfy the “common enterprise” element of Howey, plaintiffs must be able to show that funds were pooled and that the fortunes of each investor in the pool were tied to the success of the overall venture.” *Rolo v. City Investing Co. Liquidating Trust*, 845 F. Supp. 182, 236 (D.N.J. 1993).

those who mine AML BitCoins do not receive returns on an as-converted basis that may correlate with other miners or initial coin offering purchasers.

AML compliance feature of the AML BitCoin does not impact the pooling of purchaser funds or the running of an enterprise that will pay a return on investment.

The Fifth and Eleventh Circuit Courts of Appeals have adopted “broad vertical commonality” which requires that the fortunes of all the investors depend on the promoter’s expertise, whether or not the investment is pooled with other investments.²⁴ But, Bitcoin has no promoter lending expertise to generate a return on investment through a distribution of earned revenue or payment of interest. AML BitCoin has an administrator that is merely engaging in monitoring the use of the AML BitCoin to comply with AML-KYC laws not generating returns on investment to be paid to AML BitCoin holders. Mined AML BitCoin should be viewed similarly.

The Ninth Circuit has adopted “strict vertical commonality.” The common enterprise may be found there the “fortunes of the investor are interwoven with and dependent on the efforts and success of those seeking the investment or third parties.”²⁵ Bitcoin and AML BitCoin will generate no return on investment through dividends, distributions, royalties or interest payments. There is no enterprise depending on efforts of others for its success. Any economic return will only relate to speculative trading or mining by the Bitcoin or AML BitCoin holder (thus depending on the success of the purchaser), not the operation of any enterprise.

²⁴ *SEC v. Koscot Interplanetary, Inc.*, 497 F.2d 473, 478-479 (5th Cir. 1974); *SEC v. Continental Commodities Corp.*, 497 F. 2d 516, 520-523 (5th Cir. 1974); *Cameron v. Outdoor Resorts of America, Inc.*, 608 F.2d 187, 193 (5th Cir. 1979), *modified on other grounds*, 611 F.2d 105 (5th Cir. 1980); *Villeneuve v. Advanced Business Concepts Corp*, 698 F.2d 1121, 1124 (11th Cir. 1983), *aff’d en banc*, 730 F.2d 1403 (11th Cir. 1984).

²⁵ *SEC v. Glenn W. Turner Enterprises, Inc.*, 474 F.2d 476, 482 n.7 (9th Cir. 1973), *cert. denied* 414 U.S. 821.

Third, the investment contract test requires an expectation of profits. By profits, the Court has meant either capital appreciation resulting from the development of the initial investment, . . . or a participation in earnings resulting from the use of investors' funds, In such cases, the investor is "attracted solely by the prospects of a return" on his investment."²⁶ Moreover, "profit may be derived from the income yield by an investment as well as from capital appreciation."²⁷ The profit expected may be either fixed, as with interest, or variable.²⁸ With Bitcoin and AML BitCoin, no return on investment from development of the initial investment, participation in earnings, or fixed payments should be expected and any return will only derive from speculative market demand for Bitcoin or AML BitCoin with the decision as to whether, when and at what price to buy and sell being within the discretion of the purchaser, not NAC or another third party. Alternatively returns could be generated with AML BitCoin mining, but those speculative actions would be in the control of the miner, not any third party.

Fourth, the investment contract test states that the anticipated return on investment comes from the efforts of others which are "undeniably significant ones, those essential managerial efforts which affect the failure or success of the enterprise."²⁹ For Bitcoin and AML BitCoin, any return on investment would solely depend on mining and the purchaser's trading prowess in surfing a speculative wave. Bitcoin and AML BitCoin purchasers will not rely on others. AML BitCoin's efforts to comply with anti-money laundering laws should have no impact on returns on investment.

Accordingly, the purchase or sale of Bitcoin and AML BitCoin does not appear to involve the purchase or sale of securities under US federal and state securities laws.

²⁶ *United Housing Foundation, Inc. at 853.*

²⁷ *United Housing Foundation, Inc. at 855.*

²⁸ *SEC v. Edwards*, 540 U.S. 389 (2004).

²⁹ *SEC v. Glenn W. Turner Enterprises, Inc. at 482.*

7.2 Are all Virtual Currencies Not Securities; what about AML BitCoin?

Whether a Virtual Currency is considered as a security depends on its nature and its associated business model. For example, on July 25, 2017, the U.S. SEC concluded that The DAO tokens, a digital asset, were securities.³⁰ The DAO (“Distributed Autonomous Organization”) is an Ethereum-based token offered by a German blockchain startup, Slock.it. Slock.it sold The DAO tokens to investors to collect for the purpose of funding certain projects. The DAO token holders could vote on which projects were to be funded and a portion of the profits from those projects were given to The DAO token holders as a return on their investments. The SEC concluded that The DAO is a security because the fortunes of the investors (i.e., The DAO token holders) were directly tied to those of the promoter (i.e., Slock.it), and The DAO token holders’ interest in business enterprise indicated a pooled investment vehicle, and the success of the pooled investment vehicle derived from the material efforts of those other than The Dao token holders.

AML BitCoin holders will not be presented with business ventures and no votes will be taken. Thus, AML BitCoin’s operations and function significantly differs from The Dao tokens. Therefore, AML BitCoin is not a security.

8. Forward Contacts and Options – United States Commodity Futures Trading Commission

The United States Commodity Futures Trading Commission (“CFTC”) has determined that Bitcoins are “commodities” as defined by the Commodities Exchange Act. This means that derivative contracts such as futures contracts and options contracts on Bitcoins will be subject to the CFTC regulatory regime. On July 6, 2017, the CFTC registered LedgerX LLC as a “Swap Execution Facility” based on a business plan relating to Bitcoins.³¹ On July 24, 2017 the CFTC also registered LedgerX LLC as a “Derivatives Clearing Organization.”³² LedgerX claims it is “first federally regulated bitcoin options exchange and clearing house to list and clear fully-collateralized, physically-settled bitcoin options for the institutional market.”³³

³⁰ “Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The Dao,” SEC Release No. 34-81207 (July 25, 2017), (found at <https://www.sec.gov/litigation/investreport/34-81207.pdf>).

³¹ [CFTC Press Release no. pr7584-17 \(July 6, 2017\)](#).

³² [CFTC Press Release no. pr7592-17 \(July, 24, 2017\)](#).

³³ Found at <https://ledgerx.com/about-ledgerx/>

Brokers engaged in swap, option or forward contracts relating to virtual currencies will likely need to be registered with the CFTC through the National Futures Association.³⁴

The CFTC has not yet granted approval for swap execution facilities or derivatives clearing organizations for the retail Bitcoin market, much less for other virtual currencies. Thus, NAC does not anticipate a market in the near future for swaps, options or forward contracts on AML BitCoins. Moreover, NAC does not anticipate facilitating such transactions, and if such transactions occur, NAC's role would be solely with respect to AML compliance as to the AML BitCoin spot transaction that may be used to settle an expiring swap, option or forward contract.

9. US Treasury Department Regulation – FinCEN

AML BitCoin's creator, NAC, has been registered with The Financial Crimes Enforcement Network (FinCEN), a division of the US Treasury, as a "Money Services Business" ("MSB") since 2015. Its MSB Registration number is 31000067804981. FinCEN has a comprehensive anti-money laundering regime that governs MSBs.

U.S. money laundering penalties can be severe. Operating an unlicensed money transmitting business can lead to five years imprisonment under [18 U.S.C. § 1960](#). Laundering monetary instruments can lead to criminal liability under [18 USC § 1956](#) with up to a \$500,000 fine and 20 years imprisonment. Engaging in monetary transactions in property derived from certain unlawful activities under [18 USC § 1957](#) can result in up to ten years in prison.

On March 18, 2013, FinCEN issued guidance on the application of FinCEN's regulations to persons "administering, exchanging or using virtual currencies."³⁵ This guidance described persons engaging in transactions involving virtual currency as either a "User," "Exchanger," or "Administrator."

A User "is a person who obtains virtual currency to purchase goods and services." Users can "obtain" virtual currency by several means, including earning, harvesting, mining, creating, auto-generating, manufacturing or purchasing, depending on the details of the specific virtual currency. A User is not an MSB under federal law subject to regulation by FinCEN.

Exchangers and Administrators who (1) accept and transmit a convertible virtual currency

³⁴ 17 CFR §3.10.

³⁵ [Department of Treasury Financial Crimes Enforcement Network guidance regarding "Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies," FIN-2013-G001 \(March 18, 2013\).](#)

or (2) purchase or sell virtual currency for any reason are money transmitters under FinCEN regulations as “money transmitters,” unless one of six exemptions applies.³⁶ According to FinCEN, “(t)he definition of a money transmitter does not differentiate between real currencies and convertible virtual currencies. Accepting and transmitting anything of value that substitutes for currency makes a person a money transmitter under (FINcen) regulations.

For a “centralized virtual currency” the Administrator of the currency repository will be a money transmitter to the extent that it allows transfers of value between persons or from one location to another. Likewise, Exchangers will be money transmitters if they use their access to the centralized convertible virtual currency provided by the administrator to accept and transmit convertible virtual currency on behalf of others to third parties, including for payment of good and services. NAC may be seen as to exercise some of the functions of an administrator and thus it obtained its MSB registration in 2015.

“Decentralized virtual currencies” have no central repository or single administrator. Further, persons may obtain decentralized virtual currencies through their own computing or manufacturing effort. Bitcoin is a decentralized virtual currency. In connection with decentralized virtual currencies FinCEN stated:

A person that creates units of this convertible virtual currency and uses it to purchase real or virtual goods and services is a user of the convertible virtual currency and not subject to regulation as a money transmitter. By contrast, a person that creates units of convertible virtual currency and sells those units to another person for real currency or its equivalent is

³⁶ [31 CFR §1010.100\(ff\)\(5\)\(i\)\(A\)-\(F\)](#). “The term ‘money transmitter shall not include a person that only: (A) Provides the delivery, communication, or network access services used by a money transmitter to support money transmission services; (B) Acts as a payment processor to facilitate the purchase of, or payment of a bill for, a good or service through a clearance and settlement system by agreement with the creditor or seller; (C) operates a clearance and settlement system or otherwise acts as an intermediary solely between (Bank Secrecy Act) regulated institutions. . . . ; (D) Physically transports currency, other monetary instruments, other commercial paper, or other value that substitutes for currency as a person primarily engaged in such business, such as an armored car, from one person to the same person at another location or to an account belonging to the same person at a financial institution, provided that the person engaged in physical transportation has no more than a custodial interest in the currency, other monetary instruments, other commercial paper, or other value at any point during the transportation; (E) Provides prepaid access; or (F) Accepts and transmits funds only integral to the sale of goods or the provision of services, other than money transmission services, by the person who is accepting and transmitting the funds.

engaged in transmission to another location and is a money transmitter. In addition, a person is an exchanger and a money transmitter if the person accepts such de-centralized convertible virtual currency from one person and transmits it to another person as part of the acceptance and transfer of currency, funds, or other value that substitutes for currency.

FinCEN also said that convertible virtual currency administrators and exchangers will not meet the definition of a dealer in foreign exchange because the Bank Secrecy Act requires such dealers to be engaged in the conversion of the legal tender of two or more countries. Virtual currencies are not legal tender.

In January 2014, FinCEN provided further guidance to a Bitcoin miner:

From time to time, as your letter has indicated, it may be necessary for a user to convert Bitcoin that it has mined into a real currency or another convertible virtual currency, either because the seller of the goods or services the user wishes to purchase will not accept Bitcoin, or because the user wishes to diversify currency holdings in anticipation of future needs or for the user's own investment purposes. In undertaking such a conversion transaction, the user is not acting as an exchanger, notwithstanding the fact that the user is accepting a real currency or another convertible virtual currency and transmitting Bitcoin, so long as the user is undertaking the transaction solely for the user's own purposes and not as a business service performed for the benefit of another. A user's conversion of Bitcoin into a real currency or another convertible virtual currency, therefore, does not in and of itself make the user a money transmitter. (However, a user wishing to purchase goods or services with Bitcoin it has mined, which pays the Bitcoin to a third party at the direction of a seller or creditor, may be engaged in money transmission.)³⁷

FinCEN has enforced these provisions in high profile virtual currency cases. For example, on July 27, 2017, the US Treasury Department's Financial Crimes Enforcement Network

³⁷ [Department of Treasury Financial Crimes Enforcement Network guidance regarding "Application of FinCEN's Regulations to Virtual Currency Mining Operations," FIN-2014-R001 \(January 30, 2014\).](#)

("FinCEN") and the US Attorney's Office for the Northern District of California announced a \$110,003,314 civil money penalty against BTC-e a/k/a Canton Business Corporation (BTC-e) and a \$12 million penalty against Russian national Alexander Vinik for willful violations of US Anti-money-laundering laws. Mr. Vinik was also arrested in Greece on US money-laundering charges.³⁸

According to FinCEN and DOJ:

BTC-e is an internet-based, foreign-located money transmitter that exchanges fiat currency as well as the convertible virtual currencies Bitcoin, Litecoin, Namecoin, Novacoin, Peercoin, Ethereum, and Dash. It is one of the largest virtual currency exchanges by volume in the world. BTC-e facilitated transactions involving ransomware, computer hacking, identity theft, tax refund fraud schemes, public corruption, and drug trafficking.³⁹

FinCEN's acting director stated: "We will hold accountable foreign-located money transmitters, including virtual currency exchangers that do business in the United States when they willfully violate U.S. anti-money laundering laws."⁴⁰

On May 5, 2015, FinCEN announced a \$700,000 civil money penalty against Ripple Labs, Inc. that went along with a \$450,000 Department of Justice forfeiture that was partially credited to the \$700,000 penalty.⁴¹ FinCEN's director said: "Virtual currency exchangers must bring products to market that comply with our anti-money laundering laws. . . Innovation is laudable but only as long as it does not unreasonably expose our financial system to tech-smart criminals eager to abuse the latest and most complex products."

10. Conclusion

AML BitCoin solves the concerns raised as to the use of cryptocurrencies to facilitate

³⁸ Fincen Press Release, July 27, 2017 found at <https://www.fincen.gov/news/news-releases/fincen-fines-btc-e-virtual-currency-exchange-110-million-facilitating-ransomware>

³⁹ id

⁴⁰ id

⁴¹ Fincen Press Release, May 5, 2015 found at <https://www.fincen.gov/news/news-releases/fincen-fines-ripple-labs-inc-first-civil-enforcement-action-against-virtual>

criminal conduct, while maintaining the beneficial features of speed of transactions and decentralization. AML BitCoin accomplishes this by the invention of a privately regulated, public blockchain that has anti-money laundering, anti-terrorist, and theft preventive features. NAC also will allow pre-approved persons to use its white-labelled technology through AML/KYC platform. These features indicate that AML BitCoin is more likely to gain wider acceptance by governments and institutions for use of the coin in the global economy as a reliable payment system.

Forward-Looking Statements: Statements, other than statements of historical facts, included in this white paper address activities, events or developments that the NAC Foundation, LLC anticipates will or may occur in the future. These forward-looking statements include such things as regulatory compliance, computer security, the anticipated use of AML BitCoin tokens or coins and other similar matters. These statements are based on certain assumptions and analyses made by NAC Foundation, LLC in light of its experience and their perception of historical trends, current conditions and expected future developments. However, the actual results of the plan for AML BitCoin Tokens and AML BitCoins might not conform with NAC Foundation, LLC's expectations due to a number of risks and uncertainties, many of which are beyond NAC Foundation, LLC's control, including, cybersecurity matters, changes in laws or regulations, secondary market conditions and other risks. Thus, all of the forward-looking statements made in this White Paper are qualified by these cautionary statements. There can be no assurance that actual results will conform to NAC Foundation, LLC's expectations.

The purchase of AML Tokens and AML BitCoins involves a high degree of speculation.

NAC makes no implied warranties of any kind concerning the AML Tokens or AML BitCoin.