

Joint Commonwealth Fund: A Cryptocurrency Index Fund for Universal Basic Income

Joint Commonwealth Inc.

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2 INTRODUCTION

Technology developments such as Internet, AI, robotics, and VR have accelerated globally in recent years. With new tools in our hands, innovations and knowledge-based enterprises are growing rapidly. In the race towards growth and efficiency, human labor appears to be capable to handle less and less, as Elon Musk commented in a World Government Summit: "There will be fewer and fewer jobs that a robot can't do better"[5].

Unfortunately, while the entry barriers to become technology innovators have become lower, the services/products that succeed also have become more limited.

The reason is simple: most Internet economies exhibit the "winner-take-all" effect, where the first winning service likely will dominate a market segment (Google in search, Facebook in social network, etc.), until its demise or other re-structuring (such as merger with larger companies). Also due to the knowledge and knowhow intensive nature of Internet economy, the number of human hires required for massive economic success need not be too many (e.g., WhatsApp employs only about 50 people for its 900M userbase) [6].

As jobs and career prospects continue to be more knowledge and idea-based, building an adequate life becomes more difficult if one cannot or has not invested the time necessary to gain sufficient skills in a knowledge economy.

While one potential solution may be to improve education (which many people are working towards and is beyond our scope), another more pressing question is: as middle-class shrinks and jobs disappear, how shall people already at socio-economical disadvantages to sustain basic economic needs to have the time required to upgrade knowledge and skills? [17]

The concept of an *Universal Basic Income* (UBI, or simply *basic income*) has been proposed by philosophers, economists, and social activists as the potential solution to address the paradigm shift in jobs. Basic income is designed as a citizen's right (much like the right to vote or receive public education), where any verified individuals receive some money regularly for a basic living.

Besides the obvious benefit of receiving "free" money, basic income has (or has been intended) to provide protection for people of less prestigious socio-economic status, so that for example: 1) a mother may choose to care for young kids at home, without having to worry about making a living; 2) employees may decide to "walk out" or refuse jobs that are of poor conditions, so they would not be forced into poor work environments; 3) aspiring artists or entrepreneurs may have the time and space to experiment and explore more unconventional career paths to produce social or artistic values [8].

But how can we fund basic income? It likely will require a large sum of money. Famous investor Warren Buffett mentioned that: "most investors, both institutional and individual, will find that the best way to own common stocks is through an index fund that charges minimal fees." [1] The rationale is simple: research has shown that index fund, while relatively simple to operate and administer, has performances that beat most actively managed funds. Also because index fund does not require the hiring of experts for analysis or building complex systems, its operations can often be low-cost and minimal (typically with an annual management fee of 0.1%, compared with the average 0.8% fee for active funds) [3], allowing more profits be preserved, and not lost to the fund's administration.

The concept to use an index fund with growing assets, while paying dividends back to its holders on a regular basis, thus may provide passive income to its holders. If such passive income reaches or exceeds certain "minimal living standards", then it can be said to be providing "basic income".

Our goal is to present the proposal, design, and feasibility of such an index fund, using cryptocurrency as its main investing instrument. While other asset types (such as stocks, bonds, real estates, precious metals, or fiat currencies) may also be the basis for such an index fund, we choose cryptocurrency due to two main reasons: 1) the expected rate of return and growth of cryptos may be much higher than any other known assets today; 2) to provide a global index fund which may be potentially accessible to any person in any country (i.e., a *world citizen*), cryptocurrency's ease of transfer and conversion into fiat currency is unparalleled among other asset types. Thus the administration costs of such a fund can be further reduced, making it not only more accessible but also cost effective.

According to Wikipedia: "A cryptocurrency (or crypto currency) is a digital asset designed to work as a medium of exchange that uses cryptography to secure its transactions, to control the creation of additional units, and to verify the transfer of assets" [9]. It is an emerging and global phenomenon and there are many details that can be said, though for our purpose, we only need to understand its most basic principles, before we dive into other details:

- (1) At the time of this writing, there are over 1,900 cryptocurrencies, almost all of them are issued by the private sector without government backing. As the maintenance of a cryptocurrency is performed by 50 ~ 100 thousands *mining machines* worldwide (figures are for BitCoin alone) [2], the network is highly distributed and very difficult to shutdown by any single entity or government. There are also close to 14,000 exchanges worldwide, making any government intervention to ban or prevent fiat currency exchange extremely difficult (if not impossible).
- (2) Each cryptocurrency has a *market value* as determined by the buy/sell prices of the currency on a given exchange (just like how fiat currency can be traded at currency exchanges). However, the value of a crypto mainly lies in how much trust people are willing to place in terms of its current and future value to transfer and store values. The prices of a crypto thus may fluctuate greatly (as it is not regulated by any entity but purely governed by market forces).

- (3) Cryptocurrency is highly secure in that its transaction history is very difficult to modify, and its supply cannot be easily manipulated (unless one is willing to put in considerable effort in rewriting the history, which is often not economical). However, as holding a cryptocurrency is determined by knowledge of a user's *private key*, storing and securing the private key becomes the main security issue and challenge, and this responsibility rests at the holder (as opposed to fiat currency, where most holders can safely assume that banks will hold their money safely).

Given the current circumstances about crypto, we suggest that the best way to hold and invest in cryptocurrency is via a comprehensive index fund, that can balance out the various effects (fluctuation in prices) of individual cryptos.

We propose to build an index fund that is composed entirely of cryptocurrencies, with a regular re-balancing of the portfolio, so that the assets values may grow over time. The fund issues its own crypto token as well, so that by holding a single token, one is holding a number of crypto assets. A certain percentage of any annual profits will be given to token holders as a form of dividend. This will generate passive income streams for the token holders. When enough income can cover basic living expenses, a token holder will effectively have a basic income.

In existing funds, dividends are often paid out in proportion to the amount of securities an investor holds. However, to achieve our desired effect to make basic income universal, when dividends are given, only 50% are paid out according to the ratio of token ownership, the other 50% are *equally* distributed among all existing verified token holders (both individual and institutional). This way we effectively have a re-distribution mechanism built-in to the fund.

When the fund starts, initial token holders are mostly investors (we initially accept only Ethereum for fund investment). However, when tokens are purchased, certain additional tokens will be created and donated to social organizations; token owners can choose to donate their dividends or existing tokens. This way, the diversity of token holders will increase over time, thus providing potentially disadvantaged people with a passive income that may in time, become a basic income protection.

3 JCF

Our proposed index fund is called *Joint Commonwealth Fund* or JCF, it is mainly modeled after one of the first successfully executed crypto index fund Crypto20 [7] with two main differences: JCF is an *open fund* (Crypto20 is *closed*, meaning that after the *Initial Coin Offering* (or ICO), no more tokens are created); JCF is also dividend-paying (Crypto20 pays no dividend). These two differences indicate that by design, funds similar to Crypto20 likely will generate more return on wealth for its individual investors, especially if one holds a large amount of tokens, individual investor profits are maximized. On the other hand, wealth holding on JCF likely will be more distributed. While individual investor/holder may not enjoy incredible returns, they will in essence help each other to achieve income guarantees, helping to realize practical basic income sooner than waiting for government actions.

3.1 Open Fund

JCF is an *open fund*, meaning that the period to invest or participate is still open after the ICO. JCF is designed to release a total of roughly 1 trillion tokens (specifically, a maximum of 1,048,575,000,000 tokens). The idea is that given the United Nations estimated population of 11.2 billion by 2100, each individual can hold about 88.8 JCF tokens on average [10].

Closed funds have the benefit of being easier to administer and less likely to be under manipulation or performance pressure. As additional cash funding will force the manager to seek additional high-quality (high yielding) investments, otherwise the fund's performance / growth could slow, detrimental to a fund's reputation. Too much cash investments into a fund and forced purchases of assets may also drive up an asset's price unwittingly. On the other hand, open funds allow new investors to participate the fund by increasing the size of the fund's shares upon additional funding. Thus allowing more to participate with potentially a larger pool of capital.

Our design for JCF is to allow investors to join at will at the current Net Asset Value (NAV) of the fund. NAV is basically how each token is worth based on the value of the underlying assets each token represents. However, the allocation of the underlying assets is not immediate but at the discretions of the fund manager. This allows for both a more open fund, and also the prevention of negative effects of turning funding into assets too quickly.

While tokens can be purchased continuously after ICO, we do wish to limit the total amount of supply of JCF, which will increase annually at the next *token release period*, during which the limit on the supply of the total number of tokens is increased. Dividends will first be released as new tokens, then the rest is open for external purchases.

3.2 Dividend Plan

To maximize profit, re-investing the profit is a very good idea, so the fund can grow with maximum capital. This strategy is used by Warren Buffett, and his Berkshire Hathaway does not pay dividends [4] as a principle. The reason is simple: if the fund is efficient to create more wealth with its capital, then investors are better off by keeping money in the fund than to use it.

However, while wealth can be built in the long-term, it does not address the immediate needs for cash, which is the economic hurdle for most people. The fact that most people need cash regularly to live, indicates that this approach is of little motivation to people who need cash regularly, who may have little extra to put away. Unable to benefit from this process, many people are kept in cash-earning cycles forever, and cannot afford the free time to upgrade life.

It is due to a different purpose, that we design JCF as a *dividend-paying fund* with a unique payment process. Dividends are paid from the fund's *profits*, defined as the increase in JCF token's NAV in USD over the past year. Annual profits contribute to a *joint dividend pool* that acts as the source for dividends paid. If the fund operates at a loss since last year, the pool receives no new contribution. To ensure that JCF can operate as a stable passive income vehicle, dividends are paid from the *joint dividend pool* regardless of the fund's performance, as long as the dividend pool has assets.

To keep JCF's NAV stable, at the onset of each annual dividend payment, any increase in NAV is first converted to new tokens as potential dividends. This will bring NAV back to the initial offer price of USD 100. New tokens are also created with a NAV of USD 100. This process will repeat at each year's token release period until the token's maximum supply (i.e., hard cap) is reached, only then will NAV start to increase in value without limit. At that stage, the total fund should be large enough, and the *joint dividend pool* shall be set minimally at a designated percentage (20%) of the total fund (i.e., if the *joint dividend pool* is less than 20% of the total fund size, it will be increased and kept at that ratio).

The *joint dividend pool* will be owned by the fund organization, as a form of public assets that becomes our main vehicle for passive/basic income distribution.

In most funds, payments of dividends are determined mainly by how many shares an investor holds, the higher the ratio, the more dividend received. As our purpose is to provide *everyone* in the fund with a decent passive income that could grow into basic income, the dividends will be given with the following guidelines:

- (1) 25% of the *joint dividend pool* becomes actual *dividend tokens* to be paid out to current token holders. This ratio is called the *dividend payout ratio*.
- (2) 50% of the actual dividend tokens are paid as *common dividend* according to token holders' holding ratios (i.e., similar to traditional dividend payments).
- (3) the other 50% is called *shared dividend*, and is equally distributed to every verified token holder, regardless of their holding ratio.

Token holders can set their default preferences with the dividends received, including: 1) withdraw as Ethereum sent to their ETH address; 2) keep the dividend and reinvest continuously to leverage the compound interest effect; 3) donate to individuals or social organizations. We will allow token holders to set the default ratios for each of the three actions so they are executed automatically on the token holders' behalf (e.g., one may keep all the dividends, or donate 50% to organizations of choice, or withdraw to have an annual passive income).

The above design is to ensure that: 1) some dividends are paid to everyone every year, as long as the pool has assets; 2) wealth redistribution is built-in into the fund, such that every investor/holder has a direct impact on other participants' financial well-being if he or she is doing well financially.

Note that this re-distribution of wealth is not only intentional, but built-in. While governments also perform wealth redistribution via taxes and social benefits, our mechanism is much more simple, transparent, and low-cost (in terms of the administrative efforts).

By using blockchain technologies, the distribution process will be fully transparent to everyone and anyone interested in knowing how the fund operates. The redistribution is done automatically by software *smart contract* without human interventions or oversight, and without human efforts to check for eligibility (like social programs do), or other administrative efforts (for example, calculating how much to re-distribute and perform the actual re-distribution). In other words, if the dividend pool becomes large enough, it could potentially provide everyone with a cheaply-administrated basic

income at little to no efforts on the part of the fund managers, thus lowering the fund's maintenance and management fee.

The existence of this *dividend pool* also serves as an asset repository for the fund, adding additional safety to its long-term operations.

3.3 Identity Verification

While we have no problems to accept any legal investors to contribute to JCF, our social goal requires that the fund's dividend-paying aspect be limited to entities with verifiable identities. As JCF tokens may be transferred from an investor to non-investing individuals, to ensure the fairness of the dividend mechanism, we require real identities be verified as an individual or social organization, before an account could receive any dividends. Token holders whose real-world identities have not been verified simply cannot participate in any dividend pay-off. We intend to use various identify verification process such as Civic [11], NetVerify [12], or iSignthis[13] for this purpose.

3.4 ICO and Exchange Mechanism

JCF tokens will be given to fund participants via token sales that started with an ICO, and later via continuous token sales throughout the fund's operations. For tokens already released, we may work with crypto exchanges to have JCF listed in the future, so that tokens can also be purchased from existing owners via the exchanges. However, as Joint Commonwealth Inc. will offer both token purchase and redemption, listing on exchange is optional and not required for JCF's operations.

As JCF is designed to provide passive income that could enable basic income eventually, we also encourage the unconditional transfer of JCF tokens from existing holders to either individual or social institutions, so that the social benefits of JCF can be more widespread and immediate.

Wealthy individual or institutional token holders will be encouraged to give away, or donate fiat cash to purchase tokens for the purpose to provide passive income support for individuals in need. Incentives will also be designed to encourage such behaviors. For example, token holders can specify that a certain percentage of their annual dividend profits be given / donated to social organizations of their choice.

3.5 Token Distribution

JCF is designed to be a privately held crypto index fund that ideally will have many participants. With a large user size, the social benefits of wealth redistribution will be more visible, as more people in the low income bracket would benefit from the redistribution. Additionally, as JCF is a long-term fund, its tokens are released over the course of a long period of time. JCF has a token release schedule that increases the supply each year over a period of 20 years. The basic idea is that 1 million tokens (1,000,000) JCF tokens are initially released, the supply is doubled every year for 20 years, with a maximum supply of 1,048,575,000,000 tokens.

Initial offer price of a JCF token is USD 100 or the current NAV of a token, whichever is lower. Prices after the ICO will be determined by current NAV of the token [14]. This way, additional token owners will always join the fund by purchasing tokens at the same net value

Table 1: Token Summary

Type	ERC20 - Ethereum Blockchain
Maximum Supply (Hard Cap)	1 048 575 000 000
Available for Purchase (Year 1)	1 000 000
	(double every year for 20 years)
Minimum ICO Contribution	300 USD
Minimum Raise (USD)	\$1 000 000

Table 2: Token Distribution

Holder	Percentage
JCF Team (plus: security, legal, marketing, advisory)	3.0%
Donation to Social Organizations	7.0%
Token Buyers	90%

as existing token holders. Potential advantage for early participants in the fund is to start when the overall crypto market is not yet matured, thus the potential for growth is highest.

Whenever JCF tokens are purchased, an additional 1/9 tokens will be minted regularly in the next month, and be given to JCF team and social organizations worldwide. Social organizations receiving donations are suggested by the token buyers. Pending their approval, the organizations will receive the donated tokens for any purpose at their disposal (from holding it to giving it to people in need for social benefits). The JCF fund management will receive a combined of 3%, while social organizations will receive a combined of 7%. Verified social organization holders will also participate in the dividend-sharing plan.

3.6 Token Withdrawal

Each JCF token represents a collection of the underlying crypto assets, and thus have a *real* market value (i.e., its NAV). If a token holder no longer wishes to keep his or her tokens, a *withdraw* function from JCF's smart contract can be provoked at any time, and the token holder can redeem the tokens by returning them to Joint Commonwealth Inc. in exchange for Ethereum of equivalent value. The redeemed Ethereum, after deducting a small transfer fee, will be sent to the token holder's registered Ethereum address.

This mechanism ensures that the NAV of JCF tokens represents an intrinsic floor price for the token's market value. A certain amount of Ethereum will be stored / owned by the JCF smart contract, for the purpose of fulfilling such automatic withdrawals.

3.7 Management Fee

As an index fund selects and manages its assets mostly via rules and algorithms, its operation and maintenance can be kept quite low cost. A 2% management fee is collected at each purchase for basic operations, there are no additional fees related to owning JCF tokens. 0.1% of the total fund is collected annually in later years to maintain the fund's operations.

3.8 Rebalancing

Index funds are basically a form of rule-based investing, and rebalancing is the act of changing the relative ratios of a fund's holding assets according to a set of predefined rules, so the total amount of asset value can maximize over time. It is the core operation of an index fund, and the main driving force behind a fund's performance. Good rebalancing should be easy to administer (contributing to the low-cost aspect of an index fund), while providing good performance.

We divide the main aspects of rebalancing into *ratio determination*, which is determining the ideal holding ratio for the fund at any given time; and *rebalancing procedure*, which is the actual act of performing the rebalancing, given how we intend to hold assets in the fund.

3.8.1 Ratio Determination. There are several key parameters to an index fund's design, the first is the number of assets it intends to hold. For example, the S&P 500 index fund is composed of holdings of the 500 companies' stocks that comprise the S&P 500 index. Crypto20 holds the top 20 cryptocurrencies (by market value) in its portfolio.

A second parameter is the maximum ratio of a given asset to hold, to prevent a given asset from dominating the portfolio, increasing the risk impact of that particular asset to the whole portfolio. Crypto20 for example, adopts a ratio cap of 10%, meaning that no asset will be worth more than 10% of the total asset value. Although it is possible that this ratio could grow during a rebalancing period (if the asset value has increased), this will often be corrected at the next rebalancing action.

We choose our top 10 cryptocurrency based on the CRIX index [15], which is a publicly available index that tracks cryptocurrency matching certain criteria such as stability and longevity. We retrieve actual market price for each crypto from CoinMarketCap [16]. As cryptocurrency is still in its infancy and many cryptos may come and go on the market, an index should try to avoid a cryptocurrency that may disappear in the near future.

For JCF, our initial choice is to hold 10 top cryptocurrencies, each with a maximum holding limit of 20%. The choice is based on stability over performance, also less management complexity in just 10 assets instead of more. These numbers however are subject to annual review and modifications of our rebalancing rules, which will also be made public during our annual report of the fund's performance.

Our rules of determining the ratio is thus the following steps:

- (1) Obtain the market values for each asset in current portfolio to determine the fund's total market value.
- (2) Determine the current top 10 cryptocurrencies as shown by the CRIX index.
- (3) Starting from the largest asset, set its ratio to match CRIX's ratio up to a limit of 20%.
- (4) Continue step 3 for each cryptocurrency to hold, until all market value are assigned.

Thus in the end, we will obtain a targeted holding ratio for each of our portfolio asset that the rebalancing procedure described next will try to achieve.

3.8.2 Rebalancing Procedure. The basic flow for a portfolio rebalancing is to first get the current total market value of the portfolio, then we can determine the *current ratios* for each of the held asset against the total market value. Then an *ideal ratios* can be determined for the whole portfolio, using the main procedure in the last section.

Once we have an overall *ideal ratios*, we can then generate the an *action sequence* of the specific steps we should take to change our portfolio ratios into that of the ideal ratio, plus or minus a pre-defined error allowance (currently set to be 1% of total portfolio value). The specific actions include:

- move assets from cold storage to exchange
- buy/sell assets on exchange to achieve a desired ratio
- move assets from exchange back to cold storage for safe storage

We first define the key terms as follows, all ratios are described in terms of relative numbers in market value.

- each crypto is described by a *type* and an *amount*.
- each crypto is held on both an *exchange* (for adjustment) and *cold storage* (for long-term storage).
- **cold ceiling ratio:** ratio of upper limit on how much a crypto may be held on cold storage (e.g., 85%).
- **cold floor ratio:** ratio of a lower limit on how much a crypto should be stored on cold storage (e.g., 75%).
- **group:** a collection of cryptos that are traded together on the same exchange.
- **group limit ratio:** ratio of upper limit on how much a group's market value can be within the total portfolio.

Below are the actual steps to perform rebalancing:

- (1) Group determination
 - (a) if a given crypto already is in the portfolio, no change is needed.
 - (b) if a new crypto is to be added, add to the Group with lowest market value.
- (2) Cold Storage to Exchange Transfer
 - (a) if the market value in a particular cold storage is above **cold ceiling ratio** (e.g., 85%), move to the corresponding exchange and reduce its ratio to 5% below the limit (e.g., 80%).
 - (b) if the crypto were to be removed from the portfolio, move all to the exchange.
- (3) Intra-Exchange Rebalancing
 - (a) Determine for a given crypto, how much should be increased/decreased on both cold storage and exchange according to the *ideal ratio*.
 - (b) move the most over-ratio crypto into the most under-ratio crypto (i.e., purchase the crypto whose ratio is under ideal by cryptos whose ratio is over).
 - (c) if bitcoin is not enough, transfer the over-ratio crypto to bitcoin first.
 - (d) if a crypto cannot be exchange directly, convert to bitcoin first before exchanging to targeted crypto.
- (4) Inter-Exchange Rebalancing
 - (a) at this point some exchange may hold more cryptos while others have less, adjust bitcoin first.

- (b) convert the largest over-ratio crypto to the under-ratio crypto, then move to targeted exchange.
 - (c) if cryptos cannot be exchanged directly, convert to bitcoin first, before the exchange.
- (5) Exchange to Cold Storage Transfer
 - (a) if a given crypto exists in exchange with higher ratio than (1 - **cold floor ratio**), move it to cold storage so the crypto's ratio in cold storage is above **cold floor ratio**.
 - (6) Inter-Group Rebalancing
 - (a) If a given group's market value ratio exceeds **group limit ratio**, move its cryptos to the group with the lowest market value.

3.9 Consensus-based Decision-Making

Built into the Ethereum smart contract is the capability to perform consensus-based voting. We expect there will be major decisions to be made regarding the operations of JCF in the future. For example:

- the percentage of *joint dividend pool* to be allocated as dividends (currently: 25%).
- the percentage of *shared dividend* to be distributed to all token holders (currently: 50%).
- the percentage of released tokens that serve as *donation tokens* to social organizations (currently: 7%).

Details of how this will be performed will be announced at JCF's official website in the future.

3.10 Security

Security is of utmost importance for any financial instruments and systems, and there are potential security issues related to both human errors and system vulnerabilities.

Our basic philosophy is to reduce human errors as much as possible by automating most of the tasks in running the fund, and reduce the tasks that require human operations to:

- transfer of crypto assets held by the fund between cold storage and exchange (during rebalancing).
- the confirmation and release of annual dividends.
- upgrade of smart contracts used.

Regarding system vulnerabilities, our system architecture is divided into an backend *Portfolio Server* which normal users never see, and another frontend *User Server* that token investors or holders interact with. The information flow is basically one-directional from the Portfolio Server to the User Server. This is designed so that the front-end user facing server only stores user info and publicly available info (such as crypto public addresses). All private keys are stored at the Portfolio server and away from access from the public Internet (or even from the User Server).

We intend to operate our Portfolio Server in a closed environment that only fund managers can access via private networks.

4 SCHEDULE

We outline the roadmap of JCF into the following milestones.

2018.01 ~ 2018.03

Formed team, developed & launched alpha prototype (with smart

contract, funding ready)

2018.04 ~ 2018.06

Performed exchange integration, tested rebalancing mechanism and social invitation.

2018.07

JCF Company registered in Taiwan, R.O.C., beta is launched.

2018.08 ~ 2018.09

Legal review and smart contract security audit are performed.

2018.10.10

Token sales begin.

2018.11

Acquisition of underlying crypto holding.

2018.12

Public auditing firm to audit JCF token sales and holding verification, first rebalancing is performed.

2019.01 ~ future

Regular operations begin, annual dividend is released on each October starting from 2019.

5 CONCLUSIONS

Technological innovations and advancements have been the hallmark of human civilizations. The increased in productivity has and will continue to bring more prosperity to humanity, creating a world where people no longer have to struggle to make ends meet, and can be liberated to work on creative, humanitarian, and social endeavors.

This vision, however, can only be realized if the fruits of societal advancements are equally shared and enjoyed by all its members. *Universal Basic Income* may be one important mechanisms to ensure that prosperity can be shared by all. Yet how to redistribute wealth is a major challenge that may be very difficult to realize given our existing organization and social instruments.

The rise of cryptocurrency, while being possibly disruptive to the current financial and economic systems, may also hold the hopes to finally build a more efficient society in performing and distributing financial transactions. Our proposed cryptocurrency index fund, Joint Commonwealth Fund (JCF) is intended to solve both wealth creation and distribution problems at once, by using a rising global infrastructure, built by worldwide volunteers, profit-seeking individuals and organizations, to allow wider participations of the society in enjoying and benefiting from this breakthrough technology.

We combine the time-tested index fund systems with the rising cryptocurrency phenomenon, along with the smart contract offered by blockchain technology, that realizes automatic and efficient redistribution of the wealth created, so that a practical basic income system may actually be realized by the private sector without waiting for governments to act.

It is with this hope for a more free and liberating society, where humanity can be freed from the burdens of laboring for his/her living, and engage in more creative, social, scientific or spiritual activities, that we encourage you to participate in the fund, and help humanity to realize its biggest potentials that have yet to happen.

6 DISCLAIMER OF LIABILITY

To the maximum extent permitted by the applicable laws, regulations and rules, neither the Company nor the JCF Team shall be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this White Paper or any part thereof by you.

NO REPRESENTATIONS AND WARRANTIES

The Company does not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in this White Paper.

REPRESENTATIONS AND WARRANTIES BY YOU

By accessing and/or accepting possession of any information in this White Paper or such part thereof (as the case may be), you represent and warrant to the Company as follows:

(a) you agree and acknowledge that this White Paper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in any jurisdiction or a solicitation for investment in securities and you are not bound to enter into any contract or binding legal commitment and no cryptocurrency or other form of payment is to be accepted on the basis of this White Paper;

(b) you agree and acknowledge that no regulatory authority has examined or approved of the information set out in this White Paper, no action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction and the publication, distribution or dissemination of this White Paper to you does not imply that the applicable laws, regulatory requirements or rules have been complied with;

(c) you agree and acknowledge that this White Paper, the undertaking and/or the completion of the JCF token sale, or future trading of the JCF tokens on any cryptocurrency exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of the Company, the JCF tokens, the JCF token sale and the underlying assets (each as referred to in this White Paper);

(d) the distribution or dissemination of this White Paper, any part thereof or any copy thereof, or acceptance of the same by you, is not prohibited or restricted by the applicable laws, regulations or rules in your jurisdiction, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to the Company;

(e) you understand and acknowledge that in the case where you wish to purchase any JCF tokens, the JCF tokens are not to be construed, interpreted, classified or treated as:

- (1) any kind of currency other than cryptocurrency;
- (2) debentures, stocks or shares issued by any person or entity;
- (3) rights, options or derivatives in respect of such debentures, stocks or shares;
- (4) rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;
- (5) units in a collective investment scheme;
- (6) units in a business trust;
- (7) derivatives of units in a business trust; or
- (8) any other security or class of securities.

(f) you are fully aware of and understand that you are not eligible to purchase any JCF tokens if you are a citizen, resident (tax or otherwise) or green card holder of the United States of America;

(g) you have a basic degree of understanding of the operation, functionality, usage, storage, transmission mechanisms and other material characteristics of cryptocurrencies, blockchain-based software systems, cryptocurrency wallets or other related token storage mechanisms, blockchain technology and smart contract technology;

(h) you are fully aware and understand that in the case where you wish to purchase any JCF tokens, there are risks associated with the Company and its respective business and operations, the JCF tokens, JCF token sale and the underlying assets (each as referred to in the White Paper);

(i) you agree and acknowledge that the Company or any of the JCF Team is not liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this White Paper or any part thereof by you; and

(j) all of the above representations and warranties are true, complete, accurate and non-misleading from the time of your access to and/or acceptance of possession this White Paper or such part thereof (as the case may be).

CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

All statements contained in this White Paper, statements made in press releases or in any place accessible by the public and oral statements that may be made by the Company or any of the JCF Team on behalf of the Company, that are not statements of historical fact, constitute forward-looking statements. Some of these statements can be identified by forward-looking terms such as aim, target, anticipate, believe, could, estimate, expect, if, intend, may, plan, possible, probable, project, should, would, will or other similar terms. However, these terms are not the exclusive means of identifying forward-looking statements. All statements regarding the Company's financial position, business strategies, plans and prospects and the future prospects of the industry which the Company is in are forward-looking statements. These forward-looking statements, including but not limited to statements as to the Company's revenue and profitability, prospects, future plans, other expected industry trends and other matters discussed in this White Paper regarding JCF are matters that are not historic facts, but only predictions. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may

cause the actual future results, performance or achievements of funds, cryptocurrencies, or the Company to be materially different from any future results, performance or achievements expected, expressed or implied by such forward-looking statements. These factors include, amongst others:

(a) changes in political, social, economic and stock or cryptocurrency market conditions, and the regulatory environment in the countries in which the Company conducts its respective businesses and operations;

(b) the risk that the Company may be unable or execute or implement their respective business strategies and future plans;

(c) changes in interest rates and exchange rates of fiat currencies and cryptocurrencies;

(d) changes in the anticipated growth strategies and expected internal growth of the Company;

(e) changes in the availability and fees payable to the Company in connection with their respective businesses and operations;

(f) changes in the availability and salaries of employees who are required by the Company to operate their respective businesses and operations;

(g) changes in preferences of customers of the Company;

(h) changes in competitive conditions under which the Company operate, and the ability of the Company to compete under such conditions;

(i) changes in the future capital needs of the Company and the availability of financing and capital to fund such needs;

(j) war or acts of international or domestic terrorism;

(k) occurrences of catastrophic events, natural disasters and acts of God that affect the businesses and/or operations of the Company;

(l) other factors beyond the control of the Company; and

(m) any risk and uncertainties associated with the Company and its business and operations, the JCF tokens, the JCF token sale and the underlying assets (each as referred to in the White Paper).

All forward-looking statements made by or attributable to the Company and of the JCF Team or other persons acting on behalf of the Company are expressly qualified in their entirety by such factors. Given that risks and uncertainties that may cause the actual future results, performance or achievements of the Company to be materially different from that expected, expressed or implied by the forward-looking statements in this White Paper, undue reliance must not be placed on these statements. These forward-looking statements are applicable only as of the date of this White Paper.

Neither the Company nor any other person represents, warrants and/or undertakes that the actual future results, performance or achievements of the Company will be as discussed in those forward-looking statements. The actual results, performance or achievements of JCF may differ materially from those anticipated in these forward-looking statements.

Nothing contained in this White Paper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of the Company.

Further, the Company disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events or circumstances, even if new information becomes available or other events occur in the future.

MARKET AND INDUSTRY INFORMATION AND NO CONSENT OF OTHER PERSONS

This White Paper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information.

Save for the Company and its respective directors, executive officers and employees, no person has provided his or her consent to the inclusion of his or her name and/or other information attributed or perceived to be attributed to such person in connection therewith in this White Paper and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information by such person and such persons shall not be obliged to provide any updates on the same.

Neither the Company nor any of the JCF Team has conducted any independent review of the information extracted from third party sources, verified the accuracy or completeness of such information or ascertained the underlying economic assumptions relied upon therein. Consequently, neither Joint Commonwealth Inc. nor its directors, executive officers and employees acting on its behalf makes any representation or warranty as to the accuracy or completeness of such information and shall not be obliged to provide any updates on the same.

TERMS USED

To facilitate a better understanding of the JCF tokens being offered for purchase by the Company, and the businesses and operations of the Company, certain technical terms and abbreviations, as well as, in certain instances, their descriptions, have been used in this White Paper. These descriptions and assigned meanings should not be treated as being definitive of their meanings and may not correspond to standard industry meanings or usage.

Words importing the singular shall, where applicable, include the plural and vice versa and words importing the masculine gender shall, where applicable, include the feminine and neuter genders and vice versa. References to persons shall include corporations.

NO ADVICE

No information in this White Paper should be considered to be business, legal, financial or tax advice regarding the Company, the JCF tokens and JCF token sale and the underlying assets (each as referred to in the White Paper). You should consult your own legal, financial, tax or other professional adviser regarding the Company and its business and operations, the JCF tokens, the JCF token sale and the underlying assets (each as referred to in the White Paper). You should be aware that you may be required to bear the financial risk of any purchase of JCF tokens for an indefinite period of time.

NO FURTHER INFORMATION OR UPDATE

No person has been or is authorized to give any information or representation not contained in this White Paper in connection with the Company and its business and operations, the JCF tokens,

the JCF token sale and the underlying assets (each as referred to in the White Paper) and, if given, such information or representation must not be relied upon as having been authorized by or on behalf of the Company. JCF token sale (as referred to in the White Paper) shall not, under any circumstances, constitute a continuing representation or create any suggestion or implication that there has been no change, or development reasonably likely to involve a material change in the affairs, conditions and prospects of JCF or in any statement of fact or information contained in this White Paper since the date hereof.

RESTRICTIONS ON DISTRIBUTION AND DISSEMINATION

The distribution or dissemination of this White Paper or any part thereof may be prohibited or restricted by the laws, regulatory requirements and rules of any jurisdiction. In the case where any restriction applies, you are to inform yourself about, and to observe, any restrictions which are applicable to your possession of this White Paper or such part thereof (as the case may be) at your own expense and without liability to the Company or any member of the JCF Team.

Persons to whom a copy of this White Paper has been distributed or disseminated, provided access to or who otherwise have the White Paper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute this White Paper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

NO OFFER OF SECURITIES OR REGISTRATION

This White Paper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction. No person is bound to enter into any contract or binding legal commitment and no cryptocurrency or other form of payment is to be accepted on the basis of this White Paper. Any agreement in relation to any sale and purchase of JCF tokens (as referred to in this White Paper) is to be governed by only the T&Cs of such agreement and no other document. In the event of any inconsistencies between the T&Cs and this White Paper, the former shall prevail.

No regulatory authority has examined or approved of any of the information set out in this White Paper. No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this White Paper does not imply that the applicable laws, regulatory requirements or rules have been complied with.

RISKS AND UNCERTAINTIES

Prospective purchasers of JCF tokens (as referred to in this White Paper) should carefully consider and evaluate all risks and uncertainties associated with the Company and its business and operations, the JCF tokens, the JCF token sale and the underlying assets (each as referred to in the White Paper), all information set out in this White Paper and the T&Cs prior to any purchase of JCF tokens. If any of such risks and uncertainties develops into actual events, the business, financial condition, results of operations and prospects of the Company could be materially and adversely affected. In such cases, you may lose all or part of the value of the JCF tokens.

Joint Commonwealth Inc., 0.1.5, (2018-09-20)

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