

# **BETTER EXPERIENCE**

for mutiple digital currency

WHITE PAPER VERSION 1.0

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# Introduction

In 2016 The world economic forum published its first report on blockchain entitled The Future of Financial Infrastructure: An Ambitious View on How Blockchain Can Reshape Financial Services". This report mentioned a few potential and promising applications of blockchain beyond the bitcoin. Among the many applications mentioned, payment is indisputably one of the most important application scenarios for the blockchain technology. In fact, according to the report, it will be elevated to an unprecedented level. The concept of "Blockchain + Pay" will gradually be known and accepted by everyone. "Blockchain + Pay" will not only significantly reduce the cost of information exchange between financial institutions and improve the processing speed and efficiency of payment services, but also open up a whole new field for cross-border payment. There is no uniform clearing center in the world, because no single organization or institution can have endorsement and trust of different financial institutions simultaneously. But with the advantage of the distributed ledger technology in blockchain, the problem of transaction authenticity and reliability can finally be solved.

In traditional transaction methods, third-party organizations often need to audit the authenticity of the transaction. Blockchain technology, on the other hand, can significantly reduce transaction costs by sharing real-time ledgers among the participants.

Based on this background, the Hyperpay project came into being. Today, in the rapid development of the global encrypted digital currency world, the Hyperpay team has stand out by developing a set of superior payment technology after years of efforts. The technology is able to achieve real-time exchange and payment of BTC, ETH, Hcash and other cryptocurrencies with multi-fiat currencies. At the same time, it is compatible with the current mainstream third-party payment platforms such as WeChat and Alipay. The payment space has finally see an ideal solution the that it has been waiting for a long time.

# 1. Background - the Era of Blockchain is Here

Internet has allowed us, for the very first time in human civilization, to communicate information instantly and efficiently without any constraints of physical distance. The significance of blockchain lies in its potential to help human transact trust directly and efficiently at near zero cost. Blockchain, due to its decentralized peer-to-peer nature, is fundamentally different from third party models (banks or quasi banks such as exchange, Paypal, Taobao acting as the trusted 3rd party intermediary) which has hitherto been the predominant way for the society to transact trust. Despite the high cost and the problems associated with third party models, no innovation in the past can bypass the third party when it comes to trust transaction. It is the fundamental breakthrough in the trust transaction model that lead many to believe the great significance of blockchain. It has been posed as a technology that will directly alter people's habits, needs, and demands in every aspect of their life.

No one can predict the future of blockchain, in the same way that no one could have predicted the future of the Internet in the early 90s. Nevertheless, what is clear is that this technology is going to have a significant impact in every aspect of the society (Klaus Schwab, 2017). It is the interlink of many other technologies and promises to be the core component of the forth revolution. From corporations to start-ups and from governments to organizations, the race is on to tap into the hidden power of distributed and decentralized trust in order to reduce abrasion and build more trustworthy, transparent, and efficient frameworks for economy and society. Klaus Schwab estimated that before 2025, more than 10% of the global GDP will be stored by the blockchain technology.

According to the World Economic Forum (WEF) report, by the end of 2015, more than 24 countries have invested in blockchain. More than 90 central banks have engaged in blockchain discussion. More than 90 corporations have joined blockchain consortia, and more than 2500 patents related to blockchain have been filed within the last 3 years. It also predicts that more than 80% of the banks will initiate blockchain projects in 2016. In fact, due to the exponential development of blockchain technology in 2016, the actual number is much more staggering at the end of 2016. It is clear that blockchain is no longer a toy for a niche group of blockchain technology gurus and cryptocurrency enthusiasts. It is becoming a new trend and it is opening a new era.

# 2. Blockchain Payment - Post-mobile-payment Era

Through the blockchain technology, point-to-point payment is now possible. Third parties like financial institutions can be conveniently eliminated. The technology enables us to achieve 24/7 instant payment, convenient withdrawals and zero invisible costs. In addition, it helps to reduce various financial risks and counterparty risks in cross-border transactions and meet the demand of cross-border electronic commerce for more convenient payment and settlement services.

Blockchain payments are functionally similar to Google Wallet and PayPal Wallet. But it goes beyond national and geographical limitations. It enables high-efficiency and low-cost value transfer. This was not achievable by traditional financial institutions even with the internet. In the new age of cryptocurrency, everyone's crypto-wallet can be developed into a "self-financing" platform. On this platform, every person can engage in financial activities such as P2P payment, deposit, transfer, exchange, borrowing, etc. Any cryptocurrency system, such as BTC, ETH and HSR, can issue its own financial contracts and carry out credit or debit actions to perform accounting and clearing in the blockchain network.

The blockchain payment wallet is based on the decentralized technology. The two sides of a payment no longer need to rely on a central system to fund the liquidation and storage of all the transaction information. They can now depend on a non-trust consensus mechanism directly to achieve value transfer. The establishment of a reliable, centralized third-party organization requires huge cost to set up a capable server and perform maintenance. A successful attack on the central organization, on the other hand, can compromise the security of the entire system. The decentralized system, on the other hand, can do away with the costs of setting up central infrastructure. At the same time, each node of the system has a complete copy of data set. Even when multiple nodes are being attacked, the security of the entire system will not be compromised. The cost of value transfer and security maintenance are relatively low compared with the centralized model.

Principle of blockchain payment:

To start, a decentralized global settlement system will be built first. The gateway system will then be introduced to solve the trust issue in transfer between non-acquaintances. The gateway is generally assumed by a main body with credibility, such as banks, third parties, etc. The relationship between the user and the gateway is reflected in the whole

system as a relationship of the rights and the liabilities. If user A needs to send remittance to user B through the blockchain wallet, the gateway will generate debt with A and credit with B. The credit of the gateway to B will be converted into the credit of A to B. It will then be cleared and reflected in the balance of the parties to complete the transaction. This relationship of rights and liabilities will be stored on a number of servers through a distributed network, and the servers communicate in a P2P manner to avoid the risks of a single, centralized server. The system ensures data security through certain encryption technology. For the exchanges of different currencies, the blockchain wallet can create a set of algorithms that quickly match with the market maker who offers the most favorable exchange rate. The market maker then accepts the payment for cryptocurrency and pays the appropriate amount to the beneficiary. During this process, the market maker assumes the role of the gateway. The cross-border transaction is completed by clearing the credit and debit of the two parties.

According to the consensus mechanism, a series of encrypted digital currencies can be set up, such as Bitcoin, Ethereum, Hcash and other mainstream digital currencies. Each digital currency can represent a similar margin and transaction fee in each transaction. In order to prevent malicious attackers from making a large number of junk accounts that affect the normal operation of the network, the blockchain wallet requires each gateway to have a certain amount of cryptocurrency, and in each transaction, there will be a certain number of digital currencies being destroyed. This way, the cost of attack by malicious attackers will be increased and the safety of the operation is assured.

The encrypted digital currencies, spearheaded by bitcoin, is not a direct rival of the USD and other fiat currencies. It functions more like a payment system that can complement the fiat currencies and is equivalent of an intermediary credit for international cross-border payments.

The basis of the construction of the blockchain payment system is the electronic payment system. It tackles the problems of the high cost of cross-border payment and currency exchanges. At the moment, the internal payment and exchange in each sovereign state are still highly centralized. The fiat currency still plays an irreplaceable role.

# 3. What is Hyperpay?

The so-called Hyper-payment combines the blockchain technology, mobile payment wallet and API function into one integrated system or app that can handle functions of digital currency, debit card, credit card, WeChat, Alipay, shopping records, medical insurance, stock, living expenses budget and many more.

The emergence of Hyperpay provides a new solution for the payment of globalized digital currency and encrypted digital currency. It enables Bitcoin, Ethereum, Hcash and other mainstream digital currencies to be paid or redeemed in real time and instantly with multiple national fiat currencies.

At present, Hyperpay has already cooperated with credit cards and debit cards in many countries, and the Hyperpay project has obtained the Australian legal financial payment license. Cooperation with WeChat and Alipay will be realized soon. In the near future, Hyperpay will launch a hub in Singapore to explore cross-border payment and exchange business in Asia. Hyperpay will also open a branch in the Netherlands to expand the Hyperpay project in the European market.

# 3.1 Establishment on the Hcash Ecosystem

With consistent success of Hcash, tens of thousands of businesses and third-party payments will work with Hcash and Hyperpay. At the moment, many third-party international payment platforms have already included Hcash in their recharge channels. This move is the embodiment of Hcash as a functional currency and the cornerstone of the Hyperpay payment network. With Hcash's payment network, it is easier to set up a new third-party platform than ever before.

















# 3.2 Cooperation with Leading Payment Companies

Hyperpay is a payment system based on the Hcash public blockchain. It supports a variety of digital currencies, and it has access to the WeChat payment and Alipay oversea clearing system. A single barcode can be used to pay all the digital currencies. At the same time , it also caters to 1,000 businesses which Hcash has accumulated over time, including the largest shopping center in the southern hemisphere, Chadstone Shopping Center.

#### 3.3 Hyper Terminal

The Hyperpay team is currently dedicated to the development of the payment terminal system. The team strives to publish the hyper terminal system this year. The system will be based on cloud synchronization cashier. It supports payment by mobile phones and other mobile devices.

#### 3.4 Solution to Payment Fragmentation

As a bridge that connects small and medium-sized businesses with Alipay, WeChat, Baidu wallet and other payment agencies, Hyperpay provides a payment product that can unify a variety of mainstream payment channels. It is also a remarkable product that solve the problem of payment fragmentation. It can facilitate billing and check management of small- and middle-sized offline businesses. It also significantly increases the demands for mobile payment services that the consumers would like to pay for. In the future, we can develop a series of business models: "payment + marketing", "payment + customer management", "payment + resource management", "payment + financing", etc. Through these upgrades, Hyperpay can solve the problem of payment fragmentation.

# 3.5 Contribution of Hyperpay in Clearing and Settlement

- 1) Hyperpay promises to accelerate the entire financial system. We have seen the fundamental technology structure changes over time, from telecommunications to ICT, the Internet, and then to cloud computing. Imagine that if the technical structure of the entire financial system can be established on a distributed network. All the nodes share all their information and all their data. What will it look like?
- 2) Hyperpay will also bring disruptive impact to the account management system. There is no accounting system in the blockchain. There are only two password keys, a public key and a private key. More importantly, the public key and private key generated in the blockchain are not managed by the banks. The private key represents the identity and ownership of the assets. Through a set of encryption algorithm, it can replace the central institutions and at the same time ensures privacy protection and security. These features will bring a huge impact to the account management system.
- 3) Furthermore, the digital wallet can also reduce our payment and cross-border remittance costs close to zero.

# 4. Hyperpay Technology

# 4.1 Methodology

The concept prototype of Hyperpay borrows from the existing resources of the Hcash platform. The Hcash system was released in August. At the moment, there are already more than 1,000 businesses ready to accept Hcash. Hyperpay improves the speed and transparency of payment services through the blockchain technology, and its distributed ledger can minimize user reliance on agency banks.

The second part of the concept prototype is the business. After the implementation of the blockchain technology, Hyperpay developers will create and run smart contract to achieve automated transfer. Distributed ledger technology will be used to achieve debit and credit transactions. Through the smart contracts, developers can create value-added services and see real-time status.

# 4.2 Technology Support

Collinstar Capital has acquired Paylinx, which will provide full technical support for Hyperpay. Paylinx is an Australian payment company. It partners with WeChat to provide solutions to Australian shoppers and merchants, such as LV, CHANNEL, H&M, RAZA and others, to reach Chinese customers through WeChat. The combination of targeted outreach, relevance, context, and engagement gives advertisers greater opportunities to generate awareness and affiliation. At the same time, it creates new ways to generate quick demand for their products from consumers that are likely to have intent to purchase.

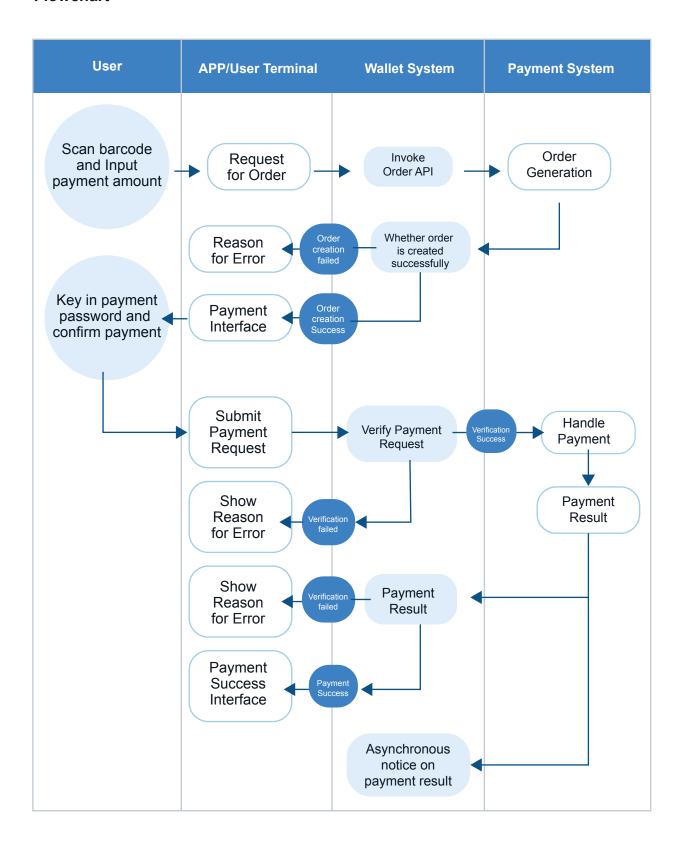
What can be seen from the above is that Paylinx not only has a strong and experienced technology team but also is familiar with how to apply this technology to real business scenarios. By combing the robust technological support from Paylinx and the blockchain technology, Hyperpay can easily develop its own project with good quality.

### 4.3 Technology Framework

#### The Integration System Logic

The user will launch the Hyperpay application and scan the payment barcode. The application will organize the prepaid order to Hyperpay application. A payment interface will pop out for the user to key in password for payment. The application will pass the payment order to the wallet system. After verified by the wallet system, the order will be passed to the payment system. The payment system will handle the payment order based on the selected payment method (e.g. open WeChat Pay, webview to launch Polipay, etc). The payment system will pass the payment result to the wallet system. The wallet system will send the result of the payment to Hyperpay.

#### **Flowchart**



#### The platform supports:

Recipient of cryptocurrencies, including BTC, ETH, ERC20, HCASH and other mainstream currencies.

It also supports: Alipay, WeChat Payment, Credit Card, UnionPay, PayEasy and Polipay.

#### **Core Functions**

- Multi-channel payment
- Receive payment through WeChat apps such as API, APP, H5, and Crypto currency payment
- Independent development of Hyperpay
- · National-level safety standard
- · Hyperpay bill payment

# **Development Progress**

- · Hyperpay bill system
- Hyperpay Wallet
- Hyperpay Terminal
- Hyperpay API
- Hyperpay Credit Card

# **Account Opening Process**

- 1. Register Hyperpay commercial customer account
- 2. Provide commercial customer information, Hyperpay organizational verification
- 3. Select payment channel
- 4. Hyperpay configures channel parameters and register for filing
- 5. Completion

#### **Integration Payment and Recipient**

- Integration Payment API
- Merchant APP for payment collection
- Mobile and web payment collection
- Merchant bill system
- QR code payment collection
- WeChat mini program payment collection

#### Flexible Payment Methods and Merchants Application Channels

- T+1, T+2, T+0 merchant fiat settlement, helps merchants to recoup funds
- Cryptocurrency settlement methods, helps merchants with financial planning by owning cryptocurrency
- Provide online network access application channel, makes it convenient for merchants to access the network

#### **Distributor**

- Independently log in to the platform and control daily deals
- Account details, order collection and profit
- Distributor can be cleared independently
- Multi-level agency management commission configuration

#### Merchants

- Support user-initiated scanning, scanning of user and other payment modes
- Independent store trading, independent management and independent refund password
- Support both methods of company and multi-store
- Store can be configured with independent account for store manager, store staff and refund password
- Merchants and configure with handling fee or no handling fee

# **Hyperpay App Wallet Technology**

• Support: Bitcoin, ETH, ERC20, Hcash

#### Multi-verification to Ensure Safety of Trading

- Phone and email dual-verification
- Google Authenticator
- HTTPS 256-BIT encrypted messaging
- Automatic phone verification for large transactions
- Fingerprint sensing, facial recognition and voice recognition

# **Wallet Security Technology**

- Cold and warm wallet segregation
- Cold wallet segregation
- 80% of the fund will be stored through offline storage or logistic methods to realize segregation of fund from the network
- All wallets use AES 256 encryption technology

#### Simple and User-friendly

- Interface design and user experience done by world-class team
- Mobile phone or email can be used on the site to receive fund
- Payment by scanning barcode

#### **Security Policy**

- Visit to server under 24-hour monitoring.
- · Establishment of strict administrator access.
- Installation of firewall
- All customer must have at least a second verification method and set trading password
- Suspicious log-in warning, including suspicious IP log-in
- Email warning on suspicious login and 24-hour account locking function

#### **Hyperpay Bill Payment**

Support household bill payment, parking bill payment, phone bill payment and credit card bill payment

#### 4.4 Technology Development Path and Plan

# Phase I Build & Test

he basic Hyperpay product was developed and tested in real time. Adjustment was done on the system to improve performance, security, functionality and customer friendliness. The first marketing partner was put in place and others entered into the pipeline. The core team was formed. It covers technology, marketing, customer service, finance, product and business development.

# Phase II Up-scaling

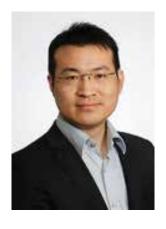
This phase focuses on meeting the sales and user base targets in the first year. At the end of Phase 2, the team will have over 20 people. We will have legal staff, a CFO as well as specialists covering marketing, technology and product management.

# Phase III Expand

Phase III focuses on growing the market and distribution of a proven product. We will also continue developing the product for application in new areas. We will fine-tune the technology, expand our distribution channels and continue with our strong push in marketing. Hyperpay will also expand geographically. We will form new partnership and acquire new customer groups.

# 5. Team and Organization

# **5.1 Core team members**



Jacob /CEO

Jacob is the shareholder and Managing Partner of Collinstar Capital. He is also the Director of Operation for Australian Blockchain Group. He is the member, Chief Strategy Officer and Product Manager of Hcash Foundation.



Khal Achkar /CTO

Khal has 18 years of experience in business architecture, including architecture in data, application, and technology. He has strong enthusiasm for blockchain and the encrypted digital currency.



**Sebastian /COO** 

Sebastian has been senior product marketing manager for 10 years. He has worked in China Southern Airlines, CITIC, China Merchants Bank and other internationally renowned enterprises.

# 5.2 Advisors



Ryan / Chairman of Hcash Foundation

Ryan is the founder of Australia Collinstar Capital. He is a famous investor in the blockchain sector and nicknamed Martian Ryan. He is a founder of Bitcoin Development Foundation, member of the Asian DACA BlockChain Association, and member of China Bitcoin Roundtable Forum.



**Gary Nan / Myth Digital Chairman** 

Gary is the Chairman of Mythical Digital. He has been a senior practitioner in IT for 15 years. He is a senior system framework designer, angel investors, and corporate strategy consultant.



**Jayden Wei / Collinstar CEO** 

Prior to joining Hyperpay, Jayden had experience with fund management in mainland China, Hong Kong, and Australia, and was the only holder of VC license of Australia's digital currency. Jayden holds a master's degree in accounting and financial risk management in Monash University, Australia's top university.

# 5.3, Partnership



















# 6. Hyperpay Foundation

#### **6.1 Introduction**

Hyperpay is setting up Hyperpay Foundation ("HPF") as a non-profit organization with the goal of accelerating the adoption of blockchain technology and development of Hyperpay ecosystem.

The Foundation allows members to register. It accepts donations and operate in public interests relating to blockchain technology and Hyperpay ecosystem. Hyperpay has been registered as a company limited by guarantee in Australia.

# 6.2 Governance principles

The principles of HPF is to support and coordinate the efforts of the blockchain community by helping to create greater awareness of the benefits of the blockchain technology and better development of Hyperpay project through concerted effort in education and awareness campaigns to promote the use of blockchain technology and its related technological requirements for enthusiasts, developers, regulators, technologists, practitioners and users globally.

# **6.3 Foundation Organization**

6.3.1 HPF Activities

HPF will undertake the following activities

- Direct and supervise the development and maintenance of the Hyperpay Tokens
- Promote safety and harmony of the HPT blockchain ecosystem through the adoption of best practice governance principles
- Fund activities that will propel the development of the Hyperpay ecosystem and any related projects.

#### 6.3.2 Advisory Committee

The Advisory Committee will:

- Comprise at least 5 persons including at least one member of HPF and at least 2 independent advisors
- Meet at least 4 times a year
- · Advise on the governance of HPF to the members of HPF

The initial term for the members of the committee will be a mix of 1 year and 2 years to ensure continuity. Thereafter, all advisors will have 2 years of appointment.

#### 6.3.3 Management

The members of HPF will be responsible for appointing or dismissing the management team of HPF. HPF intends to appoint one finance lead and one legal lead to form the initial management team for the operations of HPF. The management team will be responsible for:

- · Legal and financial management.
- Supervision of the grant management process covering application management, financial tracking and reporting, and operational delivery and reporting.
- Publishing a report on the delivery of the objectives set out in the Token Sale every quarter. The audited annual financial statements will be lodged with ACRA
- Providing reports on a regular basis to the Advisory Committee

# **6.4 Funding Distribution**

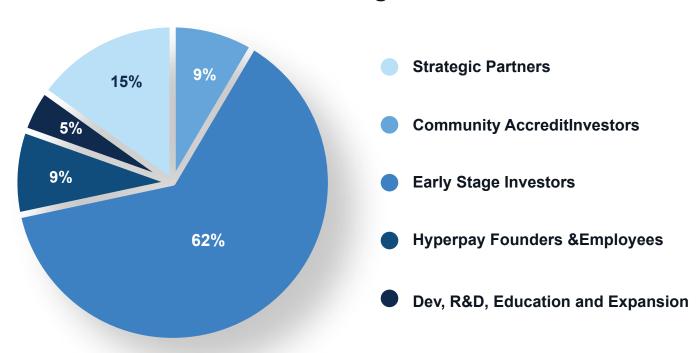
#### 6.4.1 Fund Resource

The fund for Hyperpay will be raised by strategic institutional investors and accredit investors under legislation. Hyperpay only accepts fund from people who have gone through proper KYC process and obey strict AML rules.

#### 6.4.2 Budget Plan

Hyperpay foundation will issue a total of 2,650,000,000 tokens (HYP). Strategic partners and early stage institution investors will each take 9% of HYP. 15% of HYP will be used for business development, R&D, education and expansion. Hyperpay Foundation & employees will hold 5% HYP. Majority of the tokens, accounting for 62%, will be held by community accredit investors to make the HyperPay ecosystem thrive.

# **Fund Budget**



#### 6.4.3 Restrictive clause

To the maximum extent permitted by the applicable laws, regulations and rules, Hyperpay and/or the distributor shall not 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 Whitepaper or any part thereof by you.

#### 6.4.4 Digital Asset Management

All payments received for HYP tokens will be held in escrow in a multi-signature address, with a multi-key structure. Keys of this multi-signature account will stay with Hyperpay, Collinstar Capital and Hyperchain Tech.

# 6.5 Legal, Compliance and Audit

Hyperpay is appointing a professional Australian law firm to provide legal advice on regulatory and compliance matters. This law firm will also be engaged by Hyperpay Foundation to provide external legal advice.

Hyperpay Foundation is in the process of appointing an internationally recognized audit firm to provide auditing service as well.

As soon as all appointments are finalized, the foundation will make an announcement on the Hyperpay Foundation website.

# 6.6 Reporting

#### 6.6.1 Project Plan

Hyperpay intends to produce a written update fortnightly on the progress towards the expansion goals outlined in the 'Development Funds'. Hyperpay will also make announcements when significant milestones are reached. This will be in the form of a blog on Medium, covering both technical and business issues.

#### 6.6.2 Quarter/Annual reporting

To ensure transparency in management and operation of Hyperpay foundation, the foundation will have an update of the latest status each quarter and annum. The report will include major strategies and decisions made in the reporting period, the asset under management, and the major investment activities and other important issues that will affect the development of Hyperpay and Hyperpay ecosystem.

These updates (or links to the source) will be posted on the Hyperpay channels listed below.

http://hyperpay.tech/

http://hyperpay.com.au/

# 7. Risk Management

Digital asset investment is a new investment model. There are a variety of risks involved. Potential investors need to carefully assess the investment risk and their own risk tolerance. The development of blockchain needs to overcome the problems of vested interests, market education, staff training, system migration and so on. There is also the risk that the developmental progress would be lower than expected. Blockchain technology has not been tested by substantial funds, and there are potential security and performance risks as well. The existing legal system has yet been specifically explained in the blockchain sector and its decentralization mechanism. In addition, there are compliance and legal risks, including:

- (1) The risk of judicial supervision: Blockchain technology has become the main target of regulation in major countries of the world. If the judiciary exerts influence, the Hyperpay application or the Hyperpay token may be affected. The development of Hyperpay application may be limited, obstructed or even terminated.
- (2) Technical risk: POWER FANS is based on cryptographic algorithm construction. The development of cryptography may also pose potential technical risk. Loopholes may also exist in the development process of the project.
- (3) Hacking attacks and criminal risk: electronic tokens have inherent properties of being anonymous and difficult to trace. These properties, however, can be exploited by cyber-criminals, or susceptible to hacking attack. It may also be involved in illegal asset transfer and other criminal acts.

#### Reference

1) Blockchain Payment: Near-perfect payment solution for cross-border merchants. Chen Gang, 20160309, Blockchain