



# **VHKD** White Paper

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Build a global system of digital cash that is linked and backed to fiat currencies whilst free from traditional banking limits and restraints.

V1.0

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# 01 Executive Summary

In the second half of 2017, many countries began to introduce cooling measures in an attempt to curb the heated digital currency market. In extreme cases, countries prohibited cryptocurrency exchanges altogether, resulting in widespread panic and loss of interest from global investors.

In this white paper, we propose VHKD, a cryptocurrency that is pegged to HKD at a 1:1 ratio, as the solution to this unprecedented issue. VHKD aims to minimise wild price fluctuations while offering the benefit of increased efficiency over traditional digital currencies. VHKD will possess design excellence, increased transparency in the disclosure of financial information, stricter audit procedures, advanced acceptance networks and enriched application scenarios. Through data encryption, time stamping, decentralised consensus and economic incentives of the blockchain technology, VHKD will be able to achieve decentralised credit of point-to-point transactions, coordination and collaboration in the distributed system without the need to rely on the trustworthiness of individuals.

We will explore the design principles, technical architecture, circulation mechanisms, issuance plans, distribution scenarios, application scenarios and future timelines of VHKD in greater detail. VHKD will continue to leverage blockchain technology to enhance traditional finance and form a VHKD integrated ecosystem.

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# 02 Introduction

## 2.1 Overview of the Global Cryptocurrency Market

Cryptocurrency is a new form of currency driven by the innovation of financial science and technology. It has attracted extensive interest from scholars, governments and financial professionals globally. In-depth research and analysis has been conducted by entrepreneurs in different fields such as computer science, cryptography, economics and numismatics. Cryptocurrency has unique characteristics in credit construction, distribution and circulation mechanisms, transaction costs and security. In the digital currency ecosystem, the role of the central bank no longer exists and there is no individual entity who can control its issuance. Instead, the responsibility for currency issuance and the circulation of transactions are shared by all nodes while credit information is recorded by each node.

The concept and technology of digital currencies have created a brand-new model for monetary and financial systems. In the last eight years, the digital currency market has shown unparalleled global progression and growth. In December 2017, there were 1370 different digital currencies in the world, with a total market capitalisation of more than \$600 billion. As the backbone technology of digital currency, blockchain is forming a comprehensive technological and commercial revolution. It sets the foundation for future opportunities around “internet and finance” .



Figure 2.1-1 Statistocal Curve

The digital currency with decentralised approach solves the problem of value circulation across regions and currencies, and to some extent, avoids the problem of inflation in the fiat currency. However, the traditional cryptocurrencies built on the bitcoin and Ethereum blockchains have their limitations where their circulation will have an impact on traditional monetary systems through price fluctuations causing greater financial risks. Traditional cryptocurrencies are not necessarily suitable as a stable means of payment and merchants who accept them as payment face risk of price fluctuation. Traditional cryptocurrencies also come with costs and its efficiency has inherited computing risks with the potential for nodes to tamper and forge blockchain data by controlling more than 51% of the network's computational power. Finally, digital currency has no inherent value in itself.

In light of the problems above, Tether company issued USDT, a digital currency pegged to USD at 1:1 ratio. By providing a channel for the exchange between fiat and digital currency, Tether has helped investors reduce the fluctuation risk of digital currencies. However, USDT continues to face challenges including but not limited to suspected over-issuance, hacks, inability for users to exchange USDT for USD on-demand and the lack of an audit of credit worthiness by a third party.

Protecting cryptocurrency value against price fluctuations while delivering solutions to mitigate technical and credit risk poses a big challenge to the ongoing development of digital currencies. The white paper will discuss some of the key principles and applications to build a safe and innovative environment for digital currencies.

## **2.2 VHKD's Design Principles**

There is no doubt that digital assets with stable fiat currency value are indispensable in the current environment. We propose a conjecture as to whether there is a digital currency that can improve the efficiency of the circulation of value assets, solve issues surrounding public trust and be exchange safely and reliably offline.

The digital currency VHKD, issued by the Virtual Digital Asset Corporation (VDAC), can provide alternative solutions to resolve these issues. VHKD is a new type of

cryptocurrency that can be freely traded. It pioneers the combination of the fiat currency of Hong Kong Dollar (HKD) with traceable and open blockchain technology, launching digital assets with properties of value anchoring, circulation and service payments. VHKD is pegged to Hong Kong Dollar in a 1:1 ratio, which means every VHKD will be used with a reserve of 1 HKD in the reserve account. Unlike USDT, VHKD minimises risk at the mechanism level and avoids the risk of over issuance.

The life cycle of VHKD consists of four phases: issuance, circulation, payment, and freezing. This allows VHKD to trade freely P2P, anonymously and securely in a decentralised environment. At the same time, we also introduce a decentralised audit throughout the life cycle to ensure that VHKD operates in an open and transparent environment. We discuss the issuance, circulation, payment, freezing and auditing standards of VHKD below:

- **Issuance Standard: Decentralisation**

The most essential feature of blockchain technology is its decentralised nature, reinventing the trust system as we know it. VHKD is politically decentralised with network nodes distributed throughout the world to ensure that information cannot be forged or tampered with. VHKD is structurally decentralised without infrastructural centre failures and therefore, achieves distributed consensus through Proof of Work. It securely stores transaction and other data through a distributed ledger. The data is stored in a chain block structure with a timestamp. The rights and obligations of any node are equal while the data blocks in the system are jointly maintained by nodes with maintenance function in the whole system. Based on the VHKD blockchain's smart contracts, decentralised digital cash is built in strict accordance with a 1:1 ratio of the reserve, without the need for audit by any central agency.

Decentralised blockchain technology eliminates the need for third-party intervention and enables point-to-point direct interaction in order to achieve efficient, decentralised agents and large-scale information exchange without the concern of information disclosure.

- **Circulation Standard: Convenience and Efficiency**

Free, convenient and efficient are the core values of VHKD. VHKD has a wide range of circulation channels. Not only can VHKD be freely circulated online, but holders will also be able to use VHKD offline for shopping or exchanging to fiat currency. Bitcoin currently allows up to 7 transactions per second, while Ethereum currently allows up to 25 transactions per second. VHKD's unique blockchain technology avoids the congestion of a traditional network transmission channel, achieving immediate confirmation of network blocks and currency arrival within 1 second.

- **Payment Standard: Rigid Payment**

Rigid payment is the cornerstone to ensuring that an asset maintains value. No matter when and where holders ask for payment, the issuer must be able to complete the payment in a short period of time to ensure the security of the holders' assets. Holders can exchange HKD online, or at designated stores of the VHKD offline network. The issuer will sign an acceptance constraint with partner stores in strict accordance with a 1:1 ratio of the reserve, to ensure that holders can purchase/exchange VHKD at any time. This acceptance constraint is the key to VHKD's property of value maintenance and avoidance of risk. It ensures that VHKD's price will not fluctuate greatly due to market supply and demand, protecting the rights and interests of holders. At the same time, the strong offline network coverage ensures that holders can exchange anytime, irrespective of location. These features make VHKD fundamentally different from USDT and will outperform any other digital currency pegged to a fiat currency.

- **Freezing Standard: Freezing according to the amount of reserve assets**

The freezing rules are key to guaranteeing the stability of VHKD and we also believe it to be the most effective regulation to avoid the risk of over-issuance. When holders exchange, the issuer will freeze the withdrawal of VHKD, which can be queried on the open blockchain browser. Concurrently, the account will pay 1:1 of the reserve to the holder and information will be queried at any time to ensure that the ratio of VHKD and HKD remains strictly in 1:1.

- **Auditing Standard: Openness and Transparency**

In order to minimise risk, it is necessary to introduce open and transparent auditing standards in issuance and payment. VHKD' s issuance and payment processes and proof of reserve will be described in detail in later sections. The entire circulation process will be audited by a third-party authoritative accounting firm according to international auditing standards and the findings will be published to the public regularly. The reporting infrastructure allows for an open and transparent way to support inquiries at any time and welcomes supervisory checks and balances.

VHKD' s design principles will allow it to outperform any other digital currency anchoring a fiat currency. VHKD goes further in decentralisation with smart contracts while providing channels for the exchange of fiat and digital currency. VHKD' s convenience, efficiency, security and other features will bring new innovations and standards to the entire blockchain industry as well as to end users.

## **2.3 Business opportunities and technical challenges**

The main advantage of VHKD is its ability to provide liquidity and convenience to cross-border assets without the risk of price fluctuation. However, opportunities and challenges can and do exist.

Although VHKD is politically and structurally decentralised, not everything needs to be decentralised. VHKD is logically constructed so maintain reserve fund security and the fiat currency exchange – a recognised issuer undertakes acceptance obligations of reserve custodian and rigid payment, and continuously develops and maintains the acceptance network, to ensure VHKD' s liquidity and uphold the convenience of cross-currency transfer.

The security of the VHKD blockchain relies on asymmetric cryptographic algorithms such as the hash function and elliptic curve. However, with the continued development of mathematics, cryptography and quantum computing technology, some basic security assumptions in traditional cryptography, such as the large prime decomposition problem, the discrete logarithm problem and the discrete logarithm problem on elliptic curve may become more and more fragile, and the issue of



password algorithm security may also become more and more prominent. In addition, the workload of VHKD using the PoW consensus process depends heavily on computing power contributed by blockchain network nodes, which is mainly used to solve SHA256 hash and random number search. This computing power resource is often thought to be "wasted", however, at the same time, a large amount of power resource is wasted, highlighting the important issue of resource consumption.

VHKD blockchain technology faces commercial and technical challenges in attempting to weaken the influence of logical centralisation and effectively utilising the network computing power of distributed nodes. We are still working to solve these problems. Our development pipeline is focussed on designing an effective interaction mechanism to collect and utilise the group intelligence of distributed consensus nodes, which will help lay a more solid foundation for the next step of innovation.

## 03 VHKD's Technical Architecture

VHKD's underlying blockchain is a data book shared by nodes in the decentralised system. Using specific hash algorithm and Merkle data structure, each distributed node can encapsulate the transaction data and code received over a period of time into a data block with timestamp, and connect to the longest main blockchain of that time to form the latest block. The process involves technical elements such as block, chain structure, hash algorithm, Merkle trees and timestamps. VHKD was originally designed to build a global free circulation system of digital currency. Accounting for industrial characteristics and the possibility of future expansion, we have a six-tier design of the VHKD blockchain.

### 3.1 The infrastructure of VHKD block chain technology

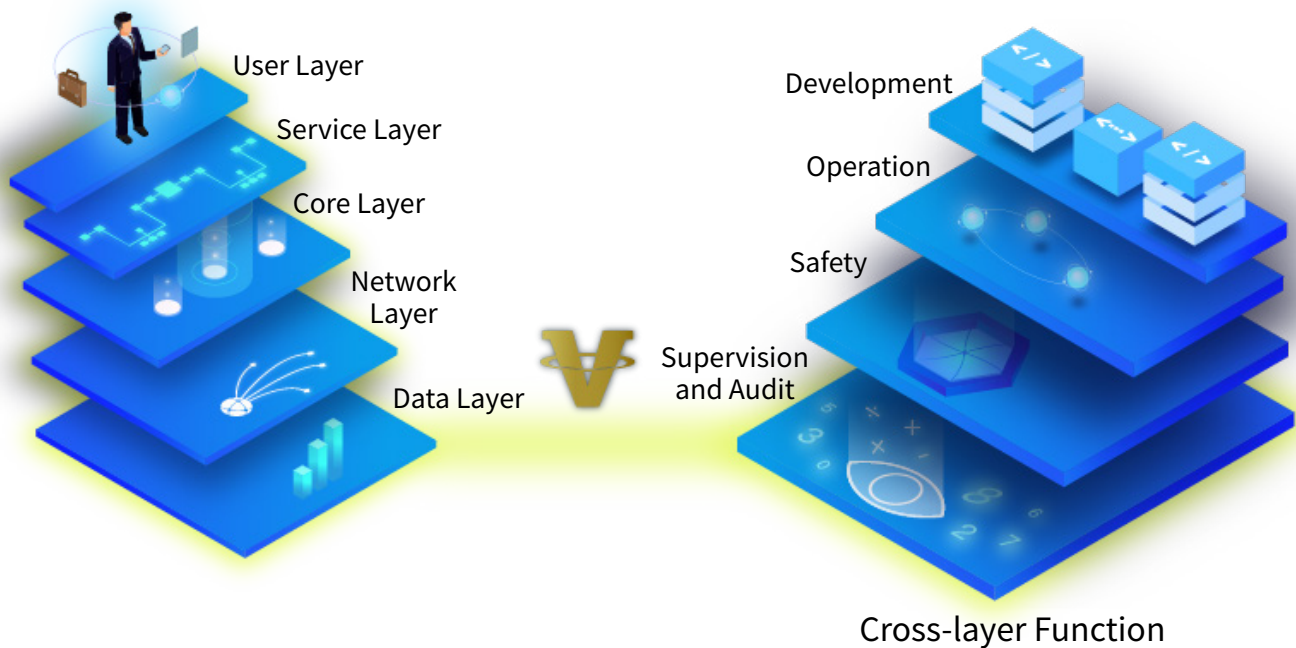


Figure 3.1-1 The infrastructure foundation of VHKD block chain technology

As is shown in Figure 3.1-1, the infrastructure model of the bottom VHKD block chain technology consists of data, network, core, service, user and cross-layer functions. Among them:

1. The data layer encapsulates the bottom data blocks and related techniques such as data encryption and timestamp;
2. The network layer includes distributed networking mechanism, data transmission and data verification mechanisms;
3. The core layer encapsulates various consensus algorithms of network nodes and various kinds of scripts and smart contracts, which is the basis of the programmable characteristics of blockchain;
4. The service layer which includes access, node and ledger management;
5. The top layer which is the user layer, encapsulating all kinds of application scenarios and cases in the blockchain, including user, business and management functions;
6. The cross-layer include development, operation, security, regulation and audit functions.

### 3.2 The introduction of the Bottom Block Chain Structure

The miners who get the accounting right will link the current block to the former block to form the latest main block chain. Each block links and in turn forms into the longest main chain that ranges from the genesis block to the current block, recording the entire history of VHKD block chain data. It could provide the traceability and locating function so that any data can be traced back to the source through this chain structure. The VHKD bottom block chain structure is shown in Figure 3.2-1.

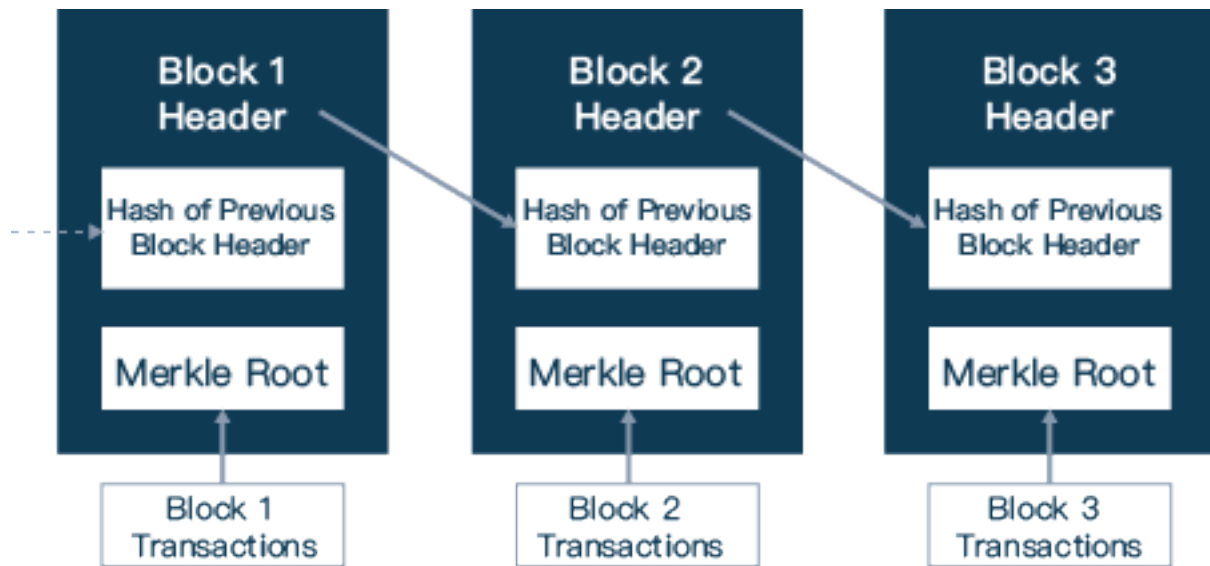


Figure 3.2-1 VHKD Block Chain Structure

Merkle trees are a vital data structure of block chain as it can summarise and verify the existence and integrity of block data quickly, shown in Figure 3.1-1. VHKD adopts a binary Merkle tree, with each hash node always containing two adjacent data blocks or their hash values. The Merkle tree usually contains the bottom (transaction) database of the block, the root hash value of the block head (the Merkle root), and all branches along the bottom block data to the root hash. The Merkle tree is built from bottom to top and the operation is generally to hash the block data in group and insert the generated new hash value into the Merkle tree, conducting recursion in this way until only remains one last root hash value and it could be marked as the Merkle root of the block head. The number of transactions recorded in each block can be over 1,000 or even 2,000. Adopting the data structure of Merkle tree to record transaction information greatly enhances the operational efficiency and extensibility of the block chain.

If you want to prove that there is a specific transaction in the block, you just need to find an authentication path from the specific transaction to the Merkle root. Using the Merkle tree shown in Picture 3.2-2 as example, if you want to prove that transaction K is a valid block recorded in this block, you can generate a Merkle authentication path with only four 32-byte hash values to fully verify it, namely (HL, HLJ, HMNOP, HABCDEFGH), the hash values that are marked with dark color in Figure 3.2-2. Calculate another 4 hash values (denoted with the dotted box in Figure 3.2-2) and you can verify that the transaction is recorded in this block by comparing the calculated Merkle root with the Merkle root recorded in the block header.

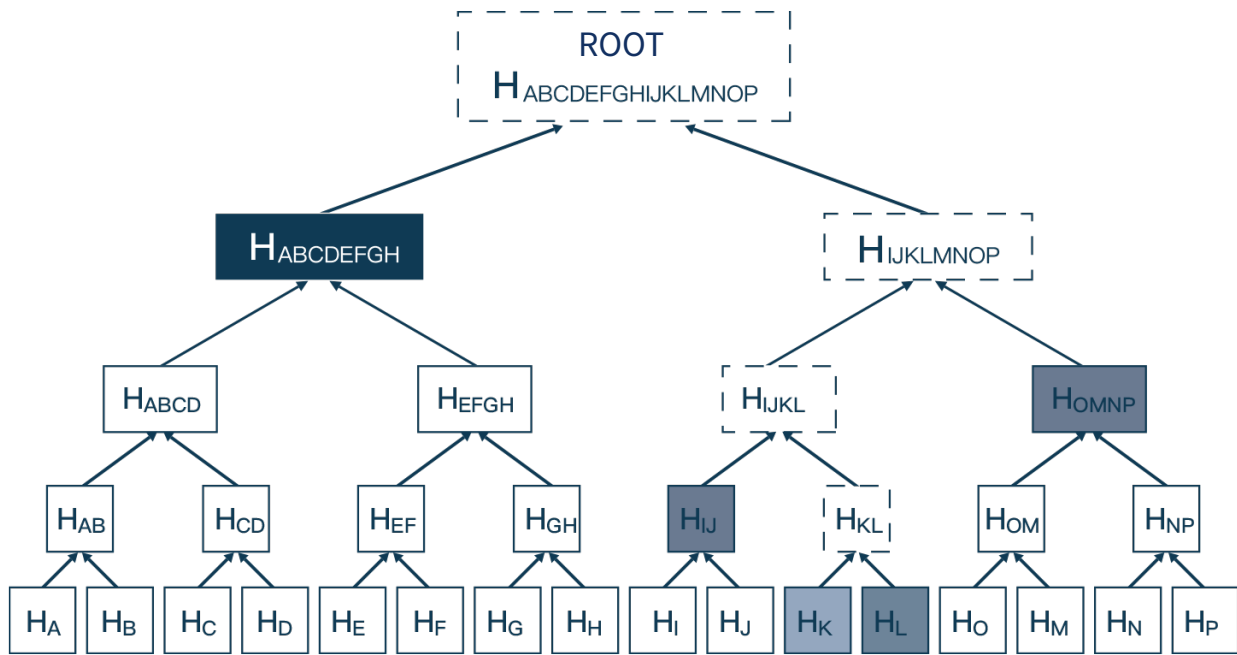


Figure 3.2-2 VHKD Binary Merkle Tree Path

### 3.3 VHKD Distributed consensus mechanism

VHKD adopts a Proof of Work mechanism (PoW consensus mechanism) which relies on the competing calculating ability of distributed nodes to guarantee the consistency of distributed accounting for VHKD networks. Proof of Work reaches to a consensus in the whole network through the verification and settlement of transaction to ensure the security of the system.

In the VHKD system, each node competes with one another based on their calculating ability to solve a mathematical problem SHA256 together, which is complex but easy to be verified. The node that first resolves the problem will obtain the block

accounting right and VHKD rewards that is automatically generated in the system. In general, the random digit searching process of PoW consensus is as follows:

1. Search the unconfirmed transactions in the entire network for the current time period and add a coinbase transaction that is used to issue a new VHKD reward to form a transaction set of the current block;
2. Calculate the Merkle root of the transaction set of the block and count it into the block head. Fill in the metadata of the block head and the Nonce is set to zero;
3. Add 1 to the random number generated and calculate the dual SHA256 hash value of the current block head. If the value is less than or equal to the target hash value, a suitable random number is searched for and the accounting right of the block is obtained. Otherwise, continue to conduct step 3 until a suitable random number is found by any node.
4. If no success within a certain period of time, update the timestamp and unconfirmed transaction set, recalculate the Merkle root and continue the search.

## 04 VHKD Circulation System

### 4.1 The Process of Cash Flow

We simplify the entire life cycle of cash flow into 8 stages, as is shown in Figure 4.1-1.

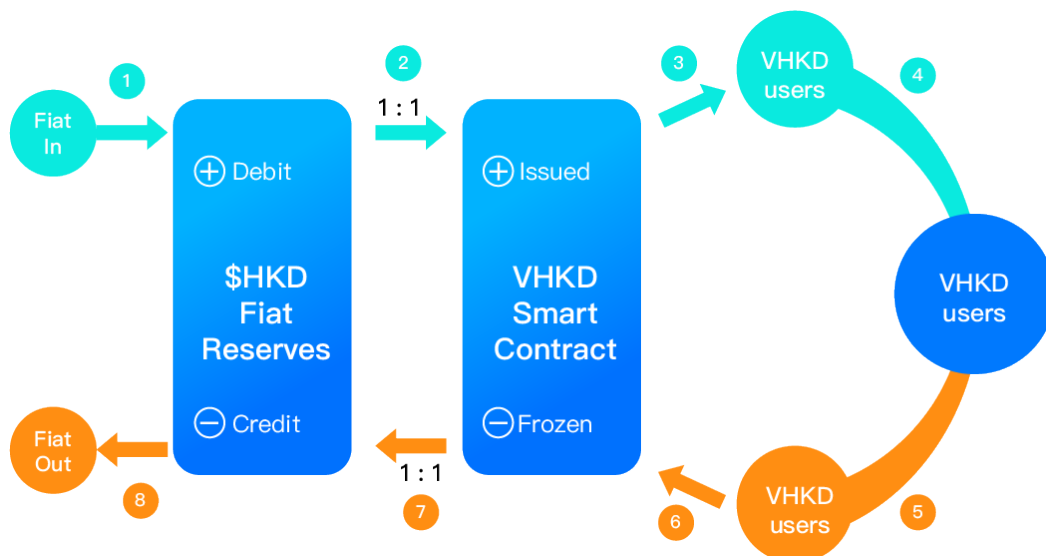


Figure 4.1-1 the figure of the Cash Flow Process

### **Step 1: The inflow of legal tender**

Users deposit Hong Kong dollars, or convert other legal tenders into Hong Kong dollars, into the VHKD reserve account through the exchange channels.

### **Step 2: 1:1 Exchange**

Complete the fund account by VDAC and record through multiple agencies through the VHKD smart contract. Issue new VHKD using inflows of the HKD in Step 1 in a ratio of 1:1. As an example, if there is \$100 HKD flowing into the reserve account, issue 100 new VHKD and credit 100 HKD to the reserve account.

### **Step 3: Send VHKD**

Send the new VHKD to the asset address provided by the end users – the reserve account balance should equal to VHKD circulation in the market.

### **Step 4: Transaction**

End users can use VHKD to transfer, shopping, buy other digital currencies, storage among many other scenarios.

### **Step 5: Send for redemption**

End users can send VHKD to a designated address through redemption channels to redeem for legal tender with payment fulfilled after the following two redemption processes.

### **Step 6: Redemption**

The VHKD smart contract freezes the VHKD that was sent by the users to the specified address. VDAC will then conduct a 1:1 HKD transaction according to the frozen VHKD. For example, if there is 100 VHKD applying for redemption, then 100 VHKD will be frozen and \$100 HKD will be debited to the reserve account.

### **Step 7: Outflow of legal tender**

After verifying the reserve account, the HKD, or other legal tender according to the user's requirements, can be deposited into the user's designated bank account, or paid in cash, to complete the redemption exchange process. VDAC has strong

connections and cooperation with overseas banks. It should be noted that due to differing bank regulations, the time of receipt will differ and the specific time will be subject to the banks' regulations.

## **4.2 Certificate of reserve mechanism**

The risk control of the VHKD reserves will occur during issuance and redemption. This is completed by a smart contract and the reserve audit in its chain. During issuance, the smart contract regulates the number of circulating VHKD in accordance to the legal tender amount paid by users. Meanwhile, equivalent HKD legal tender needs to be reserved in the reserve account. In the event of redemption, after users complete the redemption step, the retrieved VHKD will be frozen while the reserve account disburses equivalent HKD legal tender. VHKD circulation and bank account reserves will not only be completed by multiple agencies, but also audited by third-party authoritative accounting firms in accordance with international auditing standards. VHKD will also support a blockchain browser to conduct real-time inquiries, release a regular audit report to the public and stick to open and transparent principles.

We will introduce a simple but effective innovative proof mechanism to prove the aggregation of HKD reserve  $\geq$  VHKD total circulation (reserve  $\geq$  100%), thereby demonstrating the security of the reserve.

In the case of promoting user transparency, our philosophy is to make data on the platform public, including the real-time residual in reserve account, the total VHKD in circulation and all the node data. The audit institution will also conduct regular audits which though very strict, we will continue to protect the “absolute privacy” of users.

To prove the total volume of VHKD circulation is real and effective, beyond a reasonable doubt, we need to prove:

1. The data is not fabricated

Since the number of users is not necessarily related to the total volume of VHKD in circulation, there is no point in fabricating the number of users; users convert HKD 1:1

to VHKD and if they don't receive the equivalent VHKD, they will find out immediately and be able to give us feedback. If the VHKD possessed by users is deliberately inflated, it will decrease the reserve to less than 100% and dilute the reserve rate. Clearly the disadvantages outweigh the advantages and it is not in our best interests to fabricate data.

## 2. User statistics have not been omitted

The direct omission of users refers to the fact that they may not be able to find themselves in the data released by the blockchain browser. In this case, the user will notice this and give us feedback if they come upon this scenario. Indirect omission of users means that two or more users correspond to the same data which is possible, as VHKD adopts binary Merkle Tree. The hash algorithm ensures that the field of each User ID is unique and fixed, with natural uniqueness and cannot be forged. After constructing the Merkle Tree, the residual of the root node is identical to the address residual published by the blockchain browser, which will prove that the user is not omitted and the residual is accurate. The two points above help prove that the VHKD circulation volume is real and effective.

Through figure 4.1-1, the figure of capital flow process, the following viewpoints could be achieved: the newly issued VHKD is named as N\_VHKD and frozen VHKD is named as F\_VHKD and the circulating VHKD is named as C\_VHKD, and the logical relationship between them at any time should be:

$$\mathbf{C\_VHKD=N\_VHKD - F\_VHKD}$$

We could directly check the real-time data about the C\_VHKD in the block chain browser, which is the real-time total volume of VHKD circulation

- Secondly, discuss the 1:1 logical relationship between VHKD and HKD legal tender:

(1) the HKD flows into the reserve account due to users' purchase for VHKD is named as In\_HKD, at that time, new VHKD will be issued in the proportion of 1:1, that is  $In\_HKD = N\_VHKD$ ;



(2) The HKD outflows reserve account due to users' redemption for HKD is called Out\_HKD, at that time, VHKD will be frozen in the proportion of 1:1, that is  $Out\_HKD = F\_VHKD$ ;

(3) Name the real-time residual of the reserve account R\_HKD, there will be  $R\_HKD = In\_HKD - Out\_HKD = N\_VHKD - F\_VHKD = C\_VHKD$ , that is  $R\_HKD : C\_VHKD = 1:1$ , the relationship between the total volume of VHKD circulation at any time and the residual of the reserve account will always be 1:1, the logical relationship is established.

- Finally, we will prove the residual of the reserve account (R\_HKD) is real and effective, we choose to be audited by the third-party authoritative accounting firm according to the international audit standard and support the open inquiry. The audit process involves the following steps:

(1) Auditors will verify all the current assets of VHKD:

VHKD will provide auditors with all the public addresses and sign for these addresses. The area of Hash table in signing will be a part of the signature information, and therefore it can be used as a timestamp to justify the signature time. These public addresses with signatures will be confirmed therewith, and the auditors will get the entire VHKD amount of the addresses at a certain point-in-time through the VHKD block chain;

(2) Auditors will investigate the balance of VHKD reserve account and the consistency of the whole current asset of VHKD:

VHKD will offer the auditors with the Merkle tree of every client that is generated by using Hash encryption algorithm to process the information of the addresses. The auditors will publish the hash value of every node of the Merkle tree root and confirm that the total HKD balance of the reserve account is greater than the total number of VHKDs in circulation.

(3) Users should confirm on their own whether their accounts are included in the

data obtained by the auditors:

We will provide users with the number of VHKBs of the user addresses of audit and all the node hashes until the root node. We will also provide the specific methods of calculating these node hashes, and users can verify whether their VHKBs are included in this audit.

- **Users are able to check the audited address information.**

(1) Audit time: the time on the timestamp of the auditors.

(2) User ID: the only identifier for a user in the system.

(3) Random number: the number that is created randomly for every user in this audit. During the audit, even though the balance of a user address will not change, the generated hashes of the user nodes will vary.

(4) VHKB amount means the number of VHKBs of your address while auditing. And this is the asset information of your address that we will provide to the auditors.

(5) Remark column contains the audited information of users' root-node hash values published by the auditors.

(6) Asset certification refers to all the hashes from your nodes to the root node, as well as the hashes of the neighboring nodes. The hash values on the direct path are marked with an \* to distinguish the hashes of the adjacent nodes. With these hashes, you can confirm whether your nodes are contained on this root.

### **4.3 Challenges and Solutions**

As an innovative technology, integrating VHKB with the existing monetary and financial system may face issues due to complex laws and compliance in different countries. It is understood that the supervising agencies of each country have each adopted multiple ways to monitor and regulate digital assets, including the classification of digital assets as virtual currency, cryptocurrency or digital currency

based on actual business content. We believe that VHKD is a new and innovative alternative asset which should not be called money or currency. However, as we wish to serve users who want to settle with Hong Kong Dollars (HKD), we have received approval and access to the financial system of legal tenders. We may hold different opinions on the regulatory approaches taken by various government agencies around the world, but we will always fully comply with the rules and regulations of all countries and regularly discuss the best ways to deal with digital-asset operation with supervising agencies and our counterparts. VDAC will comply with all relevant laws and regulations of the local jurisdictions.

Security loopholes currently exist with the possibilities of hacks. There are two possibilities for a security breach:

1. The security of VHKD blockchain relies on asymmetric encryption algorithms such as the Hash function and elliptic curve. However, with the continued development of mathematics, cryptography and quantum-computing, some underlying security assumptions in traditional cryptography may become increasingly vulnerable. However, if the passwords on the VHKD blockchain can be cracked, it will mean that all digital currencies, including Bitcoin, in their current state will be broken. In the current state of scientific development, this is not possible.
2. The possibility of VHKD being stolen if users store them in an unsafe wallet or exchange. This is the biggest possibility as the private keys are not in the users' control.

There is also the possibility that a reserve account may be frozen, the same as with other traditional financial institutions. Our assurance is that the banking institutions cooperating with us are also serving other exchanges and wallet providers and that we have obtained legal and regulatory commitment. Furthermore, we will not violate the laws and regulations of the banks in any country in order to protect our reputation and users.

The risk of bankruptcy may result from poor governance by the corporation, but

the reserve fund of VHKD would still be safe. In the case of bankruptcy, we will redeem all VHKDs circulating in the market and pay legal tenders from the reserve fund to the users in a 1:1 ratio. The deposit and withdrawal processes of a bank account are subject to strict internal policies.

## 05 VHKD Issuing Scheme

### 5.1 Program introduction

VHKD adopts the scheme of proxy-acceptance release. The primary market (the authorised dealer) is entirely distributed by Virtual Digital Asset Corporation (VDAC). VDAC is a multi-national alliance formed by top tier financial institutions, it is registered in the Republic of Seychelles. VDAC has successively set up service outlets in dozens of regions including Mainland China, Hong Kong, Macau, the United States, France, Spain, Japan, South Korea and Vietnam. The service coverage contains regions of East Asia, Southeast Asia, Europe and the United States. With exceptional advantages in cross-border remittance and transfer of value, users can buy or convert VHKDs at anytime and anywhere. Their funds come and go freely, and there is no risk of price fluctuations.

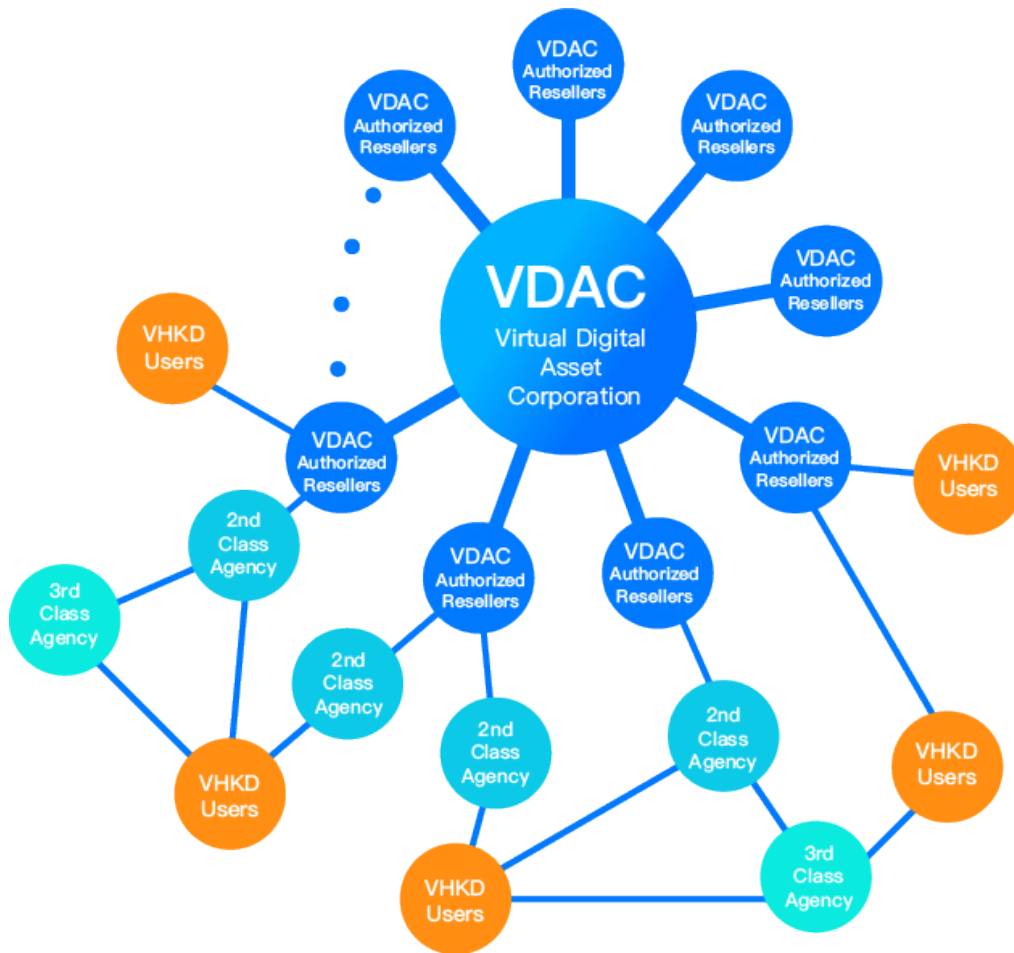


Figure 5-1 The schematic drawing of VHKD release

## 5.2 Distribution Advantage

The advantages of adopting proxy channels:

- (1) Through the proxy-acceptance constraints, the exchange rate of VHKD and HKD is ensured to remain stable, and the problems of drastic fluctuations experienced by USDT can be avoided;
- (2) The VHKD-based acceptance channels are built on the economic networks of various international agencies whose mutual collaborations enable the transactions to be integrated rapidly with the real world and provide users with diverse needs globally, faster and easier access to financial services;
- (3) Leaving out of the intermediate links of the banks and the free circulation of cross-border funds will fill the huge gap in financial sector.

### 5.3 Daily Operations

VDAC's daily operations are divided into financial management, marketing and legal affairs. Alliance members are also responsible for the following operations:

Management	Responsibilities	Approval
<b>Financial Management</b>		
Operations Budget	Draw up VDAC operations budget proposal each year, decided by financial committee.	Treasurer Management Committee
Contract	Contracts are decided by the executive committee and signed by VDAC.	Executive Committee
Income	VDAC's income is derived from financial services, alliance members will make accounting note and reconcile with independent party.	Treasurer Management Committee
Expenditure	VDAC's expenditures need to be decided by alliance members.	Treasurer Management Committee
Accounting	Alliance members will perform accounting duties and issue monthly reports.	Treasurer Management Committee
Disclosure	Make important disclosures from time to time and make periodic reports to alliance members on VHKD operations.	Executive Committee
<b>Marketing</b>		
Channels	Public relations committee will decide on the addition of new network channels.	Public Relations Management Committee
Marketing	Public relations committee will decide on the addition of new marketing strategies.	Public Relations Management Committee
Crisis Management	Public relations committee and the decision making committee will decide on crisis matters.	Public Relations Management Committee
<b>Legal Affairs</b>		
Contracts	Independent legal team to decide on contracts	Legal Committee
Legal Advice	Ensure that VDAC is in compliance with local laws and regulations.	Legal Committee
Legal Matters	Represent VDAC in dealing with financial matters and protect the interests of alliance members.	Legal Committee
External Counsel	Retaining external legal counsel in special situations and better protect the interests of alliance members.	Legal Committee

Strategic and business cooperation is vital to VDAC, we will provide transparent accounting procedures and independent third party audits. VDAC will always comply with local laws and regulations to ensure long term sustainable business relations.

## 06 Major Application Scenarios

### 6.1 The Target Clients of VHKD



- **Digital-currency investors:** VHKD is an excellent tool for hedging, and allows investors to be more calm in the face of emergencies and increases the convenience and speed of transfers.
- **Exchanges:** Accepting VHKD adds a new deposit method, which can bypass the inconveniences caused by fiat currencies, saves time and labor costs of linking with banks, and increases transfer efficiency speed.
- **Dealers:** As a money changer, it is possible to be a VHKD agent for exchanges and investors. VHKD is able to achieve instant arrival, reduce service fees experienced in traditional financial institutions, and help users solve the problem of trying to realise their cryptocurrency profits.
- **Customers:** Depositing HKD in conversion websites or offline stores is available. Money changers will directly remit VHKD to the addresses provided by users according to users' requirements so as to complete the transaction. Cross-border assets come and go freely without traditional banking restrictions

and are easy to carry and move.

## 6.2 The purchase/redemption channels of VHKD

(1) If users are holding digital currencies, they can buy VHKDs in a digital-currency exchange that supports VHKD and also can convert VHKD into other digital currencies through the same channels.



Figure 6.2-1 Purchase of VHKDs with digital currencies

(2) If users hold legal tenders, they can purchase VHKDs on a digital-currency exchange (C2C) that supports VHKD, users may also sell VHKDs on the same channels.

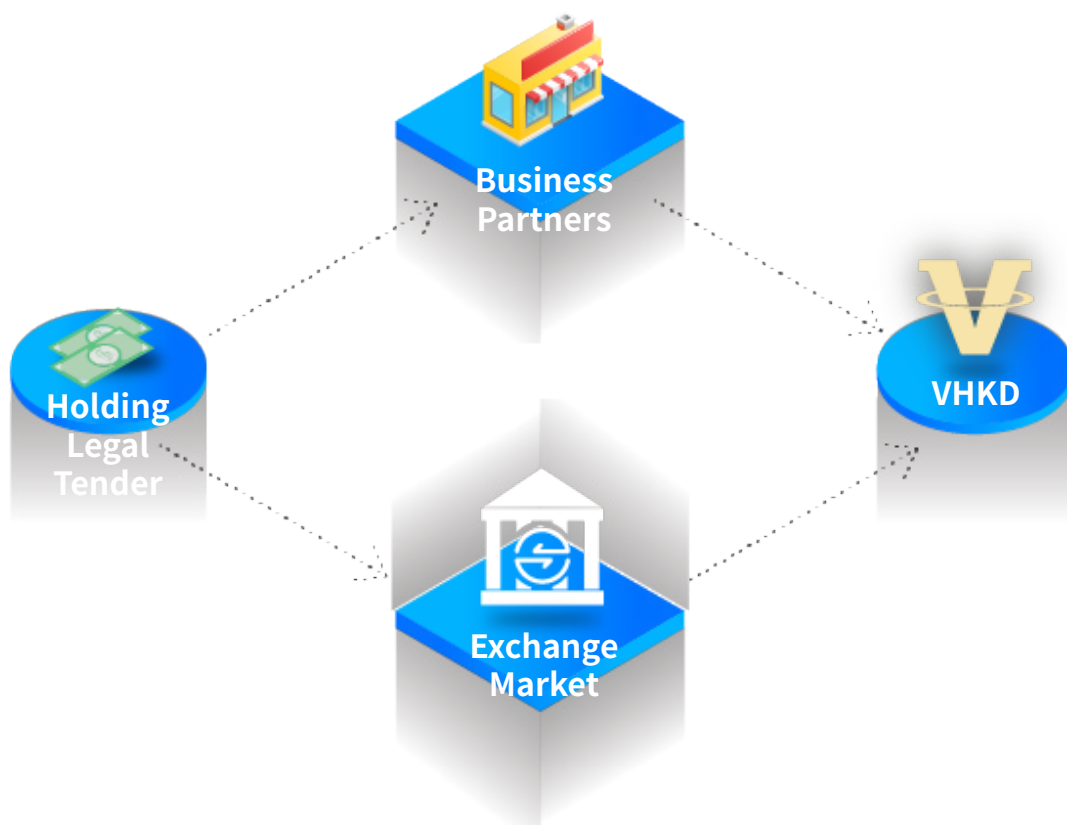


Figure 6.2-2 Purchasing VHKDs with legal tenders



### 6.3 Scenario Application

VHKD has a wealth of application scenarios in areas such as Hong Kong, Macao, Southeast Asia, Europe and the United States. Applications include the purchase of luxury goods and recreational consumption in casinos. Users can also pay online bills. VHKD has opened up a connection between digital cash and the real world. It's original intention was designed to solve the problems of digital asset price instability and transfer limitations of fiat currencies.

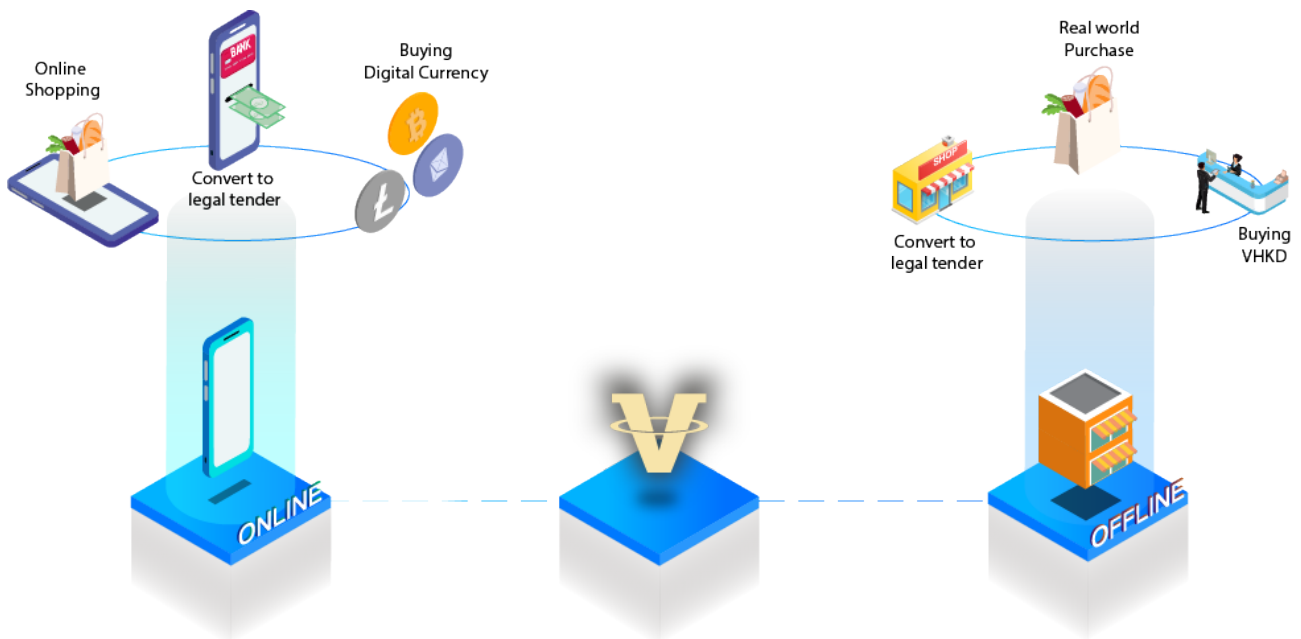


Figure 6.3-1: Varieties of application scenarios

VHKD has vast areas of application in Hong Kong, Macau, Southeast Asia, Europe and the USA including shopping, luxury watches and casino leisure services etc.. VHKD connects digital currencies with the real world allowing everyone to ensure the future of digital cash.

## 07 Future Developments

VDAC is committed to building a world without financial borders and restrictions. This is only phase I, we aim to bring VHKD's technology onto other currencies in Asia and western countries thereby linking multiple ecosystems making trading and exchanging seamless. A truly revolutionary force once fully integrated into the global financial system.

# 08 Appendix

## 8.1 VHKD Legal Structure

Virtual Digital Asset Corporation (VDAC) is an independent body corporate, it is responsible for VHKD's development, issuance, security and maintenance. Nevertheless the management of VHKD rests with the alliance members, VDAC is the executive arm of the alliance.

VDAC's income is used for technical development, marketing, compliance costs, and business development purposes.

VHKD uses blockchain' s distributed ledger system meaning users anywhere around the world can enjoy VHKD' s capabilities. There is no physical VHKD but nevertheless VHKD may encounter different laws and regulations in different jurisdictions around the world. VHKD will use the sandbox policy to protect the interests of users around the world and deliver the best possible service.

## 8.2 Risk Disclosure and Disclaimer

Other than this whitepaper, VDAC does not take responsibility for issues arising from VHKD. Anyone participating or using VHKD does so according to their own informed knowledge and free will.

VDAC hereby expressly disclaims and refuses to accept the following responsibilities:.

(1)Anyone using VHKD in violation of anti money laundering and anti terrorism laws

(2) Anyone using VHKD in violation of the rules expressed in this whitepaper resulting in loss of VHKD or inability to send and receive VHKD;

(3) VHKD development delays resulting in any inconvenience;

(4) Errors or issues with VHKD's code;

(5) VHKD fails to perform any particular function or is unsuitable for any particular purpose;

(6) Failure to disclose information regarding VHKD's development;

(7) Anyone who divulges, loses or damages the private key of the digitally encrypted currency;

(8) Anyone who finds a contradiction or conflict between a third party and the whitepaper;

(9) Any exchange or platform that offers VHKD

(10) Restrictions or limitations placed on VHKD by any government body or agency;

(11) Any unauthorized method of gaining VHKD whether by theft or decryption;

(12) Any risks disclosed in this whitepaper which results in damage, losses, claims, penalties, costs or any other adverse effects.

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