

Virtual Asset Knowledge Training

December 2023

Virtual Asset

Definition¹ :

- Any “virtual asset” as defined in section 53ZRA of the Anti-Money Laundering and Counter-Terrorist Financing Ordinance (AMLO)

¹ Refer to SFC circular on 22 December 2023

Virtual Asset as defined in section 53ZRA of the AMLO

53ZR Meaning of VA or virtual asset

A.

(1) In this Ordinance—

VA or *virtual asset* (虛擬資產), subject to subsection (2), means—

- (a) a cryptographically secured digital representation of value that—
 - (i) is expressed as a unit of account or a store of economic value;
 - (ii) either—
 - (A) is used, or is intended to be used, as a medium of exchange accepted by the public, for any one or more of the following purposes—
 - (I) payment for goods or services;
 - (II) discharge of a debt;
 - (III) investment; or
 - (B) provides rights, eligibility or access to vote on the management, administration or governance of the affairs in connection with, or to vote on any change of the terms of any arrangement applicable to, any cryptographically secured digital representation of value;
 - (iii) can be transferred, stored or traded electronically; and
 - (iv) satisfies other characteristics prescribed by the Commission under subsection (3)(a); or
- (b) a digital representation of value prescribed as a virtual asset by notice published under subsection (4)(a).

(3) The Commission may, by notice published in the Gazette—

- (a) prescribe any characteristics necessary for a digital representation of value to be a virtual asset for the purposes of paragraph (a)(iv) of the definition of *VA* in subsection (1); and
- (b) prescribe any characteristics the presence of which precludes a digital representation of value being a VA for the purposes of subsection (2)(a)(v).

(4) The Secretary for Financial Services and the Treasury may, by notice published in the Gazette—

- (a) prescribe, either generally or in a particular case, any digital representation of value to be a VA for the purposes of paragraph (b) of the definition of *VA* in subsection (1); or
- (b) prescribe, either generally or in a particular case, any digital representation of value not to be a VA for the purposes of subsection (2)(b).

Virtual Asset Introduction

1. Usually built on blockchain

- A public ledger that stores all transaction records, stored in data blocks connected to form a chain of blocks, i.e. blockchain
- The transaction information recorded on the blockchain includes (i) the payer's crypto asset address, (ii) the payee's crypto asset address, (iii) transaction date and time, (iv) transaction amount, and (v) transaction ID. Once data is written into the blockchain, it cannot be modified or deleted
- The blockchain does not keep any information to identify any party of the transaction, such as IP address, name of the payer or payee, etc. Therefore, transaction via crypto asset is highly anonymous

Virtual Asset Introduction

1. Usually built on blockchain

- Blockchain supports the recording and verification of various virtual asset transactions
- A decentralized system that does not manage by any central authority. It provides users with Peer-to-Peer (P2P) transactions. It is only responsible for matching transactions between buyers and sellers, and the trading participants do not need to go through verification

Virtual Asset Introduction

2. Common examples of virtual assets

Cryptocurrency

- Is a type of digital token. While its name has the word “currency”, it does not physically exist
- Instead, it is a series of complicated and encrypted passwords which can be transferred electronically, and is operated under blockchain technology to verify and record transactions
- Typically decentralized digital money designed to be used over the internet. The most popular cryptocurrencies are Bitcoin and Ether

Virtual Asset Introduction

2. Common examples of virtual assets

Stablecoins

- Claims to have mechanisms in place to maintain the price at a certain level. In the virtual asset space, stablecoins generally serve as a medium of exchange, and some even consider them as a safe haven during periods of market distress and also a way to generate returns
- There are different kinds of stablecoins in the market, which can broadly be grouped into two categories based on their price stabilization mechanisms:

Virtual Asset Introduction

2. Common examples of virtual assets

Stablecoins

(A) Asset-backed stablecoins

The backing assets can be fiat currencies (e.g., U.S. dollar), commodities (e.g., gold) or other financial assets (e.g., bonds). Taking stablecoins that claim to be backed by the U.S. dollar as an example, to ensure the value of one stablecoin is equivalent to one U.S. dollar, the stablecoin issuer would publicly claim to hold one U.S. dollar or equivalent of asset for every stablecoin issued. If 100 million stablecoins are issued, in theory, the issuer should have US\$100 million equivalent of asset as backing asset

(B) Algorithm-based stablecoins

Algorithm-based stablecoins generally adjust the supply of stablecoins through algorithms to maintain price stability. When the stablecoin price falls below the target level, a certain amount of stablecoins will be destroyed, reducing the supply to send the price upward until it returns to the target level. Conversely, when the price rises above the target level, the mechanism will increase the supply to bring the price down

Virtual Asset Introduction

2. Common examples of virtual assets

Non-fungible token (NFT)

- Both NFTs and cryptocurrencies are on blockchains, and their differences lie in their “fungibility”
- A cryptocurrency is a fungible token. For instance, bitcoins which are at the same value can be mutually interchangeable and divisible into smaller units
- Whereas, NFTs are each unique and irreplaceable. As data recorded in a blockchain ledger cannot be altered or deleted, and all purchases and sales records are made public, hence the NFTs stored in a blockchain cannot be counterfeited

Virtual Asset-Related Products

Refers to investment products which² :

- (a) Have a principal investment objective or strategy to invest in virtual assets;
- (b) Derive their value principally from the value and characteristics of virtual assets;
- (c) Track or replicate the investment results or returns which closely match or correspond to virtual assets

² Refer to SFC circular on 22 December 2023

<https://apps.sfc.hk/edistributionWeb/gateway/EN/circular/intermediaries/licensing/doc?refNo=23EC67>

Virtual Asset-Related Products

Virtual asset futures contracts

- Among VA futures traded on conventional regulated exchanges, the mostly traded ones are bitcoin futures and ether futures on Chicago Mercantile Exchange (CME)
- On CME, each of bitcoin futures contract and ether futures contract is USD-denominated and cash settled
- The contract unit of the former is 5 bitcoins, whereas the contract unit of the latter is 50 ethers. CME also offers micro bitcoin futures and micro ether futures which have smaller contract units (0.1 bitcoin and 0.1 ether respectively) as well as contracts dominated in euro
- The value of a VA futures is affected by, among others, the factors driving the value of the underlying VA as described above. In extreme cases where the value of the underlying VA declines significantly, including to zero, the value of the relevant VA futures may be affected similarly

Virtual Asset-Related Products

Funds or ETFs that invest in virtual assets or virtual asset derivatives

- These products are packaged as traditional investment products and traded through exchanges or intermediaries. Investors can buy virtual asset-related products without going through the complicated process of holding the virtual assets directly
- More accessible does not mean lower risk, investing in virtual asset-related products does not lower the fundamental risks of virtual asset investment
- Investors should note that virtual asset-related products offered in overseas markets may not be authorized by the Hong Kong Securities and Futures Commission (SFC), which means that they may not be subject to the regulation of the SFC; their structures, operations and offering documents may not be governed by any rules or regulations in Hong Kong

Virtual Asset-Related Products

Virtual asset futures ETF

- A virtual asset futures ETF (such as a bitcoin futures ETF or an ether futures ETF) obtains exposure to VA primarily through futures contracts (such as bitcoin futures or ether futures traded on CME)
- In Hong Kong, virtual asset futures ETFs adopt active investment strategies to allow flexibility in portfolio composition, rolling strategy and handling of market disruption events. Such ETFs do not seek to track any index or benchmark
- Depending on the ETF's investment strategy, the fund manager may invest in futures contracts with short-term or longer-term maturities or a mixture of different maturities, and adjust the portfolio composition from time to time

Difference between Virtual Asset and Virtual Asset-Related Products

	Virtual Asset	Virtual Asset Futures	Virtual Asset Futures ETF
Ownership of virtual assets	<ul style="list-style-type: none"> • Direct ownership of investors • Entitled to legal rights such as voting for major forks or staking participation 	<ul style="list-style-type: none"> • Trade contracts that represent the value of specific virtual assets, investors have no direct ownership • Does not reward investors with any economic benefits such as voting and staking 	<ul style="list-style-type: none"> • Investors have no direct ownership
Trading price	<ul style="list-style-type: none"> • Spot price, with payment being immediate and the buyer taking delivery immediately or within a few days • Directly transferred between market participants (buyers and sellers) 	<ul style="list-style-type: none"> • The price of the asset at a future date 	<ul style="list-style-type: none"> • Not the spot price but a futures-based ETF follows futures contracts via the CME-listed futures markets
Capital requirement	<ul style="list-style-type: none"> • Full value of the asset 	<ul style="list-style-type: none"> • Margin value of the futures 	<ul style="list-style-type: none"> • ETFs are traded in board lots and the board lot size is set by the ETF managers
Trading platform	<ul style="list-style-type: none"> • Virtual assets platform/exchange • Such as Binance 	<ul style="list-style-type: none"> • Regulated Future exchange • Such as Chicago Mercantile Exchange (CME) 	<ul style="list-style-type: none"> • Regulated exchange • Such as Hong Kong Exchanges and Clearing Limited(HKEX), New York Stock Exchange(NYSE)
History and regulation of underlying exchange	<ul style="list-style-type: none"> • Shorter • Evolving regulation 	<ul style="list-style-type: none"> • Longer • Standardized agreement regulated by the CFTC 	<ul style="list-style-type: none"> • Longer • Regulated by regulatory bodies, authorized by the SFC as collective investment schemes in HK ¹⁴

The Risks of Virtual Asset

1. No intrinsic value, highly volatile

- Virtual assets generally do not have any intrinsic value and are not backed by any government, bank or physical assets to support their value or purchasing power. Their prices mainly rely on investor confidence and market demand and supply
- Speculative trades around virtual assets are common, and the market may not be transparent. Prices of virtual assets are easily affected by market rumors and celebrity shilling

2. Liquidity risk and market manipulation

- The scale and number of users of many virtual assets are not large, and trading may not be active, leading to liquidity risk and potential market manipulation

The Risks of Virtual Asset

3. Trading platforms and regulatory risk

- Virtual asset trading platforms are generally operated by private companies, with only a few being regulated, and most are located overseas. If these platforms cease to operate or collapse or are hacked, investors may lose some or all of the virtual assets held on these platforms, and it may be difficult for them to seek recourse or recover the losses
- Different jurisdictions may have different stances on these emerging assets. Virtual asset trading platforms may be unregulated or only subject to light regulation (i.e. subject to none or minimal investor protection measures) in different jurisdictions and there may not be sufficient protection for investors

4. Wallet security

- In recent years, hacks and scams involving virtual assets have been increasing, especially for hot wallets connected to the internet. Investors may incur significant losses in such cases. Besides, investors could lose all their virtual assets if their devices are infected by virus or if they lose their private key

The Risks of Virtual Asset

5. Illegal activities

- Due to the high anonymity of virtual assets, they could be used by criminals for money laundering or funding of terrorist activities. Additionally, virtual assets are increasingly being used as a medium for scams

6. Other risks

- Virtual assets are innovative products and their future development is unpredictable, thus their acceptance and demand may move in a different direction. Governments may change their regulatory policies or tighten regulations for virtual assets and their activities, affecting the development and prices of virtual assets

Example of Unregulated Virtual Asset Trading Platform: JPEX

- JPEX: Actively promoting its products and services to the Hong Kong public through social media influencers and key opinion leaders (KOLs) as well as over-the-counter virtual asset money changers. It offers very high returns for some of its products, **suspected false and misleading representations and unlicensed activities**. It has been placed on the SFC's Alert List since 8 July 2022.
- Claims to be a licensed and recognized platform to facilitate the trading of digital asset and virtual currency, which in fact **no entity in the JPEX group is licensed by the SFC** or has applied to the SFC for a license to operate a VATP in Hong Kong, which may breach the AMLO
- Has received complaints from retail investors who were **unable to withdraw virtual assets from their accounts maintained with JPEX**, or had found their account balances having been reduced and altered
- Investors should be cautious about investment opportunities that seem too good to be true. Investors should be skeptical of investment advice posted on social media platforms and instant messengers by KOLs who are often paid promoters but not investment professionals
- Investors should be **aware of the risks of trading virtual assets on an unregulated VATP**. Investors **may risk losing their entire investment** held on the VATP if it ceases operation, collapses, is hacked or otherwise suffers from any misappropriation of assets. **Seeking recourse against platforms that do not have a nexus with Hong Kong is likely to be difficult** and legal remedies may not be available

Q&A

References:

The Investor and Financial Education Council

<https://www.ifec.org.hk/web/en/financial-products/fintech/ico-bitcoin/index.page>

SFC circular on 22 December 2023

<https://apps.sfc.hk/edistributionWeb/gateway/EN/circular/intermediaries/licensing/doc?refNo=23EC67>

Cyber Defender

<https://cyberdefender.hk/en-us/cryptocurrency/>

Appendix: Virtual Asset Types - Key Characteristics

Type	Examples	Issuer	Features
Unbacked crypto-assets	Bitcoin, ether	Usually decentralized	<ul style="list-style-type: none"> Designed to be used as a means of exchange Limited rights for token holders No single issuer to be held accountable for regulatory responsibilities Transferable
Stablecoins	Tether (code: USDT), USD Coin (code: USDC) and TerraUSD (code: UST) pegged to the US dollar	Usually centrally issued by crypto exchanges and crypto firms	<ul style="list-style-type: none"> Designed to be value-stable Stability mechanism can be backing or collateralization by a commodity, fiat currency, multiple currencies, virtual assets or algorithms
Tokenised securities	Tokenised bonds or equities	Centrally issued by a known issuer	<ul style="list-style-type: none"> Meets the definition of a security in each respective jurisdiction Within the regulatory perimeter
Utility tokens	Basic Attention Token (code: BAT) and Chainlink (code: LINK)	Centrally issued by a known issuer	<ul style="list-style-type: none"> Right to a product/service are accepted across multiple ecosystems Transferable Can be used as a means of exchange
NFTs	NFT art (digitalised piece of art)	Usually centrally issued by a known issuer	<ul style="list-style-type: none"> Right to ownership of a specific product Collectible and non-substitutable
CBDCs	e-CNY	Centrally issued by a state or central bank	<ul style="list-style-type: none"> Designed to be value stable Stability mechanism is usually sovereign fiat currency

Source :

HKEX Research Report 2023 April: ETF and the Growing Virtual Asset Ecosystem in Global Financial Markets

https://www.hkex.com.hk/-/media/HKEX-Market/News/Research-Reports/HKEx-Research-Papers/2023/CCEO_CryptoETF_202304_e.pdf

Bains, P., A. Ismail, F. Melo and N. Sugimoto, "Regulating the crypto ecosystem", published on the IMF's website, Note/2022/007, September 2022

Virtual Asset Knowledge Questionnaire

- Upon successful completion of the Virtual Asset Knowledge Training (including this questionnaire), you will be characterized as having general knowledge of virtual asset and may invest in the virtual asset related products afterwards.
- For a joint holders account, each joint holder has to submit an individual Virtual Asset Knowledge Questionnaire. For corporate account holder, this questionnaire should be completed on behalf of the company by the authorized person(s).
- **Assessment Questionnaire**
- **(Please ✓ the appropriate box)**
- **Q1 : Which of the following assets is a virtual asset ?**
 - A. Stock**
 - B. Bitcoin**
 - C. Cash**
 - D. Bank deposit**
- **Q2 : Which of the following technologies is commonly used in virtual asset?**
 - A. Biotechnology**
 - B. 5G communication technology**
 - C. Blockchain**
 - D. Quantum computing**
- **Q3 : Which of the following statements about virtual asset futures contracts is incorrect?**
 - A. Investors directly own virtual assets**
 - B. Can be traded on conventional regulated exchanges**
 - C. Value is influenced by the value of the underlying virtual asset**
 - D. Usually trade in the margin value**

Q4 : Which of the following products is/are virtual asset related products ?

- (i) Virtual asset futures contracts**
- (ii) Futures-based virtual asset ETF**
- (iii) Virtual asset derivative funds**
- (iv) Virtual asset exchange**

- A. Only (i)**
- B. Only (i), (ii)**
- C. Only (i), (ii) , (iii)**
- D. All of the above**

Q5 : Virtual asset will be most likely used in which of the following criminal activities?

- (i) Scam**
- (ii) Money laundering**
- (iii) Funding of terrorist activities**

- A. Only (i)**
- B. Only (i), (ii)**
- C. Only (ii), (iii)**
- D. All of the above**

Q6 : Which of the followings are risks of virtual asset?

- (i) Without intrinsic value, prices are highly volatile**
- (ii) Liquidity risk and market manipulation**
- (iii) Trading platforms and regulatory risks**
- (iv) Using virtual assets to engage in illegal activities**

- A. Only (ii), (iii)**
- B. Only (ii), (iii) , (iv)**
- C. Only (i), (ii) , (iii)**
- D. All of the above**

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