RISKS OF TRADING IN DIGITAL ASSETS

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>2</td>
</tr>
<tr>
<td>1. Technological risks</td>
<td>2</td>
</tr>
<tr>
<td>2. Valuation risks</td>
<td>4</td>
</tr>
<tr>
<td>3. Issuer risks</td>
<td>5</td>
</tr>
<tr>
<td>4. Other risks</td>
<td>5</td>
</tr>
</tbody>
</table>
Introduction

The trading and custody of crypto-based assets (hereinafter «digital assets») entail completely new risks that are largely unknown in the traditional world of finance. This brochure classifies and describes these risks in four categories.

Digital asset technology is still young and in a constant state of change. Therefore, the list of risks set out in this brochure cannot be regarded as exhaustive under any circumstances. There may be additional risks that are not foreseen or explained in the brochure.

Investing in digital assets is highly speculative and is only recommended for highly experienced investors.

The Bank strongly recommends that the Client seek professional advice before making any decisions about investing in digital assets.

1. Technological risks

Technological innovation

Digital assets are based on distributed ledger technology, which is at an early stage of development and will continue to undergo significant technological changes. Technological innovations can represent not only opportunities but also risks to the security of such assets. In addition, alternative technologies to certain assets may establish themselves, thereby making these assets less relevant or even obsolete. If the distributed ledger on which a digital asset is based becomes irrelevant or obsolete, this may adversely affect its price and liquidity.

Open-source software

The functionality of digital assets is often based on open-source software. Open-source software code is freely accessible and may be lawfully copied, used and modified at any time. For this reason, such software may be subject to vulnerabilities and errors. The further development of open-source software can be discontinued at any time, thereby exposing the digital assets to vulnerabilities, programming errors and threats of fraud, theft and cyberattacks.

Blockchain risks: Availability, processing time, transaction fees, hard forks

Distributed ledger networks have experienced a sharp increase in transactions in recent years. Failure to develop or renew distributed ledger networks may result in longer processing times per transaction and/or a significant increase in the transaction fees payable to miners/stakers for using the network. This type of situation may limit the ability to process transactions and lead to an increase in costs.

As there is no government oversight of the development, functionality or improvement of distributed ledger technology, collaboration and consensus among different stakeholders (e.g. developers and miners) is critical. Any disagreement between the parties may result in a hard fork. A hard fork is an open-source software upgrade that is not backwards compatible. Hard forks may cause the relevant distributed ledger technology to become unstable. In addition, hard forks are hardly predictable, which in turn also applies to their effects. The tradability of digital assets can thereby be severely restricted,
or trading liquidity can be massively reduced. As a result, the price may also become more volatile and unpredictable. Investors should always keep track of such forks and keep a close eye on market developments.

**Fraud, theft, cyberattacks**

The characteristics of digital assets (e.g. their existence in the virtual computer network and the irreversibility and partial anonymity of transactions on the blockchain) make them an attractive target for fraud, theft and cyberattacks. Various attacks that attempted to steal digital assets or disrupt the underlying distributed ledger technology have become known over time.

Such attempts may lead to losses or at least to scepticism about the long-term future of digital assets, hinder their acceptance and increase volatility and illiquidity.

**Virtual environments**

Many digital assets exist only virtually in a computer network and have no physical counterpart. The value of digital assets can be difficult to estimate and may depend on market confidence in their suitability as a future payment, exchange or value-retention tool. Persistently high volatility, technological changes and advances, fraud, theft and cyberattacks, as well as regulatory changes may prevent digital assets from becoming accepted long-term means of exchange, which may lead them to become significantly less valuable or even worthless.

**Regulatory, legal or tax adjustments**

Distributed ledger technology has only been available for a relatively short time. Nonetheless, regulators around the world are considering adapting current regulations to the new technology (e.g. money laundering, taxes, consumer protection and disclosure requirements). New regulations may restrict or even ban trading in digital assets. Similarly, strengthened regulatory controls can significantly increase transaction fees for digital assets. There is therefore considerable uncertainty at present in terms of the legal, regulatory and tax treatment of digital assets and/or transactions.
### 2. Valuation risks

| High price volatility and unpredictable value changes | Digital asset prices can change significantly, even within a single day. Investments in digital assets are considered to be highly speculative. The volatility of digital assets tends to be high, and changes in value are often unpredictable. The volatility of digital assets may continue to increase because of technological changes and advances, fraud, theft and cyberattacks, as well as regulatory changes. Digital assets have only existed for a short time. Unlike traditional financial instruments, currencies or commodities, digital assets lack historical market values that would allow a reliable estimation of their volatility. The risk of a substantial or complete loss of digital assets exists at all times. |
| Lack of oversight by authorities | Digital assets are not currently supervised by authorities or institutions such as central banks. Thus, there are no authorities or institutions to stabilise or support the value of digital assets and/or attempt to prevent or mitigate irrational price developments. |
| Irrational bubbles or lack of market confidence | Investments in digital assets are prone to irrational bubbles (hypes) or loss of confidence, which may cause demand to collapse relative to supply. Market confidence can also collapse because of technical problems, for example in the event of large losses of digital assets. |
| Illiquid markets | The digital asset market may exhibit limited liquidity or even illiquidity. The prices normally published for supply and demand for digital assets are usually based on information from crypto exchanges. However, trading is spread across many stock exchanges, which means that the investor may not necessarily find the same prices or the same level of liquidity on their stock exchange. The situation can also change rapidly. Low liquidity means an increased risk of rapid and hectic price movements, abnormally large spreads or a large number of rejected orders. In certain market situations, it may be difficult or even impossible for a client to liquidate their open position. This is, for example, the case in an illiquid market in which no counterparty for the order can be found on the client’s crypto exchange. This makes it extremely difficult to compare the prices of digital assets. |
| Price influence by big token holders (whales) or influencers | The free float of tokens can be severely restricted, and project staff, programmers and investors often hold larger positions. «Whales» can also hold a large percentage of tokens. Comments, publications or transactions by such persons can often have a significant impact on the price of the token. Digital asset prices can be extremely vulnerable to news and comments (e.g. tweets). |
3. Issuer risks

Limited investor protection for lack of stock exchange listing

As digital assets are usually not listed on a stock exchange, their issuers are not subject to the rules applicable to listed companies. As a result, issuers of digital assets cannot be bound by important investor protection regulations. In particular, issuers of digital assets currently do not publish documents having content that can guarantee transparency or equal treatment.

Vulnerability to fraud and insider trading

If the digital assets are not listed and admitted to trading on a regulated stock exchange or multilateral or organised trading facility, they may not be subject to regulations on insider trading and market manipulation. Accordingly, the digital asset market may be vulnerable to fraud or insider trading.

4. Other risks

Digital assets as new financial market instruments

Digital assets may include numerous financial or non-financial rights, claims or assets. In particular, they may include rights, claims or assets that are not normally contained in traditional financial market instruments. Therefore, investors must carefully consider the rights and obligations included in digital assets before making an investment decision.

Valuation of digital assets

Digital assets may contain a wide range of rights. For this reason, their valuation may be difficult to ascertain and may prove to be significantly lower than originally expected. This may in particular be the case for digital assets that include a right to supply goods or services.

Understanding of smart contract code

The technical functionalities of a digital asset (e.g. creation, transfer, trading, etc.) depend on the smart contract used for the relevant asset insofar as they are based thereon. Smart contracts are based on sophisticated computer code, and their interaction with the respective distributed ledger network is often very complex. Therefore, before investing in a particular digital asset, investors should always make sure they understand how smart contracts work.

Execution of smart contracts

An error-free execution of smart contracts or their use in the distributed ledger network in line with the expectations of the issuer of the digital asset or the investors cannot be guaranteed. Depending on the rights and obligations in the smart contract, issuers have considerable discretion in managing their digital assets. For example, they may decide to cancel the digital assets and replace them with other forms of proof such as paper certificates. The Bank is not obligated to provide services related to paper certificates or any other substitute for the digital assets.
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