ธนาคารแห่งประเทศไทย
BANK OF THAILAND

Banking group's digital asset business:
Supervisory approach and management of risks to the financial system

BOT Directional Paper on Financial Landscape

July 2022

Contents

Introduction

In the past 2-3 decades, advancements in information technology and telecommunications have been a significant global transition that led to open and borderless linkages, the development of faster processing systems, as well as reduced costs in data collection and processing. As a result, technology has altered the lifestyles of all members of society and been a major driving force behind changes in numerous aspects of the economic structure.

For the financial sector, distributed ledger technology (DLT) is regarded as a greatly transformative technology, notably in lowering costs, enhancing efficiency, and leveraging programmability to improve service delivery. Furthermore, the role of digital assets (DA) is gaining much attention for many reasons, including the enticing principle of owning decentralized assets, higher short-term returns compared to conventional investments, and also as a result of popular trends in new investment tools.

Adaptation of financial sector players

These technological innovations and the rapidly rising popularity of DAs have prompted businesses, both in the financial and non-financial sectors, to take an interest in this area and attempt to adapt. Likewise, businesses within commercial banks' financial business groups (hereinafter banking groups) are also adapting, including by setting up companies to specifically engage in DA business or by restructuring their business through establishing a holding company with an aim, in part, to ensure that DA operations are adaptable to changes and to mitigate any limitations that may result from supervisory regulations.

Benefits and risks from emerging changes

In one aspect, such changes help enable the development of financial services. As a result of their organizational restructuring, banking groups can become more agile in response to rapid technological advancements. Furthermore, since DLT is decentralized, it can, in some cases, be more efficient. It can therefore catalyze further development of the country's financial services, expand the scope of financial services through the use of smart contracts, and lower costs that may originate from traditional centralized systems. Prominent examples include using DAs for cross-border money transfers or using smart contracts to enhance the efficiency of supply chain financing. Utilizing technology in such beneficial ways is aligned with the approach in repositioning Thailand's new Financial Landscape, which would ultimately benefit financial service consumers and the overall economy.

However, such changes also bring about risks in many ways.

- **Risks to the financial system**
    - If DAs become widely used as a means of payment for goods and services, it may undermine the central bank's ability to oversee economic and financial system stability and serve as a crisis-time liquidity provider.
    - Fragmentation may occur in the payment systems, leading to inefficiencies.
    - As some DAs are backed by conventional assets or there may be linkages through the use of conventional assets as collaterals in lending for DA investments, large sell-offs of DAs may consequently impact other assets.
- **Risks to business operators themselves** e.g. technological risks, and when problems arise, these business operators may face reputational risks and lose the confidence of depositors, which can lead to larger problems.
- **Risks to consumers and business operators who hold DAs** e.g. cyber theft, highly volatile asset prices, particularly in cases where holders lack sufficient understanding of the nature of DA and associated risks.

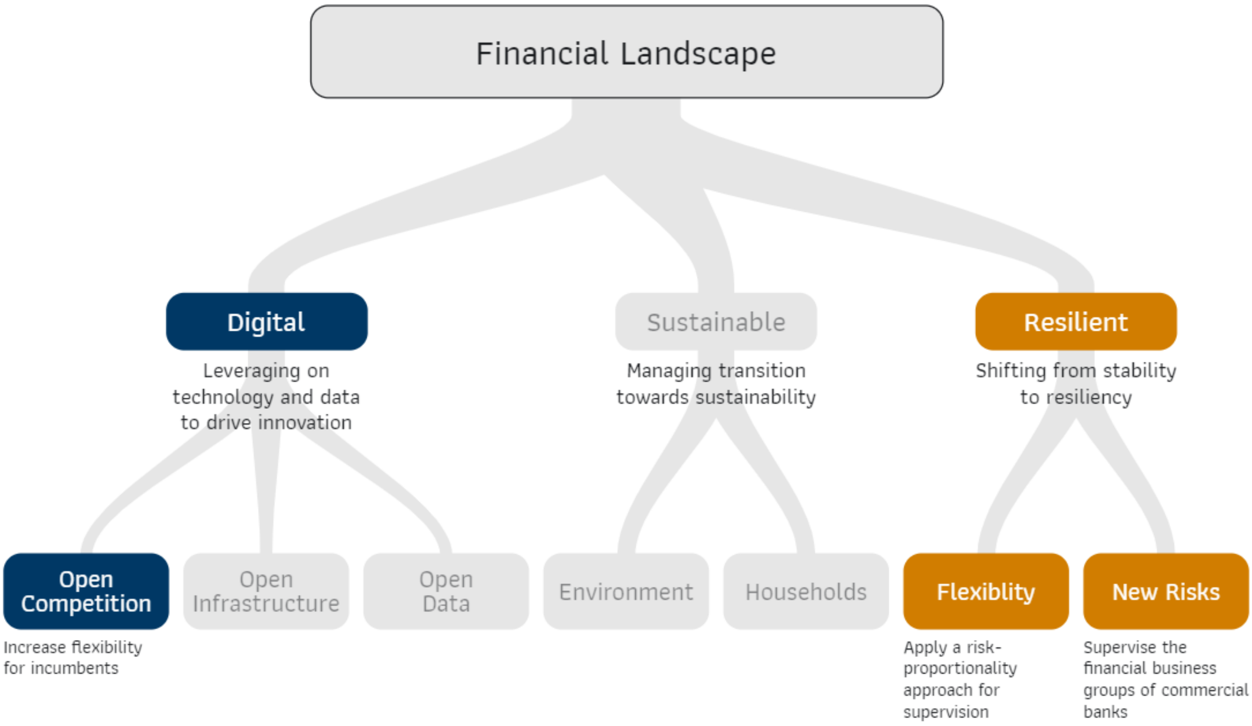
On the other hand, although banking groups' organizational restructurings may improve business agility, they may also incur risks. The rapid changes in technology and temporary popular trends have prompted the "fear of missing out" (FOMO) sentiment to be incorporated into business decisions, urging businesses in both the financial and non-financial sectors to engage in DA-related businesses without proper precautions or preparations. At times, companies offer new services solely to create a modern brand identity, even if the true benefit to the consumers has yet to be apparent; or neglect to perform assessments of risks to the business and to the system. If such behavior becomes prevalent, it may lead to a buildup of risks to the financial system stability as well.

Implications on supervision

Based on the benefits and risks stated above, **striking a balance between facilitating DA-related innovation to promote their benefits and managing the risks that may arise is the key principle underpinning the supervision of DAs.** However, regulators face challenges in designing regulations or rules to achieve this intended objective, since technologies, particularly those relating to DAs, can evolve rapidly. Additionally, DA-related financial products still lack extensive performance history or observation periods, thus limiting the ability to conduct risk assessments.

Furthermore, Thailand is currently undergoing a financial landscape repositioning of its own. For example, by considering new types of financial institutions (e.g. virtual bank), promoting the exchange of data for the benefit of consumers (Open Data) and giving higher priority to sustainable finance. Therefore, envisioning the future of the financial sector has become increasingly complex. Policy decisions in setting the course of development and supervision must therefore be done more carefully, so as to set the right direction in enabling the traditional financial system and digital finance to co-exist while providing optimal benefits to financial service consumers and the overall economy.

The Bank of Thailand (BOT), as the authority overseeing the economic and financial stability and the supervisor of financial institutions and financial service users, therefore issued this directional paper to explain the BOT's rationale in issuing its policies related to Financial Business Groups with regard to digital assets, the options considered by the BOT, as well as the pros and cons of each supervisory approach under the existing limitations and context of the Thai financial sector.



Supervisory approach

Facts on digital assets and banking groups

1 The supervisory approaches considered by the BOT are based on the following facts on digital assets and the current context of the Thai financial sector

(1) Even though legislation has been passed to allow the operation of DA business, DAs and engagement in DA-related businesses still do pose risks, both to the financial position and credibility of the DA business operator. Moreover, some risks may still remain as "unknown unknowns" which may pose new tail risks to financial system stability.

(2) Banking groups are positioned differently from other financial business groups as they accept deposits from the public, are subject to intense supervision, and are familiar to the public; hence, they are trusted by the public.

(3) Although organizational structures may be transitioning to banking groups, banking groups still include the commercial bank, which serves as a financial intermediary between depositors and borrowers, making them critical to other financial institutions and the capital market.

(4) Banking groups are businesses that can rapidly expand their market share by leveraging their existing large customer base, as evidenced by how different players in the business sector want commercial banks to become part of their business network or their business partner, in order to achieve leapfrog business growth or use the banks' large customer database, as well as to be an important source of funds.

(5) Many of banking groups' financial service consumers are vulnerable or have insufficient understanding of investment in new and complex assets such as DAs and the associated risks. Also, most depositors are retail depositors with limited financial assets, as indicated by the fact that more than half of Thai depositors with deposit accounts at commercial banks have a deposit amount of less than THB 3,200,[1] reflecting their limited financial buffer against investment risks.

(6) Many Thais are giving attention to DA investments, as reflected by the Cryptocurrency Adoption Index, under which Thailand ranked 12^{th} highest as the most "open" to DAs[2], and also by the number of user accounts at exchanges under the supervision of the Securities

1 https://www.pier.or.th/abridged/2019/23/

2 Information from Chainanalysis, based on data from global DA exchanges (on web traffic, time zone, or fiat currency used in the exchange)

and Exchange Commission, which totals to 2.7 million accounts[3]. This does not include DA investors that are users of exchanges that are registered outside of Thailand.

(7) Over the recent period, the BOT has seen banking groups express their rather high appetite for engagement in DAs. This includes issuing tokens, setting up companies, marketing, and so forth. Their investment appetite in DAs is also quite high compared to leading global banks. Moreover, most applications submitted by businesses were aimed towards marketing purposes or to create a modern brand identity, not to enhance the efficiency of the financial system, which may reflect the current FOMO behavior among market players.

(8) Thailand was one of the first countries to pass legislation to accommodate DA business. However, although laws may help regulators in handling and overseeing risks, the scope of supervision may not yet cover emerging DA products or businesses, as they may not be explicitly stated in the relevant laws, hence putting limitations on supervisory oversight.

(9) Although DAs on a public blockchain make financial transactions easily traceable, if an account of a wrongdoer is found, it is not possible to freeze such an account because there is no regulator, and most transactions are executed overseas.

Risks observed by the BOT

2 Based on the facts above, the BOT, as the authority overseeing economic and financial stability and the supervisor of financial institutions and financial service consumers, sees the following risks that may arise in the absence of supervision of financial business groups in the area of DAs:

- Risks from DAs or engagement in DA business may spread to other systems within the banking group, therefore impacting the depositors; or even if financial losses are limited, it may still undermine the depositors' confidence in the banking group's future decisions.
- Risks that arise from banking groups having a wide and diverse customer base, allowing them to rapidly expand their market, and providing them with channels to solicit DA investments from vulnerable groups, or those who lack sufficient understanding of the associated risks.
- Risks that banking groups may overinvest in DAs or DA businesses, to the extent that it distorts their resource allocation and undermines their function as a financial intermediary between borrowers and depositors, which should be the primary function of commercial banks. Furthermore, the FOMO sentiment may also put pressure on other banking groups to follow suit.

3 The number of active DA investor accounts in May 2022 totaled to about 500,000 accounts, whereas the number of stock market investor accounts in the same period totaled to about 600,000 accounts. (https://www.sec.or.th/TH/PublishingImages/Pages/WeeklyReport/DAWeeklyReport20220603.jpg
https://classic.set.or.th/th/market/securities_company_statistics65.html)

- Risks that DAs and related businesses may grow quickly while the general public still has insufficient understanding of the risks involved, and without adequate supervision, may lead to systemic risks. Also, in the case where DAs become so widely held by the public that DA transactions are not traceable, DAs may become a tool for money laundering or other financial crimes.

Policy options for the supervisory approach

3 At present, there is not yet an internationally agreed approach in supervising DAs and the undertaking of DA business, as there is still a wide range of issues, and risks are not yet clearly seen. However, international regulators have begun to agree on some risk factors and the need for supervision, although specific approaches may still differ.

4 In the case of Thailand, the BOT hopes that the growth of DA business would provide benefits to the public, while also fostering innovation to enhance the efficiency of the financial system. Meanwhile, various risks and the stability of the financial system should also be taken into account. The BOT therefore has explored a range of policy options in supervising banking groups, which can be broadly categorized as follows.

(1) Prohibiting banking groups from undertaking DA-related business

✓ Pros	✗ Cons
• Is a preventative approach that safeguards depositors and also prevents vulnerable groups or those with limited financial literacy from being solicited to invest in or access DAs through the banks' business channels. However, other players with a large customer base who are not regulated by the BOT may also engage in DA business. Therefore, DAs would ultimately continue to grow, although at a slower pace.	• Banking groups are on an unlevel playing field with non-banks in competing in DA business. • Creates an environment that does not foster innovation due to limited competition from banking groups. • Creates unintended consequences e.g. opportunity cost in raising the standard of DA services though banks' services, or a lack of data from which risks can be monitored, given that DAs would be regarded as business outside the BOT's supervision under this approach.

(2) Allowing banking groups to engage in DA-related businesses, under an investment limit

✓ Pros	✗ Cons
• Fosters innovation and allows capable players to engage in DA business. • As banking groups are regulated, their engagement in the DA market would enable the BOT to monitor risks form data collected from banking groups. • The BOT can set incentivizing mechanisms for banking groups to raise the standard of DA business, which, in turn, would lead to competition in raising the standard of providing DA service in the country. • Having investment limits would result in gradual changes, and banking groups must ensure efficient allocation of funds. • Allows flexibility as the investment limit can later be raised, in line the development of international supervisory standards.	• Risks may occur within limited circles if regulators are unable to keep up with the market players' behavior and business operations. • Having an investment limit may prevent banking groups from fully competing with non-banks in DA businesses.

(3) Allowing banking groups to freely engage in DA-related businesses

✓ Pros	✗ Cons
• Fosters innovation. • Provides opportunities for banking groups to freely compete on a level playing field with non-banks in DA business.	• Banking groups may hastily invest in DA business due to FOMO, resulting in sub-optimal allocation of funds. • Rapid expansion of DAs may pose risks to the system while regulators may be late to adapt; or even once risks are identified, there may be challenges in issuing measures to correct past incidents, or large-scale impact on consumers may have already occurred.

Since options 2 and 3 may lead to increased risks associated with DA-related businesses, they would need to be accompanied by enhanced supervision in the areas of corporate governance, risk management, and consumer protection.

The BOT's chosen supervisory approach

5 The supervisory approach chosen by the BOT to achieve its objectives must strike a balance between fostering innovation for the benefit of financial service consumers, and proper risk management. This would be accomplished by allowing greater flexibility in banking groups' scope of business, in order to promote competition and innovation, thus allowing banking groups to adapt in pace with technological advancements while considering both benefits and risks. At the same time, increased flexibility must be accompanied by enhanced supervisory oversight. Otherwise, incautious expansion in the scope of business and growth of new businesses may pose risks that cannot yet be comprehensively assessed, which may adversely impact consumers, banking groups, or escalate to a large-scale impact on the financial sector and economic system. **The BOT therefore has chosen the second supervisory approach, which is to allow banking groups to engage in DA business under an investment limit.**

6 Although, in the short term, this enhanced supervision may raise the business costs of banking groups and place them at a competitive disadvantage compared to other players who are not supervised by the BOT, its implementation is necessary. This approach would allow for the handling of new risks while ensuring that banking groups remain strong, public confidence in the banking sector is maintained, and consumers are protected. Other countries have also implemented similar measures[4] to oversee their retail consumers' access to DAs. Additionally, this enhanced supervision would help ensure that banking groups pursue business growth in a prudent and sustainable manner and encourage DA businesses to have good service standards and provide proper consumer protection, thereby setting a good example for other players. In turn, this would reinforce the confidence of consumers, which would benefit banking groups and the country's DA businesses in the long run.

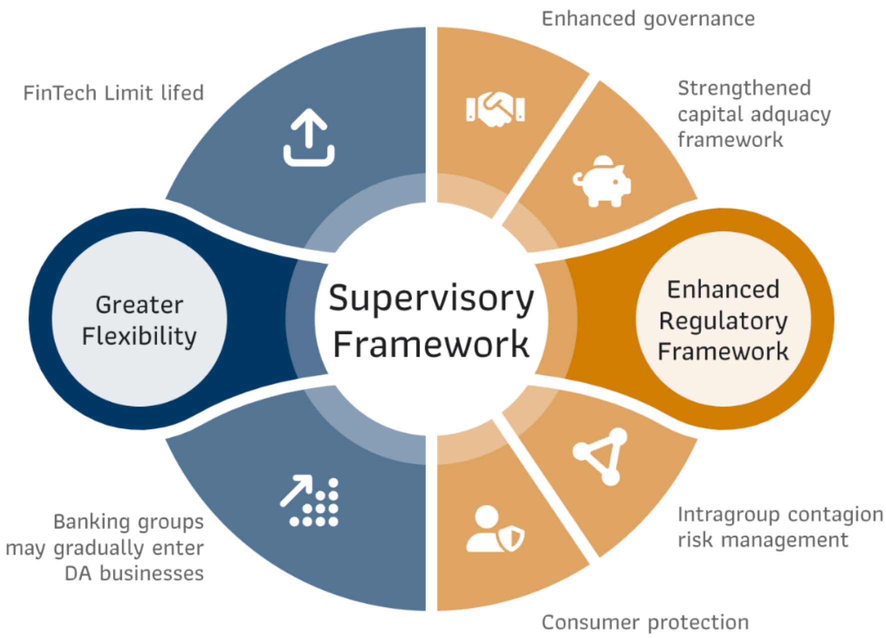
4 For example, Singapore prohibits the advertisement of DA services in public areas to prevent the solicitation of retail investors, while Hong Kong requires that service providers can only offer DA-related products to retail investors only if they meet the condition that they are not complex products.

Supervision objectives

- Supporting technology or financial services that would improve the efficiency of the financial system, further develop financial services, and provide greater access to financial services to benefit the public and the business sector, while allowing the utilization of DAs for beneficial purposes.
- Safeguarding the public's deposits and confidence in the banking business from risks, as well as overseeing risks to the system
- Protecting consumers to ensure they receive fair service and preventing investment solicitation from vulnerable groups and those who have insufficient understanding of DAs.
- Raising the standard of DA business to meet consumer expectations for services provided by commercial banks.
- Having appropriate risk-based supervisory standards, by encouraging organizational restructurings that improve business agility, or by relaxing unnecessary regulations, while ensuring that banking groups do not utilize organizational restructuring as a tool to circumvent the regulations that are still necessary.

Supervisory framework

7 Based on the supervisory approach chosen above by the BOT, the BOT has designed a supervisory framework that finds a balance between fostering innovation and having proper risk management, while also taking into account the dynamic nature of the business. This supervisory framework focuses on overseeing banking groups that operate complex and potentially high-risk businesses. For example, groups with companies that operate DA-related or venture capital businesses. The framework is also applicable to all types of banking group structures, including those with a holding company as the parent company, and those with a commercial bank as the parent company, based on the principle of risk proportionality.



1. Greater flexibility in banking groups' operations

8 Allowing greater flexibility in the business operations of banking groups is aimed at opening up opportunities to compete, as well as fostering innovation in the financial sector, in order to optimize benefits to financial service consumers. The measures are as follows.

9 [1.1] Lifting the FinTech investment limit

To allow banking groups to further utilize FinTech, as it can be clearly seen that FinTech is beneficial in the development of financial products and services. Furthermore, commercial banks have now gained experience and have in place FinTech risk management frameworks that can provide a degree of assurance.

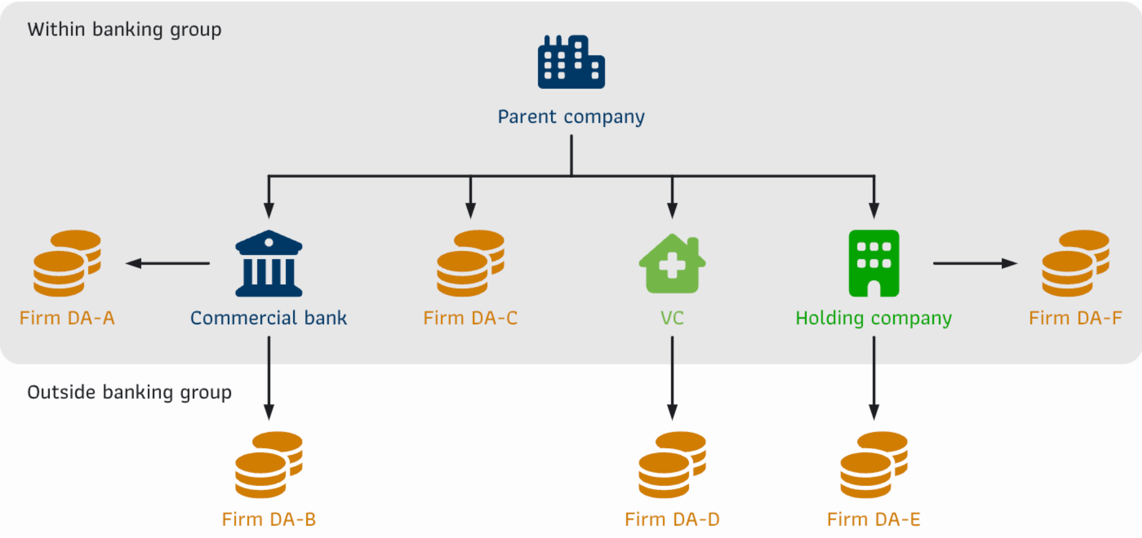
10 [1.2] Allowing banking groups to gradually enter into DA-related business

To encourage financial service providers to learn new innovations, raise the standard of their operations and service provision, and have proper consumer protection, while also ensuring that financial system stability is not adversely impacted.

As previously stated, engaging in DA business may pose new risks which may undermine the depositors' and the public's confidence in commercial banks. Also, there is no internationally agreed-upon approach in supervising DAs yet. Therefore, expanding the role of banking groups in DA business should be done gradually in the initial stage, so as to limit the potential impact from new risks while also urging banking groups to be prudent in their investment and resource allocation decisions. Hence, the BOT prohibits commercial banks from directly operating DA business and allows companies within the banking group to invest in DA-related business, under a DA Business Limit of 3 percent of capital.[5]

5 If the banking group had acquired goodwill through an acquisition or merger, the banking group must deduct the value of such goodwill from the group's capital, in accordance with the current regulations on capital maintenance. Such goodwill amount is to be excluded from the calculation of the DA Business Limit.

Example: calculating investments under the DA Business Limit



(i) **A commercial bank** can invest in DA business companies, both those that are within and outside its banking group. The investment amount, together with any lending provided to any DA business company within the banking group must not exceed 3 percent of the commercial bank's capital. In the example, the sum of investments in and lending to Business DA-A and investments in Business DA-B must not exceed 3 percent of the commercial bank's capital.

(ii) **A parent company** can invest in DA business companies, both those that are within and outside its banking group, in an amount not exceeding 3 percent of the banking group's capital. Any investment amount exceeding such limit must be fully deducted from the banking group's Common Equity Tier 1 Capital (CET1). In the example, investments in businesses DA-A, DA-B, DA-C, DA-D, DA-E and DA-F must not exceed 3 percent of the banking group's capital.

The calculation slightly differs depending on the structure of the banking group, as it is designed to prevent any potential regulatory arbitrage and to capture the essence of this supervisory approach.

11 Rationale behind the DA Business Limit level

Setting the DA Business Limit at 3 percent is an adequate level that allows for the learning and development of DA business, in the initial stage, while not being so high to the extent that it may impact the commercial bank's financial position should losses occur. For comparison, investments of leading global financial institutions in DA businesses, on average, amount to around THB 7 billion[6],

6 Data from Blockdata

which is equivalent to 0.43% of those financial institutions' average capital; or, when calculated using the average capital of Thai DSIBs, which is lower, this would amount to only 1.96%. Furthermore, setting the DA Business Limit at 3 percent is not too high, since a 3 percent loss of financial institutions' capital is equivalent to about, on average, a 0.6% change in their BIS ratio, which is considered an acceptable level of risk.

12 Creating incentives to elevate DA business standards

Aside from allowing a gradual growth of DA businesses, the DA Business Limit can also be used as an incentivizing mechanism to raise DA business standards in the country. If banking groups can raise the standard of any DA business in the group to the same level as those of other businesses as required by the BOT in other aspects, such as corporate governance, technology and cyber risk management, anti-money laundering/combating the financing of terrorism (AML/CFT), consumer protection, and client suitability assessments, then investments in such businesses can be excluded from the DA Business Limit.

In this regard, in order to prove that a banking group's DA business has met the standards required by the BOT, the banking group can consult with the BOT, conduct a self-assessment, and take further actions as will be prescribed in a future BOT Notification.

13 Reassessing the DA Business Limit

This supervisory approach using the DA Business Limit can be reassessed to ensure that it remains appropriate in light of changing circumstances. The BOT therefore has been closely monitoring developments and actively exchanging knowledge with its international counterparts and the private sector. Once the benefits become more apparent, risk oversight approaches become clearer, international supervisory standards are set, or when international data or examples can ease the existing concerns, the limit can then be raised or lifted entirely, in the same manner that the FinTech Limit was lifted.

14 Supervising DA-related businesses that still lack regulatory certainty

For DA-businesses that still lack regulatory certainty, such as those without specific governing laws or a lead regulator, and do not yet demonstrate clear benefits to the economy, such as decentralized finance (DeFi), non-fungible tokens (NFTs) or DA-related businesses in the metaverse, the banking group may consult the BOT on a case-by-case basis on testing such businesses in the BOT's Regulatory Sandbox,[7] which would be counted in the DA Business Limit. This would enable an assessment of pros and cons to the financial system and testing of consumer protection protocols, while also ensuring that there is proper risk management, financial system stability will not be adversely impacted, and benefits to the economy are considered. Through the testing, if compliance with the relevant regulations and the key success factors (approved by an expert panel comprising

7 Entry into the Regulatory Sandbox can only be granted to companies within a financial institution's group, and business operators regulated by the BOT, in accordance with the entry requirements set by the BOT. The BOT may also consider allowing banking groups to operate such business without having to enter the Regulatory Sandbox.

specialists from both within and outside the BOT) can be achieved, the tested business can then exit the Sandbox and be conducted on a large scale. Also, once the service can meet the BOT's expected standards, the BOT may also consider excluding it from the DA Business Limit as well.

In ranking businesses to enter the Regulatory Sandbox, the BOT would give priority to assessments on the potentiality and benefits to the economic and financial system over assessments of technological feasibility. Therefore, banking groups must present their test plan and an initial self-assessment of the business' benefits and risks prior to its consultation with the BOT.

2. Enhanced regulatory framework for banking groups

15 Enhancing the regulatory framework of banking groups to accommodate organizational restructurings and their expansion into digital businesses is aimed at safeguarding depositors and the financial system, as well as ensuring proper consumer protection. Supervision is based on the risk-proportionality principle, under which businesses that are low-risk can be flexibly supervised, whereas high-risk businesses must be subject to stringent supervision. Meanwhile, new businesses that are still risky and do not yet demonstrate clear benefits must be subject to a degree of supervision, in order to put up guardrails to protect the system from adverse impact. Once more clarity is achieved, such supervision can be later adjusted as appropriate. As can be seen, the supervision of banking groups' engagement in DA business is rather stringent in the early stage, because risks faced by commercial banks and the overall financial system cannot yet be clearly assessed.

(2.1) Enhancing corporate governance

16 Preventing conflict of interests

Having companies within the banking groups that operate different business would likely expose the group to risks of conflict of interests. These risks would become more significant when companies in the group operate complex businesses[8], and when directors concurrently hold positions at both the commercial bank and the parent company that is a holding company, or at a company that operates complex businesses. Such concurrent directorship may influence the decision-making of the commercial bank's board of directors, as they may not prioritize the interests of the commercial bank's depositors and stakeholders.

For example, in the case where a set of directors concurrently holds positions at both the commercial bank and the parent company that is a holding company, if the commercial bank's directors must decide whether to lend to a company within the holding group to invest in high-risk activities, the directors may weigh the potential returns to the holding company against the investment risks. Conversely, if these boards comprise a different set of members, and the commercial bank's directors do not have clear stakes in the holding company, they would instead

8 For example, having companies within the group that operate DA-related business or venture capital business

weigh the interest gains from such lending against the risks of a repayment failure, which is a decision-making approach that prioritizes the interests of the commercial bank's depositors and stakeholders.

In this regard, because different organizational structures pose different conflicts of interest risks, their supervisory framework reflects those different risk characteristics. Meanwhile, commercial banks' management should be independent in order to prevent conflicts of interests and have in place checks and balances to enable their board of directors to perform their duties independently.

The BOT therefore sets the following measures to mitigate the risk of incurring conflict of interests:

- **For banking groups whose parent company is not a commercial bank:** directors of the parent company may also assume directorship at the commercial bank, given that they only constitute a minority of the commercial bank's board of directors. Additionally, the chairman of the board of directors of the parent company and that of the commercial bank must not be the same person, and the audit committee of the parent company must comprise an entirely different set of members from that of the commercial bank's audit committee.
- **For banking groups whose parent company is a commercial bank:** directors of the commercial bank may also assume directorship at any subsidiary company that operates DA-related or VC business, up to a maximum of three-fourths of the board of directors of such subsidiary company.

Nonetheless, the supervisory measures above still allow for a degree of concurrent directorship. This is to enable a smooth transmission of policies and corporate culture within the group, which would have a positive impact on the banking group's business operations.

17 Having efficient internal control mechanisms

As the business operations of commercial banks have become more diverse, the parent company must ensure that companies within the banking group operate in accordance with good corporate governance principles, have in place efficient internal controls, together with a segregation of duties between different business units and persons. Also, priority should be given to internal controls and the functioning of the Three Lines of Defense, particularly the second and third lines, whose duties are to control, oversee, and audit business operations independently and thoroughly.

18 Keeping pace with technological advancements

Expanding the scope of business of banking groups, together with changes in technological advancements, may lead to evolving risks that are increasingly diverse. If the banking group's board of directors lack sufficient knowledge and expertise, it may put the banking group at the risk of having ineffective and incomprehensive oversight, which would then impact the banking group's business operations and its depositors. The BOT therefore expects and sets a framework on good governance principles, under which commercial banks' board of directors should be composed of directors with knowledge and expertise appropriate for the banking group's business operations and risks.

19 [2.2] Strengthening the capital adequacy framework

Given that DA is a new business, and its underlying technologies are rapidly evolving, related businesses are therefore exposed to the risks described above, as well as risks that cannot yet be clearly assessed. Moreover, most DAs exhibit high value volatility, so holding DAs would pose the risk of incurring a loss due to a rapid decline in value.

To ensure that banking groups have adequate capital to prudently provide buffer against new risks, including risks from operating DA business, the BOT has therefore introduced additional supervisory measures. For example, if the commercial bank or a company in the group holds DAs[9], the value of such DA holding must be fully deducted from the capital amount, in order to absorb the risk of such asset holding. This is aligned with the initial approach that is being considered by the BCBS and many other countries.

In addition, banking groups should have adequate capital as buffer against risks in other aspects (Pillar II) as well. Banking groups are required to conduct stress testing using stress scenarios that cover risks from operating DA business and conducting DA-related transactions, and consider maintaining additional capital to absorb other risks, based on the risk profile of the commercial bank and companies within the banking group. This would help ensure that the commercial bank has adequate capital to absorb potential losses and also reinforce the depositors' confidence.

20 [2.3] Intragroup contagion risk management

As companies within a banking group are operating businesses that are increasingly diverse and risky, those risks may be transmitted to the commercial bank, who must safekeep the public's deposits, through interconnected financial and operational linkages within the group (intragroup contagion risk). Furthermore, from the consumers' perspective, the reputation of companies operating under the same group are often linked, so public confidence in the commercial bank may be undermined by the business operations of other companies within the group.

To prevent adverse impact from said intragroup contagion between the commercial bank and other companies within the banking group that may be increasingly exposed to new risks, the BOT therefore requires the parent company to:

- Assess risks from the operations of companies within the group that may impact the commercial bank, set measures to manage such impact, and also ensure compliance with the limit on the commercial bank's investments in and lending to companies within the group;
- Set an annual audit program for companies within the group that operate DA-related businesses;

9 A commercial bank can hold DAs only to innovate or enhance the efficiency of their services. Prior consultation with the BOT to conduct testing in the BOT Sandbox is also required.

- Completely segregate DA work system(s) from the commercial bank's core banking system and maintain strict IT and cyber security to avoid incidents that may disrupt the commercial bank's operations.

Moreover, the banking group must not create any misunderstanding that the commercial bank is accountable for the DA-related transactions conducted by DA companies within the group, so as to safeguard the consumers' confidence in the commercial bank from being undermined by the operations of other companies within the group.

21 [2.4] Reinforcing consumer protection

Commercial banks have a wide and diverse customer base, which includes vulnerable groups with limited financial literacy and low risk tolerance. Without safeguards, if such groups are provided with sale offers or recommendations on new and highly volatile financial products, such as DAs, through the banks' business channels or through the usage of the bank's customer data, they may purchase or invest in DAs without sufficient understanding. In such a case, if losses occur, such losses may exceed the customers' risk tolerance level.

To ensure that these customer groups receive fair service and proper protection, the BOT therefore sets an additional supervisory framework[10] that takes into account the different risk tolerance level of each customer group.

- **For vulnerable customers with limited financial literacy and low risk tolerance,** banking groups must not take any action that would facilitate this customer group in accessing DAs. For example, it is prohibited to solicit, offer the sale of, or provide any other information related to a DA company or DA product, via any channel. It is also prohibited to request the customer's consent to disclose the customer's data to a DA business for marketing purposes (marketing consent).

- **For customers that are institutional investors or Ultra High Net Worth investors[11] with higher risk tolerance, who have been assessed to understand financial products and the associated risks sufficiently to access DA products,** the banking group may facilitate them in accessing DAs to an appropriate degree. For example, by providing information or advising the client to use services provided by a DA company, recommending a DA asset class, and requesting marketing consent. However, it is still prohibited to solicit or offer the sale of any specific DA. Furthermore, customers should be provided with knowledge and understanding on an ongoing basis, and the usage of customer data must be closely supervised.

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10 The supervisory framework on consumer protection is not to be enforced on companies within the group that are subject to the supervision of another lead regulator, such as securities companies, insurance companies, and digital asset business operators, as they must comply with the regulations of the lead regulator.

11 In accordance with the Securities and Exchange Commission's definition of investors

Expectations of the chosen supervisory approach

22 From the risks observed by the BOT that are based on the current context of Thailand, the BOT expects that its supervisory approach in allowing banking groups to gradually engage in DA business together with incentivizing them to raise the service standards would provide the following benefits.

- Businesses in the financial sector would be able to adapt and keep up with technological advancements, while the financial sector would benefit from technologies in terms of improving service efficiency, meeting consumer needs, and increasing access to financial services.
- The BOT can support the financial sector in transitioning towards a digital economy with an emphasis on quality rather than speed, which would require appropriate risk management.
- Domestic DA businesses are up to equal standard as those expected by the public from commercial banks, with consumer protection and oversight of money laundering or other undesired activities, which would benefit the banking group, customers, and the overall financial system.