



BANK OF THAILAND

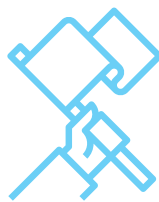
Annual Report 2020
Bank of Thailand





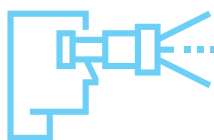






Mission

Promoting a stable financial environment to achieve sustainable and inclusive economic development



Vision

To be an organization of vision and principles that engages with stakeholders in pursuit of Thailand's sustainable economic well-being



Values

Principles
Visions
Collaboration
Humility

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The Bank of Thailand
Board



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The Bank of Thailand's operation to alleviate the impact of COVID-19

In 2020, in addition to the BOT's operation to alleviate the impact of COVID-19, which is critical and urgent, the BOT also operated other core business-as-usual tasks as follows;

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The operation to alleviate the impact of COVID-19

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Bank of Thailand

Message from the Chairman
of the Bank of Thailand Board

The year 2020 marked another notable year for the Bank of Thailand (BOT). It is with our utmost gratitude to be granted the royal permission from His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua to print the commemorative banknotes on the auspicious occasion of the Coronation of King Rama X B.E. 2562 (2019). These commemorative banknotes were designed to honor His Majesty the King in the Royal Coronation Ceremony in 2019 and intended to be a part of the national historical record.

Throughout the year 2020, the BOT remained committed to pursuing central bank mission in preserving economic stability amidst the volatile, uncertain, complex, and ambiguous environment. As such, the BOT swiftly and continuously implemented measures, together with the preemptive policy rate cuts, to alleviate the impact of COVID-19 outbreak on households and businesses. At the same time, the COVID-19 outbreak also posed challenges to the BOT in implementing the three-year strategic plan for 2020 - 2022 in strengthening the resiliency of the Thai financial and economic system and promoting an inclusive and sustainable growth of the Thai economy.

Overseeing the BOT's overall activities and operations, the BOT Board, together with the Monetary Policy Committee, the Financial Institutions Policy Committee, the Payment Systems Committee, the Audit Committee and the Risk Oversight Committee supported the BOT to work in a more "proactive, practical and collaborative" manner, particularly in the eight priority areas under the BOT's three-year strategic plan such as debt restructuring, and safeguarding the financial institutions stability, to alleviate the impacts from the COVID-19 outbreak and to sustain the economic recovery.



The eight priorities areas to alleviate the economic impact and sustain the economic recovery are

1

debt restructuring for household and business

2

safeguarding the financial institutions stability

3

enhancing monitoring and prevention to maintain financial stability

4

rapid assessment of economic risk and pushing forward the structuring of the Thai economy

5

coordinating the policy tool mix for targeted measures

6

facilitating private sector in better handling financial markets volatility

7

organization management under highly uncertain environment

8

proactive communication and engagement with stakeholders



The BOT Board highlighted the importance of risk oversight and good governance which is the key to organizational credibility in this volatile and uncertain environment. The BOT Board closely monitored global economic risk that may affect the recovery of the Thai economy. Given the different role and scope of central banking compared to the past, the BOT Board supported the framework for monitoring and managing risk arising from new policy measures, together with the enhancement of organizational capability for post-COVID-19 environment. In addition, the BOT Board enhanced a conflict of interest policy to further strengthen good governance and credibility of the BOT.

On behalf of the BOT Board, I wish to thank all BOT Board members, management and staff for their commitment and dedication throughout 2020. The accomplishment of the BOT's missions reflected capabilities and strong public mind of the BOT staff. Indeed, I would like to thank Dr. Veerathai Santiprabhob, the former BOT governor, for his well-recognized contribution to the BOT during his five-year term. I would also like to thank Dr. Sethaput Suthiwartnarueput, who assumed the BOT governorship since October 1, 2020, for ensuring the accomplishment of the BOT's missions during transition and challenging period.

Mr. Porametee Vimolsiri

Chairman of the Bank of Thailand Board



Bank of Thailand

Message from the Governor
of the Bank of Thailand

The year 2020 marked an important event as the Bank of Thailand (BOT) was granted royal permission from His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua to print the commemorative banknotes on the auspicious occasion of the Coronation of King Rama X B.E. 2562 (2019) for circulation. These commemorative banknotes were designed to honor His Majesty the King in the Royal Coronation Ceremony of 2019 and intended to be a part of the national historical record.

During 2020, the global economy, including Thailand, experienced events that were beyond expectation. The outbreak of the coronavirus disease (COVID-19) **had a broad-based repercussion on economic activities**, plunging the Thai economy into contraction at the highest rate in 22 years. Certain businesses particularly those related to tourism were severely hit, resulting in a large-scale unemployment and underemployment. The Thai people and businesses faced damaging consequences from an income fall. The commercial bank system operated in a challenging business environment. Financial markets were highly volatile, potentially passing negative effects onto other sectors.

The broad-based and highly uncertain impact on the Thai economy requires **a policy aimed at alleviating the adverse impact and coping with the crisis to be comprehensive, forward-looking, timely and well-targeted to support the Thai people and businesses in navigating through this difficult time.** The BOT has implemented a proactive policy—including **pre-emptively accelerating monetary policy accommodation before the situation became severe**, resulting in the fall in the Thai policy interest rate to its historic low and to be the lowest in the region. **The liquidity-provision facility was set up** to shore up confidence and to prevent the spread of liquidity-shortage problems. Furthermore, **the BOT collaborated with the government in introducing financial and loan measures to support the Thai people and businesses particularly SMEs affected**

by the COVID-19 situation. These include remedial measures to reduce debt burden and liquidity measures to provide liquidity to the severely affected. Amid the prolonged COVID-19 situation, I view the continuity and adequacy of government measures as well as coordination among agencies to be critical to the Thai economic recovery going forward.

During the past year, in addition to implementing the policy aimed at swiftly lessening the adverse impact caused by the COVID-19 crisis, the BOT gave priority to other core missions, namely preserving stability in the economic and financial systems, financial sector development and improving operational effectiveness. Key outcomes can be summarised as follows.

The first dimension involves preserving economic and financial stability. The BOT ensured that the monetary condition was constantly accommodative and did not pose an obstacle to business recovery, as well as ensuring appropriate and adequate levels of liquidity in the financial markets via various tools such as MFLF* and BSF** measures. Furthermore, the BOT upgraded the structure of the Thai financial markets—for example, by developing the new reference interest rate which better reflects the Thai financial market conditions and accelerating the development of the new Thai foreign exchange ecosystem to create more balanced capital movement, reduce pressure leading to currency appreciation and support greater businesses’

* Mutual Fund Liquidity Facility is a tool that supports mutual funds experiencing liquidity shortage in the financial markets

** Corporate Bond Stabilization Fund is a mechanism to maintain stability in the financial sector through providing liquidity to the corporate bond market

currency hedging practices. These would benefit foreign currency transactions of both entrepreneurs and financial service providers.

In addition, the BOT introduced and improved financial regulation and prudent risk management guideline to allow financial institutions to help cushion the negative impact and provide greater support to the Thai economic recovery. Furthermore, the BOT's development of the Thai payment system's infrastructure and upgrading the cyber security capability of the financial sector to continuously support the digital economy have served the rapid increase in online financial transactions during the COVID-19 crisis and helped lessen the adverse consequences on economic activities to a certain extent.

The second dimension is financial sector development. The BOT accelerated the upgrade of the financial infrastructure and continued to introduce technologies to further develop the Thai financial sector—such as the National Digital Identity (NDID) program, developing the Thai Overnight Repurchase Rate (THOR), supporting the provision of digital personal loans, and developing the protocol for Central Bank Digital Currency (CBDC) to increase effectiveness and develop financial services in Thailand to keep pace with the global development.

The third dimension is to augment operational effectiveness. The BOT adjusted the work process amid the COVID-19 crisis to be flexible and fit with changing circumstances by enabling staff to work from home, introducing online seminars and supporting the use of work technology to become a digital organisation. Furthermore, the BOT adopted the Objectives and Key Results (OKRs) principle in setting organisational goals to allow staff to jointly drive forward critical and urgent work.

The coronavirus outbreak occurred amid structural changes in the economic and financial systems as well as the society. Therefore, **the BOT reprioritised the**

goals under the three-year strategic plan (2019 - 2022) to tackle the impact caused by the COVID-19 crisis by focusing on accelerating critical and urgent work, which addresses five important challenges to the Thai economy. These challenges include: **1) resolving the debt crisis in a sustainable manner** to support debtors and address the debt problems quickly and well targeted, helping households and firms to successfully navigate through the COVID-19 crisis and recover; **2) preserving financial stability** to avoid financial problems and enabling the financial sector to be the main contributor to the Thai economic recovery; **3) maintaining macroeconomic stability** so that the Thai economic structure is resilient to changes amid the COVID-19 crisis; **4) building public trust** particularly through implementing the COVID-19 related policies and measures which are effective and well received. This requires rigorous analytical process and consultation with all stakeholders as well as ability to explain the policies' social benefits to the public with transparency and clarity; and **5) improving operational effectiveness** to ensure that the BOT as an organisation is goal-oriented and produces maximum benefits to the Thai economy and society.

Across 2020, the BOT received excellent collaboration from all sectors. Despite rapid changes in the future global context and the highly uncertain nature of the coronavirus crisis, the BOT is aware of these challenges and is committed to collaborate with all sectors in driving forward the BOT's three-year strategic plan (2020 - 2022) and addressing future challenges in a tangible manner as well as building public trust in the BOT as a public organisation for sustainable well-being of the Thai people.



Mr. Sethaput Suthiwartnarueput
Governor of the Bank of Thailand



1

Executive Summary



In 2020, the global and the Thai economies were severely hit by the COVID-19 outbreak. The BOT has implemented policies and measures which have helped to support the liquidity of Thai people and businesses to successfully navigate through this crisis, along with maintaining financial stability and supporting the adjustment of the Thai economic system to cope with the post-COVID-19 world.

The BOT has prioritised policies and measures to tackle the COVID-19 crisis as its urgent and critical task under the three-year strategic plan (2020 - 2022) based on the principle of “**Central Bank in the Transformative World**”. The BOT’s policy implementation in 2020 has benefitted all sectors as well as the broad economic and social systems.

Thai economy and financial system halted due to the COVID-19 crisis

In the beginning of 2020, the Thai economy which only began to improve in line with the global economy halted after the severe and global contagion of the coronavirus. The lockdown

measures to contain the outbreak in many countries including Thailand brought economic activities to a standstill, particularly external demand including both tourism which was severely contracted due to international travel restrictions and exports of goods as the global trade fell at a high rate due to a fall in income abroad. As a result, in 2020 the Thai economy contracted at a staggering rate of 6.1%—the highest rate of contraction in 22 years.

The spread of the coronavirus caused broad-based and cascading effects, particularly on tourism-related industries which are the main source of income for many Thais, both directly and indirectly.





This led to a fall in income or redundancy. A large number of businesses faced liquidity shortage particularly small and medium sized enterprises (SMEs), affecting their debt servicing ability. Despite the relaxation of the lockdown measures and the gradual resumption of economic activities in the latter half of the year, the recovery was not permeated into all economic sectors, thereby causing certain groups of businesses and households to continue facing with problems related to business continuity, debt repayment and livelihood.

Conducting proactive monetary policy before the effect from the COVID-19 crisis became severe

The BOT closely monitored the situation and proactively relaxed monetary policy before the COVID-19 situation became more severe and continued reducing the monetary policy interest rate to reach its historic low at 0.5% per annum. Furthermore, the BOT reduced the Financial Institutions Development Fund (FIDF) fees to allow financial institutions to further reduce loan interest rates for the Thai people and businesses, to which financial institutions reacted swiftly by reducing their interest rates. The low interest rate would also lead to lessen the financial burden for the government to borrow funds to help the affected sectors as well as firms that would like to undertake business adjustment.

Accelerating measures to alleviate the negative impact and reduce panic

During the early phase of the COVID-19 outbreak, the BOT prioritised on remedial measures to help the Thai people and businesses survive and to avoid severe interruption within the Thai economic system. The BOT collaborated with financial institutions and other financial service providers to accelerate the introduction of the minimum measures to support all borrowers adversely affected by the outbreak (the first phase of the measures). These measures included, for instance, general principal and/or interest payment holidays without impairing credit history, the reduction in minimum repayment of credit card loans, the restructuring of personal loans under supervision used as circulating capital into long-term loans to lessen interest burden as well as the decrease in loan repayment installments. A large number of financial institutions supported their borrowers who were directly hit by the crisis at a magnitude larger than the required minimum measures. The BOT also introduced debt-restructuring measures, particularly for the severely affected and liquidity-constrained SMEs, by relaxing financial regulation to allow financial institutions to proactively restructure their loans. Furthermore, the BOT rolled out the measure that supports liquidity in the Mutual Fund Liquidity Facility (MFLF) to maintain stability in the financial system as a whole.

Continuing measures to tackle the crisis across the economy

As the COVID-19 situation tended to be more severe and protracted than previously expected, the BOT introduced another round of measures to support SMEs which is a primary source of employment in Thailand. The measures included pausing loan repayment for SMEs with a credit line not exceeding 100 million baht for 6 months and supporting the provision of soft loans to SMEs with a credit line not exceeding 500 million baht for 2 years, with a concessional interest rate of 2% per annum and with the government bearing interest burden for the first 6 months. These two measures helped lessen the negative impact on SMEs so that they have adequate liquidity for essential expenses particularly paying workers' wages. Furthermore, the BOT established the Corporate Bond Stabilisation Fund (BSF) to stabilise the corporate bond market to avoid market dysfunction which would have a knock-on effect on the stability of the overall financial system.

In addition, the BOT launched the "BOT COVID-19 website" to facilitate users to easily and quickly find support measures that fit with their circumstances and to serve as an instant communication channel for users seeking the services.

The benefits from the continuous development of the digital payment infrastructure and services have manifested more clearly in times when the Thai public needed to maintain social distancing during the COVID-19 crisis, as reflected, for instance, by a rapid surge in the number of PromptPay users and transaction volumes.

To ensure the public confidence in safely using banknotes during the COVID-19 outbreak, the BOT issued the banknote measure to reduce the risk of individuals being infected from the coronavirus lasting on banknotes and increased the quantity of reserve banknotes adequate for demand during the crisis.

Regarding market conduct, the BOT issued the requirements related to the calculation of default interests and debt amortisation to reduce borrowers' debt burden and reduce the incidence of non-performing loans in the financial system.

Reviving the Thai economy through well-targeted and sustainable policy

Although the situation improved somewhat, thanks to the relaxation of the lockdown measures in the latter half of the year, certain borrowers particularly those in the service sector and industries related to tourism and exports of good remained affected. Therefore, the BOT rolled out the second phase of the measures to support retail borrowers negatively affected by the outbreak, which were more targeted and more sustainable. These measures include, for example, debt restructuring based on individual borrowers' debt servicing abilities, the extension of debt repayment holiday on a case-by-case basis for 6 months at the maximum, counting from the end of 2020. Furthermore, the BOT launched the program "DR BIZ the financial sector united for resilient Thai businesses" to support corporate borrowers adversely affected by the ongoing economic situation and the COVID-19 outbreak. This program swiftly and comprehensively lessened debt burden of multi-creditors through a debt negotiation with all creditors in a single setting. The additional measure to support retail borrowers through debt consolidation provided an alternative avenue for retail debtors seeking debt restructuring.

The Thai financial institution system has remained robust amid the debt-relief measures and provided support to economic recovery.

Financial stability has remained intact thanks to prudent risk management, with the commercial bank system having high levels of capital fund, loan loss provision and liquidity, allowing banks to well support debtors adversely affected by the COVID-19 crisis. Furthermore, the BOT encouraged financial institutions to operate businesses under the principle of good governance by improving the criteria for good governance applied to non-bank financial institutions as well as issuing the policy guideline on loan monitoring process to be more principle based. The BOT also revised the regulation related to commercial banks' undertaking in other services to increase flexibility in their service provision, increase competitiveness and effectiveness in bank operation, while giving

importance to constant supervision and regulation. Thai commercial banks were required to conduct an impact assessment of the COVID-19 outbreak through supervisory stress test, which suggested that Thai commercial banks had adequate capital funds to cope with the COVID-19 situation.

Furthermore, the BOT promoted the principle of sustainable banking by creating a self-assessment template for commercial banks regarding responsible lending to enable self-tracking of the progress undertaken under the memorandum of the agreement on sustainable banking guidelines concerning responsible lending. The result from this assessment was monitored during 2020. A study on sustainable finance and its taxonomy was conducted to develop products and services which can attract investment, serving the country's sustainability development goals.

Developing financial markets to enhance effectiveness of the Thai financial system

The BOT continued to emphasise the policy to reform exchange control regulations as well as the policy to accelerate the development of the new FX ecosystem to increase more effectiveness, create more balanced capital movement, allow businesses to effectively manage FX risks and adjust themselves to FX volatility as well as relax the rules on exchange control.

Furthermore, the BOT collaborated with market participants in developing the Thai Overnight Repurchase Rate (THOR) to be used as the new reference interest rate and continued to collaborate with various organisations to continue the project to enhance public understanding on FX risk management and to support SMEs engaged in international trade in its third phase (FX options), with the aims to enhance businesses' understanding on this issue, promote FX risk management and build Thai SMEs' cushion against financial market volatility in a sustainable manner.

Building strong public trust

One of the pillars for maintaining financial stability and to sustainably cope with the crisis is building public

trust in the BOT. During the past year, the BOT focused on improving effectiveness of the digital payment system, preparing the PromptPay system to meet the demand in online payment transactions during the COVID-19 crisis with the average transaction volume reaching the high level of 20.2 million transactions per day. Currently, the QR payment system has more than 6.9 service points across Thailand and the connection enabling international transfer via QR code was established between Thailand and Cambodia and between Thailand and Japan. In addition, in 2020 the BOT began operating bond sale through the DLT Bond Platform which leverages blockchain technology for selling government savings bonds under the edition "Wallet: Bond Wealth Accumulation 1 and 2" and the edition "Moving Together", totalling 50 billion baht. Progress on the Inthanon project was made through experimenting the corporate and retail use of Central Bank Digital Currency (CBDC) and collaborating with the Hong Kong Monetary Authority in developing a prototype for wholesale CBDC.

Furthermore, to cultivate the public confidence in using financial technology, the BOT upgraded preparatory measures and regulation, continued to develop tools for monitoring IT risks and maintaining cyber security, as well as collaborated with the Thailand Telecom Computer Emergency Response Team (TTC-CERT) and the Thailand Banking Sector Computer Emergency Response Team (TB-CERT) to ensure timeliness in dealing with emergency situations.



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In light of resolving debtors' problems, the BOT continued with the third phase of the debt clinic scheme by expanding its scope to include cases related to default credit-card loans, debit-card loans and personal loans. Single-creditor debtors and those already receiving court verdicts are allowed to participate. As of December 2020, 7,924 debtors have signed a debt restructuring contract with the debt clinic with a large number of debtors in the process. Furthermore, the BOT launched the "Debt Resolve Expressway" to provide an additional avenue for debtors to enter into debt restructuring process to help relieve their financial stress during the crisis, as well as increased the number of 1213 line operators to meet the abnormal surge in demand from struggling debtors seeking financial advice.

Another important line of duty is promoting financial literacy particularly among the young generation. In 2020, the BOT advanced the collaboration with partners into the next step to expand the promotion of financial literacy into the broader society with the main target groups including: (1) high-risk workers who are potentially affected by the COVID-19 crisis, such as those in retail and hospitality sectors, through seminars and public communication and (2) vocational students and young adults through the contest projects on financial literacy products "Fin Dee We Can Do!!!

Season 2" and "Fin Dee Happy Life!!!", which aim to increase public awareness about basic personal finance and debt management.

Regarding international economic collaboration, important projects include for instance: representing Thailand as a member of the ASEAN+3 group in promoting effectiveness of the Chiang Mai Initiative and advancing the initiative into the Chiang Mai Initiative Multilateralisation (CMIM), expanding collaboration in promoting the use of regional currencies including rupee, yuan and yen, connecting retail payment between Thailand and Cambodia through interoperable QR code as well as participating in Regional Comprehensive Economic Partnership (RCEP) negotiations in sections related to services trade and investment.

Improving organisational effectiveness to keep pace with changes

Another pillar in maintaining financial stability and resolving the debt crisis sustainably is increasing operational effectiveness within the organisation. During 2020, the BOT underwent organisational restructuring to meet the expansion of duties amid the crisis and progressed forward into becoming a digital organisation to keep pace with the rapid changes as well as enhanced the use of data analytics to inform policy and conduct more comprehensive behavioural analysis.

Another important dimension is building knowledge and academic networks through publishing studies of both internal and external researchers through various channels, as well as expanding the channel of information release to the public through the BOT's application program interface with transparency and continuity.

Furthermore, the BOT organised policy forums to serve as exchange platforms among academics, policymakers and other stakeholders, organised the national academic BOT symposium to disseminate the BOT's research and policy insights to the public and provided research grants.



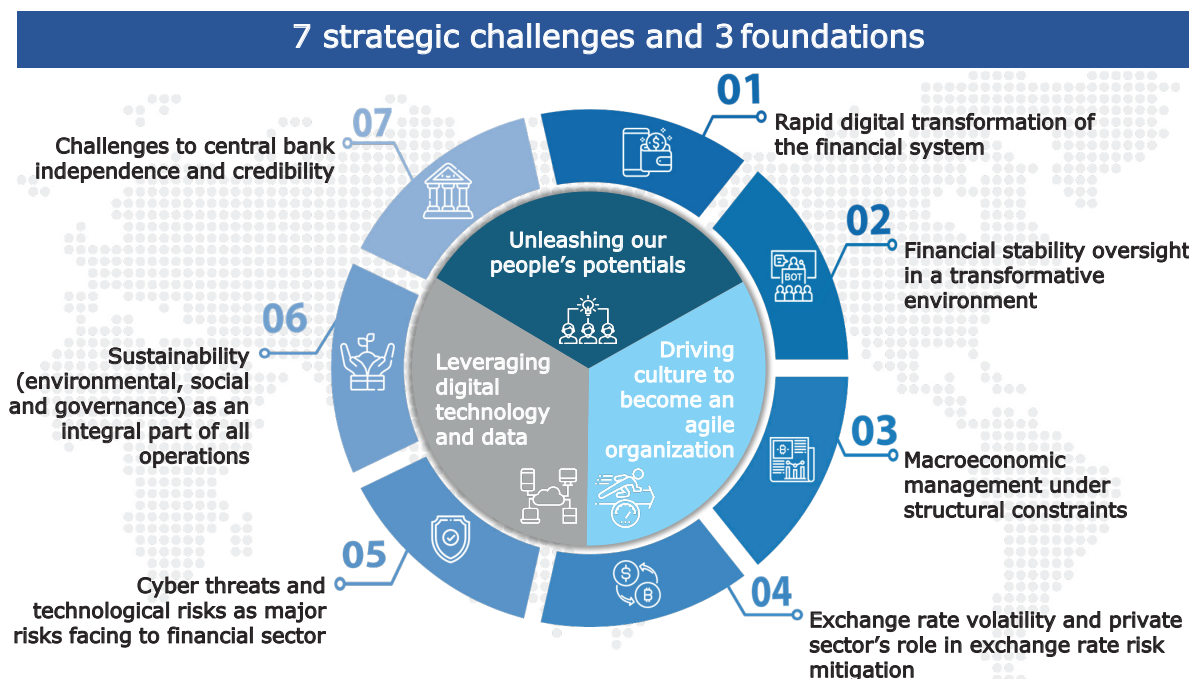
MOU signing ceremony between the National Statistical Office and the Bank of Thailand for the cooperation in academic, data and technical support

Future policy amid challenges from the COVID-19 crisis

All sectors are heading towards a new global landscape in which information and technology play a crucial role, and the COVID-19 crisis requires all sectors to accelerate this adjustment towards the greater use of information and technology. The lack of adjustment would not only result in missed opportunities for businesses but can be a turning point determining business continuity. Meanwhile, the government needs to accelerate information consolidation among agencies while considering the importance of privacy and good governance in order to use such information to design future policy that yields maximum benefits. Since Thailand has a considerably large informal sector, as reflected by a BOT's survey and estimate which suggests that there are 20 million workers in this sector, having information at disposal would allow the government to provide targeted support to those in greatest need. Therefore, we need to exercise caution to avoid solving short-term problems, while neglecting

long-term economic recovery which can be done simultaneously. This strategy would generate a clear policy to drive the Thai economy in ways that are consistent with the post-COVID-19 new global landscape.

For the BOT, in addition to accelerating policy implementation to address the five main challenges—namely, tackling the debt crisis sustainably, maintaining financial stability, preserving macroeconomic stability, building public trust and improving operational effectiveness to ensure sustainable recovery of households and businesses—the BOT will continue to focus on building foundations to address future challenges consistent with the seven areas outlined in the BOT's strategic plan. This is to prepare the Thai economic and financial systems to be ready for new forms of challenges in the highly volatile, uncertain, complex, and ambiguous world. This is to ensure a strong and stable Thai economic recovery in the times ahead.



What Thai People Benefited from the BOT's Policies and Actions in 2020

BOT AT A GLANCE

Thai people
and the
business
sector



As of July 2020, the
outstanding loans under
the assistance measures
amounted to

7.2 trillion baht,
and dwindled down to
4.8 trillion baht by
December 2020.



Retail
borrowers
7.4
million
accounts

SME
borrowers
930,000
accounts

Big corporates
36,000
accounts

คลินิกหนี
DEBT
CLINIC BY SAM

As of end 2020,
there were

7,924 debtors
under the debt clinic, or the total of
11,118 debtors
participated since the inception of
the scheme in June 2017



Ins 1213

ศูนย์คุ้มครองผู้ใช้บริการทางการเงิน
ธนาคารแห่งประเทศไทย

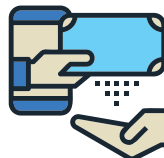
Since its beginning in April 2020 until
the end of the year, there were over

120,000 requests
through the Debt Exit FastLane and 64%
of which were resolved by the creditors.

พร้อมเพย์
PromptPay

As of December 2020,
totaling

56.2
million numbers registered
for Promptpay.



PromptPay accounts
increased by

6.4
million mobile
numbers from
the end of 2019.

The daily
transactions
averaged

20.2
million baht,
at the value of
74.3
billion baht.

The usage peaked
during the beginning
of December 2020
with

27.1
million transactions
in a single day.

Two types of commemorative banknotes in honor of His Majesty King Rama X's historical Royal Coronation Ceremony in 2019.

10 million notes of **10000** -baht banknote were issued

20 million notes of **100** -baht banknote were issued

The financial institutions



FIDF

Reduction of Financial Institution Development Fund fee (FIDF fee) from 0.46% to 0.23% of the total deposits for 2 years.

The financial system



MFLF

During 2020, there were 10 financial institutions borrowing liquidity from Mutual Fund Liquidity Facility (MFLF) corridor with the highest outstanding at

56,047 million baht.

*The amount was gradually repaid until no outstanding remained at the end of 2020.

The Thai society and overall economy



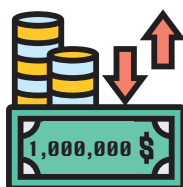
At the end of 2020, the BOT granted soft loan to help more than

73,817 SMEs,
total amounting to
123,107 million baht.

The Monetary Policy Committee reduced the policy rate three times to

0.50%

per annum, which was the lowest policy rate ever implemented.



The BOT, in collaboration with the Ministry of Finance, extended the threshold for proceeds that do not need to be repatriated from 200,000 US dollars to

1,000,000

US dollars, including proceeds from exports and other sources of income.

BOX
1

What Thai People Benefited from the BOT's Operations in 2020

2020 was a year of challenge. Every Thai citizen from all sectors, including the Bank of Thailand (BOT), had to collaborate and adapt in order to navigate through the COVID-19 crisis. The BOT initiated several policy responses and measures to assist Thai people and businesses who faced financial constraints during this difficult time. These included debt relief program, debt restructuring program, and credit assistance measures. At the same time, the BOT ensured the stability of the overall financial system while promoted the resiliency of the Thai economy to be well-prepared for the post-pandemic world.

These policies and measures in response to the COVID-19 crisis became the BOT's key priorities under the three-year strategic plan (2020 – 2022), which focused on enhancing resiliency and efficiency as well as establishing strong foundations for the Thai economic and financial systems. Throughout 2020, the BOT's works strived towards bringing positive impact to all sectors in Thailand, from Thai citizens, the business sector, the financial sector to the society and the overall economy.





Press conference on additional measures to assist SMEs affected by COVID-19 and to stabilize corporate bond market

1. Thai people and the business sector

The COVID-19 outbreak started in the beginning of 2020 had a devastating impact to the Thai people. The BOT, together with financial service providers, launched a set of measures, consisting of minimum supports for all retail and small business borrowers. Examples included lowering the minimum amount of installments, extending terms and lowering interest rates for credit card and revolving loans, and offering loan repayment holiday for 3 months without negatively impacting the borrowers' credit history. Most of financial institutions provided assistance to the borrowers beyond the minimum requirement.

In addition, the BOT supported the debt restructuring program aimed specifically to support the hard-hit small and medium-sized enterprises (SMEs). Some of the regulations were temporarily relaxed in order to enable financial institutions to take a pre-emptive approach and assist their borrowers more extensively and

promptly, thus preventing some of the troubled loans from becoming non-performing loans (NPL).

Nevertheless, due to the severity and prolonged consequences of the COVID-19 pandemic, the BOT issued another set of measures with additional liquidity support for SMEs, which employed the majority of the workforce. The measures included offering loan repayment holidays up to 6 months for SME loans with less than 100 million baht credit limits, and providing 2-year soft loan for SMEs with less than 500 million baht credit limits at government-subsidized interest rate for the first 6 months.

During the second half of 2020, the COVID-19 pandemic situation became less severe and economic activities started to resume as the lock-down measures were gradually lifted. Nevertheless, the full economic recovery required a longer time. Therefore, the BOT initiated the second round of measures to help assist retail borrowers struggling with cash flows. The BOT,

together with the financial service providers, launched several initiatives such as lowering the interest rate ceilings for credit card and personal loans 2 - 4% per year, offering loan repayment holiday for 3 - 6 months, and temporarily increasing the credit limits. Furthermore, the BOT issued an interest calculation guideline for late repayment. With this guideline, the financial service providers were required to charge the penalty rate only on the actual unpaid amount in that period. This new guideline on setting a penalty rate and amortizing debt outstanding aimed to assist borrowers with temporary liquidity shortage and to preempt the loans from becoming NPL.

For SME borrowers given 6-month loan repayment holidays since the beginning of the year, this assistance measure was due in October 2020. More targeted and proactive measures were in place to continue providing supports to these SME borrowers through debt restructuring programs. Specifically, for the business segments with high potentials but were struggling financially due to the COVID-19 situation, the program still maintained their loan status to the normal ones. As for borrowers who still could not repay, the financial institutions would consider on a case by case basis to extend the loan repayment holidays up to 6 months from the end of 2020.

In addition, for SMEs to better access credits from the soft loan scheme, the BOT coordinated with the Ministry of Finance to initiate a special 57-billion-baht portfolio guarantee scheme program to support the soft loan under the management of Small Business Credit Guarantee Corporation (SBCG). The program would reduce banks' credit costs and incentivize soft loan provisions to SMEs. In addition, some of the soft loan criteria were adjusted to enhance flexibility. For example, the new definitions of the eligible participants allowed companies listed in MAI and expanded the definition of SMEs conglomerate

group to include more SMEs eligible for soft loans. Lastly, SMEs could apply for soft loans at the maximum of 2 times and extended application period for another 6 months to April 18, 2021.

As of July 2020, the outstanding loans under the assistance measures amounted to 7.2 trillion baht, and dwindled down to 4.8 trillion baht by December 2020. These included 7.4 million accounts for retail borrowers and 930,000 accounts for SME borrowers, and 36,000 accounts for big corporates. 56% of all these accounts were the commercial banks' borrowers; 44% were from the special financial institutions (SFIs). At the end of 2020, there were 73,817 SMEs under the soft loan scheme accounted for the total loan outstanding of 123,107 million baht.

Other than the above mentioned measures, the BOT also issued a debt consolidation measures to allow borrowers to pool and manage all of their debts under one service provider. For example, a borrower can combine his credit card loan, personal loan and hire purchases with mortgages to better utilize existing collaterals, reduce the interest burdens, and extend loan repayment periods. Moreover, the BOT extended the debt clinic scheme (Phase 3) to cover more types of retail debtors including those whose debts were owed to single creditor, or undergone court proceedings and judgements. In addition, the debtors' eligibility requirement was expanded to include those classified as being NPL prior to July 1, 2020, instead of January 1, 2019. As of end 2020, there were 7,924 debtors under the scheme, or the total of 11,118 debtors participated since the inception of the scheme in June 2017.

For the businesses indebted with multi-creditors, they could adopt for debt restructuring option of 'DR BIZ Program'. Initiated by the BOT together with the financial institutions, the program aimed to provide a one-stop service to



ธนาคารแห่งประเทศไทย
BANK OF THAILAND

DR BIZ Program

Debt restructuring for multi-creditors businesses

- be a business debtor from any sectors
- Was affected by economic distress or COVID-19, but still have good prospect and potential
 - not NPL-debtor, since 1 January 2020
 - NPL debtor, since 1 January 2019* still not in NPL status with at least one creditor.
- No pending litigation

Participating creditors:
Financial institutions and Specialized Financial Institutions

*unless proven affected by the economic distress or COVID-19 before 1 January 2019

What does DR BIZ program do?
Lessen overall debt burdens and shorten the period of contacting multi-creditors

- 1. Restructure current debt burdens:**
 - lower installment payments, extend repayment period and/or modify loan conditions in accordance with the debtor's ability to repay as appropriate.
 - offer grace period, or adjust the debtor's repayment plan as appropriate.
 - review the debtor's remaining credit lines.
- 2. Offer new loan:**
 - Creditors jointly review the debtor's profile in order to provide additional loans to the debtor with good payment records and solid business plans.

The program is open for application from 1 September 2020 to 31 December 2021
Debtors can directly apply via banks
For more information, please contact The Financial Consumer Protection Center (FCC), call 1219 or www.bot.or.th

help lessen their consolidated debt burdens and support coordination among multiple creditors.

Any citizens or businesses requiring additional support or had trouble contacting their creditors could ask for debt restructuring program through the BOT's "Debt Exit FastLane". Since its beginning in April until the end of 2020, there were over 120,000 requests through the FastLane and 64% of which were resolved by the creditors.

While navigating through the COVID-19 pandemic, people and businesses greatly benefited from PromptPay, a digital retail payment system which enabled convenient, fast, and cost-efficient payment transactions as well as supported distribution channels for the government's COVID-19 subsidies to the public. As of December 2020, PromptPay accounts increased by 6.4 million mobile numbers from the end of 2019, totaling 56.2 million numbers registered. The daily transactions averaged 20.2 million baht, at the value of 74.3 billion baht. The usage peaked during the beginning of December 2020 with 27.1 million transactions in a single day.

Given the rapid digitalization in the financial sector, the BOT cooperated with various sectors in organizing a virtual Bangkok FinTech Fair 2020 under the theme "Digital Transformation for the New Normal" to promote digital utilization of the businesses, particularly in SME sector, for the new challenges due to COVID-19 and beyond.





Commemorative banknotes in honor of His Majesty King Rama X's historical Royal Coronation Ceremony in 2019

Furthermore, in 2020, the BOT received the royal permission to issue commemorative banknotes in honor of His Majesty King Rama X's historical Royal Coronation Ceremony in 2019. The banknotes reflected Thai nation's unique culture as well as honored His Majesty King Rama X. There were two types of commemorative banknotes - a 1000 baht and a 100 baht banknotes - of which 10 million and 20 million notes were issued, respectively.

2. The financial institutions

During 2020, Thai people and the business sector were in great needs for liquidity support to weather economic uncertainties caused by the COVID-19 pandemic. The financial institutions therefore had to operate their intermediary functions effectively. In order to further support their operations, the BOT initiated several measures to enable banks to manage their liquidity and cash flows more flexibly and to provide loan supported for the affected sector more effectively. Some of the measures included relaxing the regulation for maintaining Liquidity Coverage Ratio (LCR), and reducing Financial Institution Development Fund fee (FIDF fee) from 0.46% to 0.23% of the total deposits for 2 years,

thus enabling the banks to provide low interest rate loans to consumers and businesses.

In the meantime, in order to preserve the public trust in financial institutions during the time of high economic uncertainties due to the pandemic, the BOT implemented a temporary policy to restrict banks from paying interim dividends and suspend share buybacks to ensure that their amount of capital remained healthy. In addition, the BOT conducted stress tests to evaluate the banks' financial conditions against the crisis. The test results indicated that the banks were well-prepared with high level of capital and reserve funds. Therefore, the BOT allowed the banks to pay annual dividends for the year 2020 at the amount not exceeding the dividend payouts in 2019 and no more than 50% of the net profit in 2020. The policy ensured that the banks remained well-capitalized in the event of a sharp downturn and were able to support an economic recovery once the COVID-19 pandemic began to subside.

3. The financial system

The beginning of the COVID-19 outbreak caused high volatilities in both money and capital

markets worldwide. The Thai financial markets suddenly faced liquidity difficulties and irregular functioning, especially in the money market fund market and the fixed income market. In order to maintain trust and stability of the overall financial system, the BOT issued a measure called Mutual Fund Liquidity Facility (MFLF) to provide liquidity through repurchase agreements for the financial institutions providing liquidity support for money market funds and daily fixed income funds. During 2020, there were 10 financial institutions borrowing liquidity from MFLF corridor with the highest outstanding at 56,047 million baht. The amount was gradually repaid until no outstanding remained at the end of 2020. In addition, the BOT, together with the Ministry of Finance initiated Corporate Bond Liquidity Stabilization Fund (BSF). The Fund served as a precautionary tool to prevent a liquidity shortage problem in the corporate bond market from becoming systemic, affecting the overall financial system. Moreover, the Fund would help stabilize the value of the public savings and relieve financial burdens of the business sector, limiting further adverse impact on the employment and the overall economy. Companies with good performance records but temporarily struggled due to the COVID-19 situation would be eligible for backstop liquidity reserves from the BSF. Both MFLF and BSF successfully restored the investors' confidence and enabled the Thai financial markets to regain its normal operations within a short period of time.

Apart from effectively handling short-term market volatilities, the building-up of digital payment infrastructures enabled Thai financial sector developing innovative financial services for their customers. These infrastructures included transfer and settlement system in the ASEAN thus enabling faster and cheaper cross-border payments. In 2020, Thailand connected the

standard QR payment system with Cambodia, which allowed Cambodians to scan Thai QR code and make payments for goods and services in Thailand.

Moreover, the BOT took part in the development of interbank electronic Know-Your-Customer (e-KYC) infrastructure through National Digital Identity (NDID) system. Customers could verify their identities electronically with any banks to open bank accounts, and access digital financial services faster and more conveniently. NDID system expanded to cover services provided in the capital market, insurance and credit bureau.

The BOT, together with the financial institutions launched a new platform leveraging Distributing Ledger Technology (DLT) for government savings bond issuance. The platform helped streamline the purchase and distribution process. Bond buyers could complete their purchase orders faster, cheaper and more conveniently with a single bank.

Given the fast changing financial landscape driven by digitalization, the BOT also focused on the development of Central Bank Digital Currency (CBDC) to explore its potentials for enhancing efficiency and reducing costs in



Media briefing on Central Bank Digital Currency (CBDC)

financial services for the business sector in tandem with maintaining financial stability. The BOT currently expanded the scope for research and development in Corporate and Retail CBDC. At the same time, the BOT continued its engagement with Hong Kong Monetary Authority (HKMA) as an extension of Project Inthanon to better leverage Distributed Ledger Technology (DLT) for cross-border transfers using Wholesale CBDC to enhance efficiency and reduce transfer costs. Moreover, other aspects, such as risks and legal compliance, were included in the study to ensure that CBDC would be ready and receive full public support if the BOT was to move forward with a broad-based implementation.

As LIBOR would cease its role as a global reference rate by the end of 2021, the Thai financial markets needed to make a smooth transition and adopt a new reference rate. The BOT, together with market participants developed Thai Overnight Repurchase Rate (THOR) to better reflect real market conditions and replace LIBOR as a reference rate for floating-rate financial products and services such as loans and corporate bonds. Moreover, the BOT relaxed the regulation on FX e-money service providers by allowing non-banks to acquire FX e-money licenses. With greater varieties of services available, consumers could safely and conveniently use FX e-money when traveling and pay for goods and services abroad or make purchases from foreign e-commerce platforms.

4. The Thai society and overall economy

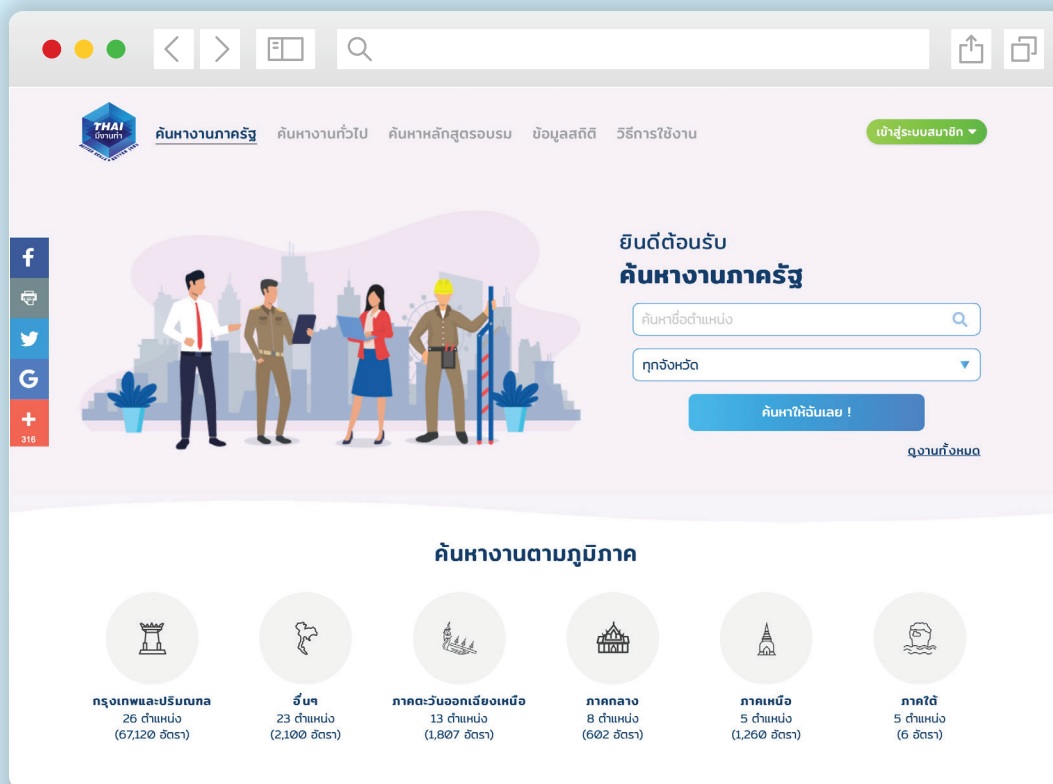
Thailand's economy and society remained largely resilient while weathering the uncertainties. The BOT conducted proactive policies to reduce debtors' interest burdens, relieve liquidity shortage in the financial markets and lessen the negative impact on the overall economy. In 2020, the Monetary Policy Committee reduced the

policy rate three times to 0.5% per annum, which was the lowest policy rate ever implemented.

Furthermore, in order to reduce appreciation pressure on the Thai baht and promote balanced capital flows as well as solve the structural problems in the Thai foreign exchange market, the BOT, in collaboration with the Ministry of Finance, extended the threshold for proceeds that do not need to be repatriated from 200,000 US dollars to 1,000,000 US dollars, including proceeds from exports and other sources of income. The relaxation aimed to help businesses reduce fund transfer costs and manage foreign exchange risk more efficiently. In addition, the new measure allowed Thai residents to freely deposit and transfer funds among Thai Foreign Currency Deposit (FCD) accounts. This would enable exporters to effectively manage liquidity and foreign exchange risk. Residents were allowed to conduct FCD transactions electronically, which reduced transaction costs. Thai residents could also diversify investment into assets denominated in foreign currencies, such as foreign equities and gold denominated in US dollar. Moreover, the regulations regarding investment in foreign securities were also relaxed. These included increasing investment limits and expanding eligible financial products, in order to expand investment options for residents and enhance portfolio diversification.

To ensure that the Thai economy and society could withstand any challenges from the pandemic and beyond, the BOT supported the economic restructuring plan which focused on 3 aspects:

1) **Enhance Thai labor productivity**, which included co-creating a platform [www.ไทยมีงานทำ.com] with the public and private sectors as a source for job opportunities and skill



development. The site was live in September 2020 and by December 14, 2020, there were 586,071 opening positions and 132,764 job enrollments.

2) **Increase competitiveness of the Thai SMEs**, for example, the BOT provided recommendations to The Office of the National Economic and Social Development Council (NESDC) to allocate no less than 30% of the public's procurement budget under goods and services spending category for SME support, and shorten credit terms of large corporates to 30 - 45 days to lessen liquidity problem for the SMEs.

3) **Increase competitiveness of the Thai agricultural sector**, for example, the BOT coordinated with related stakeholders to support the use of satellite image processing technology to evaluate rice fields through a mobile

application called "Malisorn". The registered farmers could use the satellite images of their paddy fields to file for natural disaster insurance claims.

The economic restructuring policies would enhance the country's productivity and competitiveness and yield a long-term positive impact to ensure that the Thai economy could recover and become well-adjusted to the new normal in the post-pandemic world.

2

The Bank of Thailand's Strategic Plan (2020 – 2022)





2.1 Implementation of the Bank of Thailand's Strategic Plan (2020 – 2022)

The year 2020 was the first year of implementing the BOT's strategic plan (2020 – 2022) which was under the theme of “Central Bank in a Transformative World”. The BOT realized that in the next three to five years, Thailand's financial system would face increasingly volatile, uncertain, complex, and ambiguous (VUCA)¹ or the so-called VUCA+ environment. Disruptive technology became a key driving force for rapid changes in people's lifestyles, business models, financial services, and economic system. In addition, Thailand's economy and society constantly faced vulnerabilities and structural challenges, including household debt and aging society. Therefore, this strategic plan aimed to navigate the BOT's operations through the changing environment, by strengthening the resiliency of Thailand's financial and economic

system, and promoting an inclusive and sustainable growth of the Thai economy. This three-year strategic plan consisted of 7 strategic challenges and 3 foundations.

The COVID-19 pandemic started in the beginning of 2020 clearly showed the VUCA+ characteristics of the economic and social system. The main factor greatly affecting Thai economy and society as well as people's daily lives was the situation of public health. This rapidly-changing circumstance was still in line with the BOT's foreseen strategic challenges and foundations which emphasized on the resiliency of Thailand's economic system to deal with the various volatility and uncertainty.

The COVID-19 pandemic in 2020 had greatly reduced Thailand's economic activities and hence, the recovery would take time. Some industries were heavily affected by the pandemic, particularly

¹ volatile, uncertain, complex, and ambiguous

the tourism and its related businesses. Many of small-sized borrowers were also hit very hard. The commercial banking system had been challenged by uncertain business conditions. The financial market was volatile due to the uncertainty of the outbreaks. Furthermore, the unemployment and underemployment rate was increased greatly whereas Thailand's economic structure was transforming into the new normal. Consequently, the BOT had to adjust the way we execute the strategic plan to be more proactive by re-prioritizing the action plans to be in line with current situations, more practical by analyzing thoroughly for the most effective policy and measures, and more outreach by collaborating with every related sector, both government and private entities to drive financial rehabilitation and economic restructuring measures. By doing so, the BOT believed Thailand's economy and society would overcome the COVID-19 pandemic and strongly recover thereafter.

In order to prioritize the initiatives in accordance with current situations, in 2020, the BOT gave priorities to debt restructuring for individuals and businesses, prevention of financial institutions' problems, close monitoring and ringfencing to maintain financial stability, detecting economic pulse timely as well as supporting important structural economic policies, designing the mix of policy instruments to directly address economic problem, increasing the ability

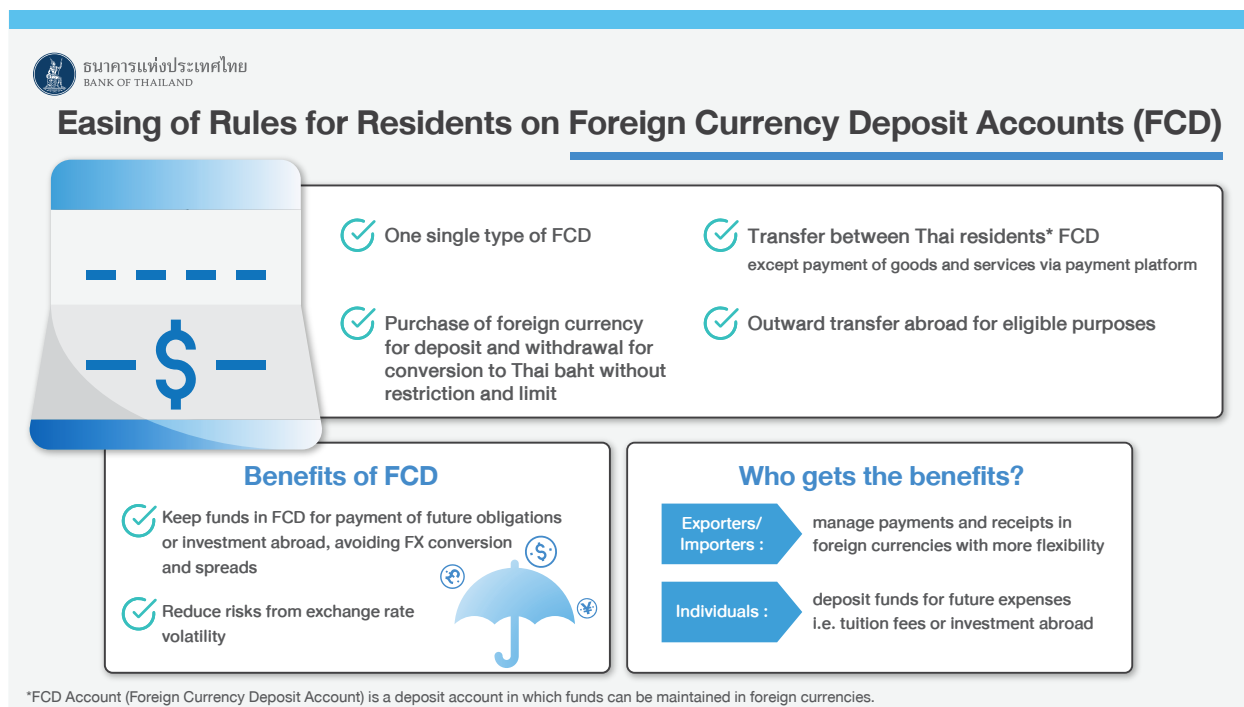
to handle the fluctuation in money markets, and proactive engagement with stakeholders as well as organization management under high uncertainties.

In addition to these priorities, there were other ongoing strategic initiatives in preparing Thailand's economic and financial system, as well as the BOT, for the near future. Such initiatives included the development of digital financial infrastructure that could interoperate among service providers, namely the PromptPay's overlay services that could support varieties of digital payment for people and businesses, as well as the expansion of cross-bank's verification and authentication infrastructure through a common platform called "National Digital Identity (NDID)". The NDID helped facilitate individuals' digital transactions, for example, digital banking accounts could be opened more conveniently. Moreover, allowing digital personal loan's service providers helped promote financial accessibilities by using alternative data to support credit approval.

Moreover, the BOT had begun to adjust FX ecosystem to address the market structural problems by allowing Thai people to freely open Foreign Currency Deposit (FCD) and transfer money among Thai people's FCD accounts. In addition, the BOT had also raised cybersecurity standards for financial institutions and important payment service providers, which the service providers conducted self-assessment and self-regulated



Analyst Meeting to summarize economy outlook and financial policy



regularly following an international standard called “Cyber Resilience Assessment Framework (CRAF)”. At the same time, the BOT had utilized digital technology as its major working tool under digital transformation roadmap by implementing automation systems in various business processes. Also, the BOT had adjusted the work processes to be more agile in accordance with the changing environment and focused more on an outcome-oriented approach. For example, the approach of financial institution supervision had been shifted to offsite examination rather than onsite examination.

2.2 Five Key Urgent Priorities

By late 2020, the COVID-19 outbreak had still not yet passed and had seriously impaired the Thai economy and society. Such effects were expected to last longer, with greater uncertainties, than many had anticipated. The BOT thus had an important role in supporting the Thai economy through the COVID-19 pandemic, such that the economy would be able to get back on track with inclusive growth in the new normal world after the pandemic. The BOT had re-prioritized the strategic plans in accordance with ongoing challenges so that the organization had clear common objectives and could focus efforts on achieving necessary

outcomes urgently. In doing so, the BOT was able to re-allocate resources to support these urgent initiatives accordingly. Five key challenges for the BOT to urgently address going forward were as follows:

Challenge 1: Solving the debt crisis sustainably to enable households and businesses to weather the COVID-19 crisis and recover thereafter. The BOT’s measures aimed to assist a great number of borrowers to be able to restructure their debts in a fast and direct way, whereas households and businesses could have adequate liquidity. Also, the BOT would work on practical proposals, regarding economic stimulation and rehabilitation measures, that could effectively reduce the long-lasting impacts of the pandemic that could leave scars on the economy.

Challenge 2: Maintaining financial stability to support continuous economic recovery. The BOT would ensure that financial institutions have sufficient reserve fund and capital to handle impacts from the crisis and that they could still continuously function as loan providers. Also, the BOT would ensure that the financial sector had a mechanism to practically and efficiently handle



non-performing loans (NPL) as well as a mechanism to help maintain stability in any vulnerable area of the financial system.

Challenge 3: Maintaining macroeconomic stability to ensure that the Thai economic structure is resilient to volatilities during the pandemic and beyond. The BOT aimed to help the Thai economy to better cope with the fluctuation of foreign exchange rates, and to provide the government with proposals that could help expedite the economic restructuring.

Challenge 4: Building public trust, to be one of the most trusted public organizations. Thus, all BOT policies and measures addressing the COVID-19 crisis should be effective and widely recognized by the public. International institutions should have positive opinions towards the BOT's policy implementations, and the public should have positive perceptions towards the BOT's communication strategy. In order to build public trust towards the BOT's operations, the BOT planted the working culture called "Think thoroughly - Answer clearly", meaning that policies should be thoroughly analyzed with data and evidence, considering all aspects and impacts on related stakeholders, such that every policy decision could be explained to the public clearly and transparently.

Challenge 5: Enhancing organization's efficiency, to create the most impactful benefit for the Thai economy and society. The BOT had begun to transform to be an agile organization concerning its structures, operational systems and processes. Moreover, the BOT would develop sufficient future-ready leaders to cope with the BOT's future challenges, roles and responsibilities.

Challenge 1 to 3 were the challenges that must be addressed in order to achieve the BOT's core missions in maintaining economic and financial stability; nonetheless, with high urgency in response to COVID-19 crisis. Meanwhile, challenge 4 and 5 were about the BOT's internal transformations which were key enablers for the effective strategic plan executions as well as other policies implementations.

By focusing on these five key challenges, the BOT would be able to broadly alleviate difficulties for people and businesses, while the stable economic and financial system would enable the Thai economy to weather through the COVID-19 crisis sustainably.



1	Executive Summary
2	The Bank of Thailand's Strategic Plan (2020 - 2022)
3	The BOT's Operation to Alleviate the Impact of COVID-19 Outbreak
4	Other Business-as-Usual Operations
5	Corporate Governance and Risk Management
6	The Future Policy Direction

BOX

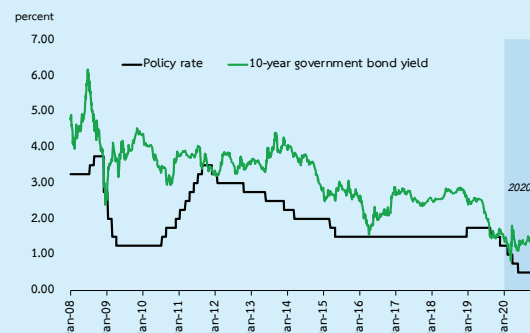
2

The Bank of Thailand (BOT) Conducted Forward-looking Monetary Policy in Order to Mitigate the Impacts of the COVID-19 Outbreak.

In 2020, the Thai economy faced various negative shocks, especially the COVID-19 outbreak, which was a public health crisis and differed from crises in the past. The COVID-19 outbreak led to unprecedentedly severe impact on the economy and the way of life. It was the first time in the history that almost all economic engines were shut down simultaneously. In such a highly uncertain environment, the Monetary Policy Committee (MPC) deemed it necessary to develop scenario planning in various cases, and to have sufficient and appropriate data such as high frequency economic indicators, innovative and more comprehensive economic indicators, as well as insights from interviews. These would assist the MPC in making efficient and timely monetary policy decisions with comprehensive assessment of the economic conditions. Hence, the MPC conducted forward-looking monetary policy by cutting the policy rate three times from 1.25% to 0.50%. The first cut was in February and the BOT was among the first central banks worldwide to cut the policy rate to mitigate the impacts of the COVID-19 outbreak. As a result, the policy rate was now at the historical low level.

The policy rate cuts in 2020 was a forward-looking and pre-emptive policy conduct, without having to wait for adverse impacts to the economy and financial stability to be observed. The lower interest rates would help relieve debt burden and ease overall financial conditions in both credit and bond markets. This would also facilitate debt restructuring and support fiscal measures already implemented and forthcoming.

The Thai policy rate and 10-year government bond yield



Source : Bank of Thailand and ThaiBMA

In addition, the BOT has continuously implemented financial measures in tandem, which helped enhance monetary policy transmission through the interest rate channel. On April 7, 2020, the BOT announced a reduction in the Financial Institutions Development Fund (FIDF) contribution from 0.46% to 0.23% of the deposit base for the duration of two years. This helped enhance monetary policy transmission to the reference loan rates, causing financial institutions to reduce the reference loan rates to the lowest level in 16 years, down by 0.38%age point on average. This helped further reduce interest burden of businesses and households with floating rate loans.

* changes in the average of 14 Thai commercial banks' reference loan rates including MRR, MOR, and MLR during 7 – 15 April 2020.

3

The BOT's Operation to Alleviate the Impact of COVID-19 Outbreak



3.1 Timely Policy Responses to Cope with the Crisis

The improvement of the Thai economy, which was in line with the global economic recovery, was disrupted in the first quarter of 2020 by the rapid spread of the COVID-19 across the globe. Many countries, including Thailand, imposed strict containment measures to limit the spread of the virus. As a result, economic activities in several sectors were stalled, especially the external sectors. The tourism sector was severely hit by international travel restrictions, which led to a collapse of foreign tourist figures in all nationalities. Merchandise exports were affected as the global trade volume contracted sharply due to lockdown measures in the trading partner countries. These deteriorations in external demand subsequently affected domestic demand as private consumption decelerated due to losses in household income and confidence, while private investment contracted accordingly from lower demand and weaker business sentiment. Meanwhile, public spending was limited due to the delayed enactment of the fiscal 2020 budget. Thus, the Thai economy in the first quarter of 2020 contracted by 2.1% from the same period last year, marking a downturn from the 1.3% expansion in the previous quarter.

The overall economic and financial stability remained sound despite signs of vulnerability in certain areas. Inflation rate remained low with a slight increase from the previous quarter. External stability was strong as reflected by low external debts, high international reserves, and continued current account surplus. Financial stability remained resilient, especially the banking system which displayed high levels of capital, loan loss provision and liquidity. The labor market, however, showed signs of vulnerabilities, especially in March when economic activities came to a halt. This was evident by increases in the number of jobless and lay-off claims on the social security system as well as the number of firms and employees registered for a temporary suspension of business.



Press conference on The Monetary Policy Committee (MPC) meeting result



The improvement of the Thai economy, which was in line with the global economic recovery, was disrupted in the first quarter of 2020 by the rapid spread of the COVID-19 across the globe



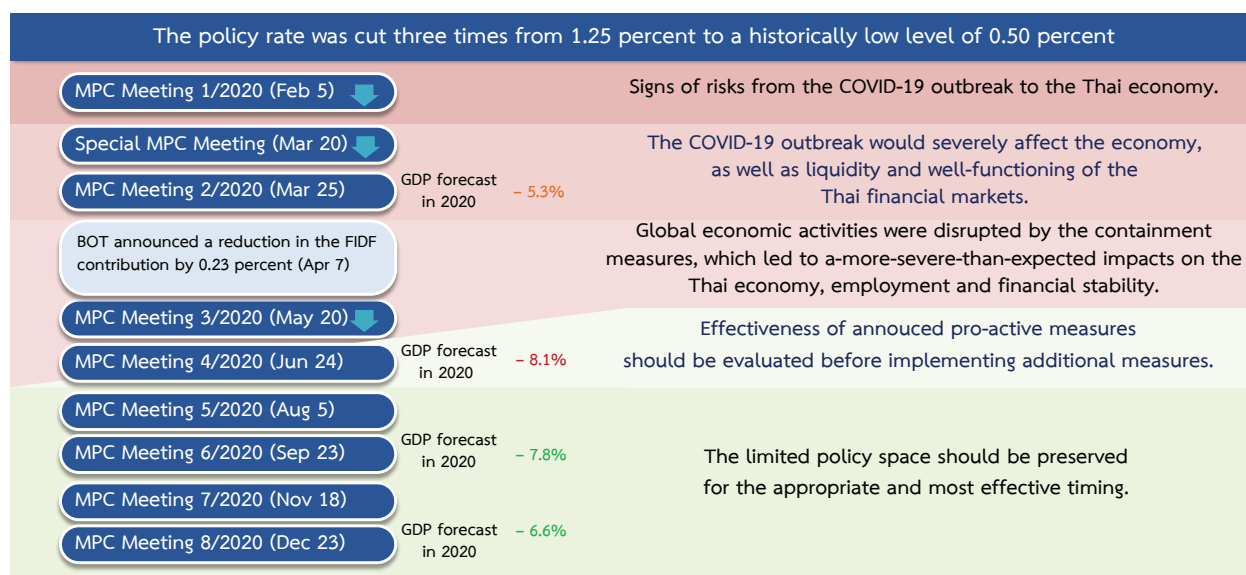
The baht depreciated. The rapid spread of the COVID-19 led investors to sell risky assets, especially currencies of the economies that had high exposures to the external sector, in favor of holding the US dollar. Consequently, the baht against the US dollar, on average, depreciated rapidly during the first quarter of 2020 from December 2019 while the Nominal Effective Exchange Rate (NEER) depreciated by 2.7%.

3.1.1 The Monetary Policy Committee (MPC) cut the policy rate to help alleviate the impacts of the COVID-19 outbreak.

The Bank of Thailand (BOT) proactively eased monetary policy to ensure more accommodative financial conditions at the start of the COVID-19 outbreak in early 2020. The MPC viewed that more accommodative monetary policy was necessary

and hence decided to cut the policy rate in February. The BOT was among the first central banks worldwide to cut the policy rate in response to the COVID-19 outbreak. Later on, the MPC cut the policy rate twice more during the first half of the year, in effect bringing down the policy rate from 1.25% to the historical low level of 0.50%.

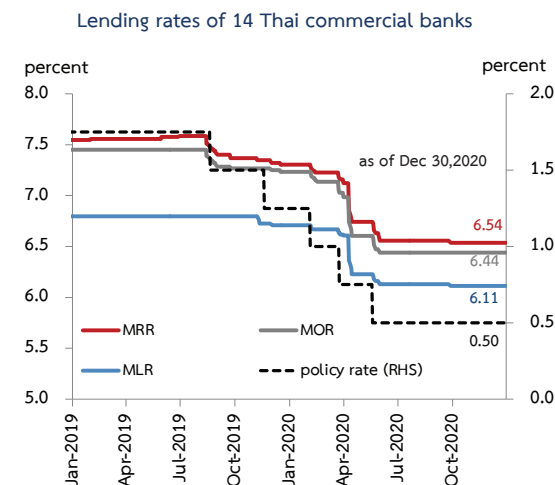
The policy rate cuts prompted commercial banks to lower reference loan rates and new loan rates (NLR) rapidly in the first half of the year. In particular, commercial banks decreased the minimum retail rate (MRR), the minimum overdraft rate (MOR), and the minimum loan rate (MLR) by 0.77, 0.80 and 0.59 percentage point, respectively². The lower lending rates would help ease financial conditions further through lower borrowing costs, and help relieve debt burden of affected businesses and households.



See more details for NLR

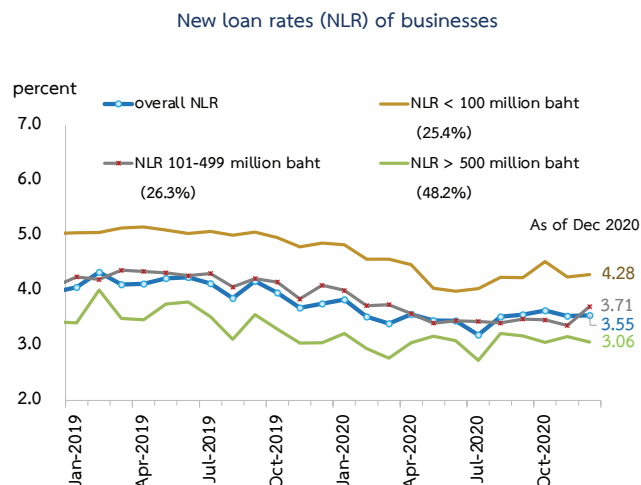
²calculated from changes in the average of 14 Thai commercial banks' reference loan rates including MRR, MOR, and MLR from 1 January to 30 December 2020.

Commercial banks reduced reference loan rates rapidly in the first half of 2020.



Source: Bank of Thailand

Note: Average of 14 Thai commercial banks' lending rates



Source: Bank of Thailand

Note: () represents share of new loans extended in 2019 with contract size exceeding 20 million baht

Nevertheless, the BOT assessed that the severe economic contraction could lead to increased vulnerabilities to financial stability in many dimensions which could create repercussions if not urgently addressed. Such vulnerabilities included, first, deteriorating debt servicing ability of businesses and households due to substantial income loss, causing financial institutions to deal with higher NPLs and become more cautious in extending loans. The private sector could then have more difficulty in credit access and experience liquidity shortage, resulting in a negative feedback loop in the economy. Second, a fall in business revenue could increase default risks or rollover risks. This could potentially trigger a cross default.

In addition, the BOT has continued to expedite financial and credit measures along with monetary policy accommodation. Given the high uncertainties surrounding the COVID-19 situation, the BOT has implemented a series of measures to remedy and assist those affected by the outbreak in a broad-based and timely manner to ensure that this would not hinder the economic recovery in the period ahead. For example, a reduction in the Financial Institutions Development Fund (FIDF) contribution

enabled financial institutions to further reduce bank lending rates, facilitate loan holiday and debt reduction measures, and provide additional loans and debt restructuring.

3.1.2 The BOT announced measures to assist all types of debtors affected by the economic downturn due to COVID-19

Since the beginning of 2020, the BOT has closely monitored the COVID-19 situation and proactively collaborated with financial service providers. The BOT circulation dated February 28, 2020 provided financial assistances for retail, SMEs, and corporate debtors, who were affected by the economic downturn due to COVID-19, but have potential to recover. The measures aimed to provide liquidity support and facilitate debt restructuring e.g. providing additional working capital, granting temporary debt moratorium, extending loan repayment period, reducing interest charged, penalty fees, and service fees, reducing interest rate to below-market rate, granting the 'paying-back principal before interest' scheme as appropriate, or relaxing other repayment requirements. These would increase debtors' liquidity and ensure that they have adequate cash flows for their living and business operations. The BOT also



Press conference on the expansion of measure assisting all types of debtors affected by the economic crisis

relaxed certain conditions on the submission of National Credit Bureau (NCB) report. That is, if debt restructuring is done before the debt is considered NPL, such debt restructuring would not be reported to NCB, leaving no negative record on the credit history. As such, this will motivate debtors to contact financial service providers.

In addition, the BOT has revised regulations in relation to asset classification and provision and those relevant, so that the financial service providers can offer needed assistance efficiently.

The aforementioned measure is effective for 2 years starting from January 1, 2020 to December 31, 2021.

3.1.3 Mutual Fund Liquidity Facility (MFLF)

In March 2020, extreme volatilities in the global financial markets triggered by investors' concerns over the COVID-19 outbreak led to liquidity dry-up and impaired market functioning in the Thai financial markets. In order to maintain stability of the financial system and restore investors' confidence, the BOT introduced the Mutual Fund Liquidity Facility (MFLF) to provide liquidity support to mutual funds that were experiencing massive redemption flows. The facility was operational on March 24, 2020 and set to expire in one year.

Through support from MFLF, financial institutions that provided liquidity for money market funds and daily fixed income funds according to rules specified by the BOT³ were eligible to receive liquidity from the BOT

for a maximum period of 6 months. The lending rate was initially set at policy rate minus 0.50% per annum. However, once mutual funds redemptions slowed and conditions in the government and corporate bond markets improved, the interest rate on the facility was gradually raised, first to policy rate minus 0.25% on May 21, and finally to policy rate flat on July 7, 2020.

Since the launch of MFLF, a total of 10 financial institutions applied for liquidity support. Borrowings from the facility peaked at 56,047 million baht in April 2020, before declining gradually as market conditions improved. All borrowings were repaid in November 2020, and there was no MFLF borrowings outstanding at the end of 2020.



3.2 Immediate Broad-based Measures to Alleviate the Crisis

In the second quarter of 2020, the Thai economy severely contracted at the rate close to the figure during the Asian financial crisis. More stringent lockdown measures both in Thailand and abroad to control the spread of the COVID-19 froze economic activities in almost all sectors. The tourism sector was exacerbated by stricter travel restrictions which resulted in no foreign tourist arrivals. Merchandise exports substantially contracted in several product categories due to weaker demand from trading partners although some categories, such as food and medical gloves, expanded thanks to rising demand from several countries during the COVID-19 outbreak.



See more details for MFLF

³ To be eligible for MFLF liquidity support, financial institutions must provide liquidity to mutual funds via one of the following channels: 1) purchase of mutual funds units, 2) repurchase agreements with mutual funds, 3) purchase of corporate bonds from mutual funds, and 4) lending to unit holders of mutual funds that had been closed.

The collapse in external demand subsequently affected domestic demand as employment and household income severely deteriorated. In addition, weak consumer confidence as well as suspended economic activities from lockdown measures, caused private consumption to decline sharply, despite the income support schemes from the government to those affected by the COVID-19. Private investment contracted at a higher rate as firms postponed their investment plans due to weak domestic and external demand, causing excessive capacity, while business sentiment deteriorated from high economic uncertainties. Nonetheless, government spending rebounded and played a crucial role in supporting the economy, on the back of the enactment of the fiscal 2020 budget and the Emergency Decree Authorizing the Ministry of Finance to Raise Loans to Solve Problems, to Remedy and Restore the Economy and Society as Affected by the Coronavirus Disease Pandemic, B.E. 2020. Overall, the Thai economy in the second quarter of 2020 contracted sharply by 12.1%, the largest contraction in 22 years since the Asian financial crisis where growth rate registered a substantial negative growth of 12.5% in the second quarter of 1998.

Overall economic and financial stability became more vulnerable in many aspects. Headline inflation rate became more negative as domestic retail oil prices fell in line with the global crude oil prices and from the government subsidies which reduced costs of living by subsidizing electricity and water bill. Core inflation rate edged down but remained positive. Labor market substantially deteriorated as reflected in large increases in unemployment rate, the number of jobless and lay-off claims on the social security system, and the number of firms and employees registered for the temporary suspension of business in both the manufacturing and service sectors, especially tourism-related business. As a result, households were hit by sizable income shocks and their debt serviceability deteriorated. Stalled economic activities also caused liquidity problems

to many businesses, especially SMEs that usually have lower financial buffer, thereby affecting their abilities to service their debt. Nevertheless, external and financial stability remained sound, especially the banking system which was able to preserve high levels of capital, loan loss provision, and liquidity. Risks in the banking sector, however, increased as the economy contracted, especially credit risks of households and businesses that suffered from income losses.

The baht continued to depreciate. Although the baht against the US dollar showed signs of appreciation due to increased gold exports amid higher global gold prices, the baht on average depreciated in the second quarter of 2020 from the previous quarter. Meanwhile, the Nominal Effective Exchange Rate (NEER) depreciated by 0.6% as the baht depreciated more compared to other major currencies.

3.2.1 Phase I: Measures to assist debtors affected by the economic downturn due to COVID-19

During March 2020, the widespread outbreak of COVID-19 to various areas had led to area-lockdowns imposed by the government, causing severe effects to businesses and individuals. The BOT had collaborated with financial service providers, and mutually agreed to adopt measures to assist debtors in timely manner. Therefore, on March 26, 2020, the BOT issued minimum measures to assist debtors with credit cards, personal loans, hire purchase, leasing, housing loans, and SMEs loans, whose debts are not yet classified as NPL as of March 1, 2020. The measures include reducing the minimum monthly repayment for credit card from 10% to 5% during 2020 to 2021 and will be lifted to 8% in 2022, converting credit card and revolving loans to long-term loans with lower interest rates, temporarily suspending on repayment of principal and/or interest, and reducing loan installments. The measures took effect on April 1, 2020, and these measures generally provided assistance for approximately 3 months.



ธนาคารแห่งประเทศไทย
BANK OF THAILAND

มาตรการช่วยเหลือด้านสินเชื่อ สำหรับลูกหนี้ที่ได้รับผลกระทบจาก COVID-19



มีผลตั้งแต่ 1 เม.ย. 63 เป็นต้นไป



ไม่เสียประวัติข้อมูลเครดิต

มาตรการนี้เป็นเพียงมาตรการช่วยเหลือขั้นต้น เพื่อลดภาระหนี้ของประชาชน
ผู้ให้บริการทางการเงินแต่ละแห่งสามารถให้ความช่วยเหลือเพิ่มเติมที่คิดว่ามาตรการขั้นต้นได้

ประเภทสินเชื่อ	แนวทางการให้ความช่วยเหลือลูกหนี้ขั้นต้น								
1. สินเชื่อบัตรเครดิต และสินเชื่อเงินสดหมุนเวียน	<p>ลดอัตราผ่อนชำระขั้นต้น (เดิม 10%)</p> <table border="1"> <thead> <tr> <th>ปี</th><th>ผ่อนขั้นต้น</th></tr> </thead> <tbody> <tr> <td>2563-2564</td><td>5%</td></tr> <tr> <td>2565</td><td>8%</td></tr> <tr> <td>2566</td><td>10%</td></tr> </tbody> </table> <p>นอกจากนี้ ลูกหนี้สามารถแปลงหนี้ เป็นสินเชื่อระยะยาว ที่ดอกเบี้ยต่ำลงได้</p>	ปี	ผ่อนขั้นต้น	2563-2564	5%	2565	8%	2566	10%
ปี	ผ่อนขั้นต้น								
2563-2564	5%								
2565	8%								
2566	10%								
2. สินเชื่อส่วนบุคคล ที่ผ่อนชำระเป็นงวด และสินเชื่อจำนำทะเบียนรถ	<p>สำหรับธนาคารพาณิชย์และสถาบันการเงินเฉพาะกิจ (SFI)</p> <ul style="list-style-type: none"> พักชำระเงินต้นและดอกเบี้ยเป็นเวลา 3 เดือน <p>สำหรับผู้ให้บริการอื่น เลือกดำเนินการระหว่าง</p> <ul style="list-style-type: none"> พักชำระเงินต้นและดอกเบี้ยเป็นเวลา 3 เดือน หรือ ลดค่างวดอย่างน้อย 30% ของค่างวดเดิม เป็นเวลา 6 เดือน 								
3. สินเชื่อเช่าซื้อ (Hire purchase) รถมอเตอร์ไซด์ : วงเงินไม่เกิน 35,000 บาท รถทุกประเภท : วงเงินไม่เกิน 250,000 บาท	<ul style="list-style-type: none"> พักชำระเงินต้นและดอกเบี้ยเป็นเวลา 3 เดือน หรือ พักชำระเงินต้น เป็นเวลา 6 เดือน 								
4. ลีสซิ่ง (Leasing) หนี้คงเหลือไม่เกิน 3 ล้านบาท									
5. สินเชื่อบ้าน วงเงินไม่เกิน 3 ล้านบาท									
6. สินเชื่อธุรกิจ SMEs ไมโครไฟแนนซ์ และนาโนไฟแนนซ์	<p>พักชำระเงินต้น 3 เดือน และพิจารณาลดดอกเบี้ยให้ตามสถานการณ์ของแต่ละราย</p>								

- ลูกหนี้ที่มีศักยภาพยังสามารถชำระหนี้ได้ตามปกติ ซึ่งจะได้รับเงื่อนไขพิเศษตามความเหมาะสม
- ลูกหนี้ที่มีสินเชื่อหลายประเภท สามารถได้รับความช่วยเหลือทุกประเภทตามเงื่อนไข

มาตรการนี้เป็นความร่วมมือระหว่าง ธปท. และ 9 หน่วยงาน ได้แก่ 1. สมาคมธนาคารไทย 2. สมาคมธนาคารนานาชาติ 3. สมาคมสถาบันการเงินของรัฐ 4. สมาคมลีสซิ่งไทย 5. สมาคมธุรกิจเช่าซื้อ 6. สมาคมการค้าผู้ประกอบการธุรกิจสินเชื่อทะเบียนรถ 7. สมาคมธุรกิจเช่าซื้อรถจักรยานยนต์ไทย 8. ชมรมธุรกิจบัตรเครดิต-สมาคมธนาคารไทย 9. ชมรมสินเชื่อส่วนบุคคล



Field trip in Phitsanulok province to meet the entrepreneurs

3.2.2 Additional measures to assist SMEs affected by COVID-19 outbreak and to stabilize the corporate bond market.

The BOT and the Ministry of Finance had worked closely together to swiftly implement measures to alleviate the impact of COVID-19 outbreak on households and businesses. However, the intensified and longer-than-anticipated outbreak necessitated additional relief measures to support small and medium-sized enterprises (SMEs), which were the backbone of the Thai economy and a primary source of employment, to have sufficient funding and liquidity to bridge through these testing times and retain their workforce. It was also necessary to have measures to stabilize the corporate bond market to ensure the normal functioning of the market as the financing source for the private sector and to safeguard the economy and financial stability as a whole. The package consisted of four important measures.

Measure 1 : A loan payment holiday of 6 months for all SMEs with a credit line not exceeding 100 million baht, to provide the much-needed liquidity to the SMEs.

SMEs with a line of credit with a commercial bank or a specialised financial institution not exceeding 100 million baht were automatically eligible to pause payments of both principal and interest for 6 months. This payment holiday would not be considered as a missed payment and thus would not impair credit history. The BOT hoped that this measure would provide some relief such that SMEs would have more cash on hand to support their businesses and meet necessary expenses, especially wages. The BOT

expected that during this 6-month period, financial institutions would work closely with the borrowers to restructure their debts so that the debt repayment plan aligned with their declining incomes.

Nevertheless, for those SMEs that were in a position to continue servicing the loans, the BOT advised that they repay their debts as normal or as much as they could because this measure was merely a postponement of debt payment, while interest charges continued to accrue during the holiday period. More importantly, a regular flow of loan repayment would avail financial institutions with liquidity to help more SMEs that were severely affected by the outbreak.

Measure 2 : Soft loans to support liquidity for SMEs with a credit line not exceeding 500 million baht, with a concessional interest rate of 2% per annum and interest-free for the first 6 months.

The BOT provided soft loans of 500 billion baht at 0.01% interest rate per annum to financial institutions for 2 years. Financial institutions would then on-lend to SMEs. SMEs that were eligible for this measure must (i) operate domestically, (ii) are not listed in the Stock Exchange of Thailand or the Market for Alternative Investment (MAI), (iii) have a credit line with a financial institution not exceeding 500 million baht, and (iv) still have a performing loan with normal repayment status or arrears of less than 90 days (non-NPL) as of December 31, 2019. The maximum drawdown for the soft loan was 20% of the loan outstanding as of end of December 2019.

During the first 2 years, financial institutions would charge a concessional rate of 2% per annum. For the first 6 months, the government would bear the interest burden resulting in no interest cost for SMEs. In order to help expedite the issuance of new loans during this highly uncertain period, the government, through the Ministry of Finance, would partly compensate financial institutions for losses that might be incurred on these additional new loans. In case these loans turned nonperforming by the end of the second year, financial institutions would be compensated no more than 70% of the additional loans for borrowers with a credit line not exceeding 50 million baht, and no more than 60%

of the additional loans for borrowers with a credit line of 50–500 million baht.

Measure 3: Market liquidity enhancement to stabilize the corporate bond market: Establishment of the Corporate Bond Stabilization Fund (BSF)

During the period when COVID-19 outbreak intensified, the business sector began to experience liquidity shortage as economic activities came to a halt. At the same time, investors avoided risky assets and sought refuge in cash resulting in a severe impairment in the functioning of the corporate bond market that might have resulted in widespread defaults.

ตรวจสอบคุณสมบัติก่อนขอ “สินเชื่อซอฟต์โลน” สำหรับ SMEs ที่ได้รับผลกระทบจากโควิด 19

คุณสามารถยื่นขอสินเชื่อซอฟต์โลนกับธนาคารพาณิชย์
หรือธนาคารของรัฐทุกแห่งที่คุณใช้บริการได้ หาก...

- 1 เป็นผู้ที่ประกอบธุรกิจในประเทศไทย
และไม่จดทะเบียนในตลาดหุ้น
- 2 ไม่เป็น NPL ณ วันที่ 31 ธันวาคม 2562
- 3 มีวงเงินสินเชื่อรวมไม่เกิน 500 ล้านบาท
กับธนาคารพาณิชย์หรือธนาคารของรัฐ
แต่ละแห่งอยู่แล้ว



ธนาคาร
จะแจ้งผลอนุมัติ
ภายใน 10 วัน

สิทธิที่จะได้รับ



- ☒ สินเชื่อซอฟต์โลนวงเงินไม่เกิน 20%
ของยอดสินเชื่อคงค้าง ณ วันที่ 31 ธันวาคม 2562
- ☒ อัตราดอกเบี้ยไม่เกิน 2% ต่อปี นาน 2 ปี
คิดตามวงเงินที่เบิกใช้จริง
- ☒ ฟรี ดอกเบี้ย 6 เดือนแรก จ่ายคืนเฉพาะเงินต้น
- ☒ ฟรี ค่าธรรมเนียมทุกประเภท

ระยะเวลาการขอสินเชื่อ
23 เมษายน – 22 ตุลาคม 2563

สามารถติดตามมาตรการ
ช่วยเหลือลูกหนี้เพิ่มเติมได้ที่



The BOT, therefore, proposed the establishment of the Corporate Bond Stabilization Fund (BSF) with total investment amount of 400 billion baht to provide short term liquidity (bridge financing) to fundamentally sound firms that faced temporary liquidity shock. Such measure would help restore the confidence of market participants and prevent corporate bond market illiquidity from affecting the stability of the financial system as a whole. The measure also helped protect savings of the general public and lessen possible impacts on the issuers' businesses with potential adverse consequences on employment and economic conditions.

Eligible corporate bonds for BSF assistance must have investment grade credit ratings and issued prior to April 19, 2020 with the maturity date between 2020 - 2021. The total amount of such bonds in the market was around 900 billion baht. The BSF would provide liquidity support through its investment in corporate bonds with the maturity period of less than 270 days. The assisted firm was required to obtain at least 50% of the funding (the original bond amount due) from other sources through corporate bond issuance, borrowing from financial institutions, or other funding sources. In addition, the firm must comply with other BSF criteria to ensure that the funding was used strictly as intended.

Even though by the end of 2020 there were no businesses requiring assistance from the established fund, the measure achieved its objective of restoring market confidence and protecting the overall stability of the financial system as evidenced by the return of normal funding conditions in the corporate bond market.

Measure 4 : Reducing the FIDF fee to ease the loan interest burden of businesses and households.

The BOT would halve the rate of contribution from financial institutions to the FIDF from 0.46% of deposit base to 0.23% per annum for the period of two years. This was intended for financial

institutions to immediately pass on such cost savings to businesses and households by further reducing their loan rates. In order for the BOT to effectively implement the above mentioned measures to support SMEs and stabilize the corporate bond market, the Cabinet approved the two Draft Emergency Decrees as follows:

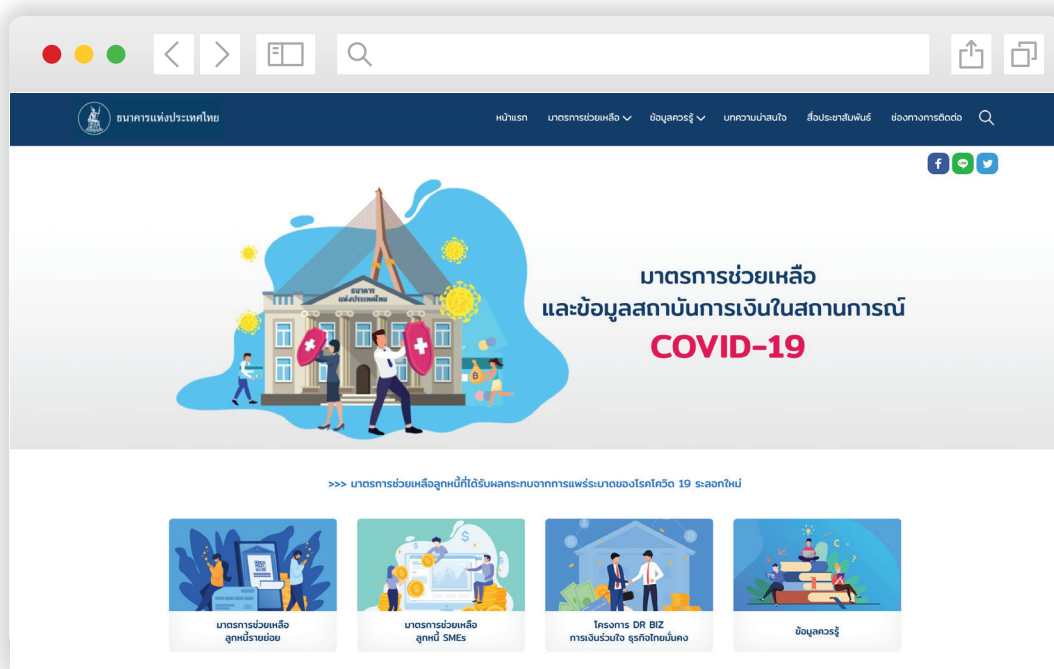
1. Draft Emergency Decree on Financial Assistance to Small and Medium-sized Enterprises Affected by Coronavirus Pandemic, and
2. Draft Emergency Decree on Provision of Liquidity Support to Stabilize the Corporate Bond Market.

These two Emergency Decrees authorized the BOT to manage liquidity and direct funds to the affected target groups. The Decrees also put in place a mechanism that allowed the government to indemnify for losses that may arise in the future in connection with these measures. This mechanism was necessary during this period of heightened economic uncertainty caused by the COVID-19 pandemic. The two Decrees also enhanced the BOT's policy toolkit enabling the BOT to readily and promptly deploy additional measures to support SMEs and ensure stability of the corporate bond market.

The BOT trusted that the suite of relief measures that have been continuously implemented starting from encouraging banks to engage in early debt restructuring measure and the debt payment holiday for retail customers, together with additional measures announced today would support affected businesses and households, stabilize the corporate bond market, and ensure the continued functioning and stability of the whole financial system.

3.2.3 BOT launched BOT COVID-19 website to facilitate the access to information on financial relief measures

Since early 2020, COVID-19 pandemic has adversely affected livelihoods, employment, and activities of various business sectors. The BOT has continuously released various financial relief



BOT COVID-19 website

measures to mitigate the impact on borrowers and to manage the liquidity in the Thai financial market. In this connection, financial institutions as well as financial service providers cooperated well with the BOT's measures by issuing different types of debt relief measures to help their customers. To facilitate general public and businesses to access to information on such financial relief measures, the BOT launched BOT COVID-19 website (www.bot.or.th/covid19) which was the information center for all financial relief measures and other related issues. This website was designed on user-centric approach by using clear and simple language with a user-friendly interface, enabling users to search for relevant information rapidly and conveniently with contact details that they could apply for assistance instantly.

3.2.4 Strengthening capital against risks arising from the coronavirus pandemic

COVID-19 pandemic has widespread impact to the public, business sector, and economy of the country. Financial institutions, in consequence, have an essential role in driving the economy. As a result, financial institutions have to manage to have adequate levels of capital in order to continually

support credit and economic activities, as well as, to withstand unanticipated events and to build confidence among depositors and investors.

Initially, BOT required all commercial banks to submit a capital plan of one to three years going-forward, as well as, to suspend interim dividend payments for the year 2020, and to refrain from share buybacks, redeeming or repurchasing Additional Tier 1 or Tier 2 capital instruments before its maturity date in case that there was no plan to raise funds to replenish its capital funds. Later on, from the review of the capital plans together with the results of stress test, BOT considered that the Thai banking system remained resilient to withstand the adverse impact. However, given the high uncertainties of the situation, BOT deemed it necessary to issue preventive measures to strengthen capital by allowing financial institutions to pay dividends for the year 2020 not exceeding its 2019 payout ratio and 50% of its 2020 net profit, together with the suspension of share buybacks, redeeming or repurchasing Additional Tier 1 or Tier 2 capital instruments before its maturity date in case that there was no plan to raise funds to replenish its capital funds.

3.2.5 Providing safe and convenient of payment services for Thais during COVID-19 outbreak During the first half of 2020, the lockdown implemented by governments and temporary closure of certain places such as schools, restaurants, department stores, theaters, including with work from home policy affected the way people lived and worked. People tended to move towards online channel; for example, shopping online, and ordering food delivery via online platform, and avoid touching banknotes and coins. These changing behaviors promoted “digital payment” to be the most preferred choice of payment for Thais.

The BOT continually enhanced payment systems infrastructure and payment services, especially providing payment infrastructure “PromptPay” to facilitate retail payment transactions with more convenient, faster and lower cost for both general public and businesses. In addition, PromptPay infrastructure had generated a variety of extension services. For example, cross-bank bill payment services, Payalert services, welfare payments, electronic tax refunds for personal and corporate, and the increasing of the ceiling on electronic funds transfer for high-value transactions, as well as, payment service that helped Thais’ payment more convenient by scanning “QR Payment” at point of sales. Latest figure showed that there were 7 million QR payment acceptance points nationwide, both in-store and online.

These developments helped facilitate more convenient, more choices, as well as promoted financial inclusion for general public and also supported businesses that allowed them to transact anywhere anytime especially during the COVID-19 situation, resulted in the increasing of digital payment usage at the end of March 2020 grew by 50% from the previous year. Promptpay daily usage in 2020 grew significantly with an average transaction volume at 20.2 million transactions per day, equivalent to a value of 74,300 million baht, and continued to increase in the future.

While the usage of digital payment transactions

have been increasing, the BOT also strengthened the supervisory framework of both critical payment system infrastructures and retail payment service providers, including banks and non-banks.

Such efforts aim to build public confidence in digital payments by ensuring that payment systems support the increasing of digital payments and maintain adequate security to lessen impacts on customers and the overall system from system failures and cyber threats. Moreover, the BOT emphasized on promoting understandings of using digital payments continually. For example, promoting uses of mobile banking application and providing knowledge and understandings about Thailand’s payment systems development and payment statistics through Payment Insight: Bi-monthly report, which was published through various channels such as the BOT website, media’s publications, and social media platforms.

Moreover, during the COVID-19 pandemic the BOT introduced the measures to reduce the risk of virus transmission via banknotes to the public by separately storing the banknotes deposited from commercial banks for 14 days (up from the usual 3 to 5 days) before recirculating them back to commercial banks. The additional period was set to be longer than the lifetime that the virus could survive on the banknotes and to ensure that there would be no transmission via banknotes. The old banknotes were destroyed and replaced by the new ones. The BOT also collaborated with commercial banks to inject significant amount of the new 500-baht banknotes into circulation for enhanced cleanliness. In addition, the BOT directly communicated to the public via various channels and media about hygienic practices of using banknotes in the COVID-19 pandemic.

To sufficiently meet all public demand of banknotes in the COVID-19 pandemic, the BOT also increased the amount of banknote inventory and closely worked with commercial banks to reach the maximum efficiency of services provided to the public.

BOX
3

How Can “Digital Payment” Help Thais during the COVID-19 Outbreak



Since Thais' behavior shifted towards online channel; work from home policy, food delivery, shopping online, “digital payment” became the preferred choice of payment because the transactions can be done anywhere anytime through various payment services; fund transfers and payment via mobile banking application or PromptPay infrastructure, QR payment, online payment using debit or credit cards, which grew significantly compared to the previous year. QR payment acceptance points in shops which help facilitate more convenient, avoid touching banknotes and coins to prevent epidemic of COVID-19

Furthermore, digital payment was the principal channel for the government to distribute welfare payments to recipients with fast and precisely. It was also the channel to provide subsidies to assist people affected by COVID-19 and to stimulate consumer spending and economy. These projects benefited Thais with more convenient by accepting payments through digital channel, and also promoting awareness in using digital payment widely and continually in the future.

In 2020, digital payment transactions increased significantly compared to the previous year;

- Thailand's digital payment transactions stood at 202 times per capita
- PromptPay registration increased by 6.4 million IDs from 2019, totaled 56.2 million IDs

- PromptPay daily average transaction volume at 20.2 million transactions per day which increased by 109.8% (YoY), equivalent to a value of 74,300 million baht which increased by 55.1% (YoY)
- Online payment using debit or credit cards transaction volume in December 2020 was 17.9 million transactions increased by 35.3% (YoY), totaled 35,500 million baht.
- QR Payment
- QR payment acceptance were 7 million points
- QR payment transaction volume in December 2020 were 36.3 million transactions, totaled 71,600 million baht.

However, for banknote management, the Bank of Thailand (BOT) realized the risk of using banknotes during the COVID-19 pandemic. Therefore, the banknotes deposited from commercial banks were separately stored for 14 days before recirculating back to commercial banks and public in order to reduce the risk of virus transmission via banknotes. The old banknotes were destroyed and replaced by the new ones. The BOT collaborated with commercial banks to inject more new banknotes into circulation. Information on how to properly clean banknotes was regularly communicated.

Moreover, to sufficiently meet all public demand of banknotes in the COVID-19 pandemic, the BOT increased the amount of banknotes in inventory and closely worked with commercial banks to reach the maximum efficiency of services provided to the public. As usual, the daily counterfeit situation was closely monitored and dealt with. The BOT also communicated the security features of banknotes to the public via various channels and media.



Media briefing on debt consolidation measure

3.2.6 Amendment to regulations on market conduct to include new service providers and supervision on default interest and debt payment hierarchy

The BOT issued two financial consumer protection regulations: 1) Regulations on Market Conduct and 2) Regulations on Market Conduct Implementation Guideline for Each Service Provider Type. The scope of the market conduct regulation was broadened to include specialized financial institutions, non-bank nano finance companies, and asset management companies; and the concept of proportionality was introduced to encourage better execution that suits the differences among service providers regarding sizes, organizational structures, the number of staff, types of products, and target customers. Additionally, an alteration to a process to receive customers' consent was made. The customers must explicitly give their consent (opt-in) as opposed to the former process which allowed the service providers to regard no objection as consent (opt-out). The aforementioned regulations was effective from September 4, 2020 onwards.

Furthermore, the BOT issued Regulations regarding the imposition of default interest and debt payment hierarchy dated October 9, 2020

determining 3 important practices: 1) a default interest be calculated upon “the principal portion of the installment in arrears” 2) a default interest rate be determined at “the contractual interest rate plus no more than 3% per annum”, and 3) the debt payment hierarchy “starting from fee, interest, and principal portion of the longest overdue installment”, in order that the imposition of default interest and debt payment hierarchy would be aligned with the actual affordability and payment behavior of the borrowers. The regulations also suggested an appropriate determination of a default interest rate to be different from the contractual rate imposed on non-delinquent borrowers, while balancing with the affordability of borrowers to pay off their debts. Consequently, the Non-Performing Loans in the financial system would be reduced and debt burdens of the borrower would be alleviated. Moreover, the regulations encourage more of successful debt restructuring negotiations as well as be a reference guideline and practice to other relevant organizations. The Regulations were effective from April 1, 2021 onwards, except for the regulation on debt payment hierarchy, which will be effective on July 1, 2021 onwards.





ธนาคารแห่งประเทศไทย
BANK OF THAILAND

ประกาศ Market conduct ฉบับใหม่

“กำกับดูแลเข้มขึ้น ปรับใช้เหมาะสม ชัดเจนในทางปฏิบัติ”

มีผลบังคับใช้ตั้งแต่วันที่ 4 ก.ย. 63 เป็นต้นไป



กำกับดูแลเข้มขึ้น



ขยายขอบเขตการกำกับดูแล
ไปยังสถาบันการเงินเฉพาะกิจ (SFIs)
บริษัทบริหารสินทรัพย์ และนาโนไฟแนนซ์
(เดิมใช้กับสถาบันการเงินและบริษัทในเครือ
บริษัทบัตรเครดิต และบริษัทสินเชื่อส่วนบุคคลเท่านั้น)



**เปิดเผยความผิดของกรรมการ
และผู้บริหารระดับสูง เพิ่มเติม**
(เดิมเปิดเผยได้เฉพาะความผิดขององค์กรเท่านั้น)



ปรับใช้เหมาะสม

เพิ่มแนวทางการนำหลักเกณฑ์ไปปรับใช้ให้เหมาะสมกับผู้ให้บริการแต่ละประเภท
ให้สอดคล้องกับลักษณะธุรกิจ ขนาดองค์กร ประเภทผลิตภัณฑ์และกลุ่มลูกค้าเป้าหมาย



ชัดเจนในทางปฏิบัติ

เพิ่มสิ่งที่ควรและไม่ควรปฏิบัติ ในการให้บริการทางการเงิน เช่น



ไม่ขายบัตรเครดิตพ่วงประกัน
โดยอ้างว่าบัตรธรรมดาหมด
และห้ามแถมบัตรกดเงินสด
หากลูกค้าไม่ได้สมัคร



เพิ่มวงเงินบัตรเครดิตให้ลูกค้าได้
ต่อเมื่อลูกค้าแจ้งยืนยันยอมรับ
การเพิ่มวงเงิน (opt in) แล้วเท่านั้น



ต้องชี้แจงให้ลูกค้าทราบว่า
อาจไม่ได้รับคืนเงินต้นเต็มจำนวน
สำหรับผลิตภัณฑ์ที่ไม่รับประกันเงินต้น
เช่น กองทุนรวม ประกันชีวิต



ไม่ควรกำหนด KPI จากยอดขาย
เพียงอย่างเดียว โดยไม่นำเรื่องร้องเรียน
และคุณภาพการขายนามาพิจารณาด้วย



ห้ามกำหนดให้การเปิดเผยข้อมูลลูกค้า
เป็นเงื่อนไขการขอใช้บริการ
ต้องขอความยินยอมจากลูกค้าก่อน
(กรณีข้อมูลนี้ไม่กระทบต่อการใช้บริการ)



มีช่องทางขอยกเลิกความยินยอม
และดำเนินการยกเลิกความยินยอม
ให้ลูกค้าโดยเร็ว

3.2.7 The opening of “Debt Exit Fastlane”

The Financial Consumer Protection Center of the BOT monitors financial difficulties in the retail sector through its Call Center 1213. Apparently, COVID-19 and the subsequent social-distancing measures at the beginning of 2020 widely caused losses of income for individuals and SMEs. At the same time, contacting creditors to discuss debt restructuring became far less convenient due to branch closures and changes in operating hours. Hence, the Debt Exit Fastlane was set up in April 2020 as a supplementary channel for debtors to reach their creditors amid the difficult time and lessen some anxiety.

Debt Exit Fastlane operates as an online channel accepting requests for restructuring retail debts of any product type and legal status. These online requests are sent out to the creditors as specified for consideration in accordance with each creditor’s policy. Customers with difficulties filling an online form, may call 1213 for assistance. At the same time, where no deals can be agreed voluntarily, the BOT requests the creditors to provide a reason behind the unsuccessful requests, in order to fine tune its policies and possibly relieve impediments.

The processing time typically takes 15 days but varies with the types of debt facilities and the volume of requests received by individual creditors. While the creditors are asked to report the progress back to the BOT on the 10th, 20th and the last day of each month, the customers can check the status of their requests from the BOT website using ones’ identification number together with the latest one-time password (OTP) received via SMS.

Since inception to the end of 2020, the channel processed almost 120,000 requests. Statistically, 81% of the requests received by the lenders under the BOT’s supervision were reported complete, 60% of which reported success in reaching a form of assistance. More details are available on Debt Exit Fastlane website at www.1213.or.th/APP/DebtCase.



3.2.8 FCC Hotline 1213

BOT has set up Financial Consumer Protection Center (FCC) since 2012 to provide comprehensive financial consumer protection. FCC gives advice concerning utilization of financial services of financial service providers under BOT’s supervision, and provides information on financial services under BOT’s responsibility, such as banknotes, government bonds, and foreign exchange regulations. Furthermore, financial consumers can file complaints or send requests to financial service providers via FCC channels, such as Hotline 1213, FCC website (www.1213.or.th), BOT website (www.bot.or.th), letter to FCC, or walk-in to FCC.

Due to the COVID-19 pandemic, the government imposed travel restrictions and announced temporary closure of certain places from late March 2020. Workplace closure affected income and debt servicing ability of the debtors. The BOT therefore issued credit assistance measures to support retail borrowers affected by COVID-19 pandemic phase 1, effective from April 1, 2020. Subsequently, during April – May 2020, there were

13,881 borrowers affected by COVID-19 pandemic contacting Hotline 1213, triple the calls in the same period of the previous year. For the whole year 2020, there were 50,771 people contacting Hotline 1213, 86% increase from 2019. The BOT added more agents to match an increase in call volume. Most of the callers inquired about credit assistance measures, consulted on their debt problems and the ways to contact their financial service providers, or asked about how to send requests through “Debt Exit Fastlane”. Hotline 1213 Agents listened and gave advice to the borrowers which helped alleviate stress and make them find solutions to their problems. For those who could not manage to submit requests through “Debt Exit Fastlane”

by themselves, FCC also helped sending the requests to their financial service providers. FCC asked financial service providers for co-operation to notify the borrowers directly within 7 days about the results of their consideration and to inform the BOT of the result as well.

Moreover, the BOT took feedback and comments from people calling hotline 1213 into consideration in order to formulate more comprehensive and inclusive additional measures for the following period, and to provide timely communication on the issues that many people did not fully understand or were misled, which helped preventing fraud losses.

Why Does the BOT Move from Blanket Measure to Targeted Assistances for SMEs

BOX 4

1 Most of borrowers tend to be capable of repaying the loans

Each individual borrower is differently impacted and disproportionately recovered from the COVID-19 situation. Therefore, the assistance in next phase is **tailored to the needs of each individual borrower** instead of a generic loan payment holiday.

2 Reduce the burden of the borrowers in the long run

The borrowers who are capable to repay the loans are advised to continue to do so to reduce the overall debt burden **because the borrowers would still need to pay interest charges that continue to accrue during the holiday period.**

3 Safeguard the stability of the financial institution system

Continuation of the general payment holiday poses risks to the stability of the financial institution system as it will affect the financial institutions' regular cash inflows which is expected to be **about 200 billion baht per year.**

3.3 Overcome the Crisis with Targeted Measures

By the second half of 2020, the Thai economy recovered thanks to the uplifts of lockdown measures both in Thailand and abroad. As a result, the contraction of merchandise exports and domestic demand gradually improved in the third and fourth quarter. Merchandise exports, excluding gold, increased steadily in several categories due to improvement in trading partners' demand, the upward trend of global electronics cycle, and the shifting export orders from other countries to Thailand. On domestic demand, private consumption rebounded and leveled off close to its pre-pandemic level due to several factors. These included increases in employment, income and consumer confidence, together with pent-up demand, announcement of special public holidays as well as stimulus measures from the government. Nevertheless, the recovery of private consumption remained uneven across income groups and geographical areas. The tourism sector, which employed a large number of workers, continued to contract sharply due to international travel restrictions. While the government has allowed foreigners who held Special Tourist Visa (STV) to enter Thailand since October, the number of foreign tourist arrivals remained extremely low. Private investment, on the other hand, displayed a smaller contraction thanks to improvements in domestic and foreign demand, as well as business sentiment. The government spending continued to expand and support the economic recovery. Overall, the Thai economy in the third and fourth quarter of 2020 contracted at a smaller magnitude, which were 6.4% and 4.2%, respectively from the same period last year.

The overall economic and financial stability improved in tandem with the economic recovery after the relaxation of lockdown measures. Nonetheless, the unemployment rate and the number of underemployed workers remained high, and the recovery was uneven across

sectors, particularly tourism-related sectors that encountered a slow recovery and remained fragile. Headline inflation rate was less negative mainly due to higher energy prices, while core inflation rate increased slightly after the termination of government's subsidy on water bill. Labor market improved gradually, both in terms of employment and income, but continued to be vulnerable, as the unemployment rate and the number of jobless claims on the social security system remained high. Moreover, the economic recovery was uneven across sectors, especially the service sectors related to tourism, which recovered at a slower pace than other sectors. As for the stability of household and business sectors, debt serviceability improved in line with economic activities following the relaxation of lockdown measures, except for some groups of households and businesses which continued to experience difficulties due to the uneven recovery.

The baht appreciated after easing the lockdown measures in several countries while reinvestment from foreign investors rebounded in the emerging market economies, including Thailand. The baht against US dollar appreciated on average during the second half of 2020 from the second quarter of 2020 as investors' sentiment improved from the relaxation of containment measures from several countries. In addition, assets in emerging market economies, including Thailand, became more favorable after the outturn of the U.S. presidential election as well as the promising progress of the COVID-19 vaccines development. Nonetheless, the Nominal Effective Exchange Rate (NEER) depreciated by 0.3% as the baht appreciated by a lesser degree compared to the trading partners' currencies.

Looking ahead, the Thai economy in 2021 would recover gradually on the back of exports' recovery, in line with trading partner economies as well as improvement in domestic spending despite a slowdown in the first quarter from the new wave of the COVID-19 outbreak. Significant risks remained, including 1) the development of new outbreak and its containment measures which would affect

domestic economic activities, and 2) the efficacy and distribution of COVID-19 vaccination which would affect the recovery of the tourism sector and the development of labor market going forward.

3.3.1 Phase II: Measures to assist retail debtors affected by the economic downturn due to COVID-19

During June 2020, even though the situation of COVID-19 in Thailand gradually improved and the government lockdowns were being relaxed, the number of COVID-19 cases globally still rose continuously. Therefore, debtors who worked in tourism and exporting sectors in particular remained vulnerable from income reduction. Moreover, with the ending of the Phase I measures, the BOT, therefore, collaborated once again with financial service providers and mutually came to an agreement to issue additional measures to assist debtors who get affected. Thus, on June 19, 2020, the BOT issued phase II of relief measures to assist retail debtors affected by COVID-19, consisting of:

1. Reduction of interest rate ceiling for credit card from 18% to 16% per annum, and personal loan under supervision from 28% to 25% per annum (installment loan and revolving loan) and to 24% per annum (title loan). Such reduction was made permanent thereafter.

2. Temporary increasing credit card, revolving loan, and installment loan limit for those with monthly income lower than 30,000 baht and good credit record, from 1.5 to 2 times of borrower's income, starting from August 1, 2020 to December 31, 2021.

3. Minimum measures to assist retail debtors with credit card, personal loans, hire purchase and mortgage loans e.g. interest rate reduction, minimum repayment reduction, conversion of credit card and revolving loans under supervision into long-term loans, debt moratorium, reduction in loan installment, for a period of approximately 3 months. Debtors could apply to receive those measures from July 1, 2020 to December 31, 2020.

3.3.2 Measures to expedite debt restructuring for SMEs

After the Emergency Decree on Financial Assistance to Small and Medium-sized Enterprises Affected by Coronavirus Pandemic B.E. 2563 (2020) ended in October 2020, the BOT and financial institutions were closely monitoring their SMEs borrowers under loan payment holiday measure. From the assessment of the situation, the epidemic of COVID-19 was expected to continue and remain highly uncertain. Moreover, the recovery of business in each industry were disproportionate. As a result, the borrowers were differently impacted and in need of various assistances. The BOT therefore opted for an approach away from a traditional and generic measure to a proactive and more targeted approach to fit with each individual borrower's need. Most of the borrowers indicated that they would be able to repay their debts when the loan payment holiday measure ended. It would also help lessen the burden of the borrowers in the long run because interest charges continued to accrue during the holiday period. Moreover, this measure would safeguard the stability of financial institution system.

The BOT encouraged financial institutions to consider debt restructuring according to the repayment capability of individual borrowers and allowed a standstill for financial institutions to maintain asset classification and provisioning until the end of 2020 for borrowers who were in process of debt restructuring. This measure would reduce the probability of loan deterioration and incentivize financial institutions to expedite debt restructuring for their borrowers. In addition, if financial institutions considered restructuring the debt but could not clearly assess the cash flow of the borrowers (for example, the debtor's business was still not normally operating), financial institutions may consider on a case-by-case basis extending the repayment period for the borrowers but no later than 6 months from the end of 2020. Financial institutions may consider maintaining asset classification during that moratorium period.

BOX
5

BOT Has Issued New Regulations on the Default Interest Calculation

Bank of Thailand Regulations: Regulations on the Imposition of Default Interest and Debt Payment Hierarchy

- ✓ Installment Loan¹
- ✓ Revolving Loan²

¹ excluding hire purchase for car and motorcycle under the Notification of the Office Of The Consumer Protection Board (OCPB)

² excluding credit card



Advantage to consumer

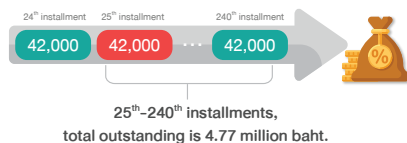
- ✓ Reducing the acceleration of Non-Performing Loans (NPL)
- ✓ Facilitating debt restructuring negotiations
- ✓ Promoting fairness by calculating default interest based on the actual default payments
- ✓ Balancing out the financial system and reducing the number of prosecutions

1. The Base Amount for Default Interest Calculation

Pre-regulation

Only one missed payment, the default interest will be calculated on **the outstanding principal of debt.**

a 20-year 5,000,000 THB mortgage loan with a monthly payment of 42,000 THB.
The borrower missed the 25th installment.

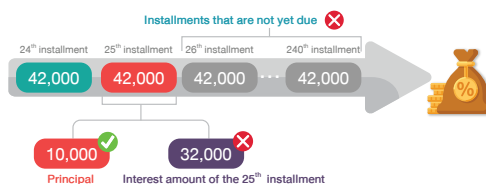


Default interest will be calculated on **4.77 million baht.**

Post-regulation

Default interest will be calculated on **the principal portion of the installment in arrears**, not including those that are not yet due.

a 20-year 5,000,000 THB mortgage loan with a monthly payment of 42,000 THB.
The borrower missed the 25th installment.



Default interest will be calculated on **10,000 baht.**

BOX
6

Debt Clinic Extends Eligibility to Cover Most NPL Stages

Dual-formula medicines by Debt Clinic

help immunize debtors against the impact from COVID-19.

Automatic eligibility for all debtors, with no need to call for application

While the postponed payments will not penalize the debtor's credit record, the interest amount continues as normally calculated.

Formula-1

medicine allows a 6-month repayment skip (of both principal and interest amounts over April to September 2020)

Formula-2

medicine cuts the interest rate by 2 percent over the 6-month period (April – September 2020) for those who keep repaying.

While most contracts pay 4%-5% interest rate, in effect this campaign reduces the rate to 2%-3% for most debtors.

The 2% interest cut is also applicable for those with partial repayments to encourage debt repayment in accordance with ones' ability.

Generous give-away!

New customers joining in April to September 2020 are also eligible for the 2% interest cut.

We shall restructure debts together to fight against COVID-19!

Enquiries:
Call Center 0-2610-2266 (จันทร์ - ศุกร์ 8.30 - 17.00 น.)
 Line @debtclinicbysam
 Facebook คลินิกแก้หนี้
www.คลินิกแก้หนี้.com

The COVID-19 pandemic impacted incomes of individuals and SMEs, and resulted in a higher tendency for personal loans and credit cards to default. Having standard schemes for debt restructuring, which can be adopted readily, is a crucial tool preventing the defaults from escalating into a widespread debt crisis.

The Debt Clinic Project entered its third phase at the beginning of 2020, with an extension to cover almost all sub-groups and legal stages. Previously, Debt Clinic scheme only accepted debtors who were non-performing loans (NPLs) with multiple creditors, and pre-ruling legal cases. Currently, single-creditor NPLs and post-ruling legal cases are also eligible to apply, on the condition that the loans must become non-performing before July 1, 2020. (The NPL cut-off date has recently been extended further to February 1, 2021 in order to accommodate new NPLs caused by COVID-19.) Furthermore, the anti-leverage clause, which previously prohibited the debtors in the Debt Clinic Project from applying for new loans in the first 5 years of the TDR contract, was relaxed. It was expected that by allowing the TDR debtors who had repaid at least 50% of the principal to apply for new loans, ones would be incentivized to repay more quickly when their financial condition allows - for example if a lump sum becomes available.

Two special features enabled the Debt Clinic Project in helping individuals restructure their troubled unsecured debts. Firstly, comprising 35 members from banks, an SFI as well as non-bank card-issuers, Debt Clinic formed the nation's largest card-debt resolution network. These members combined account for more than 90% of the country's card-debts. Once a debtor entered the application process, the


original creditors individually were obliged to stop chasing for repayment. They collectively assigned Sukhumwit Asset Management Co. Ltd. (SAM) to function as the central point of contact facing a debtor, and combine all relevant NPL amounts proportionately into a single TDR contract. Secondly, Debt Clinic offered a truly serviceable repayment scheme, with the requirement to repay only the original principal amount over a period as long as 10 years, with interest at a fixed rate as low as 4% - 7% p.a. Once the original principal amount is fully repaid in accordance with the TDR contract, the original overdue interest amount will be forgiven.

In 2020, Debt Clinic successfully facilitated 7,924 debtors to sign TDR contracts. Cumulatively since inception, the figure added up to 11,118 individuals or more than 35,000 NPL accounts, covering the principal amounts around 2,892 million baht. Among the debtors in the Project, 23% entered with pre-ruling legal status, and 19% with post-ruling legal status.

**BOX
7**

Measures to Assist Retail Debtors Affected by the Economic Downturn due to COVID-19

During 2020, the Thai economy was hit by the COVID-19 outbreak, leading to mostly an abrupt suspension for businesses and their operations, as well as reduction of income of employees which decrease their loan repayment ability. As a result, the BOT issued measures to assist retail debtors to mitigate the COVID-19 impact regardless of debtors' status, as follows:

Status	Goals	How?	Where?	Measures to support
Just able to partially repay the debt	To reduce debt burden	Apply for assistance e.g. interest reduction or extending mortgage repayment period, converting credit card to long-term loans.	Contact your financial institution via call center, website or its branches	<ul style="list-style-type: none"> Measures to assist retail debtors affected by the economic downturn due to COVID-19 (Phase I) Measures to assist retail debtors affected by the economic downturn due to COVID-19 Phase II (opt-in) Debt restructuring measure Debt consolidation measure Amendment for default interest rate calculation and application of repayment proceeds when the debt is repaid.
Start to miss debt repayment schedule	To avoid NPL status and negative credit record	Request for debt restructuring that reflects the debtor's ability to pay e.g. extending repayment period, consolidating mortgage loan with credit card loan into a single loan in order to reduce credit card's interest charged	Contact your financial institution via call center, website or its branches	<ul style="list-style-type: none"> Debt restructuring measure Debt clinic Credit Card and Personal Loan's Debt Mediation Fair
More than 90 days past due (NPL status)	To avoid being sued and negative legal record	<p>Request for debt restructuring that reflects the debtor's ability to pay</p> <p>Request for repayment period extension up to 10 years, interest rate at 4 – 7% (only for credit card and personal loans which total outstanding not more than THB 2 million)</p>	<p>Contact your financial institution</p> <p>Debt Clinic Call 02-610-2266 Or website www.debtclinicbysam.com</p>	<ul style="list-style-type: none"> Debt restructuring measure Debt clinic Credit Card and Personal Loan's Debt Mediation Fair
During legal proceedings	To quickly end the lawsuit with acceptable terms	Get a mediator who can effectively solve the problems in a fair manner for both debtors and creditors (in the process of setting up a standardized guideline)	<p>Online Debt Mediation by the Court https://mediation.coj.go.th/</p> <p>Initial phase starting with credit card and personal loans via Online Debt Mediation Fair Register from 14 Feb. – 14 Apr. 21</p>	
During legal execution	To avoid foreclosure and want a fresh start	<p>Register to the Debt Mediation Fair Fill in correct information and wait for the financial institution to contact back, with opportunities to receive new terms and conditions in accordance with the debtor's ability to pay e.g. repayment of only the principal amount, overdue interests exemption when repayment is done as planned.</p>	<p>Online Debt Mediation Fair Register from 14 Feb. – 14 Apr. 21</p> <p>Court of Justice www.coj.go.th Legal Execution Department www.led.go.th BOT www.bot.or.th The Financial Consumer Protection Center (FCC) www.1213.or.th</p>	



If there is any inconvenience, please provide the information in order to get support at
"Debt Resolution Expressway"
www.1213.or.th/App/DebtCase



For further assistance or guidance, please contact the
1213
 The Financial Consumer Protection Center (FCC)

ธนาคารแห่งประเทศไทย
BANK OF THAILAND

การปรับโครงสร้างหนี้ลูกหนี้รายย่อยโดยวิธีการรวมหนี้

ลูกหนี้สามารถสมัครเข้าร่วมโครงการได้ตั้งแต่ 1 ก.ย. 63 – 31 ธ.ค. 64
โดยติดต่อผู้ให้บริการทางการเงินที่ใช้บริการ

สินเชื่อบ้าน
ต้องไม่เป็นหนี้ที่ค้างชำระเกินกว่า 90 วัน (ไม่เป็น NPL)

สินเชื่อรายย่อยที่ไม่มีหลักประกัน
อาทิ บัตรเครดิต สินเชื่อส่วนบุคคล สินเชื่อเช่าซื้อ ทั้งที่เป็น NPL และไม่เป็น NPL

เฉพาะผู้ให้บริการทางการเงินเดียวกัน

สินเชื่อบ้าน
อัตราดอกเบี้ย : ไม่เพิ่มขึ้นจากเดิม

สินเชื่อปรับโครงสร้างหนี้โดยใช้บ้านเป็นหลักประกัน
อัตราดอกเบี้ย : ไม่เกิน MRR

หมายเหตุ 1) สินเชื่อบ้าน ไม่รวม home for cash
2) สินเชื่อส่วนบุคคล หมายถึง สินเชื่อส่วนบุคคลที่มีลักษณะผ่อนชำระเป็นงวด และสินเชื่อจำนำทะเบียนรถ
3) นำเฉพาะเงินต้นของสินเชื่อรายย่อยที่ไม่มีหลักประกันมารวม ส่วนดอกเบี้ยค้างจ่ายที่ยกยอดชำระหรือดอกเบี้ยที่ตกลงกัน

ประโยชน์ที่ลูกหนี้จะได้รับจากการปรับโครงสร้างหนี้

- ไม่เสียประวัติข้อมูลเครดิต
- ลดภาระหนี้ ทั้งดอกเบี้ยและค่างวด
- ไม่มีค่าใช้จ่ายอื่นเพิ่มเติม เช่น ค่าธรรมเนียม ค่าปรับ เป็นต้น
- สามารถใช้วงเงินบัตรเครดิต หรือสินเชื่อส่วนบุคคลที่เหลือได้ (ตามความสามารถในการชำระหนี้ของลูกหนี้)

? สอบถามข้อมูลเพิ่มเติมได้ที่ ศูนย์คุ้มครองผู้ใช้บริการทางการเงิน (ศคง.) โทร. 1213

Bank of Thailand

3.3.3 Debt Restructuring for Businesses or DR BIZ

DR BIZ or Debt Restructuring for Businesses is a program in coordination with the BOT, the Thai Bankers' Association, the Association of International Banks, and the Government Financial Institutions Association, together with 38 financial institutions. The objective of the program was to help businesses that were affected by COVID-19 that had multiple creditors to lessen the debt and operational burden, through the negotiation with all creditors at once, so that the businesses could continue to run smoothly and be able to recover after the pandemic is over.

During the 4-month operation period of the program (starting from September 1, 2020), the BOT consulted, coordinated, and facilitated the creditors and debtors in negotiating in order to find the mutual resolution. As a result, several debtors and creditors were able to agree on debt restructuring plan that would be beneficial to all parties in a short period of time. At present, debtors under DR BIZ were residing in many parts of Thailand, both in Bangkok and other areas.

3.3.4 Debt consolidation measure

The BOT issued additional measure, debt consolidation, on August 27, 2020 as an alternative measure for retail borrowers as a part of retail debt restructuring. Debt consolidation allowed debtors "to utilize home, as collateral, under mortgage loan" to reduce risk and interest rate from other unsecured loans. In other words, borrowers could 'consolidate' unsecured retail loans, which had high interest rates e.g. credit card, revolving loan, personal loan, car title loan and hire purchase, with mortgage loans under the same financial business group. By adding the value of pledged collateral to cover unsecured retail loans, a debtor was able to receive lower interest rate, therefore easing debt burden.

BOX
8

Measures to Assist Business Borrowers Affected by the Economic Downturn due to COVID-19



Corporates and SMEs are important fundamentals in driving the economy and primary sources of employment. The outbreak of COVID-19 has affected businesses, especially SMEs. The Bank of Thailand (BOT) closely monitored and issued measures to assist business borrowers as follows:

1. Debt restructuring and debt assisting such as moratorium on repayment of principal and/or interest, reduction of loan installments, renewing loan tenor, maintaining loan amount, reducing interest, penalty, or fees, converting short-term loans into long-term loans, etc. Also, if debt restructuring is done before the debt is considered NPL, such debt restructuring would not be reported to NCB, leaving no negative record on the credit history. At the end of 2020, there were approximately 960,000 business debtor accounts under the abovementioned measures, totaling 2.04 trillion baht.

2. The BOT soft loan under the emergency decree on the provision of financial assistance for entrepreneurs affected by COVID-19 pandemic, B.E. 2563 (2020) (the decree) to support liquidity with low interest rate (no exceeding 2% per annum) for 2 years, for SMEs that operated businesses in Thailand with a credit line not exceeding 500 million baht that were not NPL (not more than 90 days past due) as of December 31, 2019.

At the end of 2020, the BOT granted soft loan amounting to 123,106 million baht, helping more than 73,817 SMEs, with an average of 1.7 million baht per SME.

3. A loan payment holiday for 6 months (April to October 2020) under the decree for SMEs with a credit line not exceeding 100 million baht that were not NPL as of December 31, 2019. Approximately 1.05 million accounts with total outstanding around 1.35 trillion baht were applied for payment holiday. However, with the ongoing difficulties resulted from the pandemic, those who were still unable to repay may file a request to the financial institutions to consider extending loan payment holiday until June 30, 2021.

4. DR BIZ scheme was designed to help business debtors with multiple creditors. A debtor who had multiple creditors often found it was difficult to coordinate all of its creditor to agree with its debt restructuring plan. With DR BIZ scheme, a business debtor can receive financial assistance in a short period, through the negotiation with all of its creditors at once, corresponding with the debtor's financial position. A debtor can apply to the program via www.bot.or.th/app/drbiz **until December 31, 2021.**

In addition, the BOT gathered and released the detail of financial measures through the BOT COVID-19 website (www.bot.or.th/covid19) for the public to access easily and conveniently.



www.bot.or.th/covid19

After the consolidation, the interest rates of all unsecured retail loans would be lowered, from 25% per annum for personal loans that were paid in installments, to below Minimum Retail Rate (MRR) of the financial institutions immediately. Also, individuals were able to request for a change in repayment level in accordance with their repayment capability. Individuals may apply to the debt consolidation scheme via banks from September 1, 2020 to December 31, 2021.

3.3.5 Financial rehabilitation measures to support business recovery

The COVID-19 pandemic has lingered on and impacted Thai economy beyond what was initially expected. Uncertainties remain with wide-range of implications across the economy. Particularly, the uneven recovery has further suppressed businesses to the risk of insolvency, as firms facing liquidity shortage with lack of clear future cash flows. The BOT has closely monitored the situation and actively engaged relevant stakeholders in the process of policy design. Appropriate and timely responses to different needs of the troubled groups is critical in this challenging context. The key is to ensure that the COVID-19 financial rehabilitation measures would be effective in helping affected Thai businesses so that they have opportunities to recover and remain competitive once the pandemic subsides.

The measures were designed with three underlying objectives:

1. To provide liquidity supports for viable businesses so that they can (1) remain open and maintain employment and (2) uplift competitiveness via business transformation by means of market mechanism and financial institutions screening process that would suit for different recovery path of each business sector and firm's conditions.

2. To ensure financial institutions stability as well as financial stability at large. NPL management measures were considered so the threat of asset quality deterioration would not affect well-

functioning intermediary role of financial institutions that was essential to continue liquidity supports for affected businesses, to maintain trusted level of losses absorbing capacity for depositors and investors' confidence, and also to prevent asset fire sale.

3. To limit public sector burden by mainly utilizing market mechanism to channel in financial support for businesses and steer economic recovery going forward.

Progress on policy measures and recommendations

Since April 27, 2020 to end of 2020, the amount of soft loan approved and provided by the BOT under the Emergency Decree on Financial Assistance to Small and Medium-sized Enterprises Affected by Coronavirus Pandemic B.E. 2563 (2020) reached 123,106 million baht. The loans were distributed among businesses of all sizes and sectors across the country with more than 73,817 entrepreneurs receiving around 1.7 million baht on average.

Due to the prolonged nature of the situation and the impact that it had on SME businesses, the BOT decided to extend the soft loan program for 6 months ending April 18, 2021 and also revised the lending criteria to include companies that were registered on MAI, changed definition on business groups as well as altered the loan application practices where SMEs could apply for funding twice to make the program more accessible to a wider group.

In addition, the BOT coordinated with the Ministry of Finance and Thai Credit Guarantee Corporation (TCG) in the issuance of Special Portfolio Guarantee Scheme called Soft Loan Plus guaranteeing the loan granted by financial institutions from the 3rd year onward to enhance financial institutions' abilities to provide loans that exceeded 2 years or up to 10 years.

Besides, the BOT worked closely with the private sector and financial institutions to take into account

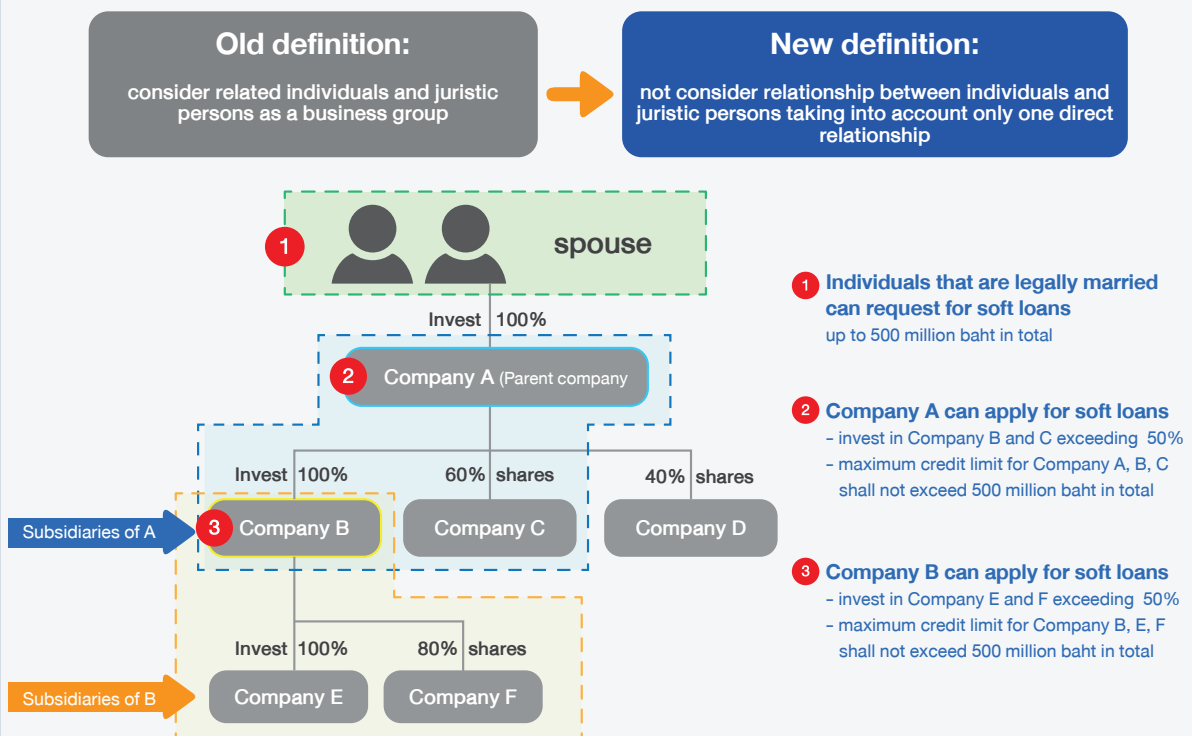
limitations of the existing soft loan program when designing future financial support measures where flexibility was key to withstand the rapidly-changing and highly uncertain environment.

The credit guarantee schemes provided by the TCG was also revised to enhance credit access for viable SMEs with inadequate collaterals or in need of liquidity so that small businesses can continue to operate amid economic slowdown and heightened-credit risk resulting from the COVID-19

pandemic. With the Portfolio Guarantee Scheme 9 (PGS-9) totaled 150,000 million baht and Micro Entrepreneurs Scheme 4 totaled 25,000 million baht approved by the cabinet on December 1, 2020, financial institutions can provide lending to SMEs at ease. The BOT, together with the Ministry of Finance and TCG, ensured that the programs distributions were directed to entrepreneurs whose businesses were affected by the COVID-19 as well as encouraging financial institutions to assist businesses through debt restructuring program.

Revision to the definition on business groups of the soft loan program

to facilitate better access to businesses that has not yet received assistance.



While uncertainties remained, the BOT was proactively monitoring debt serviceability of debtors both under the assistance measures and those that were not, as well as assessing overall vulnerability of loan portfolio to identify whether adjustments to the existing measures are required. In addition, projections of bank's asset quality along with implications on adequacy of loan loss provision and capital buffers were basis for preparing NPL management schemes. The BOT coordinated with relevant parties including the Ministry of Finance, the Federation of Accounting Professions and the

Securities and Exchange Commission to fine-tune related regulations. The aim was to facilitate financial institutions in supporting troubled businesses in time and best-suited for their needs, lower the chance of asset fire sale, and to assist businesses that were ceased and gone under court proceedings to get through the process quickly with chances to recover. Altogether, this would help minimizing public sector burden and sunk costs to the economy, while fostering resource reallocation and healthy development in the long run.



4

Other Business-as-Usual Operations





	JPY : 100	Japan	39.29	40.50	42.00
	AUD	Australia	31.10	32.13	33.44
	CNY	China	4.02	-	5.27
	HKD	Hong Kong	3.94	3.97	4.18
	KRW : 1000	Korea	22.00	-	33.50

4.1 Maintaining Financial System Stability

4.1.1 Maintaining Economic and Financial Stability

1. Monetary Operations

The BOT's monetary operations are designed to maintain an appropriate liquidity condition under which the banking system can meet their liquidity demand, both for the maintenance of required reserves and for settlement balances. This is to ensure that the prevailing money market rates are in line with the policy rate set by the MPC.

In 2020, excess liquidity in the Thai banking system increased mainly as a result of the BOT's operations, which included liquidity provision via the COVID-19 Soft Loan Program. As a result, the BOT absorbed 100,567 million baht net additional liquidity using 4 open market operations instruments, namely the Bank of Thailand bonds and bills issuance, the Bilateral repurchase transactions, the Foreign exchange swap transactions, and the Outright purchases and sales of public sector debt securities. Details regarding liquidity management via each absorption instrument are as follows.

1.1 Bank of Thailand bonds and bills issuance

The issuance of BOT bonds and bills is the principal channel used to absorb structural liquidity surplus in the system and to contribute to the development of Thailand's bond market by enhancing liquidity and efficiency in the market. In planning the bond issuance strategy, the BOT takes into consideration the prevailing market and liquidity conditions, as well as the government's funding plans.

In 2020, the COVID-19 pandemic had a vast impact on global economy and financial markets, leading to extreme volatilities in the Thai bond market. Furthermore, the rise in the government's funding needs to finance the COVID-19 relief measures resulted in a marked increase in overall supply of public sector debt securities. To this end, the BOT and the Public Debt Management Office (PDMO) collaborated closely with a view to maintain an appropriate level of overall supply. The outstanding amount of BOT bills and bonds declined by 352,343 million baht to 3,365,405 million baht at the end of the year (80,335 million baht of which was held by the BOT through bond buyback operations.) Also, liquidity absorption via BOT bills and bonds fell 6% from the previous year to 49% of the total outstanding absorption.

For more details on the BOT Bond Issuance Program for 2020 (1st Revision), please refer to



With regard to the BOT bond issuance program for 2021, key consideration remains on the continued increase in government's funding needs amid volatile market. Given such backdrop, the BOT has discontinued issuance of new 6-month bills and 3-year bonds, whilst the PDMO plans to auction both tenors on a regular basis instead. In addition, the BOT has started issuing a new floating-rate bond (FRB) linked to the Thai Overnight Repurchase Rate (THOR) index to help promote the use of THOR as a new reference rate in derivatives and cash products and expand the choice of fixed-income instruments in the market.

1.2 Bilateral Repurchase Transactions with Primary Dealers

The BOT uses Bilateral Repurchase (BRP) transactions with appointed BRP Primary Dealers (BRP PDs) to manage short-term liquidity fluctuations, particularly those resulting from government cash flows and seasonal factors, such as demand for currency. To enhance the signaling of the MPC's stance, the 1-day BRP transactions are conducted as a fixed-rate tender at the policy rate. Meanwhile, Term BRP transactions (7-day, 14-day, and 1-month tenors) are executed as variable rate tenders, in the form of spreads over the policy rate (Indexed BRP). Thus, the interest rates earned on these Term BRP transactions will vary with changes in the policy rate over the duration of the transactions.

BRP transactions are carried out with BRP PDs in the morning of every business day⁴. These BRP PDs serve as liquidity adjustment intermediaries between the BOT and other financial institutions, through the use of Private Repo transactions or Uncollateralized Interbank markets. This BRP PDs scheme helps support financial market development by fostering an adoption among interbank participants of market practices that are in line with international standards.

In 2020, liquidity absorption through BRP transactions increased by 604,632 million baht, following the reduction in absorption through BOT bond issuance and foreign exchange swap transactions. At year-end, BRP transactions totaled 2,493,087 million baht, which accounted for approximately 38% of the total outstanding absorption.

1.3 Foreign Exchange Swap Transactions

The Foreign exchange swap (FX swap) transactions are used as a supplementary absorption tool, as they can be adjusted fairly flexibly according to BOT's liquidity absorption needs and market conditions. In 2020, outstanding FX swap transactions fell by 166,155 million baht to 885,641 million baht or 28,579 million USD at year-end. FX swap transactions constituted approximately 13% of the total absorption outstanding.

For more details on the BOT Bond Issuance Program for 2021, please refer to



⁴ Except on days of MPC meetings where BRP transactions are carried out in the afternoon after the release of MPC press statement, instead of in the morning.

1.4 Outright Purchases and Sales of Public Sector Debt Securities

The BOT can permanently inject liquidity into or drain liquidity from the banking system by purchasing or selling outright public sector debt securities with appointed e-Outright counterparties. In 2020, the BOT purchased a total of 166,473 million baht in public sector securities. The majority of these purchases were conducted in March - April 2020, during periods of tightened liquidity conditions and extreme dysfunctions in the government bond market due to investors' concerns over the COVID-19 outbreak. Meanwhile, 109,825 million baht of public sector securities held in the BOT's portfolio matured during the year. Taken together, the amount of securities in the BOT portfolio rose by 56,648 million baht in 2020.

In addition to open market operations outlined above, the BOT also operates end-of-day liquidity adjustment windows in the form of overnight standing facilities, which include the Lending and Deposit Facilities. Through these windows, financial institutions with liquidity deficit or surplus at end-of-day can borrow or deposit funds overnight at policy rate plus or minus 50 basis points, respectively. The interest rates on the Deposit and Lending Facilities together form an interest rate corridor that helps limit short-term volatility in the money market interest rates. In 2020, the majority of transactions in the end-of-day liquidity adjustment windows were deposits, which averaged around 2,182 million baht per day. The average amount of deposits declined from previous year in part because the interest rate on the Deposit Facility was reduced to 0% in May 2020 following several cuts in the policy rate.

2. Financial Market Development

Amidst the rapidly changing dynamics and volatilities of the global economy and the Thai economy in 2020, the BOT continued to play an important role in further developing the Thai financial markets as follows:

2.1 Foreign Exchange Market Development

Promoting foreign exchange risk management remained an important pillar in building immunity for Thai SMEs to sustainably withstand financial market volatilities. The BOT collaborated with other organizations to implement Phase 3 of the "Foreign Exchange Risk Management Program for SMEs" aiming at promoting awareness and knowledge on foreign exchange risk management, including hedging instruments, particularly FX Options. Qualified SMEs participating in this program were granted support to provide them with hands-on experience in using the FX Options. Moreover the program continued uninterrupted, despite the COVID-19 pandemic with an online seminar format providing participants with the convenience and flexibility to participate while maintaining appropriate social distancing. As of year's end, there were 1,152 SMEs participating in the program, 666 of which obtained the related financial support.



Media briefing on Foreign Exchange Risk Management Program for SMEs

2.2 Development of the Alternative Reference Rate

Given the ongoing interest rate benchmarks reform in the global financial market, the development of the new Thai reference rates also made a significant progress. In this regard, the BOT and financial market participants jointly agreed to cease the publication of the Thai Baht Interest Rate Fixing (THBFIX) along with the cessation of the London Interbank Offered Rate (LIBOR). However, as there were more than 25,000 financial contracts referencing THBFIX outstanding, worth approximately 15 trillion baht, the BOT, in collaboration with representatives from commercial banks, therefore, established the “Steering Committee on Commercial Banks’ Preparedness on LIBOR Discontinuation (the Committee) to ensure a smooth transition. At the same time, the Thai Overnight Repurchase Rate (THOR) was developed as the Alternative Reference Rate to replace THBFIX. THOR was derived from overnight private repurchase transactions and was first published on April 1, 2020. The development of THOR represented an important milestone for Thailand in moving towards risk-free rates which aligned with international standards. The first derivative transaction which referenced THOR occurred in August, and transactions have steadily increased since then. As of end 2020, outstanding derivative transactions which referenced THOR stood at approximately 23,000 million baht. The BOT, together with all market participants, will continue to promote the liquidity of THOR-linked products and encourage its market-wide usage.

To alleviate the impacts upon financial market participants with outstanding contracts referencing THBFIX, and facilitate a smooth transition, the BOT published the so-called “Fallback Rate (THBFIX)” to be used as a fallback for legacy contracts during the transition. Nonetheless, Fallback Rate (THBFIX) would only be available for a temporary period. The BOT expected that market participants would start reducing their THBFIX outstanding transactions as soon as practicable, avoid entering into new THBFIX financial transactions and began referencing THOR instead.

This reference rate transition is an important structural change which has significant impacts on relevant market participants. Therefore, the BOT was communicating with market participants to increase awareness of the potential impacts of LIBOR and THBFIX discontinuation. Meanwhile, the BOT would also promote awareness and understanding of THOR usage in financial contracts. In addition, we also supported the transition process in many aspects for all involved stakeholders including both financial institutions and businesses to ensure that everyone was well-prepared for the transition. The BOT coordinated with other relevant organizations, both domestic and international, such as the Federation of Account Professions of Thailand and the International Swaps and Derivatives Association (ISDA) to prepare for some specific aspects of the transition process.

3. Reserve Management and Operations⁵

Reserves management by the BOT is based on the principle of prudence, investing in safe and highly liquid assets that provide a reasonable return within the investment and risk guidelines. In 2020, the BOT closely monitored and analyzed highly volatile global economy and financial markets, particularly short-term developments and structural changes of invested countries in order to anticipate the movement of foreign exchange rates, interest rates, and asset prices, as well as assessed the risk environment to enhance returns and reduce overall financial risk.

⁵ Major portfolios under the BOT management include liquidity portfolio and long-term investment portfolio

BOX

9

Thai Overnight Repurchase Rate (THOR): A Significant Step Forward for Thai Interest Rate Benchmark Development

Thai Baht Interest Rate Fixing (THBFIX), which has been widely referenced in various financial contracts in the Thai financial market, will cease to be published along with the cessation of the London Interbank Offered Rate (LIBOR). In preparation for the upcoming transition, the BOT, in collaboration with market participants, developed the Thai Overnight Repurchase Rate (THOR) as an Alternative Reference Rate for the Thai financial market, with the expectation that it will be widely used in the future.

THOR is an overnight rate calculated from collateralized interbank lending (i.e. bond repurchase transactions) and is therefore considered a nearly risk-free rate. In addition, it better reflects domestic money market condition and closely aligns with the policy rate. Furthermore, unlike THBFIX, it is not affected by USD liquidity condition. Thus, THOR can be used as a reference in all types of financial transactions, including loans, bonds, or derivatives.

For term interest rates, it will be calculated by compounding THOR on a daily basis for the entirety of the period (i.e. compounded average). Therefore, market participants will only know the full interest payment amount at the end of the period (i.e. backward-looking term rate). In contrast with THBFIX, the rate represents a forward-looking term rate. In this regard, it may take some time for market participants to become accustomed to the different practice and market conventions in using THOR.

Nonetheless, THOR is calculated from overnight repurchase transactions which is highly liquid, thereby lowering the risks of rate manipulation. The Bank of Thailand (BOT), as the rate administrator for THOR and an important promoter of market development, is aware that a key factor in the development of any reference rate is its market liquidity. This requires the market-wide adoption of various THOR-linked financial products including derivatives, bonds, and loans. The BOT will issue the THOR Floating Rate Notes (BOTF) in early 2021, and encourage all market participants to cooperate and support market-wide usage of THOR going forward. Further information regarding THOR can be found at:



See more
details for
THOR

The BOT continued to diversify investment risk in the portfolio and regularly increased number of countries and types of asset classes in the investment universe, including investing in eligible social sustainability assets under the current investment guidelines. Besides, the BOT adopted various types of analytical tools, such as quantitative and macroeconomic modeling, as well as the advanced and secured Dealing Room System, to contemplate and assess the portfolio risk and return systematically. The BOT also improved reserve management practice and continually explored investment instruments to enhance returns, reduce risk, and minimize operating expenses corresponding to the BOT Board's guidelines.

4. Foreign Exchange Control

The BOT has been continually relaxing foreign exchange regulations under the Foreign Exchange Regulation Reform and the comprehensive FX Ecosystem Development Plan. This is with an aim to develop a more efficient foreign exchange market, support more balanced capital flows, allow more flexibility for businesses in managing foreign exchange risks which will enhance their resilience to exchange rate volatility, and expanding options for businesses and residents in conducting foreign exchange transactions and investment. The relaxations can be summarized as follows:

4.1 Increasing the threshold for proceeds from abroad that do not need to be repatriated to USD 1 million (previously USD 200,000) to help businesses manage foreign exchange risk more efficiently and reduce transaction costs.

4.2 Allowing residents to freely deposit funds in Foreign Currency Deposit (FCD) accounts and allowing transfers among residents' FCDs. This would enable businesses to effectively manage liquidity and foreign exchange risk, allowing FCD related transactions to be done electronically, which helped reduce transaction costs.

4.3 Relaxing regulations regarding investment in foreign securities in terms of investment limits and eligible financial products, in order to expand investment options and enhance portfolio diversification as follows:

(1) Increasing investment limit for retail investors not investing through local intermediaries from USD 200,000 per year to USD 5 million per year; and lifting the limit for those investing through local intermediaries, such as brokerage firms, by removing the aggregate investment limit set for the Thai Securities and Exchange Commission (SEC) to be allocated to investors under its regulation.

Freer Portfolio Investment Abroad



Increasing investment limit for retail investors up to USD 5 million per year
(from USD 200,000 per year)



Removing the aggregate investment limit allocated by SEC (FIA)*
(previously USD 150,000 million)



Expand types of foreign securities issued and distributed domestically to include instruments such as Exchanged Traded Funds (ETFs) and Depository Receipts (DRs) relating to foreign securities.
(previously only debt securities were allowed.)

*The BOT set the aggregate investment limit for the Thai Securities and Exchange Commission (SEC) to be allocated to investors under its regulation. These include mutual funds, provident funds, securities companies and derivatives dealers, and retail investors who invest through Thai intermediaries.

BOX
10

Accelerating the Development of the New Foreign Exchange (FX) Ecosystem to Address Structural Problems of the Thai FX Market in a Sustainable Manner

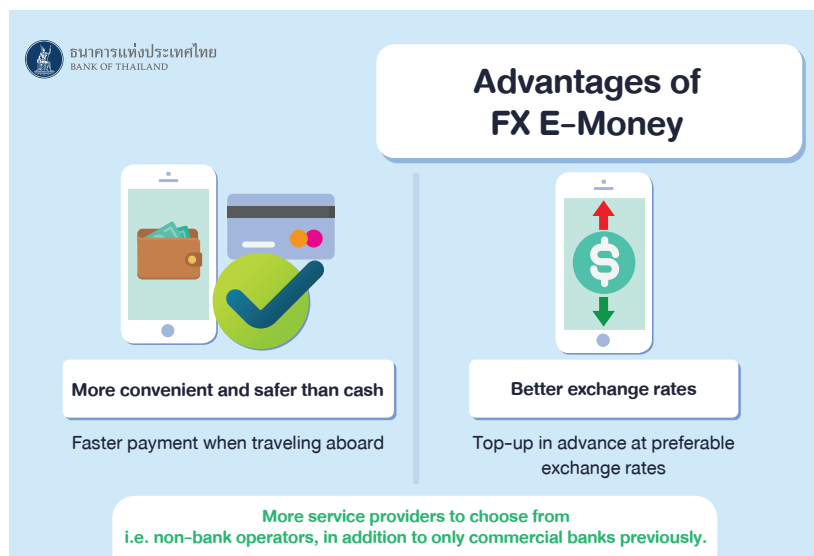
The Bank of Thailand (BOT) is committed to developing the Thai financial and the FX markets to be continuously effective by accelerating the development of the new FX ecosystem to address structural problems in the FX market. The development would foster the new FX ecosystem in which capital movement would be more balanced, businesses would have greater access to FX-hedging instruments with lower costs, and regulators would have improved capability to foresee and put in place appropriate policies for any emerging risks in a timely manner. The mentioned advancement of the new FX ecosystem would require collaboration from both the government and the private sector to jointly advance measures striving for tangible results. This would enable the Thai economy to withstand rising volatilities in the global markets in a sustainable manner going forward.



Note: Additional information in Monetary Policy Report, December 2020

(2) Expanding types of foreign securities issued and distributed domestically to include instruments such as Exchanged Traded Funds (ETFs) and Depository Receipts (DRs) relating to foreign securities.

4.4 Allowing non-bank operators to provide foreign currency e-money service (FX E-Money) as another alternative for cross-border payment of goods and services, catering to people's demand in using e-money as means of payment when traveling abroad and facilitating cross-border purchase of goods and services on e-commerce platforms. More diverse players would further promote the use of e-money and the country's transition to a digital society.



Moreover, Authorized Money Transfer Agents can now obtain approval from the BOT to outsource certain operations and appoint agents to perform the operations on behalf of the licensees which would help promote broader access to financial services.

4.1.2 Maintaining Financial Institutions System Stability

1. Issuance of Regulations for Financial Institutions

The BOT issued and updated the BOT regulations to ensure the resilience and sound risk management according to international standards, as well as to enhance the efficiency of financial institutions' operations amidst changing environment. Besides, the BOT also promoted financial inclusion. The BOT also continuously monitored effectiveness of the regulations to establish more appropriate measures and policy directions.

1.1 Ensuring Resilience and Sound Risk Management of Financial Institutions

(1) Regulations on eligibility criteria for financial instruments qualified as banking capital

The BOT amended the regulations on eligibility criteria for financial instruments qualified as banking capital, for both Additional Tier 1 (AT1) and Tier 2 (T2). The amendment aimed to be in line with international standard, and facilitate the banks for the building up of their regulatory capital with lower cost of funding, especially during highly unanticipated event from the spread of COVID-19. The revision of eligibility criteria for AT1 capital instrument is that issuing banks are allowed to pay interests or

other returns to holders, provided that the banks' BIS Ratio is higher than the specified ratio as prescribed by the BOT, without prior approval from the BOT. In addition, the BOT revoked the clause requiring banks to have the rights to postpone the schedule for payment of interest on T2 capital instruments.

(2) Regulations on Corporate Governance for non-banks

The BOT amended the regulations on Corporate Governance for non-banks licensed to operate credit card business, personal loans and nano finances under supervision, peer-to-peer lending platforms as well as asset management companies. The amendments aimed to promote good corporate governance among non-bank operators by requiring their major shareholders, directors, persons with management authority, partners, managers and persons with power of management's parent companies to satisfy fit and proper qualifications on ethics and integrity. The operators must also take into account risks and all stakeholder groups to generate strong organizational culture and provide their services with fairness. The regulations on Corporate Governance came into effect on July 31, 2020, and for asset management companies, on February 29, 2020.

(3) Credit review of financial institutions

The BOT amended the policy statements on credit review of financial institutions by adopting a more principle-based approach. The amendments allowed financial institutions to apply such principles to establish the credit review policy and process that was flexible and suitable to the changing environment and business condition. Financial institutions would be able to set up the desired amount and characteristic of loans to be reviewed that was consistent with the nature and risk level of the loan portfolio based on their own internal risk assessment results. In addition, the credit review function must be set up as an independent unit within financial institutions to promote an appropriate checks and balances.

1.2 Safeguarding financial stability

(1) Crisis preparedness framework

The BOT has continuously involved in the efforts to address potential threats that may arise in the financial system. Such efforts included ensuring that financial institutions had credible recovery plans in place and coordinating with other supervisory authorities in the financial sector to maintain financial stability and enhance crisis preparedness. In addition, the BOT, together with domestic and foreign supervisory counterparts, is planning joint simulation exercises to bridge between each institution's crisis management framework, minimizing potential spillovers and strengthening the resilience of the overall financial system.

(2) Macroprudential measures on residential mortgage loans and other related loans (Loan-to-Value: LTV)

The BOT has been monitoring the effectiveness of the LTV measures since its implementation in April 2019. The measure aimed to dampen the speculation in the real estate market and lift the credit underwriting standard of commercial banks without having unintended consequences on the real demand. The BOT revised LTV measures at the beginning of 2020 to facilitate the first-time homebuyers. The first time homebuyers may be granted a top-up loan not more than 10% of the selling price to support the cost of moving in. In addition, the BOT relaxed the regulation for the first-time homebuyers with good credit records and were paying installment on their first home for at least 2 years to make a down payment of 10% on the second home to align with the changing lifestyle.

(3) Regulations on Debt Clinic Scheme

The BOT amended the regulations on Debt Clinic Scheme to improve efficiency and to cover a wider group of debtors. The scope of the Debt Clinic was expanded to include single-creditors and non-bank operators such as credit cards, personal loans under supervision, nano finances under supervision and asset management companies. In addition, the creditors can now restructure debt without any intermediaries if follows the rules and guidelines approved by the Governing body of the Debt Clinic Scheme.

1.3 Ensuring Operational Efficiency of Financial Institutions

(1) Regulations on permission for commercial banks to undertake business of providing other services and permission for companies within a commercial bank's financial business group to undertake business of information technology related services to support digital banking (IT related services)

The BOT amended the regulations on business of providing other services to allow greater agility in business operations, provide personalized services for customers, support the development of financial services and enhance competitiveness and efficiency in operating businesses. Meanwhile, the impact on financial institution system stability was taken into consideration as commercial banks must mainly focus on their financial services. The revised regulations came into effect on June 26, 2020. To be in line with the scope of business of commercial bank, the BOT allowed companies within a commercial bank's financial business group to provide IT related services, including being a cross-border e-Commerce facilitator. In this regard, a financial business group must remain focusing on its financial businesses and must have oversight and management of overall risks arising from operating supporting businesses. The regulations came into effect on July 16, 2020.

(2) Regulations on banking channel and business partner

The BOT revised regulations on commercial bank's banking channel, the use of services from business partners of financial institutions, and the number of, and counting on, "Service Points" of subsidiaries of foreign commercial banks and branches of foreign commercial banks in order to accommodate commercial banks to operate businesses more flexibly and to provide a variety of services that met the customer needs through various channels, for example, general branch channel, electronic branch channel, and digital channel. The revised regulations also facilitated customers to continuously have access to essential financial services, especially during the COVID-19 situation. The commercial banks must have appropriate risk management in order to provide customers with safe and fair services. The regulations came into effect on September 4, 2020.

1.4 Financial Sector Development

The BOT introduced the Financial Sector Master Plan Phase III (2016 - 2020) with implementation progress as follows:

(1) Promoting electronic financial and payment services and enhance efficiency of the financial system

The BOT continuously encouraged public sector, individuals and juristic persons to transfer funds via PromptPay platform. The BOT also promoted the adoption of electronic cards and

QR Code, such as MyPromptQR which allowed merchants to accept payment through QR code scanning. In addition, the BOT issued the guideline on the application of biometric technology in financial services to guide financial service providers under supervision to appropriately adopt such technology and to comply with international standards. Moreover, the BOT revised the guideline on PromptPay services offered by e-Money service providers to ensure that such service providers would provide secured services and adopt reliable technology for identity authentication.

(2) Promoting greater financial access

The BOT issued the Circular Re: Rules, Procedures and Conditions for the Undertaking of Digital Personal Loan Business on September 15, 2020. The Circular was released in order to promote financial access for people who did not have regular income. This required lenders to leverage alternative data in assessing borrower's ability or willingness to repay the loan. In addition, lenders must digitize lending processes, such as loan disbursement and debt repayment. Lenders may grant digital personal loans with the maximum credit line offered to each borrower not exceeding 20,000 baht, with the repayment period not exceeding 6 months, and no limitation on borrowing purposes. Interests charged together with fines, service charges, and any related fees on digital personal loans must not exceed 25% per annum (effective rate). Through the use of digital products, digital footprints would be created which would pave the way to other financial services.

(3) Facilitating regional trade and investment connectivity

The BOT has driven the necessary infrastructure for connecting Thai payment systems with those of other countries to serve increasing cross-border financial transactions within the region. In 2020, the money-transfer service between Thailand and Lao PDR as well as inbound payment service from Cambodia to Thailand were launched. Furthermore, the BOT is operating the connectedness of payment systems with Malaysia, Vietnam, Indonesia and Japan as well as preparing to test the interconnected payment system "PromptPay - PayNow" with Singapore, expected to launch in the first quarter of 2021. In addition, the BOT has enhanced Thai commercial banks' business opportunities and facilitate trading and investments of Thai businesses through establishing Qualified ASEAN Banks (QABs) between Thailand and Malaysia. The BOT and the Ministry of Finance are currently working to finalize the domestic regulation in support of the QABs application and approval process which is expected to come into effect in 2021.



Media briefing on the test using cross-bank identity verification through the National Digital ID (NDID) platform for opening bank accounts

(4) Develop financial infrastructure

The BOT promoted the development of electronic authentication infrastructure (e-KYC) through National Digital Identity (NDID) platform by allowing banks to test the use of cross-bank identity verification for opening bank accounts since February 2020. Moreover, the BOT has supported the NDID platform to increasingly provide the cross-entity identity verification and authentication services for non-banks such as securities companies, asset management companies, insurance companies and credit providers under supervision since November 2020.

1.5 Sustainable Banking

The BOT has promoted sustainable banking by encouraging the banking sector to conduct business responsibly, taking into account the environmental, social, and governance (ESG) considerations. In 2020, the BOT formulated the banking self-assessment framework to evaluate implementation progress of banking sector following the Memorandum of Understanding on Sustainable Banking Guidelines – Responsible Lending. Furthermore, the Working Group on Sustainable Finance, in collaboration with the International Finance Corporation (IFC), conducted a study on sustainable finance focusing on direction and key enabling factors for sustainable finance in Thailand to ensure the consistency of policies and work plans with regards to promoting sustainable finance. In addition, the BOT is exploring the possibility of developing a taxonomy as a common definition and classification system of economic activities deemed as environmentally-sustainable. The taxonomy would facilitate the alignment of environmental policies among financial regulators and the identification of environmentally-sustainable economic activities by financial institutions, which encouraged the development of new financial products and services attracting funding towards the achievement of Thailand's environmental goals.



MOU signing ceremony for Sustainable Banking Guidelines on Responsible Lending by members of The Association of International Banks (AIB)

2. Supervision and Examination of Financial Institutions

The BOT places importance on ongoing supervision of financial institutions (FIs) by encouraging the use of new technology and big data to supervise FIs more efficiently, and also has continuously developed supervisory systems and tools in order to closely monitor significant issues and risks of FIs. In addition, the supervision places importance on the comprehension of FIs' organizational behavior and culture, the enhancement of IT risk management and cyber resilience, and market conduct supervision.

2.1 The Supervisory Stress Test of Thai commercial banks

The BOT requested Thai commercial banks to assess the impact of the coronavirus outbreak (COVID-19) situation that would affect the financial position, stability and liquidity of the banks during the three-year period (2020 - 2022), according to the BOT supervisory scenario (baseline scenario and severe scenario). The stress test result indicated that all Thai commercial banks had sufficient capital to support the impact of the COVID-19 situation. However, under the highly uncertain situation, all the banks and the BOT had to closely monitor and assess the impact to ensure that the financial position of the banks was strong enough to provide a source of funds and support Thailand economy smoothly.

2.2 The Assessment of TFRS 9 Provision

The BOT monitored the risk of credit portfolio of Thai commercial banks according to TFRS 9 accounting standard both at the bank level and consolidated banking group basis, by reviewing the classification, PD, LGD and provision. The supervisors recommended and followed up the model development to ensure that all Thai commercial banks had efficient process and model to set appropriate provision.

2.3 The Development of Ongoing Supervision Tools

The BOT developed the risk and impact bucketing framework to assist resource planning of each FIs according to the risk profile and its significance, and also developed supervisory tools to increase the efficiency and effectiveness of ongoing supervision, such as, profitability dashboard, solvency dashboard, macroeconomic dashboard, payment dashboard, IT & cyber monitoring system, soft loan monitoring system, market dashboard, ALM dashboard, credit dashboard Phase III, early warning system (EWS), and debt restructure monitoring system.

2.4 The Assessment of Organizational Behavior and Risk Culture (B&C)

The BOT drafted the risk culture guideline for FIs to implement and be aware of the importance of sound risk culture, which will be issued by the end of the first quarter of 2021. For the next step, the BOT will develop the gap analysis for FIs' risk culture to encourage board of directors and senior management to understand their risk culture, including the strengths and points that should be improved.

Table: Number of FIs Examined by the BOT in 2020

Financial Institution	Number of FIs
Thai Commercial Banks / Retail Banks	14
Finance companies and Credit Foncier companies	2
Specialized Financial Institutions (SFIs)	7
Foreign Bank Branches	2
Asset Management Companies	2
Non-banks operating credit card business and personal loans	2
Total	29

2.5 Examination of FIs' Financial Positions, Performance and Risk Management

In accordance with the surveillance and preventive measures of COVID 19, the BOT examined and monitored the operations of FIs (including SFIs) on ongoing supervision primarily at the BOT's office, if necessary, the supervisors would conduct onsite examination. In 2020, the BOT examined 29 FIs (including SFIs) by focusing on follow-up issues, measures to assist borrowers impacted by the COVID-19 situation, oversight function, risk management of significant activities, market conduct, benefit transfer to the debtor from FIDF fee reduction, business continuity plan (BCP), including model validation for risk weighted assets and capital calculation, and liquidity and financial status of FIs.

The overall banking system was strong in both capital and liquidity. Measures of borrowers' assistance and loan classification supported loan growth and slowed down deterioration of asset quality of the banking system. However, the performance of the banking system decreased due to higher provision for possible impaired loans from the impact of COVID-19.

2.6 Supervision of Specialized Financial Institutions (SFIs)

2.6.1 The BOT revised the regulation on housing loans and other loans related to housing loans of SFIs dated January 30, 2020 in order to promote people to own their first home (the first contract) more easily and be able to apply for other loans related to housing loans up to 10% of the selling price. Moreover, it allowed the first home buyers who had paid in installments on schedule for more than 2 years to be able to place a down payment for only 10%.

2.6.2 The BOT is in the process of proposing to the Minister of Finance to consider and approve the third phase of SFIs regulatory framework to be effective in 2021 covering 5 topics: 1) operational risk management; 2) Business Continuity Management: BCM and Business Continuity Plan: BCP; 3) regulatory compliance; 4) internal audit; and 5) telebanking and digital banking channel.

2.6.3 The Minister of Finance approved the extension of the TFRS 9 implementation period of SFIs for another five years until January 1, 2025. However, if any SFIs are ready to comply before, they will have to discuss the financial statement form with the BOT on a case by case basis.

2.7 The Coordination with Local and International Authorities and Meetings and Clarifications

2.7.1 The BOT coordinated with the Thai Bankers Association (TBA) in driving Thai commercial banks to implement the Banking Industry Code of Conduct Guideline in 9 areas comprising (1) Business Code of Conduct (2) Roles of directors and executives (3) Service standards (4) Employees and Work environment (5) Responsibility to customers (6) Conflicts of interest (7) Information management (8) General Compliance and (9) Business Competition and Resolution of Disputes. The banks were expected to establish their own internal guideline in accordance with the Code of Conduct.



2.7.2 Supporting and Collaboration on Saving Cooperative Supervision. The BOT participated in drafting Ministerial Regulations under Section 89/2 of the Cooperative Act. There were also meetings among the executives of the BOT, the Ministry of Finance, the Cooperative Promotion Department and the Department of Cooperative Auditing to set up guidelines for cooperative supervision. In addition, the BOT gave an advice to the Cooperative Promotion Department on database system development and provided knowledge and training on various aspects of savings cooperative supervision.

2.7.3 Up to the end of 2020, the BOT signed a Memorandum of Understanding (MOU) on FIs supervisory cooperation with foreign supervisory agencies in 11 countries, which were India, Malaysia, Singapore, China, Philippines, Cambodia, Japan, Indonesia, Laos, Vietnam, and Korea in order to strengthen the cooperation on FIs supervision among the regulators and supervisors in the region and to develop supervisory system to be more efficient and in line with international standards. Also, MOU on FIs supervisory cooperation was signed by Taipei Economic and Cultural Office in Thailand and Thai Trade and Economy Office (Taipei).

2.7.4 The BOT held meetings, seminars, and presentations to exchange views and information on supervision in order to build an understanding among the BOT, FIs (including SFIs) and other agencies. There were (1) the presentation to FIs management on the overall banking industry supervision and key audit findings in 2019, including the BOT's examination approach in 2020; the meeting with senior management of FIs to discuss on FI's strategic plan and business plan including measures to assist debtors affected by COVID-19 and preparation for LIBOR termination; (2) the meetings with auditors, representatives of the Federation of Accounting Professions Ministry of Commerce and the Securities and Exchange Commission to discuss guideline for giving opinion on the financial statement for BOT measures to assist debtors (3) the meetings with investors and the media to communicate relevant policy and guideline; to respond to inquiries about measures to assist debtors affected by COVID-19 and the effectiveness of various measures; to share digital banking development of FIs, market conduct supervision, banking system performance, and BOT's policy guideline regarding dividend payment (4) the study visit of Civil Aviation Authority of Thailand Fiscal Policy Research Institute Foundation and the Office of Insurance Commission regarding regulatory guideline framework, supervision and examination process and legal proceedings against FIs.

4.1.3 Payment systems stability

1. Enhancing efficiency and strengthening standards in payment systems

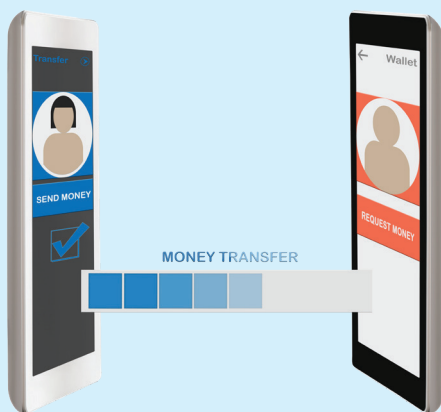
The BOT implemented the payment systems policy to enhance efficiency, mitigate risks, and protect consumers. It also strengthened the oversight of payment systems in accordance with the international standards. The key activities in 2020 were as follows:

1.1 The enhancement of payment infrastructure supporting digital business activities

The BOT pushed forward the implementation of ISO 20022 standard to carry not only sent and received payment messages but also business information at the same time in order to minimize development costs, enhance efficiency and boost security standard of the payment systems which would be able to support for further value-added innovations and cross-border activities in the future.

BOX
11

Digital Personal Loan: Digital Financial Service for Retail Customers



Technological advancements and data variety have altered the world of finance and stimulated various innovative products to satisfy customers' demand. There remains, however, some groups of customers who do not have access to credit through the formal channel, especially those who do not have regular income, those without proof thereof, or those without collateral. Therefore, in order to promote financial access as well as foster the usage of financial technology, the Bank of Thailand issued the Circular Re: Rules, Procedures and Conditions for the Undertaking of Digital Personal Loan Business in September 2020.

Digital Personal Loan is a type of personal loans under supervision which requires lenders to operate as follows:

1. Leveraging alternative data for instance, using payment behaviors or earning and spending behaviors on e-commerce platforms instead of using proof of income, e.g. salary slips or cash flow statement from the customer's deposit accounts, in assessing the borrowers' ability or willingness to repay the loans.

2. Digitizing disbursement and repayment process for instance, disbursement and repayment by electronic funds transfer including direct debit from financial institution accounts or e-money accounts.

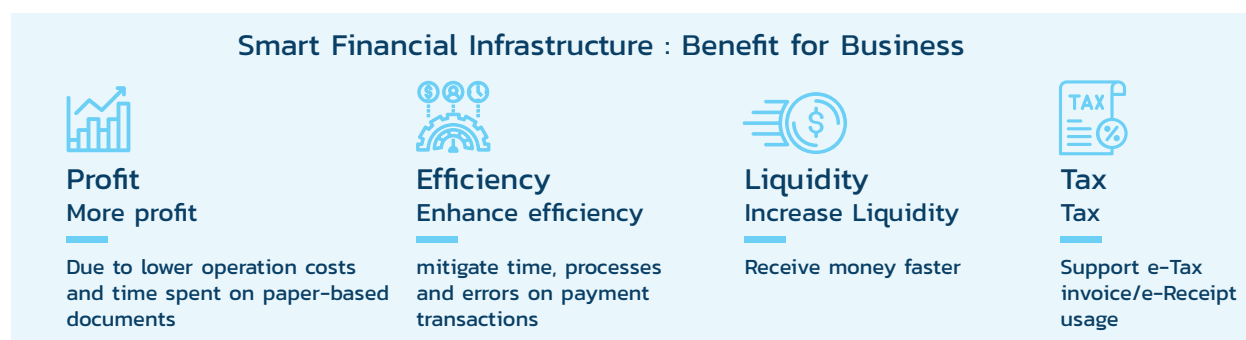
3. Disclosure of relevant information for instance, interest rates, fines, fees and loan outstanding to ensure transparency as well as to provide borrowers with necessary and clear information in making their decisions.

Lenders may grant digital personal loans with the maximum credit line offered to each borrower not exceeding 20,000 baht, with the repayment period not exceeding 6 months, and no limitation on borrowing purposes. Interests charged together with fines, service charges, and any related fees on digital personal loans must not exceed 25% per annum (effective rate)

The use of technology and alternative data in digital personal loans will help lenders better assess the borrower's ability or willingness to repay the loan.

Moreover, digital personal loans will help those who do not have regular income, those without proof thereof, or those without collateral, to better access credit from the formal financial institutions. Through the use of digital personal loans, digital footprints would be created which will pave the way to other financial services.

Recently, the significant payment systems in Thailand were implemented ISO 20022 standard; to illustrate, in the fourth quarter of 2019, MyPromptQR⁶ was the first payment service developed on ISO 20022 standard followed by the new bulk payment for business that launched in the first quarter of 2021 and the ISO 20022 standard BAHTNET system was planned to launch in 2022. Moreover, the BOT in cooperation with financial institutions and businesses have been working with stakeholders on leveraging the use of ISO 20022 standard to develop the Smart Financial Infrastructure for Business. The objective of the project is to seamlessly connect the digital payments and digital business processes and activities as well as to support business-to-business digital platform (B2B platform). For example, the e-Tax invoice / e-Receipt will be issued, and also sent and received via the Smart Financial Infrastructure automatically after a successful payment, as a result, the real-time auto-reconciliation will shorten business process, provide convenient, speed and safe fund transfers as well as enhance efficiency and liquidity of businesses.



1.2 The issuance of regulation and guidelines to support financial innovation

The BOT issued regulation and guidelines under the Payment Systems Act B.E. 2560 (2017) to support financial innovation. Firstly, the Regulation on Know Your Customer (KYC) for Activating the Use of e-Money Service was prescribed to strengthen the secure and reliable KYC process to be tailored to levels of risk associated with each e-Money services and service channels. The Policy Guideline on Know Your Merchant (KYM) was also imposed to enhance the payment service providers' standard practices in having appropriate procedure for knowing merchant business and managing associated risks. In addition, the Policy Guideline for Standardized Thai QR Code for Payment Transaction was refined to support new payment transactions such as MyPromptQR and cross-border QR Payment. Besides, the BOT required the payment service providers to comply with the Personal Data Protection Act B.E. 2562 ("PDPA") by initiating and fostering the guidelines of PDPA practice to ensure the compliance with such law.

⁶ MyPromptQR is payment made via a mobile banking application where customers present the QR code generated for their bank accounts to the merchants to scan for payments.



The opening ceremony for QR code payment system between Cambodia and Thailand

1.3 Cross-border payments connectivity

The BOT promoted cross-border payment connectivity not only to facilitate cross-border transactions for general public, but also to support international trade and tourism. These projects aimed to provide more convenient, secure and faster payment and remittance services to customers with attractive fees. These connectivity projects used innovative technology and would benefit international businesses and tourism sectors (through interoperable QR payment) as well as support migrant workers to remit funds back home (through real-time remittance).

In 2020, there were two cross-border QR payment linkages: one with Cambodia, enabling Cambodian tourists to pay for goods and services in Thailand (launched in Q1/2020) and another one with Japan, enabling Thai tourists to pay for goods and services in Japan (launched Q4/2020). Additionally, there will be many more cross-border payment and remittance services with other countries in 2021, such as with Singapore, Vietnam, Indonesia and Malaysia.

1.4 The supervision and examination of the payment business providers

The BOT consistently supervised and examined the business providers who were granted licenses or registration certificates under the Payment Systems Act B.E. 2560 (2017) to ensure the stability, security and trustworthiness of the business providers and to ensure that business providers implement risk management which was in line with the international standards and were able to continuously operate in both normal and emergency conditions with an appropriate level of consumer protection. In 2020, 35 licenses/registration certificates were granted to 20 business providers. At the end of 2020, there were 126 business providers (1 business provider is under both license and registration certificate) in which 123 business providers having 281 licenses and 4 business providers having 4 registration certificates.

In addition, the BOT strengthened the supervision and examination measures to be comprehensive and to be able to response to new forms of risks. Ongoing supervision and risk monitoring tools were developed to monitor financial status, money received in advance from the consumers and contingency plan during the COVID-19 outbreak to ensure that business providers were financially stable and able to continuously operate without any impact to the consumers.

1.5 Development for Improving Payment Efficiency

The BOT is currently implementing ISO 20022 international message standard in BAHTNET, to facilitate interoperability with important payment infrastructures and to support both domestic and cross-border payment transactions. The benefits of adopting such message standard in BAHTNET are as follows: -

- (1) Promoting interoperability of payment market infrastructures to support domestic and cross-border payment transactions
- (2) Supporting richer remittance information
- (3) Facilitating straight through processing (STP)
- (4) Promoting innovation in payment and financial services

The BOT is currently developing BATHNET and others related payment systems to support the aforementioned international standard. The BOT and BAHTNET participants plan to have the ISO 20022 migration with big bang approach by 2022.

Furthermore, the BOT has implemented BAHTNET API which uses the API technology to track the status of BAHTNET transactions and notify their customers when funds are deposited on their customers' account in a convenient and timely manner. In the future, the BOT will extend the use of API to enable payment instructions straight-through-processing (STP) feature in BAHTNET system.

1.6 Recent Development in Securities Market Infrastructure

(1) DLT Scripless Bond Project

The BOT launched the DLT Bond Platform which utilized Blockchain technology to support the issuance of two government saving bonds, with the total issuance amount of 5.02 billion baht. The service enabled investors to receive bonds within two working days, from its previous period of 15 days. They can also purchase bonds with their full rights from a single selling agent bank. For selling agent banks, they can reduce operational costs, increase efficiency and enhance their service provision to satisfy their customers. Furthermore, the bond issuer can manage selling quota and monitor bond sales information in real time.

Going forward, this platform will be extended to support all types of government debt securities, as well as to interoperate with the corporate bond network under Digital Infrastructure for Capital Market (DIF) initiative, to fulfill the needs of investors, issuers and all of the related sectors in the future.

(2) Bond systems enhancement to support BOT's registrar role in amortized bond

The BOT is currently enhancing bond and related systems (such as BAHTNET and financial market systems) to support the provision of amortized bond. The enhancement is expected to complete and ready for use in May 2021. Until now, the Public Debt Management Office (PDMO) issued two amortized bonds, including (1) Government amortized bond in fiscal year 2013, with the issuance and outstanding of 211.379 billion baht, and (2) Government amortized savings bond in fiscal year 2020, with the issuance and outstanding of 5 billion baht. The 5-year government amortized saving bond will be due for the first principle repayment on June 23, 2021.

2. Risk Reduction in Payment Systems

2.1 Implementation and monitoring of the Financial Sector Assessment Program (FSAP) for payment systems

After the BOT had been assessed under Financial Sector Assessment Program (FSAP) in 2018 and self-assessment following the guideline in Principles for Financial Market Infrastructures (PFMI) in 2020, the BOT took actions in response to advices from the assessors on concentration risk and wrong-way risk. The BOT imposed additional regulations and made system adjustments to BAHTNET system in 2019. Moreover, the additional measurements for collateral management is in the process of conducting a study.

2.2 Fraud prevention in large value payment system

The BOT has been implementing fraud prevention framework in compliance with the BIS-CPMI wholesale payments endpoint security, by making amendment to the guideline on information security management system for BAHTNET. Based on the guideline, participants should be able to response to fraud incidents in a timely manner, and have the capability to do the data analysis for fraud detection. The guideline will become effective in early 2021.

3. BOT's payment system services

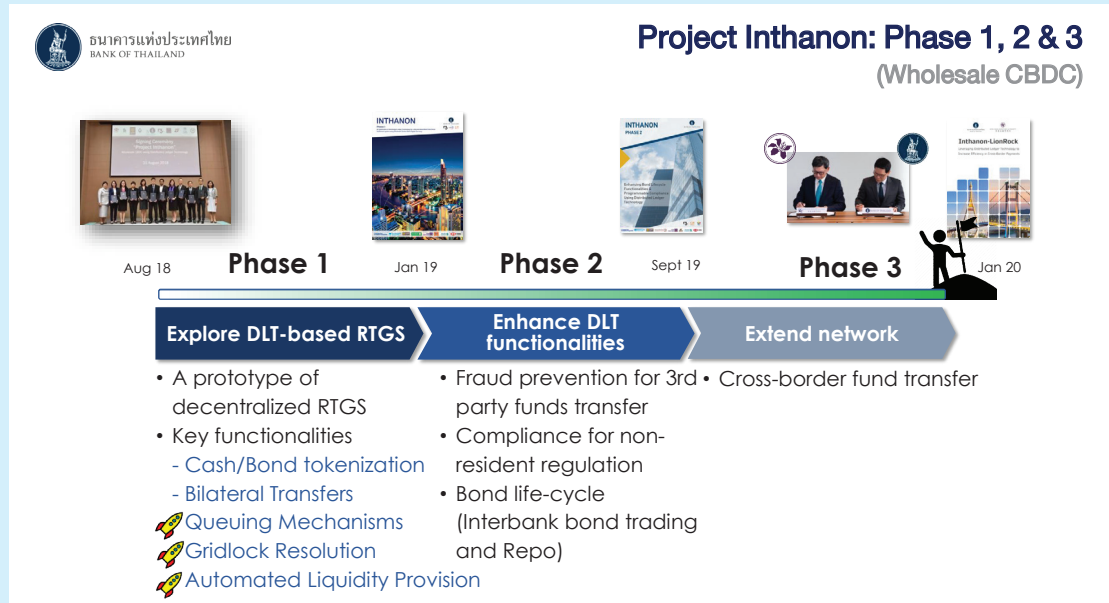
In order to provide a continuity of payment services, satisfy the needs of people and businesses, as well as to boost confidence of the country's payment systems during the COVID-19 outbreak, the BOT established BAHTNET and ICAS's operational guidelines for BOT and BAHTNET and ICAS participants. Such guidelines were considered as an emergency guideline and preparation guideline for all circumstances. Apart from the above, the BOT also reserved a third clean site for important operational personnel of BAHTNET and ICAS and also set up a third group of operational personnel to support the work during the pandemic. The results of payment system services in 2020 can be summarized as follows:

3.1 BAHTNET (Bank of Thailand Automated High-value Transfer Network)

At the end of 2020, BAHTNET had a total of 61 participants, consisting of 19 Thai commercial banks, 11 foreign bank branches, 7 finance and securities companies, 16 specialized financial institutions, government entities and other institutions, and 8 BOT's internal departments. In 2020, 1 institution, namely Secondary Mortgage Corporation requested for service termination due to the business dissolution under the Dissolution of the Secondary Mortgage Corporation Act. In 2020, the total volume of funds transfer via BAHTNET was 4.6 million transactions with the total value of 947.9 trillion baht, a 15.5% increase from 2019 due to the bilateral repurchase transactions.

BOX
12

Project Inthanon and CBDC Developments



“Project Inthanon and the start of the BOT’s CBDC journey”

- The rapid evolution of finance and technology has propelled Thailand towards a digital era of finance. Digital currencies are one form of financial innovation that will play an increasingly important role in future financial services. Such currencies can become widely adopted for they offer lower costs by eliminating intermediaries and can be used to build more diverse and innovative financial services. Digital currencies have the potential to alter the financial landscape and impact financial stability in the future.

- In recognition of this, the Bank of Thailand (BOT) has been actively exploring the development of a central bank-issued digital currency (CBDC), beginning with the initiation of Project Inthanon in 2018 in collaboration with eight commercial banks. A wholesale CBDC was tested to enhance efficiency and reduce costs in transactions between financial institutions. In 2019, the Project delved into how CBDC could be used to enhance cross-border transactions, in partnership with the Hong

Kong Monetary Authority (HKMA) under Project Inthanon-LionRock.

- As Thailand quickly progresses towards a digital era of finance, Project Inthanon marked a key milestone for the country. In addition to the development of a CBDC system prototype, the results of the Project demonstrated the need for further preparation in other areas such as policy changes and adjustments in the financial sector.

“Recent CBDC developments and progress”

- The BOT sees the potential of CBDC in enhancing various activities in the business sector. In 2020, the BOT in collaboration with Siam Cement Public Company Limited (SCG) and Digital Ventures Company Limited expanded the scope of CBDC development to include business users, by integrating the CBDC system with the procurement management, billing, and payment systems between SCG and its business partners. The Project demonstrated that CBDC can increase efficiency and flexibility for businesses by allowing users to set conditions on the CBDC (programmable money).

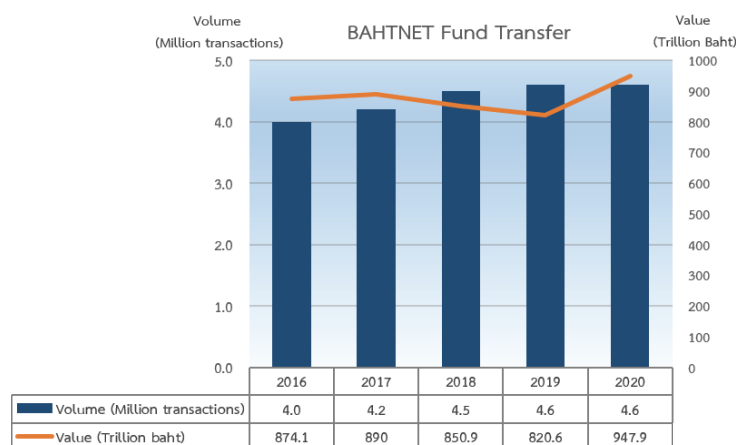
Results of the Project are expected to be published in February 2021.

- In addition to exploring CBDC for the business sector, the BOT has continued its development of a CBDC for cross-border funds transfers with the HKMA through Project Inthanon-LionRock. The scope of the Project was expanded to support additional currencies issued by other central banks, include governance studies, and test non-functional requirements. The Project is expected to be completed in November 2021.

“Next steps”

Following the BOT’s exploration of CBDC for the business sector, the next step is to prepare for the usage of a retail CBDC by the general public. In 2021, the BOT intends to focus its efforts on the research and development of retail CBDC, to support Thailand’s advancement towards a financial landscape in which digital currencies could play a greater role. CBDC could serve as a trusted and safe means of payment accessible by the Thai public, and as a reliable payment infrastructure to help safeguard the stability of the Thai financial and monetary system in the new financial landscape. However, thorough consideration of the implications of CBDC issuance on financial and monetary stability, as well as the roles of financial intermediaries and the BOT, is necessary before any decision on whether to issue CBDC can be made.

Additionally, the foreign exchange settlement for USD is handled in the nature of Payment versus Payment (PvP USD CHATS) i.e., THB is settled in BAHTNET and USD is settled in Hong Kong’s USD CHATS simultaneously. In 2020, the volume of PvP USD CHATS reached to 1,706 transactions with a total value of 4.79 trillion baht, a decrease from 2019 by 23.39% and 22.03% respectively.

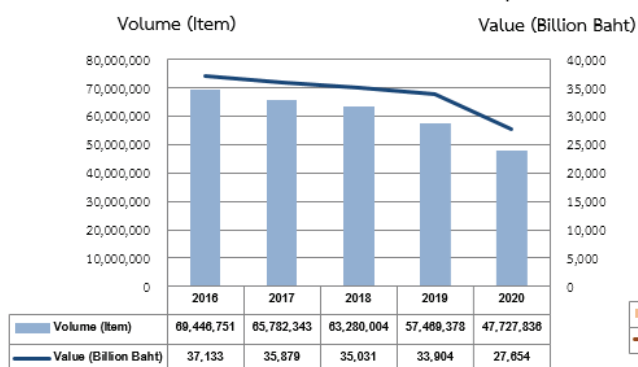


Source: Payment and Bond Department, Bank of Thailand

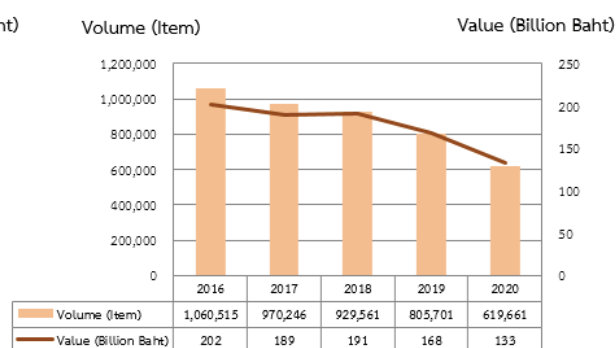
3.2 ICAS (Imaged Cheque Clearing and Archive System) At the end of 2020, there were 36 member banks, consisting of 19 Thai commercial banks, 11 foreign bank branches, and 6 specialized financial institutions. The total number of bank branches (including sub-branches) was 9,494.

Over the past five years, the total volume and value of interbank cheques cleared through ICAS have declined. In 2020, the total volume of interbank cleared cheques was 47.72 million with the total value of 27.65 trillion baht. The volume of interbank cleared cheques decreased by 16.95% from the previous year, in line with the decline in value of 18.44%. Compared to last year, as a proportion of total value of interbank cleared cheques, the ratio of interbank returned cheques and interbank returned cheques due to insufficient funds were slightly decreased from 0.50% and 0.28% to 0.48% and 0.26%, respectively.

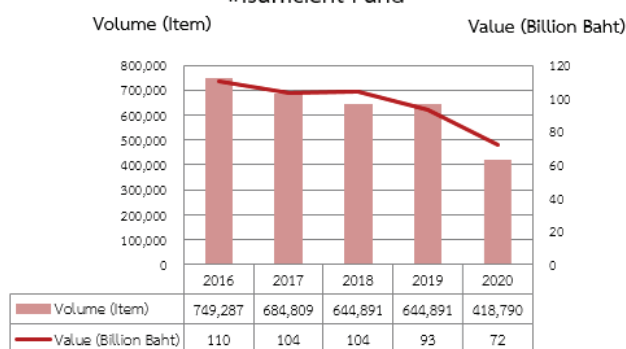
Total Interbank Cleared Cheques



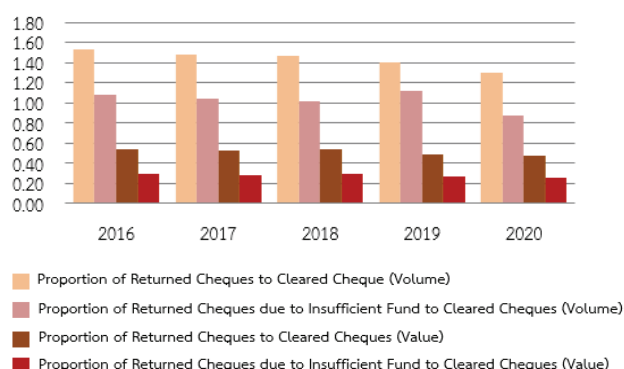
Interbank Returned Cheques



Interbank Returned Cheques due to Insufficient Fund



Proportion of Interbank Returned Cheques to Cleared Cheques



Source: Payment and Bond Department, Bank of Thailand

4. Cybersecurity readiness of Thailand's Financial Sector

At present, technology and cyber-attack risks pose significant risks to financial and payment systems. Due to wider adoption of technology to facilitate financial services, risks have become more diverse, unpredictable, and severe. Therefore, improving the security of financial services and transactions is important and the BOT has taken a number of critical steps to ensure that supervision remains up-to-date with technological and financial advancements namely:

4.1 Enhancing cyber resilience readiness and information technology risk management by assessing system resilience and cyber resilience of financial institutions and significant electronic payment systems providers; ensuring that improvements were made to the systems' resilience and security levels; strengthening management and IT system capacity to ensure that the entire network of financial systems can support the rapid growth of transactions with continuity; and improving the capability of the security operations center (SOC) to promptly handle strong and complex cyberattacks.

4.2 Continuously improving supervising process through developing and implementing IT risk and security monitoring tools to track IT risk and IT security level thus enabling identification of potential systemic risk; monitoring of potential problems and averting problem escalation; urging financial institutions and significant electronic payment system providers to self-assess and self-regulate at their own risk level and appropriately implement solutions. Moreover, an IT risk management framework was issued directing e-payment providers to establish risk management system mechanisms in line with international standards.

4.3 Developing capabilities of new and existing cybersecurity staffs by fostering cyber risk awareness of board of directors and committees by working with financial regulators namely the Securities and Exchange Commission (SEC) and the Office of Insurance Commission (OIC) as well as developing and recruiting new cybersecurity staffs by organizing events such as Financial Cybersecurity Boot Camp and Tech Career Coaching.

4.4 Creating cybersecurity-related collaborations in the financial sector by creating channels with which to share cyberattack information in order to strengthen security measurements in response and recovery; working with National Broadcasting and Telecommunications Commission (NBTC) to establish the Thailand Telecommunication Community Emergency Response Team (TTC-CERT) and encourage cyberattack information sharing with the Thailand Banking Sector CERT (TB-CERT) ensuring timely response cyber-related crisis, and conducting drilling exercises with other sectors' regulators to ensure extensive cybersecurity knowledge. In addition, the BOT collaborated with the National Cybersecurity Agency (NCSA) to issue the Cybersecurity Guidelines and Standards which served as a foundation for government agencies and critical information infrastructure as they align their systems to the Cybersecurity Act, B.E. 2562 (2019).

4.2 Public confidence

4.2.1 Public Supervision

1. Financial consumer protection

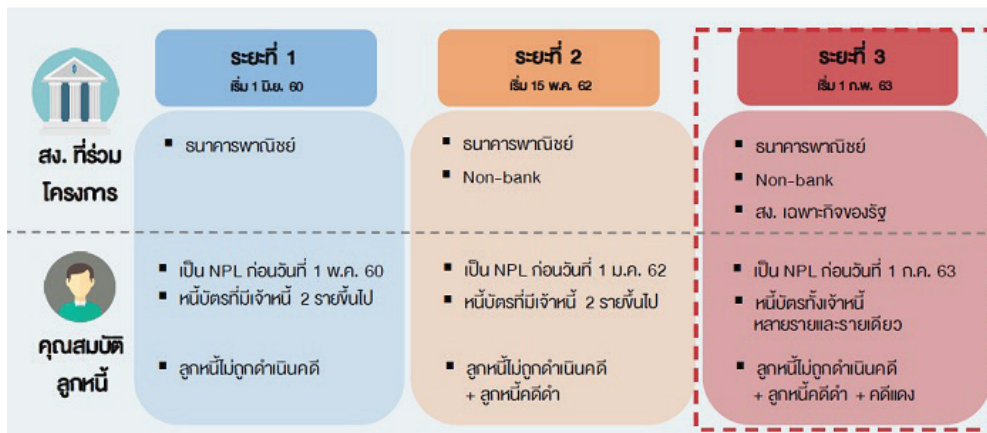
COVID-19 pandemic resulted in a higher tendency for credit cards and personal loans (together referred to as card-debts) to become non-performing. While card-debts were relatively short-term and charge relatively high interest rates, they were highly accessible for the retail public and take a large portion of households' monthly debt repayment. Therefore, reaching agreement on restructuring problem card-debts stands high in the nation's economic agenda at this juncture where households' financial situation remained fragile.

Without a standard readily-adoptable scheme for debt restructuring, card-debt defaults may easily escalate into a widespread debt crisis. Both economic and social costs to households and SMEs arising from legal execution should not be underestimated.

Hence, Debt Clinic in its third phase was expanded to cover card-debts in almost all stages. At present, single-creditor NPLs and post-ruling legal cases are also eligible to apply, provided that they became NPLs before July 1, 2020. (Recently, the new NPL cut-off date has been changed to February 1, 2021)

วิวัฒนาการของโครงการคลินิกแก้หนี้

เพื่อแก้ปัญหาหนี้บัตรเครดิต บัตรกดเงินสด และสินเชื่อส่วนบุคคลที่ไม่มีหลักประกัน



In addition, Debt Clinic tried to speed up its application process and reaches out to potential customers more actively by 1) opening service booths on weekends 2) arranging corporate events with enterprises around the country, and 3) coordinating with the Court of Justice as well as the Legal Execution Department.

Furthermore, Debt Clinic was quick and proactive in immunizing its customers against the impact from COVID-19 by providing dual-formula medicines.

1.1 First phase Formula-1 medicine allowed an automatic payment skip for 6 months from April to September 2020 for all TDR accounts, without penalty. Formula-2 medicine cut the interest rate by 2% over the 6-month period for those who kept paying.

ผลของยา 2 สูตรของคลินิกแก้หนี้



The result showed that only 6% of the debtors skipped payments totally, while 94% voluntarily chose to pay, at least partly. Among those who paid, as many as 74% kept paying no less than the contractual installments.

1.2 Second phase Formula-1 medicine allowed a payment skip for further 9 months from October 2020 to June 2021. Formula-2 medicine rebated the debt principal equivalent to a 1%-2% reduction in the interest rate, depending on the repaid amount expressed as a percentage of the contractual amount over the 9 months' period. Debt Clinic's both existing and new customers must opt-in for one of the two medicines in accordance with ones' ability to pay.

2. The Promotion of Financial Literacy to the General Public

COVID-19 pandemic which led to economic contraction adversely affected the bulk of Thai citizens. Their income dropped or disappeared completely while debts and expenses did not follow correspondingly. Financial skills, especially financial planning therefore became an important tool to help people survive this crisis. In 2020, the BOT took further steps to promote financial literacy to the general public as follows:

The microsite “Financial Resilience” was launched on www.1213.or.th. It comprised advices on debt management when income was reduced as well as tools which facilitated financial management; for instance, budgeting and saving tables, and a calendar to manage debt payments. It was expected to assist people in managing their money more conveniently and efficiently amidst difficult situations such as decreased income during the COVID-19 crisis and other unexpected financial volatilities. As the COVID-19 pandemic also led to numerous job losses, the BOT collaborated with Department of Employment, Ministry of Labor in promoting an online course, “Live a Happy Life Thanks to Good Financial Management” on www.ไทยมีงานทำ.com which is a digital platform created by the Department of Employment, compiling information about employment and training opportunities for better chances of job matching for job seekers. The training syllabus consisted of income and expense management, how to reach savings goals, and tips on debt management. Course participants would be equipped with skills to manage their own income and expenses, be able to achieve their financial goals, as well as understand how to manage their debts appropriately.

In addition, the BOT expanded promoting financial literacy to new target groups via strategic partners; namely village health volunteers, Bangkok Metropolitan Administration’s health volunteers, Department of Women’s Affairs and Family Development, and groups of farmers and disabled persons. At the initial stage, the emphasis was put on raising awareness about financial literacy through infographics created by the BOT with regard to basic financial knowledge, financial frauds and channels for complaint handling. Examples of topics were the PromptPay service, mobile banking, what to do when transferring money to wrong accounts, and consulting services by the Financial Consumer Protection Center (FCC). Such information was sent to the mentioned target groups via the strategic partners’ mobile applications and Line groups.

Moreover, the BOT targeted the workers in sectors at risk due to the COVID-19 pandemic. The aforementioned group were in such industries as wholesale and retail trade, transportation, restaurants, hospitality, automobiles and automotive parts, tourism, entertainment, and gems and jewelry, etc. which summed up to approximately 8 million people vulnerable to layoff or income reduction. Apart from contents on raising awareness over basic financial management, the BOT also focused on promoting debt management topics such as debt restructuring, advice for negotiating with creditors, and promoting access to debt relief measures. In collaboration with strategic partners from the private sector, the BOT was able to communicate with the target group through infographics, video clips, online training programs, and articles. This initiative aimed to help the public live through this crisis as smoothly as possible and be able to find the assistance they needed which would contribute to solving the household debt in a more sustainable way.

The BOT continued promoting financial literacy through various channels including social media, such as Facebook and YouTube, print media, radio broadcasting, and local media with localized contents to suit the context and dialects. The focus was on personal finance management; for example, financial planning, debt management, financial frauds, and saving for rainy day. Debt management under the COVID-19 situation and preparation for future challenges were also areas covered. In 2020, the usage of social media platform dominated the financial literacy promotion to better reach the digital savvy target. The total reach of social media contents exceeded 12.42 million times over the year.



3. The Promotion of Financial Literacy to Generation Y

The BOT continued effort on the preventive financial literacy promotion among the young generation targeting vocational college students and working adults. For the vocational college students, the financial literacy competition project, “Fin. Dee We Can Do!!! season 2 was launched in 2020. Due to COVID-19 pandemic, the project was adapted to online mode, whereby in the final competition round, 10 teams had to pitch via VDO conference. The season 1’s six finalists also entitled the role model colleges which would be supported by BOT to further develop and expand financial literacy program in their colleges and community. The expected result of the “Fin. Dee We Can Do!!! project will be extended so that all 20,000 vocational college students nationwide will receive financial literacy and essential skills.

The BOT also held the financial literacy via online platform, Line OpenChat, specially delegated the channel to vocational college students and teachers to have their own online community to exchange ideas about saving, making revenue, managing expenses and other financial skills. Moreover, the BOT developed a financial literacy toolkit for vocational college students. The toolkit, which will be used by teachers, students, and the general public as a teaching tool, is now available on www.1213.or.th,

Although the working age population, which have played an important role in the economic and social development of the country, have presumably stable income and access to financial services, they can become indebted mainly because of the lack of financial discipline and absence of consistent saving. Furthermore, their buying behavior adhering to the phrase “The Must-Have Items”, causing them to have insufficient income to pay off their debt. Consequently, Thailand household debt is likely to be exacerbated in the future. In order to promote financial literacy and financial discipline, the BOT continuously implemented the “Fin. Dee Happy Life!!!” project through “Train the Trainer” model with the aim to create the financial trainer (Fin. Trainer) in participating organizations. After completing workshops held by the BOT, Fin. Trainers were responsible for developing personal financial skills for the colleagues in their organizations. In 2020, the BOT trained 125 Fin. Trainers from 46 governmental and private organizations nationwide.

The COVID-19 pandemic obviously affected the operating pattern of some organizations in the project. To preserve smooth functioning of the project, the BOT therefore designed the online training courses which were tailored to the 6-part VDO clips including online monitoring and reporting. These courses were published on FCC YouTube channel (www.youtube.com/hotline1213), considered as an expandable and flexible learning model that was suitable for the context of organizations while giving access for non-participants to learn online. The course syllabus consisted of two main topics, namely financial planning and debt management combined with behavioral nudge. Furthermore, the BOT followed up the activities result continuously by the BOT's staff as organizations' mentor throughout the project.

The project accomplishments can be represented not only by the participants but also the organizations. For the participants, they got better financial knowledge, financial attitude, and financial behavior, such as recognizing about financial planning for an emergency situation, saving money for their goals, and managing debt burden to avoid over-indebtedness. For the organizations, many ecosystems which would support good financial habits to all employees e.g. arranging ongoing saving activities were created. The BOT coordinated with all Fin. Trainers consistently in order to enhance their financial knowledge and skills so that they can disseminate to other colleagues and sustainably embed in their organizations' culture.



Fin. Dee Happy Life!!! activity



Source: International Monetary Fund (IMF)

4.2.2 The Bank of Thailand's International Cooperation

As part of the effort to preserve and strengthen economic and financial stability in Thailand and the region, the BOT played active roles in enhancing financial cooperation throughout the year of 2020 as follows:

1. The BOT's Participation in the International Organizations and the International Fora

The BOT actively participated and exchanged views with other central banks and International Financial Institutions (IFIs) in various international fora. This year in particular, the BOT represented the Southeast Asia Voting Group in the International Monetary and Financial Committee (IMFC) of the International Monetary Fund (IMF). The Governor reiterated the importance of deploying a mix of policy tools namely, monetary policy, macroprudential measures, foreign exchange intervention, and capital flow management to deal with economic and financial challenges holistically, which was a departure from the orthodox theory that a certain policy tool was assigned to respond to a specific objective. This conceptual framework had been well accepted by emerging market economies who faced enormous challenges in safeguarding economic and financial stability at the current juncture. They called for the IMF to be more flexible in drawing its policy recommendation according to members' specific circumstances. In the same vein, the Bank for International Settlements (BIS) also launched an academic paper related to this new policy framework supporting practices of emerging market economies policymakers that placed more focus on policy practicality and effectiveness rather than following the traditional policy theory.

2. Development of the Regional Financial Safety Net

The BOT represented Thailand as a member of ASEAN+3 (ASEAN, China, Japan, and Korea) in the joint effort to enhance the Chiang Mai Initiative Multilateralisation (CMIM). This year ASEAN+3 Finance Ministers and Central Bank Governors agreed on key amendments to improve the effectiveness of CMIM Agreement⁷ as follows:

2.1 To increase the IMF de-linked portion (IDLDP) from 30% to 40% of the CMIM's total financing capacity of USD 240 billion

2.2 To allow the use of members' local currencies in CMIM contribution and financing operations, in order to reduce reliance on the US dollar that could subject members to exchange rate volatility

3. Promotion of Local Currency Usage

The objective was to provide alternatives for business operators to use local currencies for cross-border trade and investment transactions, which could reduce reliance on major currencies and increase efficiency of their exchange rate risks management. Significant developments in this area were as follows:

3.1 Enhancement of the local currency settlement framework between Indonesian rupiah and Thai baht⁸: Bank Indonesia (BI) and the BOT appointed additional qualified commercial banks (Appointed Cross Currency Dealers: ACCD) in both countries to improve ease of access to the rupiah-baht settlement framework by business operators. In addition, the framework was expanded to include direct investment as an eligible underlying transaction in addition to trade, and further relax relevant foreign exchange rules and regulations, for example on documentation requirements. The enhancement came into effect on 21 December 2020.

3.2 Renewal of the RMB-THB Bilateral Swap Arrangement: the arrangement aimed to support bilateral trade between Thailand and China as well as to bolster confidence of business and financial sectors on the availability of liquidity in Thai baht and Renminbi for cross-border transactions. In this connection, the People's Bank of China and the BOT renewed the RMB-THB Bilateral Swap Arrangement for the third time on 22 December 2020 that would allow for the exchange of local currencies up to RMB 70 billion or THB 370 billion.

3.3 Establishment of a Bilateral Local Currency Swap Arrangement between Japanese Yen and Thai Baht: the arrangement would enable the Bank of Japan and the BOT to provide Thai baht or Japanese yen liquidity up to THB 240 billion or JPY 800 billion to eligible financial institutions in support of their cross-border operations. The two central banks entered into the agreement in March 2020.

4. Financial Connectivity

4.1 Retail Payment Connectivity between Cambodia and Thailand: the National Bank of Cambodia (NBC), the BOT, together with participating commercial banks from the two countries developed an interoperable QR Code for cross-border QR Code payment. As a result, Thai travelers could use Thai commercial banks' mobile banking application to scan QR Code to pay for goods and services at

⁷ The revised CMIM Agreement will come into effect after being signed by all member nations, which is expected to complete in 2021.

⁸ The first phase of the cooperation began in 2017

participating shops in Cambodia. The project reflected the BOT's continual commitment and great emphasis on enhancing payment systems connectivity within the ASEAN countries (ASEAN Payment Connectivity).

4.2 Free Trade Agreement (FTA): the BOT participated in the Regional Comprehensive Economic Partnership (RCEP)⁹ negotiations of issues related to trade in services and investment, of which member countries successfully signed the agreement on November 15, 2020. The RCEP aimed to facilitate the expansion of regional trade and investment. It would play an important role in driving economic growth and development of the region and potentially lead to a harmonious integration to the global economy; businesses and people in the region will benefit from enhanced regional competitiveness and investment opportunities. In addition, the BOT participated in the hearing for potential CPTPP membership by providing views and comments on financial sector related issues to the 'Ad-hoc Committee on an Impact Assessment of CPTPP'.

The year 2020 was a challenging year where cooperation among central banks and IFIs became even more important amidst the COVID-19 crisis. The frequent exchanges of best practices and experiences on policy responses were instrumental in formulating BOT's policies and measures to support the domestic economic recovery.

4.2.3 Sustainable Banking

An economy focusing only on short-term growth could lead to negative impacts, particularly, in 3 key areas: 1) Environment, such as PM 2.5, drought, and flood 2) Society, such as household debt and inequality and 3) Governance, such as violation of the rule of law in legal enforcement and corruption. The underlying root cause of these issues stemmed from the exploitation of public resources for private gains, without taking into account the consequent negative externalities over the long-term. Thailand, along with other United Nations (UN) Member States, adopted the 2030 Agenda for Sustainable Development (the Agenda), which comprises of 17 Sustainable Development Goals (SDGs)¹⁰ as a global framework for concrete action plan.

The BOT, with mandates of supervising financial institutions and safeguarding economic stability, recognized that the banking sector, as Thailand's main funding source, could play a significant role in the allocation of financial resources towards improving the Thais' quality of life and achieving the SDGs. The BOT actively encouraged the banking sector to conduct business responsibly, taking into account the environmental, social, and governance (ESG) considerations. This can be achieved through organizational culture that prioritizes long-term value creation to stakeholders over short-term profit maximization and a comprehensive ESG risk management system – all of which boosts public trust.

⁹ RCEP is the world's largest FTA covering approximately one third of the world population and its member economies' combined gross domestic products (GDP) accounting for about 30% of the global GDP. Thailand's trade values with the member economies account for 60% of Thailand's total trade.

¹⁰ For more information: <https://www.sdgmove.com/sdg-101/>

In 2020, the BOT undertook the following initiatives to promote sustainable banking:

1. The BOT formulated the Banking Self-Assessment Framework on Sustainable Banking

Guidelines – Responsible Lending to evaluate implementation progress of banking sector following the Memorandum of Understanding on Sustainable Banking Guidelines – Responsible Lending (MoU) in 2020, on 4 key principles: 1) Leadership and Responsible Lending Commitment 2) Stakeholder Engagement 3) Internal Implementation Mechanisms and 4) Transparency. Extending beyond Corporate Social Responsibility (CSR), this self-assessment emphasized a comprehensive internalization of ESG into business operations. Having aggregated the self-assessment results, the BOT is currently analyzing the progress of the overall banking sector and each bank which will be reported to banks individually.

2. The Working Group on Sustainable Finance (WG-SF) consisting of the BOT, the Securities and Exchange Commission (SEC), the Office of Insurance Commission (OIC), the Ministry of Finance (MOF), and the Stock Exchange of Thailand (SET), in collaboration with the International Finance Corporation, conducted a study on sustainable finance. Focusing on the direction and key enabling factors for sustainable finance in Thailand, the study served as a common framework upon which stakeholders and regulators can formulate and coordinate their future work plans and policies. Additionally, the WG-SF is exploring the possibility of developing a taxonomy, a common definition and classification system of economic activities deemed as environmentally-sustainable. The taxonomy would facilitate the alignment of environmental policies among financial regulators and the identification of environmentally-sustainable economic activities by financial institutions, which encourages innovative development of new financial products and services, attracting funding towards the achievement of Thailand's environmental goals.

3. The BOT collaborated with partner organizations to drive practical implementation of sustainable finance. The BOT with partner organizations, namely the World Wide Fund for Nature and the UK Government – ASEAN Low Carbon Energy Program, have been organized a series of capacity building workshops to raise awareness, build technical know-how on areas of practical ESG internalization, such as Climate Risk Management for Financial Institutions, especially by stimulating discussions between the Thai financial institutions and technical experts. Furthermore, the BOT connected with the civil society networks, namely Fair Finance Thailand and Mekong River activists, to facilitate stakeholder discussion on the socio-environmental impacts of commercial banks' lending to finance the Luang Prabang Hydropower Project. The discussion was intended to ensure that responsible lending was fully incorporated in the process of financing the project.

Additionally, the BOT is committed to enhancing sustainability in its internal processes, including but not limited to, environmentally-friendly production of banknote, utilizing the BOT Learning Center as a knowledge center in economics and finance, setting up the Corporate Governance Committee to ensure sufficient and appropriate central bank governance. The BOT published its inaugural Sustainability Report in 2020 to illustrate its concrete sustainability-related implementation to the public.



4.2.4 Banknote Management

1. Banknotes

Banknotes management for sufficient circulation to the public In 2020, note in circulation was 2,094,452 million baht, increased 234,911 million baht. Currency reserves was in total of 2,189,485 million baht, increased 14.7% from 2019.

Assets in Currency Reserve Account as of December 31, 2020

Description	Value (Million Baht)	Share (%)
1. Foreign Currencies	382,996	17.5
2. Foreign Securities	1,806,489	82.5
Total	2,189,485	100.0

All denominations of banknotes are produced for 1,900 million notes, decreased 8.2% from 2019.

Banknote Production in 2020

Denomination	1000 baht	500 baht	100 baht	50 baht	20 baht	Total
Volume (Million notes)	553	126	585	140	495	1,900

Note: included the Auspicious Occasion of the Coronation of King Rama X B.E. 2562 (2019) 1000 baht and 100 baht at 10 and 20 million notes, respectively

The Commemorative Banknotes on the Auspicious Occasion of the Coronation of King Rama X B.E. 2562 (2019) 1000 baht and 100 baht were issued on December 12, 2020.

Counterfeit banknotes detected and arrested in 2020 was 6,680 notes or about 1.1 piece per million.

2. Supporting of banknotes issuing and management

2.1 Banknotes management system development There was the development of the banknotes management model between the BOT and commercial banks by establishing the Consolidated Cash Center (CCC) at Phuket and Khon Kaen (in progress). There were more automatic systems being used in the banknotes production and management. Additionally, the RPA (Robotic Process Automation) and the AI (Artificial Intelligence) were applied to improve the processes and data analyses for higher efficiency and lower working processes and costs. The organization structure was also improved to improve workforces' potential to be more agile, skilled and to gain new capabilities.

2.2 Development for environmental and society sustainability For the Banknote Management Group to be the role model of sustainable operations in energy, resources, environment, society and good governance, various operations were improved to reduce consumables and reach the maximum efficiency of resources used. For example, new auto packing systems were installed in the production lines to reduce the amount of plastic straps. The solar cell installation helped reduce energy consumed by 400,000 kilowatt-hours per year. Additionally, the BOT emphasized waste reduction and adding value to waste from processes. For example, some of the destroyed banknotes were recycled and transformed into new and useful products. Furthermore, the BOT provided public education on banknotes and supports near-by communities.

2.3 Risk management and business continuous plan Review and plan for the disruptions by preparing the minimum processes and resources needed for the emergency situations and verified by the international standard of business continuous plan or ISO 22301.

4.2.5 Communication and Stakeholder Engagement

Aiming for the public's trust and understanding on our roles, the BOT has been improving communication strategy by holding to "CSR" principle, which are shortened form of Customer-centric, Simple and Rationale.

2020 was one of the most challenging years for the BOT's communication. The communication strategy was developed to correspond with current behavior of people mainly perceiving message from many channels, such as mass media together with the BOT's new media containing Facebook Fanpage, Youtube channel, Twitter, Instagram and Line official account. It was found that there was a steady growth in the number of subscribers of those channels. Meanwhile, an improvement in the public relation was also one of the most important duties of the BOT, including the coordination with government and private sectors in order to encourage policy effectiveness via knowledge and experience sharing, as well as, hearing and solving problems with public and business sectors. Looking forward, the BOT will keep communicating useful information and improving the process to meet public's higher expectation.

BOX
13

Stakeholders' Engagement: The Bank of Thailand's Initiative of the Year



When it comes to central banks' communication, most people might view it as communicating or talking to public about central banks' policies and regulations. However, at the Bank of Thailand (BOT), we focus on "stakeholders' engagement" because it is not only about "communicating", but also "listening" and "engaging with stakeholders" to ensure the successful delivery of central banks' mandates.

In 2020, The BOT received the "Initiative of the Year" award from the Central Banking Journal, the United Kingdom. The award recognized the work conducted by the BOT to engage much more with stakeholders as well as the use of two-way communications to support the delivery of at least four major initiatives as followed.

1. Automating banknote production to meet the growing demand of banknotes in circulation and educating the public on banknotes through the mobile application "Thai Banknotes". Available in Thai and English, the app showed how to identify genuine banknotes using three methods: "feel, look, tilt".

2. Turning the banknote printing house, a once highly restricted area, into the BOT Learning Center. As a symbol of the central bank's openness, the building became a public space where people came to visit the museum, using the library, and appreciating art exhibitions.

3. Launching the cheapest fund-transfer system "PromptPay". Giving people access to convenient, instant, and safe payments, it represented a major overhaul of Thailand's payments infrastructure and a cross-border payments linkage called ASEAN Payment Connectivity.

4. Establishing the Debt Clinic, the country's largest initiative for credit card and personal loans debt restructuring. The scheme pooled unsecured NPLs owed to multiple creditors aiming to help debtors better manage and pay off their debts.

The BOT believed that innovative and active stakeholder engagement was essential for smooth policy implementation to ensure the sustainable economic well-being of the country, and without it, these initiatives would have been impossible.

4.3 Organization's Efficiency

4.3.1 COVID-19 Coordination Center

Since the onset of the COVID-19 outbreak at the beginning of 2020, the BOT acknowledged potential risks and established the **COVID-19 Coordination Center** to closely monitor the situation, propose risk mitigation measures, facilitate and coordinate with internal and external agencies for efficient and effective business continuity plan implementation. The center was led by the Enterprise Risk Management Department with the goals **to safeguard employee health and safety and to ensure the continuity of the BOT's critical operations**.

Since early January 2020, the Center has closely monitored the outbreak situations in Thailand and has been in close consultation with medical experts from the Ministry of Public Health. Besides, the BOT discussed risk prevention and response measures with other central banks through various Central Bank in South East Asia (SEACEN) forums. In an initial phase, the BOT emphasized preventive measures. For instance, the BOT issued international travel restrictions, set up temperature screening procedures, distributed alcohol gels, and increased the cleaning frequency, and laid out social distancing measures in all common facilities such as elevators and meeting rooms. Further, the BOT began the preparation for business continuity plans readiness, such as securing IT resources to enable effective work from home, assembling backup teams for critical operation, and setting up additional backup sites to facilitate split operations. Correspondingly, all departments revised their pandemic business continuity plans by re-classifying their critical operations into 3 groups: (1) mandatory continuous on-site operations (2) work from home operations; and (3) work from home operations that occasionally need to be on-site. Additionally, all on-site operations must be planned with the minimum resources principle.

Subsequently, during the city lockdown, the BOT added preventive measures to safeguard the health and safety of employees working on-site; for instance, providing shuttle services for employees traveling to work via public transportation, providing foods and drinks, and rearranging seating and adding protective shields in workplaces and common facilities following the government social distancing guidelines.

Once the government relaxed the disease control measures, the BOT planned a gradual business resumption by taking into account social distancing and health and safety guidelines. The BOT renovated workplace and common areas as well as issued various internal guidelines consistent with the government relaxing anti-COVID-19 rules, such as guidelines for using fitness and cafeteria and guidelines for resuming employee sport and recreation clubs and activities.

4.3.2 Organization Structure, Work System, and Work Processes

The BOT has continuously revamped and adjusted organizational structure, work system, or process in diverse crucial areas with the purpose to achieving key and urgent strategic mission, caused by COVID-19 pandemic, as well as enhancing agility, efficiency, and effectiveness.

1. Monetary Stability

1.1 Monetary Policy Group: supporting monetary policy Formulation, macroeconomic surveillance, and financial systems stability under greater complexity, fluctuation and economic expansions.

1.2 Financial Markets Operations Group: supporting financial markets operations under stress by COVID-19 pandemic and market volatility i.e. enhancement of Open-Market Operations (OMOs) windows and instruments, Emergency Liquidity Assistant (EIA), Corporate Bond Stabilization Fund (BSF), together with exchange control regulation and the operation of new dealing room system

2. Financial Institutions Stability

2.1 Financial Institutions Policy Group: strengthening FIs strategy development, for instance, sustainable banking, international collaboration & financial institution policy development, and FIs resolution and FIDF management.

2.2 Payment Systems Policy and Financial Technology Group: enhancing the formulation of payment system policy, together with a supervision and examination to embrace the expansion of e-payment services, as well as cybersecurity and technology risk supervision capabilities.

2.3 Supervision Group 2: supporting debt restructuring program for debtors e.g. issuance of policy for SMEs and corporate debtors, an analysis and assessment of policy effectiveness, and stakeholder engagement with related agencies including government and private sector, combined with SFI's supervision.

3. Corporate Development

3.1 Information Technology Group: promoting digital transformation strategy, strengthening the efficiency of computer engineering surveillance and the system in data center, and enhancing IT capability to better support the strategy regarding data-driven organization.

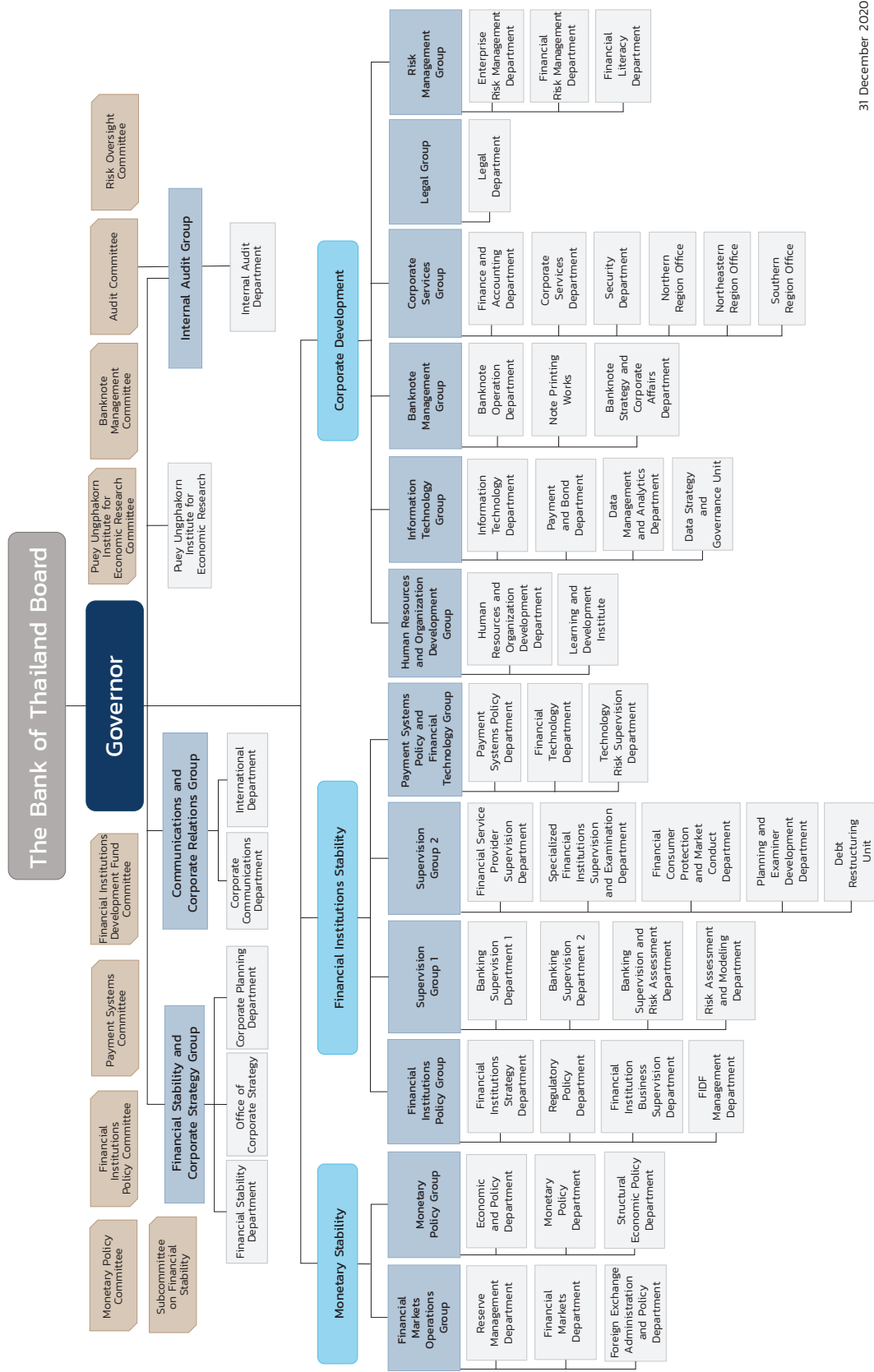
3.2 Risk Management Group: enhancing capabilities and efficiency of enterprise risk management, financial risk management, and financial literacy.

4. System and work process improvement

Upon BOT's strategic direction on digital transformation to streamline and enhance efficiency of BOT's processes. We have adopted design thinking concept to formulate the technology-based solution for 13 projects; i.e. e-factoring and supervisory technology. This method encouraged us to have a better understanding of stakeholders in broader and deeper facets, to reduce or to eliminate unnecessary or duplicated work processes via the deployment of robotic process automation (RPA) for 11 projects. Moreover, digital mindset was cultivated to employees to make a greater work collaboration and more digital security. Moreover, the BOT is in the process of formulating new HR model and new HR platform.

Furthermore, BOT promoted such new way of work as cross-function work collaboration; cross-functional squad. This way helped gather potential employees from various departments to work together under the same project in an aim to encourage work collaboration and to broaden knowledge beyond their routine work scope, together with delayering and greater empowerment.

Bank of Thailand Organization Chart



31 December 2020

BOX
14

As the World Changes Rapidly, the BOT is Required to Approach and Understand Thai Rural Lifestyle Even More



“Khao Thueng Khao Jai (To Approach and Apprehend) Thai lifestyle” Project

The Thai economic and financial landscape is facing several challenges. These include mega trends, such as aging society, climate change and disruptive technology, as well as domestic structural changes, such as income inequality between urban and rural areas and elevated household debt. The unprecedented COVID-19 has accelerated these trends. The Bank of Thailand (BOT), as an entity to maintain Thailand’s economic and financial stability, acknowledges these changes and realizes that only taking economic data into account is insufficient and not comprehensive to assess the overall economic and financial conditions. **Therefore, the BOT is required to have an in-depth understanding of the issues in each region, and collaborate with the related organizations in order to design and implement adequate, well-targeted and practical monetary policies.** The Business Liaison Program (BLP) which started in 2004 is one of the channel that the BOT gathered information and opinion on economic issues from stakeholders, including businesses and government agencies as well as other associations and unions, to monitor economic and

financial conditions, coupled with economic data, and present to the BOT Board.

In addition, the BOT has initiated to conduct field surveys to reach out to regions in a project called “Khao Thueng Khao Jai (To Approach and Apprehend) Thai Rural Lifestyle” in 2019, and going into 2020. More field trips will be arranged in the upcoming years. The project provides an opportunity of “Humility” to the BOT staff, which broaden the understanding of the regional and local issues and facts by themselves. The first-hand experience helps them design and implement policies in several aspects, including economic policy, monetary policy, financial institution policy and payment system policy, with well-rounded and thoughtful mindset, and hence be able to implement efficient and effective policies as targeted.

The project “Khao Thueng Khao Jai (To Approach and Apprehend) Thai Rural Lifestyle” conducts field trips to reach out to the regions and collaborates with Pidthong Lang Phra Foundation (The Royal Initiative

Discovery Foundation). The project allows the BOT staff up to mid-level executives, which are the target group and involve in designing policies, to reach out to regional issues and understand the rural way of life, as agriculturalists in the rural area account for a majority of population and are the foundation of the Thai economy. The BOT staff do not only learn from an example of holistic area-based development to solve problems and promote better quality of life in the rural area, but they also fulfill necessary skills to gather regional data as a material to formulate the policy. The project has been carried out in Uthai Thani, Kalasin and Nan provinces respectively with more than 100 staff joining the project.

To conduct each fieldwork, the BOT staff spent time with the community leaders and farmers for three days, starting from understanding structural area-based issues, which were mostly related to water management as most of them were farmers. Hence, water was important for a living. The BOT staff also understood the concept of building reservoir in order to manage water more effectively and appropriately meet the farmers' demand. Furthermore, the BOT staff tried performing as farmers, harvesting rice, working on soil preparation and building a reservoir, **all of which helped them to truly understand farmers' living and spending behavior through discussing and exchanging opinions.** At the end of the project, the BOT staff utilized their lessons learned and reflected what they have experienced to help design and formulate the policy they are responsible for in the context of rapid change in such structural issues.

After realizing and understanding the problems from community leaders and farmers, who are

directly affected by the BOT's policies, there are three lessons learned that should be applied to formulate and implement the BOT's policy. **Firstly, policy designation should be based on stylized facts, and it should not be a blanket policy or one policy fits all,** as each region has different context. Thus, the policy designation should be considered on the basis of difference between regions, appropriateness with the region, being targeted. **Secondly, any supporting policies should be implemented with some conditions, as such conditions** stimulate the sense of ownership, incentivize for adaptation, and utilize the support more effectively. **Thirdly, the policy would be highly effective when all the related parties participate.** The collaboration should push the policies towards the same direction, practically and effectively make the use of the policies, and thus pursuing to achieve the common goal. With these lessons being considered, it should help reach the goal of the BOT to support economic growth and foster economic and financial stability environment with sustainability and inclusion.



"Khao Thueng Khao Jai (To Approach and Apprehend) Thai lifestyle" Project

BOX
15

BOT and Business Sectors Information Exchange Program (Business Liaison Program: BLP)



BOT and Business Sectors Information Exchange Program

The information exchange program between the Bank of Thailand (BOT) and business sectors, also known as the Business Liaison Program (BLP), began in 2004 with the purpose of gathering economic insights on both macro and micro levels which were constantly evolving. The information allows the BOT to stay up to date on current economic issues, comprehend with business conditions and market behavior, make outlook perspective on various economic dimensions, and recognize how businesses' actions in the micro level could lead to structural changes in the economy, all to support the Monetary Policy Committee on its policy decisions. Through this program, the BOT has been able to exchange information with both the private sectors and

government organizations from various industries as well as representatives of unions, associations, and households, which encourages more cooperation between economic stakeholders and enables the BOT to assess the economic conditions more extensively.

The BLP program operates using 3 main methods including

1. Insightful interviews: Representatives of the BOT from the headquarter in Bangkok and the 3 regional offices in the Northern, Northeastern, and Southern regions would conduct interviews and exchange information with approximately 200 firms each quarter (800 firms annually). There are both repetitive interviewees for the BOT to follow up on business conditions and new interviewees to diversify the industry representatives in dimensions of size (large, medium, small), firms within the major sectors (manufacturing, trade, services, real estate and construction, and agriculture), and location throughout the country, so that the BOT could keep up with the ever-changing situations and landscapes. Also, in the event of situations that could significantly impact the economy, the BOT is able to contact related organizations immediately or conduct a field survey if needed in order to make an economic assessment quickly and thoroughly.

2. Roundtable discussions: Roundtables are frequently set up to discuss important matters that could impact the economy. Various firms and

unions have been invited to exchange views such as the Thai Chamber of Commerce, the Federation of Thai Industries, Thai National Shippers' Council, the Federation of Thai SME, Thai Retailers Association, Labor Unions, Taxi and Motorcycle Unions, as well as international organizations including JETRO, embassies, and Chamber of Commerce of Thailand's major trading partners.

3. BOT's executives and regional entrepreneurs meetings: Each year, the BOT would conduct 4 field trips on 4 major regions in Thailand so that the executives would have the opportunity to discuss economic conditions and activities on various regions with major as well as local firms and government organizations and also observe real sectors through company visits.

The variety of the BLP program's procedure has helped the BOT to create a healthy relationship and network with the firms and organizations so that the BOT can keep up with data and insightful information in the real economy. Throughout the program, The BOT has strictly followed data governance protocols and treat all information as confidential. These qualitative data are used to publish the BOT's Business Outlook Report, which are released quarterly, as well as to support monthly economic condition data and Monetary Policy Committee meetings.

Apart from keeping up with the economy through the BLP Program, the BOT has also developed monthly sentiment indicators covering business sectors and low income households based on location and industries to assess the well-being of business sectors and households through 3 indicators including

1. Business Sentiment Index (BSI) which is a survey based questionnaire distributed to approximately 800 firms each month. Also, when the economy had been hit with an unexpected event such as the COVID-19 outbreak, the BOT created an extra set of questionnaires regarding the effects of COVID-19 in addition to the original survey to rapidly assess the economic conditions and developments during the times of potential economic crisis.

2. Relationship Manager Sentiment Index (RMSI) which is a survey coordinated with Specialized Financial Institutions (SFIs) using all their branch managers' sentiments throughout the country to assess low income households in both rural and urban areas (urban poor and rural poor). There are approximately 2,200 respondents each month.

3. Retailer Sentiment Index (RSI) which is a conducted survey of the Thai Retailers Association to gauge retailers' sentiments whom are mostly associated with selling consumer goods.

4.3.3 Knowledge Building and Academic Networking

The BOT recognizes the contribution of knowledge building and academic networking to policymaking, as well as the role of the BOT as a thought leader on issues in economics and development in Thailand. In 2020, Puey Ungphakorn Institute of Economic Research (PIER) and other departments within the BOT, together with their academic alliances, expanded their work on many fronts as follows:

1. Knowledge Creation and Dissemination

In 2020, the BOT disseminated more than 180 research studies by the BOT and outside researchers through various channels, including Focused and Quick (FAQ) articles, PIER Discussion Papers (full research papers), aBRIDGEd (short articles digested from full research papers for wider audience), and short OP-ED articles published in popular columns such as ThaiPublica Online Column, “Jaeng See Bia”, and “Bang Khun Phrom Chuan Kid.” In addition, media briefs were regularly held with the goal to make research reach the wider audience as well as to promote the evidence-based policies.

The BOT also awarded 15 PIER research grants to outside researchers both for research projects that support the BOT’s operation and for research projects that extend the frontier of economic knowledge. In addition, the BOT has continuously developed Thailand’s Integrated Database for Economics (TiDE), an integrated and user-friendly database platform for Thai economics data that public users can access at no cost. (<https://tide.pier.or.th/>)



PIER Research Brief on “Tummai Nong Mai Taeng-ngarn (Why don’t you get married?)”



2. Providing National Academic Platforms

In 2020, the BOT organized the annual BOT Symposium under the theme “Restructuring the Thai Economy.” Due to the COVID-19 situation, the Symposium was held online and was open to public. In addition, the BOT held the annual PIER Research Workshop with the objective to foster high-quality research, encourage knowledge exchange, and strengthen the network of economists from within and outside the BOT.

3. Building Academic Networks and Connecting Researchers with Policy Makers

The BOT organized field-specific policy forums for relevant stakeholders to exchange perspectives and policy recommendations. Previous policy forums covered various topics including “Central Bank Digital Currency” and “Public Economics” and have led to policy recommendations on issues such as social welfare and fiscal sustainability.

The BOT launched a series of policy forums “Industry Transformation” as a platform for representatives from business sector, policy makers, and researchers to exchange perspectives on structural problems of Thai industries, consequences of the COVID-19 pandemic, and policy recommendations. In 2020, the forums covered nine industries and the comments and recommendations from the meetings are published on PIER’s website.

The BOT also launched a series of policy forums “Restructuring the Regional Economy” as a platform for representatives from business sector, policy makers, and researchers to exchange perspectives on regional structural problems with an aim toward changes at the macro level. In 2020, the BOT organized three policy forums and the comments and recommendations from the meetings are published on PIER’s website.

4.3.4 Information Technology Management and Data Management

Transformation into a digital workplace by leveraging digital technology and data was one of the major milestones in the BOT’s three-year strategic plan (2020 – 2022). BOT equipped our employees by expanding their capability using various tools, data, and open mindset in order to respond to the VUCA world.

1. Information Technology

BOT accelerated its digital transformation since Q1/2020 in order to maintain business continuity during the COVID-19 crisis. By applying a new way of working, supported by upgraded technology, BOT is always ready to support the public, financial institutions, and other organizations. Here are some major achievements during 2020.

1.1 Transforming BOT into a Digital Organization

There were 5 aspects in our digital transformation roadmap.

(1) Becoming a digital workplace

BOT leveraged Microsoft O365 and many new tools to encourage digital collaboration within the organization. Employees can work together wherever they were by using a conference application, a document sharing platform and document co-authoring tools. Our employees adopted these technologies rapidly in Q2/2020 when BOT encouraged 'work from home' and were able to continue our business smoothly. Additionally, we also applied Robotics Process Automation (RPA) to replace repeated manual works and increase overall efficiency and productivity.

(2) Expanding the potential of data-driven and evidence-based decision making

BOT was revamping its data system in all aspects, from infrastructure, data analytics tools, data management tools to client's applications. By implementing data virtualization and data catalog, it was easier for employees to utilize data. BOT must maximize its data analytics capability in order to take care of the overall economics and financial ecosystem. To do so, we began to use micro data and transactional data to broaden our analytics.

(3) Migrating to next-generation platform

Many applications and systems had been created to support BOT's operation, requiring so much effort to maintain. BOT decided to unify many of these systems and migrate to cloud platforms. This would help standardize our IT systems and make it more secure and robust. A Service Management platform providing IT and legal services was our first move, to be followed by HR and ERP platforms and would expand to cover services provided to external parties as well.

(4) Cultivating digital mindset and capability

With the economy and business changing rapidly, new strategies and tactics emerged daily. BOT encouraged our employees to cultivate the new digital skills and mindset. We provided them with spaces to experiment and demonstrate their skills through the digital learning board, the digital champion program, and the design thinking center. We received great feedbacks from these sessions and will continue them in the next year.

(5) Strengthening our cyber security

IT security is one of the highest priority operation. In 2020, BOT enhanced its IT security in all levels. Firstly, we added a new security system at the secondary data center. Secondly, we implemented an advanced threat response and protection system altogether with enhancing our servers' security. Next, we increased the capability of our data backup and recovery system. We also continued to extend the coverage of our data leak protection (DLP) system. Finally, we performed a security operation center (SOC) assessment to ensure that our operation is robust according to international standards.

1.2 Upgrading the stability and security of IT facilities

BOT continued to operate payment systems (BAHTNET and ICAS), considered to be critical information infrastructure (CII) of Thailand, and kept them smooth, stable, and secure. We preserved the stability and efficiency of the payment systems even during crisis. We continued to strengthen the security of the systems and always checked for their robustness. We also kept developing better services by applying new technologies.

Last year, BOT introduced the DLT Bond system which helped shorten more than 85% of the overall process of selling savings bond. Savings bonds sold thru DLT Bond system included '1 Baht Bond' and 'Moving Forward'. This system also allowed BAHTNET's members to notify a successful transfer using API technology.

1.3 Operation supporting measures during COVID-19

BOT assembled teams to implement systems and applications to support financial rehabilitation and debt relief measures related to COVID-19. For example, the COVID-19 measures website (www.bot.or.th/covid19) consolidated and provided helpful information on all measures. The Debt Exit Fastlane was another channel that BOT established to help debtors, both business and individual. BOT also implemented many back-end systems in order to support the economy according to announced measures and policies. An analytics application for approving Soft Loan, an application supporting Mutual Fund Liquidity Facility (MFLF), and an application supporting Corporate Bond Stabilization Fund (BSF) were examples of systems that helped BOT support the economy and financial institutions during COVID-19 crisis.

2. Data Management

The BOT as an organization that has rich financial and economic data in Thailand. Policy decision making is based on comprehensive analysis and insights. Therefore, data management must be ensuring data quality and data security, ease of use and accessibility, align with data standards, as well as data governance should adhere to national and international data laws and regulation. Key implementations throughout the year are as follows.

2.1. Raise the utilization of data within the Bank of Thailand

(1) Raise utilizing of micro data for policy making and data analytics

1) Financial Market Operation: Usage of micro data to study hedging behaviors of importers and exporters in order to formulate appropriate strategies for promoting the usage of financial instruments 2) Monetary Policy: Usage of import and export transactional data for export forecasting, telco's location data for monitoring labor mobility and electricity usage for monitoring the manufacturing sector during COVID-19 3) Financial Institution Policy: classifying quality of loan in Special Financial Institutions (SFI) from behavioral data to support financial rehabilitation measures for COVID-19 pandemic. 4) Others: designing simulation model and decision support tools for Consolidated Cash Center (CCC) operations.

(2) Raise data awareness with DATA VIZ ART

Organize DATA VIZ ART internal competition to raise data awareness and encourage personnel in various departments to develop data visualization and data storytelling skills. The resulting data visualizations were exhibited at the Bank of Thailand Learning Center for public viewing, from September 22, 2020 to October 31, 2020.



The winner from DATA VIZ ART activity

(3) Raise adoption of Artificial Intelligence (AI) and Machine Learning (ML)

technology

AI and ML technology was applied to increase efficiency and effectiveness of multiple operations, for instance, automatic classification of banknote defect in the printing process, decision support system in reserve management and financial market operations, and detecting IT security breaches with AI.

2.2 Enhance data management in terms of data governance, data quality, data security and data usage for the BOT, public and external agencies in order to amplifying analytics for better insights and support data-driven decisions.

(1) Regulatory Data Transformation (RDT) was a project initiated in 2020 for developing a new data architecture of regulatory data which closely mimicked the native data collected in the financial institutions' database. **Data were transformed to regulatory reports by the BOT** to minimize the regulatory reporting burden and reduce the cost of financial institutions in the long run. Meanwhile, the granular data would provide insight and in-depth analysis for compliance, surveillance, policy decision and implement measures to cope with the rapid changes in the financial economy. First phase of RDT was granular credit data which was planned to be completed at the end of 2021. At the same time, **data guillotine was also implemented to redundant reductions and cancellations of current data reporting which did not keep up with the current situation.** Overall, it will enhance the information infrastructure of financial institutions in Thailand for sustainable benefit of all parties and ensure the stability of financial institutions and financial systems.

(2) **Enterprise data asset platform** was developed to support the systematic management of the central data registry which was the list of all data keep in the BOT including glossary and meta data. The registry would especially be useful for data searches, improving users' understanding of data and correctly use the data. This also encouraged assigning appropriate data security classification, as well as systematically governing data management process.

(3) **Central data governance guideline** was set to be a common principle and guideline to make it clearer in practice. All departments can be used for conducting data process on the same standard of good data governance. The guideline was clearly specifying the roles and responsibilities of those involved in the data process, data security classification and data management throughout the information lifecycle.

(4) **Data Leak Prevention (DLP)** was implemented for all departments for monitoring and preventing sensitive data and confidential data be sent to unauthorized person via email.

2.3 Expanding data cooperation and acquire new data to enhance the level of comprehensive data analysis, meet the needs of the country and able to cope with new challenges as well.

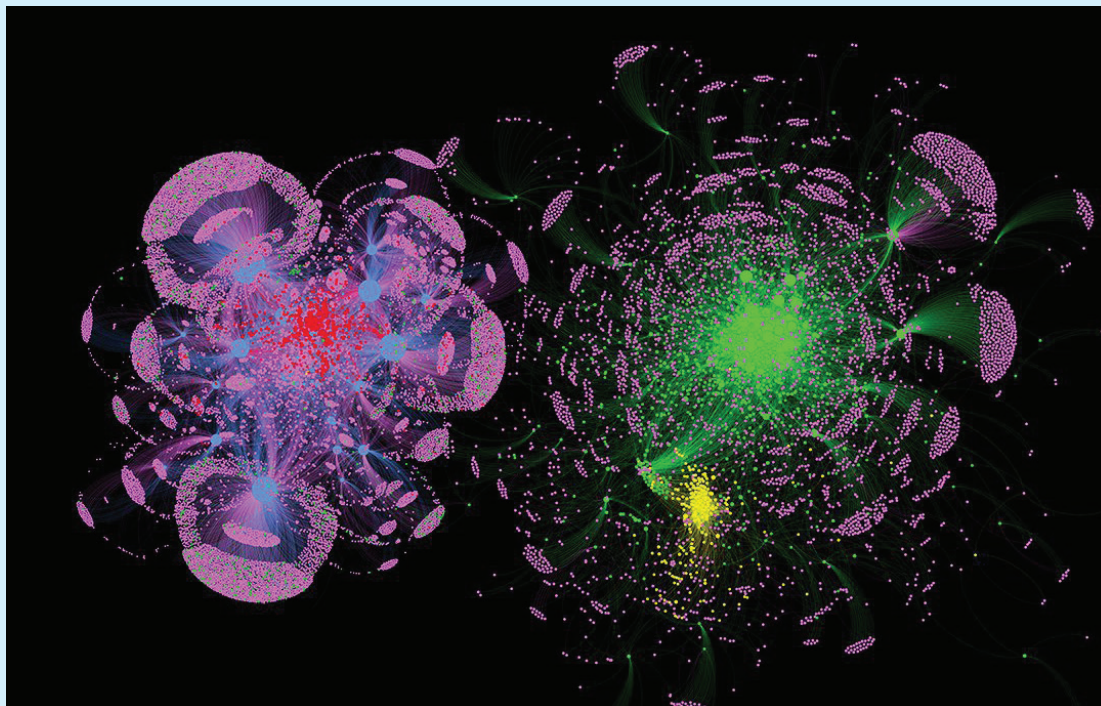
(1) The BOT signed the **Memorandum of Understanding (MOU)** with several organizations to promote data sharing between organizations, enhance data usage and make use of the vast amount of data available in each organization as well as strengthen the national database as follows: 1) Office of Agricultural Economics (OPO), Ministry of Agriculture and Cooperatives to develop national agricultural databases and utilize data for agricultural economic analysis and forecasting. 2) National Statistical Office (NSO) to utilize data to analyze and monitor the country's economic conditions as well as supporting data analytic and technical knowledge to the NSO and 3) Department of Land Transport to utilize information to develop economic indicators and transport data systems

(2) The BOT acquired new data which was urgently needed to analyze and monitor debt restructuring and new measures to help debtors and enterprises affected by the COVID-19 outbreak, as well as additional measures to assist retail debtors by means of debt consolidation.



BOX
16

Increasing Efficiency and Effectiveness in Work Processes by AI and RPA



Data visualization portrayed complicated data to be easily comprehended.

The Bank of Thailand (BOT) has developed and employed artificial intelligence (AI) and machine learning (ML) tools in its core missions and its day-to-day operations. Specific examples of how BOT has incorporated AI/ML into its processes are as follows.

1. Ai for financial institutions supervision

As an emerging supervision technology tool, BOT developed a Natural Language Processing (NLP) system to objectively and qualitatively analyze each individual board meeting minutes of financial institutions. The tool enabled supervisors to analyze a large collection of board meeting minutes for studying and monitoring behavioral and culture of the boards of director of financial institutions.

2. Ai for banknote printing process

BOT developed an in-house image processing system that automatically detects and classifies types of banknote defects from the banknote printing process. Integrating automatic defect classification into the quality control step would enable real-time adjust to the printing process, which can potentially help lower the cost of the banknote printing process.

3. Ai for fx supervision

Randomly inspecting FX transactions to identify which transaction is non-compliance can be highly time consuming, given the amount of transitions that happen everyday. Using characteristics of FX transactions and regulatory conditions in the past, BOT built an AI model to automatically filter and identify which FX

transactions human supervisors should manually inspect, which significantly helped reduce human effort in the process.

4. AI for data management automation

Many statistical compilation tasks previously required human compilers to manually inspect micro-level data and transactional data, which can be time consuming and prone to human-errors. Therefore, BOT deployed several AI models that automated those tasks, such as classifying government expenditure transaction according to IMF standard, and resolving multiple variations of entity names in financial reports.

In addition to the use of AI for automation, Robotic Process Automation (RPA) was also deployed to help automate and transform various processes within the BOT. Not only does this help enhance the efficiency of various operations, it also enabled more time and resources to be channeled to urgent tasks related to the COVID-19 situations.

The BOT's adoptions of Artificial Intelligence have gained international recognition, and were given Central Banking Fintech and Regtech Global Awards 2020 in the Artificial Intelligence Initiative category, by Central Banking Journal, UK.

Furthermore, as part of its digital transformation strategy to a data driven organization, the BOT initiated many internal projects on data governance, both in terms of data protection and data utilization. For data protection, IT mechanisms and approval procedures were put in place to protect personal information within the organization. Regarding data utilization, previously silo data

sources were connected and integrated together, making it easier for cross departmental access and utilization. Additionally, new alternative data sources were strategically acquired to help monitor the effect of the COVID-19 pandemic, for instance, the telco data for tracking labor mobility, electricity utilization for monitoring the manufacturing sector.

We also organized internal data visualization competition, BOT DATA VIZ ART. The goal was to raise data awareness and data usage within different departments, and to emphasize the importance of data communication and storytelling. Consequently, the data visualizations of all the finalists was showcased for public viewing at the Bank of Thailand Learning Center. Moreover, the data visualizations were also featured online through various news media, including ThaiPublica and Bangkokbiznews.



2.4 Enhancing access to economic and financial data

(1) BOT's API has been continuously disseminated for all statistical data since the beginning of 2019, to increase the convenience and speed of data utilization for the public and other agencies. Intensively, the BOT's API can be use through Thailand's Integrated Database for Economics (TiDE) in ready to use format for further analysis and research which was implemented by the Puey Ungphakorn Institute for Economic Research (PIER).

4.3.5 Human Resources Management and Organizational Development

1. New staff recruitment: During COVID-19 pandemic, the BOT developed flexible recruitment procedures. Virtual Interview and online assessment were deployed, instead of face-to-face interviews. To recruit staff in the management level (Mid-Career), the BOT has continuously opened some job positions for both internal and external applicants to yield the most competent and suitable candidates with high potential and expertise, especially in-demand positions and specialists such as in the areas of data analytics, IT, research, and legal. Furthermore, the BOT provided various proactive recruitment channels to attract key target groups, for instance, attending onsite and virtual career fair in the field of IT, economics, finance and accounting, as well as utilizing online job platforms i.e. JobsDB, LinkedIn.

2. Succession planning

2.1 Talent selection system: In an aim to build the BOT future leaders, the BOT uplifted standard of the selection process of high potential employee for the entire organization by specifying essential leadership characteristics to be compatible with those identified in internationally well-accepted organizations. Those characteristics comprised of growth mindset, being resilience, adaptive, failing fast and learning fast, and driving performance. Moreover, the BOT focused on the leader who was capable of people skills and work capability. On top of that, the BOT's top executives highly emphasized on the development of high performers either in the bank-wide level or in the departmental level (empower) to enhance flexibility and efficiency.

2.2 Succession plans for critical positions: in regards to the future work and new skill, as well as the preparation for the upcoming retirement of top executives, the BOT prepared and developed our management (director level and above) in terms of work experience, leadership competency, and managerial skills via the individual development plan (IDP), proactive monitoring, and job rotation. Additionally, some management was assigned for work secondment at lead organizations outside the BOT to broaden work experience and perspective, as well as job enlargement. Furthermore, recruitment for mid-career level in some critical positions was carried out to accomplish key strategic direction.

2.3 Preparations for the Next Normal: it is crucial to develop BoT's staff in all levels, especially technical skills as well as soft skills and digital skills, related to future skill. The BOT also promoted its learning environment and a bottom-up culture through knowledge sharing forums and self-selected training based on staff's functional needs and interests. The BOT fostered e-learning to suit various demands and support continuous learning during COVID-19 lockdown. For future leaders' preparedness, the BOT placed the importance on sharpening their leadership and managerial skills, including people skills and inter-organizational networking through master class training programs, seminars, one-on-one coaching, and action learning, for instance, project assignments, job shadowing, mentoring, coaching, and one-on-one feedback.

2.4 Embracing diversity and collaboration: The BOT encouraged cross functional team within the organization which would strengthen staff's diverse skills and capability and create mutual benefit of self-interest and drive the BOT's performance under the platform "Power Match". The performance of the first phase of Power Match was successful by the indicators of qualified staff placed at various project announcements.

2.5 BOT's scholarship: The BOT's granted 49 scholarships both domestic and overseas for current employees and potential from outside. Key areas included the field in line with BOT's future direction, highly market competitive, or BOT's core functions. Moreover, the BOT has continuously engaged the BOT scholars to ensure that they would always be ready to work in our organization. Furthermore, the BOT closely cooperated with the Office of Educational Affairs to follow up the BOT scholarship students in their well-being to keep them safe from COVID-19 pandemics. For those who were in Thailand, online learning was suggested during this period to mitigate the risk.

3. Promoting employee engagement: The BOT encouraged managers in all levels to be a role model for their subordinates following the specified leadership characteristics. Managers' behavior was assessed based on those characteristics for the effective implementation. In addition, on COVID-19 pandemic, the BOT greater emphasized on proactive and ongoing communication between managers and employees, providing essential a work facility to support staff to work smoothly and to deliver work effectively. From the employee survey, it was shown that greater than 90% of employees received necessary information in a continuous basis and 89% of employees were able to deliver their work. Moreover, activities promoting the engagement were continued by adjusting the format to be align with the current situation, for instance, online events, telemedicine, and online counselling via mobile application.



Townhall Meeting by the BOT Governor

5

Corporate Governance and Risk Management





The Bank of Thailand Annual Report 2020 serves as the report of the Bank of Thailand Board to the Minister of Finance in accordance with Section 57 paragraph 2 of the Bank of Thailand Act. The report outlines the result of the Bank of Thailand's operations in the previous year along with the Audit Committee's report, the auditor's report, and financial statements as of December 31, 2020. The Bank of Thailand Board is authorized under section 25 of the Bank of Thailand Act to oversee the Bank of Thailand's overall activities and operations to achieve the objectives set forth in Section 7 of the Bank of Thailand Act with the exception of activities and operations under the purview of the Monetary Policy Committee (MPC), the Financial Institutions Policy Committee (FIPC), and the Payment Systems Committee (PSC).

5.1 Operating Results of the Bank of Thailand Board

The Bank of Thailand Board (the BOT Board) underscored the importance of central bank mission in promoting economic and financial stability and supporting the recovery of the Thai economy under the BOT's three-year strategic plan for 2020 – 2022. In this connection, the BOT Board put an emphasis on enhancing organizational capacity, along with strengthening risk management and promoting good governance amidst an increasingly volatile and uncertain environment arising the COVID-19 outbreak.

The COVID-19 outbreak severely impacted economic activities, financial market, including financial positions of households and businesses. A more volatile, uncertain, complex and ambiguous environment posed challenge for the BOT to carrying out its mission in promoting a stable financial environment to achieve sustainable and inclusive development became more challenging.

5.1.1 Revising the BOT's three-year strategic plan

The BOT's three-year strategic plan for 2020 - 2022 focused on supporting sustainable economic and financial system together with laying the foundation for strengthening the BOT's capacity under a rapidly changing environment. In response to the COVID-19 outbreak, the BOT Board, together with the Monetary Policy Committee (MPC), the Financial Institutions Policy Committee (FIPC) and the Payment Systems Committee (PSC), the Audit Committee and the Risk Oversight Committee supported the BOT to work in a more "proactive, practical and collaborative" manner, particularly in the eight priorities areas under the BOT's three-year strategic plan to alleviate the economic impact and sustain the economic recovery. These areas were 1) debt restructuring for household and business, 2) safeguarding the financial institutions stability, 3) enhancing monitoring and prevention to maintain financial stability, 4) rapid assessment of economic risk and pushing forward the structuring of the Thai economy, 5) coordinating the policy tool mix for targeted measures, 6) facilitating private sector in better handling financial markets volatility, 7) organization management under highly uncertain environment, 8) proactive communication and engagement with stakeholders.





The BOT Board supported the framework for monitoring and managing risk arising from new policy measures to ensure that the BOT would continue to operate smoothly and efficiently in a more complex context.

5.1.2 Implementing economic measures to alleviate the impact from the COVID-19 outbreak.

The BOT Board played an important role in supporting preventive measures to safeguard financial system stability during the COVID-19 outbreak. The BOT Board also supported measures to provide additional relief measures to support small and medium-sized enterprises affected by the COVID-19 outbreak, such as, a loan payment holiday measure which eligible debtors can defer payment of principal and interest and a soft loan measure to support liquidity for SMEs with concessional credit-line.

5.1.3 Increasing efficiency in reserve management

The BOT Board highlighted the importance of official reserves management in a prudent manner together with a rigorous risk management mechanism under the rapid changes in global financial and economic conditions. In order to effectively manage reserve in a low interest rate environment, the BOT Board approved an expansion of investment framework according to the principle of prudence, investing in safe and high liquidity assets that provided a reasonable return within the investment and risk guidelines.

5.1.4 Promoting international cooperation

The BOT Board recognized the importance for the BOT to cooperate with international organizations in helping address the global economic crisis. In this connection, the BOT Board supported the increasing commitment to the new arrangements to borrowing and the Bilateral Borrowing Agreement of the International Monetary Fund (IMF) and the enhancement of the effectiveness and operational readiness of the Chiang Mai Initiative Multilateralisation Agreement (CMIM) to better serve as the regional safety net. The BOT Board also viewed that the signing of the Bilateral Local Currency Swap Arrangement (BSA) between the BOT and the Bank of Japan would enhance the financial stability and further promote the usage of local currencies of the two countries.

5.1.5 Enhancing enterprise risk management

Given heightened volatilities in global and Thai economy during the COVID-19 pandemic, the BOT Board proactively monitored and assessed risk, particularly global economic risk that may affect the recovery of the Thai economy. The BOT Board also recognized that organizational capability should be enhanced in response to rapidly changing environment. To this end, the BOT Board supported the framework for monitoring and managing risk arising from new policy measures to ensure that the BOT would continue to operate smoothly and efficiently in a more complex context.

5.1.6 Promoting good governance

The BOT Board continued to promote good governance within the organization. In 2020, the BOT Board enhanced a conflict of interest policy to be in line with the current laws to further strengthen good governance and credibility of the BOT.

5.2 Corporate Governance

According to the BOT Act B.E. 2485 as amended by the BOT Act (Issue 6) B.E. 2560, roles and responsibilities of the BOT and the BOT Board are indicated as supervising overall activities of the BOT, with the objectives of maintaining monetary stability, financial institutions system stability and payment system stability, including planning, budgeting, and asset management. The BOT is also responsible for the formulation and implementation of monetary policy, financial institution policy, and payment system policy under the boards having authorities and responsibilities for specific policy lines such as the Monetary Policy Committee, the Financial

Institutions Policy Committee (FIPC), and the Payment Systems Committee (PSC) Further, in order to help coordinate policy issues among different committees, the sub-committees are set up accordingly to collaborate among inter-committees such as Financial System Stability Sub-Committee.

In addition, the BOT Board has appointed the Audit Committee, the Risk Oversight Committee (ROC), and the Corporate Governance Committee to help ensure that the BOT adheres to good corporate governance practices. The Audit Committee helps supervising the Bank's operations to ensure effectiveness of internal control and internal auditing processes. The ROC provides advice on the Bank's overall risk management framework and risk management process as well as adequacy of the Bank's risk control systems in response to the changing in external environment. In 2020, the major challenges in Information Technology and Cyber threat, the composition of the ROC were adjusted to have a qualified non-executive director who was



expertise in Information and Technology in order to assess risks thoroughly. The Corporate Governance Committee oversaw corporate governance matters under the BOT Board's purview to institute good corporate governance policies and practices within the BOT

The BOT participated in the Integrity and Transparency Assessment (ITA) Program which the Cabinet Resolution required all government agencies to participate in the program in accordance with master plans under the National Strategy regarding Anti-Corruption and Misconduct B.E. 2561 - 2580 (2018 - 2037), organized by the Office of the National Anti-Corruption Commission (NACC). This aimed to promote acknowledgement and investigated the operations by the general public. Moreover, ITA program encouraged the stakeholders to play a greater role in the assessment of their relevant organization's operation. In 2020, the BOT's assessment result was in rating scores A (Raw scores: 91.94) The BOT used the results from the assessment to improve the operations in order to strengthen the Bank's efficiency and transparency.

5.3 Enterprise Risk Management

5.3.1 Enterprise risk management

The purpose of enterprise risk management is to appropriately manage critical risks affecting the BOT's operations, and to ensure that the BOT will achieve its missions effectively, provided that the risk management can support the BOT's development to overcome new challenge in the future. In 2020, the BOT assessed the enterprise risks in all aspects, and launched effective measures as well as appropriate action plans to manage the risks. It was well aware that IT and Cyber risks were still essential challenges. Therefore, the BOT enhanced its system on protection, detection and incident response to be more efficient, while continuously

raised cyber threat awareness to all BOT executives and staffs. Regarding Data risk management, the BOT developed tool and framework to effectively protect personal data and in accordance with laws and regulations.

Due to the world's volatile economy, COVID-19 pandemic and rapid digital transformation, the BOT encountered more challenges, including the policy collaboration with other authorities to support economics recovery, as well as, the adjustment of relevant development plans to cope with new ecosystem. In this regards, the BOT continuously trained its personnel and leverages its procedures and operating systems in order to achieve the inclusive risk management with good governance.

5.3.2 Financial Risk

The activities around the foreign reserve management were the major contributor to the BOT's financial risks, which were broadly classified into market, credit, and liquidity risk. A governance structure comprising the BOT Board, the Audit Committee (AC), the ROC, the RMC, and the Financial Risk Management Sub-Committee (FRMC), was put in place to equip the BOT with robust risk management framework capable of controlling, monitoring, and timely responding to financial risks.

The market risk management served the goal of limiting a risk not only from fluctuation in asset prices but also from possible outsized excess returns as a result of excessive deviations from benchmark allocations. Managing market risks also entailed a discerning consideration of consistency between portfolio's objectives and corresponding benchmark construction and of setting appropriate maximum portfolio deviation from its benchmark in the form of Tracking Error limit. Portfolio risks were capped well within tolerance levels mandated by pertinent controlling bodies.



The primary aim of credit risk management was to limit a loss incurred by the failure of an obligor to meet a contractual agreement or by capital depreciation of financial assets due to rating downgrades. By virtue of its international reserve, the BOT had a wide range of credit risk exposure to foreign governments, foreign private sectors, and foreign financial institutions. Certain limits such as minimum credit rating and concentration limit were implemented, while other credit analyses including close credit monitoring were carried out to achieve a viable exposure to credit risks.

The liquidity risk management prescribed a proper allocation into liquid assets required to meet cash outlays without adversely liquidating the assets. The maximum holding of illiquid assets was also emphasized by accounting for a delicate balance between merits on harvesting a liquidity premium and costs of inadvertently selling into thin market conditions.

Risk limits under the aforementioned risk management framework was reviewed annually or otherwise warranted by changing market environments. In addition, the BOT produced a suite of reports on performance and risk measurement of its foreign reserve on a monthly basis. In particular, the report on return and risk attribution played a key

role in analyzing, monitoring, and risk-budgeting the investment. The reports were quarterly presented to various governing bodies including the FRMC, the Reserve Investment Committee, and the RMC as well as expert committees whose membership was partially nominated to external qualified experts such as the ROC, the AC, and the BOT Board.

The Committees and Sub-Committee also had a risk oversight role over measures issued under the Emergency Decree on the Maintenance of Stability of the Financial System and Economic Security of the Country, B.E. 2563 (2020) and the Emergency Decree on the Provision of Financial Assistance for Entrepreneurs Affected by COVID-19 Pandemic, B.E. 2563 (2020), as well as measures to provide additional liquidity into the Thai financial markets during the time of stress due to the COVID 19 pandemic, including an extension of eligible securities to be used as collateral in repurchase transactions with the BOT. This role of Committees and Sub-Committee helped ensure that the BOT was able to perform its duty under good governance.

5.3.3 Operation Risk Management

Operational risk Management encompassed the risk of losses resulting from inadequate or failed internal processes, people, and systems or from external events. To ensure effective management

of operational risk, the BOT continued to enhance risk management tools to keep up with the changing environment as follows;

1. Control Self-Assessment (CSA)

All groups in the BOT annually conducted the Control Self-Assessment (CSA) to identify and assess top risks on their own work process from implementation of strategic plan and business as usual plan. In particular, the overall risk management plan for improving internal control to be efficient and effective was in accordance with Ministry of finance Criteria, Internal control guidance for government agencies, B.E. 2561

2. Operational Risk Incident Reporting

The affected departments were responsible for reporting loss and near-miss incidents.

3. Key Risk Indicators (KRIs) and Risk dashboard were used to enhance the monitoring of changes in the levels of key risks and facilitate quarterly risk report to the RMC and the ROC.

4. Business continuity management was implemented to support various situations in consistent with international standards including emergency evacuation plan testing to ensure The BOT's readiness in responding to any contingencies. In 2020, the BOT maintained accreditation in

accordance with ISO 22301: 2012 Business Continuity Management Systems for critical payment systems operated by the BOT (BAHTNET and ICAS). The BOT activated Business Continuity Plan (BCP) 2 times; Pandemic BCP in Quarter 2 and Political Unrest BCP in Quarter 4. For the Pandemic BCP, the BOT was establishing a management system, adequately allocating budgets and IT resources, supporting employees to work from home, setting-up additional backup sites for critical operations that required employees to be onsite, creating a safe and healthy workplace in accordance with the requirements of the Ministry of Public Health resulting in the safety of employees which no one was infected or tested positive and being able to perform the BOT's critical functions continuously. Second time, the Political BCP was activated in November (the BOT was in the vicinity of gathering venue), Accordingly, mandatory continuous on-site operations were moved to the alternative site and the rest are work from home. Consequently, the BOT maintained its functions unceasingly.

Additionally, The BOT developed the Data Protection Risk Management Framework to provide effective personal data protection complying with the law and preparing action plans to further assess the consistency of such risk management framework in accordance with international standards such as GDPR and ISO 27701.



5.4 Promulgation or Revision of Laws Related to the BOT's Operation.

Throughout 2020, the COVID-19 pandemic abruptly and severely affected the stability of the economic system and financial system of every country around the world. In order to alleviate such adverse effects, it was necessary for the BOT to immediately propose legislation to maintain the aforementioned stability, as well as, economic security. The BOT thereby proposed the Emergency Decrees for Cabinet's approval through the Minister of Finance. Accordingly, two Emergency Decrees were promulgated in response to the COVID-19 pandemic to urgently provide assistance to the entrepreneurs as follows.

5.4.1 Emergency Decree on the Maintenance of Stability of the Financial System and Economic Security of the Country, B.E.2563 (2020) ('BSF Decree')

The BSF Decree established the Bond Stabilization Fund ('BSF') to facilitate short-term liquidity to solvent, fundamentally sound firms that faced temporary liquidity problem in private bond market, allowing them to be able to rollover their corporate bonds which would be matured in 2020 - 2021 and avoid large scale defaults. Firms eligible to apply for BSF liquidity provision must secure not less than 50% of the funding from other sources. In addition, under the BSF Decree, the BOT shall solely have the power to purchase BSF units not exceeding four hundred billion baht within 5 years from the effective date of the BSF Decree.

5.4.2 Emergency Decree on the Provision of Financial Assistance for Entrepreneurs Affected by COVID-19 Pandemic, B.E. 2563 (2020) ('Soft-Loan Decree')

The Soft-Loan Decree provided mechanisms to mitigate financial problems of the small or medium enterprise (SMEs). The Soft-Loan Decree prevented the SMEs from lack of liquidity and event of default since the troubled SMEs would

be adversely affected the financial condition and ability to provide loan of the financial institutions. The Soft-Loan Decree allowed the BOT to facilitate the SMEs as follows:

1. Measure to Support Granting of Additional Credit

The Soft-Loan Decree empowered the BOT to lend the financial institutions within the budget of 0.5 trillion baht in order to persuade those financial institutions to grant SMEs an additional credit.

2. Measure on Postponement of Debt Repayment

The Soft-Loan Decree enabled the BOT to order the financial institutions to postpone the repayment of principal and interest of the SMEs and such postponement shall not be deemed a default by debtors.



BANK OF THAILAND

6

The Future Policy Direction



The next 1-2 years will be crucial for the recovery of the Thai economy from the COVID-19 pandemic. This depends largely on the ability to control the outbreaks. Under uncertain conditions ahead, the Bank of Thailand puts emphasis on 5 key challenges, namely; **(1) Solving the debt crisis sustainably** to help both households and businesses to survive during the financial difficult time and mitigate the long-lasting impacts (scars) of the crisis, **(2) Maintaining financial stability** to preserve the intermediary function of the financial sector in supporting the economic recovery, **(3) Maintaining macroeconomic stability** to promote resiliency of the Thai economic structure for the future environment after the pandemic, as well as strengthening the organization by **(4) Building public trust** to be one of the most trusted public organization, and **(5) Enhancing organization's efficiency** for effective delivery of policy that create the most impactful benefit to the Thai economy and society.



“

Disruptive technology will dramatically change people lifestyles, business models, financial services, as well as economy and society.”

Going forward in 2-5 years, **disruptive technology will dramatically change people lifestyles, business models, financial services, as well as economy and society**, particularly, after the speed-up of technology adoption during the pandemic. The unpredictable nature of the pandemic as well as the lockdown **highlights the importance of “financial buffer”**, including saving, not over-indebtedness, and sustainable business models. Moreover, **the Thai economy and society has been facing structural challenges and vulnerability** such as aging society and lacking of skilled labor. All of these challenges

need to be addressed and overcome to preserve the country's competitiveness and lessen the problem of inequality.

The BOT has already laid down the three-year strategic plan (2020 - 2022) in response to the upcoming challenges. **For enhancing rapid digital transformation of the financial system**, the BOT will help hasten the development of financial infrastructures that could be interoperable among service providers and the development of data ecosystem that ensure better utilization of data; while promoting innovation through the regulatory sandbox and



own sandbox mechanisms. **In developing the oversight of financial stability responding to new risks from changing environment,** the BOT will employ the supervisory technology in most of our on-going supervision. **In the aspect of macroeconomic management under structural constraints,** the BOT will support the restructuring of the Thai economy to reduce inequality, and to build monetary and fiscal transparency. **For enhancing private sector role in foreign exchange risk mitigation,** the BOT will build the foreign exchange ecosystem that provide the availability of risk management instruments at a reasonable cost, help balance capital inflows and outflows, and promote private sector's wealth diversification both domestically and internationally. **As for cyber threats and technological**

risks as the major risk to financial sector, the BOT will continuously increase the resiliency of Critical Information Infrastructure (CII) in tandem with developing supervisory framework that meets the risks from technology advancement. The BOT will continue to **promote the sustainability (environmental, social, governance)** as an integral part of financial service providers' operations and be embedded in their organizational culture. Also, the BOT still support consumer protection and equitable market conduct in financial services as well as foster financial discipline of general public. **To maintain central bank independence and credibility,** the BOT will aim to use communication as a major tool for increasing policy effectiveness and to support stakeholder's timely business decision.



To address the future challenges, the BOT ourselves will **strengthen the organization by unleashing our people's potentials**, including equipping staffs with diverse skills and knowledge, promoting employees' voice and choice, and preparing our future's leader. Moreover, the BOT has to **drive the agile culture in the organization** by promoting bottom-up culture and collaborative platforms, and streamline work processes. Additionally, **digital technology and**

data will be leveraged in all operations in order to transform the organization to digital workplace.

By setting direction and executing the BOT's strategic plan as mentioned above, the Thai economy will become more resilient and ready for upcoming challenges amidst the VUCA+ environment whilst the economic growth could reach its potential inclusively and sustainably.

Audit Committee Report

For the year 2020

The Bank of Thailand Audit Committee (the AC) comprises five members appointed by the Board of the Bank of Thailand (the Board), of whom three are non-executive members of the Board and two are external experts:

- | | | | |
|-----------------|------------------|------------------|-------------------------|
| 1. Mr. Manas | Jamveha, | Board member, | who serves as Chairman; |
| 2. Mr. Pakorn | Nilprapunt, | Board member; | |
| 3. Mr. Subhak | Siwaraksa, | Board member; | |
| 4. Mr. Sorasit | Soontornkes, | external expert; | |
| 5. Mrs. Pimpana | Peetathawatchai, | external expert. | |

During 2020, there were three AC members, including Mr. Suthad Setboonsarng (the former Chairman), Miss Jaruvan Hengtrakool and Mrs. Danuja Kunpanitchakit whose terms ended.

The Assistant Governor of the Internal Audit Group serves as secretary of the AC. The AC performs its roles and responsibilities as stipulated in the Audit Committee Charter as well as additional assignments from the Board in order to assist the Board in overseeing the Bank of Thailand (BOT) and its agencies. The AC seeks to help ensure that the BOT carries out its tasks in accordance with good governance principles, appropriate risk management system and effective internal control. The AC also ensure that the internal auditors fulfill their responsibilities with independence and objectivity to achieve the efficiency and effectiveness of internal audit work.

In 2020, the AC efficiently responded to the COVID-19 pandemic and revised the audit plan to align with the change in the BOT's work plan and process to deal with economic and financial uncertainty during the pandemic, with the objective being the maintenance of economic, financial and payment systems stability. The revised audit plan, thus, focused on auditing the BOT's measures to contain the economic impact of COVID-19, financial safety net, as well as alternative work process which may affect operational risk profile. These audit works contributed to the achievement of the BOT's mission as well as strategic objectives and promoted good governance, appropriate risk management and sufficient internal control.

The AC held 18 meetings this year including meetings with the BOT Governor, the Risk Oversight Committee (ROC), external auditor (the State Audit Office) and internal auditors.

The task carried out and reviewed by the AC in 2020 can be summarized as follows:

1. Review of Financial Statements

The AC reviewed accounting policy and the financial statements of the BOT, the Currency Reserve and the Banknote Operations. The AC viewed that the process of accounting and financial statements preparation was under prudent and effective internal control. The financial statements fairly presented the financial condition and performances in all material aspects, and were reliable by observing the generally accepted accounting principles, appropriate accounting practices for central banks, as well as relevant regulations. Information disclosure was also adequate, appropriate and useful to users.

2. Supervision and Improvement of Internal Audit

The AC reviewed audit reports submitted according to the 2020 audit plan and was of the view that the internal audit works were effective, independent and be able to add value to the BOT, particularly, the special assignments from the AC to ensure the readiness of BOT to handle impact of COVID-19. Examples of which include auditing the BOT's unconventional measures in stabilizing economic and financial system, i.e. Corporate Bond Stabilization Fund, Mutual Fund Liquidity Facility and Soft Loan for Small and Medium Enterprises; the enterprise risk management process in response to the COVID-19 and IT security in the adoption of remote work approach.

The AC continued to emphasize on performance audit to identify opportunities to improve the efficiency and effectiveness of the organization's operation in order to assure that the BOT efficiently achieve its mandate and strategic objective. Additionally, the AC focused on the utilization of database and technology in data processing and in-depth analysis to enhance the efficiency of audit activities. As skilled resources play an important role in internal auditing, the AC ensured that internal audit staff were appropriately trained and be well-prepared for the increasingly challenging and versatile internal audit task.

3. Quality Assurance and Improvement Program (QAIP)

The International Standards for the Professional Practice of Internal Auditing and the Ministry of Finance Rules on Internal Audit Standards and Code of Conduct for Government Entities B.E. 2561 state that the internal audit department needs to assess quality of its work and report the assessment result to the AC at least once a year. In 2020, the assessment result suggested that the BOT internal audit work complied with the aforementioned standards.

4. Coordination on Risk Management

In 2020, the AC and the ROC held two joint meetings to exchange views on the BOT's enterprise risks, risk management and 2021 audit plan. The two committees also exchanged relevant information regularly to ensure that internal audit activities are appropriate and contribute to effective control of key risks of the BOT.

5. Meetings with the BOT Governor

In 2020, the AC met with the BOT Governor and the Deputy Governors twice to discuss the issues on internal audit approach, the human resource management and 2021 audit plan which aligns with enterprise risks and BOT's strategic plan, as well as the efficient utilization of BOT's data to support extensively the BOT's operations.

6. Meetings with the External Auditor

The AC met with the external auditor twice without the BOT management, to exchange views on accounting practices, preparation of BOT financial statements, the information disclosure as per Thai Financial Reporting Standards 9 (TFRS 9) and internal controls. In addition, the AC followed up on the annual audit fee issue according to the Organic Act on State Audit B.E. 2561.

7. Reporting of the AC Work

The AC prepared and submitted its work reports to the Board and the Ministry of Finance on a quarterly basis, in accordance with the provisions of Section 55 of the Bank of Thailand Act B.E. 2485, as amended by the Bank of Thailand Act (No. 4) B.E. 2551.

Summary of the AC's Opinion

In an effort to fulfill its responsibilities based on scope and authority as per the Audit Committee Charter, the AC endeavored to do its best in applying knowledge, ability, experience and skills of individual committee members towards conferring independent and impartial opinions and recommendations to the Board, the BOT Management and officers, while taking into account the interests of all stakeholders. The AC has received good cooperation from both the BOT Management and the audited departments. As such, the audit recommendations had been discussed and implemented.

Overall, the AC concluded that the Board, the Policy Committee, the BOT Management and officers were committed to performing their duties, in order to achieve the BOT's objectives, evidenced by the BOT's timely and effective response to the COVID-19 pandemic. Thus far, the BOT has been able to implement the unconventional measures, i.e. Corporate Bond Stabilization Fund, Mutual Fund Liquidity Facility and Soft Loan for Small and Medium Enterprises to maintain economic and financial stability. Furthermore, the BOT operated under good governance, prudent risk management and the effective internal control and compliance to foster effectiveness, efficiency, transparency and credibility of the organization. The audit results were in accordance with best principles and beneficial, ensuring that the BOT's operational processes efficiently accomplish the mission and strategic plans set forth.



(Mr. Manas Jamveha)

Chairman, Audit Committee Bank of Thailand





BOT's Mission and Financial Statements

To understand an organization's financial statements, it is necessary to understand its mission. As a central bank, the Bank of Thailand (BOT)'s mission differs from that of business entities. As such, the central bank's financial statements are unique and distinct from other businesses'.

1.1 The Mission of the Central Bank

The BOT's mission involves 2 key aspects:

1.1.1 Maintaining Economic Stability

Section 7 of the Bank of Thailand Act, B.E. 2485 (as amended in B.E. 2561) stipulated that “...central banking role is to maintain monetary stability, financial institution system stability and payment systems stability”, in other words, the overall economic and financial stability. Similar to other central banks, the BOT's mission is to maintain internal and external economic stability. **Internal stability** refers to preserving the value of Thai baht and Thai assets from being depreciated by inflation and preventing an economic bubble or vulnerabilities in the financial system which may lead to a financial crisis in the future. Meanwhile, **external stability** refers to monitoring and overseeing the movement of Thai baht to be in line with its fundamentals and not too volatile, maintaining the global purchasing power of Thai economy, ensuring low foreign debt, as well as sufficient international reserves to cushion the impact from volatilities in the global financial market and capital market.

1.1.2 Printing and Issuing Banknotes for the economy

Section 14 of the Currency Act, B.E. 2501 (as amended in B.E. 2545) stipulated that “...the BOT has power to print, manage, and issue banknotes...”. Thai baht and Thai banknotes shall be generally accepted if the monetary policy and macroeconomic policy is reliable. In addition, Section 16 prescribed that “...No banknotes shall be issued unless an immediate exchange for any specified assets of equal value...”. Printing and issuing banknotes, the BOT therefore has to hold foreign assets of equal value to the newly-issued banknotes, in accordance with Section 26 of the Currency Act, “For the purpose of maintaining the stability of the currency, the BOT shall maintain a currency reserve, hereinafter to be called the ‘Currency Reserve’.”

These two keys missions are interconnected and regarded as crucial fundamental factors for stable and sustainable economic growth.

1.2 The Bank of Thailand Account and the Currency Reserve Account

To carry out those two key aspects of the BOT's mission, the law requires the BOT shall split its transactions into two accounts:

1.2.1 The Bank of Thailand Account is the account associated with the mission to maintain economic stability. The assets consist of two main items; i.e. international reserves in foreign currencies (over 85% of total assets) and domestic assets which mostly are Thai government bonds. On the contrary, the liabilities are mainly in Thai baht, which are the BOT bonds from the monetary policy operation to maintain economic stability and the deposits from financial institutions and government.

The Bank of Thailand Account	
Asset	Liabilities
>85% International reserves	BOT bonds Deposits from financial institutions and government
<15% Thai government bonds	Equity

1.2.2 The Currency Reserve Account is the account associated with the mission to print and issue banknotes. The asset side, currently consists of a 100% foreign currency assets held to back up banknotes issuance. Meanwhile, the liability side consists of banknotes in circulation in Thai baht. In other words, the banknotes being held by the public in the economy are the central bank's liabilities.

The Currency Reserve Account	
Asset	Liabilities
100% International reserves	Banknotes in Circulation
	Equity

1.3 Distinctive Characteristics of the Central Bank's Financial Statements

Characteristic 1 The assets and liabilities are currency mismatch

The central bank's financial statements are unique from those of private sectors in the way that **most central bank's assets are foreign assets or international reserves, while liabilities are in local currencies of each country.** In the case of the BOT, liabilities are in Thai baht which includes banknotes and the BOT bonds issued to manage liquidity and maintain the country's financial stability. Therefore, the distinctive characteristic of the central bank's financial statements is that **assets and liabilities are currency mismatch.** At the end of each year, foreign asset need to be revalued into Thai baht in order to prepare the financial statements. **The objective of the revaluation is to measure foreign assets in Thai baht as if all foreign assets were liquidated at the year-end,** and the relevant gain or loss is recognized. As a result, the annual profit or loss shown in the financial statements is mainly from "valuation gain or loss".

Changes in foreign exchange rate significantly influence the figures in the financial statements, especially when there is a high proportion of foreign assets. For example, the BOT has foreign assets of 280,000 million USD. If Thai baht depreciates by one baht, valuation gain of 280,000 million baht will be immediately recognized. In contrast, if the Thai baht appreciates by one baht, valuation loss of 280,000 million baht will be immediately recognized.

Valuation gain or loss does not cause any change in the BOT's capability to conduct its mission because at the revaluation date the international reserves in foreign currency remain unchanged to cushion against external volatilities. **Therefore, if the central bank's financial statements show loss for some periods, it is not a matter of concern because it may result from valuation loss.** When considering the BOT's previous financial statements, it is likely to find profits in some years and losses in others, mainly due to the consequence of the foreign revaluation.

Characteristic 2 International reserve management aims to maintain its long-term value in foreign currencies

The central bank's mission is to maintain **economic stability,** which requires the foresight outlook rather than focusing on momentary economic changes. The international reserve management does likewise. **The central bank invests in assets with long-term high value to facilitate risk diversification appropriately,** even though there might be short-term volatilities. The main focus in international reserve management is gaining the yield in the form of **"foreign currencies"** because ultimately the central bank has to ensure the availability and adequacy of international reserves. **However, the preparation of financial statements take place within a timeframe of one year,** resulting in the different timeframe between the financial statements and the yields from international reserves management.

In addition, **international reserve management also involves the revisions of investment**

strategies to be in line with the global economic changes to facilitate risk diversification and enhance a reasonable return, rather than selling or purchasing foreign assets in pursuit of speculation. The sales of the assets in accordance with allocation strategies is realized as gain/loss on financial statement, previously recorded as valuation gain/loss.

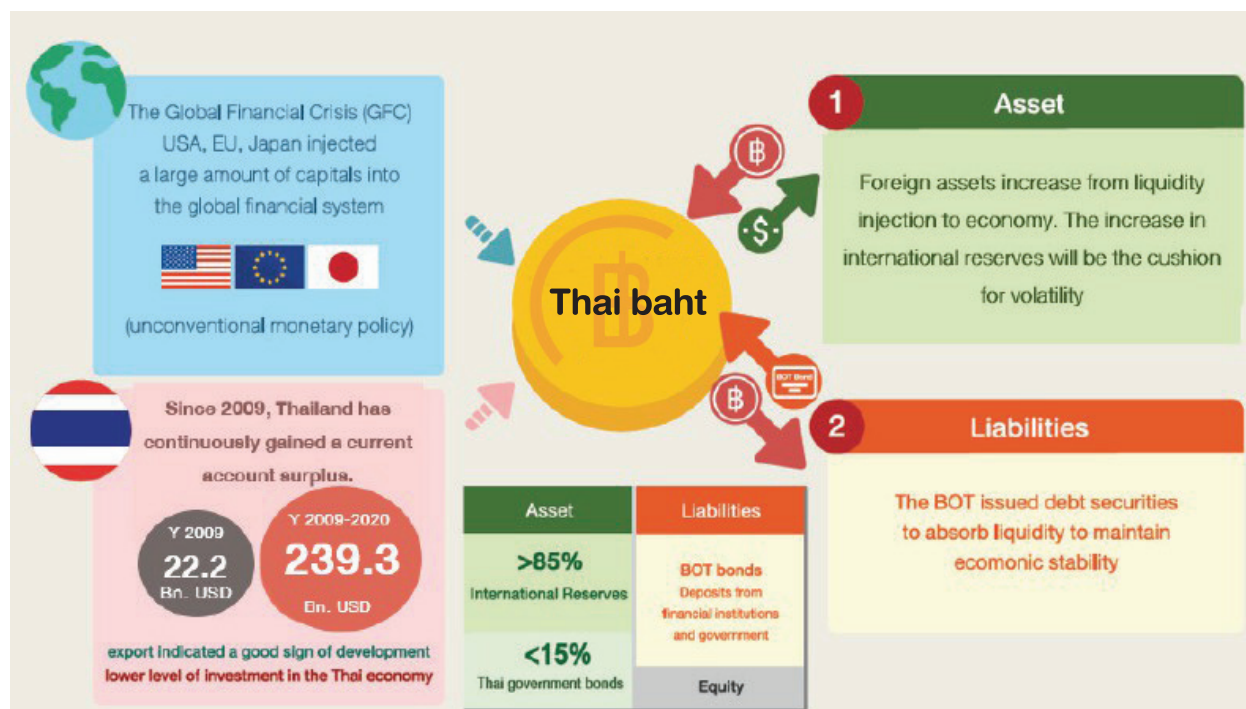
Characteristic 3 The central bank's liabilities are unique from private sectors' liabilities

Private sectors' liabilities, arising from either spending or investing, are for private benefit, **while the central bank's liabilities are for public benefit.** The BOT's liabilities are caused by (1) **printing an adequate amount of banknotes in circulation for the economic system** and (2) **maintaining economic stability, and preserving Thai baht, and Thai people's assets from being depreciated.** These are regarded as public goods which facilitate the economic system to grow stably. The central bank's liabilities are not meant for the benefit of any specific group of people, any corporate, or not

even the BOT itself. In fact, liabilities caused by carrying out the mission which benefits the Thai society as a whole.

The first element of the central bank's liabilities is banknotes circulated in the economic system. Banknotes are regarded as a medium of exchange agreed upon by people in the society as legal tender. The distinction of banknotes is that even when given banknotes by a complete stranger, one can trust in their value and accept their exchange. This became the starting point of various economic activities, for example, trading and exchanging goods or services. **The second element is the financial institutions' deposits at the central bank.** They are also considered the central bank's liabilities because the central bank acts as an intermediary in the financial institution system. Financial institutions use the deposit accounts at the BOT for payment and liquidity management purpose. **The third element is government deposits or treasury reserve.** It is regarded as the

Where did the central bank's increasing liabilities come from?



central bank's liabilities from cash flow management by the government in a different period of time. **The last element is liabilities resulted from carrying out the mission to maintain the economic and financial stability.** If there is a liquidity surplus in the financial system, central bank is required to absorb the excess liquidity by issuing central bank bills/bonds. In contrast, if there is any liquidity shortage in the system, the central bank can inject the liquidity by redeeming bonds.

Where did the central bank's increasing liabilities come from? Since the global economic crisis in 2009, the central bank of major industrial countries, e.g. the United States, the European Community, and Japan, began to implement an accommodative monetary policy which was conducive for economic recovery. These central banks injected a large amount of capital into the global financial system, resulting in a capital influx in emerging markets, including Thailand. Moreover, export and tourism sectors continued to expand, whereas the level of domestic investment in Thai economy is weak. These factors resulted in current account surplus for Thailand. Despite the fact that the country's internal affairs were challenged by political turmoil and natural disasters from time to time. The pandemic of COVID-19 in 2020, Thailand has managed the situation reliably. As a result, Thailand has had capital inflow and has continuously gained more current account surplus.

Amidst these challenging circumstances, how did the BOT carry out its mission? In the context of a rapid capital inflow, a continuously high current account surplus, and weakening domestic investment, altogether, were factors that exerted downward pressure on Thai baht to be appreciated against other foreign currencies. When the movement of Thai baht was inconsistent with economic fundamentals, the BOT sometimes took action by selling Thai baht in exchange for foreign currencies in order to slower pace of Thai baht appreciation. This means that the BOT injects the liquidity of Thai baht into the financial system.

However, excessively high level of liquidity might lead to an economic bubble in the real estate sector, causing asset prices to accelerate and become unaligned with fundamentals and long-term financial instability. Therefore, the BOT had to accommodate liquidity absorption by issuing debt securities to maintain economic stability. **Carrying out such mission caused the BOT's liabilities to rise in correspondence with the international reserves.**

The BOT's increasing liabilities were resulted from the central bank's missions to foster the **stability and sustainability of the Thai economy to be in line with potential growth**, to maintain an appropriate exchange rate from extreme volatilities, and to prevent long-term financial instability. Consequently, the liabilities which were caused by the issuance of debt securities resulted in interest expenses burdens.

Characteristic 4 Profitability is not the central bank's mission

The central bank is a nonprofit organization whose key mission is to maintain the stability of the financial economy. Therefore, profit or loss shown in the financial statements does not reflect the accomplishment of the central bank in carrying out its mission, unlike, the private sector whose key mission is to make profits. Their accomplishment is measured by profit or loss in the financial statements.

The central bank is an organization that implements public policies, but it does not mean that the central bank is unaware of the effect of policy implementation on financial statements. The central bank is obliged to maintain economic and financial stability by implementing policy tools carefully and cost-effectively.

Loss in the central bank's financial statements is not something new. In fact, many central banks, for example, Switzerland, Singapore, Australia, Israel, Chile, had experienced financial losses. Moreover,

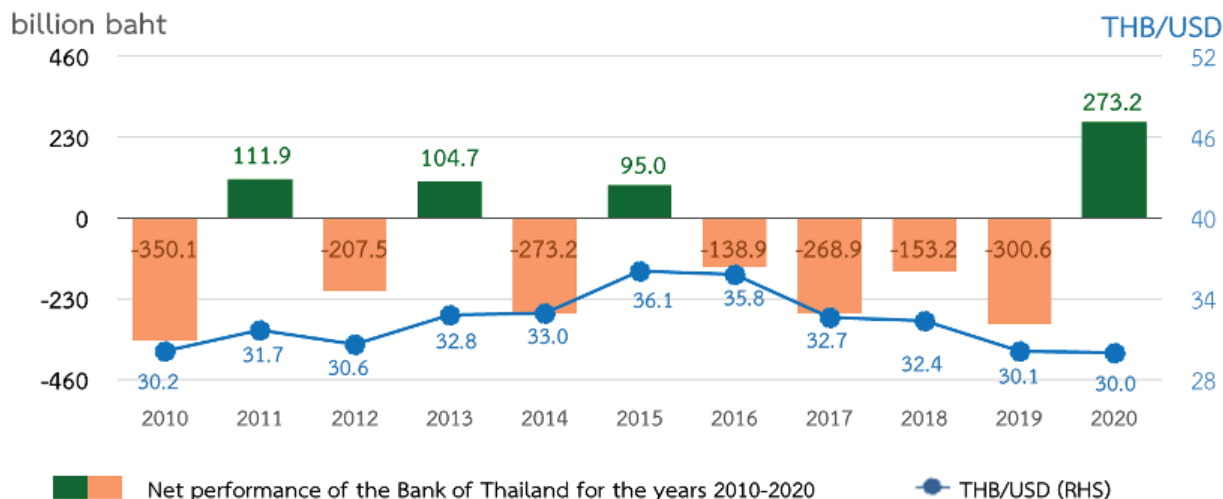
the loss does not affect the potential to carry out the central banks' mission, as long as the central bank's policy implementation is reasonable and suitable for maintaining the country's economic stability, and trustworthy by various sectors, including the general public, businesses, local and foreign investors. Previously, the number shown on the BOT's financial statements reflected losses, however, the financial market and investors were still confident in the BOT's operations.

The coherence between economic conditions and the central bank's financial statements is often in a reverse direction. That is, when Thai economy has sustained strong growth and the global financial system was recovery, the capital inflow moved to emerging markets, including Thailand.

Thai baht was generally appreciated, resulting in losses shown in the BOT's financial statements. Loss, in this sense, refers to the loss caused by valuation and interest expenses from issuing debt securities to maintain economic stability.

On the contrary, the years that the BOT's financial statements recorded profit did not guarantee economic soundness or benefits to the people. For example, in 2011, there was a devastating deluge, growth of the Thai economy of only 0.8%, the weakening of the global economy, and the depreciation of Thai baht. Likewise, in 2020, there was the pandemic of COVID-19 which affected to the global economic slowdown including Thailand. However, the BOT's financial statements of those 2 years recorded profit.

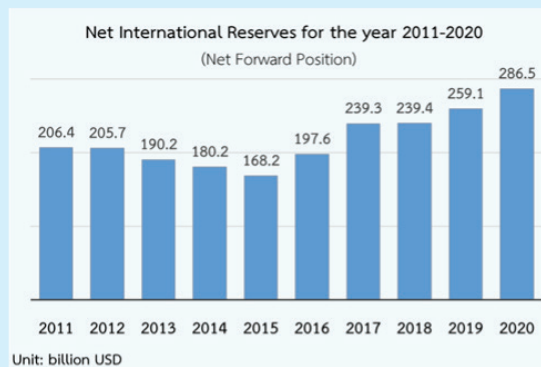
Net performance of the Bank of Thailand for the years 2010 – 2020



BOX
17

BOT's 2020 Financial Statements

In 2020, the COVID-19 pandemic caused a severe impact on global economy, and Thai economy has the lowest economic contraction in the last 22 years. Therefore, the Monetary Policy Committee cut the policy rate to a record low of 0.50% per annum to maintain economic and financial stability. Thailand however has managed the situation reliably and investor sentiment about US economy has been renewed after the general election. These factors have driven more capital inflow to emerging markets, including Thailand. The Bank of Thailand (BOT) has continued to maintain stability of the Thai baht's fluctuation which has the impact to economic recovery (the external stability mission). This mission lead to an increase in international reserves to 286.5 billion USD at the end of 2020.



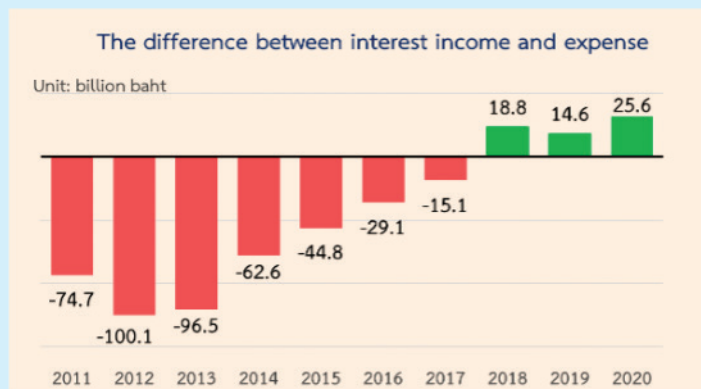
The BOT manages international reserves with an aim to maintain their value in foreign currencies to ensure the availability and adequacy to cushion the Thai economy from the global financial market volatilities. The BOT hence invests in safe and high liquidity assets and diversifies the portfolio in terms of asset classes and currencies suitable for global economic and financial outlook, as well as a reasonable return. In 2020, The Bank of Thailand Account and The Currency Reserve Account both had positive operating results, which were mostly driven by the valuation of foreign assets into Thai baht.

Unit: billion baht

Items	Bank of Thailand Account	Currency Reserve Account
Annual profit and loss in 2020	+273.2	+220.0
1. Operations according to the mission (Maintaining economic stability or printing and issuing banknotes)	+25.6	+26.7
2. International reserves management and others	-45.3	+10.7
3. Valuation	+292.9	+182.6

Details of Financial Statements are as follows

1. Operations according to the mission



1.1 Maintaining economic stability – The Bank of Thailand Account

The Bank of Thailand Account earned net interest income of 25.6 billion baht which represented positive carry for the third consecutive year, driven by the interest income from foreign assets management was higher than the interest expense from monetary

policy operation. During the year, the Monetary Policy Committee cut the policy rate to ease overall monetary situation which in turn lessen the COVID-19 impact to the economy.

1.2 Printing and issuing banknotes – The Currency Reserve Account

The Currency Reserve Account earned net interest income of 26.7 billion baht since the return from international reserve management in the account was higher than the cost of banknotes printing.

2. International reserves management and others

The BOT had bought and sold its investments to reallocate the portfolio in line with changes in the global economic outlook, to diversify risks, and to enhance return. The loss occurred in the Bank of Thailand Account was mainly caused by the prolonged appreciation of the Thai baht. The cost of foreign assets acquired several years ago translated to Thai baht, is often higher than the selling price during the current period. Nevertheless, the return in terms of foreign currencies remained positive and higher than the benchmark.

3. Valuation of foreign assets

A valuation gain or loss occurs from the valuation of foreign assets into Thai baht. Due to the depreciation of Thai baht against major currencies except USD and the higher price of foreign assets (bond, equity and gold) at the end of 2020, the financial statements showed gain on valuation.

The Bank of Thailand Board



Mr. Poramettee Vimolsiri
Chairman



Mr. Sethaput Suthiwartnarueput
Deputy-Chairman



Mr. Paiboon Kittisrikangwan
Member



Mr. Ronadol Numnonda
Member



Mr. Mathee Supamongse
Member



Mr. Manas Jamveha
Member

Mr. Pakorn Nilrapunt
Member

Mr. Danucha Pichayanan
Member



Mr. Lersuk Chuladesa
Member

Mr. Subhak Siwaraksa
Member

Mr. Rapee Sucharitakul
Member



Mr. Pruettipong Srimachand
Secretary

Mrs. Sureeratana Luckananit
Assistant Secretary





The Bank of Thailand Board

as of December 31, 2020

Chairman	Mr. Porametee	Vimolsiri
Deputy-Chairman	Mr. Sethaput	Suthiwartnarueput
Member	Mr. Paiboon	Kittisrikangwan
Member	Mr. Mathee	Supapongse
Member	Mr. Ronadol	Numnonda
Member	Mr. Danucha	Pichayanan
Member	Mr. Lersuk	Chuladesa
Member	Mr. Manas	Jamveha
Member	Mr. Pakorn	Nilprapunt
Member	Mr. Rapee	Sucharitakul
Member	Mr. Subhak	Siwaraksa
Secretary	Mr. Pruettipong	Srimachand
Assistant Secretary	Mrs. Sureeratana	Luckananit

The Bank of Thailand Executives

as of December 31, 2020

Governor	Mr. Sethaput	Suthiwartnarueput
Deputy Governor, Corporate Development	Mr. Paiboon	Kittisrikangwan
Deputy Governor, Monetary Stability	Mr. Mathee	Supapongse
Deputy Governor, Financial Institutions Stability	Mr. Ronadol	Numnonda
Assistant Governor, Risk Management Group	Miss Nawaporn	Maharagkaga
Assistant Governor, Communications and Corporate Relations Group	Mrs. Chantavarn	Sucharitakul
Assistant Governor, Corporate Services Group	Mr. Woraporn	Tangsaghasaksri
Assistant Governor, Supervision Group 1	Mr. Jaturong	Jantarangs
Assistant Governor, Legal Group	Mr. Pruettipong	Srimachand
Assistant Governor, Banknote Management Group	Mr. Somboon	Chitphentom
Assistant Governor, Payment Systems Policy and Financial Technology Group	Miss Siritida	Panomwon Na Ayudhya
Assistant Governor, Financial Markets Operations Group	Miss Vachira	Arromdee
Assistant Governor, Monetary Policy Group	Mr. Titanun	Mallikamas
Assistant Governor, Human Resources and Organization Development Group	Mrs. Wajeetip	Pongpech
Assistant Governor, Information Technology Group	Mr. Dej	Titivanich
Assistant Governor, Internal Audit Group	Mr. Amporn	Sangmanee
Assistant Governor, Financial Institutions Policy Group	Mrs. Nawaron	Dejsuvan
Assistant Governor, Supervision Group 2	Mrs. Thanyanit	Niyomkarn
Assistant Governor, Financial Stability and Corporate Strategy Group	Mrs. Roong	Mallikamas

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Names, Addresses
and Websites
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