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THAILAND

# THAILAND ECONOMIC MONITOR

## HARNESSING FINTECH FOR FINANCIAL INCLUSION

July 2019

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## Preface

The Thailand Economic Monitor (TEM) reports on key developments in Thailand's economy over the past six months, situates these changes in the context of global trends and Thailand's longer-term economic trajectory, and updates Thailand's economic and social welfare outlook. Each edition of the TEM also provides an in-depth examination of selected economic and policy issues and an analysis of Thailand's medium-term development challenges. The TEM is intended for a wide audience, including policymakers, business leaders, financial-market participants, and the community of analysts and professionals engaged in Thailand's evolving economy.

The TEM is produced by the staff of the World Bank's Bangkok office, consisting of Kiatipong Ariyapruchya, Ralph van Doorn (task team leaders), Arvind Nair, Mahama Samir Bandaogo, Ratchada Anantavasilpa, Ana Maria Aviles, Radu Tatu, Stuart Yikona, Judy Yang and Rattanyu Dechjejaruwat. Mara Warwick, Birgit Hansl, Ndiame Diop, Irina Astrakhan and Souleymane Coulibaly provided overall guidance. The team is grateful to Andrew Mason, Ekaterine Vashakmadze, Ergys Islamaj, Carlo Corazza, Harish Natarajan, Matthew Saal, Veronica Trujillo and Marco Nicoli for their constructive input. Kanitha Kongrukreatiyos and Buntarika Sangarun are responsible for external communications related to the TEM, as well as the production and design of this edition.

The report benefited from productive discussions with staff at the Public Debt Management Office and the Fiscal Policy Office at the Ministry of Finance, the Bank of Thailand, the National Economic and Social Development Council, Eastern Economic Corridor Office, the Bureau of the Budget, the Securities Exchange Commission, Office of Insurance Commission, the Stock Exchange of Thailand, the Government Savings Bank as well as fintech firms and financial and rating institutions.

The findings, interpretations, and conclusions expressed in this report do not necessarily reflect the views of the Executive Directors of the World Bank or the governments they represent. The latest data that inform this report date from May 21, 2019, and the World Bank does not guarantee the accuracy of the data presented in the TEM. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of the World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

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Previous editions of the TEM:

- January 2019: [Inequality, opportunity and human capital](#)
- April 2018: [Beyond the innovation paradox](#)
- August 2017: [Digital transformation](#)

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## ABBREVIATIONS

AFC	Asian Financial Crisis	GSB	Government Savings Bank
ASEAN	Association of Southeast Asian Nations	MAS	Monetary Authority of Singapore
BBA	Basic Banking Account	MOC	Ministry of Commerce
BOB	Bureau of the Budget	MOF	Ministry of Finance
BOI	Board of Investment	MTFF	Medium-Term Fiscal Framework
BOT	Bank of Thailand	NESDC	Office of the National Economic and Social Development Council
CBFI	Community-Based Financial Institutions	NPL	non-performing loans
CLMV	Cambodia - Lao PDR - Myanmar – Viet Nam	OBEC	Office of the Basic Education Commission
DFS	Digital Financial Services	OIC	Office of Insurance Commission
EAP	East Asia and Pacific	PromptPay	National E-Payment Initiative
EEC	Eastern Economic Corridor	PDMO	Public Debt Management Office
EMDEs	Emerging markets and developing economies	QR	Quick Response
ETDA	Electronic Transactions Development Agency	SEC	The Securities and Exchange Commission, Thailand
FDI	Foreign Direct Investment	SET	The Stock Exchange of Thailand
FRA	The Fiscal Responsibility Act	SEZ	Special Economic Zone
FTA	Free Trade Agreement	SFI	specialized financial institutions
FX	Foreign exchange reserves	SME	small and medium enterprises
FY	Fiscal Year	SOE	State-Owned Enterprise
GDP	Gross Domestic Product	UTCC	University of the Thai Chamber of Commerce
GFIN	Global Financial Innovation Network	VC/PE	Venture capital/private equity
		yoy	year-on-year

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## Executive Summary

**The Thailand Economic Monitor (TEM) consists of two parts.**

Part 1 of the TEM reviews recent economic developments, examines the country's macroeconomic outlook, and analyzes the impact of key policy changes. Part 2 focuses on a specific subject with critical implications for Thailand's long-term growth prospects. The edition of the TEM analyzes the power of financial technology (fintech) to support financial inclusion, a key element of the 20-Year National Strategy.

### Recent Economic Developments

**Thailand's economy has remained resilient to global headwinds, but growth began to moderate in early 2019.**

Growth slowed to 2.8 percent, year-on-year, in the first quarter of 2019, falling below 3 percent for the first time since mid-2015. Exports grew by 4.2 percent in 2018, but contracted by 4 percent in Q1 2019—the first quarterly contraction in three years—in the context of a weaker global and regional economic outlook marked by unresolved trade disputes and increased protectionism.

**A decline in public investment compounded the negative impact of external headwinds on the Thai economy, but private investment has remained buoyant.**

Public investment declined slightly over the past two quarters, falling by 0.1 percent as the implementation of so-called “megaprojects” slowed. While public construction spending picked up, public expenditures on machinery and equipment shrank by 6.1 percent in Q4 2018 and by 11.7 percent in Q1 2019. Private investment has remained close to its three-year high and continues to benefit from ongoing progress in public infrastructure projects. Eight large export-oriented industries indicated an increase in capacity utilization to over 80 percent, but total capacity utilization remained lower at about 71 percent across all industries, and political uncertainty continues to weigh on investor sentiment.

**Robust private consumption continued to drive growth on the demand side.**

Private consumption has proven resilient. Mirroring patterns in private investment, the growth of private consumption slowed slightly between Q4 2018 and Q1 2019 but remained near its three-year high. Private consumption focused on durable goods such as automobiles, as households have resumed car purchases following the expiration of the holding period for cars purchased during the first-car tax rebate program.

**The balance of payments and fiscal accounts remained stable, and the financial sector generally sound.**

Inflation remained low and near the lower limit of the target inflation range. The weaker external environment and resilient domestic activity led to a narrower current account surplus, but foreign exchange reserves remained more than adequate to cover imports and short-term external debt, and the Thai baht has continued to appreciate against the US dollar. The fiscal deficit remained low and stable despite declining fiscal revenues, and public debt remained low at 41.6 percent of GDP at the end of fiscal year (FY) 2018.<sup>1</sup> Bank lending has increased since 2014, and the financial sector is generally sound with strong capital buffers, but high household debt has remained a concern.

**While extreme poverty is low, it is increasing in some regions.**

The employment rate increased year-on-year despite a decline in agricultural and manufacturing employment. However, poverty reduction has stalled and poverty in certain regions increased during 2015-2017. The recent declines in agricultural employment, the agricultural price index, and the farm income index—as well as an

<sup>1</sup> The fiscal year runs from October to September.

anticipated drought—will negatively impact the welfare of households in the bottom 40 percent of the income distribution.

## Economic Outlook

**Underpinned by recovering domestic demand, the Thai economy is projected to expand by 3.5 percent in 2019 and by 3.6 percent in 2020.**

Due to rising external headwinds, the growth forecast for 2019 has been downgraded from 3.8 percent to 3.5 percent. Private consumption is expected to drive growth in 2019, supported by private investment, and public infrastructure spending (Table 1). Thailand's GDP growth rate is projected to recover gradually over the near term assuming policy continuity and the implementation of large public infrastructure projects, especially those related to the Eastern Economic Corridor. Given Thailand's strategic location, continued trade integration could support trade in goods and services, potentially compensating for some of the external headwinds.

**However, the balance of risks is tilted to the downside.**

Risk to the economic outlook are primarily domestic. Political uncertainty is a key risk, and lingering doubts about the cohesiveness of the newly established 19-party coalition government and/or delays in the implementation of large planned public infrastructure projects could negatively impact both investor sentiment and consumer confidence, thereby weakening domestic demand. Meanwhile, ongoing trade tensions between the U.S. and China could further weaken demand for Thailand's exports and discourage private investment in export-oriented industries.

**Table 1: Macroeconomic Indicators**

	2017	2018	2019	2020	2021
Real GDP Growth Rate (at constant market prices)	4.0	4.1	3.5	3.6	3.7
Private Consumption	3.0	4.6	4.6	4.7	4.8
Government Consumption	0.1	1.8	4.9	5.1	4.8
Gross Fixed Capital Investment	1.8	3.8	3.5	4.3	4.5
Exports of Goods and Services	5.4	4.2	2.2	2.6	3.2
Imports of Goods and Services	6.2	8.6	3.9	4.2	4.5
Real GDP Growth Rate (at constant factor prices)	4.0	4.1	3.5	3.6	3.7
Agriculture	3.7	5.1	3.5	3.6	3.7
Industry	2.2	2.7	3.4	4.0	4.2
Services	5.1	4.8	3.5	3.3	3.4
Inflation (Consumer Price Index)	0.7	1.1	1.1	1.2	1.3
Current Account Balance (% of GDP)	11.0	7.0	6.4	5.2	4.4
Net Foreign Direct Investment (% of GDP)	-2.3	-1.4	0.1	0.2	0.5
General Government Fiscal Balance (% of GDP)	-0.3	0.3	-0.1	-0.2	-0.3
Public Debt (% of GDP)	41.2	41.6	42.6	43.2	43.7
General Government Primary Balance (% of GDP)	0.6	1.3	0.9	0.7	0.7
Nominal GDP at Market Prices (US\$)	10.4	10.8	6.5	7.1	7.3

Source: Office of the National Economic and Social Development Council (NESDC); World Bank Staff calculations

**The government's fiscal and monetary policy stances are expected to remain accommodative, and Thailand's macroeconomic fundamentals are strong.**

Headline inflation is projected to remain near the low end of the 1–4 percent target range in a context of well-anchored inflationary expectations and gradually recovering growth. Monetary and fiscal buffers are expected to remain adequate, with scope to support economic activity if necessary while the newly introduced Fiscal Responsibility Act should help ensure that fiscal buffers remain adequate to address future macroeconomic shocks. However, the rapid aging of the population will continue to erode the tax base. The current account is projected to remain in surplus at about 5 percent of GDP, and the public debt stock is low at 42 percent of GDP.

### Policy recommendations

**Continuity in the implementation of policies and programs to promote inclusive growth will be critical to their success.**

Thailand's 20-Year National Strategy aims to enable the country to achieve high-income status through inclusive growth. However, following a long period of sustained improvements in both poverty and inequality indicators, progress on both has plateaued.<sup>2</sup> To achieve high-income status without exacerbating inequality, the authorities must continue investing in public infrastructure projects to connect lagging regions while implementing reforms designed to expand education services, promote financial access for low-income households and SMEs, and strengthen social safety nets for informal workers and the elderly.

**Improving the implementation of the capital budget is key to support growth.**

It is important to improve the disbursement of the capital budget to support economic growth over the near term, as public investment has positive spillovers on private investment. It is also key to manage contingent liabilities linked to the large infrastructure project for the Eastern Economic Corridor (EEC), and to protect the tax base from unproductive tax incentives to encourage private investment.

### Harnessing Fintech for Financial Inclusion

**Thailand has made considerable strides in expanding access to financial services.**

Most of the country's financial-inclusion indicators have improved significantly over the last five years. For example, 82 percent of Thai adults have an account at a formal financial institution, with a relatively narrow gender gap. Related metrics are also positive and improving.

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<sup>2</sup> See "Thailand Economic Monitor, January 2019: Inequality, Opportunity and Human Capital", World Bank. <https://openknowledge.worldbank.org/handle/10986/31240>.

**Fintech is transforming financial services and experiencing explosive growth in emerging markets.**

Approximately two billion people in emerging markets are unbanked. Fintech, according to the Consultative Group for the Assistance of the Poor (CGAP), has a “significant potential to provide a range of affordable, convenient and secure banking services to poor people in developing countries.” Moreover, according to the IMF-World Bank Bali Fintech Agenda - a set of 12 policy elements aimed at helping member countries to harness the benefits and opportunities of rapid advances in fintech, while managing the associated risks – the fintech revolution needs to deliver “solutions that enhance financial services, mitigate risks, and achieve stable, inclusive economic growth”. Indeed, fintech has redefined traditional notions of what it takes to be called a bank, drove banks to upgrade efficiency to improve digital services delivery, and transformed the banking sector landscape with the entry of new fintech non-bank companies. In numerous developing countries and emerging markets, including Kenya, China, and India, fintech has allowed the poor and the previously unbanked to access financial services and seize new economic opportunities. On the other hand, governments need to mitigate the risks associated with fintech, including those related to consumer protection, data privacy, cybersecurity, market concentration, integrity and stability of the financial systems.

**Thailand’s nascent fintech subsector is rapidly evolving.**

Thailand is one of the countries in ASEAN which has seen a rapid development of its fintech sector. The country has 140 fintech firms, just under half of which are startups, and 43 percent of fintech activity in Thailand focuses on digital payments. However, the subsector is dominated by large commercial banks, which have either developed their own digital financial services capabilities in-house or acquired those capabilities from other firms, thus having the potential to crowd-out independent fintech firms. In addition, multiple Thai banks have created fintech-focused venture funds and innovation hubs, which play a key supporting role in the fintech subsector.

**The government is actively promoting the growth of the fintech subsector and the larger digital economy.**

The authorities have elaborated a legal and institutional framework designed to support the expansion and diversification of digital financial services. The Bank of Thailand has implemented regulatory reforms, established policies, and created departments dedicated to facilitating the growth of fintech, and in 2017 it launched a national electronic-payments initiative, PromptPay, which has reduced transaction fees across the financial system. Meanwhile, the state-owned Government Savings Bank is using digital financial services tools to promote financial literacy. Overall, the authorities have demonstrated a commitment to creating a supportive environment for fintech while allowing private firms to drive the growth of the subsector.

**Thai regulators have employed the “regulatory sandbox”<sup>3</sup> tool to support the growth of the fintech subsector.**

Surveys show that the Thai financial industry generally perceives regulators to be interested in understanding and supporting the development of new technologies. Each of the financial sector’s three main regulatory bodies—the Bank of Thailand, the Office of Insurance Commission, and the Securities and Exchange Commission—has created “regulatory sandboxes” for fintech, reflecting their institutional priorities. Several other ministries are also sponsoring innovation-related initiatives. The presence of multiple public agencies in the fintech subsector, each with its own policy objectives, creates a risk that inadequate institutional coordination could create regulatory uncertainty and discourage innovation.

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<sup>3</sup> Under the “regulatory sandbox” approach, a regulator establishes a framework of rules, supervision requirements, and safeguards for the time-bound testing of innovations, including new technologies and business models. First adopted in the United Kingdom, the regulatory sandbox approach was designed to lower the cost of innovation, which is especially critical in the digital financial services industry. For further details, see Jenick and Lauer (2017).

**Despite the rapid growth of fintech in Thailand, the sector's potential to support financial inclusion remains largely untapped.**

Gaps in access to digital financial services reflect a deeper digital divide in internet and broadband penetration in Thailand. While the overall use of digital financial services is relatively high by the standards of comparable countries, access to finance varies dramatically across regions and household income levels. The international experience shows that digital financial services can expand farther and faster than traditional banking infrastructure, and fintech solutions can accelerate financial inclusion by extending financial access to underserved communities. Therefore, by bridging the gap in its own digital divide, Thailand could make strides in economic and financial inclusion as well.

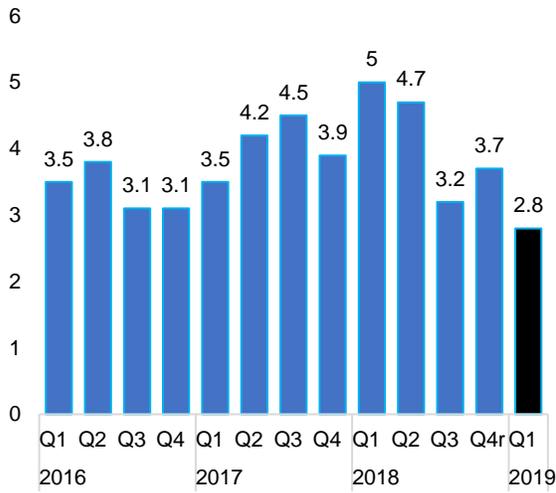
**The expansion of digital financial services could help alleviate rising levels of income inequality and support shared prosperity.**

Thailand's progress on poverty reduction has recently stalled, and inequality indicators are worsening. The widening income gap has become a national issue and is a key focus of the 20-Year National Strategy. In numerous developing countries and emerging markets, including Kenya, China, and India, fintech has allowed the poor and the previously unbanked to access financial services and seize new economic opportunities. In Thailand, the expansion of digital financial services to the underserved could mitigate inequality and promote shared prosperity by broadening the distribution of returns to growth.

**Implementing five additional policy measures could help leverage the full potential of fintech to support economic inclusion in Thailand.**

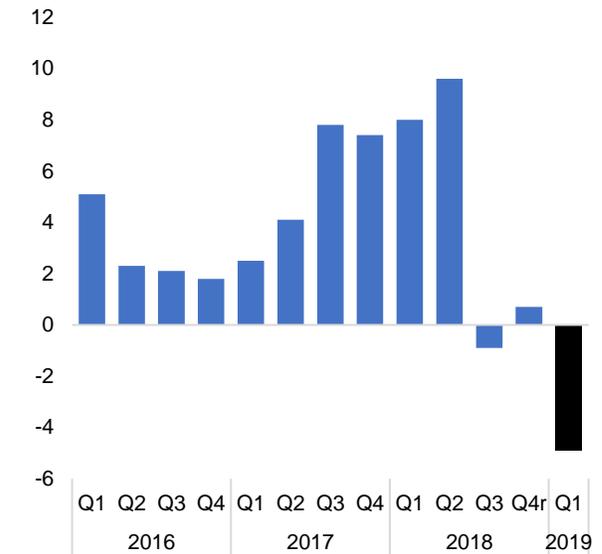
Going forward, the government can promote the robust and sustainable growth of the fintech subsector by: (i) fostering a level playing field in the fintech ecosystem; (ii) encouraging collaboration between traditional banks and fintech firms; (iii) improving coordination among the major regulatory sandboxes; (iv) encouraging public-private and private-private collaboration; and (v) supporting the development of a venture-capital ecosystem and directly providing startup funding.

**Figure ES 1: Thailand's GDP growth rate fell below 3 percent in Q1 2019...**  
 (% change, year-on-year)



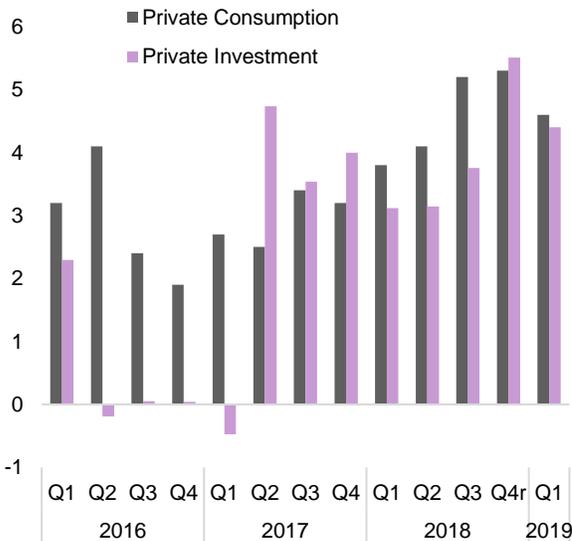
Source: NESDC

**Figure ES 2: ...due to a sharp contraction in exports.**  
 (% change, year-on-year)



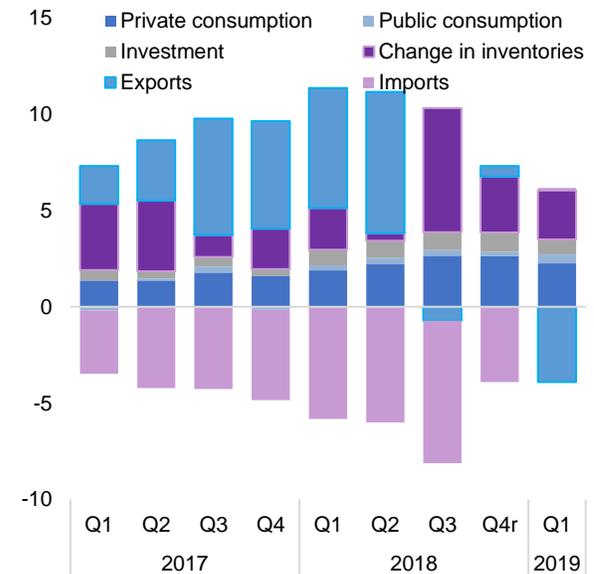
Source: NESDC

**Figure ES 3: Private investment has remained generally resilient...**  
 (% change, year-on-year)



Source: NESDC

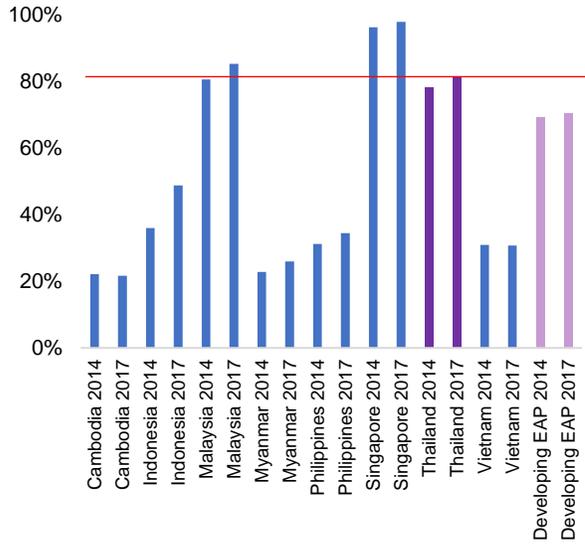
**Figure ES 4: ...but its contribution to growth has declined over the last three quarters**  
 (Percentage-point contribution to real GDP growth, year-on-year)



Source: NESDC

**Figure ES 5: Thailand performs well on indicators of financial inclusion...**

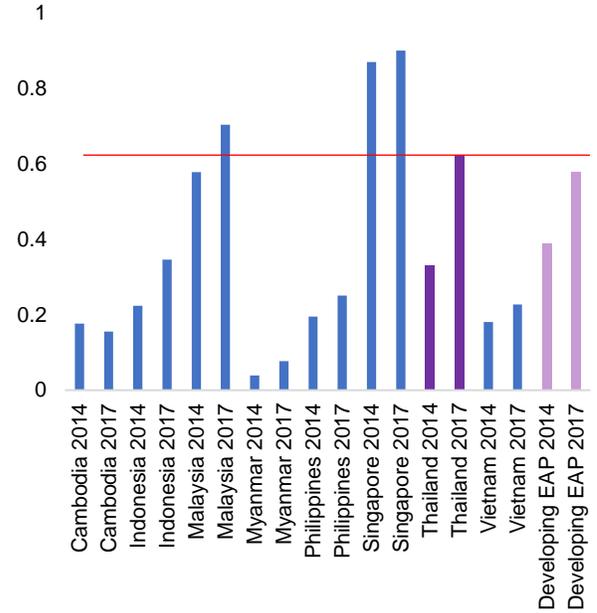
*(% of the adult population with an account at a formal financial institution, Thailand and comparators)*



Source: NESDC

**Figure ES 6: However, Thailand still has considerable scope to expand access to digital financial services, including digital payment systems...**

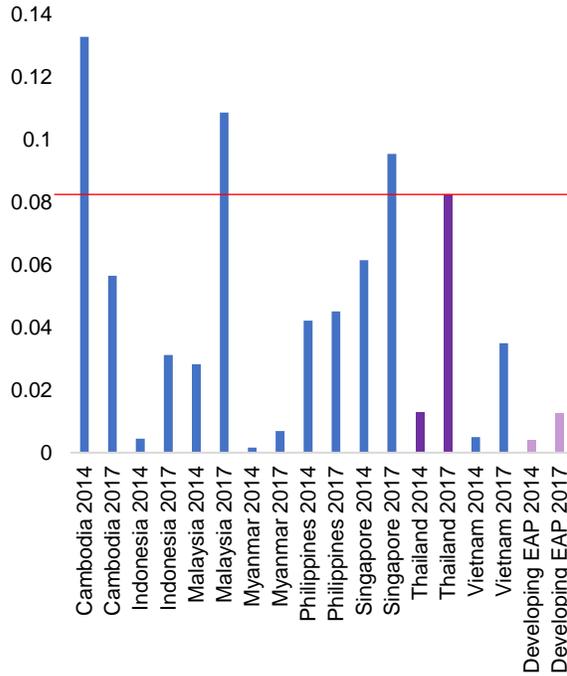
*(% of the adult population that made or received digital payments in the last year)*



Source: NESDC

**Figure ES 7: ...and mobile-money accounts**

*(% of the adult population with a mobile-money account)*

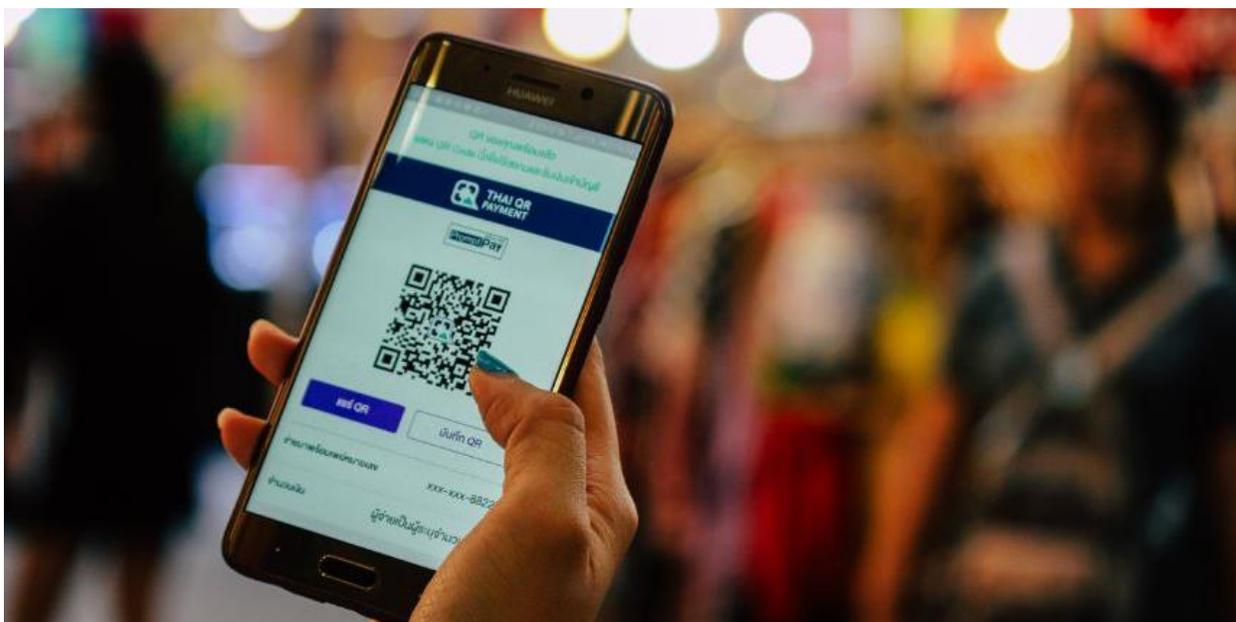


Source: NESDC





## Part 1: Recent Economic Developments and Outlook



### 1. Recent Economic Developments

#### i Regional and global growth are weakening

**The global economic growth forecast for 2019 has been revised downward from 2.9 percent to 2.6 percent.**

Global growth is projected to average 2.8 percent over 2020-2021, reflecting weaknesses in international trade and decelerating investment growth.<sup>4</sup> Moreover, even the revised World Bank projections are subject to significant downside risk, as they assume benign financial conditions and a moderate recovery in emerging markets and developing economies (EMDEs), where growth has been constrained by subdued investment.<sup>5</sup>

**The regional growth rate is projected to slow to 5.9 percent in 2019.**

China's economic slowdown is limiting growth across the East Asia and Pacific (EAP) region (Figure 1), and the regional growth rate is expected to remain at 5.9 percent in 2020 before sliding to 5.8 percent in 2021. Regional exports and manufacturing output have contracted significantly in response to weakening global trade. As economic activity has moderated across EAP, interregional trade has also slowed. Key risks to the region include a potential slowdown in other major economies, a further increase in trade tensions, and a deterioration in international financing conditions.

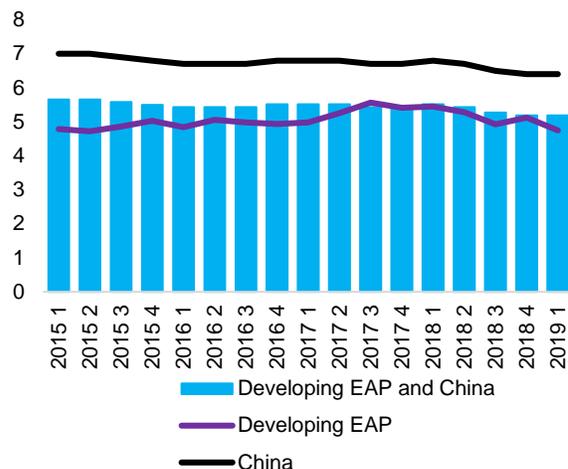
<sup>4</sup> The default measure of growth is on a year-on-year basis, unless otherwise stated.

<sup>5</sup> "Global Economic Prospects: Heightened Tensions, Subdued Investment", World Bank, June 2019. <https://www.worldbank.org/en/publication/global-economic-prospects>.



**Figure 1: Growth is slowing across the region, driven by China’s ongoing deceleration.**

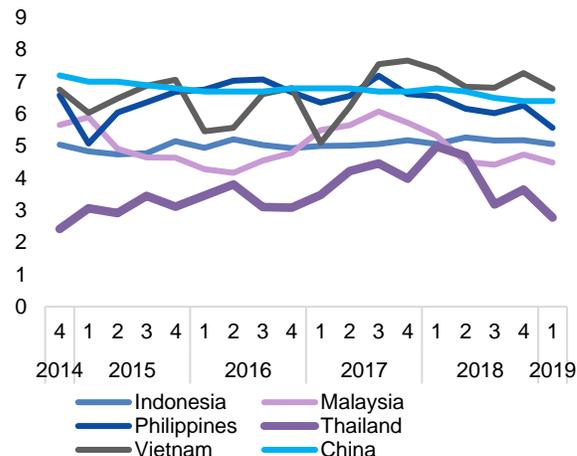
(% change, year-on-year)



Source: Haver Analytics

**Figure 2: In recent years, Thailand’s economy has grown more slowly than those of its regional peers....**

(Annual GDP growth rate, year-on-year, %)



Source: Haver Analytics

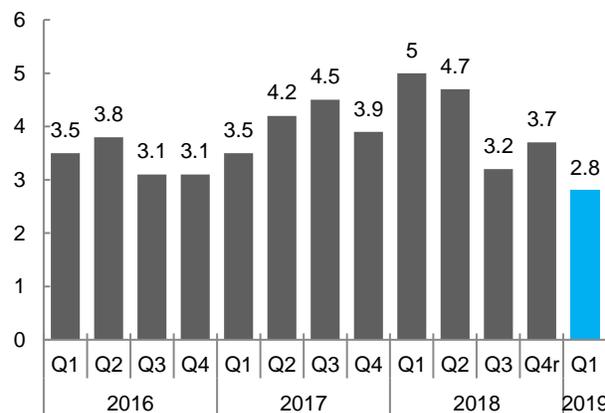
**ii Resilient domestic demand has supported a moderate economic expansion despite a sharp decline in exports.**

**A contraction in exports caused the Thai economy to slow in the first quarter of this year.**

In recent years, Thailand’s economy has expanded at a slower pace than those of its regional comparators (Figure 2). While resurgent domestic demand has enabled Thailand to weather an unfavorable external environment marked by weakening external demand, the economy grew by just 2.8 percent in Q1 2019, falling below 3 percent for the first time since mid-2015 (Figure 3). However, seasonally adjusted qoq data indicate a growth of 0.9 percent in Q4 2018 compared to 1 percent in Q1 2019. Growth in Q2 2019 is not showing signs of improvement as monthly data from April and May 2019 indicate a decline in the Product Manufacturing Index (PMI), capacity utilization and the number of tourist arrivals.

**Figure 3: ...and its GDP growth rate fell below 3 percent in Q1 2019 for the first time since Q2 2015.**

(% change, year-on-year)



Source: NESDC

**Private consumption expanded at a solid, albeit**

The fundamentals that support private consumption remain relatively strong. Inflation is low and stable, while overall employment and income levels have risen despite a drop in the farm income index. These factors underpin the continued resilience of private consumption despite high levels of household debt. Private



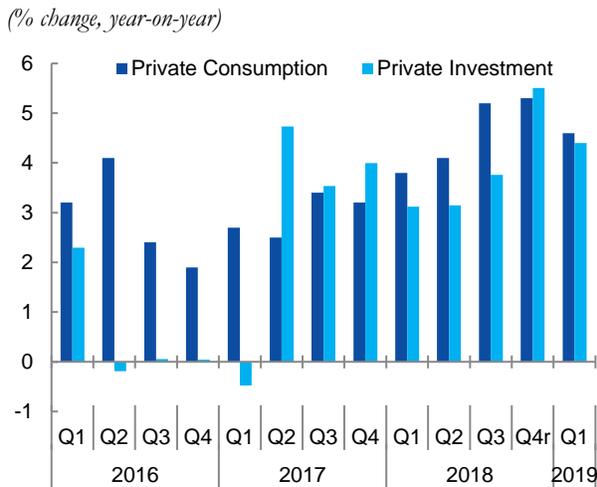
**slower, pace compared to the previous quarter.**

consumption has focused on durable goods such as automobiles, bolstered by increased electricity spending due to higher-than-usual temperatures and increased spending on certain non-durable goods such as textiles, hotels, and restaurants. However, as private consumption has continued to expand, its contribution to economic growth has slightly declined (Figure 4 and Figure 5). Furthermore, consumer confidence indicators released by the Ministry of Commerce and the University of the Thai Chamber of Commerce show that consumer confidence declined continuously between March and May 2019.

**Private investment continues to rally, driven by purchases of machinery and equipment.**

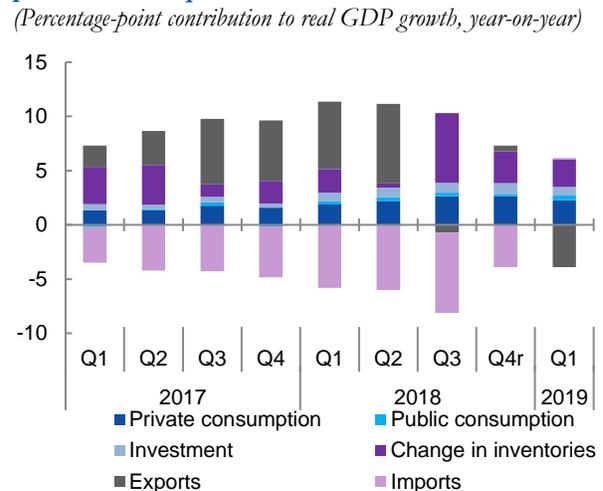
Private construction spending bolstered private investment in Q1 2019. The ongoing expansion of private investment is supported by sound fundamentals, including continued economic growth, low interest rates, and marginally positive business sentiment. However, capacity utilization remains low at about 71 percent across all industries, and political uncertainty continues to weigh on investor confidence. Nevertheless, eight major export-oriented industries now have capacity-utilization levels over 80 percent, and the number of new investment projects approved by the Board of Investment (BOI) spiked in Q1 2019. While data on private investment in Q2 2019 has not yet been released, the Private Investment Index (PSI) expanded in April to 143.70 from 142.40 at the end of Q1 2019.

**Figure 4: Private consumption and private investment continued to expand, albeit at a slower pace...**



Source: NESDC

**Figure 5: ...with changes in inventories making the largest contribution to economic growth over the previous three quarters.**



Source: World Bank Staff calculations



**The authorities did not increase public investment to bolster domestic demand and offset the impact of a worsening external environment.**

Public investment has contracted slightly over the past two quarters, falling by 0.1 percent in Q4 2018 and Q1 2019 (Figure 6) due to a decline in the acquisition of machinery and equipment.

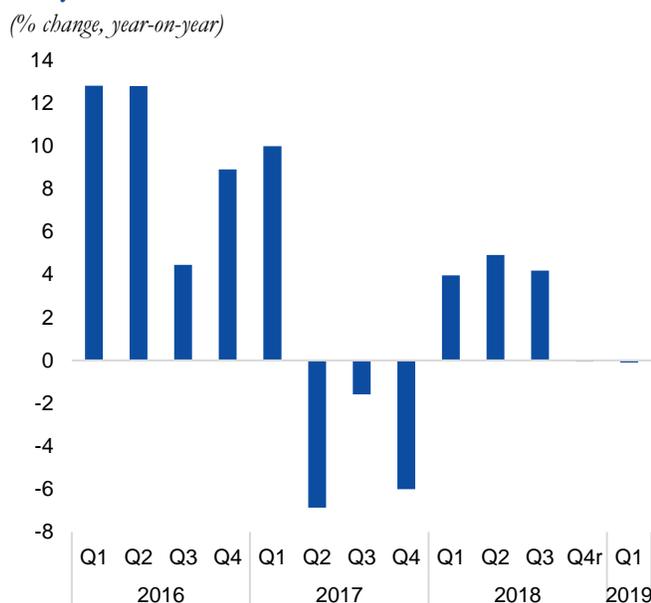
Although public construction picked up, public spending on machinery and equipment contracted sharply, falling by 6.1 percent in Q4 2018 and by 11.7 percent in Q1 2019. A study by the Bank of Thailand found that public

investment has positive spillovers on private investment, and thus the recent contraction in public investment will likely increase pressure on an already fragile domestic demand.<sup>6</sup> An expansion of public investment can help boost private investment in Thailand through several channels such as the improvement of private investor’s confidence, the creation of business opportunities and lowered logistics cost.

**External headwinds caused Thai exports to fall for the first time in 11 quarters.**

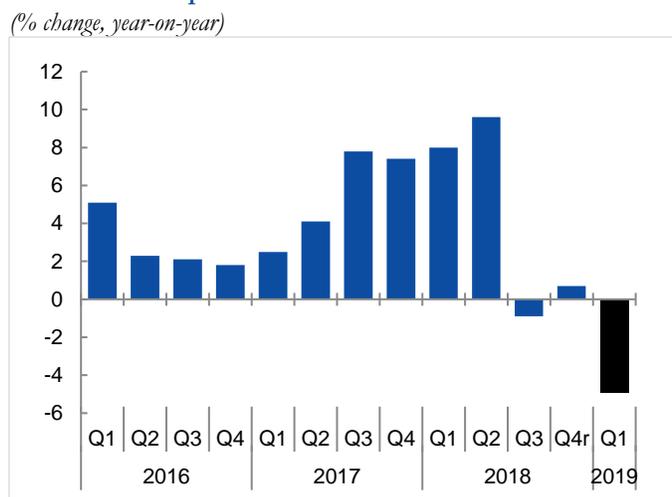
The decline in exports reflects the continuing trade dispute between the United States and China, combined with an economic slowdown among Thailand’s other major trading partners. A high base effect was also partially responsible for the observed decline (Figure 7). Exports of agricultural products and manufactured goods both fell. The poor performance of

**Figure 6: Consecutive decline in public investment, weights heavy on domestic demand.**



Source: Office of the National Economic and Social Development Council (NESDC)

**Figure 7: An unfavorable external environment caused the value of Thai exports to decline.**



Source: Office of the National Economic and Social Development Council (NESDC)

<sup>6</sup> “Crowding in of private investment by public investment”, Monetary Policy Report, December 2017, Bank of Thailand. [https://www.bot.or.th/English/MonetaryPolicy/MonetPolicyCommittee/MPR/Monetary%20Policy%20Report/MPR\\_EN\\_Dec2017.pdf](https://www.bot.or.th/English/MonetaryPolicy/MonetPolicyCommittee/MPR/Monetary%20Policy%20Report/MPR_EN_Dec2017.pdf).



agricultural products such as rice, rubber, sugar, and tapioca was due to a recent accumulation of inventories and increased competition from other exporters. Among manufactured goods, electronics suffered the sharpest contraction, driven by slowing economic activity among Thailand's major trade partners. Although exports to the ASEAN region as a whole, Japan, and China all declined, exports to Cambodia – Lao PDR- Myanmar – Vietnam (CLMV) sub-region of ASEAN and the United States expanded, with exports to the U.S. rising by over 32 percent from Q1 2018 to Q1 2019. The spike in exports to the U.S. can be attributed partially to trade diversion, as exporters strive to evade tariffs imposed during the ongoing U.S.-China trade dispute.

**As exports and manufacturing output contracted, imports remained flat in Q1 2019.**

Weakening demand for raw materials, intermediate goods, and capital goods drove the decline in imports. However, imports of oil and natural gas, petroleum products, and vehicle parts increased and partially offset the decline. As export prices rose faster than import prices, the terms of trade modestly improved.

**Faced with an unfavorable external environment, the manufacturing production index declined in Q1 2019.**

On the supply side, the value of manufacturing output increased by just 0.6 percent, down from 3.5 percent in Q4 2018, driven by the decline in export values. The manufacturing production index for export-oriented industries contracted by 4.4 percent, while the index for domestic industries fell by only 1 percent. Some sectors experienced an increase in their manufacturing production index, including automobiles, petroleum products, general-purpose machines, and medical instruments. The contraction in manufacturing output caused the overall capacity utilization rate to fall from 73 percent in Q1 2018 to 71.3 percent in Q1 2019.

**While sluggish exports caused manufacturing production to decline, agricultural production rose.**

Rising commodity prices for rice and maize, good weather conditions for fruits and oil palm, and a high yield period for rubber plants marginally increased agricultural output. Despite rising production, agricultural exports fell due to burgeoning inventories and greater international competition. Moreover, while higher prices contributed to the increase in agricultural production, a decline in the overall agricultural price index caused the farm income index to fall.

**The resilience of domestic consumption was enabled by the continued expansion of the wholesale, retail, and services sectors.**

As domestic household consumption and tourist arrivals marginally slowed, the growth of the wholesale and retail sectors eased but remained robust at 6.8 percent.

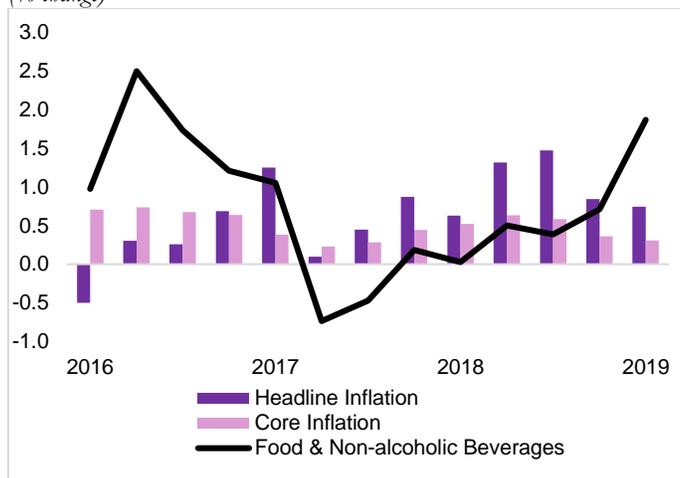
### iii. Inflation remains near the lower bound of the central bank's target range.

**Inflation has been subdued due to the slowing growth of household consumption.**

The headline inflation rate fell to 0.7 percent in Q1 2019, just below the BOT's target range of 1-4 percent, reflecting lower demand pressures with the slowdown in domestic economic activity. Meanwhile, lower prices in the global energy market caused the energy price index to decelerate from 3.4 percent in Q4 2018 to 0.8 percent in Q1

2019. Food and non-alcoholic beverages contributed the most to headline inflation, driven by rising prices for rice, flour, fish, eggs, and dairy products (Figure 8). Though relatively modest, this increase in food-price inflation has disproportionately impacted lower-income households, for which food represents an especially large share of household spending.

**Figure 8: Headline inflation remains low despite a recent increase in the food & non-alcoholic beverages price index.**  
(% change)



Source: Haver Analytics

### iv. A weaker external environment coupled with increased domestic economic activity narrowed the current-account surplus.

**The current-account surplus continued to shrink in Q1 2019 as exports fell and imports stabilized.**

After peaking at 11.7 percent of GDP in 2016, the current-account surplus narrowed from 2018 through Q1 2019, due largely a decline in the growth rate of goods exports from 9.8 percent in 2017 to 7.2 percent in 2018, reflecting the slowdown in global growth and worsening terms of trade. Income from services remained broadly stable, with tourism receipts holding at about 12 percent of GDP. However, the annual growth rate of tourism receipts, due to competing sports events such as the World Cup football in Russia. Goods imports increased due to a cyclical upswing in commodity prices and an increase in investment in 2018, then stabilized in Q1 2019. The trade balance remained in surplus, but fell from US\$7.5 billion in Q1 2018 to US\$6.8 billion in Q1 2019 (Figure 9).

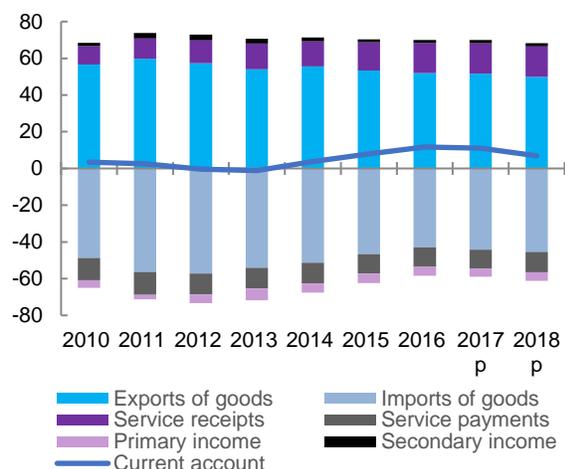
**The financial account presented mixed signals, with a rebound of foreign direct investment (FDI) and government bond inflows, but also continued FDI,**

The financial account Thailand has seen net capital outflow of 4.2 percent in 2018. Since 2016 most capital outflows from Thailand have been in the form of outbound FDI, which has focused on acquiring brands and technology in developed markets and the expansion of Thai firms into neighboring countries with fast-growing markets and lower production costs. Portfolio outflows, especially equity outflows, peaked in Q2 2018, then slowed during the second half of the year, reflecting investor expectations of slower growth. There were also increasing currency and deposit outflows by financial institutions during the second half of 2018, as changing exchange-rate expectations prompted them to adjust their hedging positions. On the other hand, capital inflows in the form inward FDI, partly reflecting early investment in the Eastern

**equity and currency outflows.**

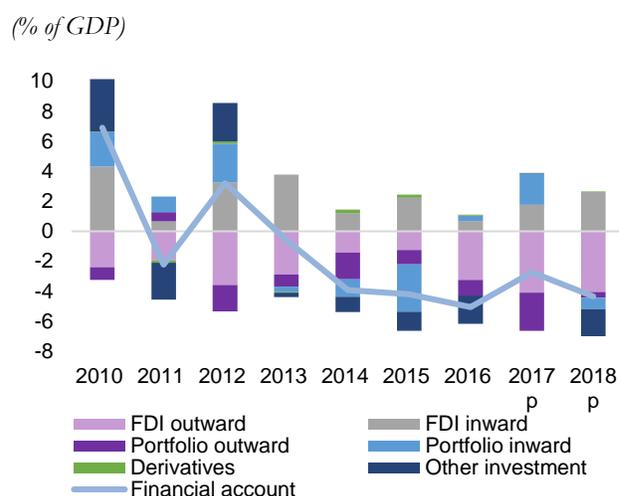
Economic Corridor (EEC), recovered to 2.6 percent of GDP in 2018, its highest level since 2013 (Figure 10). Meanwhile, while many countries in the experienced outflows of non-resident of holdings local-currency government bonds 2018 as global financial conditions tightened, Thailand saw continued inflows into its baht government bond market thanks to its strong macro fundamentals. Market data suggests that inflows have continued in the first quarter of 2019.<sup>7</sup>

**Figure 9: The current-account surplus continues to narrow, driven by softening external demand and the continued growth of the domestic consumer market.**  
(% of GDP)



Source: Bank of Thailand; World Bank staff calculations

**Figure 10: FDI inflows have increased steadily since 2016, but the financial account presents mixed signals.**  
(% of GDP)



Source: Bank of Thailand; World Bank staff calculations

**Thailand's foreign-exchange reserves have continued to increase, and the Thai baht (THB) has steadily appreciated.**

Overall, the current account surplus of 7.0 percent of GDP combined with the financial account deficit of 4.3 percent of GDP led to a balance of payments surplus and accumulation of foreign-exchange reserves to US\$172 billion,<sup>8</sup> equivalent to 37 months of goods and services imports or 1.9 times the short-term external debt stock.<sup>9</sup> While most emerging markets have faced downward pressure on their exchange rates, thanks to the balance of payment surplus the baht has continued to appreciate against the US dollar, rising from 32.7 THB/US\$ at end-2017 to 30.7 THB/US\$ by end-June 2019. Meanwhile, the real effective exchange rate appreciated nearly continuously since 2017, which to some extent a recovery from the sharp real depreciation between 2015 and 2016, and is now close to the peaks seen earlier in 2013 and 2015.

<sup>7</sup> Credit Suisse estimates that the share of outstanding local currency government bonds in Thailand held by non-residents increased from 15.4 percent in March 2018 to 18.0 percent in March 2019. Credit Suisse: Non-residents' holdings in local currency bond markets, March 2019.

<sup>8</sup> This figure excludes the country's net forward position of US\$34 billion.

<sup>9</sup> These measures are defined as foreign reserves relative to (i) monthly imports in the same year and (ii) short-term external debt at original maturity in the previous year plus debt repayments in the current year.

**Table 2: The Current Account, Financial Account, and Foreign-Exchange Reserves**  
(Percent of GDP, unless otherwise indicated)

	2015	2016	2017	2018
Current account	8.0	11.7	11.0	7.0
Exports of goods	53.3	52.0	51.7	49.9
Imports of goods	-46.7	-43.1	-44.2	-45.5
Tourism receipts	10.2	10.8	12.0	11.6
Financial account	-4.2	-5.1	-2.7	-4.3
Outbound FDI	-1.2	-3.2	-4.1	-4.1
Inbound FDI	2.2	0.7	1.8	2.6
Outbound portfolio investment	-1.0	-1.0	-2.5	-0.4
Inbound portfolio investment	-3.2	0.4	2.1	-0.8
Reserves, excluding net forward position (US\$ billions)	144.9	146.1	165.8	171.9
Reserves relative to short-term external debt	2.0	2.2	2.4	1.9

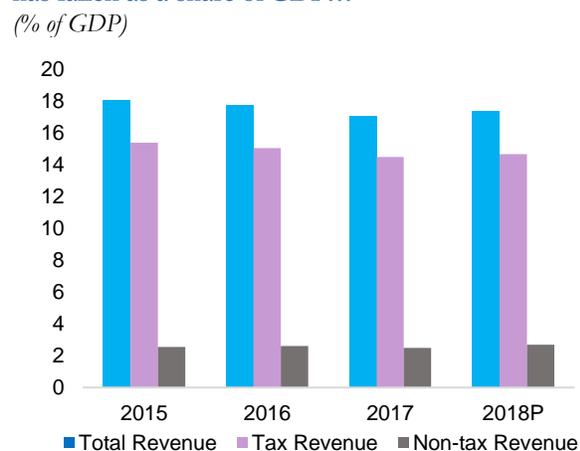
Source: Bank of Thailand; World Bank staff calculations

#### v. The fiscal deficit has remained manageable despite declining revenues.

##### Central government revenue collection declined as a share of GDP between 2015 and 2018.

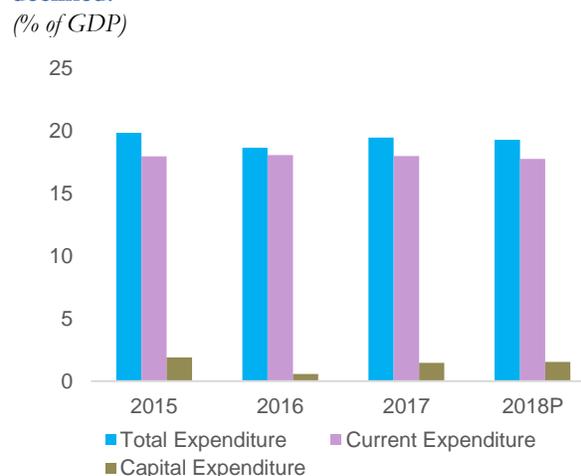
Total central government revenue fell from 18.1 percent of GDP in 2015 to 17.4 percent in 2018, as tax revenue dropped by 0.7 percent of GDP (Figure 11). Personal and corporate income tax revenue both declined by 0.5 percent of GDP over the period, but corporate income tax revenue rebounded in 2018. Meanwhile, revenue from consumption taxes (including excise taxes) has held stable at about 8 percent of GDP. In the absence of major tax-policy changes, the recent drop in income tax revenue is likely explained by demographic aging, tax incentives extended to investors, challenges in tax administration, or a combination thereof.<sup>10</sup> Nontax revenue modestly increased over the period, but tax revenue represents about 85 percent of all revenues, while nontax revenue represents just 15 percent (Table 3).

**Figure 11: In recent years, central government revenue has fallen as a share of GDP...**



Source: Ministry of Finance

**Figure 12: ...and public expenditures have also declined.**



Source: Ministry of Finance

<sup>10</sup> Thorn Pitidol, "Changing Thailand's Future with Tax Reform", *Thammasat Review of Economic and Social Policy* Volume 4, Number 1, January – June 2018



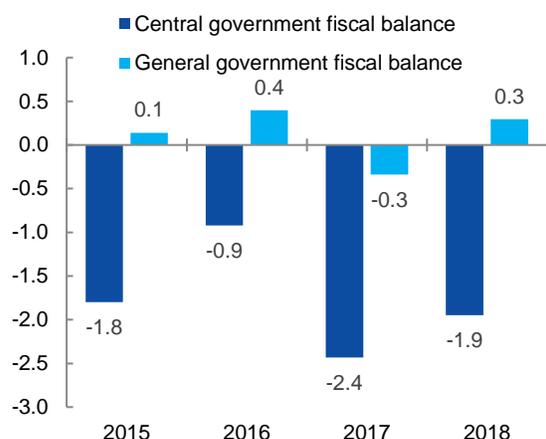
**Total public expenditures have also modestly declined, falling from about 20 percent of GDP in 2015 to 19.3 percent in 2018.**

Both current and capital spending fell as a share of GDP over the period. Current spending dropped from 18 percent of GDP in 2015 to 17.8 in 2018, while capital spending plunged from 1.9 percent of GDP in 2015 to 0.6 percent in 2016 before partially recovering to 1.5 percent in 2018 (Figure 12). Current spending fell from 97 percent of total public spending in 2016 to 92 percent in 2018, but investment in large infrastructure projects pushed capital spending from 3 percent of total public spending in 2016 to 8 percent in 2018.

**Due to the simultaneous decline in revenues and expenditures, the fiscal deficit has remained broadly stable.**

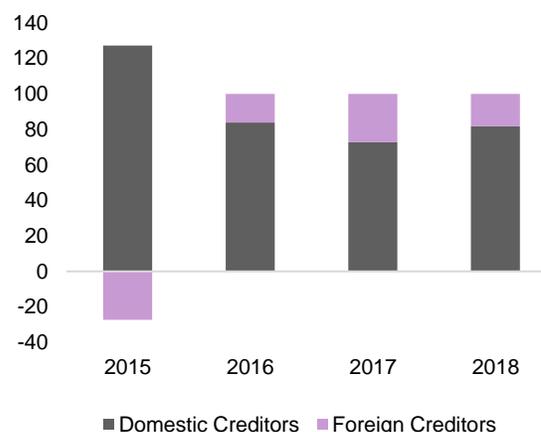
The budgetary central government fiscal deficit widened from 0.9 percent of GDP in 2016 to 2.2 percent in 2017, then narrowed slightly to 1.9 percent in 2018 (Figure 13). The deficit was largely financed through net domestic borrowing, which accounted for more than 80 percent of total net borrowing (Figure 14).<sup>11</sup> The general government fiscal balance, which includes the budgetary central government, social security funds and local governments, reached a 0.3 percent of GDP surplus.

**Figure 13: The central and general government budget deficit has remained broadly stable...**  
(% of GDP)



Source: Ministry of Finance

**Figure 14: ...and continues to be financed primarily by domestic borrowing.**  
(% of total)



Source: Ministry of Finance

<sup>11</sup> Excluding net acquisition of financial assets.

**Table 3: Fiscal Operations at the Central and General Government Levels***(Percent of calendar year GDP)<sup>(a)</sup>*

Central government - budgetary	2015	2016	2017	2018 est
<b>Revenue</b>	18.1	17.7	17.1	17.4
<b>Taxes, of which</b>	15.4	15.0	14.5	14.7
Income tax	6.5	6.1	5.8	6.0
Consumption tax	4.9	4.6	4.4	4.5
Trade tax	0.7	0.7	0.6	0.6
Excise	3.2	3.5	3.6	3.5
Other taxes, incl. property taxes	0.1	0.1	0.1	0.1
<b>Non-tax</b>	2.5	2.6	2.5	2.7
of which SOE dividends	1.1	0.9	1.0	1.0
<b>Social contributions</b>	0.0	0.0	0.0	0.0
<b>Grants</b>	0.1	0.1	0.1	0.0
<b>Expenditure</b>	19.9	18.7	19.5	19.3
<b>Current expenditure</b>	18.0	18.1	18.0	17.8
Compensation of employees	5.4	5.4	5.1	4.9
Use of goods and services	3.7	3.6	3.4	3.6
Consumption of fixed capital	0.8	0.9	1.2	1.0
Interest	1.0	0.8	0.9	1.0
Subsidies	0.8	0.7	0.7	0.6
Grants	4.2	4.0	4.1	4.2
Social benefits	1.7	1.9	2.0	2.0
Other expense	0.4	0.8	0.7	0.5
<b>Capital expenditure</b>	1.9	0.6	1.5	1.5
<b>Primary fiscal balance</b>	-0.8	-0.01	-1.5	-0.9
<b>Fiscal balance</b>	<b>-1.8</b>	<b>-0.9</b>	<b>-2.4</b>	<b>-1.9</b>
<b>Net financing<sup>(b)</sup></b>	<b>1.3</b>	<b>0.2</b>	<b>1.8</b>	<b>1.8</b>
Net domestic assets accumulation	-0.5	1.6	0.7	0.9
Net borrowing	0.9	1.8	2.5	2.7
Net domestic borrowing	1.1	1.5	1.8	2.2
Net external borrowing	-0.2	0.3	0.7	0.5
<b>Memo: General government</b>				
Revenue	22.1	21.5	20.9	21.5
Expenditure	21.9	21.1	21.2	21.2
Fiscal balance	0.1	0.4	-0.3	0.3
Government debt	30.2	30.7	32.1	33.4
Public sector debt	42.1	41.1	41.2	41.6

Notes:

(a) These are fiscal numbers (October to September) divided by calendar-year GDP. These numbers are marginally different from Ministry of Finance data on public debt divided interpolated GDP for the fiscal year

(b) The fiscal balance and net financing due not add up to zero due to a statistical discrepancy, reported by Ministry of Finance

Source: Fiscal Policy Office, Public Debt Management Office; Ministry of Finance; World Bank staff calculations

**Fiscal revenue increased in nominal terms in the first half of the current fiscal year.<sup>12</sup>**

Revenue collection reached THB 1.167 billion in first half of fiscal year (FY) 2019, an increase of 7.6 percent compared to the first half of FY 2018. Revenue collected by the central government's Revenue Department represented 60 percent of gross revenue and about 4 percent of gross revenue growth, mainly personal income tax and VAT, while revenue collected by the Excise Department represented about 25 percent to gross revenue and about 2 percent of gross revenue growth, mainly from excise tax on automobiles. The remaining 15 percent of gross revenue came from SOEs and other

<sup>12</sup> The fiscal year runs from October 1 to September 30.



public agencies such as the Treasury Department, including a one-off windfall from the sale of a telecommunication license auctioned off in 2016, but received in 2018.

**Total spending expanded by 6.0 percent, year-on-year, in the first half of the fiscal year.**

In the first half of FY 2019, total public spending reached THB 1.694 billion, an increase of 6.0 percent compared to the first half of FY 2018. Current expenditures, which represent 84 percent of total government spending, drove the overall increase. Government subsidies for rural projects and basic education under the purview of the Department of Local Administration and the Office of the Basic Education Commission, respectively, pushed the growth rate of recurrent expenditures to 18.8 percent in Q1 2019.<sup>13</sup>

**Capital expenditures also rose in Q1 2019, but actual spending missed the disbursement target by almost 7 percent.**

Due to challenges with project execution, the annual disbursement rate of the capital budget was just 15.5 percent, well below the 22 percent (quarterly) target rate. As noted above, improving the disbursement of the capital budget would help support economic growth over the near term, while a further decline in public investment could adversely impact investor sentiment and further weaken domestic demand, which is increasingly critical to economywide growth.

**Rising quarterly expenditures and revenues kept the budget deficit broadly stable as a share of GDP.**

During the first half of FY2019, the budgetary deficit was estimated at THB 527 billion, up from THB 514 billion during the same period in the previous fiscal year. To finance the deficit, the government borrowed THB 231 billion, which it supplemented with THB 289 billion in carried-over budgetary resources and treasury reserves.<sup>14</sup>

**Thailand's public debt stock remained low at 41.6 percent of GDP at end-FY2018.**

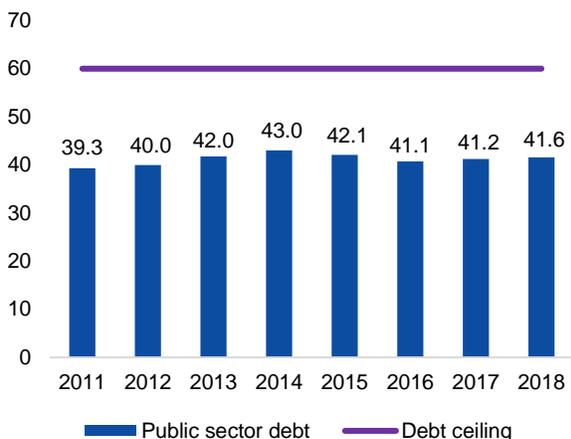
As of March 2019, THB 6.7 trillion in baht-denominated debt accounted for about 96 percent of the public-sector debt stock. Thailand's debt indicators are consistent with the quantitative fiscal rules established in the 2018 Fiscal Responsibility Act (Box 2), including: (i) a public-debt-to-GDP ratio below 60 percent; (ii) a debt-service-to-revenue ratio below 35 percent; (iii) a foreign-currency debt stock equal to less than 10 percent of the total public debt stock; and a foreign currency debt stock equal to less than 5 percent of exports. Thailand's debt-to-GDP ratio was 41.6 percent at end-2018 (Figure 15), and as of March 2019 its debt-service-to-revenue ratio was 27 percent, and foreign-currency debt represented 4 percent of total debt and less than 1 percent of exports. At end-2018, direct government debt accounted for 81 percent of the public debt stock (Figure 16), while SOE debt accounted for 13 percent, and debts accrued by specialized financial institutions (SFIs) accounted for 5 percent. In recent years, the shares of guaranteed and non-guaranteed debt have declined relative to direct government debt (Figure 17).

<sup>13</sup> According to the figures reported by the Office of the National Economic and Social Development Council.

<sup>14</sup> According to figures reported by the Ministry of Finance.

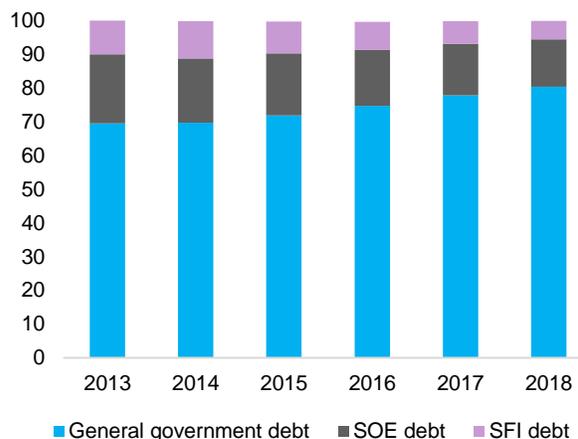


**Figure 15: The public debt stock remains well below the statutory threshold of 60 percent of GDP.**  
(% of GDP)



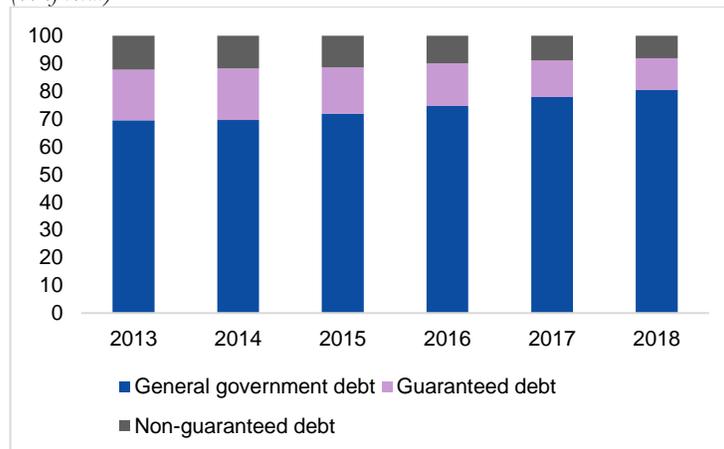
Note: debt by fiscal year divided by calendar-year GDP  
Source: Public Debt Management Office; World Bank staff calculations

**Figure 16: Direct government debt constitutes the largest share of public debt**  
(% of total)



Source: Public Debt Management Office; World Bank staff calculations

**Figure 17: Guaranteed and non-guaranteed debt have both declined as a share of total public debt.**  
(% of total)



Source: Public Debt Management Office; World Bank staff calculations

**vi. Bank lending growth returned to its 2014 growth rate, and the financial sector is generally sound.**

**After its last policy rate increase in December 2018, the BOT kept its rate unchanged.**

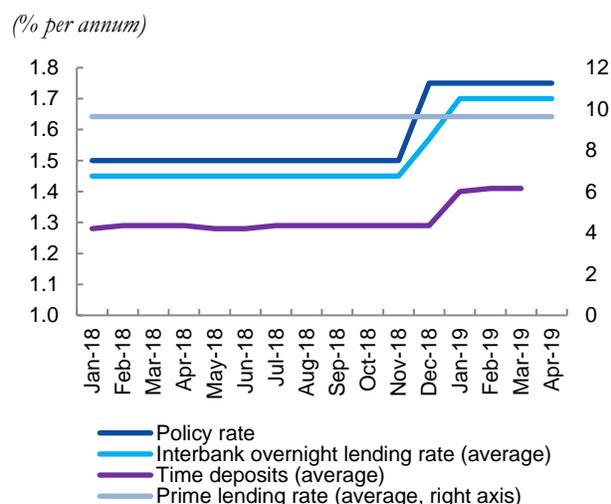
Since its last policy rate increase by 25 basis points in December 2018, the BOT has left policy rate unchanged in its subsequent four monetary policy committee meetings, as it revised downward its growth projection for 2019 and 2020 due to slower growth of merchandise and service exports.<sup>15</sup> In December, the average deposit rate increased by about 100 basis points (Figure 18).

<sup>15</sup> Bank of Thailand, Monetary Policy Committee's Decision 4/2019, June 26, 2019. [https://www.bot.or.th/Thai/MonetaryPolicy/Documents/PressMPC\\_42019\\_67MGQ10.pdf](https://www.bot.or.th/Thai/MonetaryPolicy/Documents/PressMPC_42019_67MGQ10.pdf)

**Loan growth drivers shifted from SMEs to personal, house and car loans, while NPLs remained stable.**

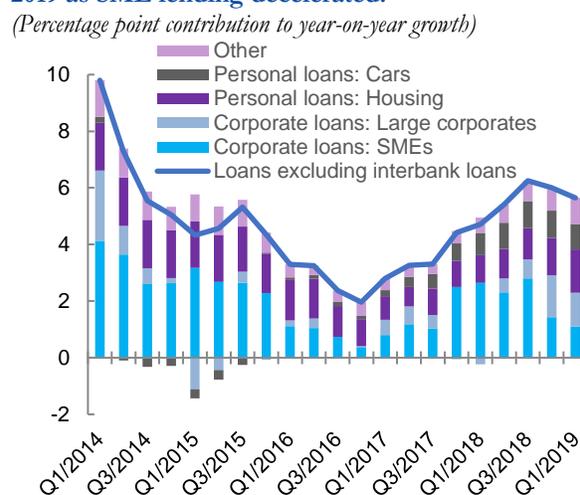
The annual growth rate of commercial bank lending reached 5.6 percent in 2018 after hitting a low of 2 percent Q4 2016.<sup>16</sup> While loans to small and medium enterprises (SMEs) and personal car loans drove the recovery, loans to large corporates, personal loans, and housing loans have all recently increased. In Q1 2019, total outstanding loans stood at 95 percent of 2018 GDP, with loans to SMEs accounting for 33.8 percent of total loans. After increasing sharply between 2014 and 2017, the volume of nonperforming loans (NPLs) stabilized from Q4 2017 though Q1 2019 at about 3 percent of total outstanding commercial bank loans.

**Figure 18: The Bank of Thailand raised its policy rate in December 2018.**



Source: Bank of Thailand

**Figure 19: After increasing steadily for several years, the growth commercial bank lending slowed in Q1 2019 as SME lending decelerated.**



Source: Bank of Thailand; World Bank staff calculations

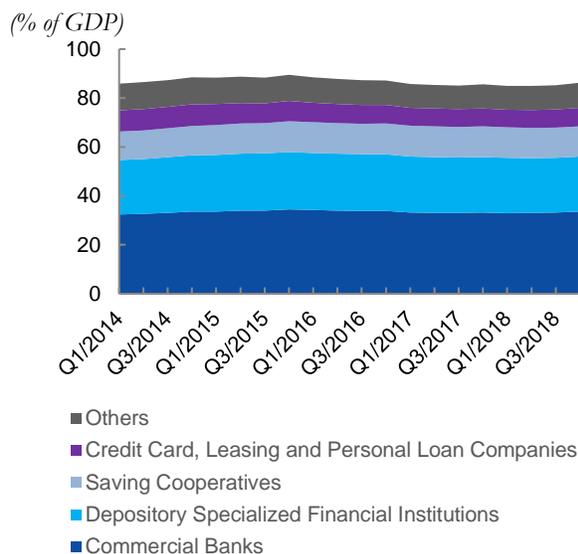
**Household debt levels have gradually declined but continue to present cause for concern.**

Household debt fell from a peak of about 81 percent of GDP in 2015 to 78.6 percent in Q4 2018—still high enough to warrant the attention of the BOT. The ratio of household debt to disposable income stood at 144.6 percent in Q3 2017 and has declined only marginally since 2015, suggesting that disposable income has not kept pace with GDP growth. Consistent with the commercial banking data, the growth of household debt is driven by auto and housing loans, while the contribution of business loans is declining (Figure 20).

<sup>16</sup> These figures exclude interbank loans.



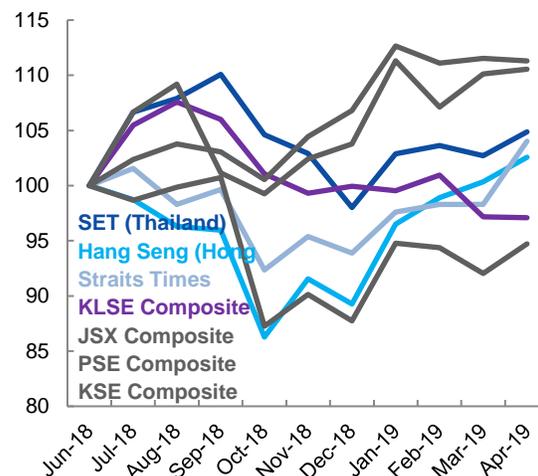
Figure 20: Household debt levels remain high.



Source: Bank of Thailand

Figure 21: Movements in the Thai stock exchange have remained broadly consistent with those of other regional stock exchanges.

(index, June 2018=100)



Source: Bank of Thailand; World Bank staff calculations

**The Stock Exchange of Thailand (SET) index fell in 2018 as global financial conditions tightened, then partially recovered in early 2019.**

Despite strong firm earnings, the SET index dropped in the second half of 2018, then rebounded in early 2019—broadly in line with trends in other regional stock exchanges (Figure 21). The alignment of the SET’s movements in 2018 with the large portfolio equity outflows observed in the balance of payments suggest that portfolio equity flows may reverse in 2019.

**Thailand’s financial system is generally sound.**

The banking sector is well capitalized and able to withstand potential shocks. The capital-adequacy ratio stood at 18.23 percent in Q1 2019.<sup>17</sup> Thai banks have complied with Basel III capital requirements since 2013 and have been asked to maintain a minimum liquidity coverage ratio of 60 percent since 2016, which is incrementally increasing to 100 percent in 2020. The loan-to-deposit ratio for domestic commercial banks stood at 98.4 percent in 2018, up from 96.3 percent at end-2017, indicating that most loans are funded by deposits. The NPL coverage ratio rose from 139.5 percent at end-2017 to 146.5 percent in Q3 2018, a sufficient level to absorb NPL-related losses.

**However, the BOT has identified four risks to financial stability outside the banking sector.**

In the financial sector, savings cooperatives continue to exhibit search-for-yield behavior, as they raise funds through deposits and members’ shares for investment in securities, especially long-term debt securities with high yields. Moreover, the cooperatives is increasingly interconnected, with mutual borrowing and deposits, and a liquidity problem at one cooperative could have adverse implications for other cooperatives, potentially undermining public confidence in the cooperatives system. Second, excess supply in the real estate sector continues to warrant monitoring, and because foreign demand has become a significant force in the Thai condominium

<sup>17</sup> This is the ratio of capital funds to risk-weighted assets for both domestic commercial banks and domestic branches of foreign banks.



market in recent years, the impact of potential changes in foreign demand must be assessed. Third, the financial position of Thai households remains fragile, as evidenced by both the high ratio of household debt to GDP and the increase of household debt driven by housing and auto loans—which could impair households’ ability to cope with shocks and lead to an increase in NPLs. Fourth, while the business sector’s overall financial position is sound, certain segments appear more sensitive to higher interest rates or lower revenues. These include businesses with high leverage, businesses whose product or input prices move with commodity prices, businesses that are affected by e-commerce, as well as SMEs with rising NPL ratios. The vulnerability of SMEs is partly due to structural concerns and their limited ability to compete in a changing business environment. Large conglomerates actively raised funds via bank loans and bonds when interest rates were low, and they have increased both their foreign investments and their investments in non-core businesses.<sup>18</sup>

**Thailand’s financial-inclusion indicators have steadily improved, but there is still considerable scope for further gains, especially in access to digital finance.**

The share of adults who have an account at a formal financial institution rose from 73 percent in 2011 to 78 percent in 2014 and reached 82 percent in 2018. The gender gap is modest, as 84 percent of men and 80 percent of women have an account. However, the utilization of financial services remains relatively limited. For example, in 2014 only 12 percent of Thailand’s population used an account at a financial institution to pay utility bills or receive wages from the private sector. Moreover, fixed broadband penetration remains relatively low at about 10 percent, and there is considerable room for growth in the fintech subsector. These issues are discussed in detail in the focus section on harnessing fintech to promote financial inclusion.

**vii. The employment rate increased year-on-year despite a decline in agricultural and manufacturing employment.**

**The construction, wholesale, and retail sectors drove employment growth in Q1 2019.**

The employment rate increased in year-on-year terms, however, it declined on a quarter-on-quarter basis for two consecutive quarters. Agricultural employment fell despite an increase in agricultural production, while a decline in manufacturing employment accompanied a slowdown in manufacturing output. Agriculture remained the country’s largest employer, followed by the wholesale and manufacturing sectors.

**viii. Thailand has made enormous gains in poverty reduction in recent decades, but progress has largely stalled since 2015, and deep disparities persist across regions.**

**While Thailand’s extreme poverty rate has fallen to negligible levels, the poverty rate at the national poverty line**

From 2015 onwards, poverty reduction slowed down as household income and consumption growth stagnated. Thailand’s headcount poverty ratio at the national poverty line has hovered between 7 and 8 percent since 2015. Labor market indicators during this period also showed weaknesses in agriculture employment as well as low wage growth. The recent declines in agricultural employment, the agricultural price index, and the farm income index—as well as an anticipated drought—will negatively impact the welfare of households in the bottom 40 percent of the income distribution.

<sup>18</sup> See Financial Stability Report 2018, Bank of Thailand [https://www.bot.or.th/English/FinancialInstitutions/Publications/FSR\\_Doc/FSR2018E.pdf](https://www.bot.or.th/English/FinancialInstitutions/Publications/FSR_Doc/FSR2018E.pdf).



has plateaued since 2015.<sup>19</sup>

**Poverty increased in some population groups more than others.**

The 2017 household survey found that poverty in some regions increased. The increase in the number of poor was due mainly to an increase in the Northeast region. By population groups, households where the head is working in the agriculture sector or have low-education were hardest hit. By sector, poverty increased the most among households with heads in the agricultural sector. The level of education of the household head is also a strong determinant of poverty. Increases in poverty was experienced almost exclusively by households with low education levels. Over half of households are headed by someone with primary education or less.<sup>20</sup>

**The low-income earner registration and the welfare smartcard project were initiated to address poverty.**

The government initiated low-income earner registration and welfare smartcard project to support low-income earners with cash transfers and in-kind benefits. Registrations were opened twice, once in 2017 and again in 2018. 14.5 million people have now qualified and received a smartcard for receiving welfare transfers. Those earning less than THB 30,000 a year are entitled to receive cash transfers of THB 300 a month as well as allowance for public transport. In addition, 4.1 million smartcard holders have taken part in occupational training. Subsequently, 1.1 million smartcard holders were able to achieve higher income and leave the welfare smartcard program.

**The increase in public assistance reflects the government's effort to help low-income households.**

The government has enacted policies to support the incomes of poor households faced with declining market income. However, the growth in public assistance income to the non-poor segment of the distribution raises questions as to how well these funds are targeted. Data from the household surveys show increases in income in pension and elderly/disability assistance, which is consistent with the government's increased spending in elderly and pension schemes. In 2017, the government launched an unconditional transfer program, often referred to as the welfare smartcard program. Spending on the elderly also increased in 2016.<sup>21</sup> The 2016 budget allocated THB 287 billion for pension schemes, with expectations to increase to THB 698 billion by 2024.

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<sup>19</sup> Extreme poverty is measured at the international poverty line of US\$ 1.90 per day in 2011 purchasing-power-parity terms, while the national poverty line is US\$ 5.50 per day. In 2017, the Asian Development Bank reported that Thailand's extreme poverty rate had reached 0.0 percent. See: <https://www.adb.org/countries/thailand/poverty>.

<sup>20</sup> The twelve-year compulsory education system was initiated in 1977.

<sup>21</sup> <https://www.reuters.com/article/thailand-economy-idUSL4N1D93O1>.



## 2. Outlook, Risks, and Recent Policy Developments



- i **Growth is projected to slow in 2019, as domestic demand is not expected to fully offset the impact of an unfavorable external environment.**

**After reaching 4.1 percent in 2018, Thailand's GDP growth rate is projected to fall to 3.5 percent in 2019 and slowly recover, with low inflation.**

Slowing growth in 2019 reflects a weakening external environment. Export growth is projected to slow from 4.2 percent in 2018 to 2.2 percent in 2019 (Table 1). The key factors expected to hurt Thailand's exports are the potential escalation of the ongoing trade dispute between the United States and China, as well as the possibility of increased competition in the E.U. market following the recently signed free-trade agreement (FTA) between Vietnam and the European Union. Export growth is projected to gradually pick up by 2020 driven by potential positive trade-diversion impacts, as seen in a pick-up in new investment applications in industries targeted by US tariffs as reported by Thailand's BOI. Inflation is projected to remain around 1 percent at the lower end of the inflation target.

**Thailand's relatively strong economic fundamentals are expected to continue to support private consumption.**

Private consumption growth is expected to grow at a stable rate, supported by low inflation, improving consumer confidence, and stimulus measures. Durable goods, especially automobiles (over 12 percent rise in the first quarter) financed with personal loans, are projected to continue to drive private consumption growth.

**The government has enacted short-term fiscal stimulus**

The Ministry of Finance announced an economic stimulus package containing seven measures to boost domestic demand among middle and low-income households on May 1, 2019. This includes a tax deduction for domestic tourism spending worth up to THB 20,000, a tax deduction on spending for uniforms, sports equipment and textbooks up to THB 15,000, transfers including a THB 500 handout per child to



**measures to boost economic growth.**

welfare smartcard holders to buy stationery, school uniforms and textbooks, a THB 1,000 transfer to farmers who are government welfare recipients, and an additional THB 200 per-month subsidy to be given until September 2019 to disabled people who are welfare smartcard holders.

**The gradual narrowing of the current-account surplus is expected to continue.**

While exports are projected to gradually pick up in 2020 and 2021, increased consumption and investment-related imports driven by increased government investment and the EEC, will lead to a narrowing trade surplus. The current account surplus is projected to narrow from 7.0 percent of GDP in 2018 to 6.4 percent of GDP in 2019.

**The EEC will contribute to FDI inflows, and Thailand may benefit from the diversion of FDI away from China.**

FDI inflows should remain strong, but FDI outflows to neighboring countries and elsewhere are also expected to continue. Meanwhile, Thai government securities will likely continue to be considered relatively safe compared to those of peer countries. Investor confidence in Thai securities is expected to support positive financial-account dynamics, especially if the policy rate is increased and the baht is seen as stable or appreciating.

**General government fiscal balance is projected to move from a surplus into a deficit from 2019.**

Government revenue as a share of GDP is projected to continue its gradual decline in the absence of firm reform commitments to structurally increase revenue. In addition, recent tax stimulus policies announced on May 1, 2019 (see aforementioned tax deductions) contributed to the revenue decline. Government expenditure is projected to gradually pick up as the incoming cabinet is expected to enact expansionary fiscal measures to spur economic growth. This will lead to a projected deterioration of the central and general government fiscal balances; the government fiscal balance is projected to move into a deficit of 0.1 percent of GDP in 2018, from a 0.3 percent of GDP surplus in 2018.

**As a result, public debt is projected to slowly rise, but remain below the statutory limit.**

This fiscal deficit is projected to lead an increasing level of public debt from 41.6 percent of GDP in 2018 to 42.6 percent of GDP in 2019 and continue to increase slowly in the medium term. However, public debt will remain well below the limit of 60 percent of GDP under the Fiscal Responsibility Act.

## ii Risks are tilted to the downside

**Political uncertainty is the main risk to investor confidence and consumer confidence.**

Prolonged political uncertainty could delay the budget approval for FY20, undermining investor sentiment—though the immediate impact on budget execution may not be significant, as agencies are allowed to carry over the previous year’s budget. The 19-party coalition government holds a slim majority in the lower house and is vulnerable to defections and internal discord. If the coalition collapses, the approval of large public investment projects beyond the current, approved pipeline could be delayed, which would negatively impact public investment spending within two to three years. However, uncertainty regarding the government’s longevity could also adversely impact investor and consumer sentiment in the short term, regardless of whether the coalition ultimately endures. Additionally, political discontinuity could also affect agencies that were designed to be insulated from politics, such as the EEC, as they must obtain cabinet approval for new projects and coordinate with other public agencies that are directly impacted by the political situation.



**An unfavorable external environment continues to pose a major risk to the Thai economy.**

A further escalation in the U.S.-China trade dispute could further weaken the global economy and adversely impact Thailand's major trading partners, with negative implications for Thai exports. Rising global uncertainty could also reduce FDI inflows, as most inbound FDI focuses on export-oriented sectors.

**Additional domestic risks stem from consumer loans and household deleveraging.**

The recent rise in auto loans has been underpinned by potentially risky lending practices by non-financial institutions seeking high returns in a low-interest-rate environment. The authorities may introduce macro-prudential measures designed to limit the risks these loans pose to the wider financial system, which would curb private consumption of cars and other durable goods. In addition, household deleveraging could also curtail private consumption.

**The upcoming rainy season is expected to be the driest in 30 years, which poses a severe risk to the agricultural sector.**

Although agriculture only contributes about 6 percent to GDP, it remains the country's largest employer. The projected decline in rainfall in 2019 could negatively impact farm income, which has already fallen due to low commodity prices. Households in the bottom 40 percent of the income distribution are the most dependent on agriculture and would be the most impacted by inadequate rainfall.

**iii Recent policy developments have been broadly positive, but implementation may pose a challenge.**

**Thailand held its first general elections since the 2014 military coup.**

The 2019 Thai general election was held on March 24, 2019, but the prime minister was not sworn in until June due to a delayed vote count and protracted negotiations to establish a coalition government. The outgoing government approved the 20-Year National Strategy, a long-term roadmap for inclusive growth that aims to enable Thailand to transition to high-income status. The implementation of public investments envisioned under the strategy, such as large infrastructure projects in the EEC, could boost private-sector sentiment and encourage complementary private investment, bolstering growth over the short-to-medium term. Political ownership and stakeholder buy-in will be essential to ensure implementation continuity, as legal reforms and the approval of major infrastructure projects will require approval by the National Assembly and the Cabinet, respectively.

**Multiple structural reforms have been approved and are currently being implemented.**

These reforms are designed to support the 20-Year National Strategy. They focus on improving competitiveness through the development of the EEC (Box 1), strengthening fiscal policy by enacting new legislation such as the Budget Procedures Act and the Fiscal Responsibility Act (Box 2), implementing short-term fiscal stimulus measures, and rolling out a welfare smartcard to facilitate cash transfers to poor households.

**Box 1: The Eastern Economic Corridor (EEC)**

The EEC is a special economic zone (SEZ) established in 2018 under Eastern Special Development Zone Act B.E. 2561. The main EEC areas include parts of Chachoengsao, Chonburi, and Rayong provinces. Dedicated regulatory bodies, including the Eastern Economic Corridor Policy Committee and the Eastern Economic Corridor Office, expedite the review and approval process for EEC projects. Tax incentives are available to businesses and foreign workers operating in the EEC, and foreign investors are allowed to hold a majority stake in aviation and related businesses. The EEC Office is also empowered to waive certain restrictions on investment and services.<sup>22</sup>

According to the Board of Investment (BOI), EEC investment applications totaled THB 6.7 billion in 2018, up 134 percent from the previous year. Recent data indicate that the number of applications increased by 12 percent Q1 2019, driven by applications from Chinese firms, but the total value of proposed investments fell by 36 percent, due in part to high base effects. Major projects already approved include investments by Toyota Motors (hybrid cars and batteries), PTT Global Chemical (polyols), Microchip Technology (integrated circuits), and Bridgestone Specialty Tire Manufacturing (aircraft tires).

The EEC also includes proposals for large infrastructure megaprojects implemented as public-private partnerships (PPPs). The five proposed centerpiece EEC projects include a high-speed rail linking the Suvarnabhumi, Don Muang, and U-Tapao airports (THB 225 billion), U-Tapao aviation city (THB 290 billion), an aircraft maintenance, repair, and overhaul facility (THB 11.6 billion), Mat Ta Phut seaport (THB 84 billion), and Laem Chabang seaport (THB 47.9 billion). Airbus has signed an agreement with Thai Airways International to develop an aircraft maintenance, repair and overhaul center at U-Tapao airport (Figure 22).

A consortium led by the Charoen Pokphand Group submitted the winning bid for the high-speed rail link, but Cabinet approval is still pending. This global consortium involves multiple foreign and domestic firms, including China Railway Construction Corporation, Bangkok Expressway and Metro Public Company Limited, Italian-Thai Development, Ch. Karnchang, and Japan Overseas Infrastructure Investment Corporation for Transport. The other four megaprojects are currently in the bidder-selection phase.

While the global experience with SEZs has been mixed, key determinants of success include the policy framework for the SEZ, the physical structure and layout of the zone, and the country context. Independent governing authorities and enabling legislation increases the chances that an SEZ will achieve its objectives. Among Asian countries with SEZs, those with independent SEZ authorities increase exports by 27 percent than those without. A clear link to the national development strategy can also increase an SEZ's impact on the broader economy.<sup>23</sup>

Figure 22: EEC Megaprojects



Source: Eastern Economic Corridor Office

<sup>22</sup> Compared to its ASEAN peers, Thailand has unusually tight restrictions on trade in services, particularly with regard to skilled professionals (World Bank Services Trade Restrictions Database: <http://iresearch.worldbank.org/servicetrade>)

<sup>23</sup> Michael Wong, Johanne Bubba (2017). Special economic zones: an operational review of their impacts. World Bank: Washington DC. Asian Development Bank (2015). Asian Economic Integration Report 2015. Asian Development Bank. <https://openknowledge.worldbank.org/handle/10986/29054>.

**The EEC Office has identified a shortage of skilled labor as a major challenge.** A recent survey by the EEC Office and found that demand for labor will exceed 475,000 workers in the next five years, including highly skilled specialists in automation and robotics, medical research, and digitization demanded by the data mining, next-generation automobiles, artificial intelligence, and health sectors. To meet the demand for skilled workers, the EEC Human Resource Development Centre has been tasked with formulating a strategy for upskilling and reskilling in partnership with state agencies, universities, and private firms.

**The 2018 Fiscal Responsibility Act (FRA) substantially reformed the legal framework for fiscal policy.**

The FRA is designed to: (i) reinforce fiscal discipline, (ii) modernize fiscal rules and procedures, and (iii) strengthen fiscal management processes and institutions. The law was initially applied to the expenditure budget for the 2019 fiscal year (Box 2).

### Box 2: The Fiscal Responsibility Act (FRA)

Together with the 2017 Public Procurement Act and the 2018 Budget Procedures Law, the FRA represents a significant realignment of the legislative framework for fiscal management. The FRA introduced fiscal rules targeting debt levels and annual budget allocations, which are designed to bolster fiscal discipline and ensure that adequate budgetary resources are available to finance priority expenditures. The government is currently in compliance with the FRA benchmarks (Table 4), and it has retroactively complied with the public debt benchmarks since the 1997/98 budget year. The FRA mandates that these benchmarks be reviewed at least every three years. FRA requirements are binding, and relevant indicators must be reported to the Cabinet and the Fiscal Commission and disclosed to the public every six months. If any benchmarks are not met, the Ministry of Finance is required to provide an explanation and recommend mitigation measures to the Cabinet (for public debt) or to the National Assembly (for annual budget allocations).

**The FRA also altered the institutional and policy framework to improve fiscal management.** The FRA established a state fiscal and financial policy commission, which is chaired by the prime minister and includes representatives from all the major economic and fiscal agencies. The commission tasked with preparing the Medium-Term Fiscal Framework (MTFF) and periodically reviewing the FRA benchmarks. The MTFF must be prepared within three months of the end of each fiscal year. It is based on medium-term macroeconomic projections and revenue and expenditure forecasts for a three-year period. Annual budget allocations must be consistent with the projections for the first year, but the outer two-year projections are indicative. The FRA also stipulates that the Ministry of Finance must present a consolidated financial report identifying all sources and uses of public funds to the Cabinet and that it must disclose these reports to the public.

**If effectively implemented, the fiscal rules and the institutional changes in the FRA could substantially improve fiscal management.** As noted in the April 2018 edition of the TEM, the fragmentation of budget management across agencies responsible for different funding sources negatively impacts the delivery of large, complex infrastructure projects. The State Fiscal and Financial Policy Commission, which has an institutional purview that encompasses all sources and uses of public funding, could play an important role in improving interagency coordination in revenue management. Meanwhile, the creation of the MTFF has introduced a medium-term budget perspective. Together with the use of multiyear budget commitments, as authorized by the Budget Procedures Act, the MTFF could create a more stable medium-term resource envelope to support the implementation of public investment projects across multiple budget years.

Table 4: Selected fiscal rules under the FRA

	Maximum allowable ratio (%)	Actual ratios (as of FY 2018)
Public Debt Rules		
Public Debt to GDP	60%	40.8%
Government Debt to Forecast Annual Revenue	35%	19.6%*
Public Debt in Foreign Currency to Total Public Debt	10%	3.8%
Public Debt in Foreign Currency to Exports Income	5%	0.6%
Annual Budget Allocation Rules		
Budget for Capital Investment	Greater than 20% of the annual budget and no less than the FY budget deficit	22.2% of the annual budget and greater than FY budget deficit
Central Budget Expenditures and Emergency Reserve items as share of annual budget	2.0-3.5%	3.2%
Budget for Debt Repayment as share of annual budget	2.5-3.5%	2.9%
Debt Contingency across fiscal years	Not more than 10%	8.4%

Forecasted level

Source: Public Debt Management Office (PDMO) and Fiscal Policy Office (FPO), Ministry of Finance.

However, some of the changes introduced in the FRA could have unintended consequences that must be carefully managed. As noted above, Thailand's revenue-to-GDP ratio has declined in recent years, but the fiscal rules focus on the aggregate balance, expenditure control, and expenditure composition. As noted in a recent review of the international experience with fiscal rules,<sup>24</sup> relying on fiscal rules that focus on the aggregate balance and expenditure indicators can undermine incentives for revenue mobilization. In addition, public investment represents a modest share of the budget despite Thailand's pressing infrastructure needs (Table 5). Safeguarding the public investment budget through a fiscal rule is a positive step. However, ensuring that the budget is executed efficiently and that investments are appropriately prioritized will require further measures to improve public investment management, from upstream appraisal to planning, budgeting, and monitoring and evaluation.<sup>25</sup>

Table 5: Annual budget allocations

(Percent of Annual Budget)<sup>26</sup>

	1995-1998	1999-2009	2010-2015	2015-2020
Recurrent Budget	59.5%	72.9%	79.4%	74.6%
Capital Investment	37.0%	24.3%	16.9%	21.7%
Debt Repayment	3.6%	2.6%	2.1%	2.6%
Loss Compensation	0.0%	0.2%	1.6%	1.1%

Source: Fiscal Policy Office (FPO), Ministry of Finance

### Thailand has also enacted laws to promote economic

The act enables local saving groups that meet certain requirements to register as community-based financial institutions (CFBIs), bringing them into the formal sector. The CBFI network will be promoted and supervised by the Ministry of Finance. The

<sup>24</sup> "How to Select Fiscal Rules: A Primer", Fiscal Affairs Department, International Monetary Fund, 2019.

<https://www.imf.org/en/Publications/Fiscal-Affairs-Department-How-To-Notes/Issues/2018/03/15/How-to-Select-Fiscal-Rules-A-Primer-45552>.

<sup>25</sup> See "Thailand Economic Monitor: Aging Society and Economy," June 2016, World Bank.

<https://openknowledge.worldbank.org/handle/10986/24940>.

<sup>26</sup> Public investments are funded from various additional sources (i.e. SOE revenue, loans, and PPPs) which are not included in this table.

### **inclusion, including the Community-Based Financial Institutions Act.**

establishment and formalization of CFBIs is expected to expand financial access and enhance the quality of financial services, reducing the share of informal debt and lowering transaction costs. CFBIs will also support the development of community businesses and community welfare funds, and the National Savings Fund (NSF) will distribute its product through the network to increase the retirement savings rate. The Bank of Agriculture and Agricultural Cooperatives (BAAC) and Government Savings Bank (GSB) have been designated as incubator banks that will support the development of the CFBIs by providing them with accounting software, management experience, and several comprehensive finance initiatives (e.g., the land-bank initiative and the micro-insurance initiative). Further policy reforms to increase financial inclusion in Thailand are discussed in Part 2.

### **Fintech solutions could accelerate financial inclusion and mitigate inequality.**

The fintech sector is changing the way individuals and firms save, borrow, and spend. In many countries, including Kenya, China, and India, fintech innovations have dramatically expanded financial access and brought new economic opportunities to the previously unbanked. Thailand is already a regional fintech leader, and further gains in digital financial inclusion could accelerate progress toward its social and economic development objectives. Part 2 of the TEM situates Thailand's fintech sector in the international context and discusses policy options to foster its growth and diversification.

## **iv Policy recommendations**

### **Continuity in the implementation of policies and programs to promote inclusive growth will be critical to their success.**

Thailand's 20-Year National Strategy aims to enable the country to achieve high-income status through inclusive growth. However, following a long period of sustained improvements in both poverty and inequality indicators, progress on both has plateaued.<sup>27</sup> To achieve high-income status without exacerbating inequality, the authorities must continue investing in public infrastructure projects to connect lagging regions while implementing reforms designed to expand education services, promote financial access for low-income households and SMEs, and strengthen social safety nets for informal workers and the elderly.

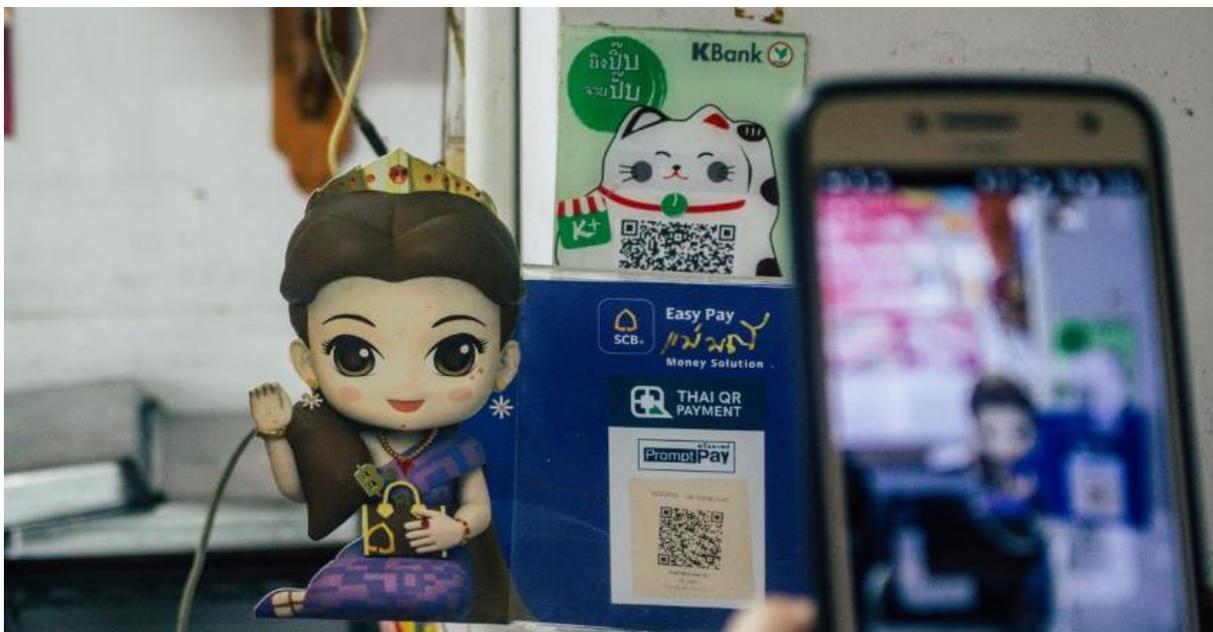
### **Improving the implementation of the capital budget is key to support growth.**

It is important to provide policy continuity, and improve the disbursement of the capital budget to support economic growth over the near term, as public investment has positive spillovers on private investment. It is also key to manage contingent liabilities linked to the large infrastructure project for the Eastern Economic Corridor (EEC), and to protect the tax base from unproductive tax incentives to encourage private investment.

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<sup>27</sup> See "Thailand Economic Monitor, January 2019: Inequality, Opportunity and Human Capital", World Bank. <https://openknowledge.worldbank.org/handle/10986/31240>.

## Part 2. Harnessing Fintech for Financial Inclusion



### 1. Introduction

**This section analyzes the potential impact of fintech on economic inclusion in Thailand.**

An overview of recent developments in the global fintech sector highlights multiple ways in which fintech could be leveraged to expand economic inclusion, given a conducive policy environment (Box 3). While the following section is not an empirical study of the relationship between fintech and economic inclusion, it draws associative inferences between the two, which provide the basis for identifying priority policy issues for consideration by the Thai authorities. However, the TEM deliberately avoids making detailed policy recommendations, which should be rooted in a dedicated empirical analysis.

**Financial access is widespread in Thailand, but fintech innovations could enhance the quality**

At the national level, rates of access to formal financial services<sup>28</sup> range from 82 percent<sup>29</sup> to 97 percent.<sup>30</sup> However, Thailand performs less well on measures of the utilization<sup>31</sup> and quality<sup>32</sup> of financial services. Recent fintech innovations could play an important role in filling these gaps.

<sup>28</sup> Access measures the availability of financial services through supply-side indicators such as the penetration of bank branches or point-of-sale devices in rural areas, as well as demand-side factors such as cost and information constraints.

<sup>29</sup> See the 2017 Global Findex Database. <https://globalfindex.worldbank.org/>.

<sup>30</sup> See the 2016 BOT Financial Access Survey of Thai Households.

<sup>31</sup> Utilization measures how clients use financial services through metrics such as average savings balances, the number of transactions per account, the number of electronic payments made, etc.

<sup>32</sup> Quality measures how well financial products and services match clients' needs through indicators including the range of options available to customers and clients' awareness and understanding of financial products.

## and utilization of financial services.

**The Ministry of Finance has demonstrated a keen interest in leveraging the potential of fintech innovations to advance economic inclusion.**<sup>33</sup>

In light of the 20-year National Strategy's focus on inclusive growth, the Government of Thailand enacted reforms to bring SMEs and lower income households into the formal financial sector. Examples include the SME tax amnesty, the National Savings Fund--a pension fund for informal workers, smart welfare cards for the poor, the Community-Based Financial Institutions (CBFI) Act and a new draft Cooperatives Act.<sup>34</sup> Given how digitization has led to innovative financial technologies at low cost in many emerging markets, the topic of using fintech to promote financial inclusion in Thailand became of considerable interest.<sup>35</sup>

### Box 3: Definitions of Fintech and Related Terms

Because some of the terms used in this section have no standard definition in the literature, this box attempts to clarify how the following terms are used in the analysis: fintech, digital financial services, digital payments, and financial institutions.

**Fintech.** Definitions of fintech range from the application of technology to the provision of financial services. The World Bank's 2016 East Asia and Pacific Economic Update defines fintech as "the innovative application of technology to financial services provision through, for example, big data and analytics, online platforms, mobile apps, and the use of other ICT tools such as GPS."<sup>36</sup> The analysis presented in this section relies on the definition used by the Financial Stability Board (FSB), which is both adequately comprehensive and appropriate to the focus of the TEM. According to the FSB, "fintech is defined as technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services."<sup>37</sup>

**Digital Financial Services.** As with fintech, definitions of digital financial services (DFS) differ across countries and organizations. The Thai government defines the term as "the provision of electronic banking services via the Internet... whereby customers can perform transactions by themselves,"<sup>38</sup> whereas the Indonesian government defines it as payment or financial services "conducted in cooperation with third parties and using tools and devices that are based on mobile technology or web-based [technology] in the framework of financial inclusion."<sup>39</sup> This analysis uses the definition provided by the Alliance for Financial Inclusion (AFI):<sup>40</sup> "DFS is the range of financial services accessed and delivered through digital channels. Digital channels include the Internet, mobile phones (both smartphones and digital feature phones), automated teller machines, point-of-sale terminals, and near field communication enabled devices, chips, and any other digital system."

**Digital Payment.** This analysis defines digital or electronic payment as any payment that does not require the use of paper-based instruments such as cash or checks.

**Financial Institution.** For the purposes of this analysis, "financial institution" is broadly defined to include any institution that is part of a country's financial system, including commercial banks, insurance companies, mutual funds, savings cooperatives, micro-finance institutions, etc.

<sup>33</sup> The Ministry of Finance has asked the World Bank to undertake an in-depth assessment of Thailand's fintech and provide policy recommendations for advancing financial inclusion through fintech innovations.

<sup>34</sup> See recent policy developments section in part 1 for a discussion of some of these reforms.

<sup>35</sup> The Ministry of Finance has asked the World Bank to undertake a high-level assessment of where Thailand stands in this area and what the Government can do to advance financial inclusion by leveraging the fintech innovations.

<sup>36</sup> World Bank, (2016). East Asia and Pacific Economic Update, October 2016.

<sup>37</sup> <https://www.fsb.org/work-of-the-fsb/policy-development/additional-policy-areas/monitoring-of-fintech/>.

<sup>38</sup> Thailand regulatory survey, quoting Notification of the Bank of Thailand (BOT) Sor. Nor. Sor. 26/2008.

<sup>39</sup> Indonesia regulatory survey, quoting Regulation No. 16/8/PBI/2014 and BI Circular Letter No. 18/22/DKSP on Digital Financial Services.

<sup>40</sup> World Bank Group and ASEAN, "Advancing Digital Financial Inclusion in ASEAN: Policy and Regulatory Enablers", (2019). <https://openknowledge.worldbank.org/handle/10986/31392>.



## 2. The Recent Development and Current Status of Thailand's Financial Sector

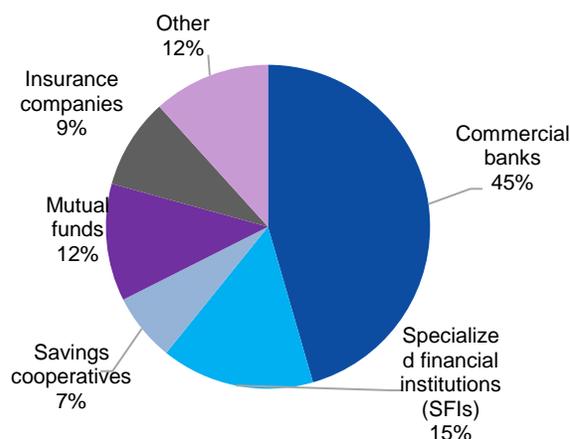
### i The Thai financial sector is stable overall, but household debt levels are high and rising.

**Thailand's financial system has come a long way in the 20 years since the Asian Financial Crisis.**

In Q3 2018, commercial banks reported assets of US\$587 billion, equal to approximately 120 percent of GDP. Commercial bank assets account for a 45 percent plurality of financial system assets (Figure 23). The banking sector consists of 15 domestic commercial banks and 15 foreign commercial banks with domestic branches or subsidiaries (Figures 23 and Figure 24). Along with six specialized financial institutions (SFIs) and 1,419 savings cooperatives, commercial banks provide the largest share of loans to the private sector, including corporate and household lending. The private loan portfolio grew from 107 percent of GDP in 2011 to 130 percent in 2018 and is relatively well diversified. Total outstanding credit is distributed among the following sectors: financial and insurance (23 percent), manufacturing (15 percent), consumers (14 percent), retail mortgages (14 percent), and trade (13 percent). As of March 2019, bank deposits comprised 71 percent of total liabilities and banking-system equity, while debt and interbank lending represented 10 percent.

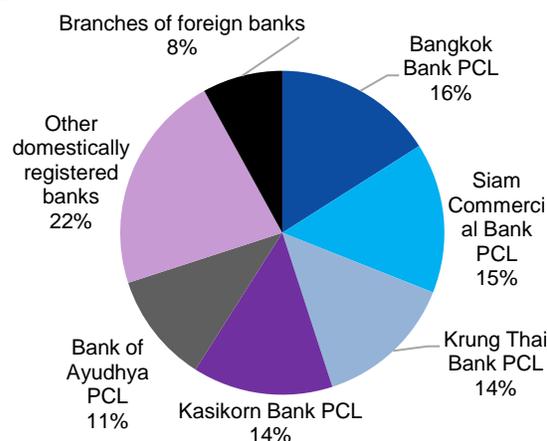
**Figure 23: Structure of the Thai Financial System**

(% of total assets), 2018



**Figure 24: Structure of the Thai Banking Sector**

(percent of total assets), Dec 2018



Source: Bank of Thailand Financial Stability Report 2018

**Thailand's financial system is sound.**

As described in the Part 1, the Thai financial system faces no major threats to its stability. The banking sector is well capitalized and able to withstand simulated shocks. The capital adequacy-ratio stood at 18.24 percent in Q1 2019. Thai banks have complied with Basel III capital requirements since 2013 and have been asked to maintain a minimum liquidity coverage ratio of 60 percent since 2016, which will gradually rise to 100 percent in 2020.

**However, rapid credit growth in recent years has**

Between 2010 and 2012, annual credit growth averaged 14 percent. While the pace of credit growth has slowed to an average of 5 percent per year since 2014, the private-sector-credit-to-GDP ratio reached 114 percent in 2017. Household debt equaled 78 percent of GDP in Q3 2018 and is the main component of private-sector debt. In its



**increased private-sector debt.**

2018 Financial Stability Report, the BOT identified high household debt levels as one of four key risks to financial stability. An increase in unemployment or rising interest rates could inhibit repayment by SMEs and certain households. SMEs with weak performance indicators also face asset-quality issues and account for a significant share of unsecured retail loans.

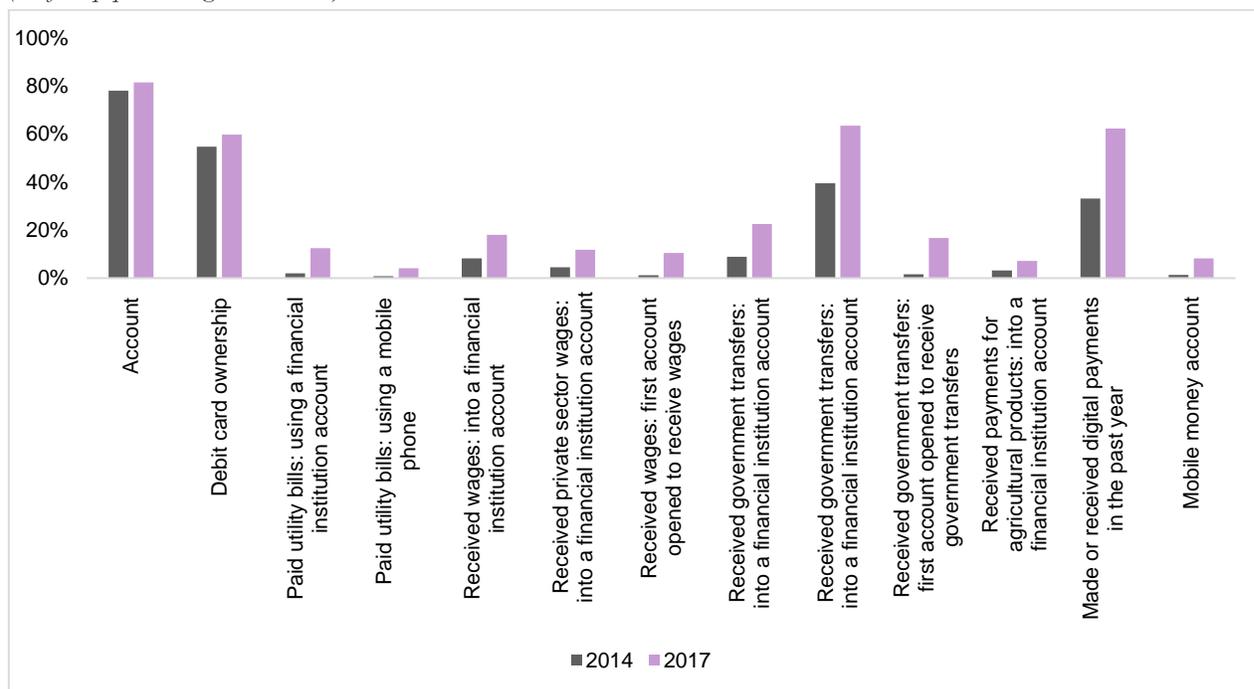
**ii Thailand performs well on measures of financial inclusion.**

**Financial access is widespread, and the gender gap is narrow.<sup>41</sup>**

The share of adults with an account at a financial institution rose from 73 percent in 2011 to 78 percent in 2014 and reached 82 percent in 2017. Thailand is close to achieving gender parity in financial access, as 84 percent of men and 80 percent of women have an account at a financial institution. In recent years, Thailand has registered significant improvements across multiple indicators of financial and digital financial inclusion (Figure 25). Between 2014 and 2017, the share of Thai adults who reported opening an account at a financial institution to receive private-sector wages rose from 1 percent to 10 percent, while the share that made or received digital payments nearly doubled from 33 percent to 62 percent, and the share that had a mobile-money account increased from 1 percent to 8 percent.

**Figure 25: Selected Indicators of Financial and Digital Financial Inclusion in Thailand**

(% of the population age 15 and over)



Source: World Bank Global Findex Database 2017

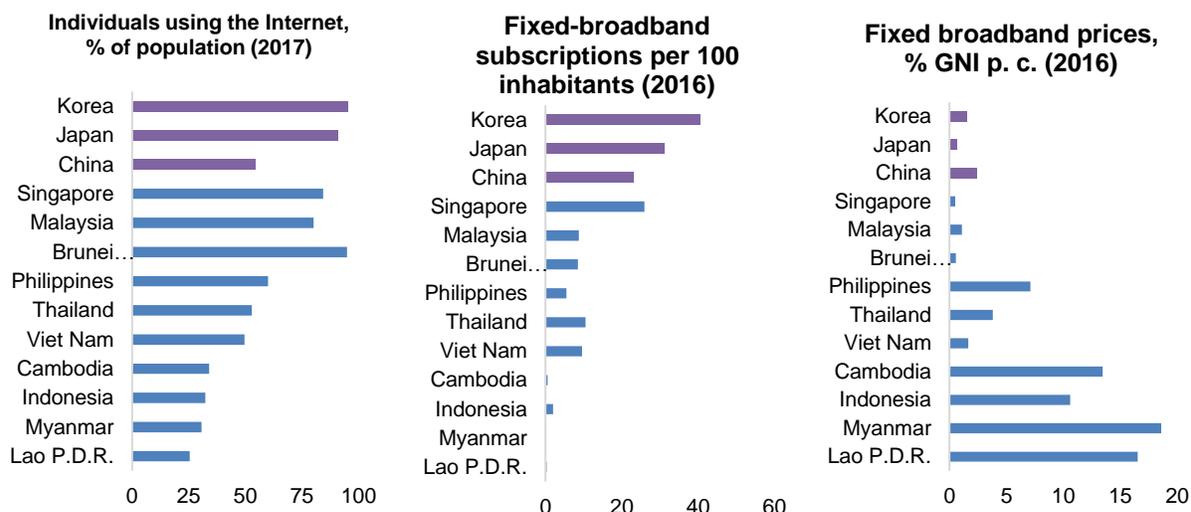
<sup>41</sup> Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. 2018. *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. Washington, DC: World Bank. [www.worldbank.org/globalfindex](http://www.worldbank.org/globalfindex).



**Nevertheless, large gaps remain in digital financial access, utilization, and infrastructure.**

In 2018, less than 19 percent of Thai adults reported shopping or paying bills online, far below the regional average of 39 percent and the middle-income-country average of 38 percent. Moreover, a recent IMF analysis<sup>42</sup> found large disparities in internet and broadband penetration in Thailand and across the ASEAN region. Only about half of Thailand’s population uses the internet, and just over 10 percent have fixed broadband subscriptions (Figure 26). Thailand’s indicators of financial and digital financial inclusion are relatively strong by regional standards but still well behind those of the top performers in EAP (Box 4).

**Figure 26: The Digital Divide, Thailand and Selected Comparator Countries**

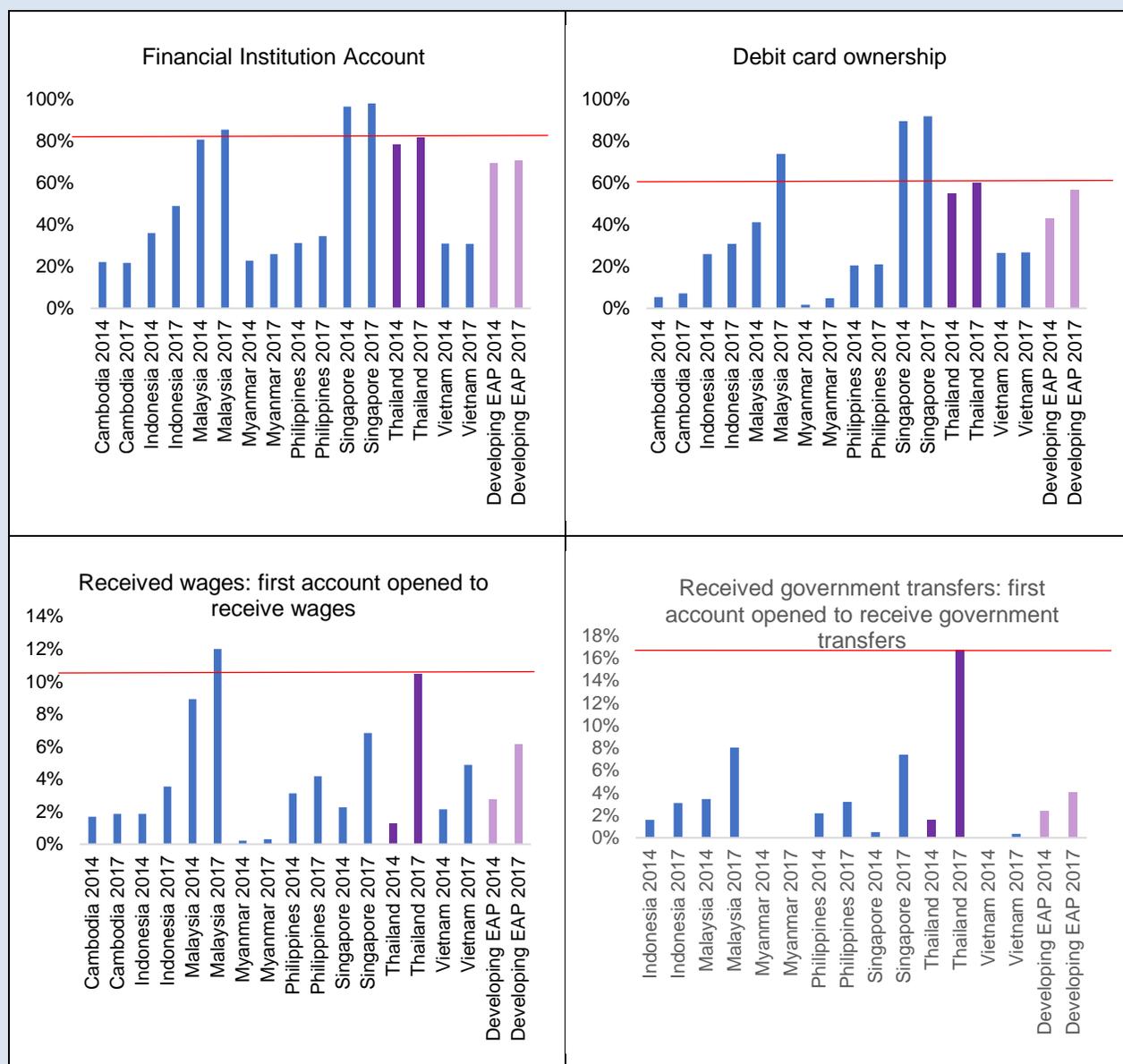


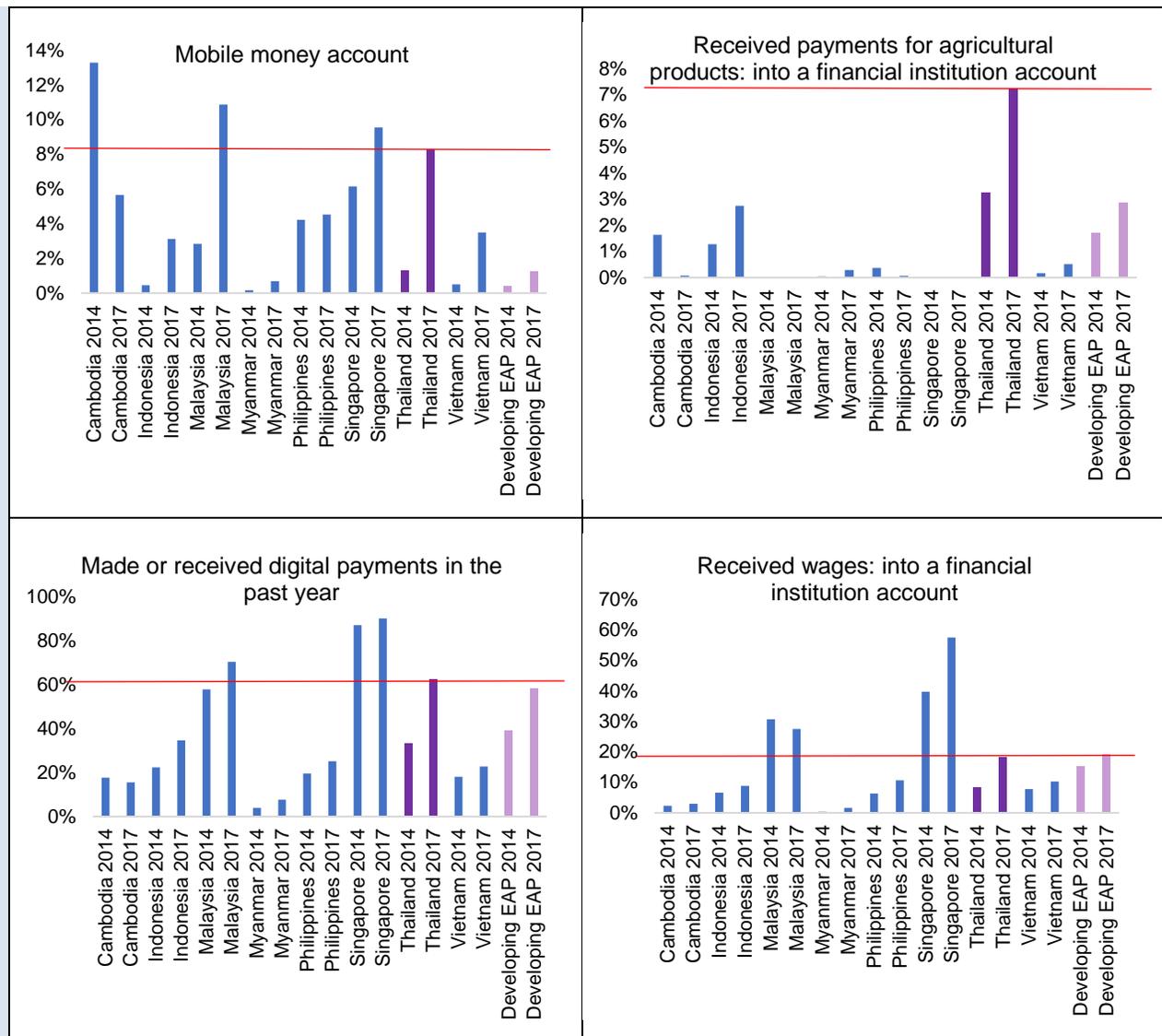
Source: Measuring the Information Society Report 2017, International Telecommunication Union

<sup>42</sup> <https://www.imf.org/external/pubs/ft/fandd/2018/09/asean-digital-economy-infographic-feng.htm>.

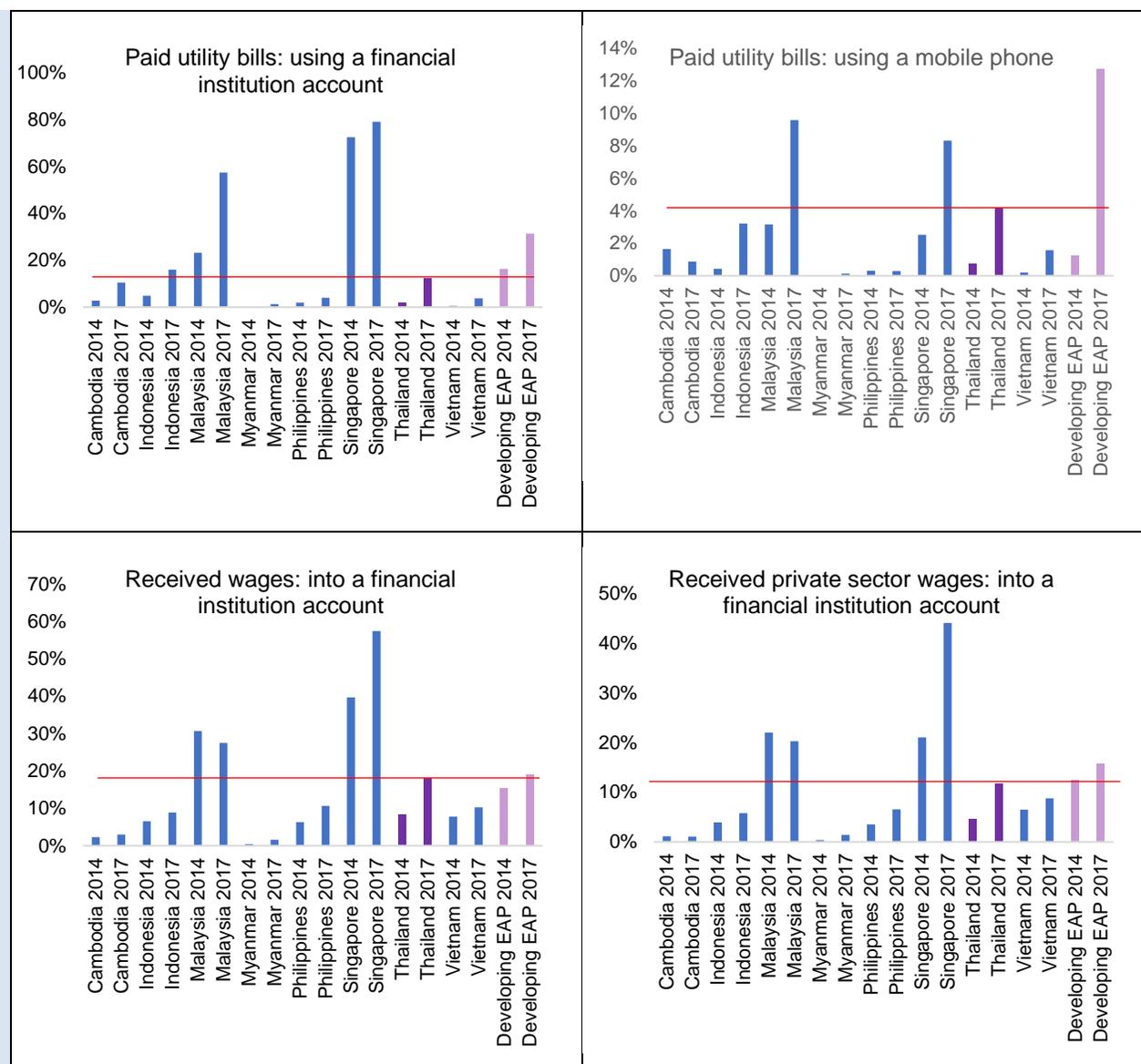
**Box 4: Financial and Digital Financial Inclusion in Thailand and the East Asia and Pacific (EAP) Region**

**Thailand outperforms many of its EAP peers on multiple dimensions of financial inclusion.** In 2017, Thailand exceeded the average for the developing EAP region on several key financial-access indicators, including: (i) the share of adults with an account at a financial institution (82 percent versus 71 percent); (ii) the share with a debit card (60 percent versus 57 percent); (iii) the share that opened a financial institution account to receive wages (10 percent versus 6 percent); (iv) the share that opened a financial institution account to receive public transfers (17 percent versus 4 percent); (v) the share with a mobile-money account (8 percent versus 1 percent); (vi) the share that received payments for agricultural products into financial institution account (7 percent versus 3 percent); and (vii) the share that made or received payments into a financial institution account (62 percent versus 58 percent).





**While Thailand performs well overall, there is still considerable scope for progress in several key areas of financial and digital financial inclusion.** In 2017, Thailand continued to lag the average for developing EAP on several important indicators, including: (i) the share of adults that used a financial institution account to pay utility bills (10 percent versus 30 percent) and (ii) the share that used a mobile phone to pay utility bills (4 percent versus 13 percent). In addition, while the share of adults that received wages in a financial institution account was only slightly below the average for developing EAP (18 percent versus 19 percent), the share that received private-sector wages in a financial institution account was significantly below the average (12 percent versus 16 percent).



Source: World Bank Global Findex Database 2017

Note: Indicators refer to the percentage of people of age 15 or above

The government’s welfare smartcard<sup>43</sup> and basic banking account (BBA) initiatives are designed to encourage the use of formal and/or online financial services. The welfare smartcard is issued by Krungthai Bank (KTB) to eligible recipients. It functions like a debit card: the government transfers funds to the card, which the recipient can either withdraw in cash or use to make purchases directly from merchants that accept the card. The BBA is a simple deposit account available to low-income earners or people ages 65 and older. The BBA enables accountholders to execute basic financial transactions at a lower cost than an ordinary deposit account would entail. The BBA is offered by 16 banks, including 14 commercial banks and two state-owned banks, GSB and BAAC.

<sup>43</sup> <https://www.thaipbsworld.com/3-1-million-more-poor-people-to-receive-welfare-cards/>;  
<http://www.nationmultimedia.com/detail/national/30362311>



**The international experience shows that financial inclusion can help reduce inequality.**

While financial access is relatively widespread in Thailand, digital financial services have considerable untapped potential to expand financial inclusion. As global research shows an inverse correlation between financial inclusion and economic inequality, leveraging the full potential of digital financial services could help Thailand restart progress on reducing inequality. For example, a recent IMF report found that closing the regional gap with Singapore’s financial-inclusion indicators could reduce each country’s Gini coefficient by 10-20 percentage points, depending on its initial levels of financial inclusion and inequality.<sup>44</sup>

**iii. Broadening the range of digital financial services available in Thailand could accelerate gains in financial inclusion.**

**Beyond expanding access, fintech can help boost the quality and utilization of financial services.**

Thailand’s rapid adoption of digital financial services has likely contributed to its high levels of financial access, but much more could be done to leverage the potential of fintech innovations. By reducing transaction costs and offering easy access to new services, fostering the growth of the fintech subsector could further enhance the quality and increase the utilization of financial services.

**Fintech is improving efficiency among financial institutions and in the retail sector.**

The use of digital financial services has expanded rapidly since 2015. The number of mobile and internet banking transactions increased 76 percent, year-on-year, in 2017, driven by advances in mobile banking. Meanwhile, the number of bank branches has declined since 2015, and the system-cost-to-income ratio fell over the period.<sup>45</sup> Mobile banking initiatives are targeting the retail SME segment. Traditional retailers are also using “quick response” (QR) codes to accept payments, alleviating challenges with liquidity management. Sellers are often discouraging the use of electronic means of paying for goods and services, as cash remains the main mode of settling transactions, but acceptance of electronic payments is increasing.<sup>46</sup>

**A competitive digital financial services market is encouraging improvements in product design.**

Banks are using financial and behavior data to improve their digital offerings. Bank apps allowing balance inquiries have reduced ATM transactions by 40 percent. Some banks have eliminated fees for electronic transfers, bill payments, and top-up services. The rise of these services, and other fintech solutions from nonbank institutions such as Alipay, are increasing pressure to innovate across the financial sector.<sup>47</sup>

**Despite their rapid expansion, digital financial services**

On the demand side, a lack of trust in the security of digital finance, a preference for human interaction, a lack of familiarity with the technology, and the limited quality of internet infrastructure inhibit the uptake of digital financial services.<sup>48</sup> On the supply side, 67 percent of fintech firms report a lack of venture capital in Thailand, compared to just 23 percent in Singapore and 37 percent in Indonesia. Fintech firms also cite

<sup>44</sup> IMF Asia and Pacific Department, “Financial Inclusion in Asia-Pacific” (2018), <https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2018/09/18/Financial-Inclusion-in-Asia-Pacific-46115>.

<sup>45</sup> See <https://www.thailand-business-news.com/banking/68086-thailands-increasing-mobile-internet-banking-payments-transactions-credit-positive-banks.html>.

<sup>46</sup> <https://www.bangkokpost.com/news/special-reports/1450247/the-dawn-of-digital-banking/>

<sup>47</sup> Akamai, 2017 ; <https://www.bangkokpost.com/news/special-reports/1450247/the-dawn-of-digital-banking>.

<sup>48</sup> <https://www.bangkokpost.com/news/special-reports/1450247/the-dawn-of-digital-banking>.



face multiple challenges.

inadequate public funding, a shortage of skilled workers, and regulatory obstacles as key constraints on their expansion.<sup>49</sup>

#### iv. Financial technology enabling environment and financial inclusion

**As discussed earlier, Thailand's financial inclusion is strong by access, but can advance further in terms of quality and usage.**

The World Bank's Global Findex survey shows that Thailand has a high level of financial inclusion both in the ASEAN and global context when measured by access, but quality and usage of financial inclusion need further improvement. Moreover, a Bank of Thailand household survey shows an even higher level of the adult population that has access to financial services – estimated to be 97 percent in 2016.<sup>50</sup> However, there are still gaps in the usage of technology driven financial services when compared to other countries in the region and other middle-income countries. More remains to be done to deepen access and usage of quality and affordable financial services. Dr. Veerathai Santiprabhob, the Governor of the BOT, has stated that, “Financial services need to be efficient and productive in order to raise the productivity of the economy as a whole,” but productivity is not enough if financial services do not reach most of the population. Furthermore, the Governor posits that “the public at large needs to be able to have access to a wide range of affordable financial services so that they can unlock their potential and have lifelong financial security.”<sup>51</sup>

**Thus, harnessing and growing the use of financial technology to deepen the quality of access to financial services by the adult population in Thailand will be a key factor**

One way to increase the quality and usage of financial services is by increasing the use of mobile phones in the provision of financial services such as accounts, money transfer and receiving of wages. Moreover, there are private and public sector initiatives to foster an environment in which fintech innovation enables the expansion of quality broad-based usage of financial services in Thailand. Before describing the government initiatives, it is important to consider the development of fintech initiatives by the private sector in Thailand. We first provide an overview of the fintech landscape in Thailand and then describe the public sector initiatives undertaken by various government agencies including establishing of regulatory sandboxes for testing new technology driven business models.

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<sup>49</sup> EY 2018.

<sup>50</sup> Interviews with Bank of Thailand Staff in June and November 2018 and April 2019; and the Household Survey (2016), [https://www.bot.or.th/English/FinancialInstitutions/Highlights/FSMP2/2016\\_percent20Financial\\_percent20Access\\_percent20Survey\\_percent20Final.pdf](https://www.bot.or.th/English/FinancialInstitutions/Highlights/FSMP2/2016_percent20Financial_percent20Access_percent20Survey_percent20Final.pdf)

<sup>51</sup> Milken Institute, *Framing the Issues: The Future of Finance in Thailand* (July 2018), p3 (Governor's address to a conference on the future of finance in Thailand)



v. Thailand's fintech sector is expanding rapidly, but it remains relatively undiversified.

**The Thai fintech sector is vibrant and expanding.**

The number of fintech companies in Thailand increased from 42 in 2015 to 169 in 2018.<sup>52</sup> In addition to startups, fintech initiatives have been launched by financial institutions, corporations, regulators such as the Office of Insurance Commission and Electronic Transactions Development Agency, venture capital firms, law firms, technology providers, academic institutions, and other entities in both the public and private sectors.<sup>53</sup> An estimated 61 startups operate in fields such as retail investments, business tools, crowdfunding, insurance, peer-to-peer lending, and electronic payments, among others (Figure 27).<sup>54</sup> These startups are organized through the Thai Fintech Association, which strives to support the expansion of financial services, promote fair competition and transparency, lower financial-services costs, and enhance the ability of Thai fintech startups to compete and expand in the global market.<sup>55</sup> Key players in the fintech sector includes banks and e-money issuers, which include regulated non-deposit-taking institutions. As of mid-2017, 13 banks provided e-money services, and 22 non-banks were licensed as e-money providers.<sup>56</sup>

**Global investment in fintech has grown exponentially over the past decade.**

Worldwide, private investment in fintech increased from less than US\$2 billion in 2010 to about US\$19 billion in 2015.<sup>57</sup> Among ASEAN member states, fintech is still in its early stages but is rapidly expanding.<sup>58</sup> Singapore has the largest share of fintech companies investing in blockchain and cryptocurrency, lending, retail, personal finance, e-payment systems, and insurance, followed by Thailand and Indonesia (Figure 28). Total investment in the ASEAN fintech market shot from US\$252 million in 2016 to US\$366 million in 2017, and the e-payment subsector vs the main target of investment.<sup>59</sup> In Thailand, 43 percent of investment focuses on e-payment services.

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<sup>52</sup> Interview with and data from Thai Fintech Association, June 18<sup>th</sup>, 2018 and November 9<sup>th</sup>, 2018; Thai Fintech Association 2019 presentation.

<sup>53</sup> Based on the information from the fintech Association, the Office of Insurance Commission is the only regulator that is a member of the Association.

<sup>54</sup> See <http://thai fintech.org/>.

<sup>55</sup> See <http://thai fintech.org/>.

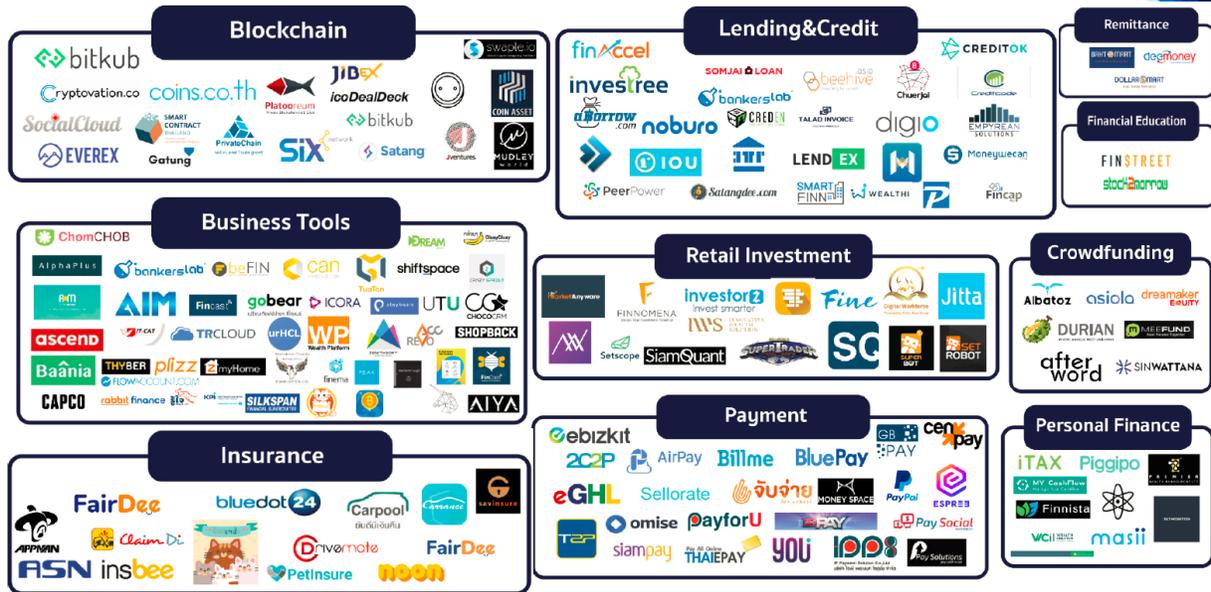
<sup>56</sup> See “Advancing Digital Financial Inclusion in ASEAN: Policy and Regulatory Enables”, World Bank Group and ASEAN (2019). <https://openknowledge.worldbank.org/handle/10986/31392>.

<sup>57</sup> CB Insights & Citi (2018).

<sup>58</sup> Fintech in Emerging ASEAN (2017), World Bank 2018 “Advancing Digital Financial Inclusion in ASEAN”.

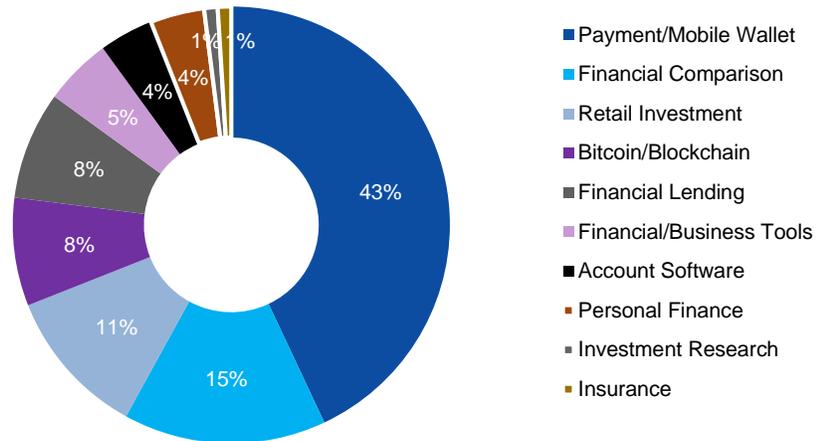
<sup>59</sup> ASEAN fintech Census 2018.

Figure 27: Fintech Companies in Thailand by Business Line



Source: Thai Fintech Association 2019

Figure 28: The Composition of the ASEAN Fintech Sector



Source: BBVA Research, Techsauce

**Large commercial banks dominate the Thai fintech sector.**

Large commercial banks are involved in fintech directly, through their own in-house fintech initiatives, and indirectly, via investments in fintech startups and venture fund subsidiaries. Some fintech initiatives could increase financial institutions' costs in the short term, as they update their technology and begin complying with additional regulatory requirements (Box 5). However, over the medium term, fintech initiatives are expected to decrease costs for financial institutions by expanding the use of digital

channels and creating business opportunities through venture capital funds.<sup>60</sup> Over time, cost reductions and service innovations will create greater value for consumers.

**Box 5: Main Features – Thailand Fintech sector: Nascent but emerging**

**Number of fintech firms:** ~169

**Investment in 2017:** US\$ 12 million (-40 percent)

**Key products:** Payments, blockchain/ICO, retail investment, lending and credit, insurance

**Connectivity:** 21 percent of population online, 38 percent smartphone penetration

**Consumer behavior:** 60 percent+ of digital buyers are reluctant to share their financial information online

Source: Thai Fintech Association interviews

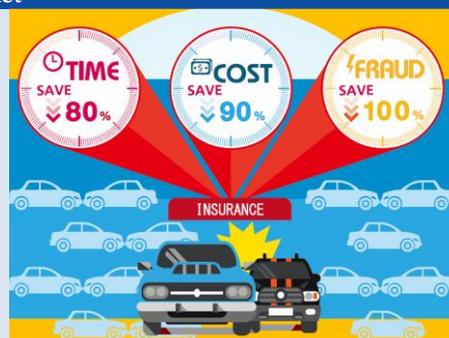
**Fintech innovations are being adopted outside the banking industry.**

Similar innovations are being embraced across a wide range of industries in the Thai fintech space (Figure 27). This trend is illustrated by two successful examples from the insurance and payment sectors. ClaimDi is an insurance company that uses a mobile application to process claims quickly and at low cost, while mitigating the risk of fraud (Box 6).<sup>61</sup> OmiseGo is an innovative fintech startup that facilitates international remittance transfers and enables financial inclusion through its decentralized OmiseGo network (Box 7).

**Box 6: ClaimDi and the Use of Technology in the Insurance Market**



ClaimDI is a new mobile application that facilitates communication between drivers and their insurance companies, creating a faster, easier claims process that is less vulnerable to fraud. The app ensures that a claims adjuster is dispatched within 20 seconds of ClaimDi receiving a call, arrives at the accident location within eight minutes, and processes a claim within five minutes. In addition, car repairs are also undertaken within 24 hours, and often on the same day that the accident took place.



**Flowchart of the ClaimDi Claims Process**



ClaimDi is achieving these impressive response and turnaround times with the help of 18,000 claims adjustors who use motorbikes to get to the accident location, 66 call-center agents, and 30 data-processing agents. The

<sup>60</sup> Tan Ivan and Seth Deepali, 2018

<sup>61</sup> Interview with ClaimDi founder and company presentation, June 15<sup>th</sup>, 2018.

ClaimDi app has been downloaded 1.5 million times and has 700,000 active users in Thailand. Leveraging technology has enabled ClaimDi to reduce the total claims-processing time by 80 percent and the total cost by 90 percent while effectively eliminating fraudulent claims.

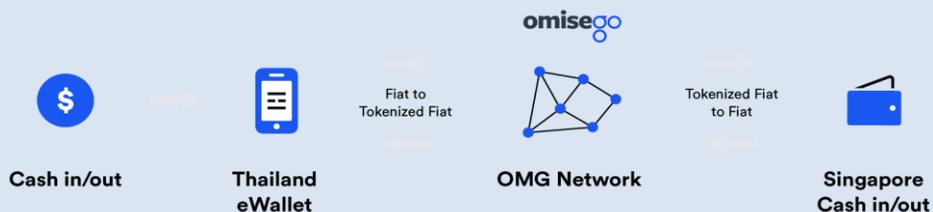
Source: interview with ClaimDI founder and company presentation, June 15<sup>th</sup>, 2018 and April 18<sup>th</sup>, 2019

**Box 7: Omise Holdings and the Use of Technology in Payments Systems**

**Omise Holdings is bridging the gap between legacy financial systems and innovative technologies such as blockchain to expand the accessibility and availability of financial services, strengthen digital security, and enable interoperability between financial platforms.** Omise Holdings uses the public, decentralized OMG network, which was developed by OmiseGO and is based on the Ethereum blockchain. The OMG network enables real-time, transparent, peer-to-peer transactions across locations, asset classes, and applications.



Vertically integrated business, including payment gateways such as Omise and trading exchanges such as GO.Exchange, connect to the OMG network. Meanwhile, customers can access financial services on the network via specialized applications. The OMG network has proven especially valuable as a means for transferring international remittances, which it does through a simple four-step process: (i) the customer transfers cash into an “e-wallet;” (ii) fiat money is exchanged for tokenized fiat/cryptocurrency using the decentralized exchange; (iii) the tokenized fiat/cryptocurrency is sent across the OMG network; and (iv) the end recipient receives the funds in real time.



**The regional digital financial sector is growing rapidly across.** According to a 2018 report by Google and Temasek, “the Southeast Asian internet economy has reached US\$72 billion in gross merchandise value (GMV) in 2018 across online travel, e-commerce, online media, and ride hailing. Growing at 37 percent from a year earlier, it has accelerated beyond the 32 percent compounded annual growth rate (CAGR) that we recorded between 2015 and 2018, therefore hitting an inflection point.” By 2025, the sector’s GMV is projected to reach US\$240 billion across online travel, online media, ride hailing and e-commerce. In this context, Omise’s open financial ecosystem could greatly facilitate economic inclusion.

Source: Interview with OmiseGo founder and company presentation, June 18<sup>th</sup>, 2018; OmiseGO 2019



**vi. The Thai government is actively supporting the development of the fintech sector.**

**The private sector through banks, networks, or partnerships is also contributing to the development of the fintech sector.**

For example, Kasikorn Bank Public Co., Ltd (KBank) in 2017, (Thailand's largest bank) launched a venture capital fund focused on fintech developments, with the aim to invest in startups in Southeast Asia, China and Europe as well as other venture funds. It plans to invest in as many as five companies on annual basis, and its first investment was in FlowAccount Co Ltd, a domestic startup offering cloud computing services for small-and-medium enterprises.<sup>62</sup> Also, in March 2017, Bangkok Bank InnoHub partnered with Nest to support its international fintech program. The program's aim was to provide local and international fintech companies the opportunity to be validated and scale its operations in a short period of time.<sup>63</sup>

**The ASEAN Financial Innovation Network – AFIN, complements these Thailand-specific initiatives.**

The Monetary Authority of Singapore (MAS) and the International Finance Corporation (IFC) launched AFIN in November 2017, supported by the Japanese government. This network, managed by the ASEAN Bankers Association, intends to facilitate broader adoption of fintech innovation and development, as well as to enhance economic integration in the region (Lee 2017). It creates a collaborative network of banks, fintech developers, and nonbanks to facilitate the development of common approaches to business, regulatory, and technical challenges. It will also develop an industry sandbox in which participants can integrate and test applications via a cloud-based structure (Mortimer-Schutts 2017).<sup>64</sup>

**vii. Public sector initiatives**

**The government has established a range of initiatives to encourage the digitization of the economy.**

The government's support encompasses hard infrastructure, digital civil-society development, efforts to promote the digital economy, soft infrastructure, and service infrastructure. As the private sector continues to drive the growth of fintech activities in Thailand, the government has adopted a collaborative approach to guide the creation of the legal and institutional framework for infrastructure development and the expansion of the digital economy.

**Thailand's Electronic Transactions Development Agency (ETDA) is a key element of the government's support to the fintech sector.**

The ETDA is in charge of establishing a legal and institutional framework for the digital economy and promoting the development of the necessary infrastructure. The ETDA provides information on government agencies implementing related initiatives such as e-invoicing and e-tax services, and it supports the collaboration between these agencies. The ETDA promotes the standardization of the rules on which the digital economy operates, and it facilitates e-commerce development by maintaining an online complaint center and an online dispute center designed to advise firms and individuals experiencing online trading problems. The ETDA also responds to cyberthreats.<sup>65</sup>

**The BOT is committed to maintaining a stable financial**

The BOT aims to promote competition, innovation, and the use of digital financial services to increase economic efficiency and reduce transaction costs by implementing policy directives, regulations, and work processes that support the development and

<sup>62</sup> <http://www.eiu.com/industry/article/815591665/thailands-kbank-launches-us295m-fintech-fund/2017-0-9>.

<sup>63</sup> [http://www.bangkokbank.com/BangkokBankThai/Documents/Site\\_percent20Documents/AboutUs/PR\\_16Mar2017\\_En.pdf](http://www.bangkokbank.com/BangkokBankThai/Documents/Site_percent20Documents/AboutUs/PR_16Mar2017_En.pdf).

<sup>64</sup> See also the website of the ASEAN Financial Innovation Network at <http://afin.tech/>.

<sup>65</sup> <https://www.etda.or.th/digital-economy.html>.

**environment to foster the growth of the fintech sector and achieve sustainable and inclusive economic development.**<sup>66</sup>

adoption of new technologies.<sup>67</sup> The BOT actively supports regulatory reform, the development of financial infrastructure, and the promotion private sector investment in fintech.<sup>68</sup> It has recently established a Financial Technology Department, which works closely with key industry players and other government agencies to formulate policies and develop infrastructure essential to fostering innovation. The BOT also encourages the development of open infrastructure and promotes interoperability to help reduce costs across the economy. As SMEs play an important role in inclusive economic development, the BOT aims to expand their access to finance by upgrading the national database to support information-based lending. Finally, the BOT issues licenses to fintech startups for financial services activities that fall under its regulatory authority.<sup>69</sup> In concert with the BOT, GSB has successfully leveraged the benefits of fintech to advance financial inclusion and expand financial education (Box 8).

**Box 8: Leveraging Fintech to Promote Financial Inclusion: the Case of Government Savings Bank**

**GSB is a state-owned bank founded in 1913.** Its assets total about US\$76.4 billion (THB 2.65 trillion) and it has over 26 million accounts belonging to 18,774,193 individuals across every consumer segment. THB is working with the public sector, the private sector, and the non-profit sector to expand the digital economy.

**GSB plays a key role in advancing financial literacy and promoting financial inclusion in Thailand, and it uses fintech and big data to maximize its impact.** By working



Photo: World Bank team visiting a village fund affiliated with GSB



closely with rural communities, which are often excluded or underserved by the traditional financial system, GSB has managed to reach millions of low-income customers. GSB estimates that there are approximately 200,000 formal and informal village funds, community banks, and social-welfare groups in Thailand, with an average of 50 members per group. GSB currently has 1,062 domestic branches and 10 million low-income accounts held by to 11,447,798 individuals.

**To promote financial literacy and expand financial inclusion, GSB has launched programs to teach people in rural areas about financial products and the benefits of participating in the formal financial system.** GSB has engaged with local community banks and village funds to teach fundamental banking skills such as credit-risk analysis, audit protocols, and how to identify NPLs.

**To maximize its impact, GSB has developed its own fintech app, MyMo, and is using big data to facilitate its lending process and assess its loan performance.** GSB uses the MyMo app to collect data on transfers, payments, and savings, as well as to encourage the use of mobile banking. Overall, GSB provides a highly positive expand of how fintech can be used to promote financial literacy and financial inclusion among marginalized groups

Source: Field visit to GSB-affiliated village fund; interviews with GSB senior management on November 9, 2018. Data as of February 28<sup>th</sup>, 2019

<sup>66</sup> See Bank of Thailand 2017. Strategic Plan 2017-2020.

<sup>67</sup> Bank of Thailand 2017.

<sup>68</sup> For more information see World Bank 2018.

<sup>69</sup> World Bank 2018.

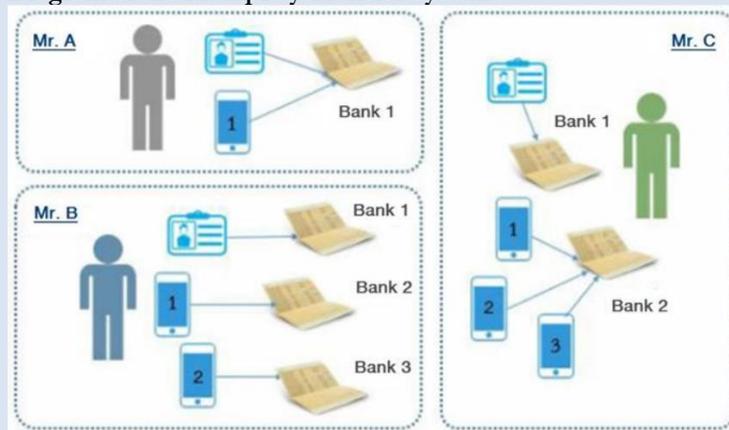
**PromptPay is Thailand’s national e-payment initiative and a potential first step toward a cashless society.**

In January 2017, the BOT launched PromptPay, an interbank mobile-payments system that enables users to transfer funds using only the mobile number or national ID number of the recipient (Box 9). PromptPay can also be used to receive payments from government agencies, including social security benefits, retirement payments, and tax refunds. No fees are charged to the customer for interbank and inter-region funds transfers if the amount is less than THB 5,000 (US\$ 156), and a maximum fee of THB 10 (US\$ 0.3) applies to transfers of over THB 100,000. These fees are significantly lower than those charged by banks for wire transfers. Thai banks generate an average of 41 percent of their gross retail banking income from fees—one of the largest shares in Asia.<sup>70</sup> Since the introduction of the PromptPay, bank transfer fees have begun gradually declining, and they now make up a small share of total bank fees. As of March 2018, over 39 million individuals had signed up for the PromptPay service, and more than 127 million transactions with a total value of over THB 490 billion had been executed via PromptPay.<sup>71</sup>

**Box 9: Towards a cashless society: PromptPay**

Initially, the PromptPay transfer system was only available to retail customers, and transfers were subject to a progressive fee structure based on the size of the transaction. Transfers of less than THB 5,000 (US\$156) were and remain free of charge, but transfers of between THB 5,001 and THB 30,000 incurred a fee of THB 2; transfers of between THB 30,001 and THB 100,000 incurred a fee of THB 5; and transfers in excess of 100,000 incurred a fee of THB 10. However, even these elevated rates were well below those charged by Thai banks for wire transfers. For example, Bangkok Bank, Thailand’s largest lender, charges THB 25-35 for its mobile banking service. Over time, PromptPay’s low fees are likely to cut into commercial banks’ fee revenue, encouraging them to become more efficient and cut costs. Lower fees for bank wire transfers could further contribute to financial inclusion, indirectly magnifying the beneficial impact of PromptPay.

**Diagram of the PromptPay Transfer System**



Source: Bank of Thailand

**The government was among the first user of the PromptPay system, and in December 2016 is began transferring welfare payments to low-income people via PromptPay.** In March 2017, the system became available to private firms, and the government worked closely with retailers, especially SMEs, to install electronic data-capture machines that could be used to process debit and credit card transactions.

**The PromptPay system has expanded exponentially over the past two years.** Between March 2017 and March 2018, the number of transactions dramatically increased, while the average amount per transaction fell from THB 6,000-7,000 to THB 3,500-3,800, which may indicate that the share of low-income users was increasing and/or that the system was being used for more routine, low-value transactions. About 39 million people registered to use PromptPay during the first year alone, and 66 percent of users linked their accounts to their national ID numbers to facilitate the receipt of public transfers and tax refunds.

Source: Bank of Thailand, Thai PBS

<sup>70</sup> “Are Thai banks prepared for the next phase in digital competition?” October 12, 2017, The Asian Banker.

<sup>71</sup> According to BOT Assistant Governor Ms. Siritida Panomwon Na Ayudhya, as cited in <http://englishnews.thaipbs.or.th/use-promptpay-system-surges-127-million-transactions-one-year/>.

**The PromptPay infrastructure could be used to further expand the provision of low-cost financial services, especially to underserved communities.**

While PromptPay has generated considerable benefits in terms of lower fees for transferring funds and reducing barriers to financial inclusion. However, the government and the business community can do more with the infrastructure used by PromptPay, which could be linked to other digital fintech platforms and financial service networks. In addition, the data collected through PromptPay could be leveraged to provide quality financial products or services at lower cost, if appropriate data-privacy safeguards are put in place.<sup>72</sup>

### viii. Initiatives by Regulatory Agencies Can Promote Fintech Development

**In addition to the policies implemented by the Ministry of Finance and the BOT, Thailand's regulatory agencies have considerable scope to promote the development of fintech.**

**Policymakers have access to a wide range of tools to support the fintech sector.** The international experience has demonstrated the potential impact of test-and-learn approaches, waivers and exceptions, letters of no-objection, and differentiated regulations on the growth of the fintech sector. Each of these regulatory tools has its own unique advantages and drawbacks (Figure 29).

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<sup>72</sup> While acknowledging that the systems involved are different, India's experience with the Aadhaar identification system may prove instructive, as the private sector created platforms on top of the Aadhaar infrastructure to enable e-payments, document storage, utility bill payments, and other services. These platforms, called India Stack, are a form of digital infrastructure built as a public good, which enables presence-less, paperless, and cashless service delivery by governments and businesses alike. IndiaStack also provides individuals with the tools to leverage their data, enabling them to negotiate access to better credit, healthcare, education, and welfare benefits. See: <http://blogs.worldbank.org/voices/giving-people-control-over-their-data-can-transform-development> (Nandan Nilekani, *Giving people control over their data can transform development*, Blog, October 11, 2018).



Figure 29: An Overview of the Fintech-Enabling Tools Available to Regulators

WAIT & SEE	TEST & LEARN	REGULATORY SANDBOX	WAIVER/ EXEMPTIONS	LETTERS OF NO-OBJECTION	DIFFERENTIATED REGULATION	REGULATORY REFORM/LAW
<p>Allows innovations to develop with <b>no restrictions</b></p> <ul style="list-style-type: none"> <li>• May work well in environments with limited regulatory capacity</li> <li>• Presents <b>significant risk</b> if not controlled later through regulations</li> <li>• <b>Example: China</b></li> </ul>	<p>New innovations tested in a live environment with involvement from the regulators</p> <ul style="list-style-type: none"> <li>• <b>Case-by-case basis</b></li> <li>• Requires <b>active involvement</b> by regulator</li> <li>• <b>Difficult to scale up</b>; hard to ensure equal treatment</li> <li>• <b>Examples: Philippines, Tanzania</b></li> </ul>	<p>Virtual Environment where innovators can <b>test</b> their products/services in a time bound manner.</p> <ul style="list-style-type: none"> <li>• <b>Greater transparency and replicability</b></li> <li>• Relevant for markets with good supervisory capacity and high level of active, potentially non-licensed players</li> </ul>	<p>Waiver or exemption from a license or restrictive sections of a license</p> <ul style="list-style-type: none"> <li>• usually codified in law, therefore no need for subjective decisions from the regulator</li> <li>• No special resources for maintenance are required</li> </ul>	<p>legal <b>certificate</b> issued by the authority to indicate that it does not object the product or services provided by the fintech entity.</p> <p>Relevant for smaller markets, when the risk profile of the innovations are generally well-understood.</p> <p><b>Example: Kenya</b></p>	<p>Usually codified in law, therefore no need for subjective decisions from the regulator</p> <p>No special resources for maintenance are required</p> <p><b>Example: India: Payments Bank &amp; Trade Receivables Platform license.</b></p>	<p>Enactment of regulations that support FinTech startups and consumer protection, competition, financial stability and financial inclusion</p> <ul style="list-style-type: none"> <li>• Modifications to existing regulations</li> <li>• <b>Examples: EU (PSD2, GDPR), Mexico (FinTech Law)</b></li> </ul>

Source: <https://blogs.worldbank.org/psd/sandbox-or-quicksand>

The “regulatory sandbox” is a popular tool employed by regulators in Thailand and other jurisdictions.

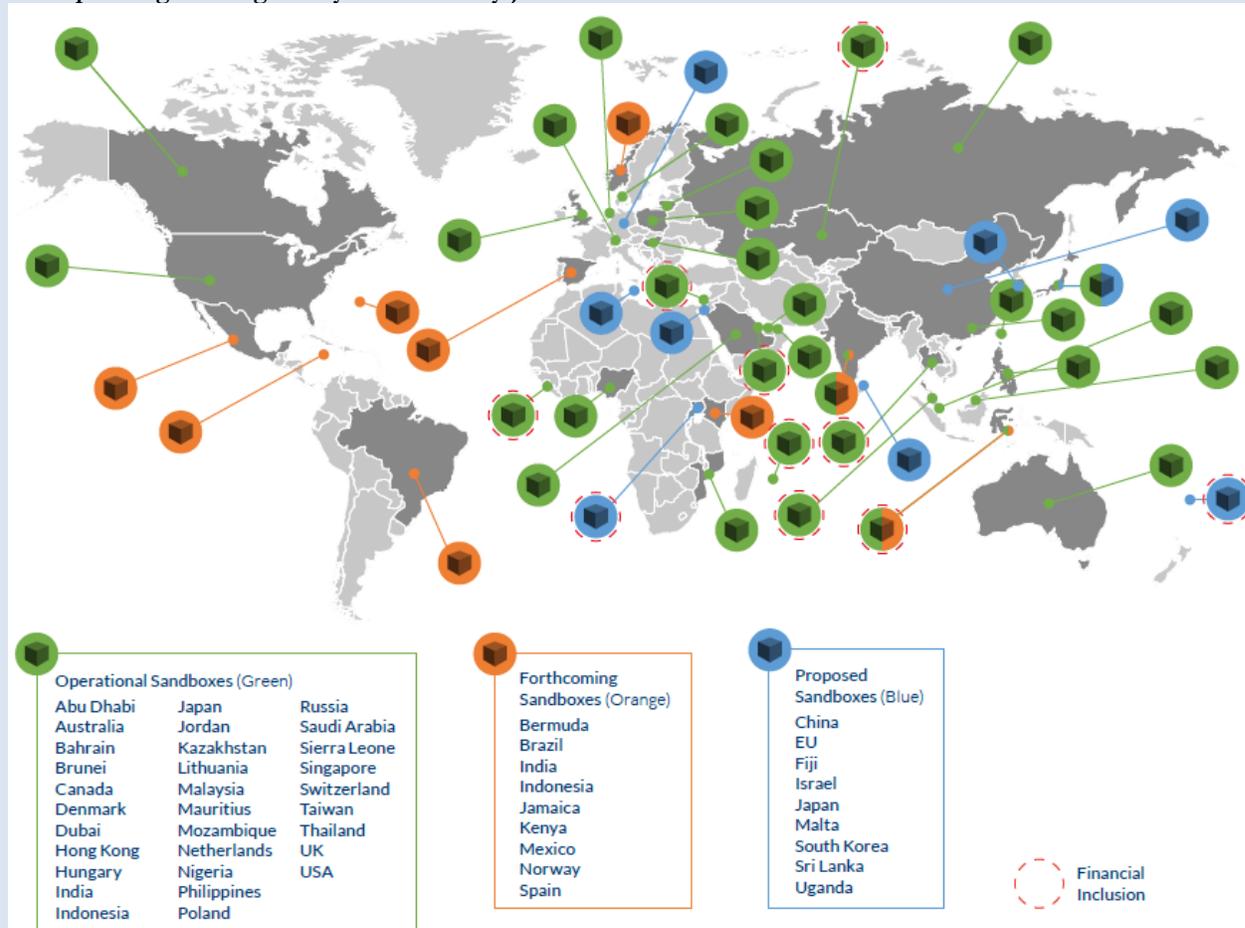
Regulatory sandboxes are an instrument for testing fintech innovations in a controlled environment. While the precise definition of a regulatory sandbox differs from jurisdiction to jurisdiction, they serve as “formal regulatory programs that allow market participants to test new financial services or business models with live customers, subject to certain safeguards and oversight.”<sup>73</sup> Regulatory sandboxes offer many important benefits, but policymakers must also be aware of the associated risks (Box 10).

<sup>73</sup> UNSGSA Working Group and CCAF (2019).

**Box 10: An overview of fintech regulatory sandboxes**

At present, approximately 50 jurisdictions around the world have either launched or are planning to launch a regulatory sandbox.

**Examples of global regulatory sandboxes by jurisdiction**



Source: European Supervisory Authorities (2019), Jenik and Lauer (2017), Mueller et al. (2018), DFS Observatory (2018), and UNSGSA Fintech Working Group and CCAF (2019)

**Regulatory sandboxes can be divided into three categories: (i) product-testing sandboxes, (ii) policy-testing sandboxes, and (iii) multijurisdictional sandboxes.**

- ▶ *Product-testing sandboxes* use the sandbox regulatory process as a safe zone for innovators to test new products before obtaining formal licensing or registration.
- ▶ *Policy-testing sandboxes* use the sandbox process to assess policies or regulations that may stifle the development of new technologies or business models. Singapore’s MAS is the leading proponent of this type of sandbox, which it regards as a key mechanism to assess whether to change rules and regulations in response to specific cases. However, the lines between these two types of sandbox are often blurred, as policy-testing sandboxes are often used for product testing as well.
- ▶ *Multijurisdictional sandboxes* are used to promote cross-border regulatory harmonization, enabling innovative firms to rapidly expand beyond their home jurisdictions. Two multijurisdictional sandboxes are currently in operation, the Global Financial Innovation Network (GFIN) and the API Exchange (APIX). GFIN facilitates the transfer of knowledge and lessons learned on issues of shared concern to regulators, such as AML/CFT, RegTech, as well as new products being tested by fintech firms operating across borders. APIX was launched by the ASEAN Financial Innovation Network as a cross-border, open-architecture platform designed to enhance financial inclusion.



Key Benefits and Risks Associated with Regulatory Sandboxes			
Benefits of Regulatory Sandboxes			Risks of Regulatory Sandboxes
Regulators	Fintech Players	Consumers	
Use learning and experimentation to inform long-term policy making	Benefit from reduced time-to-market by streamlining the authorization process	Promote the introduction of new, and potentially cheaper and safer innovative products	Might raise potential competition-related issues by giving an advantage to firms in the sandbox versus those outside, by enabling the former to benefit from both regulatory advice and being the first to market.
Proof of commitment to innovation and learning	Provide regulatory clarity and signal the regulator's openness towards new technologies	Increased access to innovative financial products and services that often serve low-margin clients profitably	Poor selection of firms if the regulator has limited capacity to assess the technology driving the innovation.
Important for developing communication and engagement with market players	Receive first-hand feedback on regulatory requirements and risks	Increased competition that may result in incumbents focusing more of their attention on unserved and underserved segments of the population	Reputational and liability issues: should there be failed testing that hurts customers or other market participants, the reputation of the regulator may be affected, as may the customers' trust in the financial system overall.
Use feedback obtained to revise and adapt regulations that could potentially stifle innovation	Improved access to capital		If regulators are held liable in their jurisdiction for their authorizing certain financial services providers, then they may be liable for their decision on whom to admit in the sandbox. This could make regulators reluctant to accept in the sandbox disruptors or radical innovations.

Source: European Supervisory Authorities (2019), Jenik and Lauer (2017), Mueller et al. (2018), DFS Observatory (2018), and UNSGSA Fintech Working Group and CCAF (2019)

**Thai regulators are embracing new developments in the field of fintech regulation.**

In Thailand, as in many other countries, both regulators and fintech startups report that regulation is generally catching up with the rapid advances in the fintech field. Several regulators oversee fintech firms in Thailand: the BOT, the Securities and Exchange Commission (SEC), and the OIC. Overall, regulators appear to be open to fintech initiatives, and several fintech entrepreneurs report they have good working relationships with regulators, who are willing to learn about new technologies and innovations. Each of Thailand's major financial regulatory agencies has launched its own regulatory sandbox.

**The BOT has established a product-testing sandbox to enable fintech firms to experiment with new products in a controlled environment.**

Three key priority areas have been explored so far: applications on quick response (QR) codes for payments, electronic know-your-customer (e-KYC) applications, and biometrics and blockchain for letters of credit. About 18 fintech initiatives have participated in the sandbox to date, but all have been owned by commercial banks, and no independent fintech startup has yet taken part in the regulatory sandbox.<sup>74</sup>

**Like the BOT sandbox, the OIC**

The OIC sandbox was launched in 2017, and the OIC limits the number of participating companies. Participants must be insurance companies, insurance agents, or brokers

<sup>74</sup> Reported in a June 14, 2018 discussion with representatives of the BOT.

**sandbox is focused on testing new products.**

involved in conducting trials of new products. Startups or firms planning to enter the insurance industry may participate in the sandbox only if they partner with an existing insurance company or corporate broker.<sup>75</sup> Five sandox projects are currently underway; four are related to auto insurance, and one is related to health insurance. Innovations pioneered outside the sandbox, such as ClaimDi, are allowed to participate.

**The SEC regulatory sandbox enables technology-related startups to experiment with innovative products and services for investors in the Thai capital market.**

The SEC sandbox was also established in 2017. Unlike the BOT and OIC, the SEC's approach to its regulatory sandbox focuses on maximizing flexibility to encourage innovation, and the sandbox is open to any fintech startup that meets certain criteria. However, no fintech startups have yet applied to participate in the SEC sandbox.

**The different approaches taken by the various fintech regulators reflect their diverse institutional priorities.**

Interviews with key stakeholders indicated that the BOT's fintech priorities include privacy, cybersecurity, infrastructure investment, and financial-sector development. In addition, the Financial Sector Masterplan cites digitization, inclusion, and financial literacy are identified as key areas of focus for the BOT. Meanwhile, the Ministry of Finance and the OIC both prioritize financial literacy. The SEC also appears to be focused on financial literacy, as well as encouraging competition in the fintech sector.

**Several ministries are also pursuing innovation-related initiatives in support of fintech activities.**

The Ministry of Digital Economy and Society has established the Digital Economy Promotion Agency (DEPA), the National Innovation Agency (NIA) and the Electronic Transaction Digital Agency (ETDA). The Ministry of Industries has created the Board of Investment (BOI), and the Ministries of Commerce, Finance, Science and Technology, and Telecommunications each have their own innovation-related initiatives. The proliferation of actors appears to be creating a confusing environment for fintech innovation and may lead to administrative redundancies or needlessly convoluted regulatory processes. For example, one fintech startup reported that it has been waiting for almost five years the approval from the Ministry of Finance to connect its tax-related fintech startup to the Revenue Department to enable the electronic submission of tax returns. Increased coordination and communication among various stakeholders could foster a more efficient regulatory environment for fintech.

### 3. Policy Considerations

**Thailand has established one of the region's most robust fintech sectors, but further policy measures could help leverage the full potential of**

Thailand has one of the highest levels of financial inclusion among middle-income countries worldwide, as well as one of the smallest gender gaps. The BOT led the development of a national e-payments master plan, which supported the establishment of the PromptPay platform, the adoption of a standardized national system for QR code payments, and the development of e-KYC policies that enable individuals to open online financial accounts consistent with customer due diligence requirements under Thailand's anti-money-laundering law. Nevertheless, several key financial inclusion indicators—especially those related to the use of digital payments—remain relatively

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<sup>75</sup> Based on discussions with OIC representatives on November 8, 2018; see also OIC Annual Report 2017, pp 133-134



### **digital financial services to expand economic inclusion.**

low by the standards of ASEAN member states and middle-income countries. To enable both traditional financial-services providers and fintech innovators to thrive in Thailand's emerging digital economy, the authorities and the private sector could engage in a collaborative discussion focusing on the following five policy areas.

#### **1) Fostering a level playing field in the fintech sector.**

While the government has made progress in adopting laws and regulations to support the development and deployment of fintech, policymakers could foster more robust competition by identifying and eliminating barriers to entry across all segments of the digital financial sector. Restriction on which firms can participate the existing regulatory sandboxes may stifle innovation and narrow the range of fintech products that are approved by regulators and made available to consumers. The BOT and OIC should consider allowing a wider range of firms to access their regulatory sandboxes.

#### **2) Encouraging collaboration between traditional financial-services providers and fintech firms.**

Collaboration between banks and fintech firms is largely limited to firms that are bank subsidiaries or in which banks have an equity stake. Deepening collaborative efforts between banks and independent firms and startups could generate valuable innovations and facilitate the expansion of digital financial services.

#### **3) Improving collaboration and information-sharing among the three regulatory sandboxes.**

The creation of regulatory sandboxes by the BOT, OIC, and SEC is a highly positive development, but minimal coordination between these sandboxes may inhibit collaboration and information-sharing among the three main sectoral regulators. Increased communication and coordination between sandboxes could eliminate information silos and prevent administrative redundancy while leveraging economies of scale on the part of fintech firms, particularly those with lines of business that fall under the purview of more than one regulator. Hong Kong faced a similar challenge, and linking its three regulatory sandboxes to create a single point of entry for fintech firms to test innovations across multiple regulatory domains significantly increased the number of participating firms.

#### **4) Encouraging public-private and private-private collaboration**

Creating partnerships in innovation between the public and private sectors and among private firms can help foment a collaborative culture of knowledge and innovation sharing that supports technological advancements and lowers costs. The creation of the PromptPay platform is an excellent example of effective public-private collaboration, which has significantly accelerated financial inclusion. Similar collaborative efforts between private firms could yield additional benefits, given a conducive regulatory environment.

#### **5) Implementing initiatives to support venture capital and providing additional funding for startups.**

A relatively large share of Thai fintech firms cite inadequate access to venture capital as a significant constraint on their operations, and most fintech firms report that the level of government funding is inadequate. Greater public investment in fintech incubators, accelerators, early-stage seed funding vehicles, and matching grants could boost the number of successful fintech startups. Singapore's MAS could serve as a role model for Thailand, as its open attitude towards innovation and experimentation, light-touch regulatory regime for venture capital, and consolidated support system for entrepreneurial and innovation-related activities has helped transform Singapore into a regional leader in fintech innovation.

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