TOGETHER WE CAN TRANSFORM THAILAND

THAILAND ECONOMIC MONITOR

THAILAND IN THE TIME OF COVID-19

June 2020

WORLD BANK GROUP

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, Arvind Nair (task team leaders), Phonthanat Uruhamanon, Ralph van Doorn, Mahama Samir Bandaogo, Harry Edmund Moroz, Francesca Lamanna, Judy Yang, Ratchada Anantavrasilpa, Ana Maria Aviles, Nikola Kojucharov, Smita Kuriakose, Wouter Schalken, Radu Tatucu and Sutayut Osornprasop. Birgit Hansl, Ndiame Diop, and Souleymane Coulibaly provided overall guidance. The team is grateful to, Andrew Blackman, Achim Schmillen and Ergys Islamaj for their constructive peer review comments. Clarissa Crisostomo David, Kanitha Kongrukgreatiyos and Buntarika Sangarun are responsible for external communications related to the TEM, as well as the production and design of this edition.

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 30, 2020, 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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- January 2020: Productivity for prosperity
- July 2019: Harnessing fintech for financial inclusion
- 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	LTGM	Long-Term Growth Model
ASEAN	Association of Southeast Asian Nations	MOC	Ministry of Commerce
BAAC	Bank of Agriculture and Agricultural Cooperative	MOF	Ministry of Finance
BICRAs	Banking Industry Country Risk Assessments	NEER	Nominal Effective Exchange Rate
BOI	Board of Investment	NESDC	Office of the National Economic and Social Development Council
BOT	Bank of Thailand	NPI	Non-Pharmaceutical Interventions
DFS	Digital Financial Services	NPL	Non-Performing Loans
EAP	East Asia and Pacific	REER	Real Effective Exchange Rate
EMDEs	Emerging Markets and Developing Economies	SFI	Specialized Financial Institution
FDI	Foreign Direct Investment	SME	Small and Medium Enterprises
FPO	Fiscal Policy Office	SMLs	Special Mention Loan
FSAP	Financial Sector Assessment Program	SOE	State-Owned Enterprise
FTA	Free Trade Agreement	SSO	Social Security Office
FY	Fiscal Year	TCC	Trade Competition Commission
GSB	Government Savings Bank	TFP	Total Factor Productivity
GDP	Gross Domestic Product	THAI	Thai Airways International Public Company Limited
GSB	Government Savings Bank	UMIC	Upper Middle-Income Country
GVC	Global Value Chains	WDI	World Development Indicators
IMF	International Monetary Fund	yoy	year-on-year
IOM	International Organization for Migration		

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Executive Summary

RECENT DEVELOPMENTS

The COVID-19 shock hit Thailand in early 2020 adding to pre-existing vulnerabilities. Economic growth slowed from 4.2 percent in 2018 to 2.4 percent in 2019, with particularly weak performance in Q4 2019. The key drivers of slowing growth were weaker demand for exports reflecting the impact of US-China trade tensions, slowing public investments driven by delay in the passage of the FY 2020 budget, and a drought, impacting agricultural production. The COVID shock hit Thailand in early 2020 and has already had a significant economic impact, with a sharp growth contraction of 1.8 percent y-o-y and 2.2 percent q-o-q in Q1 2020.

The economic impact of COVID-19 has been severe, particularly due to Thailand's openness to trade and exposure as a tourism hub. The Thai economy is projected to contract by 5 percent in 2020, which is among the sharpest projected declines in the East Asia and Pacific Region[1]. Weaker global demand has led to a contraction in global trade[2], which, in turn, has disrupted global value chains, such as automobiles, in which Thailand is an active participant, and hit exports. The tourism sector, which accounts close to 15 percent of GDP, has been severely impacted with a near cessation of international tourist arrivals since March 2020. Finally, the mobility restrictions imposed in response to the outbreak, while critical to flattening the infection curve, have severely dented private consumption, particularly for retail and recreational services. This is reflected also in the sales of durables, which have seen a sharp decline of nearly 12 percent in y-o-y terms in Q1 2020.

The outbreak will likely lead to severe job losses and its adverse impact on the labor market was already evident in Q1 2020. Jobs in services sectors, particularly in tourism, are at particular risk from transmission control and social distancing measures undertaken by government and individuals to limit the spread of COVID-19. Average working hours declined year-on-year[3] in Q1 and more than 170,000 people in the formal sector filed for unemployment benefits in Q1 2020. While significant uncertainty remains about the ultimate impact on the labor market, in late May 2020, the NESDC estimated that 8.4 million jobs were at risk from the COVID-19 outbreak in Q2 and Q3 2020, in addition to the 6 million farmers already at risk from drought.[4]

The impact on household welfare is also likely to be severe. The number of economically insecure, i.e., those living below USD 5.5 per day in PPP terms, is projected to double from 4.7 million in Q1 2020 to an estimated 9.7 million in Q2 2020, before recovering slightly to 7.8 million in Q3 2020. This is driven by an expected sharp decline in labor income for workers in affected manufacturing and services sectors, and a decline in remittance income, particularly for households without any affected workers. These income losses are only partially compensated by announced cash transfers.

While the Thai financial sector exhibits some vulnerability, it remains largely stable and appears to have sufficient buffers to support maintaining financial stability going forward. Following the outbreak, volatility in the equities market rose markedly with the Stock Exchange of Thailand Index (SET) plunging by approximately 35 percent between early January and mid-March 2020, before recovering about 15 percent by mid-May, and Thailand experiencing record capital outflows. Financial sector vulnerability, particularly resulting from household debt to GDP and non-performing loans (NPLs) for SMEs, are likely to worsened by the economic impact of the outbreak. At the same time, Thailand's financial system buffers remain adequate to support financial stability. As of March 2020, Thai commercial banking system maintained capital funds common equity Tier 1 and capital adequacy ratio (BIS ratio) at 15.16 percent and 18.73 percent of risk assets respectively, in line with the Basel III framework, to absorb losses arising from an unexpected crisis and continue providing key financial services. In addition, the banking system has continuously provided loan loss provision following the implementation of the Thai Financial Reporting

Standard 9 (TFRS 9) with NPL coverage ratio of 143.3 percent while the liquidity coverage ratio (LCR) registered at 185.7 percent, as of March 2020. Nevertheless, the COVID-19 pandemic has unleashed a global economic and financial crisis of unprecedented scale with no clear end in sight which could pose stability challenges to any financial system. **Thailand's current account surplus has narrowed, and capital outflows have accelerated, but reserves cover remains adequate.** The current account surplus narrowed to 7.1 percent of GDP in Q1 2020 and is projected to narrow further in Q2 2020, with a marked decline in tourism receipts. Large portfolio outflows and an uptick in outward FDI flows led to net capital outflows of 4.1 percent of GDP in Q1 2020 as compared to 2.9 percent of GDP registered end-2019. As a result, the Thai baht saw a significant depreciation in Q1 2020, reversing its strong appreciation in 2019. As of end-May 2020, the exchange rate stood at 31.8 baht/USD, depreciating from 30.2 baht/USD at end-2019. Foreign exchange reserves remained high at USD 226.5 billion in end-March 2020, equivalent to 3.8 times the country's short-term external debt or 14 months of value of imports.

The government's public health policy response to the COVID-19 effectively stemmed the tide of infections within three months. The Government declared a nationwide state of emergency on March 26, expanded testing, treatment and quarantine facilities, equipped hospitals with personal protective equipment, issued travel bans and mandated a curfew and closures of malls, public venues and businesses deemed as high-risk of spreading COVID-19. As of June 21, 2020, there were 3,148 confirmed COVID cases, with 58 deaths in Thailand. Since early May, the number of daily new cases have been in single-digits mostly due to repatriation of nationals, prompting the Government to gradually reopen the economy.

The government has responded with a significant fiscal and monetary response to the COVID-19 outbreak. The Bank of Thailand cut the policy rate from 1.25 to 0.5 percent during February-May 2020 continuing the monetary easing cycle that began in August 2019. Inflation has declined sharply, with headline inflation falling to -3.44 percent and core inflation to 0.01 percent as at end May 2020, driven by a sharp decline in global energy and fuel price and weakening domestic demand. The cabinet approved a COVID-19 relief and recovery package in 3 phases amounting to 2.2 trillion baht (12.9 percent of GDP). The responses are primarily focused on supporting vulnerable households and firms, particularly workers in the informal sector and SMEs to cushion loss of incomes and avoid mass unemployment and bankruptcies (the section on supporting vulnerable firms and households examines the policy response in detail).

OUTLOOK AND RISKS

The Thai economy is projected to contract sharply in 2020, driven by a sharp deterioration in global and domestic demand. In the baseline (Table ES1), the economy is projected to contract by 5.0 percent in 2020, which is among the sharpest projected declines in the region. This is driven by a sharp decline in exports, particularly from tourism receipts and weakening global trade, and a slowdown in domestic demand reflecting the impact of mobility restrictions and mandated closures of businesses. The forecast is subject to future revisions, particularly on the downside, given heightened uncertainty surrounding the outbreak trajectory, globally and domestically.

The shape of the economic recovery will be drawn-out and uncertain. Domestic demand drivers such as consumption may pick up as Thailand starts to ease mobility restrictions, but remaining international travel restrictions, trade and supply chain disruptions, will continue to impact the economy, particularly through reduced tourism. Economic growth is projected to pick up in 2021 (4.1 percent) and 2022 (3.6 percent) (Table ES1), with a projected recovery to pre-COVID output levels in around two years. The strength of the economic recovery will also depend on an effective economic response to support vulnerable households and firms. **In the absence of a vaccine or treatment for COVID-19, there remains considerable downside**

[1] "Global Economic Prospects: June 2020", World Bank, June 2020.
[2] Ibid.
[3] NESDC, 2020.
[4] https://www.bangkokpost.com/business/1925808/nesdc-14-4m-workers-at-risk

risk to the outlook. A resurgence of COVID-19 in Thailand and globally is a key downside risk, which can adversely impact demand for Thailand's exports and impact domestic economic activity. Given its strong linkages to the global economy, Thailand is vulnerable to further global capital flow volatility and disruptions to global value chains. Responding to further weakening of economic activity may further strain monetary and fiscal policy space. The monetary policy rate is now close to the zero lower-bound while public debt is projected to rise sharply, nearing the 60 percent of GDP statutory threshold by 2022.

SUPPORTING VULNERABLE HOUSEHOLDS AND FIRMS

Thailand's combined COVID-19 response packages amount to 12.9 percent of GDP, focused on providing relief to vulnerable households and affected firms. The programs are unprecedented for Thailand in terms of size, coverage and variety of instruments. A major component includes cash transfers to households and infrastructure projects in the local economy (5.9 percent of GDP) which will be partially funded through borrowing. In addition, the Bank of Thailand has set up a corporate bond market stabilization fund to help firms rollover maturing bonds (2.4 percent of GDP) and fund soft loans to SMEs (2.9 percent of GDP). Tax relief and debt restructuring for firms and households are also included.

The focus chapter provides a perspective on how Thailand can improve the effectiveness of these measures to support vulnerable households and firms. The chapter draws from international experience relevant to the specific context of Thailand – which has relatively high levels of human capital, a significant informal sector, developed financial markets, strong institutional capacities, some fiscal room and a vibrant tourism sector – to suggest how Thailand can improve ongoing policies.

In the near term, the chapter identifies challenges to be addressed and expanding coverage of supported households. While Thailand has announced sizeable response packages, challenges include connectivity to register for beneficiaries and building an integrated social registry that can provide timely information to target vulnerable groups and provide information to policymakers on program design and gaps. Several countries around the world can count on effective integrated social registries to design and target their programs and those registries have been fully utilized to rapidly respond to Covid-19 pandemic. The first step in this direction would be to agree on the protocol of interoperability of databases in country. There is also the challenge of supporting "missing middles" within households. Coverage of vulnerable households can be expanded to ensure that no gaps remain among, for example, the elderly and migrant workers.

Firm interventions could, going forward, be better tailored to sectors that have been especially hard hit by COVID-19 while maintaining coverage of vulnerable firms. While the impact has been felt on an economy-wide basis, some sectors, such as tourism—which have a large number of SMEs and are a significant source of employment and foreign exchange revenue for Thailand—are struggling more. Support to increase the digital presence of such firms will also be important to strengthen their resilience during the crisis and ensure they can more effectively compete in a post-COVID-19 world of increased demand for contact-free services. In addition, measures introduced to facilitate business environment such as fully automating the business registration process could be ramped up to facilitate new business formation while adhering to social distancing norms. In addition, while current firm liquidity support measures are aimed at both SMEs and large firms, micro enterprises, which have difficulty accessing credit, depend on savings, and are not enrolled in the social security system, may be inadvertently left out of the firm support measures.

Higher rates of unemployment and underemployment and constrained human capital of the labor force calls for innovative solutions. Thailand will also need to invest in labor market policies and programs that can meet the changing needs of the economy. Training and employment services programs need to be reformed to reflect shifting demand in the labor market, toward more socioemotional skills as well as higher-order cognitive and technical skills. In particular, digital skills will be important for contact-less services. International migrant workers from other countries are also in a vulnerable position in Thailand, having lost

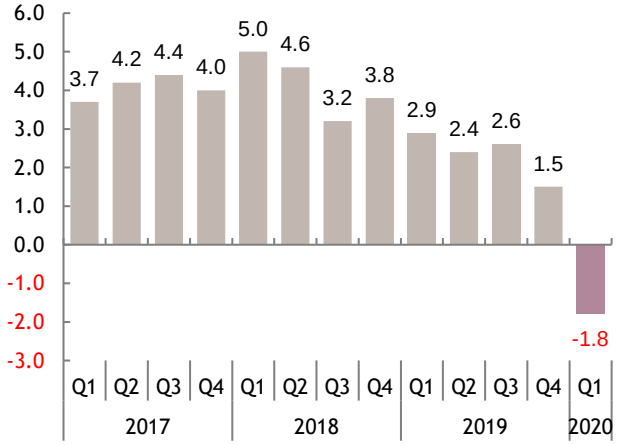
income and employment and generally unable to travel home, policies on migrants and agreements with sender countries will need to ensure that migrants will receive the needed coverage and support.

In the longer term, policies to support resiliency will be critical. As fiscal space decreases, the rebuilding of fiscal buffers, particularly through enhanced revenue mobilization, will be critical to allow Thailand to respond to future shocks as well as implement planned public infrastructure investments. In addition, Thailand can benefit from the lessons learned from its swift response to COVID-19 to move beyond the traditional employment-based social protection system towards a better targeted system that is able to ensure minimum package of benefits for the most vulnerable, identify and target vulnerable groups for support, and support re-skilling to meet the needs of a knowledge-based economy.

Recent developments in charts

Figure ES 1: Thailand's GDP contracted and recorded its lowest yoy growth rate in five years…

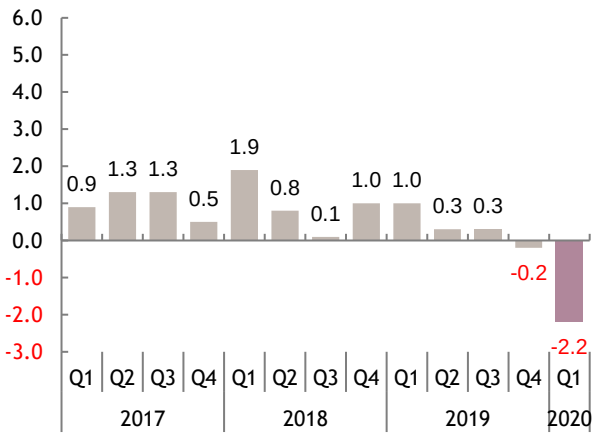
(% change, year-on-year)



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

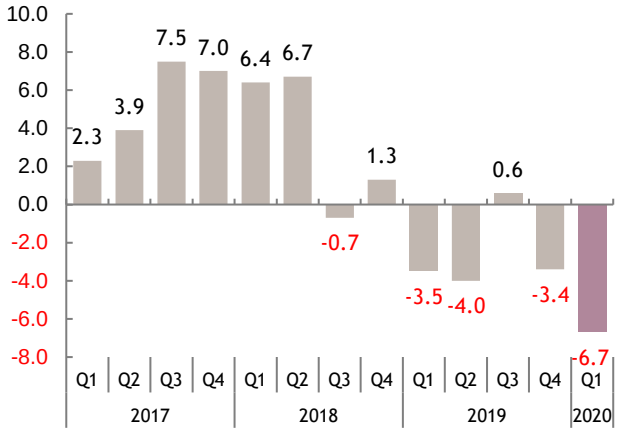
Figure ES 2: …with quarterly momentum contracting…

(% change, quarter-on-quarter, seasonally adjusted)



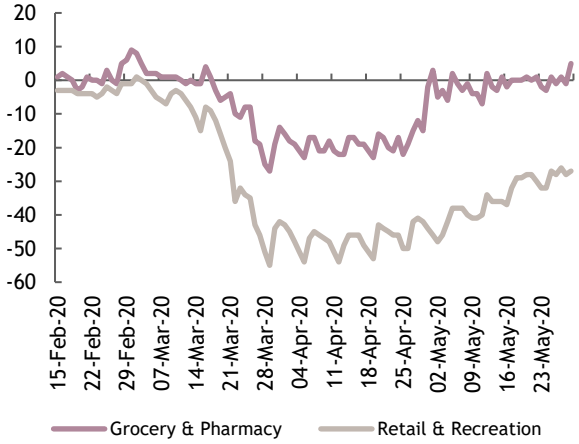
Source: NESDC

Figure ES 3: …as exports, particularly tourism, was hit hard by the COVID-19 outbreak
(% change, value, year-on-year)



Source: NESDC

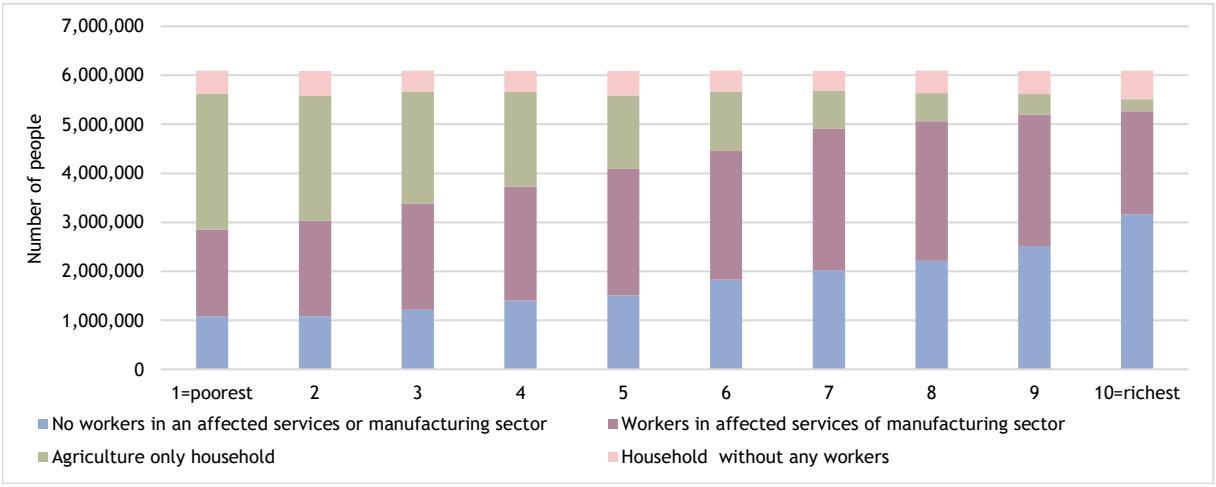
Figure ES 4: …and domestic demand drivers worsened with mobility restrictions
(Change in visits relative to baseline)



Source: Google Community Report

Note: Grocery & Pharmacy represents mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies. Retail & Recreation represents mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters

Figure ES 5: Jobs are at risk, and households along the entire income distribution will face negative impacts from COVID-19



Source: World Bank staff calculations from THA SES-2017

Table ES 1: Macroeconomic indicators

	2018	2019	2020f	2021f	2022f
Real GDP Growth Rate (at constant market prices)	**4.1**	**2.4**	**-5.0**	**4.1**	**3.6**
Private Consumption	4.6	4.5	-4.0	4.0	4.1
Government Consumption	1.8	-1.7	16.3	-15.0	-17.4
Gross Fixed Capital Investment	5.4	3.3	-1.3	-2.5	1.7
Exports of Goods and Services	3.3	-2.6	-6.3	2.2	2.5
Imports of Goods and Services	8.3	-4.4	-4.0	2.3	2.4
Real GDP Growth Rate (at constant factor prices)	**4.2**	**2.4**	**-5.0**	**4.1**	**3.6**
Agriculture	5.0	2.0	-1.0	1.5	2.0
Industry	2.7	2.6	-4.6	2.5	3.0
Services	5.0	2.3	-5.6	3.3	4.2
Inflation (Consumer Price Index)	1.1	1.1	-0.9	1.0	1.0
Current Account Balance (% of GDP)	6.5	5.0	2.3	1.7	1.1
Fiscal Balance (% of GDP)	-0.7	-1.1	-8.5	-5.4	-3.1
Debt (% of GDP)	42.2	42.5	50.2	54.9	56.4

Source: NESDC; World Bank staff calculations

Part 1: Recent Economic Developments and Outlook: Thailand in the Time of COVID-19

1. Recent economic developments: the COVID-19 shock

i. Thailand's economy entered 2020 with pre-existing vulnerabilities

A series of domestic and external shocks led growth to decline from 4.2 percent in 2018 to 2.4 percent in 2019…

As noted in the previous edition of the Thailand Economic Monitor, Thailand's growth momentum became sluggish in 2019 due to the compounded effects of the US-China trade tensions, domestic political uncertainty and the ongoing drought. Trade tensions weighed heavily on the manufacturing sector, while political uncertainty delayed the FY 2020 budget and led to a slowdown in public consumption and investment.

…contributing to weak labor market and welfare outcomes, particularly for the poor.

The yield of Thailand's major crops--rice, rubber, and sugar--declined significantly in 2019 due to the ongoing drought, thus impacting the income of farm workers. Average nominal wages also declined consistently from Q2 2019 to Q42019. These trends in 2019 are likely to worsen welfare outcomes for those in the lower end of the income distribution, and follow a period of increase in the official poverty rates in 2016 and 2018.

ii. In early 2020, Thailand and the world were hit by the COVID-19 pandemic…

The COVID-19 disease has rapidly spread throughout the world since early 2020, leading to several non-pharmaceutical health interventions.

By late June 2020, COVID-19 has already spread to almost all countries and territories in the world, leading to over 8 million infections and close to 450,000 casualties. In response, most countries have taken bold steps to try to avert the most catastrophic scenarios related to morbidity and mortality. In the absence of a vaccine and in-depth knowledge about the disease – especially regarding transmission and immunity – non-pharmaceutical interventions (NPIs) are the most viable (if not the only) prevention response currently available.[5] These often comprise advice and rules on travel (e.g. passenger screening and travel restrictions), on hygiene (e.g. handwashing, wearing face masks, abstaining from touching the face and surface decontamination), and on social distancing (e.g. school and workplace closures, quarantine, isolation, and bans on gatherings). Their main objective is to delay the introduction of the virus into the population, lower and delay the peak of the pandemic (i.e. 'flattening the infection curve') and minimize infections and deaths – especially by 'buying time' until a vaccine and/or treatment can be developed.

Thailand has focused its efforts on 'flattening the infection curve', achieving a considerable reduction in the progress of the disease.

In response to the outbreak, Thailand has enacted several public health interventions (**Box 1 summarizes the public health response undertaken by Thailand**) and NPIs related to travel, mobility and other restrictions. The government declared a state of emergency from March 26 through June 30, 2020. Some key NPIs enacted have included restrictions on movement across high-risk provinces (such as border and provinces frequented by tourists), a ban on inbound and outbound commercial flights, and a 14-day state quarantine for travelers entering Thailand from abroad. Confirmed cases of Covid-19 infection stood at 3,148 as of June 21, 2020. New daily infections stayed in the single digits for almost the whole month of May and hospitalized cases have continued to decline (Figure B1.1).

Box 1: Thailand's public health response to the COVID-19 outbreak

Thailand has so far been able to effectively contain the spread of the virus, with a relatively low number of confirmed cases and deaths. This is despite Thailand reporting the first COVID-19 case outside China in mid-January 2020. As of June 21, 2020, there are 3,148 confirmed COVID cases, with 58 deaths in Thailand. The number of confirmed COVID cases is relatively small, compared with 49,009 cases in Indonesia, 42,623 cases in Singapore, 32,295 cases in the Philippines, and 8,596 cases in Malaysia as of June 21, 2020[6]. Of all the confirmed cases in Thailand, 3,026 have fully recovered, and only 73 cases remain hospitalized.

The Thai Government was quick to address the COVID-19 threat, with initial interventions focusing on surveillance and contact tracing based on the three-stage response model. The Ministry of Public Health (MOPH) has scaled up the Emergency Operations Center to closely monitor the ongoing situation both nationally and globally. The MOPH strengthened the surveillance system by screening travelers for temperature and symptoms, initially from Wuhan and later scaled up to other COVID-19 hotspots. Surveillance and preparedness to respond to emerging infectious diseases was enhanced in government and private hospitals, particularly for patients with travel or contact history, and in areas with tourist attractions. Investigations were performed in response to

[5] The COVID-19 disease appears to be highly transmissible, but many issues remain unclear. For instance, it is difficult to assess the full extent of infection because many cases will remain undetected – due to mild or no symptoms, or lack of testing. Moreover, it has not been fully established if asymptomatic cases can transmit the virus, and whether recovered cases develop immunity (and for how long).

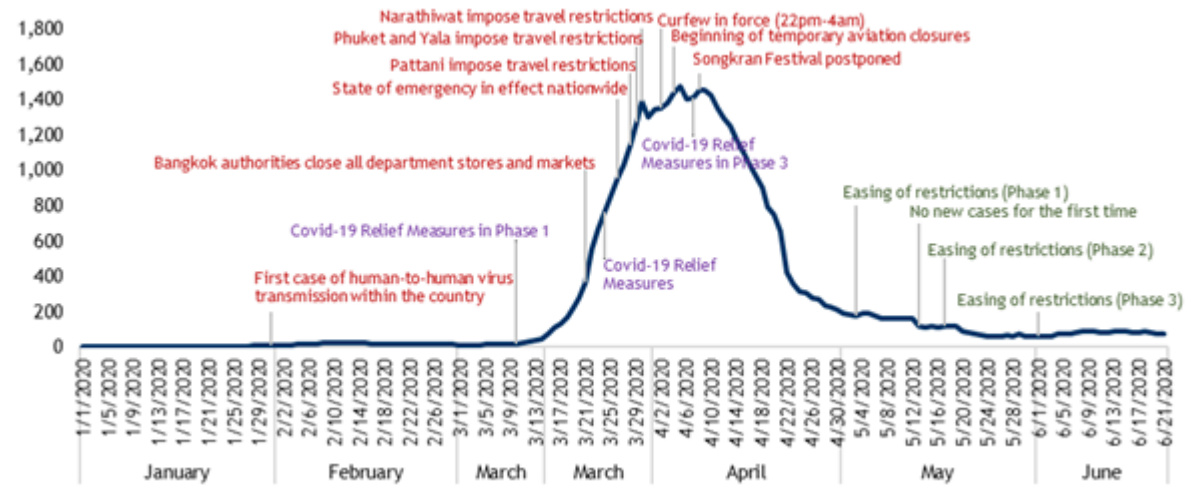
[6] Source: Johns Hopkins Coronavirus Resource Center: https://coronavirus.jhu.edu/map.html

Box 1: Thailand's public health response to the COVID-19 outbreak

outbreak clusters. The outbreak response also saw close cooperation between the Ministry of Transport, the Ministry of Foreign Affairs, the Ministry of Tourism and Sport, the Royal Thai Police, and the Ministry of Higher Education, Science, Research and Innovation.

Figure B1.1: Hospitalized cases have gradually decreased

(Number of Hospitalized Cases)



Source: Department of Disease Control, Ministry of Public Health

Thailand's relative success in stemming the tide of COVID-19 can be attributed to the following actions:

i) The government has focused on expanding COVID-19 laboratory capacity nationwide to increase testing of Patients Under Investigation (PUI). Initial limitations in laboratory capacity for COVID-19 testing, including the shortage of reagents for Reverse Transcription Polymerase Chain Reaction (RT-PCR) testing machines, was quickly overcome with the government's commitment to expand laboratory capacity for COVID-19 testing across the country. A new surveillance program will test 100,000 people for COVID-19 infection by the end of June.

ii) Extensive efforts have been made for contact tracing to identify people who were in contact with COVID-19 patients for targeted testing and quarantine. Public health authorities have identified the following target groups for Active Case Finding: healthcare workers, taxi drivers, public bus drivers, delivery persons, new prisoners, migrant workers and slum residents. Samples are also being collected from urban communities, including housing estates and condominiums. To support outreach to these potentially vulnerable groups, community volunteers have been recruited to work with the Bangkok Metropolitan Authority.

iii) Isolation and quarantine facility capacity has been expanded at "hospitels", which are adapted from hotels to help reduce service pressure at hospitals.

iv) Efforts have been made to prepare for more intensive care units (ICUs), greater provision of personal protective equipment (PPE) and other medical equipment, supplies and medicines at health facilities.

v) Extensive information and health education campaigns about COVID-19 and how people could protect themselves (e.g. through handwashing, social distancing and wearing masks) have been used to create awareness

vi) The Thai Government and academic communities have strived to invest in research and innovation to improve the country's capacity to produce key medicines and develop vaccines in response to COVID-19.

Despite the success in containing the outbreak, the Thailand's economy has been severely impacted.

The COVID-19 outbreak has impacted the Thai economy through several transmission channels. Firstly, weaker global demand has led to a contraction in global trade, which, in turn, has hit Thailand's exports and disrupted global value chains, such as automobiles, in which Thailand is an active participant. Secondly, the tourism sector, which accounts close to 15 percent of GDP, has been severely impacted with a near cessation of international tourist arrivals since March 2020. Finally, the mobility restrictions imposed in response to the outbreak, while critical to flattening the infection curve, have severely dented private consumption, particularly for retail and recreational services. The economic impact, under each of these channels, is examined in the rest of the section.

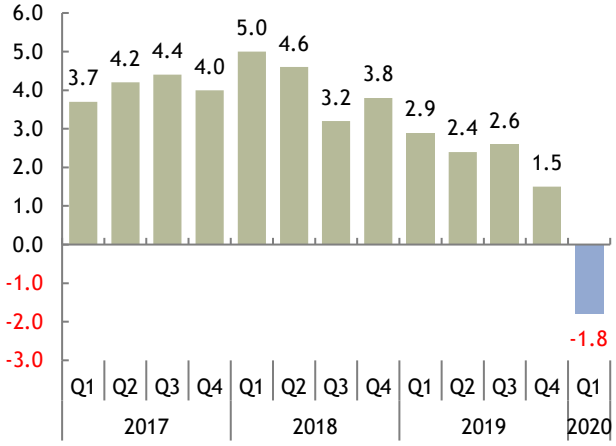
iii. ...which contributed to the sharpest quarterly contraction in five years

The outbreak contributed to the sharpest quarterly economic contraction in five years.

Thailand's economy contracted by 1.8 percent y-o-y and 2.2 percent q-o-q in Q1 2020 (Figures 2 and 3). The contraction reflects underlying weakness from decelerating growth in late 2019, with q-o-q growth turning negative in Q4 2019, but largely reflects the impact of the COVID-19 outbreak on reduced exports and tourism receipts, reduced private investment and decelerating private consumption.

Figure 2: Thailand's GDP growth contracted at its sharpest rate in five years

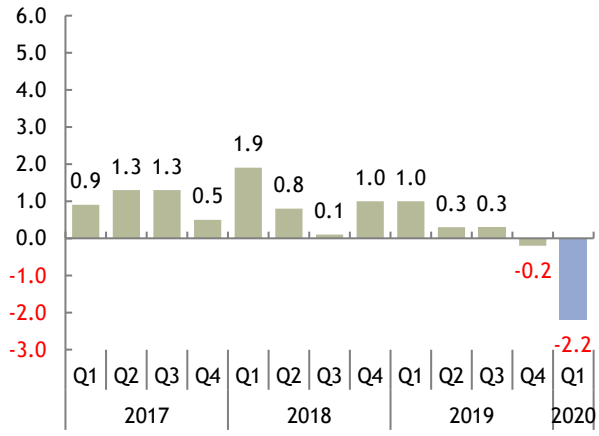
(% change, year-on-year)



Source: NESDC

Figure 3: ...with quarterly growth showing a decelerating trend

(% change, quarter-on-quarter, Seasonally Adjusted)



Source: NESDC

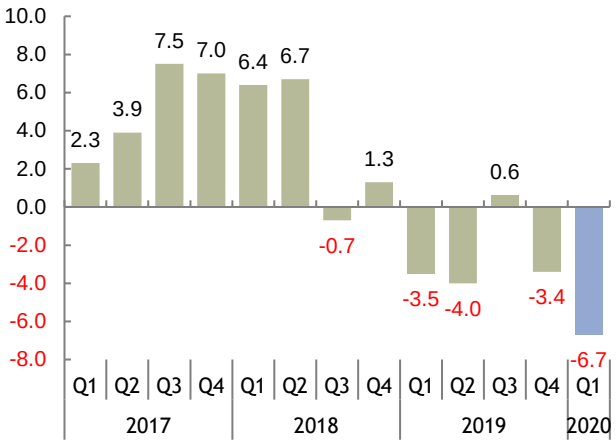
This reflects a sharp drop in exports, driven by tourism and slowdown in global trade, ...

Exports have declined sharply in recent quarters, registering a negative y-o-y growth of 6.7 percent in Q1 2020, the sharpest quarterly contraction in five years. Goods exports increased marginally by 2.0 percent y-o-y, with a decline in agricultural exports due to lack of competitiveness of Thai rice exports (on account of higher prices) counterbalanced by a pick-up in electronic and computer parts exports. Services exports declined sharply, by close to 30 percent y-o-y, with a

collapse in tourism related revenues, as the impact of COVID-19 outbreak on tourist and other arrivals began to be felt in March 2020 (Figures 4 and 5).

Figure 4: Exports of goods and services contracted sharply...

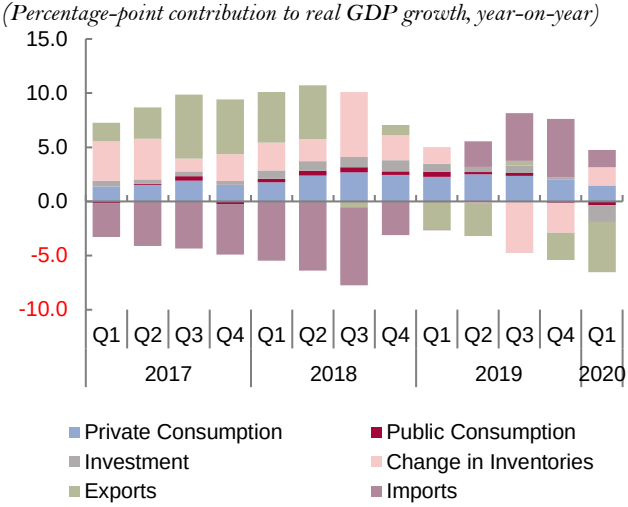
(% change, year-on-year)



Source: NESDC

Figure 5: ...dragging down overall GDP growth

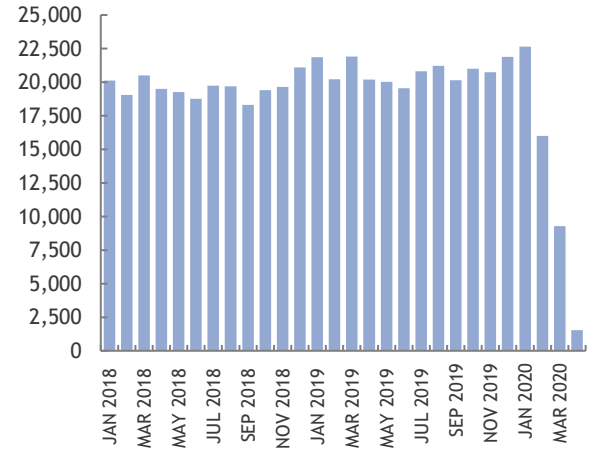
(Percentage-point contribution to real GDP growth, year-on-year)



Source: NESDC; World Bank Staff calculations

Figure 6: Number of aircrafts arriving in Thailand declined sharply in March, as restrictions began...

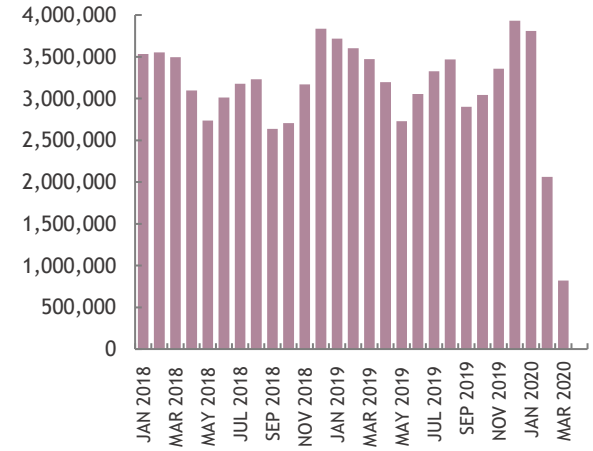
(Flight arrivals, number)



Source: Haver Analytics

Figure 7: ...leading to sharp decline in tourist arrivals

(International tourist arrivals, number of persons)



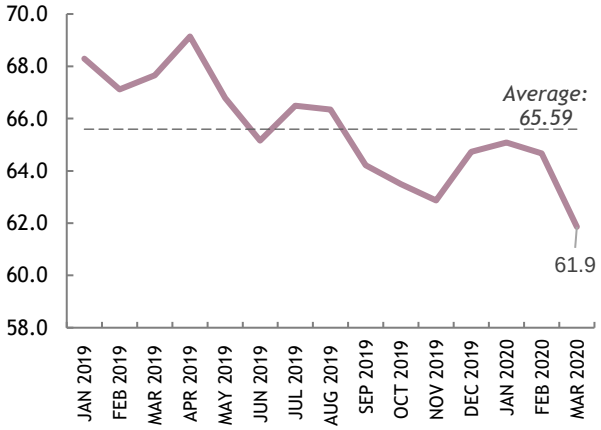
Source: Haver Analytics

...declining investment...

Decreased private (-5.5 percent y-o-y) and public (-9.3 percent y-o-y) investments led to aggregate investment shrinking by 6.5 percent y-o-y in Q1 2020 (Table 1). Capacity utilization fell to its lowest level in three years (Figure 8) and private construction declined sharply (Table 1), reflecting a contraction in residential buildings construction in the Bangkok metropolitan area. Public investments slowed considerably in Q1 2020 (see **fiscal section** for further discussion). Investments under the general government budget fell by 22.1 percent y-o-y in Q1 2020, with a sharp drop in government construction activity on ongoing

projects by 30 percent y-o-y. This was counterbalanced slightly by a pick-up in investment by State Owned Enterprises (SOEs), which rose by 12.1 percent y-o-y in Q1 2020.

Figure 8: Capacity utilization is declining
(Base Year 2016 = 100, Seasonally Adjusted)



Source: Office of Industrial Economics, Ministry of Industry

Table 1: Private investment index growth turns negative across all sub-categories in q1 2020

% yoy	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Private Investment Index	0.2	-2.4	-2.7	-5.8	-6.4
Construction Area Permitted	0.4	-2.7	-6.2	-6.8	-2.1
Construction Material Sales Index	0.7	2.5	-3.3	-1.8	-0.8
Import of Capital Goods	2.3	-0.6	-2.7	-3.5	-8.6
Domestic Machinery Sales	-2.3	-5.2	-5.7	-8.8	0.3
Number of Newly Registered Motor Vehicles for Investment Purpose	6.9	-1.7	-2.7	-15.7	-11.3

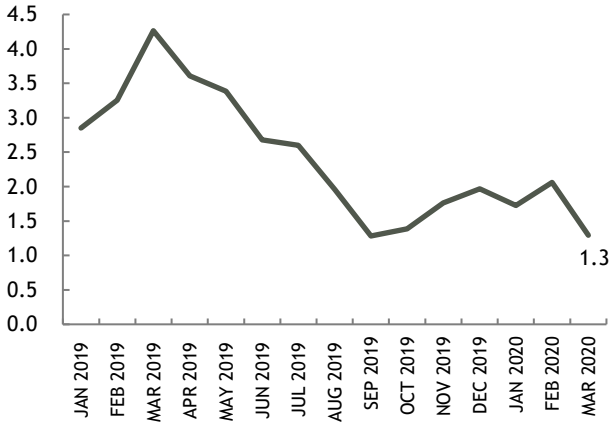
Source: Bank of Thailand and World Bank staff calculations
Note: Construction material sales index includes sales of cement (portland, mixed, and various types), clinkers, ready-mixed concrete, concrete piles, concrete floor planks, bricks, cement pipes, sanitary fixtures, wall/floor tiles, asbestos cement roman roofing tile, and roofing tile. Total import of capital goods excludes rental and leasing transportation items and includes computer and information services (imports of services).
Total number of newly registered motor vehicles excludes motorcycles and passenger cars (seven-or-less seaters)

..and slowing growth of private consumption, driven by declining incomes and the impact of NPIs.

Private consumption expanded by 3.0 percent y-o-y in Q1 2020, down from 4.1 percent y-o-y in Q4 2019, and expanding at only 0.2 percent seasonally adjusted q-o-q. The key drivers were declining household incomes, particularly from late February 2020 due to the impact of the COVID-19 outbreak (see **labor and poverty** section for further details), and from the impact of NPIs, particularly mobility restrictions, enacted as a response to the outbreak (Figure 9 and 10). The decline in consumption was particularly sharp in March 2020 for sales of durables such as motorcycles and cars; transportation, restaurant and hotel services; and consumption by tourists and non-residents (Table 2).

Figure 9: Growth of the private consumption index has begun to slow

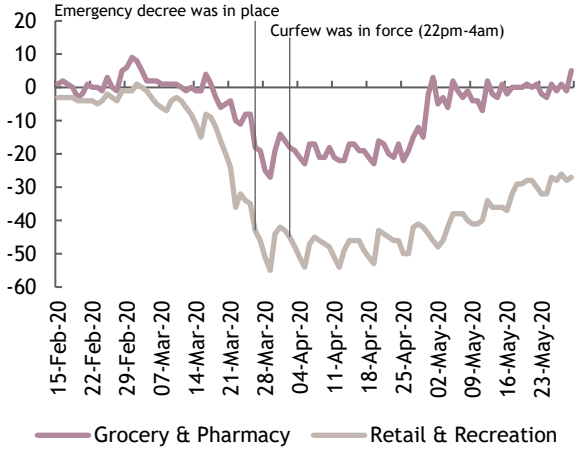
(% change, year-on-year, 3-month moving average)



Source: Bank of Thailand

Figure 10 …as mobility restriction affect consumption activities, with the impact intensifying in Q2

(Change in Visits relative to yearly baseline)



Source: Google Community Report

Note: Grocery & Pharmacy represents mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies. Retail & Recreation represents mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters

Table 2: Private consumption declined, dragged down by lower spending by tourists

% yoy	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Private Consumption Index	4.3	2.7	1.3	2.0	1.3
Non-durables Index	2.7	3.6	1.9	1.2	0.6
Semi-durables Index	1.8	1.1	0.4	-0.7	-2.2
Durables Index	5.9	0.5	-3.4	-8.9	-12.0
Services Index	3.9	3.3	2.1	2.1	-9.2
Non-residents expenditure Index	-1.4	5.6	3.2	-7.0	-44.2

Source: Bank of Thailand and World Bank staff calculations

Notes:

- Non-durables Index consists of Nielsen's fast-moving consumer goods index, Household electricity consumption, Sales of fuel consumption, and Sales of Alcohol and Tobacco.
- Semi-durables Index consists of Retail sales of textile and apparel at constant price, and Import of textile and clothing at constant price
- Durables Index consists of Sales of Passenger cars, Motorcycles and Commercial cars.
- Services Index consists of VAT of hotel and restaurant at constant price, Sales of passenger transportations at constant price.
- The actual net tourist expenditure for personal travel. This index is used to subtract total expenditure to obtain Thai private consumption

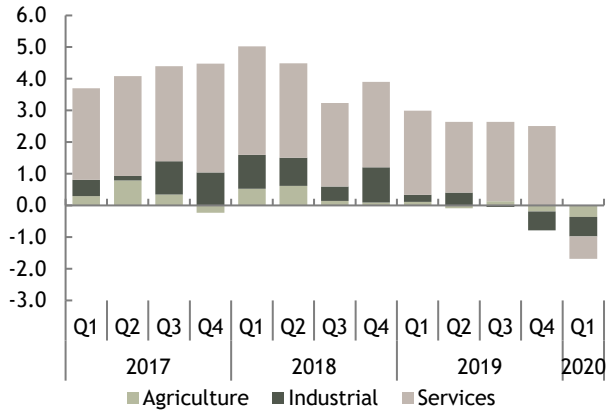
On the supply side, the economic contraction was broad-based …

The economy shrank by 1.8 percent y-o-y in Q1 2020, with all sectors contracting: agricultural production by 5.7 percent, industrial production by 1.9 percent and services sector by 1.1 percent y-o-y (Figure 11). Agricultural production (Figure 12) continued declining, driven by reduced yields of major crops such as paddy, sugarcane, maize, cassava and oil palm on account of continued dry weather

conditions. This was counterbalanced by a slight pick-up in vegetable, rubber and livestock production.

Figure 11: The growth contraction was broad-based...

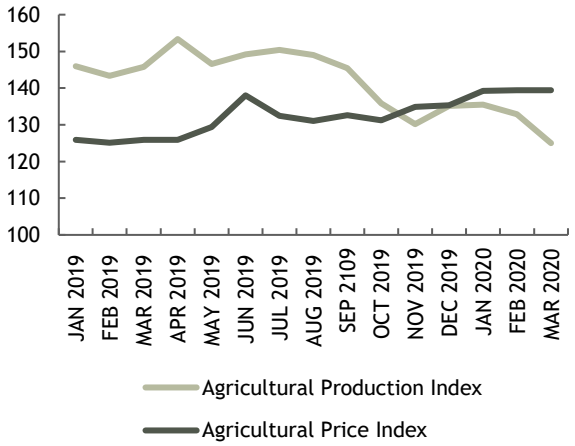
(Percentage-point contribution to real GDP growth, year-on-year)



Source: World Bank staff calculations

Figure 12: ...with agriculture sector contracting due to continued decline in production

(Base Year 2005 = 100, Seasonally Adjusted, Major Crops)



Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

Note: Major crops include grains, perennials, fruits, vegetables, oilseeds and flowers

..as manufacturing contracted, due to slowing external and domestic demand..

The manufacturing sector contracted by 2.2 percent in Q4 2019 and 2.7 percent in Q1 2020, continuing its weak performance over several quarters. This reflects the slowdown in exports, particularly for motor vehicles, food products and non-metallic mineral products. In contrast to previous quarters, domestically oriented manufacturing industries such as beverages, tobacco, textile and apparel, also contracted in Q1 2020 due to softening private consumption. Manufacturing and exports of computer and electronic parts increased marginally in Q1 2020 and was the only sub-sector showing growth.

..and services no longer supported overall growth, due to the sharp decline in tourism.

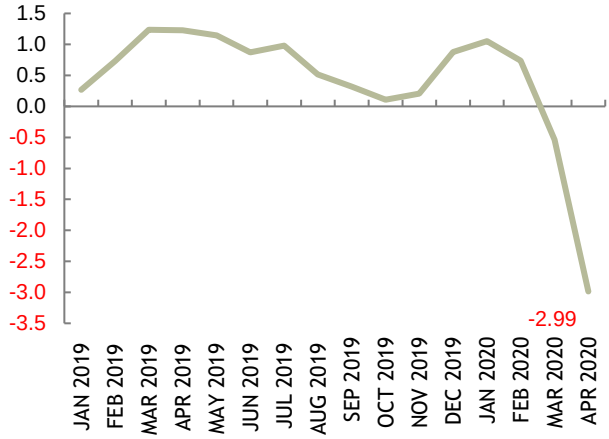
The services sector contracted by 1.1 percent y-o-y in Q1 2020, registering its first contraction in over five years. This reflects a sharp drop in tourist arrivals, resulting in a decline in tourism related sectors such as transportation and storage, accommodation and food service activities. In addition, slowing private consumption in March 2020 contributed to a deceleration in growth of wholesale and trade services, which grew at 4.5 percent y-o-y in Q1 2020 in contrast to 5.2 percent y-o-y in Q4 2019.

iv. Inflation declined reflecting falling energy prices and weakening demand

Inflation fell sharply in March 2020, driven by falling energy prices

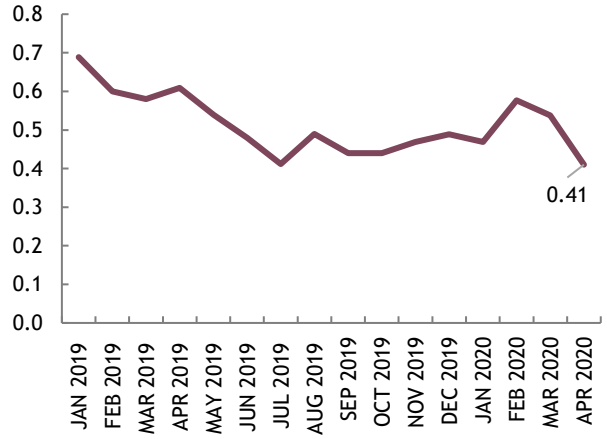
Headline inflation remained positive although, subdued, in January and February 2020, but fell sharply to -3.0 percent in March 2020 (Figure 13), before declining further to -3.44 percent as at end-May 2020. This is driven by a sharp decline in global energy and fuel prices. Core inflation also fell in March 2020 to 0.41 percent (Figure 14) with non-food core inflation declining sharply reflecting a decline in domestic demand.

Figure 13: Headline inflation fell sharply driven by fall in energy prices…
(Headline inflation, % change y-o-y)



Source: Ministry of Commerce

Figure 14: ...with core inflation rate also declining in line with slowing domestic demand
(Core inflation, % change, y-o-y)



Source: Ministry of Commerce

v. The current account surplus narrowed and portfolio flows accelerated, but reserves remain adequate

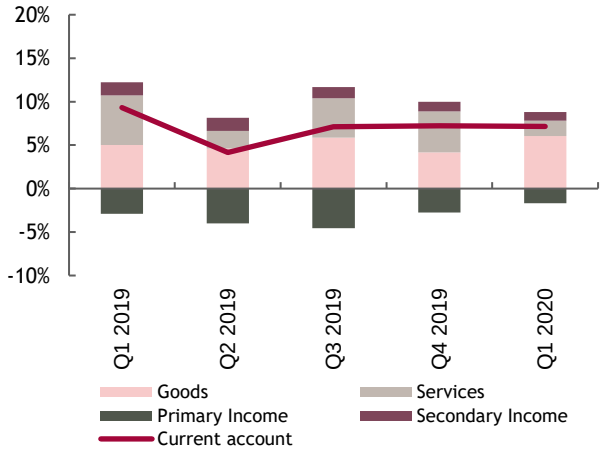
The current account surplus narrowed slightly in Q1 2020 on account of weakening receipts from tourism and is anticipated to narrow further in Q2 2020.

The current account fell to 7.1 percent of GDP in Q1 2020 from 7.2 percent of GDP in Q4 2019 (Figure 15). This was driven by a fall in services surplus (from 4.7 percent of GDP in Q4 2019 to 1.7 percent of GDP in Q1 2020) due to declining tourism receipts. This was counterbalanced by a smaller deficit in primary income (from 2.7 percent of GDP in Q4 2019 to 1.7 percent of GDP in Q1 2020) due to an increase in investment income from abroad. The current account surplus is expected to narrow significantly in Q2 2020, with services exports expected to severely impacted as tourism receipts dwindle on account of a steep drop in tourist arrivals.

The financial account recorded net capital outflows in Q1 2020, driven by portfolio and FDI outflows.

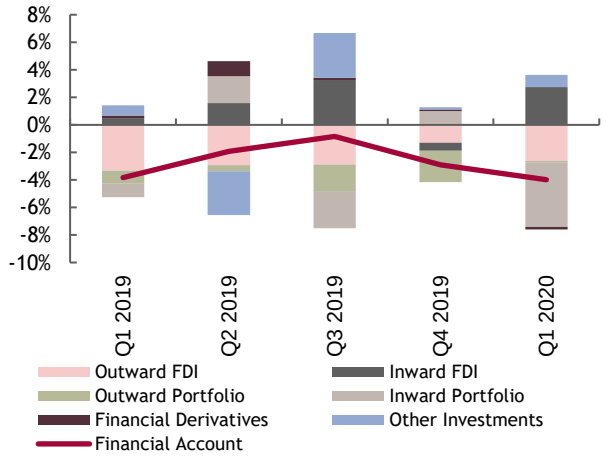
Net capital outflows stood at 4.1 percent of GDP in Q1 2020, larger than the 2.9 percent of GDP net outflows recorded in Q4 2019 (Figure 16). The larger deficit was driven by an uptick in outward FDI, which rose to 2.6 percent of GDP in Q1 2020 (from 1.3 percent of GDP in Q4 2019). Portfolio outflows also accelerated in Q1 2020, increasing to 4.9 percent of GDP from 1.2 percent of GDP in Q4 2019.

Figure 15: The current account surplus continued to narrow, with lower service receipts from tourism
(4-quarter rolling average, % of GDP)



Source: Bank of Thailand; World Bank staff calculations

Figure 16: The financial account went further into deficit with a sharp increase in portfolio outflows
(4-quarter rolling average, % of GDP)



Source: Bank of Thailand; World Bank staff calculations

The narrowing current account surplus and increasing outflows was reflected in a depreciation of the Thai Baht.

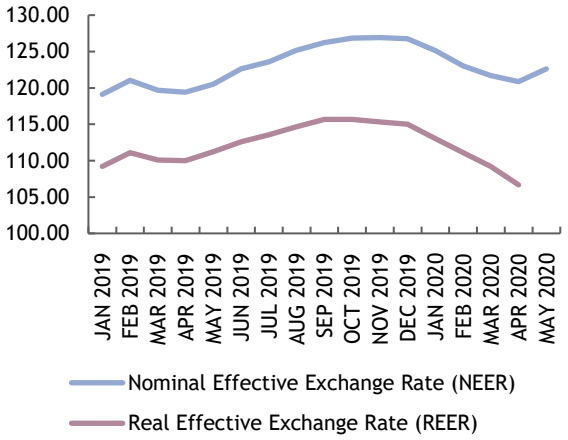
The baht saw significant depreciation in Q1 2020, reversing the strong appreciation in 2019 (Figure 17), reflecting lower tourism related receipts and increased net outflows. As of end-May 2020, the exchange rate stood at 31.83 baht/USD, compared to 30.2 baht/USD at end-2019. In NEER terms, Thai baht depreciated by 2.8 percent from the previous quarter (Figure 17). Most currencies in the region also depreciated against the USD during this period (Indonesia, Malaysia, China).

Foreign exchange reserves remain adequate.

Thailand's foreign exchange reserves stood at USD226.5 billion at the end of March 2020 equivalent to 3.8 times the country's short-term external debt or 14 months of import value (Figure 18).

Figure 17: The Thai baht depreciated significantly with both the NEER and the REER dropping from November 2019

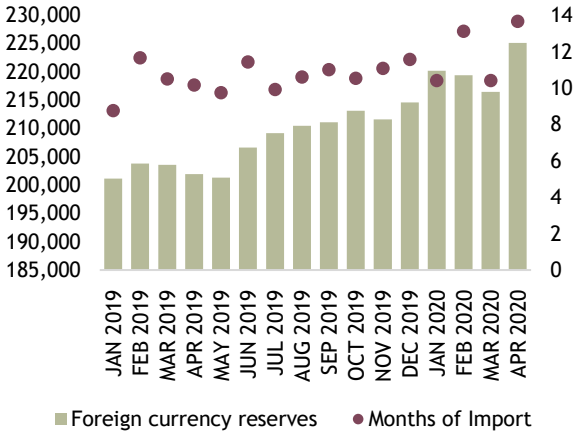
(Based year 2012 = 100)



Source: Bank of Thailand; World Bank staff calculations

Figure 18: Foreign currency reserves remained ample, at over 14 months of import

(Millions of US Dollars)



Source: Bank of Thailand; World Bank staff calculations

Table 3: The current account, financial account, and foreign-exchange reserves

(Percent of GDP, unless otherwise indicated)

	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Current account	4.8	9.3	4.2	7.1	7.2	7.1
Exports of goods	48.0	45.0	46.1	46.5	41.3	45.6
Imports of goods	44.4	40.0	41.5	40.7	37.2	39.6
Tourism receipts	15.3	16.7	13.1	15.1	15.3	12.0
Financial account	-1.9	-3.8	-1.9	-0.8	-2.9	-4.0
Outbound FDI	-3.5	-3.3	-2.9	-2.9	-1.3	-2.6
Inbound FDI	3.1	0.5	1.6	3.3	-0.6	2.8
Outbound portfolio investment	-0.1	-1.0	-0.5	-1.9	-2.3	-0.1
Inbound portfolio investment	0.0	-1.0	2.0	-2.7	1.0	-4.7
Reserves, excluding net forward position (USD billions)	205.6	212.2	215.8	220.5	224.3	226.5
Reserves relative to short-term external debt	3.2	3.4	3.5	3.7	3.7	

Source: Bank of Thailand; World Bank staff calculations

vi. The fiscal deficit has increased with declining revenues and rising expenditure commitments arising from the COVID-19 response

After a series of delays, the budget for FY2020 was approved by parliament in late February.

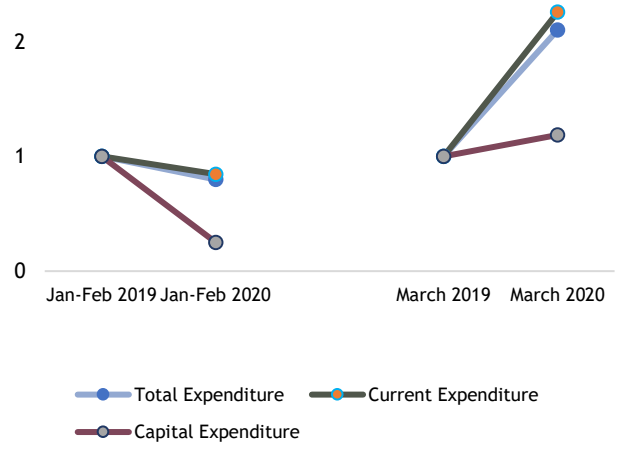
The approved budget is retroactively effective as of October 2019 (the start of the fiscal year) and amounts to 3.2 trillion baht. The fiscal deficit was projected at 469 billion baht (2.7 percent of GDP) compared to 382 billion baht (2.2 percent of GDP) in the previous fiscal year. However, developments since the approval of the budget – the economic downturn from the COVID-19 outbreak and the fiscal response – will likely lead to a much wider fiscal deficit than projected.

The pace of government expenditures has picked up since the budget was approved in February 2020...

The FY 2020 Budget passage was considerably delayed, and these delays contributed to a 20 percent lower overall spending and 75 percent lower capital spending in January and February 2020 than same period in 2019. Spending picked up in March 2020, with overall spending at double the rate of March 2019, and, as a result, Q1 2020 spending was higher than Q1 2019 spending (Figure 19 and 20)

Figure 19: Spending picked up in March post budget approval…

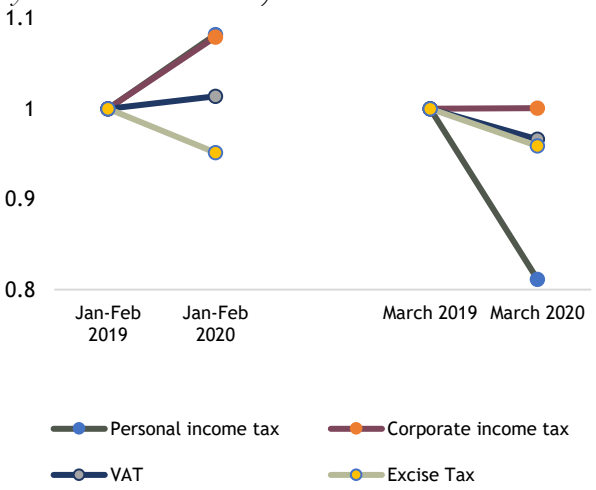
(Spending between Jan & Feb are scaled by spending in Jan & Feb 2019. And spending in March is scaled by spending in March 2019)



Source: Fiscal Policy Office, Ministry of Finance

Figure 20: …as revenue collections declined

(Revenue collection between Jan & Feb are scaled by revenue in Jan & Feb 2019. And revenue collection in March is scaled by revenue in March 2019)



Source: Fiscal Policy Office, Ministry of Finance

..and is likely to pick-up further with the approval of a series of fiscal response packages to mitigate the impact of COVID-19, estimated at over 12.9 percent of GDP

The COVID-19 response packages were announced in three phases (**See Part 2 for a deeper discussion of the policies and impacts**): (i) Phase 1 issued on March 4th was focused on providing financial assistance to SMEs; (ii) Phase 2 issued on March 24th included cash transfers to selected households and included the postponement the deadline for tax filing; (iii) Phase 3 was the largest package. valued at around 1.9 trillion baht and included the expansion of coverage of the cash transfers to households and farmers impacted by the outbreak and funding for medium to long term economic and social rehabilitation projects.[7]

Revenue also declined in Q1 2020, partly driven by fiscal measures enacted to respond to the COVID-19 outbreak.

A fall in non-tax revenue from government agencies was responsible for the registered decline in total revenue collection between January and March 2020, compared to the same period in the previous year. Between January and February 2020, all sources of tax revenue collection registered an increase except for revenue from excise tax. However, revenue fell by 7.8 percent in March 2020 when compared to same period last year. All sources of tax revenue registered a decline. The largest decline was registered by the personal income tax account, due to the extension of the deadline for filing taxes provided in Phase 2 of the government's stimulus

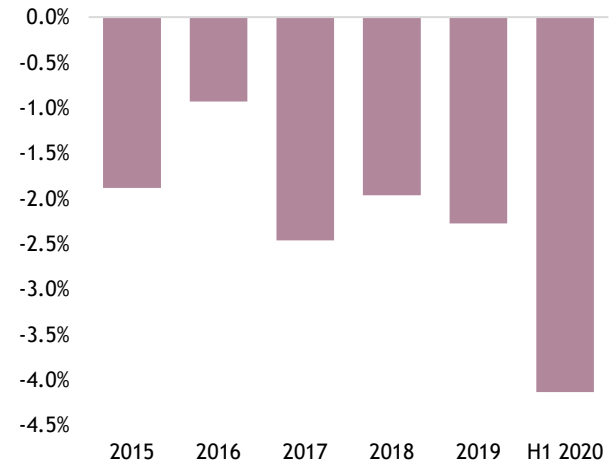
[7] In sum Phase 1 and Phase 2 were worth 724 billion baht while Phase 3 was worth 1.9 trillion baht.

package. The registered decrease in VAT and excise tax revenues in March 2020 can be attributed to lower consumer spending amidst the outbreak.

The revenue decline and expenditure pick up have contributed to an increase in government deficit from October 2019 to March 2020…

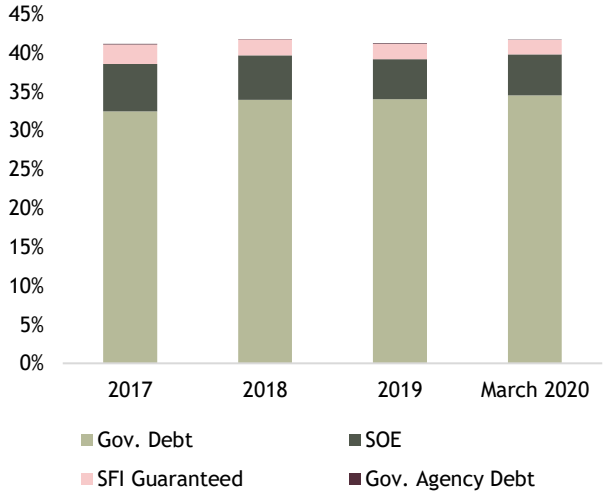
The budget approved by parliament projected the fiscal deficit for FY 2020 at 469 baht billion, however it was already estimated at over 351 billion (4.1 percent of GDP) in the first half of FY2020. The deficit in this fiscal year is already larger than the deficit recorded in each of the five previous fiscal years (Figure 21).[8] Reflecting the higher deficit, the government also plans to borrow around 900 billion baht to fund Phase 3 of the stimulus package.

Figure 21: The budget deficit widened in the first half of the fiscal year, compared to each of the previous 5 years...
(% of GDP)



Source: Fiscal Policy Office, Ministry of Finance

Figure 22: …and public debt remains below the prudential limit of 60 percent of GDP, but is expected to increase
(% of GDP)



Source: Fiscal Policy Office, Ministry of Finance

..which, over time, will push Thailand closer to statutory public debt limits.

Thailand's public debt levels, at 41.7 percent of GDP at the end of March 2020, remain compliant with the numerical limits set in the Fiscal Responsibility Act enacted in 2018 (Figure 22). These limits include the following (i) public debt to GDP to remain less than 60 percent (ii) debt service to revenue to remain less than 35 percent (iii) foreign currency debt to total public debt to remain less than 10 percent (iv) foreign currency debt to value of total exports to remain less than 5 percent. With declining revenues and rising expenditure commitments, Thailand's projected debt is expected to increase significantly to 56.2 percent of GDP in 2022 (Table ES1), edging Thailand closer to the statutory debt limits.

[8] The main indicator of the debt tracked by the Public Debt Management Office is quite broad by international standards. It includes the central government's debt, guaranteed and non-guaranteed debt of the non-financial state enterprises, the SFIs (guaranteed debt only), the Financial Institutions Development Fund, and the autonomous agencies (the Energy Fund Administration Institute and the National Village and Urban Community Fund). It excludes the local authorities' debt which is excluded in the Public Debt Management Act.

Table 4: Fiscal operations

(Percent of calendar year GDP) (a)

Central Government	2017	2018	2019	2020 H1
Revenue	**17.3%**	**17.5%**	**17.1%**	**15.5%**
Taxes	14.7%	14.8%	14.4%	12.6%
Social contributions	0.0%	0.0%	0.0%	0.0%
Grants	0.1%	0.0%	0.0%	0.0%
Other revenue	2.5%	2.7%	2.7%	3.0%
Total Expenditure	**19.7%**	**19.5%**	**19.4%**	**19.7%**
Current Expense	**18.3%**	**17.9%**	**17.9%**	**18.6%**
Compensation of employees	5.2%	4.9%	4.8%	4.7%
Use of goods and services	3.4%	3.6%	3.6%	3.5%
Consumption of fixed capital	1.2%	1.0%	1.0%	1.0%
Interest	0.9%	1.0%	1.0%	0.9%
Subsidies	0.7%	0.6%	0.7%	1.3%
Grants	4.2%	4.2%	4.4%	4.6%
Social benefits	2.0%	2.0%	2.1%	2.2%
Other expense	0.7%	0.5%	0.3%	0.4%
Capital Expenditure	**1.5%**	**1.5%**	**1.5%**	**1.1%**
Primary Balance	**-1.5%**	**-1.0%**	**-1.3%**	**-3.2%**
Fiscal Balance	**-2.5%**	**-2.0%**	**-2.3%**	**-4.1%**
Net acquisition of financial assets	0.7%	0.9%	-1.3%	-2.5%
Net incurrence of liabilities	2.6%	2.8%	1.0%	1.6%
Domestic creditors	1.9%	2.2%	0.8%	1.4%
External creditors	0.7%	0.5%	0.2%	0.2%
Memo: General government				
Revenue	21.1%	21.5%	21.0%	_
Total expenditure	19.0%	18.9%	18.6%	_
Fiscal balance	-0.4%	0.1%	0.4%	_
Government debt	32.5%	33.9%	34.0%	34.5%
Public sector debt	41.1%	41.8%	41.2%	41.7%

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

Notes:

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

(b) All the numbers were constructed from monthly fiscal data from the Fiscal Policy Office

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

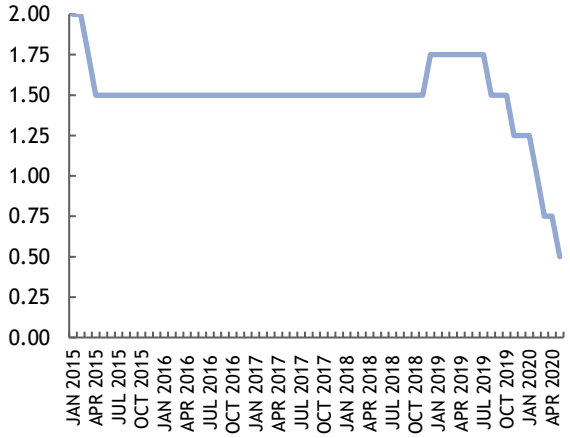
vii. Despite rising volatility, Thailand's financial system remains stable and with adequate buffers

With low inflation and a slowing economy, the Bank of Thailand lowered its policy rate to 0.5 percent.

The Bank of Thailand cut the policy rate from 1.25 to 0.5 percent during February-May as the COVID-19 outbreak took hold globally, continuing the monetary easing cycle that began in August 2019 (Figure 23).[9] Despite growing pockets of risks in the financial sector (see below), the monetary policy committee deemed it necessary to lower the policy rate as the economic outlook deteriorated considerably.

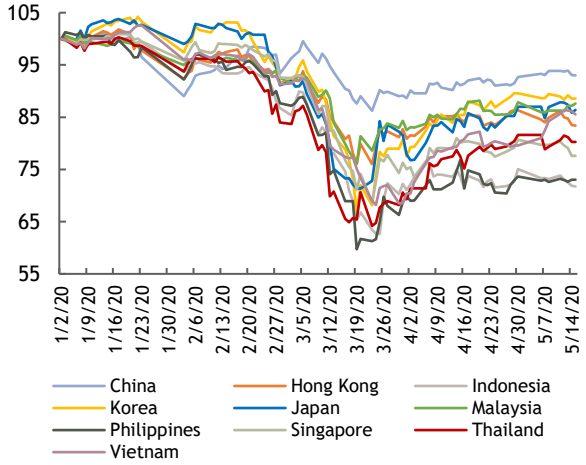
Figure 23: The Bank of Thailand continued monetary easing in 2020 and cut the policy rate to 0.5 percent

(% per annum)



Source: Bank of Thailand

Figure 24: Evolution of main EAP stock indices



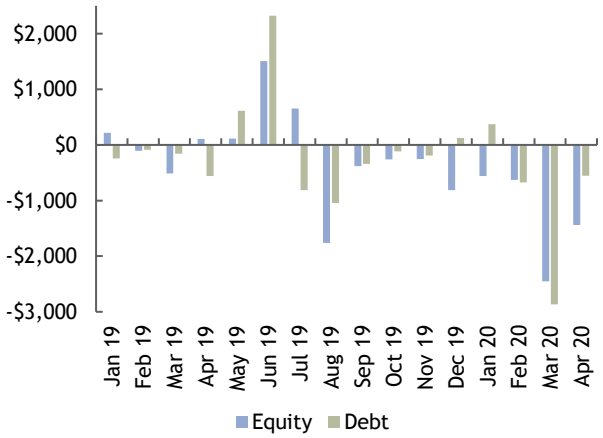
Source: Yahoo Finance; World Bank staff compilation

The COVID 19 outbreak and economic slowdown have resulted in considerable financial market volatility…

As the COVID-19 outbreak took hold, volatility in the equities market rose markedly. The Stock Exchange of Thailand Index (SET) plunged by approximately 35 percent between early January and mid-March 2020, before recovering about 15 percent by mid-May (Figure 24). Thailand experienced USD 8.8 billion in capital outflows between January and April 2020, driven largely by the negative market sentiment caused by the COVID-19 pandemic (Figure 25).

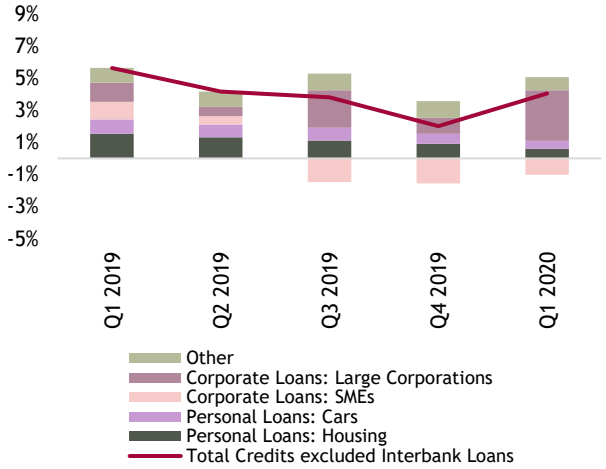
[9] Monetary Policy Decision: https://www.bot.or.th/English/PressandSpeeches/Press/2019/Pages/n4362.aspx

Figure 25: Thailand capital flows - Net non-resident purchases of EM Stocks and Bonds (Jan 2019 - April 2020)
(USD Million)



Source: IIF Global Debt Tracker

Figure 26: Commercial bank lending accelerated in Q1 2020 due to large corporates but loans to households and SMEs decelerated
(Percentage point contribution to year-on-year growth)



Source: Bank of Thailand; World Bank staff calculations

…highlighting underlying pockets of vulnerability, particularly household indebtedness and SME weakness.

There are two key sources of vulnerability in the banking system, which would likely be exacerbated with the COVID-19 crisis: household indebtedness and weaknesses in corporates and in small and medium enterprises (SMEs). Lockdown measures and slowdown in economic activity have resulted in firms in certain business sectors and households facing immediate liquidity shortages, impairing their ability to repay loans. Household debt in Thailand is the second highest in East Asia (at 78.6 percent of GDP in 2018). Credit to households saw a rapid expansion over the last decade, reaching over 80 percent of GDP by 2015 from 59.3 percent in 2010, largely driven by auto loans and housing loans (Figure 26). While corporate debt appears to have been relatively stable at 70.5 percent of GDP in 2017[10], there are certain concerns about the debt-at-risk and rollover risk. SMEs have been experiencing an increase in non-performing loans (NPLs) and special mention loans (SPLs) in recent years. NPLs of SMEs in the manufacturing, construction, trade and real estate sectors appear to be relatively high, ranging from 4 to 7 percent, thus raising concerns about the severity and length of the current crisis as it could significantly impact the asset quality of the banking system.[11]

Despite these vulnerabilities, the Thai financial system remains stable, with reforms enacted since the Asian Financial Crisis playing a crucial role.

According to the voluntary Financial Sector Assessment Program (FSAP) in 2019, Thailand's high level of compliance with international standards has supported the development of a relatively deep, diverse, and inclusive financial sector, though significant challenges remain (**Box 2 highlights the role of reforms since the Asian Financial Crisis in strengthening resilience**). The 2019 FSAP has revealed the improved strength of Thailand's financial system, with the main financial sector vulnerabilities being largely contained. According to the stress tests performed by the IMF, the Thai banking system has exhibited considerable resilience to severe shocks, with the solvency stress tests indicating the largest banks could withstand a shock roughly as severe as the Asian Financial Crisis. Moreover, although some banks would face funding pressures, overall Thai banks appear well positioned to

[10] Same level as in 2009.
[11] IMF, pp. 10.

weather considerable withdrawals of liquidity. Furthermore, investment funds liquidity stress tests revealed they could survive a severe redemption shock, with limited impact on the banks and the bond market. Finally, an assessment of the interconnectedness in both the banking sector and in the financial system more broadly did not reveal significant vulnerabilities, and interconnectedness appears to be at its lowest level since 2010, both within the banking sector, and across sectors[12].

Box 2: Why Thailand's financial system is better prepared than in previous crises

The Thai formal financial sector is in a considerably stronger position to deal with financial shocks as compared to the Asian Financial Crisis in 1997-1998. The memory of the 1997-1998 East Asian Financial Crisis remains strong in EAP countries and many countries in the region, including Thailand, learned the hard lessons from the crisis and undertook considerable efforts to avoid a similar fate. As illustrated in Table B2.1, largest economies in the EAP region performed considerably better in terms of key financial soundness indicators prior to the COVID-19 Crisis than before the 1997-1998 Asian Financial Crisis. In Thailand's case, the country performed much better just before the COVID-19 Crisis than before the 1997-1998 East Asian Financial Crisis: the capital adequacy ratio (CAR) of its banking sector was 18 percent in December 2019 (vs. 11 percent in 1998), the return on equity (ROE) was 8.6 percent in December 2019 (vs. -13.6 percent in 1997 and -106.3 in 1998), the non-performing loan ratio was 3 percent in December 2019 (vs. 43 percent in 1998) and the liquid assets to total deposits and short term funding were 19.3 percent as of December 2019 (vs. 10.8 percent at the end of 1997 and 11.5 percent at the end of 1998).

Table B2.1: FSIs before the East Asian Financial Crisis and COVID-19 outbreak

	Select FSIs at the Time of Recent Crises					
Country	Capital Adequacy: Regulatory			Earnings and Profitability: Return		
	Asian Financial Crisis end 1997	Asian Financial Crisis end-1998	COVID-19 Crisis 2020-latest available	East Asian Financial Crisis end 1997	East Asian Financial Crisis end-1998	COVID-19 Crisis 2020-latest available
China			14.5	6.5	3.9	12.3
Indonesia		-13.0	23.3	5.6	-500.0	16.0
Korea		8.0		-11.3	-74.5	7.7
Malaysia		12.0	18.3	2.4	3.1	12.9
Philippines		18.0	15.2	8.0	5.5	14.0
Singapore		18.0	17.0	5.0	2.7	14.1
Thailand		**11.0**	**19.4**	**-13.6**	**-106.3**	**11.6**
Vietnam			11.6	11.2	11.0	12.8
Country	Asset Quality: Non-Performing			Liquidity: Liquid Assets Total		
	East Asian Financial Crisis end 1997	East Asian Financial Crisis end-1998	COVID-19 Crisis 2020-latest available	East Asian Financial Crisis end 1997	East Asian Financial Crisis end-1998	COVID-19 Crisis 2020-latest available
China			1.9	30.1	24.7	15.6
Indonesia		49.0	2.4	36.1	42.7	19.8
Korea		7.0	0.6	18.4	19.9	9.3
Malaysia		19.0	1.5	25.7	29.1	18.4
Philippines		12.0	2.0	20.4	22.1	15.0
Singapore			1.3	31.0	33.6	20.7
Thailand		**43.0**	**3.1**	**10.8**	**11.5**	**19.3**
Vietnam			1.6	64.3	63.7	19.2

Source: World Bank FinStats 2020 Database

[12] IMF, pp. 7-8.

Box 2: Why Thailand's financial system is better prepared than in previous crises

Whereas Thailand's financial sector appears to be in a considerably stronger position today than before the 1997-1998 East Asian Financial Crisis, it nevertheless exhibits some of the most heightened vulnerabilities among the large EAP economies. As Table B2.2 on the EAP Banking Sector Heatmap illustrated, relative to its EAP peers, Thailand is facing increased risks and vulnerabilities in terms of both earnings and profitability, exhibiting the lowest return on equity (ROE) at 10.1 percent, as well as on the asset quality (NPL ratio of 3.1 percent, NPL net of provisions to capital of 9.3 percent), and liquidity, with the lowest liquid assets to total assets ratio of 18.8 percent and second lowest liquid assets to short-term liabilities ratio of 31.5 percent, after Indonesia's 30.8 percent. These vulnerabilities are confirmed by the S&P's Banking Industry Country Risk Assessments (BICRAs), where Thailand is ranked as either high, very high, or extremely high risk on five out of the eight metrics the S&P is monitoring (Table B2.3). As of March 2020, Thai commercial banking system maintained capital funds common equity Tier 1 and capital adequacy ratio (BIS ratio) at 15.16% and 18.73% of risk assets respectively, in line with the Basel III framework, to absorb losses arising from an unexpected crisis and continue providing key financial services. The banking system has continuously provided loan loss provision following the implementation of the Thai Financial Reporting Standard 9 (TFRS 9) with NPL coverage ratio of 143.3% while the liquidity coverage ratio (LCR) registered at 185.7% as at March 2020. According to the BOT, commercial banks' loan quality deteriorated with NPL (or stage 3) ratio at 3.05% of total loans while the ratio of loans with significant increase in credit risk (SICR or stage 2) to total loans stood at 7.70% as of March 2020.

Table B2.2: Financial soundness indicators – banks

Q4 2019 or latest available	Financial Strength Indicators									
	Capital Adequacy		Earning & Profitability							
	Regulatory Tier 1 Capital to-Risk-Weighted Assets		Return on Assets		Return of Equity		Interest Margin to Gross Income		Non-interest Expenses to Gross Income	
China	11.8	↑	1.0	↓	12.3	↓	76.7	↑	28.6	↑
Indonesia	21.8	↑	2.5	→	16.0	↓	66.3	↓	46.3	↑
Malaysia	14.8	↑	1.5	↑	12.9	↓	57.9	↑	42.4	↑
Philippines	14.0	↓	1.5	→	14.0	↑	74.0	↑	58.7	↑
Singapore	15.3	↑	1.3	↓	14.1	↓	63.5	↑	44.3	↑
Thailand	15.1	↑	1.5	↑	10.1	↑	61.7	↓	48.1	↑
	Financial Vulnerability Indicators									
	Asset Quality				Liquidity				FX Risk	
	NPL to total gross incomes		NPL Net of Provisions to Capital		Liquid Assets to Short Term Liabilities		Liquid Assets to Total Assets		Net Open Position in Foreign Exchanging to Capital	
China	1.9	↑	-9.5	↑	57.0	↑	23.9	↓	2.4	↓
Indonesia	2.4	↓	5.0	↓	30.8	↓	20.9	↓	1.6	↓
Malaysia	1.5	↓	5.2	↓	158.8	↑	23.0	↓	4.9	↑
Philippines	2.0	↓	4.6	↓	48.8	↓	32.1	↓	5.8	↑
Singapore	1.3	↓	6.4	↓	73.8	↓	66.9	↓		
Thailand	3.1	→	9.3	↓	31.5	↓	18.8	↓		

Source: International Monetary Fund, Financial Soundness Indicators

Note: A detailed description of each variable is available at the end of the document. Color indicates the level of risk and arrows up (down) denote a quarterly increase (decrease) of at least one standard deviation over the historical average (2008Q1–2018Q4). Data for Thailand reflect Q3 2019.The methodology and thresholds are original work from the IFC Global Macro and Market Research group. NPL = nonperforming loan

Box 2: Why Thailand's financial system is better prepared than in previous crises

Table B2.3: S&P's Banking Industry Country Risk Assessments (BICRAs)

Key Banking Sector Risks

				Economic risk			Industry risk		
Country	BICRA group	Economic risk trend	Industry risk trend	Economic resilience	Economic imbalances	Credit risk in the economy	Institutional framework	Competitive dynamics	Systemwide funding
Australia	3	Negative	Stable	VL	H	L	L	L	I
Bangladesh	9	Stable	Stable	VH	L	EH	EH	EH	I
Brunei	6	Stable	Stable	I	L	H	EH	I	L
Cambodia	9	Stable	Stable	VH	H	EH	EH	H	VH
China	6	Stable	Stable	I	H	VH	H	H	VL
Hong Kong	2	Stable	Stable	L	I	I	VL	L	VL
India	5	Negative	Stable	H	L	VH	H	H	L
Indonesia	6	Negative	Stable	H	L	VH	H	H	I
Japan	3	Stable	Stable	L	VL	L	I	H	VL
Korea	3	Stable	Stable	L	VL	H	I	H	L
Malaysia	4	Stable	Stable	H	L	H	I	I	L
Mongolia	9	Stable	Stable	H	VH	EH	EH	H	VH
New Zealand	4	Stable	Stable	VL	H	I	I	L	H
Papua New Guinea	9	Negative	Stable	EH	H	VH	VH	H	VH
Philippines	5	Stable	Stable	VH	L	H	H	I	I
Singapore	2	Stable	Stable	VL	I	I	VL	L	L
Sri Lanka	9	Negative	Negative	VH	VH	VH	VH	H	VH
Taiwan	4	Stable	Stable	I	L	I	I	VH	VL
Thailand	6	Stable	Stable	H	L	EH	I	H	L
Vietnam	9	Stable	Stable	VH	H	EH	EH	VH	I

Positive economic or industry risk trend | Stable economic or industry risk trend | Negative economic or industry risk trend

Very low risk (VL) | Low risk (L) | Intermediate risk (I) | High risk (H) | Very high risk (VH) | Extremely high risk(EH)

Data as of May 12, 2020.

Sources: Standard & Poor's

viii. The COVID-19 pandemic has put many jobs at risk

COVID-19 will likely lead to severe job loss, with impacts already evident in Q1 2020.

The impact of the COVID-19 crisis was beginning to show signs of impact in Q1 2020, as average working hours declined year-over-year[13] and more than 170,000 people in the formal sector filed for unemployment insurance. While significant uncertainty remains about the ultimate impact on the labor market, in late May 2020, the NESDC estimated that 8.4 million manufacturing and services jobs were at risk from COVID-19 in Q2 and Q3 2020. This is in addition to 6 million farmers at risk from drought and water shortages.[14]

The most common occupations in Thailand include service sector jobs that are at risk of being lost.

Jobs in the services sector were at particular risk from NPIs that kept people from visiting shopping malls, bars, restaurants, hotels, and other places where people congregate. The sectors that are deemed most **high-risk** in terms of impact are tourism, retail, accommodation, food, and manufacturing in export-oriented products. Workers in these sectors, such as shopkeepers, taxi drivers, sales assistants, and food service attendants constituted the most common occupations in Thailand in 2017 (Table 5).

[13] NESDC, 2020.

[14] https://www.bangkokpost.com/business/1925808/nesdc-14-4m-workers-at-risk

Labor impacts from COVID-19 will compound existing challenges to farmers.

Lower exports may also hurt the agricultural sector, which employs about one-third of the labor force. Those in this sector are also by far the poorest and primarily informal workers. In addition to facing new challenges from COVID-19, the agriculture sector has been struggling with persistent droughts, with nearly 6 million farmers estimated to be impacted by acute water shortage.

Table 5: Most common occupations in 2017, by ISCO 4-digit category

ISCO-08 4-digit code	Occupation	Number of workers in main occupation
6111	Field crop and vegetable growers	5,185,126
6112	Tree and shrub crop growers	2,759,665
6310	Subsistence crop farmers	1,840,741
5221	Shopkeepers	1,223,489
5223	Shop sales assistants	1,219,420
9211	Crop farm laborer	1,160,606
8322	Car, taxi and van drivers	831,746
5211	Stall and market salespersons	788,588
5120	Cooks	739,903
5246	Food service counter attendants	634,307

Notes: The labor force is 38 million people
Source: THA SES 2017, population weighted

Export-oriented sectors employ relatively fewer workers than services or agricultural sectors but may also experience job loss.

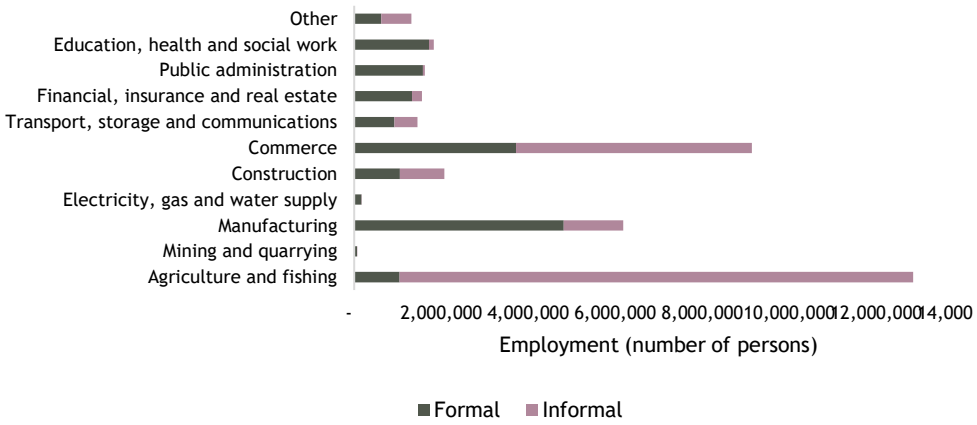
The supply and demand shock associated with COVID-19 puts Thailand's export-oriented sectors at the risk of contraction. However, these sectors account for a smaller share of employment, and the households dependent on them for income have lower rates of poverty and tend to be in the Central region close to Bangkok and port areas. Workers in the manufacturing sector are also more likely to be formal workers with safety nets and the possibility of collecting unemployment insurance in the event of job loss.

Informal workers are particularly vulnerable in the event of job loss.

More than half of the employed in Thailand are informal meaning that they are not covered under a social security scheme. In Q3 2018, there were an estimated 21.2 million informal and 17.1 million formal workers[15] (Figure 27). Besides agriculture with a 92 percent informality rate, jobs in commerce have the second highest rate of informality at 60 percent.

[15] Informal Employment Survey (2018) is conducted as an additional module in Q3 of the LFS. The 3rd quarter covers the harvesting season, thus the size of agricultural sector is smaller during other times of the year.

Figure 27: More than half of all workers are informal
(Number of persons)



Source: Informal Employment Survey, 2018-Q3
Notes: Employment is formal if the worker is subscribed to a Social Security Scheme

Wages in the informal sector are also much lower than in the formal sector.

Across all sectors, median monthly wages and salaries are lower for informal workers than their formal worker counterparts (Table 6). In some sectors such as in transport, or finance, the difference can be quite high.

Table 6: Monthly median monthly wages and salaries, by sector and formal/informal

(Unit: Baht)	Formal	Informal
Agriculture and fishing	5,280	5,000
Mining and quarrying	10,400	8,000
Manufacturing	10,000	7,000
Electricity, gas and water supply	16,000	6,700
Construction	9,360	7,360
Commerce	10,000	7,800
Transport, storage and communications	15,000	7,500
Financial, insurance and real estate	15,000	8,320
Public administration	15,000	7,500
Education, health and social work	18,000	6,600
Other	9,000	6,000

Source: 2018 Q3 LFS and Informal LFS

ix. With expected job loss, household income is expected to decline

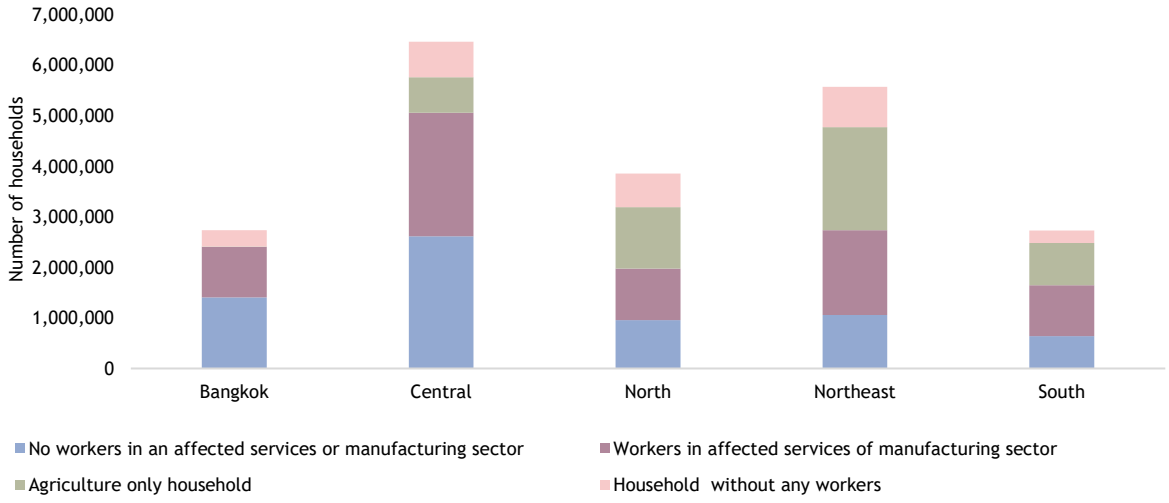
Loss of jobs in high-risk sectors will have a devastating impact on household well-being.

Across all regions in Thailand, a large share of the population resides in households where the main economic activity is in hard impact sectors due to COVID-19 or agriculture. As described above, sectors that are most likely to be affected are tourism, retail, accommodation, food, and manufacturing in export-oriented products.

Nearly a third of all households rely on income from impacted sectors.

In total, 33.5 percent of households have at least one member employed in a COVID-19 affected services or manufacturing sector (Figure 28). Based on these assumptions, the number of workers affected is estimated to be 8.3 million (excluding agriculture). This is very similar to the NESDC's estimate of 8.4 million estimated job loss in services and manufacturing (2.5 in tourism, 1.5 in the industrial sector, and 4.4 in other services)[16]. Populations in households receiving labor market income from tourism & services-related occupations and sector, ranging from 18.8 percent in the Northeast to 33 percent in Bangkok. Tourism related activities include accommodation, food, shop keepers, taxi drivers, travel guides, and street vendors.[17] Naturally, households in other sectors will also experience economic losses due to an overall slowdown in economic activity, though this aspect is not modeled in this section. In addition, 22.4 percent of households are exclusively employed in agriculture, and 13 percent of households do not have any working household members.

Figure 28: About 33.5 percent of households earned income from selected impacted sectors



Source: THA SES 2017

Notes: All households in Thailand can be grouped into four categories. See Table 7 for description of the four categories of households

[16] https://www.bangkokpost.com/business/1925808/nesdc-14-4m-workers-at-risk

[17] Using data from Thailand SES 2017, households related to five economic activity categories were identified. These categories were constructed based on their vulnerability to slowing economic activity related to the overall slowdown in economic growth as well as reduced tourism.

Affected households are reliant on labor market income as their primary source of income.

Non-agricultural households rely on labor market[18] income as their main source of income. In Bangkok, Central, and South regions, and among households that do not rely exclusively on agricultural activities, labor market income comprises about 90 percent of total income. Other sources of income include public assistance, remittances, which in April were 20 percent lower than the year prior, and financial. Across all regions, non-agricultural households rely on labor market income much more than agriculture households. Average monthly labor market income for households with employment in affected sectors range from about 17,500 baht per month in the Northeast region to 47,500 baht per month in Bangkok.

Many people moved out of Bangkok and returned to rural areas, and remittance income will likely decline.

Remittance income comprises a large share of total monetary income for households without working adults. About 13 percent of total households do not have working members, and remittance income comprises on average almost two-thirds of their total household income. As lockdowns were implemented in Bangkok, and travel and tourism declined, many workers returned to live with relatives in rural areas. Among respondents from a COVID-19 socio-economic impact survey, one main impact of the pandemic seemingly lies in displacement from urban areas (i.e. Bangkok). Survey respondents living in Bangkok decreased by about 80 percent from 9,373 residents before the pandemic to 1,874 residents after the pandemic (NSO, 2020). Moreover, in low and middle-income countries, globally remittances are expected to decline by 20% in 2020 (World Bank, 2020a).

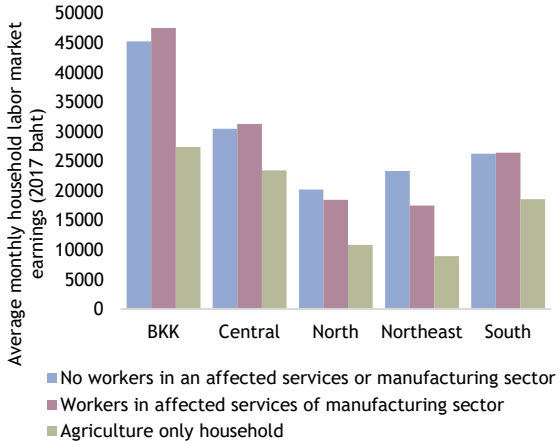
Safety nets will be crucial as labor market and remittance incomes decline.

Public assistance income will rise as a source of income for many households and replace lost earnings. As the economic impacts from COVID-19 persist, the government has responded with a large relief package totaling 1.9 trillion baht (about 12 percent of GDP). Of this amount, a 5,000-baht monthly handout program will benefit almost 15 million self-employed or laid-off workers for up to 3 months, which totals to about 225 billion baht[19]. Eligible workers in the formal sector are eligible to receive partial wage compensation up to a maximum 15,000 baht. Farmers will receive 5,000 baht per individual. Children, the elderly, and the disabled will also receive a 1,000 baht per month cash transfer. However, this relief to vulnerable individuals is still in the process of being

[18] Labor market income includes wages, salaries, net business and net farm income.
[19] https://www.bangkokpost.com/business/1904645/over-1m-appeal-cash-handout-rejection#cxrecs_s

Figure 29: Workers in impacted sectors have higher average monthly income than agriculture dependent households...

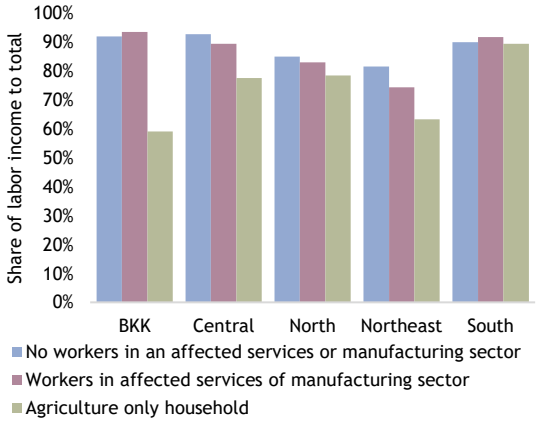
(Average Monthly Household Income)



Source: World Bank staff calculations using Thailand SES data

Figure 30: ...and are highly reliant on labor market income as the primary source of income

(Average share of labor income to total household income)



Source: World Bank staff calculations using Thailand SES data

...declines in household income will likely led to heightened economic insecurity.

To assess potential welfare impacts from income loss, assumptions on labor market and remittance income loss and cash transfer income gains are made.

All households in Thailand can be categorized into one of four groups based on their employment composition (See Table 7). For those working in the affected services and manufacturing sectors, COVID-19 impact scenarios are considered with varying assumptions on the magnitude of labor income loss and receipt of a cash transfer. Given the degree of projected job loss by the government, and the specificity of the selected afflicted sectors, it is not unreasonable to assume a high degree of labor market income loss for extended periods and for the groups considered. Under an economic impact period of one-quarter or three months, we assume that affected workers receive 2 months of cash transfers, assuming that perhaps individuals had already started losing income, and may not have received the maximum government transfer for an entire quarter. Certainly, there will be exceptions, as some households will cope using different strategies, whether it is moving in with relatives, or trying to find other jobs. For households without working members, we assume the income loss channel is mainly through loss in remittances.

Table 7: Assumptions on job and income loss scenario by household type

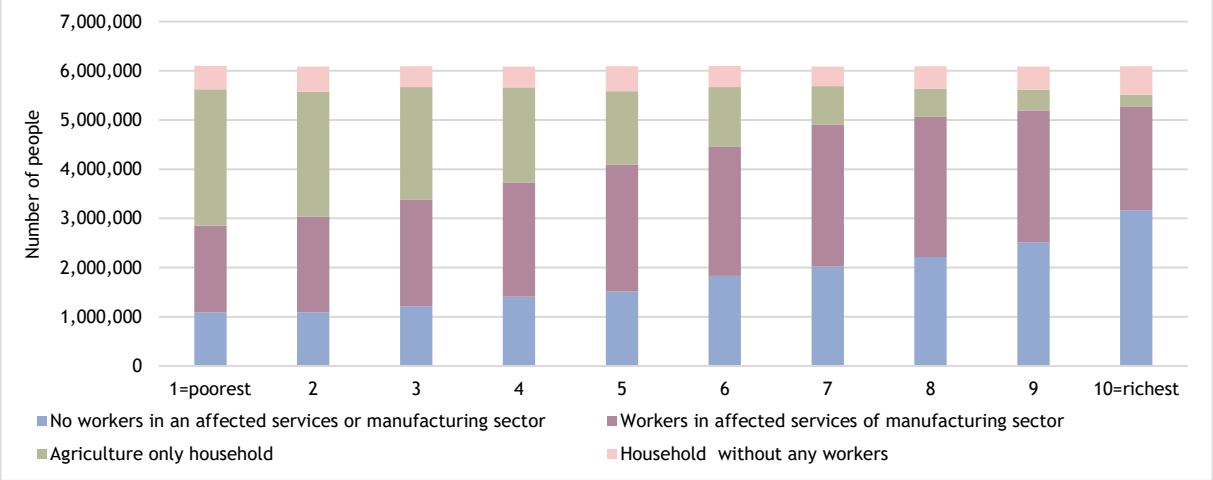
		Scenarios		
Household type	**Description of households in this group**	**Pre-COVID**	**Q2 (April – June)**	**Q3 (July -September)**
No workers in an affected services or manufacturing sector	No working household members in any selected COVID-19 hard impacted sectors	Household employment, income, and labor conditions under the THA 2017 SES	Assume no loss in labor market income for households in this category. + 0 cash transfer	
Workers in affected services of manufacturing sector	Has at least one household member working in a COVID-19 hard impacted sector		3-month 75% labor market income loss + 3-month 5000baht cash transfer per worker	3-month 50% labor market income loss assuming prolonged weakness in tourism + 0 cash transfer
Agriculture only household	All working members of the household are employed in agriculture			
Households without any workers	No members of the household are working		3-month 75% remittance income loss + 0 cash transfer	3-month 50% remittance income loss + 3-month 1000baht monthly transfer for elderly, child, and disabled

Notes: Adjustments to income are assumed based on the sectoral structure and wages in 2017. In this exercise, households in selected COVID-19 hard hit sectors are assumed to lose 50%, 75%, or 100% of labor market income for one quarter. Labor market income includes wages, salaries, business, and farm income. All workers in affected sectors are assumed to receive 5,000 baht per month, for 2 months. The household survey does not identify formal and informal workers, so the welfare analysis cannot take into account differential relief responses by formal and informal sector workers. The transfer for elderly, children, and disabled is still under proposal, so was not allocated during the first quarter of impacts.

Many affected households are not traditionally the poorest, and households along the entire income distribution will face negative economic impacts from COVID-19.

Households with members working in associated COVID-19 impacted services and manufacturing sectors exist along the entire distribution (Figure 31). When excluding agriculture, there are more affected households in the upper-middle position of the distribution. Given expected widespread unemployment and labor income losses, both the middle-class and the poor will be affected.

Figure 31: Populations along the entire distribution will face negative economic impacts from COVID-19



Source: WB calculations using THA SES-2017
Notes: Households are grouped by decile based on household consumption per capita, the welfare aggregate used to compute poverty

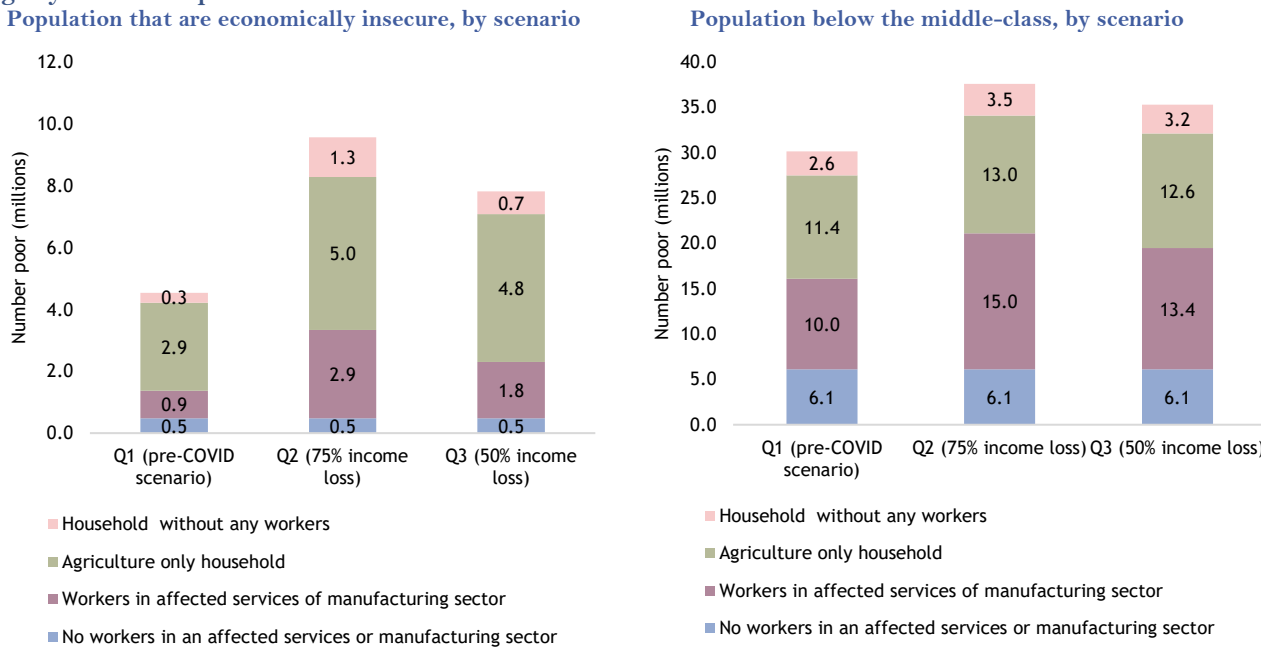
Across household types, there are differences in pre-existing welfare conditions.

Using the 2017 SES to illustrate a Q1 pre-COVID scenario, households without workers in affected services or manufacturing sectors already have the highest share in the middle-class at 66 percent (**Error! Reference source not found.**Figure 33, left pane). Households with workers in affected services and manufacturing sector, have a lower share in the middle-class (58 percent).

In the immediate quarter, millions will fall out of economic security and the middle-class.

The number of economically insecure, i.e., those living below $5.5/day in PPP terms, is projected to double from 4.7 million in Q1 2020 to an estimated 9.7 million in Q2 2020. This is under the assumption that, in Q2, 75 percent of labor income is lost for 3 consecutive months for workers in affected sectors and affected workers receive 3-months of cash transfers. Households without workers are assumed to experience losses in their remittance income (See Table 7). In Q3 2020, workers in affected sectors are projected to experience 50 percent decline labor market income, reflecting a projected pick-up in economic activity as compared to Q2 2020. However, workers are projected to not receive any cash transfers in line with current government policies that offer a maximum of three months of cash transfers. Vulnerable individuals in the households without any workers (elderly, children, disabled) are assumed to received 1000- baht monthly cash transfers in Q3. In line with these assumptions, the number of economically insecure is expected to reduce slightly to 7.8 million in Q3 2020 (Figure 32).

Figure 32: The number of poor will increase in affected sectors and agriculture in the 2nd quarter and recover slightly in the 3rd quarter



Source: WB staff calculations
Notes: Pre-scenario are based on existing conditions in 2017. The economically secure are those living above USD5.5/day 2011PPP per capita. The middle-class are those that live above USD15/day 2011PPP per capita

Households in services and manufacturing will experience a large decline in well-being despite cash transfers.

The share of middle-class households with workers in affected manufacturing and services sectors may fall from 40 percent to 24 percent in a scenario with 75 percent of labor market income loss while receiving cash transfers aimed (Figure 32). The share of the economically insecure in this population will rise by three-fold, from 6 to 20 percent. Changes in the distribution of economic classes should be viewed as the potential magnitudes of impacts from income losses but are not actual since the data used is from 2017.

Poverty rates remain highest among agricultural households.

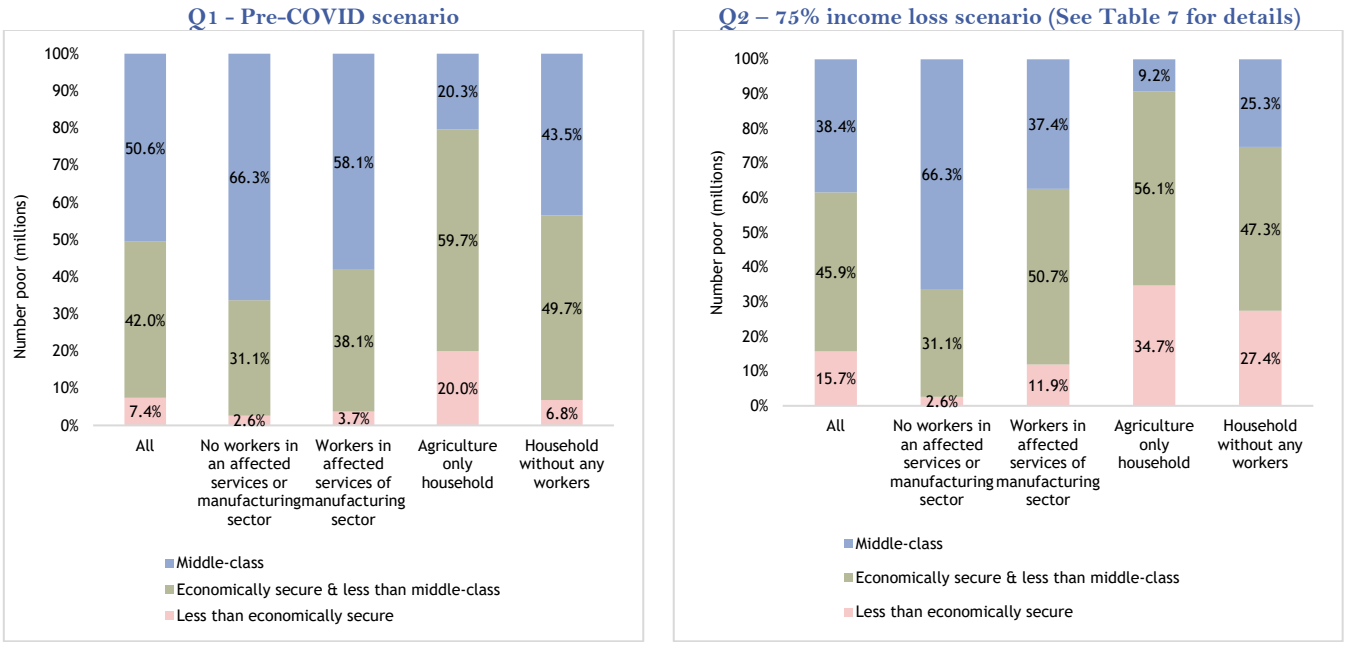
Agricultural households constitute 22.5 percent of households and almost half of the poorest 20 percent of the population in Thailand**Error! Reference source not found.**. The share of agricultural households that are economically insecure are several times higher than households with workers in manufacturing, services, or even without any working members at all (Figure 33**Error! Reference source not found.**). In 2017, the share of agriculture-only households that are economically insecure is about 4 times higher than households with employment in retail or tourism, and about 8 times higher than those working in export-oriented manufacturing. While the impact of COVID-19 affects households across many sectors, even with consideration to cash transfers, the

Households that do not have any working members at all are vulnerable.

About 13 percent of households do not have any labor market income and depend on remittances. Remittances account for 61 percent of total monetary household income, on average for this group. Due to declining migration and remittances, this group is also at risk of falling out of the middle-class and into economic insecurity. Some of these households may benefit from the government's program targeted to the elderly, children, and disabled, although these transfer

amounts are smaller than for displaced workers. Economic insecurity for these households in the immediate quarter is projected to increase by 3 to 4 times.

Figure 33: In the short-term, income loss will result in an expansion of the economically insecure and a reduction of the middle-class



Notes: The pre-scenario is based on income and welfare using the 2017 THA SES. See Table 7 for impact assumptions by household type under Scenario 1(a). The economically secure those living above USD5.5/day 2011PPP per capita. The middle-class are those that live above USD15/day 2011PPP per capita

Source: WB staff calculations

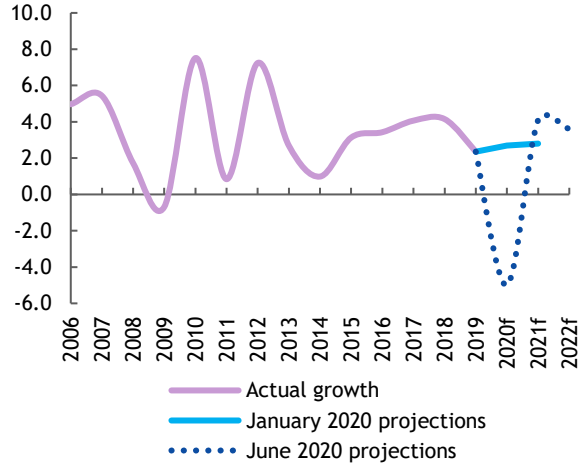
2. Outlook: an uncertain recovery with significant downside risks

i. The Thai economy is expected to contract sharply in 2020, with an uncertain path of recovery.

The Thai economy is expected to contract, by close to 5 percent in 2020, with a gradual recovery in 2021 and 2022.

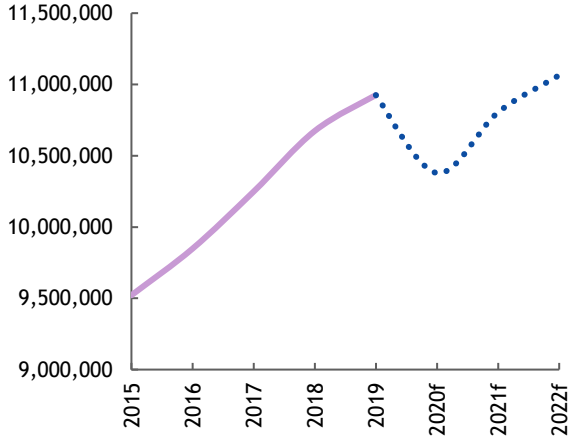
The expected contraction represents a substantial downward revision from earlier projections (Figure 34) reflecting the impact of the COVID-19 outbreak on the economy. Exports are expected to decline by 6.3 percent as external demand remained weakened by the global slowdown. Private consumption is projected to decline by 4 percent as movement restrictions and weakening income conditions, despite the ameliorating effects of social assistance transfers, limit consumers spending, especially in Q2 2020. Private investment will likely be subdued due to sluggish investor sentiment amidst heightened uncertainty. The economic recovery is projected to be drawn out, with the sharp contraction followed by a gradual recovery amid a difficult external environment (Figure 35). Because of that, it will most likely be more than 2 years until GDP returns to its pre-COVID-19 level.

Figure 34: Real GDP growth projections have been revised down sharply driven by impact of the COVID-19 outbreak
(% change, year-on-year)



Source: NESDC; World Bank staff calculations
Note: f is forecasted GDP growth rate by the World Bank staff

Figure 35: A prolonged recovery is expected to last more than two years (Real GDP Level by Year (2015–2019) and forecast)
(Millions of Baht)



Source: NESDC; World Bank staff calculations
Note: f is forecasted GDP growth rate by the World Bank staff

Monetary policy space is projected to be more constrained.

The central bank's policy has moved closer to the zero-lower bound, currently at 0.5 percent, leaving limited room for further policy rate cuts. In addition, the required reserve ratio stands at 1 percent (of previous period's average levels of deposits), leaving little room for decreasing it to induce liquidity into the financial system. Other available monetary policy tools such as targeted quantitative easing measures will likely put pressure on the Bank of Thailand's liquidity reserves.

Public debt is projected to rise as the implementation of stimulus measures lead to a wider fiscal deficit.

Before the COVID-19 outbreak, prudent fiscal spending led to ample fiscal buffers characterized by relatively low public debt, giving the government enough room to craft an effective fiscal response. The combination of increased spending and an expected decline in revenue collection is expected to widen the fiscal deficit considerably and lead to an increase in public debt. The three phases of stimulus packages combined are worth approximately 12.9 percent of GDP, which the government plans to fund partially through increased borrowing. Projected contraction in private consumption and deteriorating wage conditions will weigh heavily on VAT and income tax collection. With an anticipated sizeable revenue shortfall, public debt is projected to reach 55 percent of GDP by 2021, edging closer to the statutory limit of 60 percent of GDP stated in the Fiscal Responsibility Act (See Box 2 in Thailand Economic Monitor July 2019 for a discussion of the law).[20]

The current account surplus is expected to narrow further.

The current account surplus is projected to narrow to 2.3 percent of GDP in 2020, driven by the sharp projected decline in net exports. Merchandise and service exports are both expected to take a significant hit as economic contraction in advanced and regional economies coupled with Thailand's integration in GVCs put pressure on external demand. Furthermore, Thailand's increased dependence on imported intermediary inputs for manufacturing for instance, makes it more

[20] www.worldbank.org/en/country/thailand/publication/thailand-economic-monitor-reports

vulnerable to external supply shocks (See **Box 3: How Has COVID-19 Impacted Global Value Chains?**). Finally, international travel restrictions are expected to continue to impede tourism receipts.

Thailand's economic recovery beyond 2020 will be impacted by weaker global economic conditions...

Although the outbreak has effectively been contained in Thailand, the country's active participation in global value chains, its exposure to international spillovers through financial markets and its reliance on international tourism are expected to continue to greatly impact its economy. Beyond these short-term impacts, the outbreak is also likely to have longer lasting effects by curbing productivity, disrupting trade linkages and subduing investment, thus leading to a prolonged recovery path. The risk of further resurgence, in absence of a vaccine, will weigh on investor and consumer sentiment.

...and in line with the expected protracted recovery of the global economy, economic growth in Thailand will moderately rebound in 2021.

The global economy is not expected to quickly rebound in the medium-term, according to World Bank's projections.[21] The Thai economy is projected to expand by 4.1 percent in 2021 and by 3.6 percent in 2022, which represents a gradual recovery to pre-COVID outbreak output levels by 2022. This gradual recovery is expected to be supported by a slow pick-up in private consumption driven by improvement in households' income, consumer confidence, a restoration of investors' sentiment and a gradual uptake in international trade. In addition, the government's fiscal measures will also provide a boost to the recovery path.

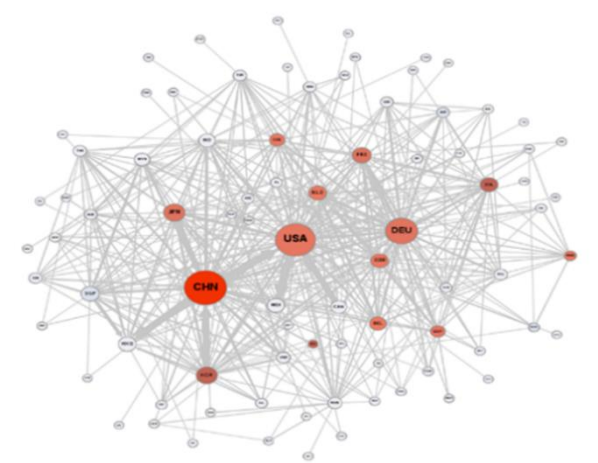
[21] "Global Economic Prospects: June 2020", World Bank, available at: www.worldbank.org/en/publication/global-economic-prospects

Box 3: How has COVID-19 impacted Global Value Chains?

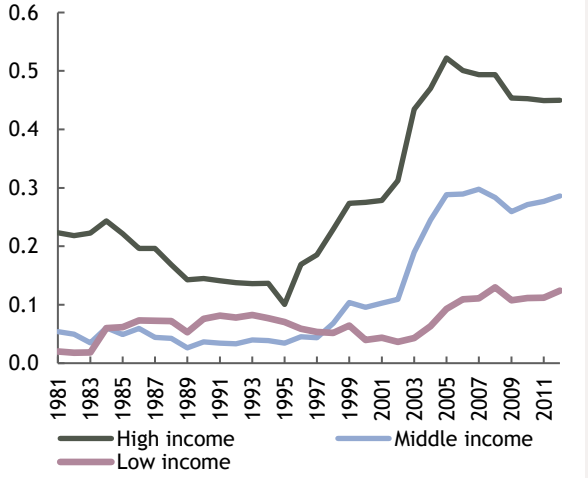
The world is interconnected as never before, with multitudes of products and people crisscrossing the planet at any point in time. This traffic is particularly intense between global centers of economic activity. It is therefore not surprising that COVID-19 has almost simultaneously hit all the largest world economies. **The most affected countries by the COVID-19 account for about 70 percent of global trade and include all dominant and essential nodes of the global economic system** (Figure B3.1).

Figure B3.1: The COVID-19 outbreak has hit critical GVC nodes and countries' fortunes are increasingly intertwined

A. Seventeen countries with the highest COVID-19 cases are critical nodes in the global trade network



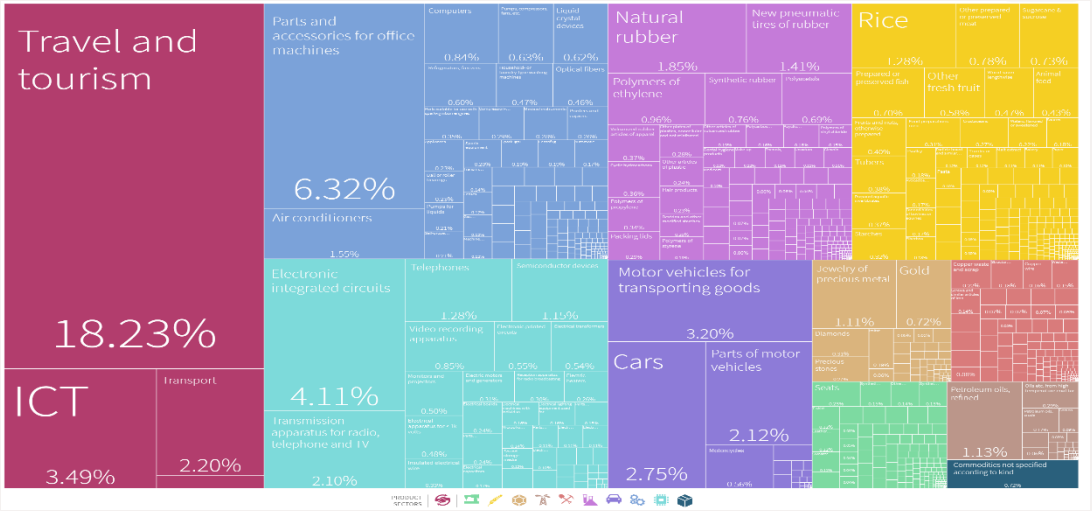
B. Countries' economic activity has become more synchronized since the mid-1990s



Source: World Bank East Asia and Pacific Economic Update, April 2020

Countries in the East Asia region, and particularly Thailand are particularly exposed to events in China and the rest of the world through trade and tourism. Thailand is dependent on tourism as well as electronics and appliances for export earnings (Figure B3.2), and exports account for more than two-thirds of GDP.

Figure B3.2: Thailand's export basket (2018)

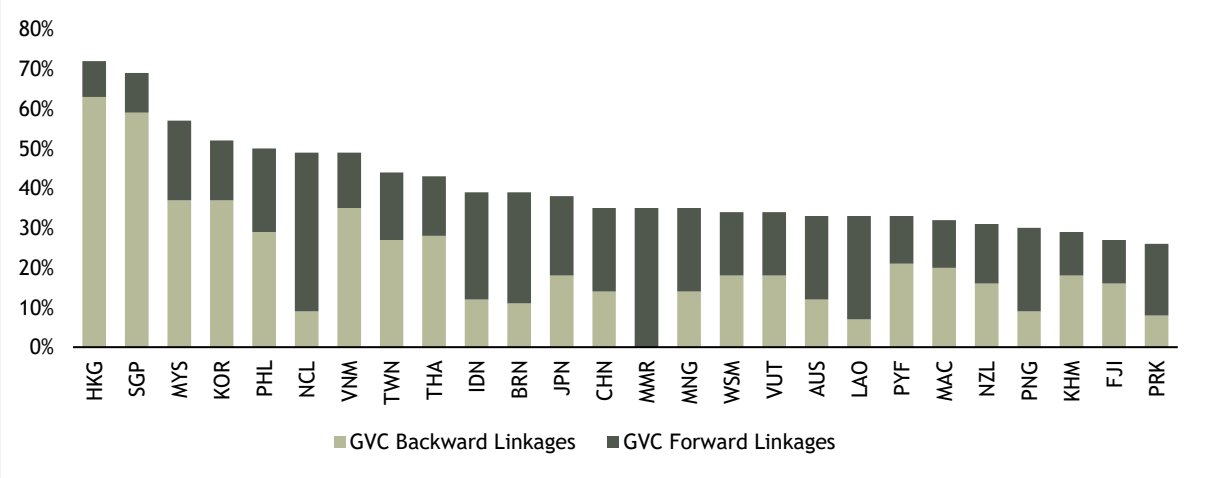


Source: Atlas of Economic Complexity, Harvard University

Box 3: How has COVID-19 impacted Global Value Chains?

East Asian countries, including Thailand, are integrated in global value chains that have been disrupted by COVID-19 (Figure B3.3)**.** Many Thai firms such as Charoen Pokphand Group and Thai Union Frozen Products (food), Indorama (textiles), and PTT (energy) have internationalized by investing abroad and relocating production, contributing to the rise of regional and global value chains and the down-streaming of Thai economic activity. Thailand has shown a rise in backward linkages (depending on imported inputs for exports) particularly in manufacturing sectors while forward linkages (Thai exports entering into other country exports) have not grown as rapidly (Figure 3.3). As a result, the Thai economy is susceptible to supply shocks particularly in the electronics and automotive sectors.

Figure B3.3: Thailand shows strong backward linkages but weak forward linkages



Sources: World Development Report 2020

ii. Downside risks have intensified

The severity and duration of the COVID-19 outbreak remains the major risk facing the Thai economy.

There is still considerable uncertainty surrounding the ongoing outbreak. Although the outbreak has been contained in Thailand, COVID-19 has continued to spread in many countries around the world and the future path of the disease is, yet, uncertain. In the absence of effective pharmaceutical solutions against the virus – such as vaccines or treatments - a resurgence of COVID-19 in Thailand, or continued severe outbreaks in others countries, could have severe consequences for the Thai economy.

Shrinking fiscal and monetary space could pose challenges the Thai economy if the COVID-19 pandemic prolongs.

Thailand has used its available monetary and fiscal space to offset the negative impacts of the COVID-19 outbreak. However,. the Bank of Thailand's policy rate now stands at 0.50 percent, close to its zero-lower bound, which limits how expansionary monetary policy can be if the outbreak lasts longer. In addition, other monetary policy tools such as quantitative easing measures could decrease BOT's liquidity reserves. Further, as the government plans to borrow to fund Phase 3 of its COVID response package, public debt is expected to rise and erode the existing fiscal space. Although currently projected to remain below the 60 percent statutory limit, further stimulus may push Thailand closer to the statutory limit. Thus, in the medium term, rebuilding fiscal buffers is a key priority.

The US-China trade tensions also remain a risk to the Thai economy.

Before the COVID-19 outbreak, the US-China trade tensions impacted Thailand's exports, through weak external demand and disruption in supply chains. Uncertainty regarding the resolution of the trade tensions may continue to weigh on inward FDI in Thailand and further delay the recovery in external demand.

Slow budget execution could also impede progress on the growth recovery.

A delay in the execution and disbursement of FY2020 budget would be detrimental to Thailand's recovery efforts. Spending did rise rapidly in March 2020, once the budget was approved, as authorities accelerated budget execution. However, historical trends of budget under-execution, particularly in the capital budget, suggest that government agencies' capability to increase and sustain the disbursement rate of the fiscal budget represents a source of risk for the growth path going forward.[22]

COVID-19 could have long-lasting effects on potential growth.

Beyond its short-term impact, the pandemic could leave lasting scars through multiple channels, if current government support to vulnerable households and firms is not effective. Globally, it is feared that the pandemic could lead to lower investment and innovation; an erosion of the human capital of the unemployed; and a disintegration of global trade and supply linkages. These effects may well lower potential growth and labor productivity in the longer term. In addition to ongoing short-term measures, a comprehensive reform drive, as envisioned in Thailand 20-year National Strategy, is needed to reduce the adverse impact of the pandemic on long-term growth prospects. Key structural reforms include expanding investment in education and public health, reducing barriers to trade in services and reprioritizing public investments to connect lagging regions.

A critical priority remains the protection of vulnerable firms and households.

Protecting vulnerable households and firms through a combination of fiscal, monetary and financial sector policies will be critical to support the economic recovery. Part 2 therefore focuses on the Thai's government ongoing policy responses to provide support to vulnerable households and firms during the relief and recovery phases and provides policy considerations drawn from international experience.

[22] See Box 2. The Fiscal Responsibility Act in World Bank Thailand Economic Monitor July 2019.

Part 2. Protecting Vulnerable Firms and Households from the COVID-19 Outbreak

The COVID- 19 outbreak can impact the economy through three main channels: direct health impacts, economic cost of health interventions, and longer-term change in behavior.

The COVID-19 outbreak impacts the economy though three main transmission channels. First, there is the direct cost from the disease. Mortality and temporary absence from work (due to sickness, quarantine, and perhaps fear) will significantly impact economic activity. The human losses directly caused by COVID-19 affect families, society, and the economy, while sick people may lose their livelihoods. This raises income poverty levels, depletes scarce assets (e.g. financial savings), and increases personal debt levels. Second, there is the economic cost of health-related restrictions on mobility and businesses. Global and domestic public health measures to protect the population (such as travel restrictions, quarantines, business closures, etc.) impact the economy by lowering both the demand and supply of goods and services. Finally, there is the issue of behavioral change (through consumer and investor sentiment) since consumer choices and firm decisions will change in response to the outbreak. Consumers will delay spending to avoid risk and firms will postpone investment decisions (and even slow production to avoid building up excessive inventory). Personal and corporate bankruptcy could ensue, while banks could accumulate a large volume of non-performing loans.

The goal of policy is to prevent a temporary shock from having a permanent impact, by protecting vulnerable firms and households.

The goal of policy in the initial response phase to the outbreak should be to prevent a temporary shock from having permanent effects in the initial phase when mobility restrictions are in place, policy can focus on protecting **vulnerable households** and providing liquidity support to **vulnerable firms.** Fiscal measures should provide social protection to cushion against shocks, especially for the most economically vulnerable. Firms, especially viable small and medium enterprises, will need liquidity support to help them stay in business and maintain beneficial links to Global Value Chains (GVCs). The optimal economic policy response too will change over time and depend on the precise nature and evolution of the shock—to labor supply, aggregate demand or finance.

This section provides global and regional evidence to inform Thailand's policy response to protect vulnerable firms and households.

Most countries around the world are grappling with the health and economic effects of the COVID-19 pandemic and Thailand could learn from this experience. At the same time, it is crucial to tailor economic policy responses to the specific context of Thailand – which has average levels of human capital compared to its ASEAN peers on the World Bank's Human Capital Index albeit with large urban-rural disparities in education outcomes,[23] one of the largest tourism sectors in East Asia, a significant informal sector, developed financial markets, strong institutional capacities, adequate fiscal room and a severe drought in 2019. While not delving into the COVID-19 health response, this focus chapter offers an economic perspective and policy considerations that aim to complement ongoing policy responses.

1. Thailand's policy response and international context

Thailand has achieved relative success in containing the COVID-19 outbreak through mobility restrictions, a public health campaign and partial lockdown.

In response to the outbreak, Thailand has enacted several public health interventions travel bans and other social distancing related restrictions to contain the COVID-19 outbreak (Box 1). Confirmed cases of Covid-19 infection stood at 3,148 as of June 21, 2020. New daily infections stayed in the single digits for almost the whole month of May and hospitalized cases have continued to decline. Interventions include:

- A state of emergency from March 26 through June 30, 2020 and a nationwide curfew from 23:00 and 04:00 is effective until further notice.
- Restrictions on movement across high-risk provinces, such border and touristic provinces
- A ban on inbound and outbound commercial flights extended to end-June, and a 14-day state quarantine has been implemented for travelers entering Thailand from abroad.
- Groceries and pharmacies remained opened and public transportation operational.
- A successful public health campaign to encourage social distancing, mask-wearing and hand-washing.
- A gradual and phased reopening of businesses, such as restaurants, malls and sport facilities began in May. Electronic, or written, check-ins are required in case contact-tracing is needed.

[23] Thailand Economic Monitor January 2019: Inequality, Opportunity and Human Capital. www.worldbank.org/tem

The government of Thailand and the central bank are implementing sizeable response packages and policies to protect vulnerable households and firms.

The cabinet has approved a COVID-19 relief and recovery package in 3 phases amounting to 2.2 trillion baht (12.9 percent of GDP). While part of this would be financed within the original FY 2020 budget or by allocating funds from the Bank of Thailand and SFIs to fund soft loans, 1 trillion baht (6 percent of GDP) in additional borrowing has also been authorized to fund the stimulus. Much of the funding is expected to be raised domestically. The policy measures (summarized in Table 8) include:

(i) **Health-related spending;**
(ii) **Support to vulnerable households** in the form of
- Assistance for informal workers, farmers, and entrepreneurs affected by COVID-19 (includes 5,000 baht per month per person for three months to about 14 million non-farm workers outside the social security system and 10 million farmers);
- Lower water and electricity bills, and social security contributions;
- Tax relief;
- Soft loans from Specialized Financial Institutions[24] (SFIs) and Bank of Thailand.

(iii) **Financial relief to SMEs and large firms to minimize cash flow constraints and ensure job preservation through:**
a. Soft loans to businesses from the Bank of Thailand;
b. Bond stabilization fund to provide liquidity to firms;
c. Regulatory forbearance, while balancing risk disclosure and supervisory expectations;
d. Tax relief.

Table 8: Summary of Thailand's policy responses

	Billion baht	% GDP	Discretionary fiscal	Budget FY2020	SFIs and SSO measures	BOT credit measures	Notes
Relief measures in Phase 1							
Soft loans by Government Savings Bank	150	0.89			x		
Soft loans to promote employment by Social Security Office	30	0.18			x		
Measures to assist people affected by the COVID-19 from central fund	20	0.12		x			The government agencies propose aiding measures for those affected by COVID-19 such as reducing service fees or rental for tenants, or lowering management cost to employ more staffs.
Measures to postpone principal payments, reduce interest and extend repayment period for debtors affected by COVID-19						x	

[24] Thailand has 8 specialized financial institutions which are state-owned, often deposit-taking, banks mandated with implementing the government's social and economic agenda. The three largest SFIs are Government Savings Bank (GSB), Bank for Agriculture and Agricultural Cooperatives (BAAC) and Government Savings Bank (GSB).

	Billion baht	% GDP	Discretionary fiscal	Budget FY2020	SFIs and SSO measures	BOT credit measures	Notes
Relief measures in Phase 2							
Emergency loans without collateral by GSB and BAAC	40	0.24			x		
Special loan with collateral by GSB	20	0.12			x		
Loans to the Office of the Government Pawnshop by GSB	2	0.01			x		
Loans to support SMEs by Small and Medium Enterprise Development Bank	10	0.06			x		
Relief measures in Phase 3							
Ministry of Finance Decree to borrow to fund the government's relief cash transfers, medical response and economic and social rehabilitation in the aftermath of the COVID-19 pandemic.	1,000	5.92	x				555 billion baht has been budgeted for cash transfers to vulnerable households while 400 billion baht has been earmarked for projects to create jobs and build infrastructure in local communities. The tourism stimulus packages worth 22.4 billion baht will be funded from the 400 billion baht plan.
Bank of Thailand Decree to provide soft loans to SMEs via commercial banks and Specialized Financial Institutions (SFIs).	500	2.96				x	As of 15 June 2020, disbursement stood at 82.7 billion baht or 16.5% of total credit limit.
Bank of Thailand Decree to stabilize the financial market by setting up Corporate Bond Liquidity Stabilization Fund (BSF)	400	2.37				x	
Total relief measures	**2,172**	**12.87**	**5.9**	**0.1**	**1.5**	**5.3**	

Many countries have provided large-scale macroeconomic support to alleviate the economic blow.

Central banks in advanced economies have cut policy rates and taken other far-reaching steps to provide liquidity, stabilize financial markets and to maintain investor confidence. In many emerging markets, central banks also cut monetary policy rates, provided liquidity and credit facilities, and embarked on various asset purchase programs (Indonesia, Malaysia, the Philippines, Thailand).The fiscal and financial policy support that has been announced already far exceeds that enacted during the 2008-09 global financial crisis. In China, the People's Bank of China (PBOC) has provided substantial liquidity support, cut policy rates, and lowered reserve requirements to stem market sell-offs and support businesses.

Many countries have proposed or implemented large fiscal support

These include easing or delaying payment obligations for taxes, utilities, rents, or debt service. In an environment of exceptionally accommodative monetary policy, fiscal policy has a key role in preventing the pandemic from having a protracted adverse effect on activity (Global Economic Perspectives June 2020). Fiscal measures generally come in the form of tax relief and deferment, direct fiscal

packages, aimed at replacing lost household incomes and firm revenues

incentives for specific sectors, and increased subsidy and social spending, among others. Most regional peers took financial sector policy measures such as credit support, repayment forbearance, and loan restructuring and rescheduling. Many countries in ASEAN, such as Indonesia, Malaysia, and Thailand have also responded with measures targeted at low-income earners and the tourism sector (Table 9).

The magnitude of stimulus responses differs across economies depending on fiscal room and severity of the impact.

For example, Malaysia plans to spend RM 35 billion or 2.4 percent of GDP while Indonesia and Philippines plan to spend around 4.3 and 3.4 percent of GDP respectively. China's approach tends to be comprehensive focusing on the entire economy (i.e. policies that benefit all households and businesses) while most other regional peers are targeted (i.e. policies that benefit specific sectors.) Unsurprisingly, China has steered resources specifically to its healthcare sector but not to its tourism or aviation sectors. Only a handful of economies have policy measures to prop up investments. In Thailand where the downturn is sharp, the fiscal stimulus accounts for 6 percent of GDP. Compared to Malaysia and Indonesia, Thailand has greater fiscal space.

Table 9: Policy responses in East Asia

			POLICY TOOLS*			
			Fiscal Policies	Monetary Policies	Financial Sector Policies	Real Sector Policies
TARGET RECIPIENTS	Households	All households			CHN	
	Businesses	Low-income earner	IND, MYS**, THA		IDN, MYS	
		All sectors	CHN, MNG, MYS, THA	CHN	CHN, MNG, MYS, THA	MYS
		Healthcare sector	CHN, MYS	CHN		CHN
		Tourism sector	IDN, KHM, MYS, THA			KHM
		Aviation sector	IDN			
		SME			CHN, KHM, MYS	KHM
	Investors/ Investment		MNG, MYS			MYS

Legend: CHN (P.R. of China), IDN (Indonesia), KHM (Cambodia), MYS (Malaysia), and THA (Thailand). No announced stimulus package yet for Lao PDR, Myanmar, and Vietnam
Note: *Updated as March 5, 2020 **MYS also targets private sector employees

Thailand has taken bold steps, in terms of size and coverage of the policies, to mitigate the

Thailand's combined packages total 12.9 percent which is high compared to ASEAN peers. Thailand has also been quick to put together a sizable cash transfer program to cover broad swathes of the population--informal workers and farmers. The amount of the cash transfer is close to the median monthly income for informal workers in most sectors, and generous by international standards.[25] Regarding policies and instrument used to support vulnerable firms, Thailand is in line with

[25] The size of the cash transfer, which amounts to about 37 percent of monthly GDP per capita, is higher than the global average of cash transfers provided in response to COVID-19 which is 25 percent and the average in upper-middle-income countries which is 22 percent (Gentilini et al. 2020).

economic impact of COVID-19.

ASEAN peers albeit with a greater tilt towards tax relief. In addition, the Bank of Thailand has taken the bold step of setting up a 400-billion-baht Corporate Bond Stabilization Fund (BSF) tasked with buying investment-grade bonds, in the secondary market, from companies that are unable to fully roll over maturing bonds, as liquidity backstopping.[26] However, implementation may prove challenging. As of 15 June 2020, disbursement of BOT's soft loans stood at 82.7 billion baht or 16.5 percent of total credit limit possibly heightened credit risk and risk aversion on the part of lenders in the current environment.

2. Supporting vulnerable households: some emerging lessons for Thailand

i. Policy responses have been tailored to specific demographic groups that comprise vulnerable households.

Impacts from COVID-19 will compound an already challenging context of droughts, stagnant wage growth, declining labor force participation, and rising poverty.

Aggregate shocks to economic activity can affect welfare (and well-being) at the household and individual level through the following channels:

- *Impact to labor income due to decline in aggregate demand, supply disruptions and the associated decrease in employment and/or the returns to productive activities.* These impacts will likely be felt first and foremost by those employed in vulnerable sectors, such as tourism, services (e.g. transportation and retail sales) and tradeables, as well as by those in the gig economy and those unable to work remotely but will eventually spread to other parts of the economy and across the formal and informal sectors. Lost earnings could also result from the direct health impact of the outbreak on breadwinners.
- *Impact to non-labor income* due to a decline in international (and domestic) remittances and potentially in private transfers.
- *Disruptions in the functioning of markets* due to decline in international trade, FDI and domestic economic activity that could lead to prices increases and/or rationing of basic consumption goods, including food (and production inputs).

Protecting vulnerable households is a central policy objective.

The government's response package targets support to several vulnerable groups. This includes support to informal off-farm workers, to on-farm workers, and to formal workers. Assistance for young children up to 6 years old, older people, and people with disabilities was approved by the Cabinet in late May but was not yet finalized as of publication. As noted in Section 1, the number of economically insecure, i.e., those living below $5.5/day in PPP terms and subject to high risk of falling into poverty, is projected to double from 4.7 million in Q1 2020 to an estimated 9.7 million in Q2 2020. (see detailed discussion in Chapter 1).

Informal workers are particularly vulnerable to job

More than half of the employed in Thailand are informal as they are not covered under a social security scheme. In Q3 2018, there were an estimated 21.2 million informal and 17.1 million formal workers. Besides agriculture with a 92 percent informality rate, jobs in commerce have the second highest rate of informality at 60 percent.

[26] www.bangkokpost.com/business/1850894/debentures-encounter-rollover-woes-delayed-repayment; asia.nikkei.com/Business/Companies/Cash-crunch-fears-rise-in-Thai-corporate-bond-market-on-pandemic.

loss because they lack safety nets.

Informal off-farm workers were targeted in phase 1.

The government has created a cash transfer program providing 5,000 baht per month for 3 months to informal off-farm workers who are not covered by the Social Security Fund and whose jobs were affected by the COVID-19 outbreak. According to the Fiscal Policy Office (FPO), as of mid-May 28.8 million people had registered for the transfer out of which 15 million were determined to be eligible for assistance. The FPO reported having made the first payment to 14.2 million people. Assuming that all 15 million eligible individuals receive the benefit, the total cost of the program would be 225 billion baht. The amount of the cash transfer is close to the median monthly income for informal workers in most sectors. The size of the cash transfer, which amounts to about 37 percent of monthly GDP per capita, is higher than the global average of cash transfers provided in response to COVID-19 which is 25 percent and the average in upper-middle-income countries which is 22 percent (Gentilini et al. 2020). A total of 124 countries globally have provided 246 conditional or unconditional cash transfers in response to the COVID-19 outbreak.

On-farm workers were targeted later in phase 2.

The government has also created a cash transfer program providing 5,000 baht per month for 3 months (May to July) to farmers. The program is designed to provide assistance to 10 million farmers. The transfer is to be made via the Bank of Agriculture and Agricultural Cooperative (BAAC). As of late May, BAAC had transferred funds to 4.7 million farmers Assuming the program ultimately reaches all 10 million farmers, the total cost will be 150 billion baht. Apart from the cash transfer, customers of BAAC will receive support including interest rate reduction and grace periods on repaying principal. Several other countries around the world have targeted cash transfers to farmers (Gentilini et al. 2020). India topped up an existing social assistance scheme with USD27 for 3 months to farmers. Sri Lank provided a transfer of USD27 to farmers. Kosovo provided early payments of farming grants and subsidies.

Other vulnerable groups also received coverage.

In late May, the Cabinet approved a cash transfer of 1,000 baht per month for 3 months (May to July) for young people up to age 6, older people, and people with disabilities, though this assistance has not yet been finalized. These three groups are already covered by existing social assistance programs and will receive these monthly top-ups to help them cope with the economic impact of COVID-19.

Formal workers received unemployment benefits from the Social Security Fund.

Emergency benefits have been provided for formal workers as well. Employees furloughed because of COVID-19 are eligible to receive 62 percent of their daily wages up to 15,000 baht from the Social Security Fund for up to 90 days. Those laid off are eligible to receive up to 70 percent of their daily wages up to 15,000 baht for up to 200 days. Employers are required to confirm that the business closed as a result of COVID-19, which has reportedly led to some delays in the receipt of benefits. As of May 29, 1.4 million salaried employees, representing approximately 8 percent of the 15.9 million enrolled in Thailand's Social Security Fund, have made claims on their unemployment insurance. 1,287,960 had been approved. Employees' contribution to the Social Security Fund has also been cut. Similar measures have been undertaken in other countries including in Malaysia where the employee contribution to the Employees' Provident Fund was reduced from 11 to 7 percent of salary from April 2020 to the end of the year; in Vietnam, which suspended social insurance contributions for COVID-19-affected firms through June 30, 2020; and in

China where unemployment benefits were paid to unemployed workers who did not meet the usual criteria to claim benefits such as conditions on minimum length of contributions.)

ii. Strengths and weaknesses of Thailand's support for vulnerable households

The informal worker cash transfer program leveraged the strengths of Thailand's national identification and payment systems.

Thailand was able to set up a large-scale cash transfer program that covered beneficiaries that were not registered in any social protection database fairly quickly and efficiently. Self-registration was undertaken for the program via a website or in-person at a state-owned bank. This helped allow for identification of the "missing middle," that is, individuals who are not covered by employment-based social insurance or by social assistance schemes. Thailand's national ID number allowed for verification against other program databases to ensure that registrants were eligible, that is, that they were not farmers or covered by the Social Security Fund. The link between the national ID and the PromptPay system meant that payments could be made electronically to bank or mobile money accounts.

Implementation of the program did face some challenges suggesting that the social protection system can be strengthened.

The program underwent several modifications since it was initially announced. The transfer was first announced to cover 3 million workers for 3 months, and then 9 million for 6 months after a larger number of people than expected registered for the program before being revised back to 3 months. Ultimately, 15 million people have been considered eligible for the cash transfer. The difficulty determining eligibility for the program indicates the limitations of the existing social assistance and social security registries, which do not currently include informal workers and the "missing middle". However, given the nature of the crisis and the temporary nature of the transfer, higher errors of inclusion are less of a reason for concern. Additionally, some registrants have faced challenges with incorrect addresses or misidentified occupations. Registering has proven hard for beneficiaries with no access to internet and the program had to introduce in-person registrations. One of the main challenges that Thailand faces in terms of supporting vulnerable groups is that the country lacks an integrated social registry that can provide timely information to timely target vulnerable groups and provide information for policy makers on programs design and program design's gaps. The first step in this direction would be to agree on the protocol of interoperability of databases in country.

Some groups may remain vulnerable. There are likely some vulnerable groups who were not included in Thailand's COVID-19 response packages.

Individuals who were already out of the labor force prior to the COVID-19 outbreak are not able to access the main assistance programs described above, though a program is planned for young children, the disabled, and older people. There were about 11.9 million people in this status in January who were over 15 and not too young to, too old to, or incapable of work. These individuals lack access to additional support (though some groups have access to preexisting programs, such as the Old Age Allowance). Informal migrant workers from other countries are also in a vulnerable position, having lost income and employment and generally unable to travel home (IOM 2020). These migrants are not eligible for the cash support available to local workers.

Thailand can take several steps to protect vulnerable households as the country begins to recover from the COVID-19 outbreak.

In the short term, Thailand should continue to address the needs of vulnerable groups, including filling gaps in support. As the recovery phase begins, Thailand can explore how to help individuals reconnect with the labor market. This includes wage subsidies targeted to individuals and linked to training to promote reemployment, particularly among vulnerable groups. Thailand has experience with this type of support. In response to the 2008-2009 economic crisis, Thailand launched the Tonkla Archeep program that provided a month of vocational training and a cash allowance for three months to encourage beneficiaries to start businesses or find jobs. The training provided under this type of program will need to be adapted to the needs of sectors that are recovering more quickly. This highlights the importance of making good labor market information widely available and linking it to employment services. For the most vulnerable populations, cash transfers may need to be continued and, where possible, linked to training, mentoring, and other types of support that could create income-generating opportunities.

In the longer term, weaknesses in the social protection system revealed by the COVID-19 outbreak will need to be addressed…

The COVID-19 crisis revealed a "missing middle" of informal workers lacking access to a social protection. This includes around half of the labor force that does not have access to social insurance. Thailand was able to provide benefits to this group by creating a new cash transfer program. But Thailand is unique among countries at its income level in lacking a backbone safety net program. A backbone safety net program would not only prepare Thailand for the next crisis, but protect vulnerable people during normal times. Establishing such a program would involve improving the interoperability of existing databases with the ultimate goal of building an integrated social registry. Such a registry would improve the ability of policymakers to identify and target vulnerable groups for support during subsequent crises.

…as Thailand considers moving beyond the current employment-based social protection system.

In the medium term, a key action that Thailand can consider is building a better targeted social protection system by drawing from the lessons learnt from its rapid response to COVID-19 using social protection instruments. Here are some important steps.

- The most immediate priority is ensuring a minimum package of benefits for the most vulnerable; it will require significant resources for the government to complement household and individual efforts. This may require increases in budget allocations for social protection beyond the immediate response to COVID-19, to bring this spending to the levels of peer countries.
- It is also important to build effective delivery mechanisms for social protection programs. In the immediate response to COVID-19, Thailand has rightly prioritized ways to deliver cash transfers quickly to a large share of the population. Over time, it could consider establishing programs with universal benefits to help cushion epidemic outbreaks that may occur in the medium term as well as other negative shocks, complemented by more targeted (and generous) programs for the poor. For the latter, Thailand will need better targeting mechanisms.
- An integrated social registry can improve targeting through timely information of vulnerable groups and feedback for policy makers on program design and program design's gaps.

- In both the medium and long term, social protection will need to be complemented by labor market policies tailored to the needs of a knowledge-based economy. Training and employment services programs need to be reformed to reflect shifting demand in the labor market, toward more socioemotional skills and higher-order cognitive and technical skills.

3. Protecting vulnerable firms: some emerging lessons for Thailand

i. Policy responses have focused on providing liquidity support for vulnerable firms.

Globally, governments have been enacting a wide array of emergency measures to provide relief for firms suffering from the economic fallout of COVID-19.

To date, the support measures have largely focused on limiting the short-term economic damage—i.e. addressing immediate liquidity challenges to minimize firm closures/bankruptcies and prevent widespread worker layoffs. As fiscal and financial resources are inherently limited, the sheer scale of affected firms has meant this support has needed to be temporary and time-bound, ideally long enough to keep firms afloat until the worst of the pandemic has passed. Even then, however, the road to the recovery from a global shock of this magnitude is likely to be long and difficult. Therefore, over the medium term, the nature of firm support will need to shift from emergency relief to more structural recovery support for firms that are still standing and firm restructurings. The key challenge for governments, including Thailand, will be to design this support in a manner that does not create perverse incentives for firms nor endanger fiscal sustainability and financial stability

Policymakers have used a wide array of economy-wide and sector-specific measures.

In the EAP region, the short-term support for firms has taken multiple forms, including easier access to emergency finance (both new and refinancing), tax relief, subsidies to reduce operating costs and maintain jobs, reduced administrative burdens, and demand stimulus via public spending. Based on the World Bank's internal COVID-19 policy tracking database, as of May 27, governments in EAP have enacted approximately 370 unique response measures. The measures have generally been adopted in several successive packages, with new ones expected to continue being rolled out in the coming weeks and months, as necessary. The level of ambition varies widely. The relatively more advanced EAP economies (e.g. Malaysia, South Korea, Singapore, China) have adopted more diverse measures and allocated larger fiscal stimulus as a share of GDP, while the less-advanced economies with more limited fiscal space (e.g. Lao PDR, Cambodia) have opted for more modest measures. While the bulk of measures support firms across sectors, sector-specific support has been provided in some countries for hard-hit (e.g. aviation) or strategic industries.

SMEs are an important source of employment and contribution to Thailand's GDP, but many of them have limited access to finance.

According to the Thai Credit Guarantee Corporation, Thailand has 5.2 million formal and informal SMEs. In 2018, SMEs contributed 42.4 percent of Thailand's GDP, with small enterprises accounting for 30 percent of GDP and medium enterprises for 12.4 percent of GDP (SMEs White Paper 2018), and account for 80.44 percent of all private sector employment in Thailand.[27] However, in terms of access to finance, SMEs suffer disproportionately compared to larger enterprises. Indeed, the formal MSME access to finance gap (the difference between current supply and potential demand which can potentially be addressed by financial

[27] www.oecd-ilibrary.org/industry-and-services/financing-smes-and-entrepreneurs-2018_fin_sme_ent-2018-en

institutions) is estimated at USD 5.05 trillion, whereas in Thailand's case this gap is estimated at USD 40.7 billion per year.[28] This is largely due to the fact that the legal framework for movable assets is underdeveloped and SMEs lacking immovable collateral and credit history are considered too risky or too small to be served by the formal banking sector. Therefore, many authorities around the world have allocated a significant share of their COVID-19 relief efforts to support SMEs and ensure they remain in business

Thailand's firm support measures have been broadly in line with EAP in terms of easing access to finance through soft loans and restructuring but with a greater tilt towards tax relief.

Of the real sector support measures included in the three policy packages enacted since early March, around 25 percent have focused on easing access to finance for firms, predominantly through soft loans and deferral or restructuring of debt obligations (Table 10). This includes150 billion baht in low-interest loans from the Government Savings Bank (GSB), 30 billion baht from the Social Security Office (SSO), and 500 billion baht via a dedicated SME lending program among commercial banks, who are also giving certain eligible SMEs a six-month moratorium on principal and interest payments. On the tax relief front (accounting for over 40 percent of total announced measures), the support includes deferred payment of corporate taxes and temporary reductions to the withholding rate, reduced social security contributions, and expanded payroll tax deductions for SMEs meeting certain eligibility criteria. Meanwhile, monthly cash transfers of 5,000 baht are also being provided for a period of six months to an estimated 14 million self-employed, informal, or farm workers, as well select reductions in rental and utility fees. Finally, a 400-billion-baht public investment program has been launched to help rehabilitate the economy through projects that create jobs, build local infrastructure, and strengthen local communities. A detailed enumeration and description of these various measures is provided in Annex 1.

Table 10: Composition of real sector support measures to firms and individuals

	East Asia & Pacific (368 measures)	Thailand (7 measures)
Debt financing	**29%**	**24%**
Soft loans	16%	18%
Credit guarantees	5%	0%
Loan repayment deferral or restructuring	7%	6%
Trade finance	3%	0%
Tax relief	**28%**	**41%**
Deferral of taxes or social contributions	8%	12%
Reduced rates, credits, exemptions	17%	24%
Other (e.g. refunds, investment incentives)	3%	6%
Subsidies	**27%**	**29%**
Wage subsidies	10%	6%
Support to self-employed/micro firms	4%	12%
Rent or utilities discount	7%	12%
Other subsidies	8%	0%

[28] www.smefinanceforum.org/data-sites/msme-finance-gap

	East Asia & Pacific (368 measures)	Thailand (7 measures)
Business climate	**10%**	**0%**
Trade policy & facilitation	4%	0%
Investment policy & facilitation	1%	0%
Other business regulations & procedures	4%	0%
Demand stimulus	**6%**	**6%**
Public investment programs	5%	6%
Other support to demand	2%	0%

Source: World Bank COVID-19 policy tracking database for East Asia & Pacific region
Note: Measures updated as of May 27, 2020

The Bank of Thailand has set up a Corporate Bond Stabilization Fund (BSF) for 400 billion baht.

Following an episode of capital outflows globally and domestic redemption pressure on mutual funds, many Thai firm faced difficulty in rolling over maturing bonds. In response, on March 24, 2020, The Bank of Thailand set up a 400-billion baht Corporate Bond Stabilization Fund (BSF) to provide liquidity support to the market in case typical market-based solutions, e.g. refinancing of maturing bonds through bank loans or new bond issuance, are insufficient. The decision of support under the BSF will be subject to the consideration of the bond market supervision and development committee established under the Emergency Decree on the Maintenance of Stability of the Financial System and Economic Security of the Country (2020).[29]

Thai Airways, a commercially oriented state-owned enterprise, has filed for bankruptcy protection and rehabilitation.

On May 22, 2020, the Thai Ministry of Finance (MOF) decided to reduce its shareholding percentage in Thai Airways by disposing 3.17 percent to the Vayupak Fund 1 from 51.03 percent, resulting in share price volatility and raising concerns for Thai Airways bondholders. As a result, THAI ceased its SOE status under the relevant law due to lower than 50 percent shareholding by government. Immediately, TRIS Rating Agency (Thai Rating and Information Services) downgraded THAI's senior unsecured debentures from "BBB" to "C" and now "D" or "Default" rating after the restructuring petition was accepted by the bankruptcy court on May 27, 2020. This incident sparked some turbulence in the Thai financial market. Saving cooperatives, securities companies, mutual funds, pension funds, and individuals hold some stake in the form of liability and / or equity component in THAI. For instance, members of 74 saving cooperatives holding THAI's bonds

[29] Advanced economies and emerging markets have also implemented funds and measures to support liquidity of large firms. The United States is implementing two different funds, one for the primary market (accessing finance) and another for the secondary market ('market maker' fund to buy and sell securities and promote liquidity). Given that each market is different, and each fund is designed to address different needs, there is no standard approach to implementing such a fund. However, some key aspects have to be taken into consideration. First, in South Korea, banks play a major role in supporting and funding the fund but this needs to be aligned with the banking regulator, since banks need to know how "weaker assets" supported by the fund may impact their risk weights. Second, the Korean model is limiting as they imposed credit rating limits, so this really doesn't help the layer of corporates who would be struggling the most for funding. Last, but not least, the fund manager needs to be carefully selected (for instance, Black Rock was chosen in the US).Other relevant initiatives, albeit still in their early stages, include Colombia where the central bank can accept as collateral corporate bonds that are investment grade and the national treasury is designing a guarantee fund for larger corporates; South Africa where the National Treasury designing a funding and guarantee platform for corporates, but has not yet reached a decision on which segment of corporate to target.

rushed to withdraw their shares and savings.[30] Pensioners and retail investors via pension and mutual funds have been panicking and are taking actions on their long-term investments.[31] Concurrently, THAI's share price showed considerable volatility, hitting a record of eight ceilings in April – May, with 5 consecutive days, during the restructuring process under the Bankruptcy Act.

ii. Strengthening support for vulnerable firms

Going forward, Thailand's firm support could be more targeted at sectors hardest hit by COVID-19.

The cross-sector provision of support thus far is understandable given the broad base of firms impacted, and from the perspective of needing to deploy relief funding rapidly, as more specific firm-targeting and eligibility criteria would likely create additional administrative burdens and delays. However, the first-come first-serve nature of the relief inevitably leads to unviable firms getting supported and certain firms being crowded out of available support funding, particularly if they are unable to summon the expertise and resources to apply for and navigate the approval processes for certain relief instruments (especially applications for loans and debt restructuring). In addition, due to the large informal sector, micro-enterprises which lack access to credit, rely on cash and are not enrolled in social security, may be left out of the firm support measures although they may be eligible for household support measures. Here, building social and business registries can help improve targeting.

Tourism is one such economically significant sector where more targeted support could potentially be extended.

With international tourism arrivals to Thailand (through March) down nearly 80 percent since January, and Thailand's borders set to remain closed until at least June 30, tourism, as a highly labor-intensive services sector that is estimated to employ 21 percent of the workforce (WTTC, 2020), has likely shed a disproportionately high number of jobs relative to other sectors in Thailand. In the near term, more targeted public support for these hard-hit tourism firms could include: (i) grants or subsidies for professional cleaning and sanitization expenses, which hotels and other tourism establishments with high visitor turnover will tend to incur more frequently than businesses in other sectors; and (ii) expanded training programs for tourism industry workers, which could both help absorb recently-laid off employees and strengthen their skills and market re-entry prospects, and allow tourism firms to temporarily furlough workers (rather than firing them) and enter them into training, while having the training expenses and worker salaries fully or partially-subsidized.

A key tourism policy goal for the medium-term recovery phase could be integrating Thailand into regional travel "bubbles" of countries that have fared well in

The trans-Tasman bubble, which would allow unrestricted travel between New Zealand and Australia—two countries that have, for the time being, successfully curtailed the spread of COVID-19—is one such example of this novel concept that is currently being considered. ASEAN could potentially emerge as one of the regions where this "bubble" may expand over time. Public health requirements for creating the travel bubbles will be important and may require data sharing between governments about COVID-19 infection levels and testing. To reassure tourists, it will entail establishing specific protocols to safeguard health and safety, common customs procedures, air transport agreements as well as providing adequate measures and equipment to check, disinfect, and socially distance users (including

[30] www.bangkokpost.com/thailand/general/1918888/pm-on-board-for-ailing-thai-rehab-under-bankruptcy-law
[31] www.bangkokpost.com/business/1887410/tmbam-eastspring-scraps-2-bond-funds; www.bangkokpost.com/business/1918948/debenture-market-jittery-over-thai-airways

containing COVID-19.

effective communication for user awareness) and workers at public transport, airports and seaports, and border gates.

Diversifying travel destinations can help support resilient and inclusive tourism.

Lastly, policy interventions should ensure that in the longer-term, products and services in the tourism industry are to be diversified to avoid dependence on a single activity or market such as the beach product on Thailand's coastal regions and islands where high visitor numbers occur. It will be important to enable new tourism products and services such as those focused on eco-travel or local culture in secondary cities and more remote provinces that support less developed, rural regions and provide an opportunity for an inclusive form of tourism where the workforce and entrepreneurs are equipped with the right skills to interact safely with future travelers. Expanding ground and port infrastructure as well ICT infrastructure beyond the three main destinations of Bangkok, Phuket and Chiang Mai will also be critical.[32]

Firms will require workers with new skills in digital communication, health operations and contact-free service.

Increasing digital presence for firms will ensure their survival during the crisis and ensure their competitiveness going forward. Supporting SMEs in manufacturing and services, in particular tourism businesses, to navigate new digital distribution channels, enhance their access to markets, and increasing the access to digital government services will be more important than ever. This includes preparing for increased automation in the Thai tourism industry and examining ways to leverage the formal tourism workforce for sector sustainability post COVID-19. In addition, this is an important opportunity for innovation and digital development in areas such as virtual reality products and training and blockchain identity tracking. Tax deductions can promote investments for worker training, management training and technology adoption.

Firm support measures can be linked to worker retention.

While Thailand's social security office loan measures are linked to worker retention, other countries, including the United States, have offered forgiveness of the firm support loans conditional on: (i) firms keeping workers on their payrolls for at least 2 months; and (ii) using the loan proceeds only for payroll costs, interest on mortgages, rent, and utilities. If any of these conditions were not respected, firms would have to repay the loans in full. While conditionality may not make the support measures more effective, it may improve compliance and reduce potential misuse of funds.

Policymakers can prepare for recovery by strengthening insolvency and resolution frameworks to prevent a surge in insolvency filings.

The deterioration of assets will increase the risk of insolvency for many firms, with negative implications on credit markets, supply chains, and worker productivity will dissipate only gradually. Governments can prepare for recovery by creating enabling environments to restructure debt and firms including strengthening insolvency and resolution and legal frameworks for corporate and consumer debt restructuring, and out-of-court conciliation and resolution measures. The latter will be particularly important to prevent a surge in insolvency filings, value-destroying liquidations, and asset fire-sales, helping to preserve employment and also reduce pressures on bank balance sheets which impair their functioning and stability.

Large firms facing liquidity pressure can also benefit

There are additional options for relatively larger SMEs that have access to the financial sector and/or are integrated into the economy through value chains. For example, firms can be encouraged to support MSMEs along their supply chain, e.g.

[32] See Box on Leveraging Tourism for Growth, Thailand Economic Monitor August 2017.

from policy interventions.

through supplier finance. It may be possible to support them in the form of credit lines, credit guarantees, linked to corporate taxes paid in the previous year, particularly as disbursement of soft loans has been low. Import tariffs can be reduced or delayed. Large firms also play an important role in generating high productivity employment, including in key sectors that typically are export-oriented.[33] For those firms, a wider range of instruments are available, including: extraordinary policies to provide liquidity support, guarantees, trade finance, factoring, capital markets solutions, tax credits or concessional lending.

4. Concluding remarks

In the near term, the chapter identifies expanding coverage of supported households and tailoring support to firms depending on sector context as key priorities...

While Thailand has shown relative success in the public health measures to contain the outbreak, this focus chapter proposes policy considerations to alleviate the economic repercussions on households and firms. Coverage of vulnerable households can be expanded to ensure that no gaps remain among, for example, the elderly and migrant workers. Firm interventions could be tailored to the needs of sectors that have been especially hit hard by COVID-19 with a view towards job creation and retention. For example, support to increase the digital presence of such firms will be important to strengthen their resilience during the crisis and ensure they can more effectively compete in a post-COVID-19 world of increased demand for contact-free services. In addition, the cost of public health safety protocols such as hospital-grade sanitization of hotels could be subsidized.

...with more medium-term measures also introduced to support SMEs to adjust to a different business environment and rebuild supply chains.

Even after business restrictions on people's mobility have been lifted, there may still be changes in consumer behavior, and some firms, especially SMEs, will need support to adjust business models to a different economic environment. Firms in global and local value chains may need support in finding new suppliers. The deterioration of firm's balance sheets will affect financial sector decisions and will increase risk aversion parameters when extending new credit. In this context, specific measures to help SMEs reconnect with supply chains and final demand could include: (i) easing SME participation in public procurement; and (ii) supporting SMEs to find new suppliers and markets (e.g. market intelligence, business development services, matching programs).

Measures can also strength the resilience of supply chains.

The COVID-19 outbreak highlights the importance of a resilient global value chain and brought more awareness of how the supply chain system is important to the economy and everyday activities. Adverse shocks to any part of the supply chain can spread both upstream and downstream. GVCs can be made more resilient through diversification. For example, products and services in the tourism industry can be diversified to support resilient and inclusive growth by avoiding dependence on certain destinations such as coastal regions and islands where high visitor numbers occur. Developing both hard and soft infrastructure for travel to more remote areas and digitalization for contact-less services will be important.

[33] See "Box 3: How has COVID-19 Impacted Global Value Chains?" for examples of large Thai firms that are export-oriented.

Another medium-term priority is maintaining financial stability and well-functioning financial markets to serve liquidity needs of households and firms.

In the short-to-medium term, Thai authorities should monitor closely the evolutions in the financial sector, keeping an eye on key macro-prudential indicators so that any significant deterioration can be properly monitored and mitigated. For instance, it is expected that NPLs will increase beyond the most recent 3.1 percent level, once more firms are hit by liquidity constraints and unless their business see an uptake in the next few months. Authorities should prepare an action plan on how to deal with a potentially significant increase in NPLs in the next 6-12 months.

In the medium to longer term, stimulus policies to support the resiliency of growth in the long term will be critical.

As fiscal space dwindles, the rebuilding of fiscal buffers, particularly through enhanced revenue mobilization, will be critical to allow Thailand to respond to future shocks as well as implement planned public infrastructure investments. Rebuilding fiscal space will also be critical to enacting stimulus policies that may be required to boost aggregate demand to support the recovery, as well as continued provision of assistance to vulnerable firms and households.

In the longer term, Thailand could consider rethinking the traditional employment-based social protection system.

There is an opportunity to rethink the traditional employment-based social protection system currently practiced by Thailand, by drawing from the lessons learnt from Thailand's active response to COVID-19 with various instruments. Some key considerations include ensuring a minimum package of benefits for the most vulnerable; building effective delivery mechanisms for social protection programs by establishing programs with universal benefits to help cushion epidemic outbreaks that may occur in the medium term as well as other negative shocks. In both the medium and long term, social protection will need to be complemented by labor market policies, such as training and employment services programs, tailored to the needs of a knowledge-based economy.

References

Gentilini, Ugo, Mohamed Almenfi, Pamela Dale, John Blomquist, Harish Natarajan, Guillermo Galicia, Robert Palacios, and Vyjayanti Desai. 2020. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures." Version 10. World Bank, Washington, D.C.

International Organization for Migration (IOM). 2020. "Rapid Assessment: COVID-19 Related Vulnerabilities and Perceptions of Non-Thai Populations in Thailand." IOM, Bangkok.

Krungsri Research, Monthly Economic Bulletin, May 2020. Bank of Ayudhya PLC, Bangkok.

Lekfuangfu, Warn N. and Piyapromdee, Suphanit and Porapakkarm, Ponpoje and Wasi, Nada, On Covid-19: New Implications of Job Task Requirements and Spouse's Occupational Sorting (April 23, 2020). Available at SSRN: https://ssrn.com/abstract=3583954 or http://dx.doi.org/10.2139/ssrn.3583954

World Bank. 2020. COVID-19 Crisis Through a Migration Lens. Migration and Development Brief, no. 32;. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/33634

National Statistical Office of Thailand. 2020. https://thaifightcovid19.com/ Results from an online COVID-19 socio-economic impact survey. NSO, Bangkok.

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