
ECONOMIC IMPACTS OF COVID-19

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COVID-19 PANDEMIC

COVID-19 PANDEMIC COULD LAST 18 MORE MONTHS

- The pandemic will most likely end in 18 months when either 1) a new vaccine discovered and available to at least 60% of population, 2) a Covid-19 anti-virus medicine is discovered and accessible to all, or 3) a critical mass of the population has been infected by the virus, creating a herd immunity.
- Countries that have “flattened the curve” are gradually relaxing the lockdowns.
- There are however possibilities of a second-wave or third-wave outbreak with the relaxation.

Countries	Relaxation of Lockdown
China	April 8
USA	May 4
Germany	April 20
UK	To be announced
France	May 11
Japan	May 14
India	May 4
ASEAN5:	
Singapore	May 12
Malaysia	May 4
Indonesia	Possibly June 1
Philippines	May 1
Thailand	May 3

IN THAILAND, A FEW BUSINESSES ARE EXPECTED TO START RE-OPENING IN MAY

- Per the proposal by the Business Advisory Committee in Center for Covid-19 Situation Administration, very low to low-risk businesses will be the first to gradually re-open and must comply with health requirements; High risk businesses will be last to re-open.
- Health requirements are (a) maintain physical distance in the shop and in the queues outside shop, (b) limit stay of each customer to 1 hour, (c) reduce loud speaking or shouting, (d) maintain air change level of more than 10 or open air, (e) measure clients and staffs' temperatures, ensure mask wearing, clean frequently touched surfaces, and (f) install a check-in & check-out QR code registration system for clients, which is being developed by the private sector.

Proposed Business Re-opening

BUSINESS WITH...			
Very Low risk	Low risk	Medium risk	High risk
Can re-open	Can re-open with health measures	Can re-open with registration & approval after low risk businesses	Can re-open after Covid-19 outbreak is under control

- Street vendors, open-air markets, small non-aircond shops, stand-alone restaurants, supermarkets, convenient stores, parks, open-air centers for non-team sports, hair salons (wash, cut, dry only), telecom service shops outside department stores, pet grooming, medical clinics, public transportation, planes, vans, buses, funerals, & weddings. [Those in blue are now permitted to re-open on 3 May 2020.]
- Malls and department stores, large restaurants, open-air sports e.g. golf course, swimming pools, beauty clinics, dental clinics, museums, flower parks, galleries, libraries, & massage parlors.
- Activities that were not allowed for white and green businesses earlier, indoor sport centers, fitness centers, & movie production
- Cinemas, concert halls, convention centers, exhibition halls, boxing centers, sports stadium, pubs, bars, game & internet shops, tutorial centers, & zoos,

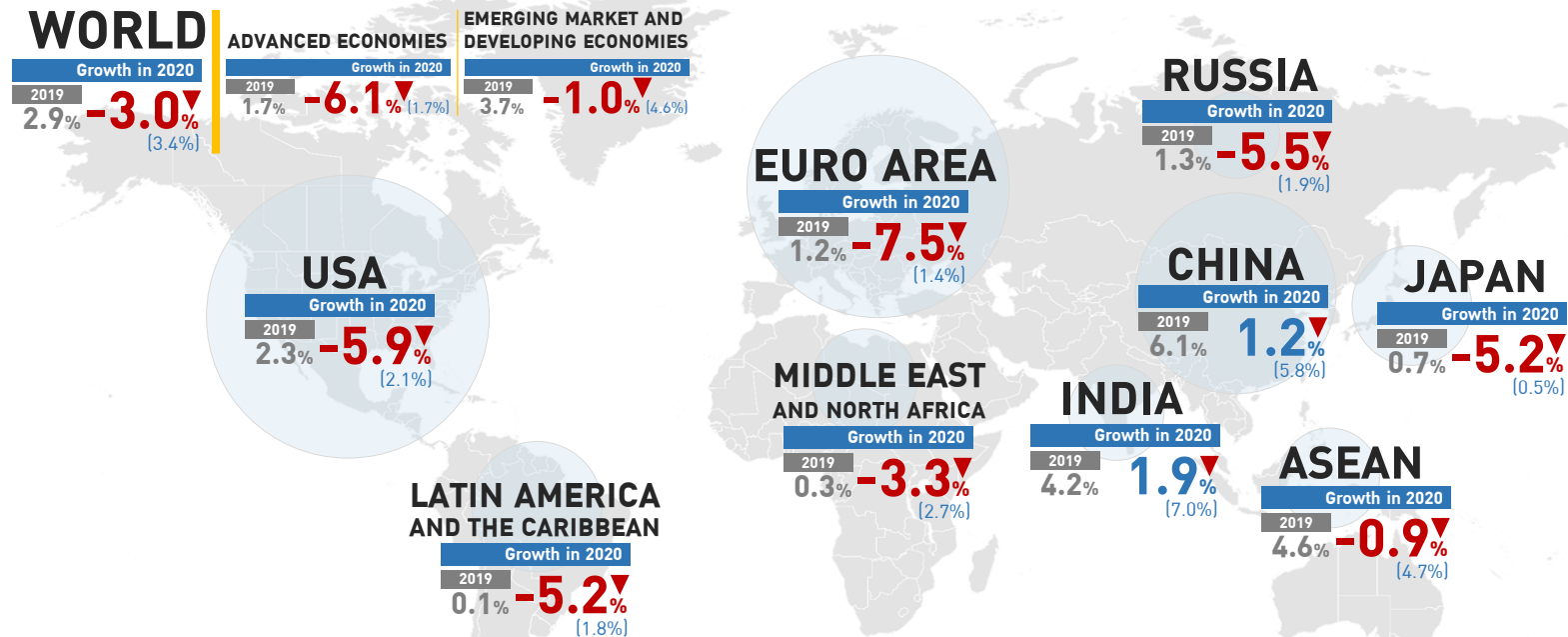
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**IMPACTS ON
GLOBAL ECONOMY**

WORLD ECONOMIC GROWTH THIS YEAR LOWEST IN 100 YEARS

- As a result of the COVID-19 pandemic, the IMF projects the global economy to contract by -3% in 2020, much worse than during the 2008-09 global financial crisis, as large, advanced economies in the West are paralyzed by the Covid-19 outbreak; China and India are the only 2 large economies can will register growth this year
- The IMF projection assumes a recovery in major Western economies in the second half of this year; should that not be the case, global economy could contract by more than currently forecasted.

GDP Growth Forecasts by International Monetary Fund



Note: ▲ ▼ shows increase/decrease compared to 2019; Number in bracket is forecast in October 2019; Size of circle is the size of economy

Source: World Economic Outlook (April 2020), International Monetary Fund and TDRI calculation

MOST LARGE ECONOMIES ARE USING 15-45% OF GDP TO SUPPORT THEIR ECONOMIES

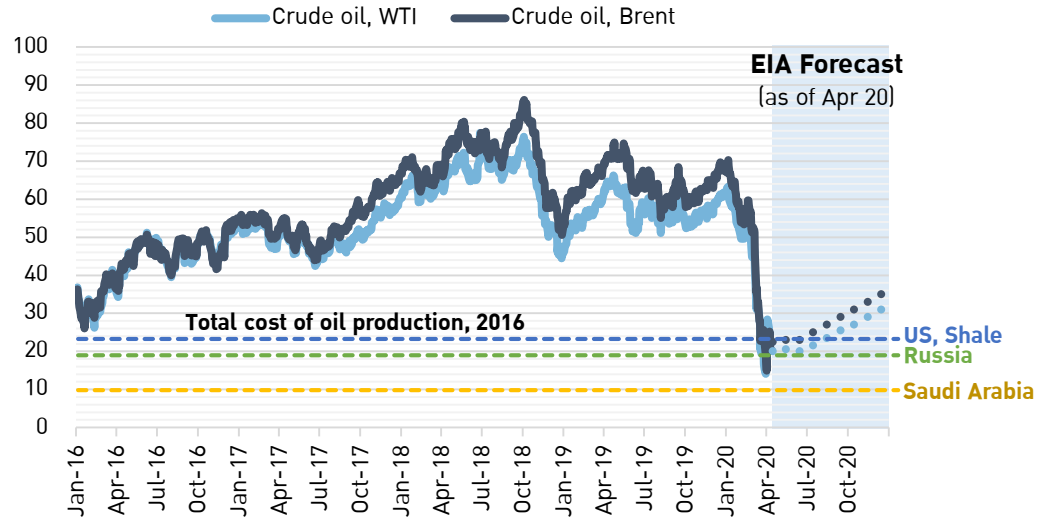
MEASURE		USA	FRANCE	GERMANY	JAPAN	CHINA	INDIA	THAILAND	
Monetary and Macro-finance	Rate cuts	✓				✓	✓	✓	
	Liquidity Injection	✓	✓ (EU)	✓ (EU)	✓	✓	✓	✓	
	Bank measure	✓	✓			✓	✓	✓	
	Guarantee or Loan	✓	✓	✓	✓	✓	✓	✓	
Taxation	Delays	✓	✓	✓	✓	✓	✓	✓	
	Individual Taxes	✓						✓	
	Business Taxes	✓	✓	✓		✓		✓	
	Consumption Taxes		✓			✓	✓		
Expenditures	Business Support	Employment	✓		✓	✓			
		Grant or support	✓	✓	✓	✓	✓	✓	
	Labor Support	Unemployment	✓	✓			✓	✓	
		Self-employed	✓	✓	✓	✓		✓	
		Sick leave	✓	✓		✓			
	Household Support	Cash	✓	✓ (parents)	✓ (parents)	✓ (low-income)		✓ (low-income)	✓ (other criteria)
		Debt	✓ (student loan)		✓ (rent)		✓ (loan, rent)		
	Public Health Spending		✓	✓	✓	✓	✓	✓	✓
Fiscal Size in USD (% of GDP)		1,813 bn (8.5%)	158 bn (5.8%)	257 bn (6.7%)	984 bn (19.1%)	533 bn (3.8%)	32 bn (1.1%)	31 bn (5.9%)	
Monetary Size in USD (% of GDP)		6,154 bn (28.7%)	327 bn (12.1%)	1,440 bn (37.3%)	117 bn (2.3%)	2,000 bn (14.1%)	53 bn (1.8%)	28 bn (5.3%)	

Source: Compiled by TDRI EIS (as of 23 April 2020)

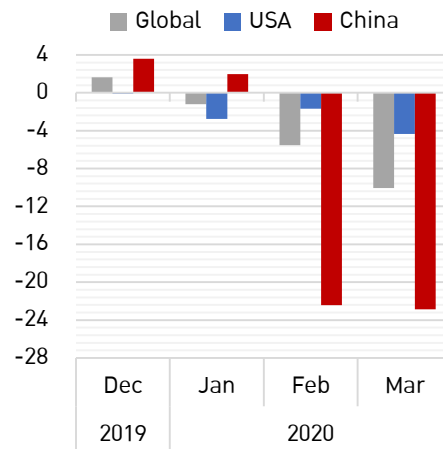
CRUDE OIL PRICES DAMPENED WITH FALL IN DEMAND

- At end-March, Brent spot price was US\$19/b (-72% yoy), lowest in 18 years, as low demand due to COVID-19 and Russia–Saudi Arabia oil price war.
- In 2020Q1, Global oil consumption decreased by 5.6%yoy, while China decreased by 14.6%yoy.
- Saudi Arabia threatened to increase oil production from 9.7 to 13 million barrels per day to pressure Russia
- EIA forecasts Brent crude oil spot prices will average US\$30/b in 2020H2 (-52%yoy) as demand recovers and US\$33/b (-48%) for the whole year.

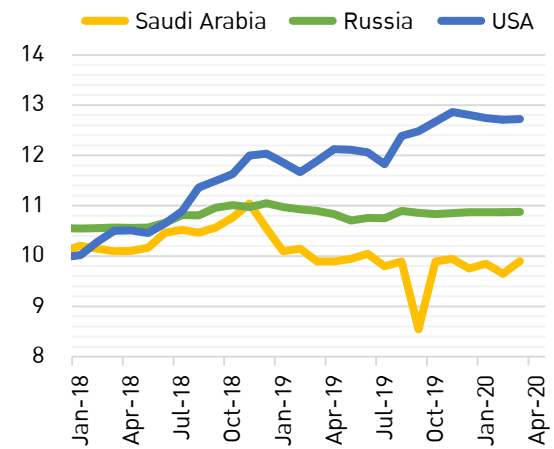
Global crude oil spot prices (US dollar/barrel)



Oil consumption growth (%YoY)



Oil production (million barrel/day)

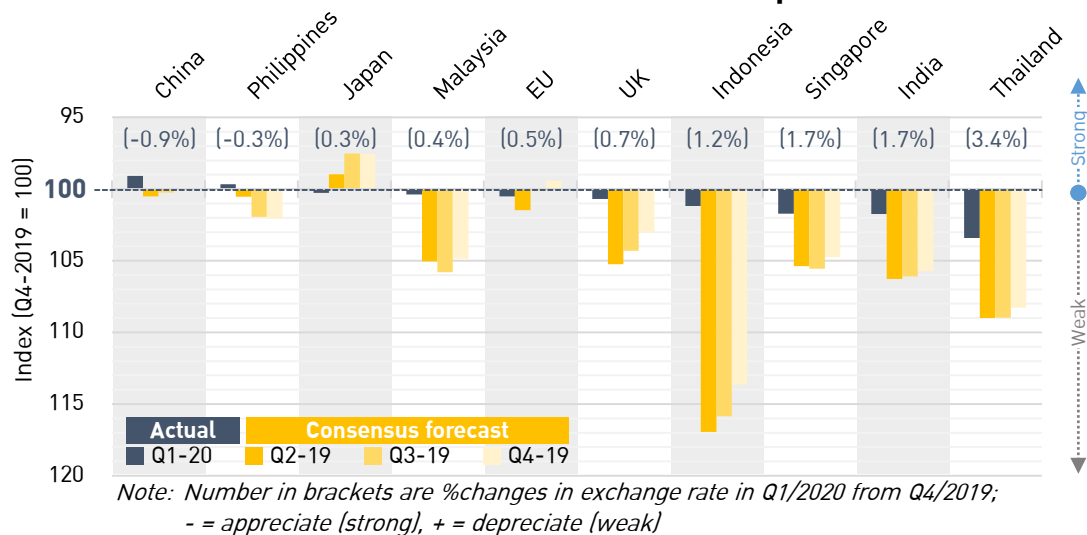


Source: EIA, knoema

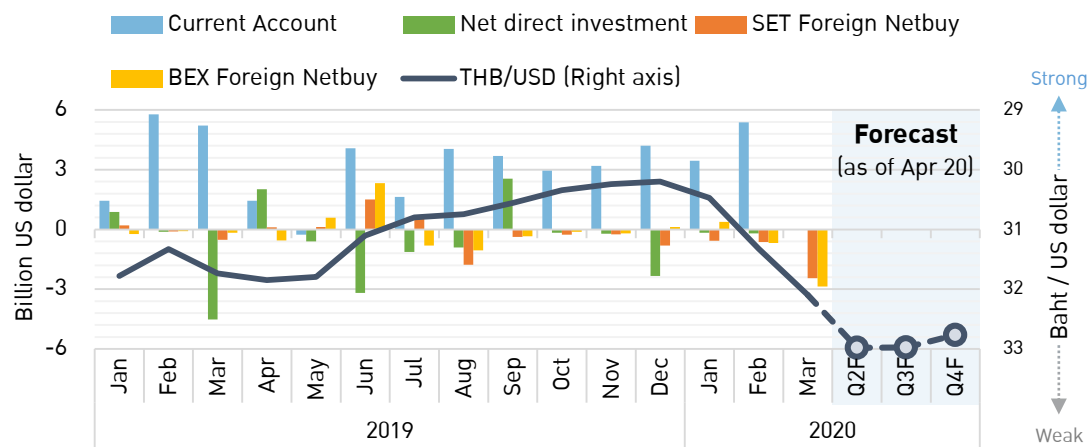
BAHT WILL WEAKEN BELOW BT32/US\$ FOR THE REST OF THIS YEAR

- Baht weakened from Bt30.3/USD in Q4/2019 to Bt31.3/USD in Q1/2020
- Baht will continue to weaken to below Bt32/US\$ for the rest of the year as current account weakens, while outflows from bond and stock markets continue.
- The baht is expected to depreciate this year by more than other currencies in ASEAN except Indonesia which is more affected by the Covid-19 outbreak.

Index of Local Currencies to US dollar (compared to Dec 2019)



Thai Baht Movement Drivers



Source: SET, ThaiBMA, BOT, CEIC and Consensus Economics Inc. (as of Apr 2020)

Note: Current account and Net direct investment data for Mar 2020 are not yet released

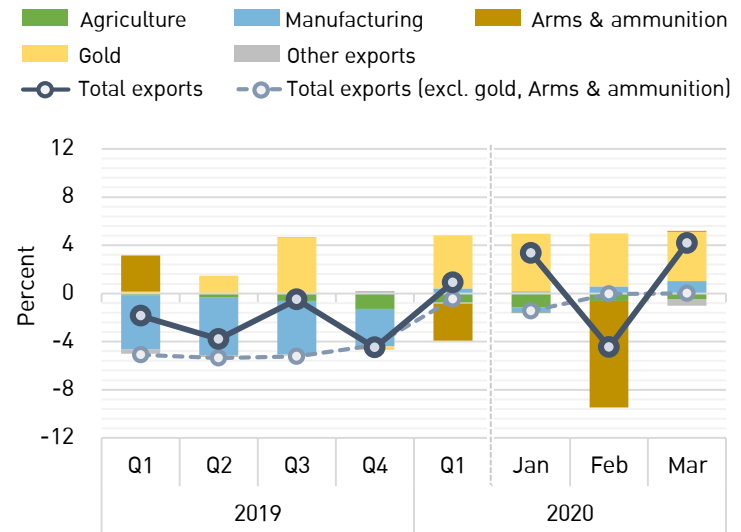
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IMPACTS ON THAI ECONOMY

THAI EXPORTS COULD CONTRACT BY 5-10% THIS YEAR

- In 2020Q1, exports excluding gold & ammunitions contracted by 0.5%. By March when the Covid-19 pandemic has spread, only exports to the US expanded, particularly in products that substituted those from China e.g. computer parts & electrical appliance parts
- Exports in 2020Q2 will benefit from the recovery in China and other major markets to follow in subsequent quarters; however, as economic activities in most major market this year will fall from last year's, exports will also contract. The magnitude of the contraction will depend on how soon the major markets recover.

Growth of Thai export value by Major Products



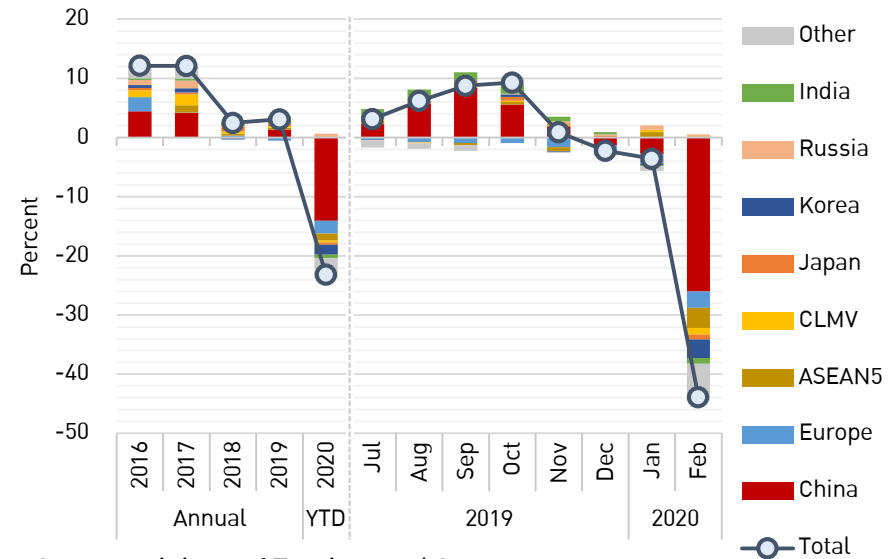
Destination	%YoY Growth of Thai export excl. gold, arms & ammunition										%Share 2020YTD
	Q2-19	Q3-19	Q4-19	Q1-20	Jan-20	Feb-20	Mar-20	2018	2019	2020YTD	
Japan	-2.2	2.9	-5.1	-5.2	-2.6	-9.7	-3.3	13.7	-1.6	-5.2	10.3
EU 28	-5.5	-5.3	-6.2	-4.3	2.4	1.1	-15.0	5.0	-5.7	-4.3	10.1
ASEAN	-7.9	-13.1	-7.4	-1.7	-4.9	2.0	-2.1	13.5	-8.2	-1.7	25.5
ASEAN-5	-13.9	-16.6	-9.2	-4.0	-10.5	-0.9	-0.8	13.6	-12.2	-4.0	13.9
CLMV	0.6	-7.9	-5.1	1.3	2.5	5.9	-3.6	13.5	-2.6	1.3	11.5
USA	3.3	7.7	5.4	24.1	10.0	18.9	42.3	5.6	5.0	24.1	14.5
Middle East	-5.5	0.9	5.4	0.5	-2.9	14.3	-7.8	-0.1	0.1	0.5	3.8
Australia	-11.3	-12.8	-14.8	-13.0	-18.9	-11.0	-8.8	4.0	-12.8	-13.0	3.7
China	-8.7	2.9	1.6	0.1	6.2	-0.8	-4.0	2.7	-3.9	0.1	11.3
Total exports	-5.4	-5.2	-4.3	-0.5	-1.5	-0.04	-0.0005	7.7	-5.0	-0.5	100.0
Total exports incl. gold, arms & ammunition	-3.8	-0.5	-4.5	0.9	3.3	-4.5	4.2	6.9	-2.7	0.9	

Source: Bank of Thailand with TDRI calculation

TOURISM WILL SLUMP INTO NEXT YEAR

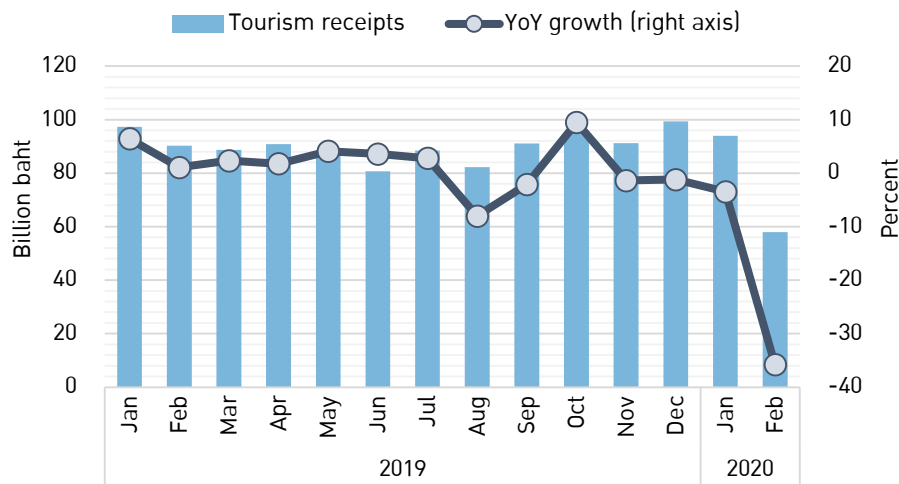
- Since the Covid-19 outbreak, tourism has declined by almost 100%.
- International tourism will unlikely fully recover until 2022 as it will likely recover 4-6 months after the next 18 months when the Covid-19 pandemic ends.
- Small groups of long-stay foreign tourists from selected low-risk countries may be allowed but will be quarantined for 14 days upon arrival in Thailand.
- Domestic tourism would be first to take place among low-risk provinces, once they are re-opened inter-provincial travel between them are allowed.

Contribution to growth of tourism receipts



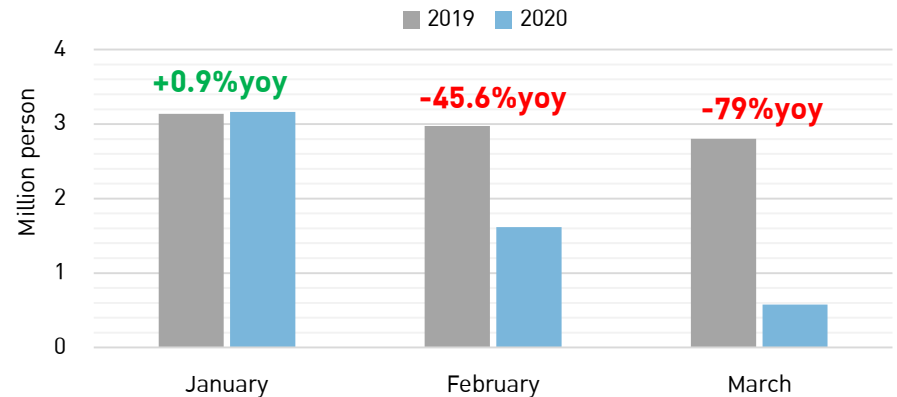
Source: Ministry of Tourism and Sports

Tourism receipts from Thai tourists



Number of passenger arrival in 5 Airports

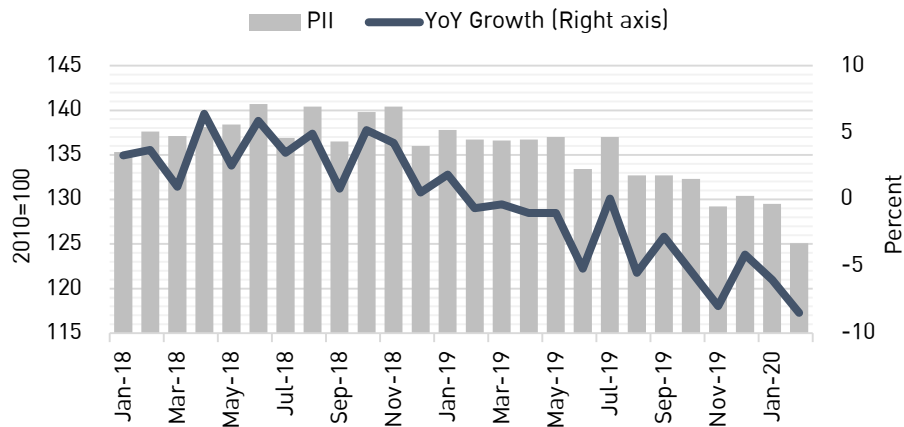
(Suvarnabhumi, Don Mueang, Phuket, Chiangmai, Hat Yai Airport)



Source: TAT Intelligence, Ministry of Tourism and Sports

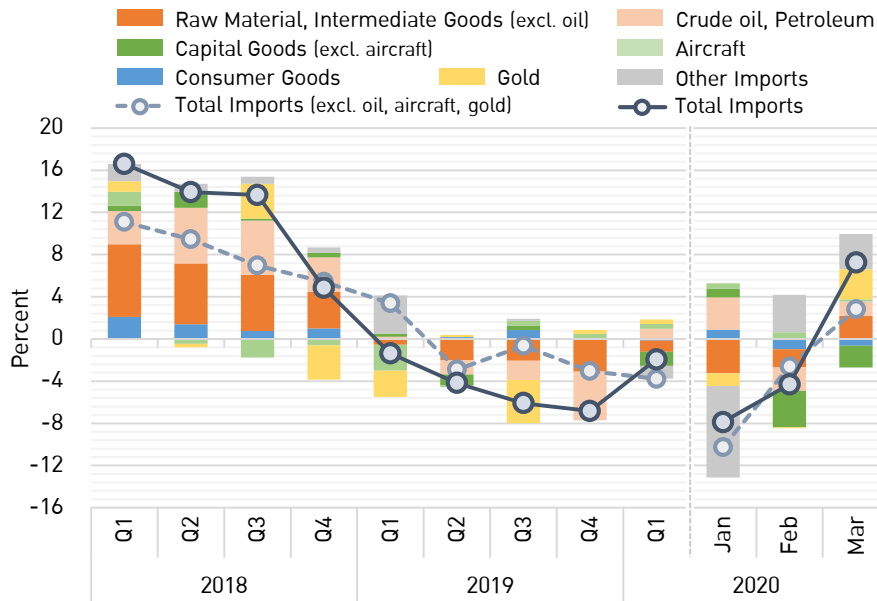
BUSINESSES ARE HOLDING OFF INVESTMENTS THIS YEAR

Private investment index (Seasonal adjusted)

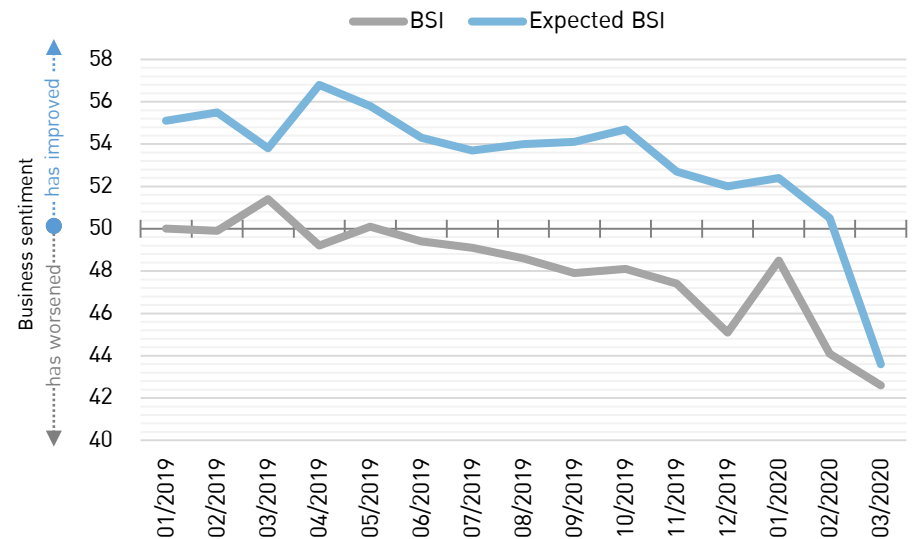


- Private investment has been on a downward trend since the beginning of last year.
- With the Covid-19 outbreak, private investment has sharply contracted with imports of capital goods declining yoy since February.
- Business sentiment for the next 3 months as of March has sharply fallen to the level of October 2011 when the big flooding occurred.

YoY Growth of Thai Import Value (in US\$ terms)

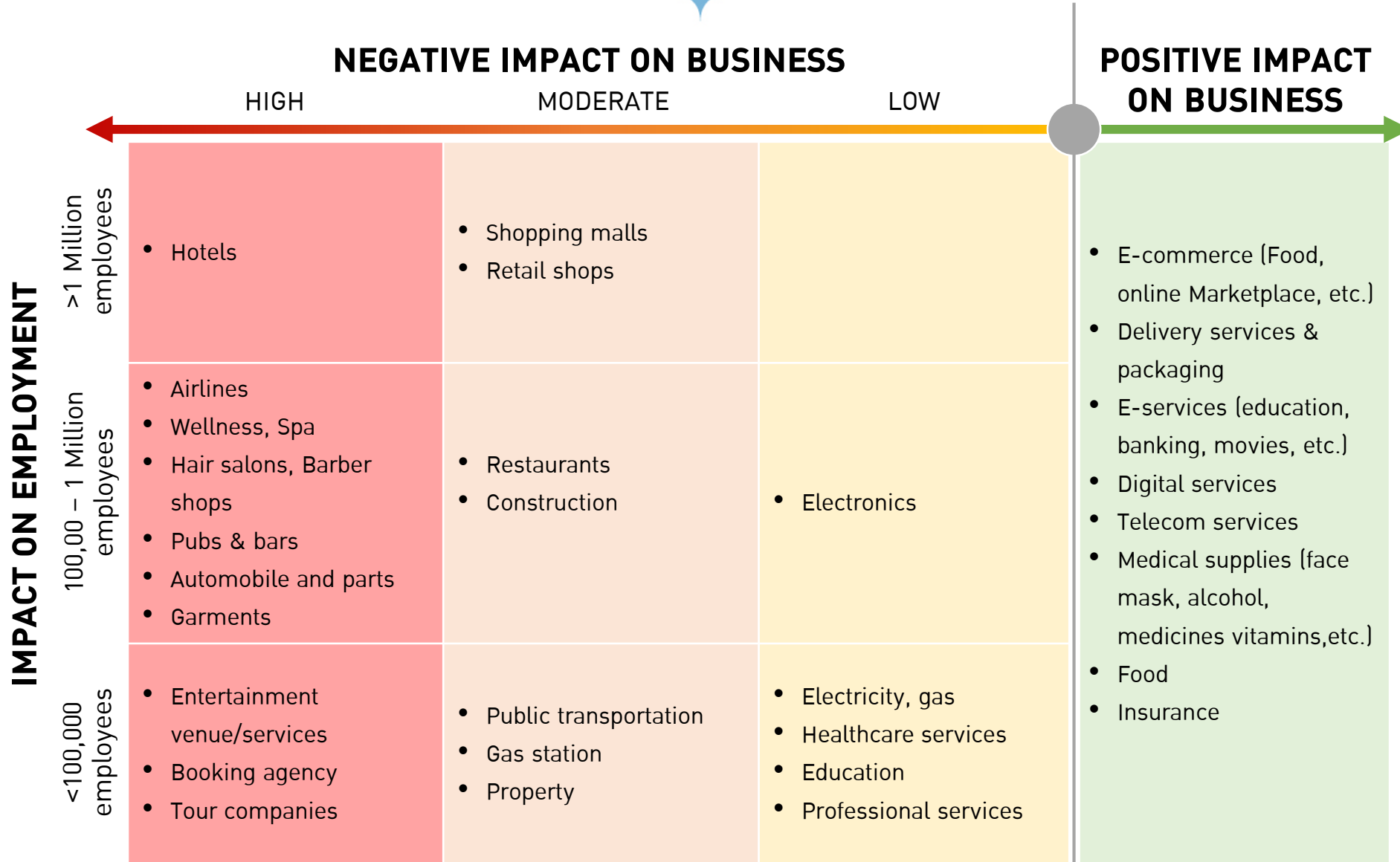


Business Sentiment Index



Source: Bank of Thailand

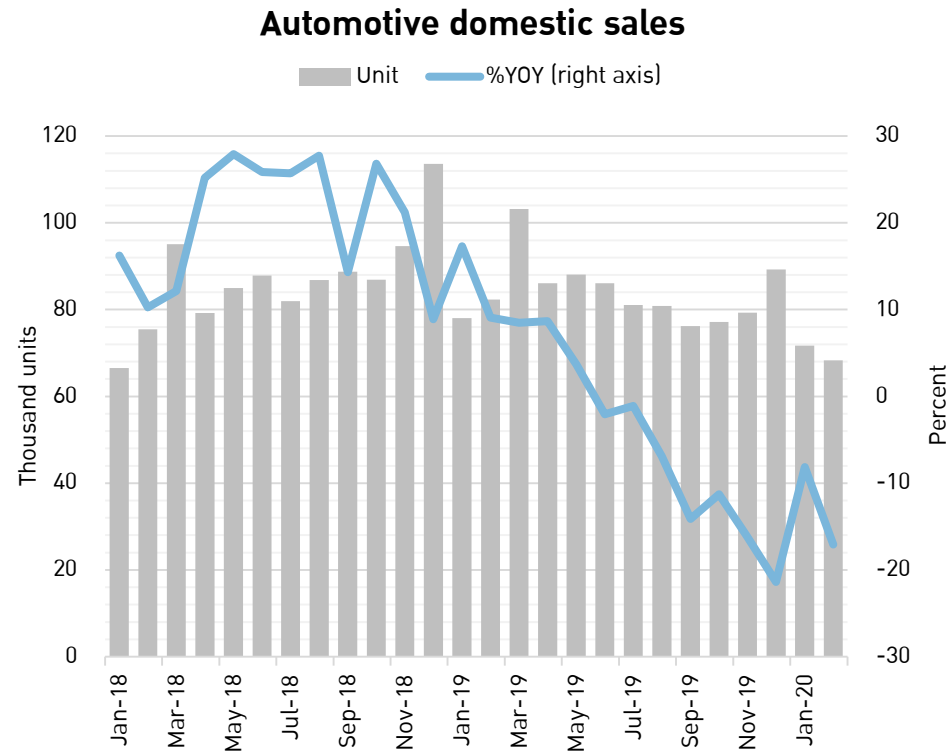
WHICH BUSINESSES ARE AFFECTED MOST BY LOCKDOWN?



Source: BOT, Bangkokbiznews, Thansettakij, marketingoops, Phatra, SET, TRIS, TDRI analysis

AUTOMOBILE AND ITS PARTS PRODUCTION FALL SHARPLY THIS YEAR

- Automobile sales have been continuously contracting yoy since June last year as demand declines after its surge since 2017 after the First Car Program ended.
- Automobile production ceased by end-March as the Covid-19 outbreak escalated and the Government announced the lock-down; auto-parts sales have also halted as both domestic demand and exports fall.
- Production for domestic automobile sales (50% of total) are expected to decline by 20-30% this year, while for exports are to decline by 20% from the following reasons:
 - Supply disruption: imported parts from Malaysia and Indonesia are stalled due to their lock-down.
 - Logistic disruption: transporting automobiles to provinces in Thailand are now difficult due to the lock-down; exports are affected by limited port operations overseas.
 - Demand decline: demand for new car purchases declined with lower purchasing power and less ability & need to drive during the lock-down.

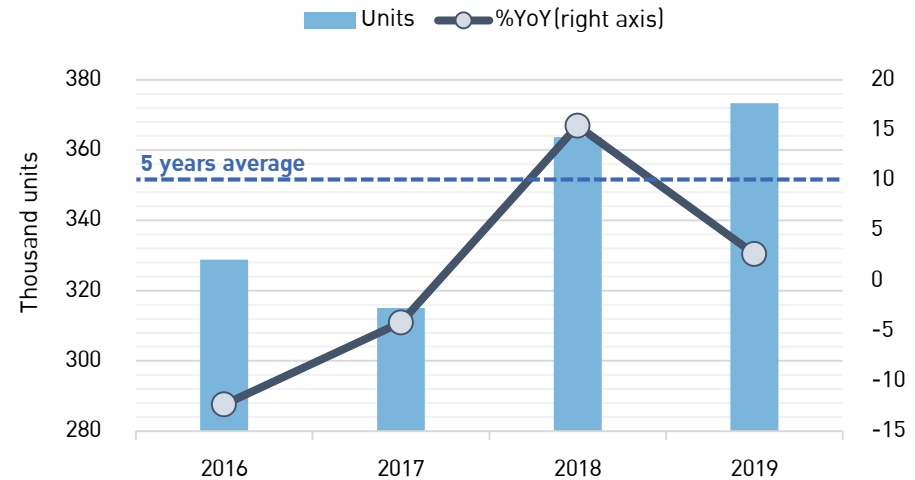


Source: The Federation of Thai Industries

PROPERTY SALES WILL FURTHER DECLINE THIS YEAR

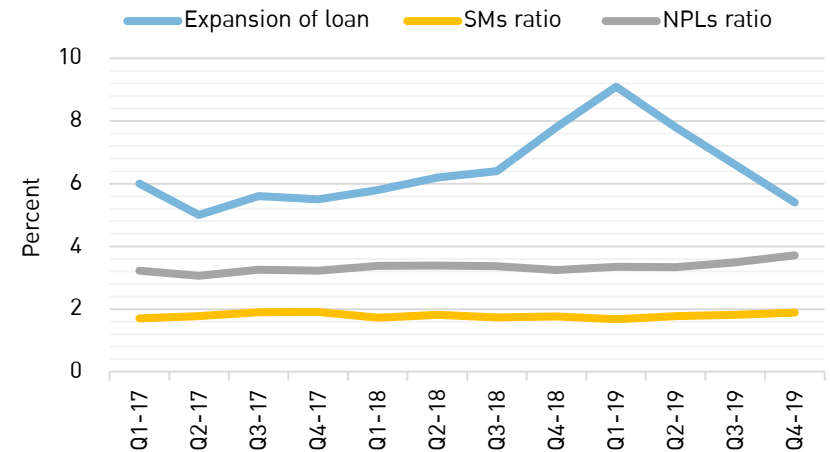
- Property sales have been declining since last year as demand from both Thai & Chinese wanes, while oversupply persisted promoting price reductions.
- REIC forecasts the number of units transferred nationwide to fall by at around 15% this year as demand & mortgage further falls amidst the Covid-19 pandemic, although some recovery is expected in 2020H2 from relaxation of the lockdown and recovery in China.
- New, unconstructed projects this year will be delayed or terminated, thus, affecting the construction business.
- Many small property developers will face liquidity problems this year; there will likely be several that will go out of business or bought by larger developers.

The number of residential units transferred nationwide



Source: REIC, GHBank

Mortgage loan

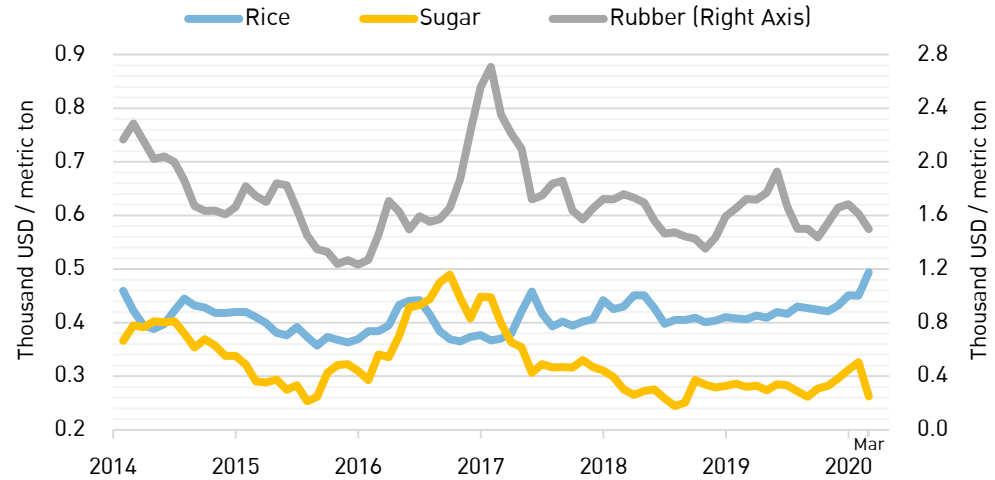


Source: BOT

AGRICULTURE HOUSEHOLD INCOMES FALLS FROM DROUGHT & COVID-19 OUTBREAK

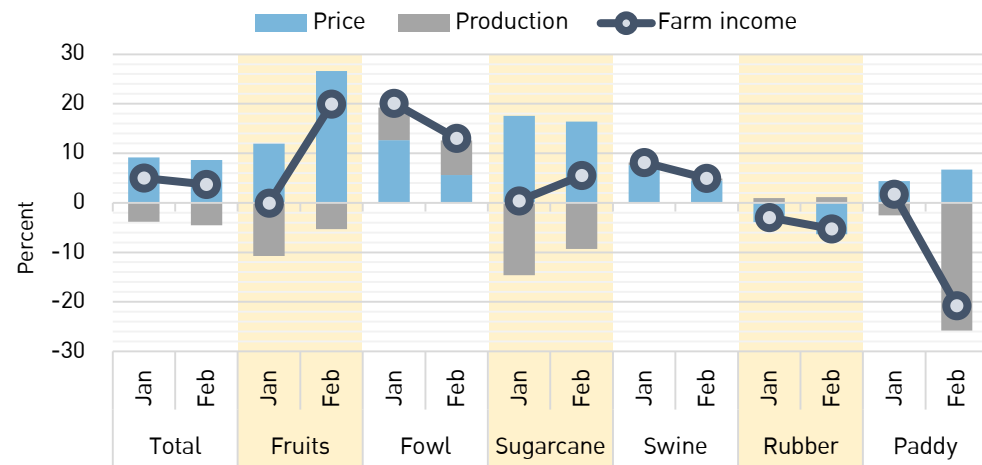
- Farm incomes in the Jan-Feb 2020 rose slightly by 3.7% yoy from rise in fruit and sugarcane prices.
- Farm incomes from rice may rise yoy this year, while those from rubber and sugarcane falls as
 - Production of rice falls by 6-7% and sugarcane by 40% from severe drought in 2020H1, while rubber production falls as farmers cannot tap rubber during curfew.
 - Rice prices will rise by around 10% this year, while rubber and sugar price falls with lower crude oil price and global demand.
- Incomes of agriculture households will also be reduced by the lock-down as their incomes from non-farm activities (>50% of income) and remittances from non-farm family members.

Global agriculture prices



Source: World Bank

YoY Growth of Farm income by Crops (2020)

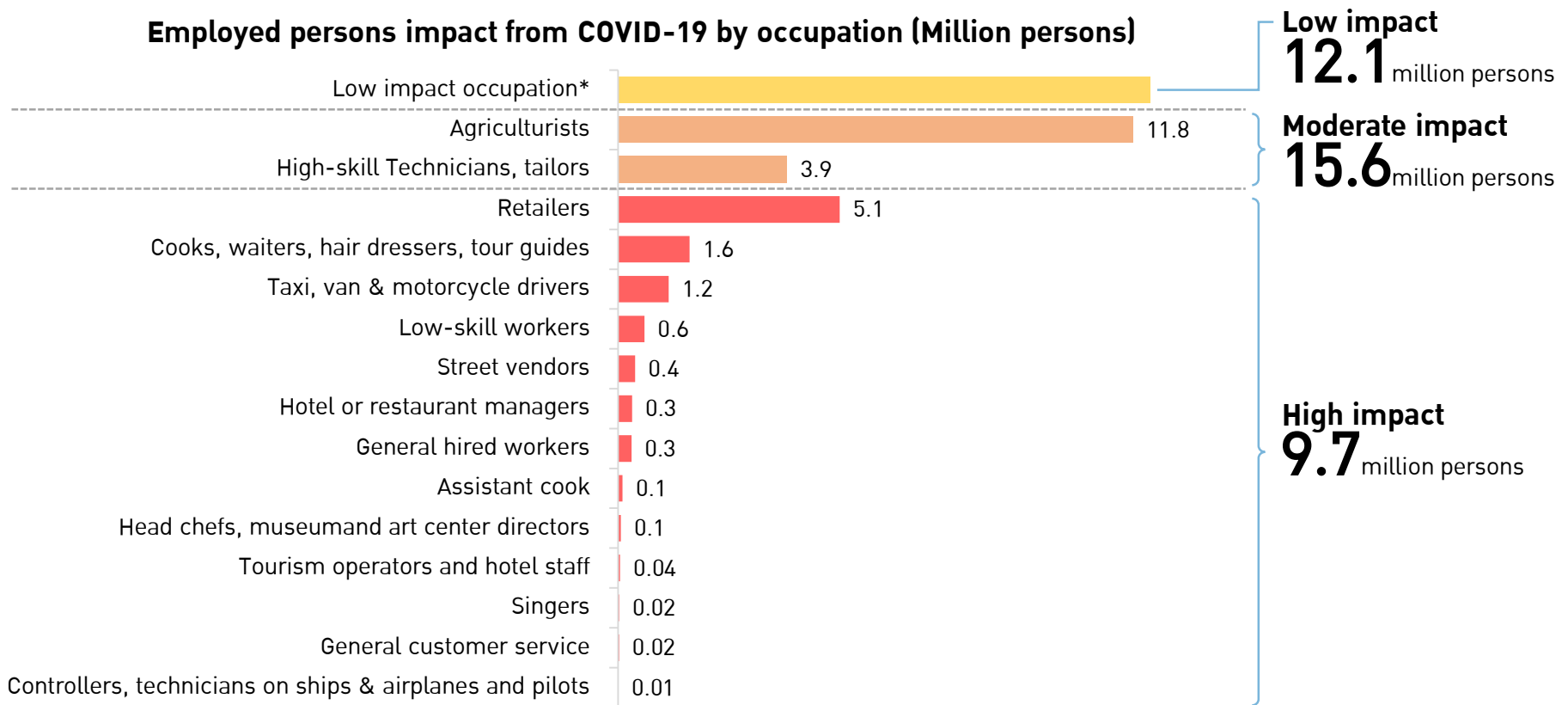


Source: Office of Agricultural Economics with TDRI calculation

ALMOST 10 MILLION ARE SEVERELY AFFECTED BY THE LOCKDOWN

- Jobs of 9.7 million people are severely affected by the lockdown from Covid-19 outbreak, with the largest group being retailers followed by cooks & waiters, hair dressers, tour guides and taxi, van and motorcycle drivers.

Employed persons impact from COVID-19 by occupation (Million persons)

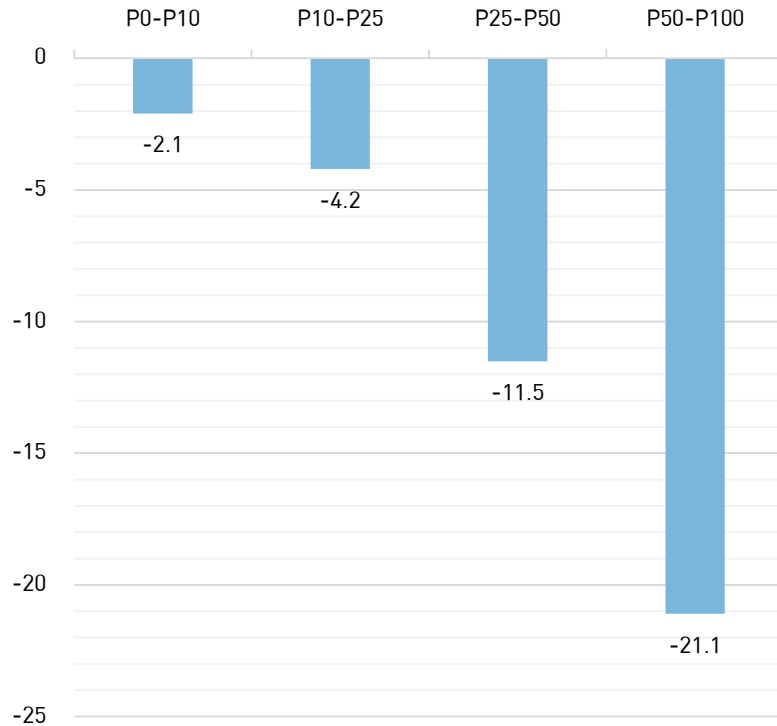


Source: BOT, Labor Force Survey Q3:2019 with TDRI calculation

Note: Low impact occupation include State employees, health care workers, chemists, physicists, computer programmers, telecom workers and high-skilled workers

CONSUMPTION OF MIDDLE & HIGH INCOME HOUSEHOLDS COULD FALL BY BT65 BN/MONTH

**%Change of expenditure per household
by income group**



Source: Socio Economic Survey 2017

Note: P0-P10 = households with income per capita not more than Bt2,776 per month

P10-P25 = households with income per capita between Bt 2,777-5,385 per month

P25-P50 = households with income per capita between Bt5,386-10,191 per month

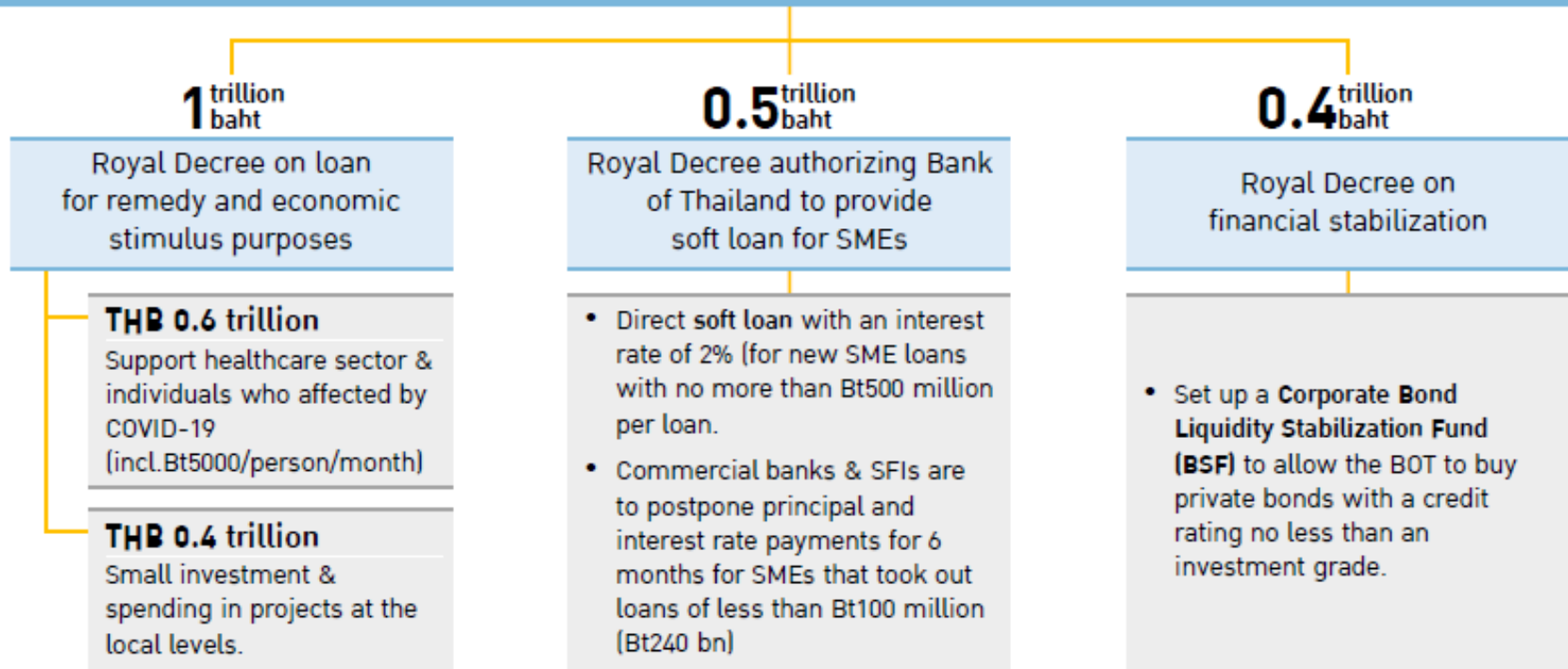
P50-P100 = households with income per capita more than Bt 10,191 per month

- Should middle and high-income households reduce their consumption per the previous slide, their purchases could fall by Bt65 billion (0.4% of GDP) per month.
- Households with per capita income of more than Bt10,191 could reduce monthly purchases by Bt50.8 billion or Bt2,988 per person (17 million persons)
- Households with per capita income between Bt5,386-10,191 could reduce monthly purchases by Bt13.8 billion or Bt749 per person (18.4 million persons)

ADDITIONAL GOVERNMENT MEASURES ADD UP TO MORE THAN 6% OF GDP

- Royal Decrees for spending are now effective; the Bt1 trillion (6% of GDP) fiscal spending could start in May; we expect the Bt0.6 trillion which includes cash handouts to be disbursed relatively quickly, but the Bt0.4 trillion may take a couple of months as projects need to be approved & procured through the usual channels; Bank of Thailand’s measures of Bt0.9 trillion have begun.
- Currently, public debt to GDP is 48%; there is room for further government borrowing of up to 60% of GDP or another Bt2 trillion, if needed.

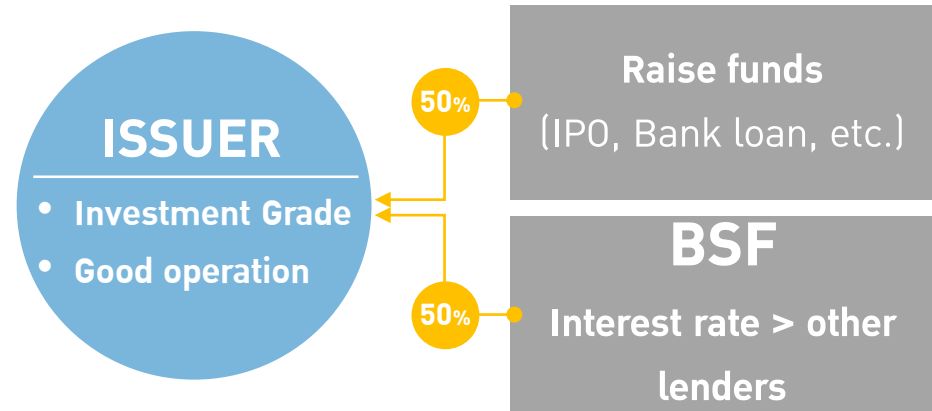
THAI GOVERNMENT COVID-19 RELIEF MEASURES PHASE 3 (1.9 TRILLION BAHT)



DESPITE THE BSF, PROPERTY AND SERVICE SECTORS ARE WORRISOME

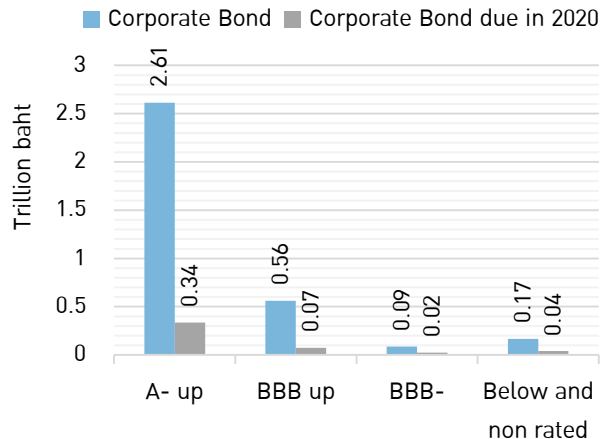
- Establishment of the BSF helps calm the bond market; it applies to only BBB-rated bonds and above which accounts for >90% of outstanding corporate bonds.
- However, of the Bt 144 bn corporate bonds that are due in the 2020Q2, Bt41 bn are non-rated of which half are in the property sector and a quarter in the services & hotels sector.

Corporate Bond Liquidity Stabilization Fund (BSF)



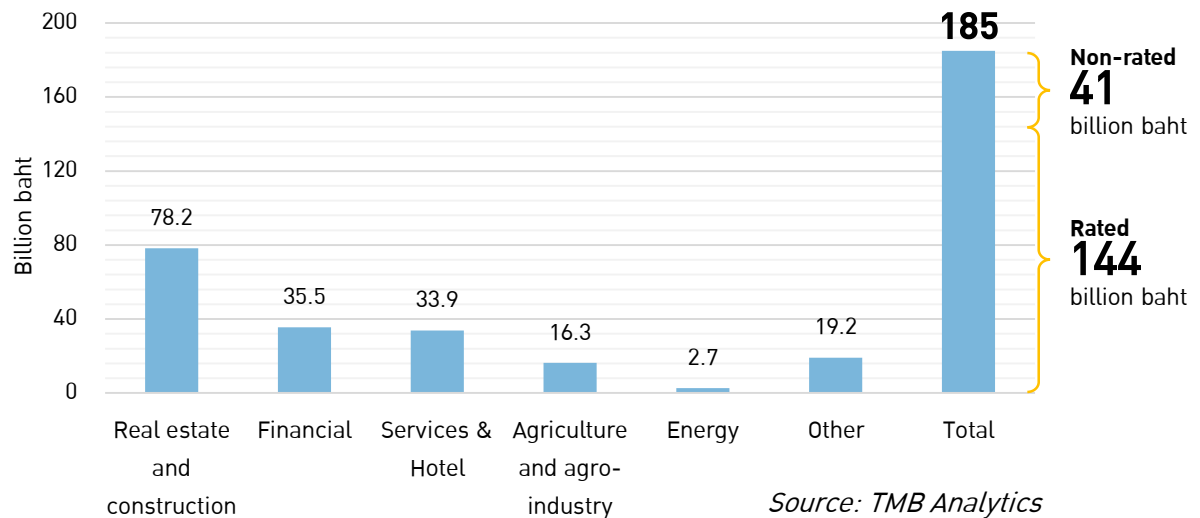
Source: Bank of Thailand

Outstanding Corporate Bonds classified by rating



Source: Bank of Thailand

Corporate Bonds due in 2020Q2



Source: TMB Analytics

BUSINESSES ARE PUTTING ON THEIR THINKING “CAP”

	SENA DEVELOPMENT	EASTERN POLYMER GROUP
<p>Coping with Covid-19 (Lean and Mean)</p> <ul style="list-style-type: none"> • Staff arrangements • Financing arrangement • Production management • Supply-chain management 	<ul style="list-style-type: none"> • WFH arrangements for office staff • Secure short-term loans • Delay new projects that have not open sales nor constructed • Manage delayed supplies • Lower specification of materials, reduce mistakes, & aggressively bargain with suppliers & contractors 	<ul style="list-style-type: none"> • WFH arrangements for office staff & strict health measures for factory staff • Secure short-term loans at low rates and deposit with bank • Cut costs where possible • Pay cash to SME suppliers upon receipt of goods and charge a small interest for 2-3 months (depending on credit terms).
<p>Adjusting to Covid-19 Outbreak</p> <ul style="list-style-type: none"> • Sales development: New products/ services, new promotion, marketing, and pricing strategies • Supply chain management • Staff management 	<ul style="list-style-type: none"> • Deploy on-line sales methods • Offer free items e.g. furniture to buyers • Distribute work to all suppliers • Deploy staff to (a) quickly reach out to secure clients, (b) research on process improvement and future positioning and act upon it right away, & (c) training to improve their capacity. 	<ul style="list-style-type: none"> • Developed & producing (a) multi-purpose protective face mask that is as effective as surgical mask but is re-usable for over 20 times and (b) high-grade face shield for hospitals. • Will donate 200,000 sets of masks in Thailand & will later sell both domestically and abroad. • For other products (food boxes, autoparts & insulation), reduced price for some customers • Ensure smooth logistics of transporting goods to customers especially overseas • Deploy staff to do other tasks; no lay-offs
<p>Positioning for Post-Covid World</p> <ul style="list-style-type: none"> • New products and services that meets new demands (physical distancing, more time spent at home, more health consciousness, etc.) 	<ul style="list-style-type: none"> • Move to more housing projects • Expand solar panels in housing projects • In condominium projects, smaller common areas & slightly bigger rooms with designated contact-less goods/food delivery area. 	<ul style="list-style-type: none"> • Will innovate more products that are suited to post-Covid lifestyle e.g. plate liners for street food and plastic partition boards for restaurants, offices, schools, cars, etc.

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THANK YOU