NESDC ECONOMIC REPORT

Thai Economic Performance in Q3 and Outlook for 2022 - 2023

Macroeconomic Strategy and Planning Division

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The Thai Economy in the third quarter of 2022 expanded by 4.5 percent, accelerating from 2.3 percent and 2.5 percent in the first and second quarters respectively. After seasonal adjustment, the economy increased by 1.2 percent from the second quarter (%QoQ sa). In the first 9 months of 2022, the Thai economy grew by 3.1 percent.

On expenditure side: Private consumption expenditures, public investment and export of services accelerated. Export of goods slowed down, while government expenditure and public investment decreased.

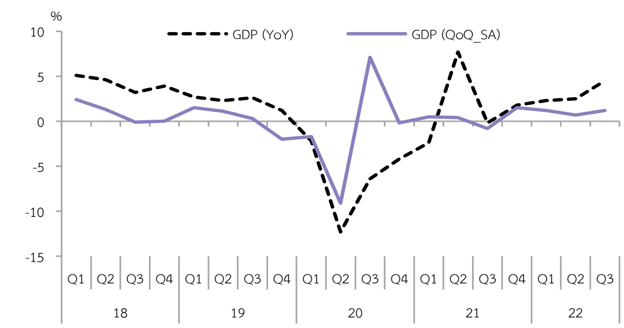
On the production side: Manufacturing sector returned to expansion, while accommodation and food service activities sector, wholesale and retail trade, repair of motor vehicles and motorcycles sector, transportation and storage sector, and electricity, gas, stream, and air conditioning supply sector accelerated. On the contrary, construction and agricultural sectors decreased.

Economic Projection for 2022 - 2023

(%YoY)	2021	2022		Projection	
	Year	Q2	Q3	2022	2023
GDP (CVM)	1.5	2.5	4.5	3.2	3.0 - 4.0
Investment[1/]	3.4	-1.0	5.2	2.6	2.5
Private	3.3	2.3	11.0	3.9	2.6
Public	3.8	-9.0	-7.3	-0.7	2.4
Private Consumption	0.3	7.1	9.0	5.4	3.0
Government Consumption	3.2	2.8	-0.6	-0.2	-0.1
Export of Goods[2/]	19.2	9.7	6.7	7.5	1.0
Volume[2/]	15.5	4.4	2.1	3.2	1.0
Import of Goods[2/]	23.9	22.4	23.2	17.8	1.6
Volume[2/]	17.9	7.5	8.0	5.3	2.6
Current Account to GDP (%)	-2.2	-6.6	-5.8	-3.6	1.1
Inflation	1.2	6.5	7.3	6.3	2.5 - 3.5

Note: [1/] Investment means Gross Fixed Capital Formation
[2/] based on the Bank of Thailand's data

Thai economy in Q3/2022



Source: NESDC

The Thai economy in 2023 is expected to expand within the range of 3.0 - 4.0 percent, mainly supported by (i) the recovery of the tourism sector, (ii) the expansion of both private and public investments, (iii) the continual expansion of domestic demand, and (iv) the favorable condition of agricultural sector. Private consumption expenditure, private investment, and public investment will increase by 3.0 percent, 2.6 percent, and 2.4 percent, respectively. Export value of goods in US dollar terms is anticipated to expand by 1.0 percent. Headline inflation is expected to be in a range of 2.5 - 3.5 percent, and the current account tends to register a surplus of 1.1 percent of GDP.

The economic management for the year 2023 needs to be prioritized on following issues: **(1) Closely monitoring and resolving retail debts,** of both households and small and medium enterprises (SMEs). **(2) Supporting agricultural production and farmers' income,** by rehabilitating the flood damaged areas and preparing supporting policy for agricultural products during the cultivation season 2023/24. **(3) Maintaining momentum from export sector,** by (i) boosting exports to major markets coupled with expanding to new markets with potential products; (ii) monitoring the global economic and trade condition, in order to utilize benefits from economic and trade policies in major economies; (iii) improving quality of agricultural, food, and manufacturing products to achieve international standard; (iv) utilizing benefits from the Regional Comprehensive Economic Partnership (RCEP), along with expediting the ongoing Free Trade Agreement negotiations and endeavoring for future negotiations; and (v) encouraging the business sector to appropriately manage risk of exchange rate fluctuation. **(4) Catalyzing the recovery in tourism and related service sector,** by: (i) preparing and assisting the tourism sector to be ready for the resumption of inbound tourism; (ii) promoting the sustainable and high-quality tourism development; (iii) continually supporting the tourism promoting events; and (iv) promoting domestic tourism. **(5) Stimulating private investment,** by: (i) assisting the liquidity for the business amidst upward interest rate tendency and global economic slowdown; (ii) speeding up projects already approved and obtained investment promotion certificates in 2019-2022 to start their actual investments, especially those in the targeted industries; (iii) solving difficulties and obstacles hindering investors and entrepreneurs from investing and conducting businesses; (iv) implementing proactive investment promotions and facilitating investors in targeted industries to invest in Thailand; (v) stimulating investments in Eastern Economic Corridor (EEC), other special economic zones; (vi) supporting investment in the key economic areas and transport infrastructure to be in accordance with the prospected plan; and (vii) enhancing high-skilled labors. **(6) Maintaining growth momentum from public expenditure. (7) Monitoring, scrutinizing, and preparing for the volatilities from global economy and financial market as well as highly uncertain geopolitical risks, and (8) Monitoring, scrutinizing, and preparing for the re-emergence of the new coronavirus variants outbreak.**

1. The Thai Economy in Q3/2022

Expenditure Side:

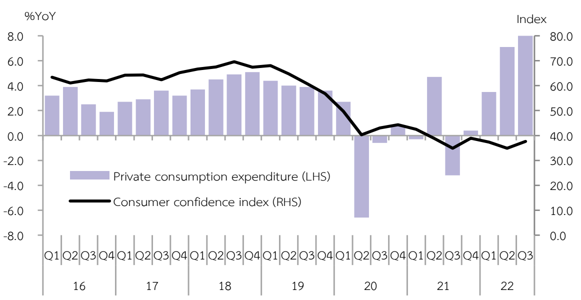
Private consumption expenditures expanded by 9.0 percent, the highest in 39 consecutive quarters, accelerating from 3.5 percent and 7.1 percent in the first quarter and second quarter, respectively. A sharp rise of private consumption was contributed to the mitigation of COVID-19 situation and overall income improvement, resulting that all spending categories were accelerated. **Expenditure on service** item grew by 15.8 percent, accelerating from 14.1 percent in the previous quarter, due to an accelerated growth of spendings on restaurants & hotels and recreation & culture which grew sharply by 88.4 percent and 7.8 percent, respectively. **Expenditure on durable goods** expanded by 18.2 percent, accelerating from 3.5 percent in the previous quarter, following an accelerated expansion on purchase of vehicles which grew by 33.9 percent, compared with 10.8 percent in the previous quarter. **Expenditure on non-durable goods** grew by 3.2 percent, accelerating from 2.7 percent in the previous quarter, following an accelerated growth on food and non-alcoholic beverages by 3.4 percent, compared with 3.1 percent in the previous quarter. And **expenditure on semi-durable goods** expanded by 3.6 percent, accelerating from 1.9 percent in the previous quarter, in line with the expansion of spendings on furnishings & household equipment and clothing & footwear accelerated to 3.1 percent and 4.5 percent, respectively. This was in line with an increase in the consumer confidence index towards the economic situation from the index level of 34.9 in the previous quarter to 37.6.

In the third quarter of 2022, private consumption expenditures and private investment accelerated.

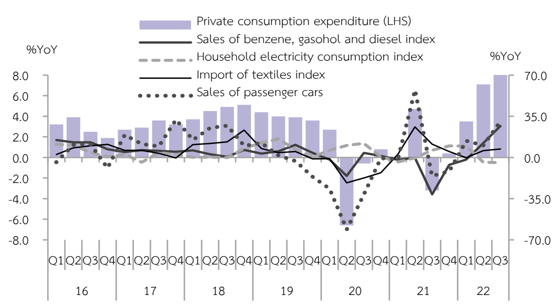
Meanwhile, export of goods decelerated.

Private consumption expenditures expanded by 9.0 percent, accelerating from 7.1 percent in the previous quarter, and the highest in 39 quarters.

In the first nine months of 2022, private consumption expenditures expanded by 6.5 percent, compared with a 0.3-percent expansion in the same period last year.



Source: NESDC, University of the Thai Chamber of Commerce

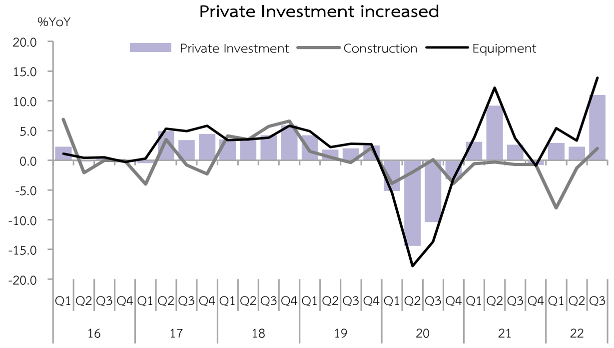


Source: NESDC, BOT, Department of Energy Business

Private investment expanded by 11.0 percent, accelerating from 2.3 percent in the previous quarter, in line with an accelerated growth of investment in machinery and equipment item while the investment in construction turned to expand. **Investment in machinery and equipment** expanded by 13.9 percent, accelerating from 3.3 percent in the previous quarter, in accordance with an expansion of the domestic machinery sales and newly registered motor vehicles for investment purpose which rose by 18.5 percent and 21.5 percent, accelerating from 5.5 percent and 5.0 percent in the previous quarter, respectively. Meanwhile, **investment in construction** turned to expand for the first time in 8 quarters by 2.0 percent, compared with a 1.3-percent drop in the previous quarter. This was in line with an improved growth of construction permitted areas and domestic construction material sales index which accelerated to 18.5 percent and 11.8 percent, respectively. In addition, this was also in line with the business sentiment index in this quarter which stood at 49.5 compared with 49.3 in the previous quarter.

Private investment grew by 11.0 percent, accelerating from 2.3 percent in the previous quarter, following an acceleration of investment in the machinery & equipment. Meanwhile, the investment in construction turned to expand.

In the first nine months of 2022, private investment expanded by 5.3 percent, compared with a 4.9-percent expansion in the same period last year.



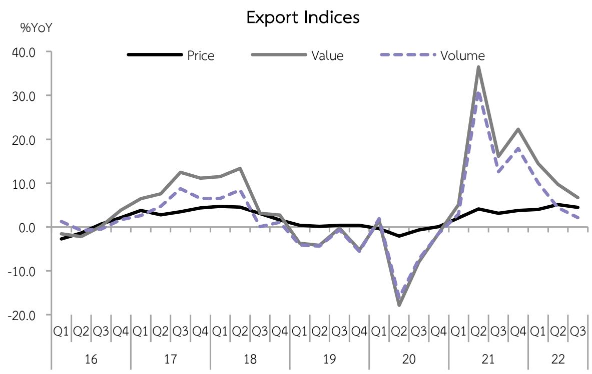
Source: NESDC

Exports in US dollar terms slowed down mainly due to a slowdown in trading partners economies. Export value in the third quarter of 2022 was recorded at 72.0 billion US dollars, increasing by 6.7 percent, decelerated from a 9.7-percent growth in the previous quarter. **The export volume index** expanded by 2.1 percent, decelerating from a 4.4-percent increase in the previous quarter. Export volume of manufacturing products grew by 3.3 percent, while agricultural and fishery products decreased by 17.6 percent and 3.3 percent, respectively. **The export price** increased by 4.4 percent, decelerating from a 5.1-percent rise in the previous quarter. Export price of manufacturing, agricultural and fishery products rose by 4.4 percent, 5.4 percent and 4.6 percent, respectively. Excluding unwrought gold, export value expanded by 6.4 percent, decelerating from a 9.9-percent increase in the previous quarter. **In Baht terms,** export value was recorded at 2,622 billion Baht, growing by 18.1 percent, compared with a 20.5-percent increase in the previous quarter.

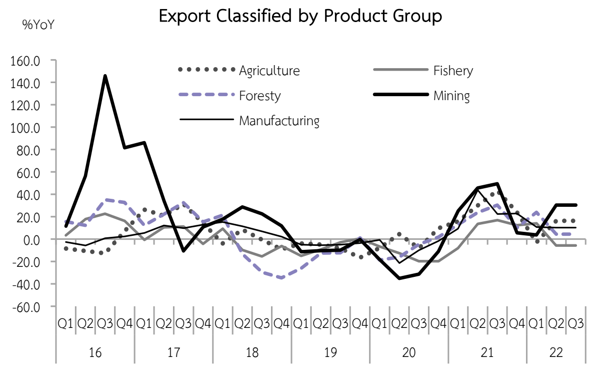
Export value in US dollar terms decelerated by 6.7 percent, following the slowdown in export volume and price.

Export value excluding unwrought gold expanded by 6.4 percent.

In the first nine months of 2022, export value was recorded at 219.8 billion US dollars, grew by 10.2 percent, compared with a 18.1-percent increase in the same period last year. Export volume and price rose by 5.4 percent and 4.5 percent, respectively. **In Baht terms,** export value was recorded at 7,610 billion Baht, expanded by 21.0 percent, compared with an 18.3-percent growth in the same period last year.



Source: Bank of Thailand



Source: Bank of Thailand

Export value of agricultural commodities decreased by 13.2 percent, compared with a 16.2-percent increase in the previous quarter. The export quantity fell by 17.6 percent following a decrease in export volume of durian and other fruits. Meanwhile, exports price grew by 5.4 percent due to the growth in export price of sugar. **Export value of manufacturing products** rose by 7.9 percent, decelerating from a 10.3-percent increase in the previous quarter. **Export value of fishery products** expanded by 1.1 percent as a result of the growth in export price by 4.6 percent, while export volume reduced by 3.3 percent. **Export value of other products** expanded by 24.1 percent.

Export value of agricultural commodities decreased according to a reduction in exports of durian, and other fruits.

Export value of manufacturing products decelerated.

Export value of fishery products expanded.

Export items with increased value included machinery & equipment (10.3 percent), pick up and trucks (12.8 percent), integrated circuits & parts (11.6 percent), parts of electrical appliances (13.6 percent), medicinal and surgical equipment (9.9 percent), animal food (22.0 percent), rice (12.4 percent), rubber (0.2 percent), sugar (121.4 percent) and fish (6.5 percent). On the other hand, **export items with decreased value included** passenger car (7.2 percent), chemicals & petrochemical products (8.8 percent), computer parts & accessories (13.2 percent), rubber products (8.0 percent), durian (53.0 percent), other fruits (39.4) and crustaceans (4.3 percent).

Export Value of Major Product in US Dollar Term

%YoY	2021					2022			Share
	Year	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q3/22 (%)
Agriculture	**28.1**	**15.7**	**29.8**	**43.1**	**24.0**	**-3.0**	**16.2**	**-13.2**	**6.1**
Rice	-7.2	-17.9	-38.8	14.8	19.3	17.1	46.6	12.4	1.3
Rubber	58.6	38.2	97.4	99.5	31.4	6.2	3.0	0.2	1.9
Durian	68.3	-16.0	74.4	91.0	84.1	-48.2	9.8	-53.0	0.7
Other fruits	27.2	45.3	-2.7	49.5	22.3	-13.3	45.6	-39.4	0.6
Manufacturing	**23.5**	**9.2**	**43.7**	**22.4**	**22.9**	**10.7**	**10.3**	**7.9**	**90.1**
Food	7.4	-1.9	5.9	5.7	20.5	28.0	31.9	26.1	8.1
Sugar	-8.9	-47.3	-21.2	-1.2	95.2	179.1	113.6	121.4	1.4
Fish, canned, prepared, or preserved	-14.7	-2.4	-26.3	-24.7	-2.3	3.3	20.9	28.0	1.1
Tapioca & cassava starch	44.0	63.3	25.8	50.7	36.6	5.8	18.8	7.5	0.6
Fruits & vegetables, canned, prepared, or preserved	8.3	-4.3	0.2	14.8	20.0	9.6	30.2	20.5	0.7
Beverages	3.6	-0.4	17.5	-5.3	2.9	4.6	0.5	14.5	1.0
Rubber products	19.1	52.4	40.1	10.4	-15.1	-25.0	-13.1	-8.0	2.3
Animal food	23.5	27.4	21.2	19.6	25.8	26.3	21.6	22.0	1.0
Electronics	18.9	8.3	30.3	19.6	18.2	17.0	2.5	5.1	12.4
- Computer	47.1	2.2	24.0	88.8	71.2	67.5	-18.0	10.2	0.4
- Computer parts & accessories	20.9	-5.0	37.1	26.0	28.7	15.1	-10.1	-13.2	5.1
- Integrated circuits & parts	19.0	13.9	24.2	19.2	18.7	17.7	9.4	11.6	3.2
Electrical appliances	19.9	14.1	44.3	14.4	12.0	7.8	-0.8	7.4	9.1
- Air conditioning machines	22.5	9.5	52.5	9.3	25.8	5.6	1.0	38.7	2.1
- Refrigerators	13.3	19.3	50.9	-6.0	-0.2	6.8	-3.2	-1.4	0.7
- Parts of electrical appliances	11.4	7.0	27.7	8.8	4.5	6.2	3.8	13.6	2.3
Metal & steel	46.5	24.8	64.6	57.7	43.6	19.8	22.2	-3.4	5.4
Automotive	35.7	21.0	111.9	20.8	23.6	-5.6	-3.6	8.4	14.2
- Passenger car	6.7	12.9	88.7	-26.7	-15.7	-49.1	-48.3	-7.2	2.0
- Pick up and trucks	60.0	44.9	190.6	18.7	62.2	-28.9	-9.6	12.8	2.7
- Vehicle parts & accessories	30.0	17.3	102.0	25.3	8.4	3.5	2.0	2.3	6.6
Machinery & equipment	20.1	16.2	41.2	17.8	10.3	5.6	7.0	10.3	8.5
Chemicals & Petro-chemical Products	37.6	21.1	51.3	43.6	36.0	18.7	4.9	-8.8	8.4
Petroleum products	64.3	-6.0	92.7	101.5	103.0	23.3	63.4	10.3	3.8
Medicinal and surgical equipment and supplies	18.8	13.8	58.2	6.6	8.9	3.5	8.0	9.9	0.8
Toiletries and cosmetics	2.4	-4.7	5.1	-1.9	12.2	8.7	14.3	9.0	1.1
Furniture and parts	20.2	21.3	49.6	6.9	12.4	18.1	5.7	0.9	0.6
Fishery	**8.8**	**-8.1**	**13.5**	**16.9**	**12.3**	**14.1**	**-5.7**	**1.1**	**0.6**
Crustaceans	15.8	-3.2	16.1	25.0	21.8	8.4	-11.9	-4.3	0.3
Fish	-0.3	-9.4	-2.1	10.5	1.0	14.7	-4.1	6.5	0.2
Other Exports	**-71.5**	**-88.2**	**-69.7**	**-74.5**	**59.9**	**556.5**	**7.9**	**24.1**	**2.2**
Non-monetary gold (excl. articles of goldsmiths)	-70.7	-88.3	-67.3	-75.8	67.9	681.8	-0.8	23.7	2.0
Total Exports (Customs basis)	**17.4**	**2.1**	**31.9**	**15.4**	**23.1**	**14.8**	**10.8**	**6.6**	**100.0**
Exports, f.o.b. (BOP basis)	**19.2**	**5.1**	**36.5**	**16.1**	**22.3**	**14.4**	**9.7**	**6.7**	**99.7**
Export Value (exclude gold)	**24.9**	**11.6**	**45.5**	**24.6**	**21.8**	**9.6**	**9.9**	**6.4**	**97.7**

Source: Bank of Thailand

Export markets: Exports to the main markets expanded whereas exports to China, Japan, and Hong Kong declined. Exports to **the US** expanded by 15.8 percent, primarily attributed to the growth in exports of fax machine & telephone equipment and parts, automatic data processing machines and parts, and other electrical equipment and parts. Exports to **EU (27), excluding the UK,** increased by 15.0 percent, due to the acceleration in exports of automatic data processing machines and parts, air condition machines and prepared poultry. Exports to **ASEAN (5)** grew by 11.9 percent, as a result of the growth in exports to Malaysia, Indonesia and the Philippines. Exports to **CLMV** rose by 30.1 percent, in line with an increase in exports to Vietnam, Cambodia, and Myanmar. Exports to **the Middle East (15)** increased by 31.9 percent, supporting by the growth in exports of motor cars and parts, rice and prepared or preserved fish, crustaceans, molluscs in airtight. Exports to **India** rose by 13.6 percent, in line with the growth in exports of chemical products, precious stones and jewellery, and iron steel and products. In addition, Exports to **Australia** grew by 17.8 percent, resulted by an increase in exports of motor cars and parts, air condition machines and prepared or preserved fish, crustaceans, molluscs in airtight. However, Exports to **China** fell by 18.1 percent mainly due to the reduction in exports of fresh, frozen and dried fruits, motor cars and parts, and chemical products. Exports to **Japan** dropped by 0.2 percent, following the growth in exports of chemical products, copper and articles thereof, motor cars and parts. Exports to **Hong Kong** declined by 22.6, in line with a decrease in exports of automatic data processing machines and parts, electronics, integrated circuits, and other electrical equipment and parts.

Exports to the main markets increased whereas exports to China, Japan and Hong Kong decreased.

Export Value to Key Markets in US Dollar Term

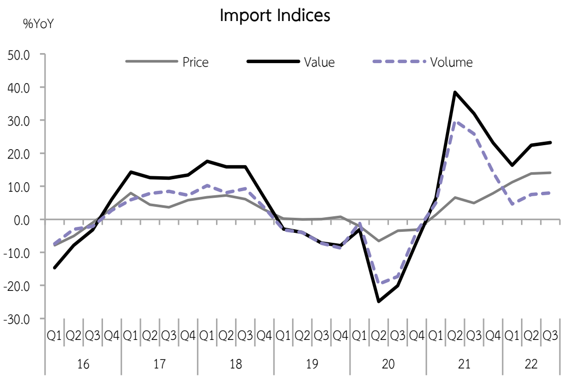
%YOY	2021					2022			Share Q3/22 (%)
	Year	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Total Exports (Mil US$) (Customs basis)	272,006	64,118	68,237	67,733	71,918	73,601	75,583	72,181	100.0
(%YoY)	17.4	2.1	31.9	15.4	23.1	14.8	10.8	6.6	
United States	21.9	13.1	30.4	19.6	25.2	23.3	17.8	15.8	17.2
Japan	9.6	5.9	20.0	15.2	-0.2	1.2	1.6	-0.2	8.5
EU (27) Excluding UK	22.8	10.8	49.9	16.3	21.3	5.7	5.7	15.0	8.2
United Kingdom	13.0	-9.3	65.6	0.3	14.5	19.4	-2.1	33.3	1.4
China	25.0	19.7	29.5	32.2	17.8	4.2	-1.9	-18.1	11.3
ASEAN (9)	17.5	-5.9	33.3	18.6	30.0	17.0	19.1	19.2	25.9
- ASEAN (5)*	19.9	-10.8	27.0	27.1	44.1	26.9	23.1	11.9	14.5
- CLMV**	14.5	0.6	42.1	7.9	13.6	5.5	14.1	30.1	11.4
Middle East (15)	20.5	-5.1	37.8	22.0	36.4	16.4	29.0	31.9	3.8
Australia	11.5	19.7	27.7	-12.6	16.9	-2.4	-3.3	17.8	4.0
Hong Kong	2.7	-19.3	15.7	7.8	9.1	5.0	-7.3	-22.6	3.2
India	56.0	7.4	181.1	65.3	50.6	33.1	60.4	13.6	3.6
South Korea	38.8	17.5	56.0	51.2	33.1	22.7	13.9	7.8	2.3
Taiwan	23.1	9.8	35.5	27.0	21.2	9.7	8.1	-2.6	1.5

Note: * ASEAN (5) consist of Brunei, Indonesia, Malaysia, Philippines, and Singapore
** CLMV consist of Cambodia, Laos, Myanmar, and Vietnam
Source: Bank of Thailand

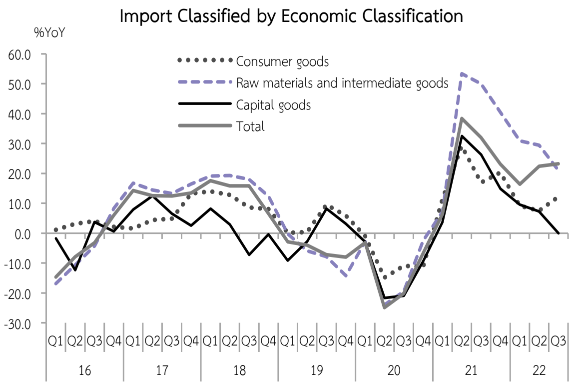
Import value in US dollar terms increased by 23.2 percent compared with a 22.4-percent expansion in the previous quarter.

Import value in US dollar terms was recorded at 71.6 billion US dollars, increasing by 23.2 percent and accelerated from a 22.4-percent increase in the previous quarter, associated with increasing of domestic private consumption and maintaining high level of oil price. Import volume rose by 8.0 percent, compared with a 7.5-percent increase in the previous quarter. On the other hand, import price rose by 14.1 percent, compared with a 13.9-percent increase in the previous quarter. Import values excluding the non-monetary gold (except for articles of golds) expanded by 18.0 percent, compared with a 20.7-percent increase in the previous quarter. **In Thai Baht terms,** the import value stood at 2,605 billion Baht, increasing by 36.2 percent compared with the previous quarter.

In the first nine months of 2022, import value stood at 204.9 billion US dollars, increased by 20.7 percent, compared with a 24.2-percent growth in the same period last year. The import volume and price expanded by 6.7 percent and 13.1 percent, respectively. **In Thai Bath terms,** import value was recorded at 7,108 billion Baht, rose by 32.7 percent, compared with a 24.4-percent increase in the same period last year.



Source: Bank of Thailand



Source: Bank of Thailand

By categories, the import value of all categories increased. **Import value of consumer goods** increased by 12.2 percent compared with a 7.5-percent growth in the previous quarter, import volume increased by 6.5 percent accelerating from 1.7 percent increase in the previous quarter and import price increased by 5.4 percent. **Import value of raw materials and intermediate goods** expanded by 21.0 percent decelerated from a 29.4-percent growth in the previous quarter, import volume rose by 5.5 percent slower than an 8.4-percent growth in the previous quarter and import price rose by 14.7 percent. **Import value of capital goods** rose by 0.03 percent compared with a 7.3-percent growth in the previous quarter, import volume decreased by 3.0 percent while import price expanded by 3.2 percent. **Import value of other goods** expanded by 140.2 percent compared with a 51.9-percent increase in the previous quarter due to an increase in imports of non-monetary gold.

Import Value of Major Product in US Dollar Term

%YoY	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	Share Q3/22 (%)
Consumer goods	**19.2**	**11.5**	**29.2**	**16.9**	**20.3**	**9.2**	**7.5**	**12.2**	**11.1**
Food, beverage & dairy products	5.7	1.0	9.9	7.8	4.6	13.8	16.3	17.7	2.4
Medicinal and pharmaceutical products	39.0	85.5	14.3	3.6	51.5	-12.3	8.1	35.4	1.4
Cellular phone	24.0	13.1	47.3	21.7	16.8	9.4	-5.1	14.3	1.2
Animal & fishery products	46.9	3.6	21.4	89.2	79.6	53.3	10.4	-39.4	1.0
Raw materials and intermediate goods	**36.2**	**7.1**	**53.4**	**50.0**	**40.5**	**30.9**	**29.4**	**21.0**	**66.4**
- Exclude Fuel	33.5	16.2	47.3	47.9	25.9	16.8	11.6	4.4	45.2
Parts of electronics and electrical appliances	20.4	13.9	23.8	24.9	19.1	20.4	14.9	7.7	14.4
Crude oil	45.7	-23.3	110.2	62.9	96.8	86.2	115.2	72.6	12.4
Chemicals & petro-chemical products	39.1	18.4	46.4	60.6	34.4	19.1	14.5	5.6	9.6
Materials of base metal	60.9	26.5	83.7	89.3	53.5	19.0	13.4	-8.6	8.2
Natural gas	43.7	-31.4	8.2	44.1	203.3	262.4	113.8	233.3	5.2
Capital goods	**18.4**	**3.6**	**32.5**	**26.3**	**14.8**	**9.6**	**7.3**	**0.03**	**15.5**
Other machinery and mechanical appliances & parts	16.4	0.4	32.2	27.6	10.3	8.9	2.7	-0.8	6.9
Transformers, generators, motors and accumulators	20.9	19.6	30.9	29.8	6.9	8.5	10.1	7.3	1.7
Measuring, checking and precision instruments	16.8	10.6	40.4	30.5	-4.9	-3.9	1.2	2.1	1.2
Computer	44.7	45.4	15.4	55.0	63.8	21.5	-12.7	-19.8	1.0
Other Imports	**19.7**	**24.7**	**74.7**	**23.4**	**-10.7**	**-42.1**	**51.9**	**140.2**	**7.0**
Non-monetary gold (excl. articles of goldsmiths)	68.6	135.5	156.6	67.2	-6.7	-54.1	103.6	245.8	5.7
Other imports, n.i.e.	-27.5	-61.3	27.5	-7.9	-18.3	14.4	-8.1	3.7	1.3
Total Imports (Customs basis)	**29.5**	**8.2**	**46.4**	**39.4**	**29.5**	**18.4**	**23.4**	**20.2**	**100.0**
Imports, f.o.b. (BOP basis)	**23.9**	**6.4**	**38.4**	**32.0**	**23.1**	**16.3**	**22.4**	**23.2**	**88.4**
Import Value (exclude gold)	**22.7**	**1.9**	**37.1**	**31.3**	**24.4**	**22.0**	**20.7**	**18.0**	**82.8**

Source: Bank of Thailand

Import Volume Indices by Economic Classification

Volume indices %YoY	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3
Consumer goods	14.8	8.3	24.0	12.6	15.2	4.6	1.7	6.5
Raw materials and intermediate goods	16.1	-1.7	26.9	26.8	15.9	10.3	8.4	5.5
Capital goods	16.2	2.1	30.3	24.0	11.8	6.0	3.3	-3.0
Total Imports	**17.9**	**4.9**	**29.8**	**25.8**	**14.2**	**4.6**	**7.5**	**8.0**

Source: Bank of Thailand

Import Price Indices by Economic Classification

Price indices %YoY	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3
Consumer goods	3.8	2.9	4.1	3.9	4.4	4.4	5.7	5.4
Raw materials and intermediate goods	17.3	9.0	20.9	18.3	21.2	18.6	19.4	14.7
Capital goods	1.9	1.5	1.7	1.8	2.7	3.3	3.8	3.2
Total Imports	**5.2**	**1.4**	**6.6**	**4.9**	**7.9**	**11.2**	**13.9**	**14.1**

Source: Bank of Thailand

Term of trade declined.

Term of trade decreased as import price expanded by 14.1 percent, faster than the growth of export price which grew by 4.4 percent. Thus, the term of trade decreased from 107.9 in the same quarter last year and 100.8 in the previous quarter to 98.8 in the third quarter of 2022.

In the first nine months of 2022, term of trade was recorded at 100.7 decrease from 109.0 in the same period last year. As import price increased by 13.1 percent, faster than the growth of export price which expanded by 4.5 percent.

Trade surplus was at 0.4 billion US dollars, lower than that of the previous quarter and the same period last year.

Trade balance in the third quarter of 2022 recorded a surplus of 0.4 billion US dollars, lower than a surplus of 5.2 billion US dollars in the previous quarter and a surplus of 9.4 billion US dollars in the same quarter last year. **In Baht terms**, trade balance recorded a surplus of 17.1 billion Baht, lower than a surplus of 178.4 billion Baht in the previous quarter and a surplus of 308.8 billion Baht in the same period last year.

In the first nine months of 2022, trade balance recorded a surplus of 14.9 billion US dollars (502.1 billion Baht), lower than a surplus of 29.7 billion US dollars (935.3 billion Baht) in the same period last year.

Term of trade

%YoY	2021					2022		
	Year	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Term of trade*	108.1	109.9	109.2	107.9	105.8	102.7	100.8	98.8
%YOY	-1.8	0.7	-2.4	-1.7	-3.8	-6.5	-7.7	-8.4

Note : *Term of trade : TOT represents the ratio between a country's export prices and its import prices. When Term of trade improves, it refers to a country that gains benefit from international trade due to export prices higher than import prices.
Source: Bank of Thailand

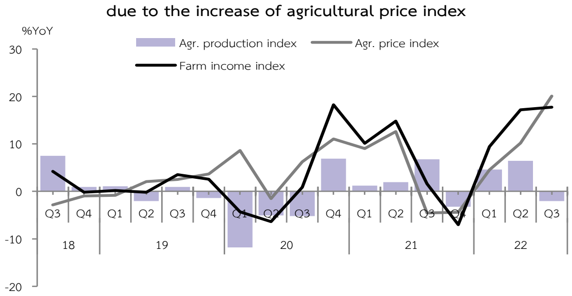
Production Side:

Agriculture, forestry, and fishery sector declined by 2.3 percent, following the decrease in major agricultural production which affected by flooding and unfavorable weather conditions in many areas. Agricultural Production Index decreased by 2.0 percent. Major agricultural products with production contraction included: (i) **fruits** (-26.3 percent), especially durian (-54.8 percent) and mangosteen (-84.8 percent), due to unfavorable weather conditions and rambutan (-53.4 percent) as rambutan farmers switched to other crops plantation, (ii) **rubber** (-1.4 percent) due to unfavorable weather conditions together with Hevea phytophthora leaf fall in some areas, (iii) **swine** (-2.2 percent), owing to the lower swine breeding stocks combined with a slowdown in bringing piglets into the farm as concerns about the African Swine Fever (ASF) outbreaks, and (iv) **cassava** (-3.1 percent), due to the flood situation in plantation area. On the other hand, major agricultural products with production expansion included paddy (10.9 percent), oil palm (9.4 percent), maize (8.6 percent), and poultry (1.0 percent), etc. **Agricultural Price Index** rose by 20.1 percent, following an increase of main agricultural products such as **swine** (50.4 percent) due to the contraction in pork production together with the surge in domestic demand, **fruits** (28.4 percent), especially durian (50.4 percent) according to the durian production declined, **paddy** (20.1 percent), owing to the global and domestic demands upsurge, **poultry** (40.1 percent) due to rising production costs and higher poultry consumption, and **cassava** (32.6 percent) following the declined in cassava production and the demand for cassava for animal feed production continues to persist. In contrast, major agricultural price index with the contraction included oil palm (-9.8 percent), etc. Rising in agricultural price index thus led to **Farm Income Index** growing for the third consecutive quarter by 17.7 percent.

Agriculture, forestry, and fishery sector declined by 2.3 percent following the decrease in major agricultural production which affected by flooding and unfavorable weather condition in many areas. Meanwhile, the higher in price key agricultural products, thus led to Farm Income Index growing for the third consecutive quarter.

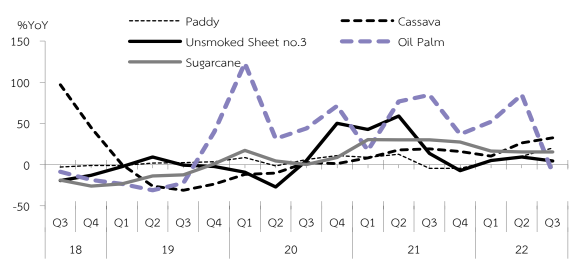
In the first nine months of 2022, agriculture, forestry, and fishery sector increased by 2.7 percent, compared with a 1.7-percent growth in the same period last year. In details, Agricultural Production and Price Indexes expanded by 2.8 percent and 11.2 percent respectively, and leading to Farm Income Index rose by 14.4 percent.

Farm Income Index increased by 17.7 percent due to the increase of agricultural price index



Source: Office of Agricultural Economics

The prices of paddy, cassava, rubber, and sugarcane increased while prices of oil palm declined



Source: Office of Agricultural Economics

Manufacturing sector grew by 6.3 percent, improving from a 0.5 percent decline in the previous quarter, following the rebound in all production groups, particularly, the high expansion of Manufacturing Production Index of the industries (with 30 - 60 percent export share to total production) with an 8.1-percent growth, compared to a 0.8-percent drop in the previous quarter. The **Manufacturing Production Index of the industries (with 30 - 60 percent export share to total production)** expanded by 22.8 percent, compared to a 0.1-percent drop in the previous quarter. The expansion was mainly supported by manufacture of motor vehicles (36.1 percent) because of the shortage of key auto parts (chips and semiconductors) easing, combined with an increase in orders from trading partners. Manufacture of sugar grew 46.1 percent due to an increase in sugar cane production for the 2021/22 season, and manufacture of motorcycles rose 90.0 percent following an increase in domestic demand. Nonetheless, manufacture of other fabricated metal products n.e.c. declined by 19.3 percent, caused by a decline in the production of metal kitchen utensils which affected by raw material shortage (steel). **Manufacturing Production Index of the domestic-oriented industries (with export share of less than 30 percent to total production)** increased by 4.5 percent, improving from a 0.3 percent decrease in the previous quarter, in line with the acceleration of household consumption expenditure. The key production improved from the previous quarter including manufacture of refined petroleum products (17.3 percent), manufacture of basic pharmaceutical products and pharmaceutical preparations (26.6 percent) following an increase in domestic orders for ready-made medicines, and manufacture of luggage, handbags and the like, saddlery and harness (91.7 percent). However, manufacture of basic iron and steel fell by 12.7 percent as a result of raw materials shortage (steel) due to several countries such as

Manufacturing sector rebounded to a favorable growth of 6.3 percent, following with the back of expansion in all production groups, especially the expansion at a high rate of manufacturing production index of the industries (with 30 - 60 percent export share to total production).

The average capacity utilization rate was at 62.55 percent, higher than 61.10 percent in the previous quarter.

and 58.51 percent in the same quarter last year.

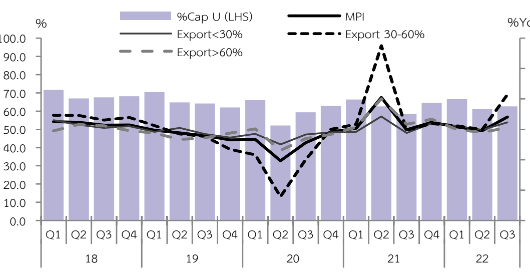
China, India and Japan cutting down their primary steel production. **Manufacturing Production Index of the industries of the export-oriented industries (with export share of more than 60 percent to total production)** grew by 1.2 percent, improving from a 2.0 percent decline in the previous quarter. This was in accordance with continuing expansion of goods exports. The key production expansion included manufacture of electronic components and boards (12.9 percent), manufacture of other general-purpose machinery (23.6 percent), especially air conditioners due to the higher demand for air conditioners in foreign markets (USA and Australia), manufacture of wearing apparel, except tailoring and dressmaking (11.3 percent), in line with exports to the United States, Japan and Belgium, respectively. Nevertheless, manufacture of computers and peripheral equipment declined for the fifth consecutive quarter by 32.4 percent as a result of Hard Disk Drives (HDD) production cancellation, especially for low-capacity HHD. **The average capacity utilization rate** stood at 62.55 percent for this quarter, higher than 61.10 percent in the previous quarter and 58.51 percent in the same quarter last year. In details, there were five industries having capacity utilization above 80 percent, namely, manufacture of parts and accessories for motor vehicles (88.25 percent), slaughtering and packing of poultry (88.11 percent) manufacture of plastics and synthetic rubber in primary forms (87.21 percent), manufacture of refined petroleum products (83.38 percent), and manufacture of electronic components and boards (81.54 percent), respectively.

Manufacturing production index with positive growth included motor vehicles (36.1 percent), refined petroleum products (17.3 percent), sugar (46.1 percent), motorcycles (90.0 percent), electronic components and boards (12.9 percent), other general-purpose machinery (23.6 percent), articles of concrete, cement and plaster (14.3 percent), basic pharmaceutical products and pharmaceutical preparations (26.6 percent), prepared animal feeds (10.0 percent), and luggage, handbags and the like, saddlery and harness (91.7 percent), etc.

Manufacturing production index with negative growth included computers and peripheral equipment (-32.4 percent), basic iron and steel (-12.7 percent), plastics and synthetic rubber in primary forms (-10.9 percent), furniture (-18.9 percent), distilling, rectifying and blending of spirits (24.1 percent), domestic appliances (-11.7 percent), fertilizers and nitrogen compounds (-18.7 percent), tobacco products (-28.2 percent), processing and preserving of fruit and vegetables (-7.4 percent), and pulp, paper and paperboard (-10.0 percent), etc.

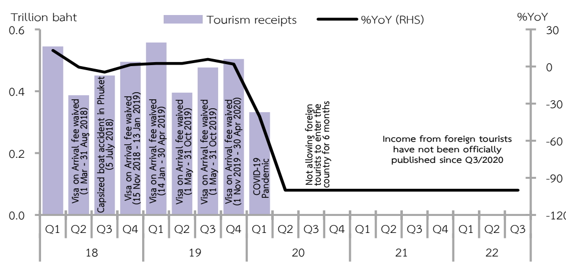
For the first nine months of 2022, manufacturing sector increased by 2.5 percent, compared with a 5.3 percent increase in the same period last year. The Manufacturing Production Index (MPI) increased by 2.8 percent and the average capacity utilization rate was at 63.40 percent.

Manufacturing Production Index increased by 8.1 percent and the capacity utilization rate averaged at 62.55 percent.



Source : Office of Industrial Economics

Income from foreign tourists for Q3/2022 not yet officially published.



Source: Ministry of Tourism and Sports

Accommodation and food service activities sector continued to increase for the third consecutive quarter by 53.6 percent, and accelerated from a 44.9-percent expansion the previous quarter. The expansion was driven mainly by higher-than-expected foreign tourist arrivals, and the continued improvement of domestic tourism. In the third quarter of 2022, **the number of foreign tourists stood at 3.608 million people** (one-thirds of number of foreign tourists before the COVID-19 outbreak). The number was supported by the removal of the Thailand Pass registration scheme and the relaxation of international travel restrictions. Top international travelers in this quarter mainly came from East Asia (2.135 million persons, share of 59.17 percent) increased by 22,455.0 percent, Europe (0.587 million persons, share of 16.28 percent) increased by 2,840.2 percent, and South Asia (0.403 million persons, share of 11.16 percent) increased by 59,730.5 percent. **Thai tourism receipts stood at 0.158 trillion Baht** which rose for three consecutive quarters by 1,497.1 percent due to the outbreak of COVID-19 gradually subsided as well as the continued stimulus packages to boost domestic tourism. Besides, the rising of vaccination rates resulted in an improved tourism confidence. The top three most visited provinces (excluding Bangkok) by Thai tourists consisted of Chonburi (2.994 million persons, shared of 5.96 percent), Kanchanaburi (2.756 million persons, share of 5.48 percent), and Prachuap Khiri-khan (2.357 million persons, share of 4.69 percent). **The average occupancy rate** was at 47.80 percent, increased from 42.09 percent in the previous quarter and higher than 5.46 percent in the same period last year.

In the first nine months of 2022, accommodation and food service activities sector increased by 14.4 percent, improving from a 17.9-percent contraction in the same period last year. The number of foreign tourists was recorded at 5.688 million people, increased by 1,863.1 percent, and the average occupancy rate was at 42.02 percent.

Accommodation and food service activities sector continued to increase for the third consecutive quarter by 53.6 percent, accelerated from the previous quarter, following higher-than-expected foreign tourist figures, and a continued improvement in domestic tourism.

Average occupancy rate was at 47.80 percent, increased from 42.09 percent in the previous quarter and higher than 5.46 percent in the same period last year.

Wholesale and retail trade; repair of motor vehicles and motorcycles sector increased by 3.5 percent, accelerated from a 3.1-percent growth in the previous quarter, following the improvement of household expenditure along with the number of foreign tourists. This was associated with the increase of Wholesale and Retail Sales, and Repair of Motor Vehicles Composite Index. **Wholesale and Retail Sales, and Repair of Motor Vehicles Index** increased by 37.6 percent accelerating from an 8.5-percent growth in the previous quarter, due to an expansion in sale of motor vehicles both commercial vehicles and passenger cars. **Wholesales Index (except motor vehicles and motorcycles)** increased by 9.6 percent accelerating from a 6.1-percent growth in the previous quarter. This was mainly driven by an expansion in wholesales of general goods. **Retail Sales Index (except motor vehicles and motorcycles) increased by 14.1 percent,** accelerating from a 12.8-percent growth in the previous quarter. This was mainly driven by a strong growth in retail sales of other goods such as jewellery, etc.

Wholesale and retail trade; repair of motor vehicles and motorcycles sector increase by 3.5 percent, following the improvement of household expenditure and the number of foreign tourists.

In the first nine months of 2022, wholesale and retail trade; repair of motor vehicles and motorcycles sector increased by 3.1 percent, improving from a 1.3-percent expansion in same period last year. Wholesale and Retail Sales, and Repair of Motor Vehicles Index rose by 19.4 percent. Wholesales Index (except motor vehicles and motorcycles) increased by 7.7 percent. Retail Sales Index (except motor vehicles and motorcycles) grew by 12.6 percent.

Transportation and storage sector increased by 9.9 percent, accelerated from a 5.2-percent growth in the previous quarter, following the acceleration of air transport, land transport and transport via pipelines. The expansion in transportation and storage sector was in accordance with a 115.0-percent growth in Transportation Services Composite Index which accelerated from a 27.4-percent growth in the previous quarter. This was attributed to (i) a 809.6-percent increase in Air Transport Services Index, owing to the rise in air passenger transport activities index, (ii) a 32.1-percent increase in Land Transport and Transport via Pipelines Services Index, due to the expansion in rail-based public transport services activities, diesel consumption, gasoline consumption, petroleum gas consumption, natural gas consumption for vehicles, number of registered trucks, and number of public transport users, and (iii) a 0.5-percent increase in Water Transport Services Index, following the slowdown of TEUs Volume Index and Thai international freight volume (water transport) index. Besides, warehousing and support activities for transportation rose by 5.5 percent. Likewise, postal and courier activities increased by 2.9 percent in line with the expansion of entrepreneur revenue.

Transportation and storage sector continued to grow for the fourth consecutive quarter by 9.9 percent, following the acceleration of air and land transports, and transport via pipelines.

In the first nine months of 2022, transportation and storage sector expanded by 6.4 percent, improved from a 4.9-percent drop in same period last year. Transport services increased by 6.6 percent. In addition, warehousing and support activities for transportation rose by 6.5 percent and postal and courier activities expanded by 3.1 percent.

Electricity, gas, steam and air conditioning supply sector increased by 5.8 percent, accelerating from a 1.4 percent growth in the previous quarter, following an acceleration of industrial production activities and tourism-related services. This was in line with an increase in the electricity, gas and air conditioning production index. This was mainly attributed to (i) the power generation index increased by 6.0 percent, accelerating from 2.0 percent in the previous quarter, following an increase in electricity consumption of the industrial and business sectors, while the demand for household sector continued to decline for the second quarter, partly due to the Work From Home (WFH) to control the spread of COVID-19 during the third quarter of 2021, together with the average temperature across the country was lower than the previous quarter and the same quarter in 2021, and (ii) the natural gas production index fell by 3.3 percent, but improved from a 9.2-percent contraction in the previous quarter, following a decrease in the production of liquefied petroleum gas while the use of natural gas for vehicles continued to increase.

Electricity, gas, steam and air conditioning supply sectors continued to increase in the fourth quarter by 5.8 percent following the acceleration in industrial production activities and tourism-related services.

For the first nine months of 2022, electricity, gas, steam and air conditioning supply sector increased by 3.0 percent, compared to a 3.6-percent decrease in the same period last year. The power generation index increased by 4.3 percent and the natural gas production index declined by 5.3 percent.

Construction sector continued to decrease by 2.8 percent, compared with a 4.5 percent decline in the previous quarter. This was in line with the decline in public construction while the Construction Material Price Index (CMI) continued to increase. In this quarter, **Public construction** continued to drop by 5.9 percent, compared with a 6.6 percent decline in the previous quarter. (Government construction fell by 10.0 percent, compared with a 12.5 percent drop in the previous quarter while state enterprise construction increased by 3.5 percent, compared with a 6.8-percent growth in the previous quarter). **Private construction** rebounded for the first time in eight quarters with a 2.0-percent growth, compared to a 1.3-percent drop in the previous quarter, following the expansion of residential construction (such as condominiums and detached houses) in line with the stronger domestic demand. Nonetheless, construction of non-residential buildings (such as commercial buildings and factories) slowed down from the previous quarter. Other construction sectors continued to decline, especially the construction of electric trains. **Construction material price index (CMI)** rose by 5.6 percent continually for the eighth consecutive quarter following an increase in the steel and steel product price index (5.9 percent), cement (7.8 percent) and other construction materials such as aluminum, brick, stone, soil, sand and asphalt (7.0 percent).

Construction sector continued to decline for the fifth quarter by 2.8 percent.

Public construction dropped by 5.9 percent, while private construction expanded for the first time in eight quarters by 2.0 percent.

Construction Material Price Index (CMI) continued to increase for the 8th quarter.

For the first nine months of 2022, construction sector decreased by 4.3 percent, compared to a 3.6-percent growth in the same period last year. Public construction dropped by 5.5 percent. Private construction declined by 2.2 percent, and construction material price index (CMI) increased by 7.0 percent.

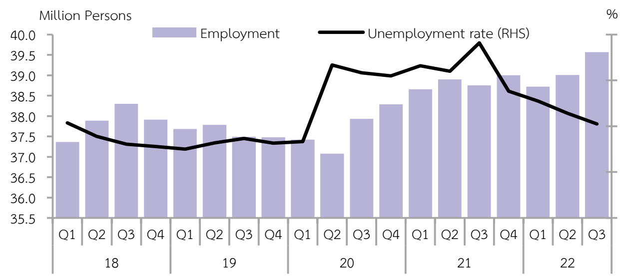
Employment continued to increase for the sixth consecutive quarter following an increase in non-agricultural sector whereas agricultural sector continued to decline for the second quarter. The unemployment rate was lower than the previous quarter and lower than the same quarter of the previous year. In the third quarter of 2022, the employment expanded by 2.1 percent, accelerating from a 0.3-percent increase in the previous quarter. **Non-agricultural employment** (shared 68.66 percent) increased for the second quarter by 4.3 percent following the increase of employment in the wholesale and retail trade; repair of motor vehicles and motorcycles, manufacturing and accommodation and food services activities sectors. Nevertheless, **agricultural employment** (31.34 percent share) continued to decline for the second quarter by 2.4 percent. This was in line with the contraction in production of some key agricultural products such as fruit trees, rubber, swine and cassava, etc. **The unemployment rate** stood at 1.23 percent lower than 1.37 percent in the previous quarter and 12.29 percent in the same quarter of the previous year. **The average number of unemployed** was at 4.91 hundred thousand people, lower than 5.47 hundred thousand people in the previous quarter and 9.11 hundred thousand people in the same quarter of the previous year.

For the first nine months of 2022, employment increased by 0.8 percent, slowed down from a 3.5 percent increase in the same period last year. The average unemployment rate was at 1.38 percent.

Employment continued to increase for the sixth quarter in line with an increase in non-agricultural sector while agricultural sector continued to decline for the second quarter.

The unemployment rate was 1.23 percent, lower than 1.37 percent in the previous quarter and 2.29 percent in the same quarter last year.

Employment decreased by 2.1 percent following a increasing in non-agricultural sector employment
Unemployment rate was low at 1.23 percent.



Source: National Statistical Office

Employed Persons by Industry

%YOY	Share Q3/22	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3
Employed	100.00	3.0	3.3	4.9	2.2	1.9	0.1	0.3	2.1
- Agricultural	31.34	2.2	3.4	2.7	1.2	1.7	2.4	-1.2	-2.4
- Non-Agricultural	68.66	3.4	3.3	5.9	2.7	1.9	-0.8	0.9	4.3
Manufacturing	15.76	3.6	2.0	2.2	6.9	3.4	-1.6	1.5	1.4
Construction	5.26	2.4	7.9	8.7	-4.1	-3.3	-4.2	-8.5	0.4
Wholesale and retail trade; repair of motor vehicles and motorcycles	17.12	3.2	2.6	2.1	3.7	4.4	2.0	8.3	4.5
Accommodation and food service activities	7.41	0.5	3.3	9.3	-5.8	-4.4	-4.4	-6.1	8.3
Total labor force (Million persons)		39.81	39.87	39.89	39.73	39.76	39.62	39.76	40.09
Employed (Million persons)		38.82	38.66	38.90	38.75	39.00	38.72	39.01	39.57
Unemployment (Million persons)		0.78	0.79	0.76	0.91	0.66	0.61	0.55	0.49
Unemployment Rate (%)		1.96	1.99	1.92	2.29	1.66	1.53	1.37	1.23

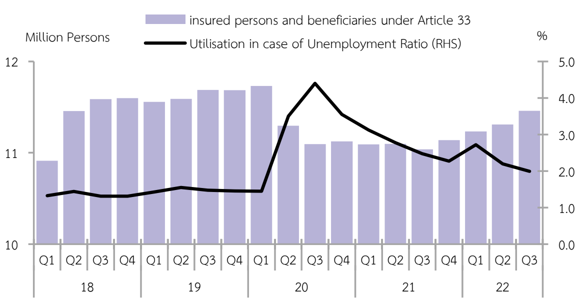
Source : National Statistical Office (NSO) Revised 2021

Labor in the Social Security System: The total number of insured persons in social security system continued to increase for the sixth consecutive quarter. The unemployment rate among insured persons under article 33 was lower than the previous quarter and the same quarter of the previous year. In the third quarter of 2022, the total number of social security beneficiaries continued to increase for the sixth consecutive quarter by 3.3 percent. This was mainly attributed to (i) an increase of compulsory insured person under article 33 by 3.9 percent, accelerating from 1.9 percent in the previous quarter. This was in line with the increase of insurers in the industrial and service sectors (such as manufacturing, wholesale and retail trade; repair of motor vehicles and motorcycles and construction sector), (ii) an increase of voluntary insured persons under article 40 by 3.9 percent, decelerating from a 199.4-percent increase in the previous quarter as weaker momentum of the government's incentives to encourage workers to enter the social security system, while voluntarily insured persons under article 39 fell by 2.9 percent. **The unemployment rate among insured person under article 33** in the quarter was at 2.0 percent, lower than 2.2 percent in the previous quarter and 2.5 percent in the same quarter of the previous year. The average number of unemployed was at 2.28 hundred thousand people lower than 2.45 thousand people in the previous quarter and 2.47 hundred thousand people in the same quarter last year.

The total number of insured persons in the social security system continued to increase for the sixth quarter by 3.3 percent, due to the increase of insured persons under article 33 and insured persons under article 40. Meanwhile, insured persons under article 39 declined.

The unemployment rate among insured person under article 33 in this quarter was at 2.0 percent, lower than 2.2 percent in the previous quarter and 2.5 percent in the same quarter last year.

There are 11.5 million insured persons and beneficiaries under Article 33 and 2.0 percent of them are receiving unemployment benefits



Source: The Social Security Office ,Ministry of labour

Number of social security beneficiaries

Registered Applicants (Thousand persons)	2021					2022		
	Year	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Insured Persons (article 33)[1/]	11,137	11,091	11,098	11,037	11,137	11,234	11,313	11,462
Insured Persons (article 39)[2/]	1,939	1,850	1,897	1,956	1,939	1,920	1,902	1,899
Insured Persons (article 40)[3/]	10,665	3,576	3,612	10,449	10,665	10,767	10,812	10,855
Total Insured Persons	23,741	16,516	16,607	23,442	23,741	23,920	24,027	24,216
Utilisation in case of Unemployment	253	346	308	273	253	306	245	228
Utilisation in case of Unemployment Ratio (%)	2.27	3.12	2.77	2.47	2.27	2.72	2.17	1.99

Source : Social Security Office (SSO) , Ministry of labour

Note: [1/] Insured Persons (article 33) are employees of private enterprises that employ at least 1 employee. Those Insured Persons must be over 15 years of age, but under 60 years of age

[2/] Insured Persons (article 39) are individuals who resigned from private enterprises (previously insured persons under article 33) but wants to maintain social security rights. Therefore, they voluntarily applied for social security rights under article 39

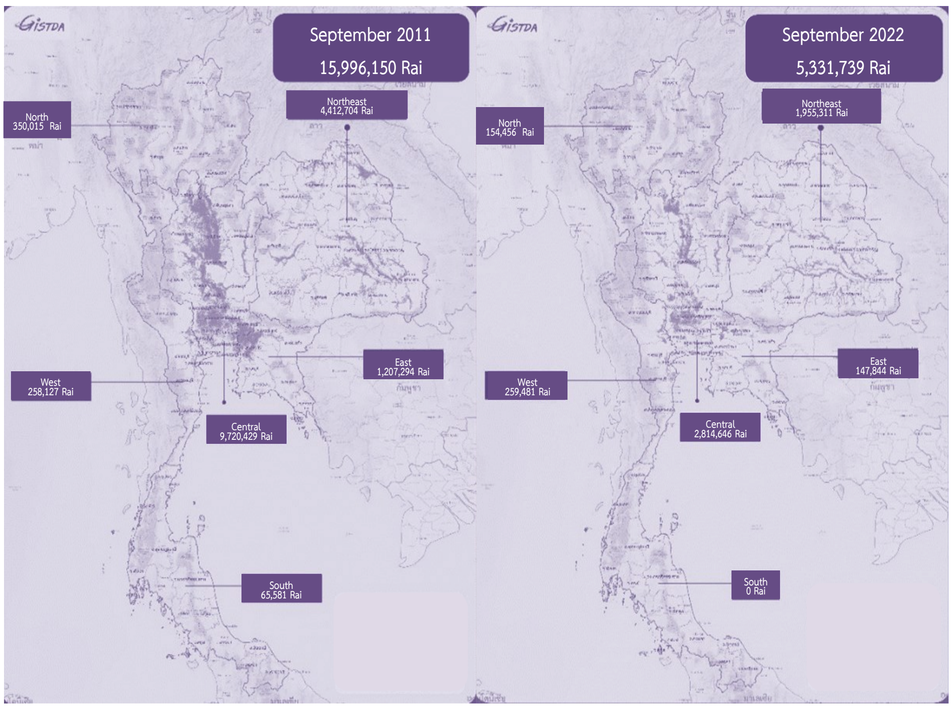
[3/] Insured Persons (article 40) are neither persons who are currently employed by private enterprises (article 33) nor has never applied to be an insured person under article 39. Insured persons under article 40 must be an self-employed person or informal workers age who must be over 15 years of age, but under 60 years of age.

The impact of the 2022 floods on agricultural sector

During the third quarter of 2022, Thailand was faced with flooding and unfavorable weather conditions partly due to the La Nina phenomenon which was morese eve than usual. The climate influence from the monsoon troughs associated with the Depression Noru, caused heavy rainfall combined with the accumulated rainfall since August 2022 to reach dangerously high levels. According to data from the Sentinel-1 satellite in September 2022, there are areas affected by flooding covering 66 provinces[1], amounting to 5.33 million rai[2] (8,528 square meters), or 33.33% flooded areas, every province amounting to 15.99 million rai[2] (25,584 square meters) in 2011.

The effects of flooding on agricultural sector. Reported by the Center for Monitoring and Solving Agricultural Disaster, the Ministry of Agriculture and Cooperatives indicated the damages of the floods on agricultural sector between 2011 and 2022. In 2011, the crop was affected by 1.29 million farmers and covered the area of 12.75 million rai (20,400 square meters). Besides, the fisher was affected by 132,726 farmers, 272,052 rai (435,283,200 square meters) of fishery areas. and 300,739 square meters of fish cages In additions livestock was inundated and affected more than 254,670 farmers and 30.31 million animals and, 17,776 rai of grass plots. In 2022, the crop was affected by 649,807 farmers with damaged area of 5.51 million rai (8,816 square meters). For fishery, at least 30,350 farmers were affected and covered the area of 45,988 rai (73,580,800 square meters) and fish cage of 54,580 square meters. Besides, livestock was affected by 90,432 farmers with 8.59 million animals and 4,870 rai (7,792,000 square meters) of grass plots.

Figure 1 Map of Thailand showing flood affected areas from Sentinel-1 satellite data in 2011 and 2022.



Source: Geo-Informatics and Space Technology Development Agency

Meanwhile, when considering the water level in the dams as of November 15th, 2022, the volume of usable water was at the level of 35,513.85 million cubic meters, 50.1 percent of totaling storage water level of the reservoir water (14.1 percent less than in 2011), The total amount of precipitation throughout the country was at 1824.9 mm. (1.2 percent lower than in 2011). As for the ENSO phenomenon, the Meteorological Department expected that the ENSO phenomenon would continue the La Nina condition until March 2023, resulting that the amount of rainfall during the remainder of 2022 tends to be above normal average.

September — 34.6% capacity

The amount of usable water is at a higher level than the previous year of 83.2% and lower than in 2011 of 37.8%

October — 40.8% capacity

The amount of usable water is at a higher level than the previous year of 24.3% and lower than in 2011 of 31.1%

November (17 November 2022) — 50.1% capacity

The amount of usable water is at a higher level than the previous year of 14.0% and lower than in 2011 of 14.1%

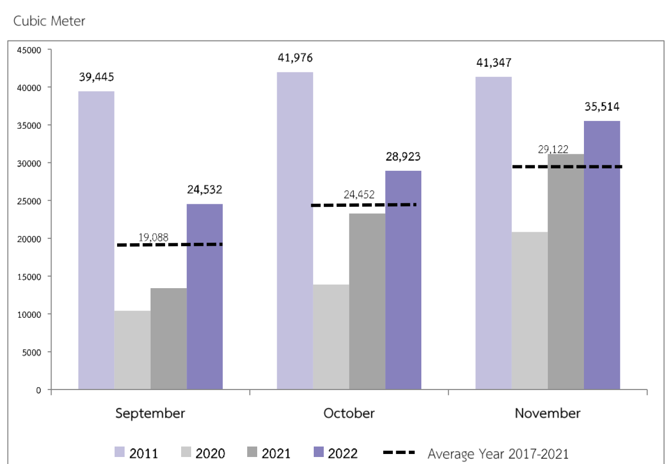
Impact of the flood incident in 2011 and 2022

Impact Summary	Year 2011	Year 2022
Provinces affected	77	66
Areas affected reported from the satellite information on September (Rai)	15,996,151	5,331,739
Crop		
Farmers (number)	1,299,668	649,807
Areas (Rai)	12,751,937	5,510,061
Rice (Rai)	10,079,708	3,611,514
Field crops and vegetables (Rai)	1,876,310	1,809,822
Fruits, trees, etc. (Rai)	795,919	88,725
Fishery		
Farmers (number)	132,726	30,350
Areas (Rai)	272,052	45,988
Fish pond (Rai)	218,355	39,815
Pond for shrimps/crabs/shellfishs (Rai)	53,697	6,173
Cage/cement pond (square meter)	300,739	54,580
Livestock		
Farmers (number)	254,670	90,432
Animals in total (number)	30,317,232	8,595,491
Poultry (number)	29,541,550	8,212,554
Pigs (number)	337,723	60,422
Goat and sheep (number)	43,505	29,147
Cattle (number)	394,454	293,368
Grass plots (Rai)	17,776	4,870

Source: Geo-Informatics and Space Technology Development Agency, Ministry of Agriculture and Cooperatives, and Royal Irrigation Department.

The amount of water as of the beginning of the month in 36 dams around the country in September until November 2022.

The amount of usable water per month compared to the previous year.



Source: Hydro - Informatics Institute

Source: [1] Ministry of Agriculture and Cooperatives

[2] Geo-Informatics and Space Technology Development Agency

Note: *66 provinces included (i) normal situation 51 provinces: Kamphaeng Phet, Chiang Mai, Chiang Rai, Nan, Mae Hong Son, Phrae, Phayao, Phetchabun, Phichit, Phitsanulok, Lamphun, Lampang, Tak, Uttaradit, Nakhon Sawan, Sukhothai, Loei, Chaiyaphum, Nong Khai, Nakhon Ratchasima, Buriram, Surin, Amnat Charoen, Udon Thani, Chonburi, Chanthaburi, Rayong, Trat, Nakhon Nayok, Lopburi, Saraburi, Sa Kaeo, Prachinburi, Pathum Thani, Chachoengsao, Samut Prakan, Nonthaburi, Bangkok, Phetchaburi, Prachuap Khiri Khan, Ratchaburi, Kanchanaburi, Chumphon, Ranong, Phuket, Satun, Trang, Narathiwat, Surat Thani, Yala, and Songkhla and (ii) flood situation 15 provinces: Uthai Thani, Kalasin, Khon Kaen, Roi Et, Maha Sarakham, Yasothon, Nong Bua Lamphu, Sisaket, Ubon Ratchathani, Chainat, Sing Buri, Phra Nakhon Si Ayutthaya, Ang Thong, Nakhon Pathom, and Suphan Buri (August - 11th November 2022)

Labor market conditions in Thailand after the COVID-19 outbreak

After the outbreak of COVID-19 within the country subsided, together with of the implementation of government employment support measures. the employment situation was improved. According to data published by the National Statistical Office at the end of the third quarter of 2022, there were 40.089 million persons in the labor force, consisting of (i) 39.566 million employed persons, divided into 37.092 million persons by Thai nationality and 2.474 million persons by foreigners, and (ii) 0.491 million unemployed persons. The number of unemployed was closely to the pre-COVID level, at the end of the third quarter of 2019, the number was at 39.030 million persons.

When considering the current labor force at the end of the third quarter of 2022 compared to the same quarter of 2019, it indicated that employed persons increased by 1.038 million persons (2.7 percent), reflecting improvements in employment conditions. This was also consistent with the rising number of employed persons in the wholesale and retail trade; repair of motor vehicles and motorcycles, and manufacturing sectors. However, the falling number of employed were in agriculture, forestry and fishery, construction; and accommodation and food service activities sectors. For Thai nationality, the number of employed persons increased by 1.786 million persons (5.1 percent). This was driven by an increase in almost all major manufacturing sectors except agriculture, forestry and fishery, and accommodation and food service activities sectors. Nonetheless, the number of foreigner labor employed in Thailand decreased by 0.748 million persons (-23.2 percent) due to the employed foreigners returned to their country during the COVID-19 outbreak, especially Cambodian, Laotian, Myanmar workers, resulting in labor shortage in all major production sectors. The contraction included manufacturing sector decreased by 0.245 million persons (-22.3 percent), construction sector decreased by 0.173 million persons (-27.7 percent), wholesale and retail trade; repair of motor vehicles and motorcycles sector decreased by 0.122 million persons (-24.2 percent), and agriculture, forestry and fisher sector decreased by 0.082 million persons (-20.4 percent). Nevertheless, the number of employed foreigners tended to increase as reflecting from data in the first to the third quarter of 2022, which the number of employed foreigners was 2.348 million persons, 2.266 million persons, and 2.474 million persons.

In addition, when categorizing respectively by skill at the end of the third quarter of 2022, the employed foreigner labor consisted of (i) general workers 2.229 million persons (90.11 percent share of the total), which mainly consisted of 4 nationalities, namely Myanmar 1.604 million persons (71.94 percent share), Cambodia 0.431 million persons (19.34 percent share), Laos 0.194 million persons (8.72 percent share), and Vietnam 150 persons (0.01 percent share), and (ii) skilled workers and others 0.245 million persons (9.89 percent share of the total).

Table: Employed Thai people and foreigner classified by major production sectors

Sectors (Unit : Thousand People)	Employed			Employed Thai People			Employed foreigner		
	Q3/2019[1/]	Q3/2022	Diff	Q3/2019[1/]	Q3/2022	Diff	Q3/2019[1/]	Q3/2022	Diff
Agriculture, forestry, and fishing	12,594.0	12,399.9	-194.1	12,190.8	12,079.0	-111.8	403.2	320.8	-82.4
Manufacturing	6,108.8	6,235.0	126.2	5,009.3	5,381.0	371.7	1,099.5	854.0	-245.4
Construction	2,096.3	2,081.3	-15.1	1,471.2	1,629.4	158.2	625.2	451.9	-173.3
Wholesale and retail trade; repair of motor vehicles and motorcycles	6,190.3	6,774.8	584.6	5,688.4	6,394.6	706.1	501.8	380.3	-121.6
Accommodation and food service activities	2,997.5	2,932.4	-65.1	2,979.0	2,914.6	-64.4	18.5	17.8	-0.7
Activities of households as employers	218.7	230.9	12.3	92.6	110.3	17.6	126.0	120.6	-5.4
Others	8,322.5	8,911.7	589.2	7,874.5	8,583.3	708.8	448.0	328.3	-119.6
Total	**38,528.0**	**39,566.0**	**1,038.0**	**35,305.9**	**37,092.2**	**1,786.3**	**3,222.2**	**2,473.8**	**-748.3**

Source : National Statistical Office and Foreign Workers Administration Office

Note : [1/] Calculated by NESDC

Fiscal Conditions:

On the revenue side, in the fourth quarter of the fiscal year 2022 (July - September 2022) the net government revenue collection stood at 671,214.4 million Baht, increasing by 7.0 percent compared with the same quarter last year due to **(i) 18.0-percent rise in corporate income tax** as a collection of corporate income tax on net profit (P.N.D. 50), withholding tax (P.N.D. 53), and tax on sales of profits (P.N.D. 54) were higher than the same quarter last year due to an improvement in the overall turnover of entrepreneurs, **(ii) 14.4-percent increase in VAT collection** as a result of an expansion in imports value and crude oil price, as well as a recovery in domestic demand, **(iii) 53.5-percent increase in excise tax on cars** following an increase in production and delivery of passenger cars, pick-up trucks, and motorcycles, and **(iv) 13.7-percent rise in import duty** causing by an expansion of total imports value which rose by 23.2 percent.

In Q4/FY2022, the net government revenue collection increased by 7.0 percent due to an increase in revenue collection from the corporate income tax, VAT, excise tax on cars, and import duty.

However, **the revenue submission from state-owned enterprises (SOEs) decreased by 49.5 percent** due to a high base in the same period last year where there were additional revenue submissions from the Vayupak Fund 1, and the overlapping revenue submission from certain state-owned enterprises such as Government Lottery Office (GLO), Metropolitan Electricity Authority (MEA), and the Provincial Electricity Authority (PEA). Meanwhile, **the excise tax on oil and oil products decreased by 39.7 percent** due to the government measure to reduce excise tax rate on diesel fuel by 5 Baht per liter from 21st July - 20th September 2022, in order to alleviate burdens for households affected by the rising of global crude oil prices.

For the fiscal year 2022, the net government revenue collection stood at 2,530,633.5 million Baht, increasing by 6.5 percent from the same period last year, and was 5.4 percent higher than the revenue estimation stated in the 2022 annual budget. In details, a revenue collection of the Revenue Department, the Customs Department, and revenue submissions from state-owned enterprises (SOEs) were higher than the estimation by 15.5 percent, 10.5 percent, and 0.6 percent, respectively. On the other hand, a revenue collection of the Excise Department was lower than the estimation by 15.7 percent, partly due to the reduction of excise tax rate on diesel fuel. Likewise, the revenue submission from other government agencies was lower than the estimation by 13.5 percent.

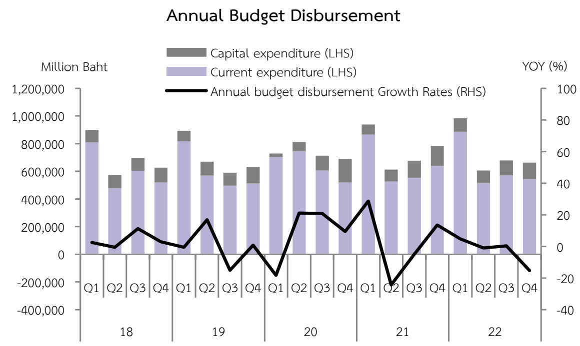
For the FY2022, the net government revenue collection was at 5.4 percent, higher than the revenue estimation stated in the 2022 annual budget.

The total budget disbursement in Q4/2022 decreased by 23.3 percent as a result of a reduction in the FY2022 annual budget.

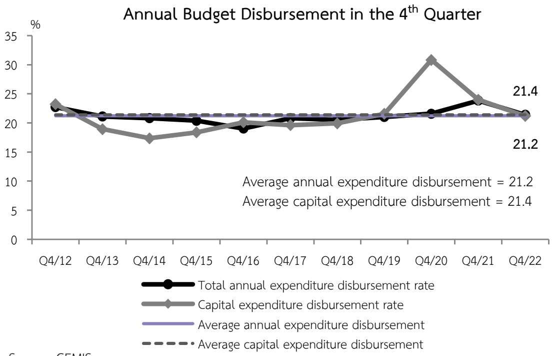
On the expenditure side, the total budget disbursement in the fourth quarter of the fiscal year 2022 was at 840.4 billion Baht[1], decreasing by 23.3 percent from the same quarter last year. Classified by sources of funds, the government disbursements were as follows:

In Q4/FY2022, the 2022 annual budget disbursement rate was at 21.4 percent in which the rate of current and capital expenditure disbursement stood at 21.4 and 21.2 percent, respectively.

(i) The 2022 annual budget disbursement stood at 63.4 billion Baht, decreasing from the same quarter last year by 15.3 percent. The disbursement rate was at 21.4 percent. The current expenditure disbursement amounted to 543.9 billion Baht, decreasing by 14.8 percent from the same quarter last year. The disbursement rate was at 21.4 percent, lower than 23.8 percent in the same quarter last year. Meanwhile, the capital expenditure disbursement was marked at 119.5 billion Baht, decreasing from the same quarter last year by 17.5 percent. The disbursement rate was at 21.2, lower than 24.0 percent in the same quarter last year. Therefore, the annual budget disbursement declined in both the current and capital expenditure as a result of reduction in the FY2022 annual budget and acceleration of disbursement in the previous period.



Source: GFMIS



Source: GFMIS

(ii) the carry-over budget disbursement stood at 48.7 billion Baht, increasing from the same quarter last year by 36.1 percent, the disbursement rate was at 20.5 percent; (iii) **State-owned enterprises capital expenditure budget** (excluding PTT) was disbursed for 74.9 billion Baht[2], increasing from the same quarter last year by 21.6 percent, mainly due to a rise in a capital expenditure disbursement of the Mass Rapid Transit Authority of Thailand (MRTA), the Industrial Estate Authority of Thailand (IEAT), the Electricity Generating Authority of Thailand (EGAT), and the Port Authority of Thailand (PAT); (iv) **The off-budget loan expenditure** stood at 163.5 million Baht as a result of disbursement from the Development Policy Loan (DPL) for the New GFMIS Thai project; (v) **the COVID-19 loans B.E. 2563 - 2564 (1.5-trillion-Baht)** was disbursed for 60.7 billion Baht.

For the fiscal year 2022, annual budget disbursement rate was at 94.6 percent in which the rate of current and capital expenditure disbursement stood at 99.2 and 73.7 percent, respectively.

For the fiscal year 2022, the total budget disbursement was at 3,755.1 billion Baht, decreasing by 8.9 percent from the previous fiscal year, with the allowing details (i) **The 2022 annual budget disbursement** stood at 2,932.6 billion Baht, including (a) 2,516.6 billion Baht in a disbursement of current expenditure, and (b) 416.0 billion Baht in a disbursement of capital expenditure. The total disbursement rate was at 94.6 percent while the disbursement rate of current and capital expenditure was at 99.2 percent and 73.7 percent, respectively. (ii) **The disbursement of the carry-over budget** stood at 213.7 billion Baht, equivalent to 90.1 percent of the total carry-over budget. (iii) **State-owned enterprises' capital expenditure budget (excluding PTT)** was disbursed by 239.4 billion Baht[3]. (iv) **The off-budget loan expenditure** stood at 163.5 million Baht. (v) **The COVID-19 loan B.E. 2563 - 2564 (1.5-trillion-Baht)** was disbursed by 393.9 billion Baht.

As of 30th September 2022, the total budget disbursement from the COVID-19 loan accumulated at 1,376.6 billion Baht, including 220.2 billion Baht from Group 1 work plans or projects (Healthcare Services), 858.3 billion Baht from Group 2 work plans or projects (Financial Aid and Cash Handouts), and 298.1 billion Baht from Group 3 work plans and projects (Economic Rehabilitation).

Public Debt: at the end of September 2022, public debt was accumulated at 10.4 trillion Baht, equivalent to 60.7 percent of GDP, and remained under the fiscal disciplinary framework. The total public debt comprised 10.2 trillion Baht of domestic loans (98.3 percent of public debt), and 177.1 billion Baht of foreign loans (1.7 percent of public debt).

[1] The total budget disbursement includes the disbursement of (i) the grand total of annual budget, (ii) the carry-over budget, (iii) the State-owned enterprises' capital expenditure budget allocated by the State Enterprise Policy Office (excluding PTT) and the State-owned enterprise's capital expenditure allocated from the annual budget and the carry-over budget, (iv) the off-budget loan (Development Policy Loan: DPL), and (v) the COVID-19 loans (1.5-trillion-Baht).
[2] The number was included the 7.4 billion Baht of the capital spending allocated from the annual budget.
[3] The number was included the 24.6 billion Baht of the capital spending allocated from the annual budget.

Total budget disbursement from the COVID-19 loan (1.5 trillion Baht)

(Unit: million Baht)

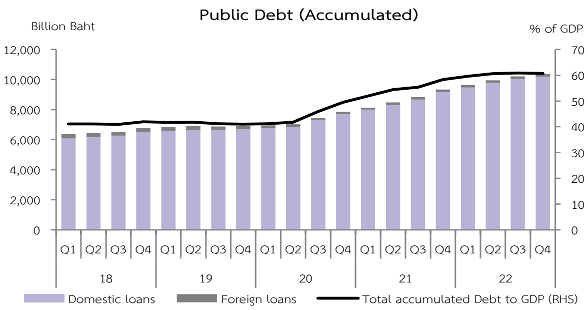
Workplans/Projects	Total Budget	Actual Budget Allocation	Amount Budget Disbursed	Disbursed as % of Allocation	Budget Balance
Group 1 Workplans/Projects – **Healthcare Services**	283,994.2	283,495.1	220,223.3	77.7	499.0
Group 2 Workplans/Projects – **Financial Aid and Cash Handouts**	864,497.3	864,494.9	858,323.9	99.3	2.4
Group 3 Workplans/Projects – **Economic Rehabilitation**	351,508.5	334,298.3	298,057.3	89.2	17,210.2
Total	**1,500,000.0**	**1,482,288.3**	**1,376,604.6**	**92.9**	**17,711.7**

Source: Public Debt Management Office (30th September 2022)

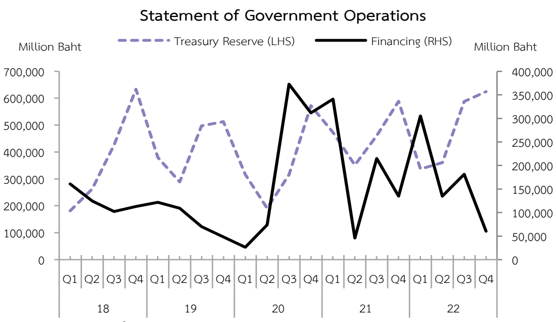
At the end of September 2022, the government fiscal statement remained at a strong level where the fiscal balance stood at 624.0 billion Baht.

Fiscal Balance: in the fourth quarter of fiscal year 2022, the budgetary balance recorded a deficit of 53.0 billion Baht while non-budgetary balance recorded a surplus of 29.0 billion Baht. In the meantime, the government conducted a cash balance management through the borrowing of 60.1 billion Baht. Therefore, the cash balance after debt financing recorded a net surplus of 36.1 billion Baht. In addition, the treasury reserve at the end of the third quarter of the fiscal year 2022 stood at 587.9 billion Baht, thus the fiscal balance at the end of September 2022 equaled to 624.0 billion Baht.

For the fiscal year 2022, the budgetary balance and the non-budgetary balance recorded a deficit of 595.4 billion Baht, and 50.5 billion Baht, respectively. In addition, the government conducted a cash balance management through the borrowing of 681.2 billion Baht. Therefore, the cash balance after debt financing recorded a net surplus of 35.3 billion Baht. balance after debt financing recorded a net deficit of 832 million Baht.



Source: Public Debt Management Office



Source: Ministry of Finance

Financial Conditions:

The BOT raised the policy rate by 0.25 percentage point in both meeting on August and September 2022. This was in line with central banks in advanced economies as well as most Asian central banks.

In the third quarter of 2022, the policy interest rate stood at 1.00 percent per annum increased from 0.50 percent in the previous quarter. In both meetings on 10th August and 28th September 2022, the Monetary Policy Committee (MPC) decided to increase the policy rate by 25 basis points for each meeting. Therefore, the policy rate increased from 0.50 percent per annum to 1.00 percent per annum. The MPC assessed that the Thai economic recovery in line with tourism recovery and private consumption. Headline inflation remained high due to higher cost passthrough, before gradually falling in the period ahead as declining oil prices and the supply chain pressures moderation. Moreover, the MPC viewed that the policy rate should be normalized in a gradual and measured manner to the level in accordance with sustainable growth in the long term, and this would support maintaining price stability, along with supporting sustainable and full potential economic growth, and preserving financial stability. However, the MPC would be ready to adjust the size and timing of policy normalization in the case of growth and inflation outlook shifting from the current assessment. The monetary policy stance of Thailand was in line with major central banks and some Asian central banks. These included, for example, the European Central Bank (ECB), central banks in Indonesia and Vietnam raising their policy rate by 125 basis points, 75 basis points, and 100 basis points respectively. In addition, many other major central banks continued to tighten monetary policy more aggressively. Specifically, the Federal Reserve (Fed), central banks in England, India, Canada, South Korea, Australia, and New Zealand increased the policy rate by 150 basis points, 100 basis points, 100 basis points, 175 basis points, 75 basis points, 150 basis points, and 100 basis points respectively. Meanwhile, the central bank of Japan kept its policy rate unchanged at -0.10 percent per annum. The central bank of China and Russia cut their policy rates by 5 basis points and 200 basis points respectively.

In October 2022, the ECB, the central banks of Canada, South Korea, Australia, Indonesia, Vietnam, and New Zealand rose the policy rate by 75 basis points, 50 basis points, 50 basis points, 25 basis points, 50 basis points, 100 basis points, and 50 basis points respectively.

Recently, in November 2022, the Fed, the central banks of England, Australia, and Malaysia increased the policy rate by 75 basis points, 75 basis points, 25 basis points, and 25 basis points respectively.

Policy Interest Rate

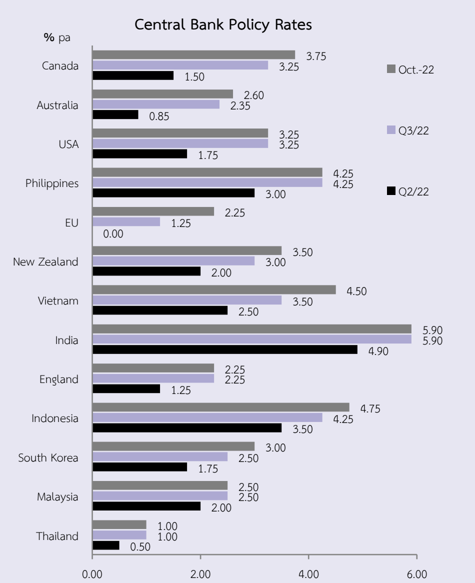
(%) At the end of period	2020 Year	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Jul.	2022 Aug.	2022 Sep.	2022 Oct.	2022 Nov.
USA	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.25-0.50	1.50-1.75	3.00-3.25	2.25-2.50	2.25-2.50	3.00-3.25	3.00-3.25	3.75-4.00
EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.50	0.50	1.25	2.00	2.00
England	0.10	0.25	0.10	0.10	0.10	0.25	0.75	1.25	2.25	1.25	1.75	2.25	2.25	3.00
India	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.90	5.90	4.90	5.40	5.90	5.90	5.90
Canada	0.25	0.25	0.25	0.25	0.25	0.25	0.50	1.50	3.25	2.50	2.50	3.25	3.75	3.75
Korea, South	0.50	1.00	0.50	0.50	0.75	1.00	1.25	1.75	2.50	2.25	2.50	2.50	3.00	3.00
Brazil	2.00	9.25	2.75	4.25	6.25	9.25	11.75	13.25	13.75	13.25	13.75	13.75	13.75	13.75
Australia	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.85	2.35	1.35	1.85	2.35	2.60	2.85
Indonesia	3.75	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.25	3.50	3.75	4.25	4.75	4.75
Thailand	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	0.50	0.75	1.00	1.00	1.00
Philippines	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	4.25	3.25	3.75	4.25	4.25	4.25
Malaysia	1.75	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.50	2.25	2.25	2.50	2.50	2.75
Vietnam	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.50	2.50	2.50	3.50	4.50	4.50
New Zealand	0.25	0.75	0.25	0.25	0.25	0.75	1.00	2.00	3.00	2.50	3.00	3.00	3.50	3.50
Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
China	3.85	3.80	3.85	3.85	3.85	3.80	3.70	3.70	3.65	3.70	3.65	3.65	3.65	3.65
Russia	4.25	8.50	4.50	5.50	6.75	8.50	20.00	9.50	7.50	8.00	8.00	7.50	7.50	7.50

Source: Collected by NESDC

The more aggressive monetary policy tightening by many central banks affecting in a heighted volatility in financial markets in several countries

In 2022, central banks around the world pursued aggressive policy rate hikes, especially central banks in advanced economies, continued to raise their key interest rates throughout the second and third quarters of 2022. The decision was underpinned by elevated inflation and the aim of keeping inflation expectations anchored. The Federal Reserve (Fed) raised the policy rate by 275 basis points, causing the federal funds rate stood at the range of 3.00 - 3.25 percent per annum at the end of the third quarter of 2022. In addition, many other central banks tighten monetary policy more aggressively. These included, for example, central banks in Canada, Australia, South Korea, Philippines, and Vietnam.

The more aggressive monetary policy tightening by major central banks, resulting in a heighted volatility in financial markets. Such volatilities stemmed from concerns over global economic slowdown due to monetary policy tightening. In the third quarter of 2022, Dow Jones Industrial Average index dropped by 7.0 percent from the previous quarter. Other major stock markets declined such as Canada (-2.2 percent), Australia (-1.4 percent), South Korea (-7.6 percent), Philippines (-6.7 percent), and Vietnam (-5.5 percent), respectively. The bond markets indicated that bond spread (10 years - 2 years) of many countries expected to be narrow down. This reflected in negative views of investor on the economy as well as concerns over recession in the period ahead in many countries. Overall financial conditions in Thailand in the third quarter of 2022, SET Index increased by 1.4 percent from the previous quarter. The government bond yields increased slightly in tandem with the gradual pace of monetary policy normalization of the Bank of Thailand. In addition, Thai equity market recorded a continue net flow of foreign investors. This was mainly driven by a net inflow of 3.94 billion US dollars in the first quarter of 2022, and 0.79 billion US dollars for the second quarter of 2022.

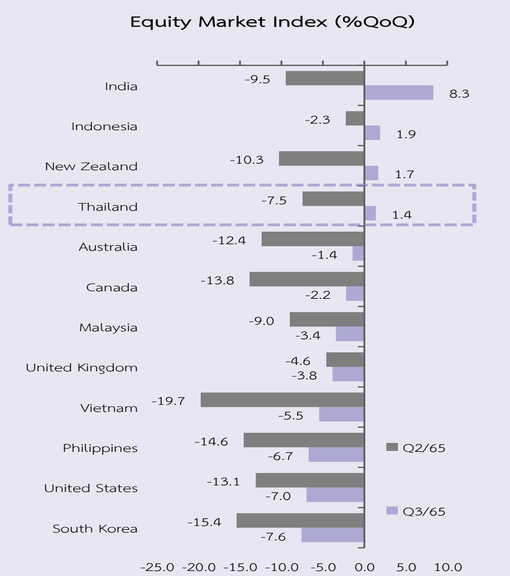


Source: CEIC

10-2 Year Treasury Yield Spread

bp	Q2/65	Q3/65
Australia	0.84	0.49
Vietnam	1.13	0.59
England	0.57	0.73
Thailand	1.15	1.33
USA	0.22	-0.70
Canada	0.13	-0.63
South Korea	0.14	-0.15
New Zealand	0.41	0.06
Malaysia	0.91	0.82
Philippines	2.66	1.74
Indonesia	2.29	1.12
India	0.85	0.31

Source : CEIC



Source: CEIC

Commercial banks maintained their lending rates at the same level as the previous quarter. Meanwhile, specialized financial institutions (SFIs) kept their lending rate unchanged while the deposit rates were decreased. In the third quarter of 2022, large-sized and medium-sized commercial banks kept their Minimum Loan Rate (MLR) unchanged at 5.49 percent per year and 6.60 percent per year, respectively. Likewise, they remained the average 12-Month fixed deposit rate at the same level at 0.45 percent per year and 0.50 percent per year, respectively. On the one hand, SFIs maintained their MLR at 6.13 percent per year but cut the deposit rate from 0.78 percent per year to 0.77 percent per year. However, the average real deposit rates and MLR stood as the low level due to persistently high domestic inflation.

Other depository corporations (ODCs) maintained their lending rates. However, the SFIs lowered the deposit rates.

In October 2022, commercial banks rose their interest rates in response to the monetary policy stance of the BOT. Therefore, the deposits rates was at 5.71 percent per year and the lending rates stood at 0.68 percent per year. The SFIs maintained the lending rate, but rose their deposit rate to 0.8 percent per year.

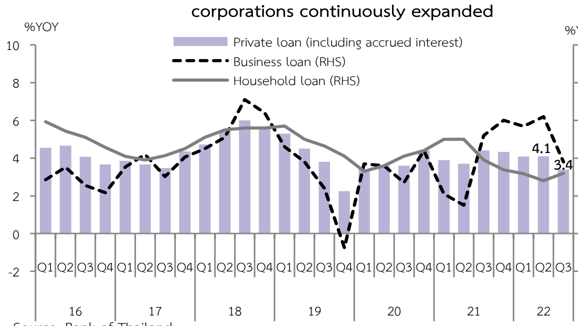
Private business loans outstanding expanded at a lower pace. At the end of the third quarter of 2022, private loans outstanding by depository institutions grew by 3.4 percent, slowed down from 4.1 percent in the previous quarter. Business loans expanded by 3.8 percent following loan demand for the economic recovery especially commercial sector, along with the tendency that interest rates would rise in the period ahead. However, this trend slowed down from 6.2 percent growth in the previous quarter owing to weakness in SMEs loans. On 31st October 2022, the soft loan facility for business (totaling 250 billion Baht) to support SMEs was approved by 197 billion Baht which accounted for 78.97 percent of total credit line. On the other hand, household loans expanded by 3.2 percent, accelerating from 2.9 percent in the previous quarter following the expansion of auto-leasing and housing loans. This was partly due to customers' purchasing decisions before higher cost of borrowing, combined with lower property transfer fees and ending of the LTV easing policy.

Private business loans outstanding expanded following the acceleration of household loans. Meanwhile, business loans slowed down.

Specialized financial institutions (SFIs) expanded by 3.5 percent, accelerated from 3.4 percent in the previous quarter. The expansion was mainly contributed to a 3.3 percent increase of household loans compared to 3.0 percent in the previous quarter, along with business loans slowed down from the growth of 6.8 percent in the previous quarter to 4.5 percent. Likewise, **commercial bank loan** expanded at a lower pace by 3.6 percent, comparing with 4.5 percent in the previous quarter. In details, business loan expanded by 3.7 percent, decelerating from 6.1 percent in the previous quarter. Household loans expanded by 3.4 percent, accelerating from 2.9 percent in the previous quarter.

Major lending sectors with expansion consisted of wholesale and retail trade; repair of motor vehicles and motorcycles (9.2 percent), financial and insurance activities (9.1 percent), manufacturing (5.1 percent), transportation and storage (4.1 percent), personal consumption (3.9 percent), construction (3.2 percent) and real estate activities (0.2 percent). On the one hand, major lending sectors with contraction included mining and quarrying (-10.7 percent), human health and social work activities (-7.0 percent), agriculture, forestry and fishery (-5.2 percent), accommodation and food service activities (-3.9 percent) and electricity, gas, steam and air conditioning supply (-1.8 percent). **Loans for small and medium-sized businesses** (excluding financial and insurance activities) indicated that outstanding loans expanded by 0.2 percent, slowed down from 3.7 percent in the previous quarter. Major lending sectors with expansion consisted of accommodation and food service activities, transportation and storage, human health and social work activities, construction, and electricity, gas, steam and air conditioning supply. Meanwhile, major lending sectors with contraction consisted of agriculture; forestry and fishery, information and communication, manufacturing, real estate activities, administrative and support service activities, and wholesale and retail trade; repair of motor vehicles.

Private loans (including accrued interest) of depository corporations continuously expanded



Source: Bank of Thailand

Thai Baht against US dollar depreciated from the previous quarter. In the third quarter of 2022, an average exchange rate was at 36.42 Baht per US dollar, depreciating by 5.75 percent from the previous quarter. The movement of Thai Baht was in response to a strengthening of US dollar against other currencies, the average US dollar index stood at 108.26, increasing from 102.62 in the previous quarter. The main factors of the US dollar's strength was caused by aggressive monetary policy tightening by US Federal Reserve and concern of global recession. Furthermore, a basket of other currencies against US dollar in US dollar index had been devalued due to (i) the BOJ's ultra-loose policy; (ii) the UK's expansionary fiscal policy; (iii) the economic slowdown in Europe amid energy price crisis, and (iv) China's economic slowdown due to continuation of the government's Zero-COVID policy and concern over real estate sector. The depreciation of Thai Baht was correlated with other regional currencies such as Philippine Peso, Japanese Yen, South Korea Won, Indian Rupees, Chinese Yuan, Taiwanese dollar, Malaysian Ringgit, Indonesian Rupiah, Singapore dollar and Vietnamese Dong which depreciated from the previous quarter. When comparing with trading partner/competitors, Thai Baht depreciated, reflecting by a decrease in average of Nominal Effective Exchange Rate (NEER) by 2.1 percent from the previous quarter (an average of 113.55).

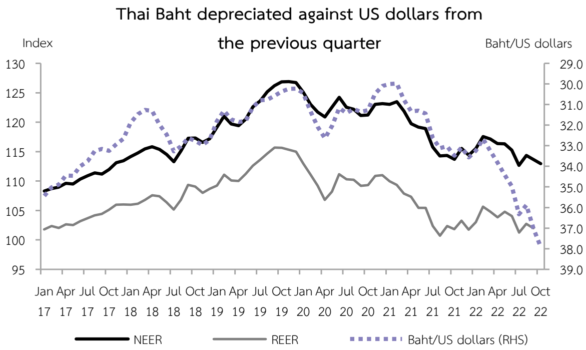
Thai Baht against US dollar depreciated compared to the previous quarter due to the US dollar's strength as a result of continued monetary policy tightening by the Fed and concern over the global economic slowdown.

In October 2022, the monthly average of Thai Baht was at 37.92 Baht per US dollar, depreciating by 2.40 percent from the previous month. The depreciation was mainly caused by investor's concerning about the Fed's more aggressive monetary policy tightening and the prolonged-than-expected Russia-Ukraine conflict, resulting that investors reallocated their asset to safe haven assets particularly the US dollar.

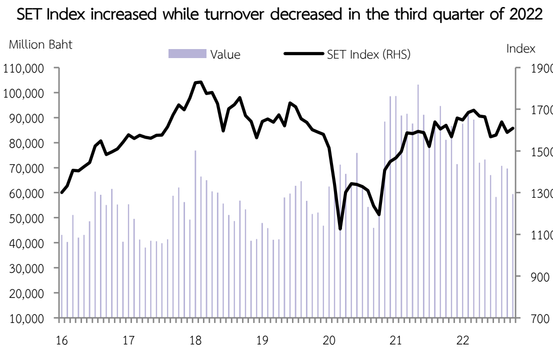
SET Index increased from the previous quarter. This was mainly driven by (i) continuing to maintain growth momentum of exports, (ii) better-than-expected tourism recovery following the Covid-19 pandemic continued to subside, together with the relaxation of international travel restrictions which improved travel sentiments, and (iii) after listed companies reported record-high earnings of 350 billion Baht in the second quarter of 2022. Altogether, SET index at the end of the third quarter of 2022 closed at 1,590 points, increased by 1.4 percent from the previous quarter. Industrial groups with positive growth were technology (15.2 percent), services (1.7 percent), resources (1.6 percent), and property and construction (0.1 percent). The movement of SET index was in contrast with other regional stock markets as the majority of Asian stock markets declined such as China (-15.2 percent), Taiwan (-9.5 percent), South Korea (-7.6 percent), Philippines (-6.7 percent), Vietnam (-5.5 percent), and Malaysia (-3.4 percent). Meanwhile, other regional stock markets with expansion was India (8.3 percent) and Indonesia (1.9 percent).

SET Index rose from the preceding quarter following the continued recovery in the Thai economy and the record-high earnings of listed companies in the second quarter of 2022.

In October 2022, SET index increased by 1.2 percent to 1,609 points from the end of September 2022. This was mainly supported by a significant increase in financial performance of listed companies on the Stock Exchange of Thailand (SET) for the third quarter of 2022, especially banking sector. Besides, investors less concerned about the Fed's monetary policy.



Source : CEIC, Bank of Thailand

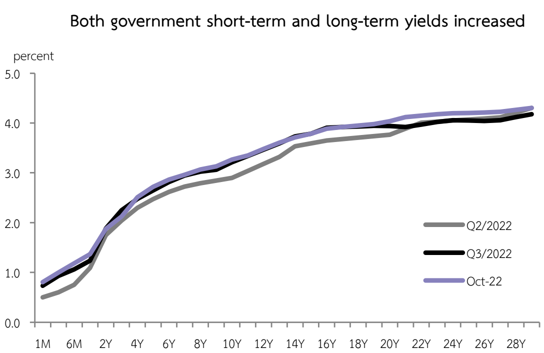


Source: SET

Government bond yields shifted upward. In the third quarter of 2022, short-term government bond yield increased following the Bank of Thailand's monetary policy tightening. Long-term government bond yield shifted upward as a result of concern over upcoming of the global economic slowdown as well as inflation remained at high level, along with the aggressive rate hikes by major central banks in recent periods. At the end of the third quarter of 2022, 2-year government bond yield was at 1.88 percent, increasing from 1.75 percent at the end of the previous quarter. Likewise, 10-year government bond yield rose to 3.21 percent, compared to 2.90 percent at the end of the previous quarter. For net trading position, foreign investors registered a net sell of 27.3 billion Baht, continued from a net sell with 28.9 billion Baht in the previous quarter. Expired bond was at 26.5 billion Baht. Total new registered corporate bond was at 540.9 billion Baht, mainly attributed to property development, finance and securities, energy, and information and communication technology.

Government bond yields increased in both short-term and long-term.

In October 2022, both short-term and long-term government bond yields continued to rise from the previous month, in tandem with the direction of monetary of many other central banks and also the Bank of Thailand (BOT). As a consequence, 2-year and 10-year government bond yields stood at 1.88 percent and 3.26 percent respectively. In details, foreign investors recorded as a net sell of 20.2 billion Baht, continuing from a net sell of 22.2 billion Baht in the previous month.



Source: ThaiBMA

Capital and financial account recorded a net inflow of 0.9 billion US dollars in the second quarter of 2022 which lowered from 3.7 billion US dollars inflow in the previous quarter. This was mainly driven by a decline in net inflow of foreign investors in term of both direct and portfolio investments. Nevertheless, there was a continued net outflow in term of direct investment of Thai investor.

Capital and financial account recorded a net inflow which lowered from the previous quarter.

Capital Flow

(Billion USD)	2020					2021					2022	
	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Q1	Q2
- Direct Investment	-23.8	-2.7	-5.7	-3.4	-12.2	-4.5	2.3	-1.4	-1.4	-4.0	2.0	-0.2
Thai investor	-19.0	-5.3	-5.3	-3.7	-4.6	-19.2	-3.5	-3.0	-4.6	-8.0	-3.7	-0.9
Foreign investor	-4.8	2.7	-0.3	0.3	-7.5	14.6	5.8	1.6	3.2	4.0	5.7	0.8
- Portfolio Investments	-12.1	-8.5	2.8	-2.5	-3.9	-11.9	-10.0	-3.7	0.0	1.9	2.6	1.8
Thai investor	-4.1	-1.2	4.2	-1.8	-5.3	-16.8	-10.5	-3.7	-0.2	-2.5	-1.3	1.0
Foreign investor	-8.1	-7.3	-1.5	-0.7	1.4	4.9	0.4	-0.1	0.2	4.4	3.9	0.8
Others	24.0	1.6	8.9	-0.4	14.0	10.4	1.0	2.5	4.0	2.9	-0.9	-0.7
Capital and financial account	-12.0	-9.6	6.0	-6.3	-2.0	-6.0	-6.7	-2.7	2.6	0.8	3.7	0.9

Source: BOT

Current account in third quarter of 2022 registered a deficit of 7.0 billion US dollars (253.1 billion Baht), compared to a 4.4 billion US dollars deficit (144.9 billion Baht) in the same quarter last year, and an 8.1 billion US dollars deficit (279.0 billion Baht) in the previous quarter. This was a result of a 7.4 billion US dollars deficit in services, and primary and secondary income, lower than a 13.8 billion US dollars deficit in the same period last year and recorded a deficit for ten quarters consecutively. Meanwhile, trade balance recorded a surplus of 0.4 billion US dollars, lower than a 9.4 billion US dollars surplus in the same quarter last year.

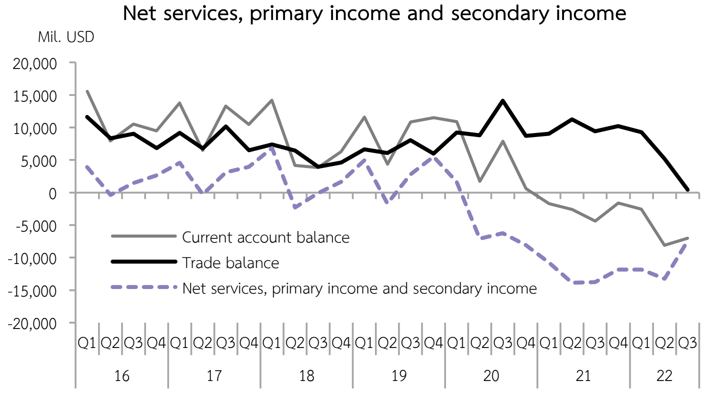
Current account recorded a deficit for the seventh consecutive quarter.

In the first nine months of 2022, current account registered a deficit of 17.7 billion US dollars (617.1 billion Baht), compared to an 8.7 billion US dollars deficit (278.9 billion Baht) in the same period last year.

International reserve at the end of September 2022 stood at 199.4 billion US dollars, decreasing from 244.7 billion US dollars at the end of September 2021. In Baht terms, international reserve at the end of September 2022 stood at 7,561.9 billion Baht, lower than 8,293.6 billion Baht at the end of September 2021.

International reserve at the end of September 2022 stood at 199.4 billion US dollars

Current account balance, Trade balance, Net services, primary income and secondary income



Source: Bank of Thailand

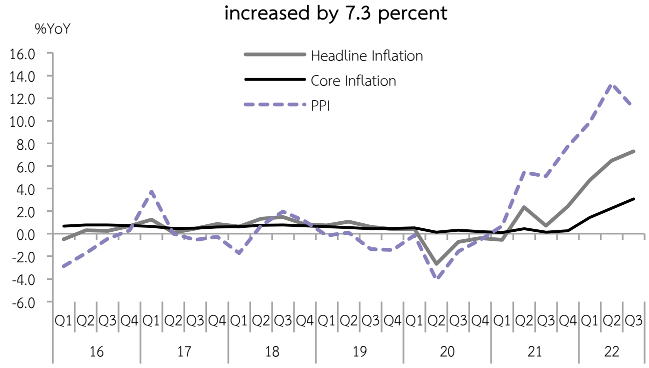
Headline inflation: In the third quarter of 2022, headline inflation was averaged at 7.3 percent compared with a 6.5-percent headline inflation recorded in the previous quarter. **Food-and-beverage** price index increased by 9.1 percent accelerating from a 5.8-percent increase in the previous quarter. This was partly due to an increase in price of meats, poultry & fish, vegetables and fruits, and prepared food, which expanded by 14.7 percent, 10.0 percent, and 8.8 percent, respectively, associated with a rise of raw food price index which continuously increased by 9.7 percent compared with a 5.1-percent increase in the previous quarter. **Non-food and beverage** price index increased by 6.1 percent slower than a 6.9-percent increase in the previous quarter, following an increase in price of electricity, fuel, water supply, and vehicle & vehicle operation which increased by 31.5 percent, and 11.9 percent, respectively. Core inflation was averaged at 3.1 percent compared with a 2.3-percent in the previous quarter[4].

Headline inflation was averaged at 7.3 percent, compared with a 6.5-percent in the previous quarter.

The price index of food-and-beverage increased at a higher pace associated with raw food price index.

In the first nine months of 2022, headline inflation was averaged at 6.2 percent and core inflation was averaged at 2.3 percent.

Headline inflation in the third quarter of 2022 increased by 7.3 percent



Source: Ministry of Commerce

Producer Price Index (PPI): In the third quarter of 2022, Producer Price Index increased by 11.1 percent compared with a 13.3-percent rise in the previous quarter. **The price of mining products** increased by 64.2 percent decelerated from a 68.1-percent increase in the previous quarter, following an increase in price of petroleum & natural gas which rose by 81.2 percent compared with an 88.7-percent increase in the previous quarter. **The price of manufactured products** expanded by 9.1 percent decelerated from a 12.1-percent increase in the previous quarter, associated with an increase in price of petroleum products, which grew by 59.4 percent slower than a 92.9-percent increase in the previous quarter. **The price of agricultural & fishery products** increased by 11.2 percent accelerating from a 7.7-percent increase in the previous quarter, associated with an increase in price of agricultural products, which grew by 11.9 percent accelerated from a 7.7-percent increase in the previous[5].

Producer Price Index (PPI) increased by 11.1 percent, compared with a 13.3-percent increase in the previous quarter.

In the first nine months of 2022, PPI was averaged at 11.4 percent.

[4] In October 2022, headline and core inflation was at 6.0 percent and 3.2 percent, respectively. In the first ten months of 2022, headline inflation was averaged at 6.2 percent and core inflation was averaged at 2.4 percent.

[5] In October 2022, Producer Price Index (PPI) rose by 9.9 percent. In the first ten months of 2022, PPI was averaged at 11.3 percent.

Economic measures to help and resolving debt for individuals and SMEs

<table>
<tr><th>Measures to support and resolve SMEs debts</th><th>Operation under the debt resolution committee for eight specific groups</th></tr>
<tr><td>Act of the 2021 Emergency Decree Amending the Civil and Commercial Code to prevent creditor from exaggeratedly claiming interest from debtors, reducing interest rate from 7.5 percent per year to 3.0 percent per year whenever interest is to be paid and the rate is not fixed by a juristic act, and reducing default interest from 7.5 percent per year to 5 percent per year.</td><td rowspan="12">The government has prioritized and hastened to solve the problem of household debt. Support would include reducing the debt burden of small citizens, finding effective solutions which covered in all dimension and every credit portfolio. The debt resolution committee's meeting concluded as follows:
1. Student Loans Fund (SLF), debt restructuring is carried out. There were 3.4 hundred thousand applications for debt restructuring from totaling 2.0 million eligible applicants. In addition, on 14^{th} September 2022, the House approved the Student Loan Fund for Education Bill, which if in effect, would assist and alleviate the burden on borrowers or guarantors who contracted before the Bill came into force to be able to pay their loans, exempt interest on loans and fines in case of repayment defaults.
2. Public officials' debt, especially public teachers and police. The Government Savings Bank reduced the interest on teachers' loans in all projects to no more than 4.9 percent. Besides, considering financial mediation and debt restructuring were completed by 3,623 persons, accounted for 8.9 percent of total participants. Moreover, financial literacy training through "KHURU Online", with 21,586 trainees. At present, the draft Ministerial Regulations on Management and Financial Supervision, Savings Cooperatives and Credit Union Cooperatives B.E. will be presented to the cabinet for consideration.
3. Debts from the business of hire purchase and leasing. Carrying out the drafting of the Act, given that certain types of financial business operations to be under the Financial Institution Business Act B.E. 2551 (2008) which is currently in the process of being submitted to the cabinet for consideration. In addition, on 12^{th} October 2022, the Commission on Contract issued an announcement that the Business of the hire Purchase and Leasing of Cars and Motorcycles to be regulated B.E. 2565 (2022).
4. Credit card debt, helps credit card/personal loan debtors by reducing interest through Debt Remediation Clinic, and the Government Savings Banks have implemented a "good home, light debt" program, combining debt between mortgage loans and other types of retail loans. By leveraging the residence as collateral, the loan amount does not exceed 100 percent of the collateral appraisal price. In addition, the Islamic banks have supported credit lines to close credit card accounts. The maximum limit is 5 million Baht for those with collateral and the limit is 1 million Baht, for those who are unsecured.
5. Debt restructuring/mediation. On 31^{st} May 2022, there were 6 specialized financial institutions (SFIs) that restructured 2,250,854 accounts for debtors, accounted for 958,025 million Baht. Besides, the Bank of Thailand (BOT) has implemented long-term debt restructuring measures, which have completed 3.89 million accounts receivable, accounted for 2.98 trillion Baht. The BOT also implemented the “debt relief expressway” project which could help 271,446 accounts receivable, accounted for 74 percent of total eligible persons, along with conducted 78 household debt mediation fairs which successfully mediated 72,331 debts out of 75,619, accounted for 95.6 percent of total mediation applicants, and 20,200 mediation centers, totaling of 92,531 cases.
6. Reconsidering the structure of interest rates/measures to protect the rights of clients. The BOT is studying guidelines and mechanisms to support interest rates that reflect the actual risk of receivables or risk-based pricing to reduce dependence on informal loans.
7. Providing better financial access for individuals and SMEs via setting up a limited company (Mi Thi Mi Ngoen) to help a group of entrepreneurs, SMEs and the general public to access to financing at a reasonable cost, and resolve the issue of informal debt, which is expected to open by 1^{st} October 2022.
8. Reorganizing protocols in the judicial process to resolve debt problems. The House adopted the principle, the Draft Bankruptcy Act (No. ..) B.E. was passed on 24^{th} August 2022 and the Commission was appointed to consider the draft. In addition, the Draft Cheques Offences Act 1991 was cancelled by the Parliamentary Liaison Committee on 6^{th} September 2022 and will be presented to the House for consideration in the period ahead.</td></tr>
<tr><td>Soft Loan package under the 2020 Emergency Decree on the Provision of Financial Assistance for Entrepreneurs Affected by COVID-19 Pandemic. As of 12^{th} April, 2020, the soft loan was approved by 138 billion Baht, granted to 77,787 borrowers.</td></tr>
<tr><td>Financial Rehabilitation program under the 2021 Emergency Decree on the Provision of Assistance and rehabilitation of business operators impacted by the spread of the COVID-19 Pandemic. As of 7^{th} November, 2022, the program was approved by 198 billion Baht, granted to 57,606 borrowers.</td></tr>
<tr><td>Asset Warehousing with Buy-Back option, providing mutually agreement on debt restructuring program to transfer or settle collateral assets for debt repayment purpose, which borrowers have the first rights to repurchase those assets within specific period. As of 7^{th} November 2022, the program was approved by 54.8 billion Baht, granted to 389 business operators.</td></tr>
<tr><td>Long-term debt restructure program by emphasizing on financial institutions' supports to provide the targeted assistance for debtors via long-term debt restructuring program as well as increasing liquidity for business operation in order to sustainably resolve existent debts</td></tr>
<tr><td>Utilizing Criteria for Classification and Flexible Bank reserve to reduce Financial Institution's cost, who help debtors to sustainably restructure their debts, other than extended debt repayment period</td></tr>
<tr><td>The assistance programs of financial institution in accordance with loan type and debtors' risk included, (1) Debt restructure (2) provide revolving credit and increase liquidity (3) deferred repayment and (4) easing of relevant loans condition.</td></tr>
<tr><td>Debt consolidation measure by supporting debtors to consolidate their mortgage and other retail loans from the same banks or loans from other banks to lower interest rates and repayment period.</td></tr>
<tr><td>Debt relief measure for retail debts including Debt Exit Fast Lane, Debt Clinic, Debt Doctor, Personal Loan's Debt Mediation Fair and Debt Solving Fair.</td></tr>
<tr><td>Measures for supportive refinance by provision financial institution under regulation by BOT to waive prepayment fee.</td></tr>
<tr><td>The assisting and alleviating BOT's measures to provide a mechanism for multi-creditors businesses.</td></tr>
<tr><td>Temporary reduction of Financial Institutions Development Fund (FIDF) from 0.46 percent to 0.23 percent until the end of 2022.

Temporarily lower the contribution of specialized Financial Institution Development Fund (SFIF) from 0.25 percent to 0.125 percent until the end of 2022.</td></tr>
</table>

Source: BoT and collected by NESDC

2. Crude oil price in Q3 of 2022

The crude oil price in the global market continually increased compared with the same period last year, but decreased from the previous quarter.

The crude oil price in the global market was higher than the same period last year but declined from the second quarter of 2022. In the third quarter of 2022, the average crude oil price in four major markets (WTI, Brent, Dubai, and Oman) stood at 96.5 US dollars per barrel, rose by 34.3 percent from 71.9 US dollars per barrel recorded in the same period last year. However, the price decreased by 11.3 percent from the 108.8 US dollars per barrel on average recorded in the previous quarter.

Key reasons leading to an increase in the global crude oil price in this quarter were (i) concern towards oil supply tightness as The European Union (EU) will ban imports of Russia oil and refined oil products from December 2022. Meanwhile, Russia already cut off exporting natural gas to EU though Nord Steam 1, (ii) a decrease of the U.S. commercial crude oil inventories in the third quarter of 2022 (the third quarter of the inventories was average at 426 million barrels, decreasing by 1.1 percent compared with 431 million barrels in the same period last year), and (iii) the production plan of the OPEC+ which was expected to be less than target amount due to limitation of production capacity reserve. Moreover, the OPEC+ was unable to decrease production for sustain level of the oil price.

In the first nine months of 2022, the average crude oil price in four major markets stood at 100.2 US dollars per barrel, rose by 50.9 percent from 66.4 US dollars per barrel recorded in the same period last year.

Crude oil price

Year		USD per Barrel					(%YoY)				
		WTI	BRENT	DUBAI	OMAN	Average	WTI	BRENT	DUBAI	OMAN	Average
2019	Year	56.9	64.0	63.3	63.6	62.0	-12.6	-10.9	-9.0	-8.9	-10.3
2020	Year	39.6	43.4	42.4	41.9	42.0	-30.4	-32.2	-33.0	-34.2	-32.3
2021	Year	68.1	70.9	69.5	69.3	69.4	72.1	63.4	63.8	65.5	65.4
	Q1	58.0	61.2	60.3	59.0	59.6	25.6	20.1	18.7	19.0	20.0
	Q2	66.5	69.4	67.5	67.5	67.7	135.9	107.0	118.3	119.3	119.5
	Q3	70.5	73.2	71.8	71.9	71.9	72.5	69.0	67.0	67.8	69.1
	Q4	77.1	79.7	78.4	78.5	78.4	80.8	76.6	75.6	75.7	77.2
2022	Q1	94.7	97.9	96.1	96.4	96.2	63.3	59.8	59.4	63.3	61.3
	Q2	109.0	112.3	108.5	105.4	108.8	63.9	61.9	60.7	56.2	60.6
	Q3	91.4	97.5	96.5	100.7	96.5	29.6	33.2	34.3	40.0	34.3
	Jul	100.2	105.4	103.2	106.0	103.7	37.9	41.8	41.3	44.9	41.5
	Aug	91.4	97.7	96.4	106.0	97.8	35.1	38.6	38.3	51.8	41.0
	Sep	83.9	90.6	90.8	90.8	89.0	17.5	21.0	24.7	24.6	22.0
	9M	98.0	102.2	100.0	100.7	100.2	50.7	50.4	50.4	52.2	50.9
	Oct	87.1	93.7	90.9	90.9	90.6	7.4	11.9	11.3	11.3	10.5
	10M	96.9	101.4	99.2	99.7	99.3	45.7	46.0	45.9	47.5	46.3

Source: Thaioil Plc and EPPO.

3. The World Economy in Q3

The world economy in the third quarter of 2022 continued to expand, but at different paces across countries. Major industrialized economies signaled a slowdown in domestic consumption and production mainly due to continuously raising policy rates by the major central banks to mitigate rising inflationary pressure. Meanwhile, the Eurozone and UK economies have been affected by a severe energy crisis resulting from the geopolitical conflict between Russia and Ukraine and its following sanctions. This pressure caused the inflation rates to reach a record high in the third quarter. However, the Chinese economy accelerated as domestic demand recovered after the government began easing lockdown measures in several major cities. Besides, emerging and developing economies in Asia continued to expand in line with favorable merchandise exports and recovering tourism.

The US economy grew by 1.8 percent (Advance Estimate), an equivalent growth to the previous quarter. After seasonal adjustment, the economy expanded by 2.6 percent (%QoQ saar.), recovering from a 1.6 percent decline in the previous quarter. The growth was mainly supported by the expansions of non-residential investment, government expenditure, and export of goods. Meanwhile, private consumption decelerated, resulting from decreasing non-durable goods consumption. In addition, private investment slowed down following a continuous fall in residential investment due to rising housing prices amid an upward trend of policy interest rates. On the other hand, the labor market remained strong. The unemployment rate stood at 3.6 percent, stable from the previous quarter and close to the pre-pandemic level. Meanwhile, headline inflation regarding personal consumption expenditures was at 6.3 percent, down from 6.6 percent in the previous quarter[6], but still higher than the monetary policy target. Therefore, in the July 26th – 27th and September 20th - 21st meetings, the Federal Open Market Committee (FOMC) decided to raise the policy rate by two-straight 0.75-percent hike to 3.00 - 3.25 percent, which was the fifth-consecutive increase since March 2022.

The Eurozone economy expanded by 2.1 percent, slowing down from 4.3 percent growth in the last quarter following the deceleration in key member economies[7]. This slowdown was mainly attributed to weakened domestic demand and production sector, as a result of high inflationary pressure causing by surging energy prices due to the prolonged conflict between Russia and Ukraine and thus following sanction measures[8]. Henceforth, the headline inflation rate in the third quarter was at 9.3 percent, accelerating from 8.0 percent in the prior quarter, which was the record high. Meanwhile, the consumer confidence index lowered to 95.6, the historical lowest record. Also, the manufacturing and service Purchasing Manager Index (PMI) dropped to 49.3 and 49.9, which were below 50 for the first time since the second quarter of 2020 and the first quarter of 2021 respectively. Against high inflationary pressure, the European Central Bank (ECB) during the July, 21st and September, 8th meetings decided to increase policy rates[9] to achieve the medium term inflation target at 2.0 percent. Besides, the sizable fiscal stimulus had continually supported economy[10].

6 Headline inflation regarding consumer price index was at 8.3 percent, dropping from 8.6 percent in the second quarter.

7 The economies of Germany, France, Italy, and Spain expanded by 1.1 percent, 1.0 percent, 2.6 percent and 3.8 percent, decelerating from 1.7 percent, 4.2 percent, 5.0 percent, and 6.2 percent in the last quarter respectively.

8 The Eurozone Economy has significantly impacted by limited natural gas imports from Russia. In fact, during July 2022, Russia had temporarily stopped exporting natural gas through the Nord Stream 1 pipeline to Europe for 10 days and, subsequently, reduced gas supply to only 20 percent of the pipeline capacity, blaming it for leaking in the pipe system. Thereafter, Russia had completely stopped exporting natural gas through this pipeline since September 1st, 2022. Against such situation, the European Union, on 30th September 2022, announced the emergency measures to mitigate impact such as (i) mandatory reducing electricity usage by 5 percent in the peak hour starting from September 30th, 2022, to March 31st, 2023, as well as voluntary reducing 10 percent of gross electricity consumption, (ii) paying solidarity contribution on the profits of businesses active in the energy sector, where the solidarity contribution is calculated on taxable profits, which are 20 percent higher than those in the previous periods, and (iii) temporarily controlling electricity price for small and medium-sized enterprises. Moreover, the European Union imposed more sanction measures as follows (i) banning imports of gold from Russia, (ii) adding goods and products on the lists of banned importing products, especially those that could be applied for military activity, (iii) preventing Russian vessels to access docks in EU member countries, (iv) expanding the prohibition on accepting deposits to deposits from legal persons, entities or bodies established in third countries and majority-owned by Russian nationals or natural persons residing in Russia, and (v) adding 54 individuals and 10 entities for the asset frozen.

9 In the September meeting, the ECB decided to increase refinancing operations rate, marginal lending facility rate and deposit facility rate to 1.25 percent, 1.50 percent, and 0.75 percent respectively, which would be effective on September 14th, 2022, right after the first rate hike in 11 years in its July meeting. Nonetheless, the ECB decided to continue reinvesting maturing securities under the Asset purchase Programme (APP) and the Pandemic Emergency Purchase Programme (PEPP) where the operation of the PEPP would be until at least the end of 2023 and those under the APP would be as long as necessary. The ECB also continued to increase market liquidity through the targeted longer-term refinancing operations (TLTRO III). Besides, the ECB will continue to use a transmission protection instrument (TPI) to cushion the impacts from raising interest rates by purchasing securities from member countries to mitigate volatility in financial market and risks to member's economies.

10 The budget under the Next Generation EU Recovery and Resilience Facility with a total budget of 0.7 trillion Euros, has been disbursed around 0.33 trillion Euros to 21 member countries, as reported in the 7th Recovery and Resilience Dialogue on September 12th, 2022.

The Japanese economy grew by 1.8 percent, compared with 1.7 percent in the previous quarter. This was supported by a recovery in domestic demand and service sector after easing restrictions on the entry of international tourists, reflected by the retail trade index that grew by 3.7 percent, accelerating from 2.8 percent in the previous quarter. The economy was also driven by expansionary monetary[11] and fiscal[12] policies. Notwithstanding, the manufacturing and export sectors were still affected by supply chain disruptions as well as the depreciation of Japanese yen which affected the cost of imports, in particular, energy and raw materials. This caused the manufacturing PMI in the third quarter to decline to 51.5 from 54.1 and 53.2 in the first and second quarters, respectively, while the export value fell by 2.0 percent, which had been declining for two consecutive quarters. On the contrary, import value grew by 17.5 percent, and thus the trade account still recorded a deficit. In August 2022, the Japanese trade deficit was a record high at 2.8 trillion yen.

The Chinese economy expanded by 3.9 percent, accelerating from 0.4 percent in the previous quarter. This was supported by a recovery in domestic demand after the government gradually relaxed lockdown measures in many major cities such as Shanghai, Beijing and Nanjing. Hence, the domestic spending began to pick up, reflected by a 3.5-percent growth in retail sales, recovered from a 4.6-percent decline in the previous quarter. Likewise, the service PMI rose to 53.3 from 44.0 in the last quarter, the highest level in six quarters. Similarly, the manufacturing PMI was at 49.3, increasing from 48.6 in the previous quarter, although, remained below 50 for the third consecutive quarters, owing to lockdowns in some major industrial areas[13]. Hence, exports expanded by 10.0 percent, decelerating from 12.8 percent in the prior quarter. Meanwhile private investment remained fragile owing to liquidity and indebted problems in the real estate sector, together with the electricity shortage during August, due to severe drought. Therefore, fixed assets investment continually decelerated. In particular, real estate investment declined for two consecutive quarters by 8.0 percent decrease in real estate investment. Against the problem in real estate sector, on August 25th, 2022, the government announced additional economic measures worth of 1 trillion yuan, aimed at promoting investment and subsidizing consumption, and supporting local governments to help the real estate sector in each area, while the People's Bank of China (PBOC) maintained its dovish policy stance[14].

The newly industrialized economies (NIEs) continued to expand following the recovery in domestic demand and growing export sector as shown in the continual expansion of retail sale index[15] and export value. Thus, the economies of Singapore, South Korea and Taiwan in the third quarter grew by 4.4 percent, 3.1 percent and 4.1 percent, continuing from 4.5 percent, 2.9 percent and 3.0 percent in the previous quarter, respectively. However, Hong Kong’s economy continued to contract by 4.5 percent, down from a 1.3-percent contraction and was the third consecutive quarterly decline following falling export value. In the third quarter, Hong Kong's export value of goods fell by 11.6 percent, continuing from 3.3 percent in the previous quarter, likewise the composite PMI dropped to 50.5, compared with 53.0 in the previous quarter.

The ASEAN economies continued to expand due to an improved domestic demand. However, the export and manufacturing sectors in many countries had slowed down from the high growth rate in the previous quarter. This was in line with the economic slowdown of major trading partners, especially major economies. **The Indonesian economy** grew by 5.7 percent, compared with 5.4 percent in the previous quarter. **The Philippines economy** expanded by 7.6 percent, compared with 7.2 percent in the previous quarter. Meanwhile, **the Malaysian and Vietnamese economies** improved by 14.2 percent and 13.7 percent, accelerating from 8.9 percent and 7.7 percent in the second quarter, respectively. Nevertheless, many central banks decided to implement contractionary monetary policy[16] to alleviate increasing inflationary pressures including to reduce the pressure on the depreciation of the exchange rate.

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11 On September 21st - 22nd, 2022, the Bank of Japan's Monetary Policy Meeting decided to continue its expansionary monetary policy by maintaining the short-term policy interest rate at (-0.1) percent and its yield curve control measure by maintaining the 10-year long-term government bond interest rate at 0 percent.

12 In September 2022, the Japanese Cabinet announced additional measures to help people who haven been affected by the rising cost of living, amounting to 3.5 trillion yen, in addition to prior measures announced in April 2022, with important measures such as remedial measures for those affected by the rising cost of living, or price ceiling for oil and wheat.

13 On September 1st, 2022, the lockdown measure was implemented in Chengdu in Sichuan Province, which had a population of 21 million and bases of major electronics and automotive production.

14 On August 15th, 2022, the PBOC lowered the one-year medium-term lending facility (MLF) interest rate to 2.75 percent from 2.85 percent, which was the second reduction in 2022. In addition, the PBOC has increased liquidity in the financial markets through reverse repos, totalling 2 billion yuan. Furthermore, on August 22nd, 2022, the PBOC reduced the one-year LPR interest rate to 3.65 percent from 3.70 percent and lowered the five-year LPR interest rate to 4.30 percent from 4.45 percent.

15 The retail sale index/value of Singapore, South Korea and Taiwan in the third quarter grew by 12.9 percent, 7.2 percent and 12.4 percent, continuing from 15.1 percent, 7.4 percent and 9.6 percent in the second quarter respectively. Export value of goods grew by 19.5 percent, 6.0 percent and 3.4 percent, compared with 20.8 percent, 13.0 percent and 15.4 percent in the previous quarter, respectively.

16 The Bank of Indonesia announced an increase in the policy rate on September 22nd, 2022, from 3.75 percent to 4.25 percent, while the Central Bank of the Philippines also raised its policy rate on September 22nd, 2022, from 3.75 percent to 4.25 percent. Moreover, on September 8th, 2022, the Central Bank of Malaysia announced to increase the policy rate from 2.25 percent to 2.5 percent and the State Bank of Vietnam announced its policy rate increase on September 23rd, 2022, from 4.0 percent to 5.0 percent.

Real GDP Growth, Exports of Goods Growth, and Inflation Rates of Key Economies

(%YoY)	GDP				Exports of Goods				Headline Inflation						
	2020	2021	2022		2020	2021	2022		2021	2022					Highest in
	Year	Year	Q2	Q3	Year	Year	Q2	Q3	Year	Q2	Q3	Aug.	Sep.	Oct.	(Months)
US	-2.8	5.9	1.8	1.8	-13.5	23.3	23.2	23.7	4.7	8.6	8.3	8.2	8.2	7.8	487 (Jun)
Eurozone	-6.3	5.4	4.3	2.1	-7.1	18.1	6.1	2.5	2.6	8.0	9.3	9.1	9.9	10.6	310
United Kingdom	-11.0	7.5	4.4	2.4	-11.3	10.4	7.5	14.6	2.6	9.2	10.0	9.9	10.1	11.6	406
Australia[1/]	-2.2	4.9	3.8		-7.3	37.2	27.4	15.2	2.9	6.1	7.3				85 (Q)
Japan	-4.6	1.6	1.7	1.8	-9.1	17.9	-2.3	-2.0	-0.2	2.4	2.9	3.0	3.0	3.8	381
China	2.2	8.1	0.4	3.9	4.0	29.7	12.8	10.0	0.9	2.2	2.7	2.5	2.8	2.1	29 (Sep)
India	-6.6	8.3	13.5		-14.8	43.1	26.7	7.9	5.1	7.3	7.0	7.0	7.4	6.8	95 (Apr)
South Korea	-0.7	4.1	2.9	3.1	-5.5	25.7	13.0	5.8	2.5	5.4	5.9	5.7	5.6	5.7	284
Taiwan	3.4	6.6	3.0	4.1	4.9	29.3	15.4	3.4	2.0	3.5	2.9	2.7	2.8	2.7	166 (Jun)
Hong Kong	-6.5	6.3	-1.3	-4.5	-0.5	26.0	-3.3	-11.6	1.6	1.5	2.7	1.9	4.4		90 (Sep)
Singapore	-4.1	7.6	4.5	4.4	-4.1	22.1	20.8	19.5	2.3	5.9	7.3	7.5	7.5		171
Indonesia	-2.1	3.7	5.4	5.7	-2.7	41.9	39.0	27.3	1.6	3.8	5.2	4.7	6.0	5.7	83 (Sep)
Malaysia	-5.5	3.1	8.9	14.2	-2.3	27.5	23.3	29.4	2.5	2.8	4.5	4.7	4.5		16 (Aug)
Philippines	-9.5	5.7	7.5	7.6	-8.1	14.5	4.4	0.4	3.9	5.5	6.5	6.3	6.9	7.7	166
Vietnam	2.9	2.6	7.8	13.7	6.9	18.9	21.3	15.8	1.8	3.0	3.3	2.9	3.9	4.3	31

Notes: [1/] Australian inflation is reported on a quarterly basis.

Source: CEIC, compiled by NESDC

4. The World Economic Outlook for 2023

The world economy in 2023 is expected to slow down from 2022 following the decelerated growth trend in major economies, particularly the US, the Eurozone, the UK and Australia in accordance with the tightening monetary policy direction. Specifically, the Eurozone economy is likely to be confined by the prolonged energy crisis, resulting from the sanctions and the reductions in energy imports from Russia. Besides, emerging and ASEAN economies are anticipated to experience some slowdowns following the deceleration trend of world economic activity and global trade volume. Additionally, some countries may face a higher risk of economic instability, especially those with high proportions of foreign debt. The Chinese economic growth is expected to gradually accelerate due to additional easing of lockdown measures and travel restriction; nonetheless, the growth is still restrained by high debt problems in the real estate sector.

Notwithstanding, key underlying assumptions for this baseline projection include: (i) an increasing policy interest rate from major central banks will not lead to severe economic recession and will not cause volatility in the global financial market, while the economic crisis in emerging markets and low-income countries with vulnerable economic stability is anticipated to have marginal impact on overall global economy; (ii) the ongoing conflict between Russia and Ukraine will not escalate to more intensified warfare and more widespread sanctions, while the tensions between the US and China will not lead to more severe trade protection policies which will deteriorates global trade activities; (iii) energy and commodity markets can adjust accordingly and European countries will be able to allocate their supply of energy with no sudden drop in energy supply, specifically natural gas which could affect the energy security of the region and will damplen overall economies; and (iv) the ongoing COVID-19 outbreak will not lead to reimplementation of stringent containment measures and restrictions on international travel. Under this baseline scenario, **the global economy and trade volume in 2023 are projected to expand by 2.6 percent and 2.0 percent,** decelerating from the 3.1 percent and 4.0 percent growths in 2022, respectively. Prospects on key economies are as follows:

The US economy is expected to grow by 0.7 percent in 2023, continuously decelerating from 1.7 percent and 5.9 percent in 2022 and 2021, respectively. The slowdown is mainly due to the Federal Reserve's decision to tighten policy interest rates which could limit the expansion of domestic demand in both private consumption and investment. In particular, residential investment is likely to decrease due to rising mortgage loan rates as reflected on a number of single house sales that have continued to decline since March 2022. Also, the housing market index dropped to a 28-month low, while the Consumer Confidence Index in October stood at 102.5, down by 8.2 percent from the same period of last year. A slowdown in domestic demand is expected to curtail the manufacturing sector. This was evident in the manufacturing PMI in October falling to 50.4 from 52.0 in the previous month, the lowest level in 28 months since June 2020. In addition, the service PMI declined from 49.3 in September to 47.8 in October, standing below 50 for four consecutive months. In 2023, the inflationary pressure is anticipated to be diminished in line with a slowdown in domestic demand. Nonetheless, the inflation rate is expected to remain above the monetary policy target of 2.0 percent. Therefore, the Federal Reserve will conceivably continue to increase policy interest rate and tighten its balance sheet the first half of 2023[17]. Thus, this may result in an increase in the unemployment rate from 2022. However, the US economy will be supported by government spending through major investment programs under the Inflation Reduction Act of 2022, specifically projects to support energy security and climate change, and the CHIPS and Science Act, worth of 248 billion US dollars, which focuses on supporting scientific research and development and semiconductor industry in the US.

The Eurozone economy is expected to expand by 0.3 percent, decelerating from 2.6 percent in 2022, following a slowdown in the manufacturing sector, owing to the protracted conflict between Ukraine and Russia, leading to the continued sanctions. As a result, with the sanctioning of Russia energy import in particular, the manufacturing sector faces higher energy costs and, consequently, the energy security of many countries in the region was affected, particularly countries with a high proportion of external energy dependencies such as Germany, Austria, Hungary and Czechia, which are likely to face economic recession. At the same time, domestic demand is constrained by the continual policy rate hike[18], as to reduce inflationary pressure, which is expected to remain at a high level throughout 2023, due to high energy and electricity costs. In fact, the data in October 2022 already showed a sign of the slowdown in the manufacturing sector, where the manufacturing and service Purchasing Manager Indices in October 2022 dropped to 46.1 and 48.6, the lowest in 29 months and 20 months, respectively, as well as the consumer confidence index in October 2022 declined to (-27.6). The lowering trend could also be seen in the confidence index of the business, industry and service sectors, which decreased to the lowest levels in 18 months, 23 months, and 19 months, respectively. However, the Eurozone economy will continue to be supported by massive EU medium-term fiscal measures[19].

The Japanese economy is expected to grow by 2.0 percent, compared to 1.4 percent in 2022, mainly supported by the expansion of domestic demand as pent-up demand due to the spread of epidemic that has been steadily subsided. In addition, the labor market is recovering as reflected by the lower unemployment rate and an increase in the minimum wage at a record rate[20]. In addition, the tourism sector is likely to improve markedly after the relaxation of entry restrictions from October 11th, 2022. Furthermore, the economy still receives the support from monetary[21] and fiscal[22] policies to maintain economic recovery. However, the Japanese economy is still subject to risks from currency depreciation. As of October 20th, 2022, the Japanese Yen depreciated to 150 Yen per US dollars which is the weakest rate in 32 years. Under this tendency, the cost of import, especially energy, is likely to increase, which will put pressure on inflation and cause trade balance to record a deficit.

The Chinese economy is expected to grow by 4.2 percent, improving from 3.0 percent in 2022. The economic recovery is supported by the easing of epidemic containment measures, which will further support the recovery of domestic demand. At the same time, inflationary pressure is likely to decline, reflected from headline inflation at 2.1 percent in October 2022, decelerated from 2.8 percent in the previous month. In addition, the Chinese economy will be further supported by the continued government stimulus measures[23] as well as accommodative monetary policy. Nevertheless, the recovery of the Chinese economy in 2023 will be limited by the liquidity problem and high debt burden in the real estate sector. In fact, total real estate sales values in the first nine months of 2022 were at 9.9 trillion yuan, significantly decreasing by 26.3 percent from the same period of last year and was the lowest level since 2017. In addition, the export and manufacturing sectors are likely to be severely affected by US investment and trade policy, especially the US CHIPS and Science Act, which may impede the Chinese economic growth to be lower than the pre-epidemic level.

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17 At the meeting on November 1st-2nd, 2022, the FOMC announced its plan to continually reduce the size of the balance sheet as well as lower the holding of government bonds by 60 billion US dollars per month and reduce the holding of mortgage-backed debt securities (MBS) by 35 US billion dollar per month.

18 The ECB, at the meeting on October 27th, 2022, raised its key ECB interest rates, such that interest rates on refinancing operations, the marginal lending facility and deposits facility will increase from 1.25 percent, 1.5 percent and 0.75 percent to 2.00 percent, 2.25 percent and 1.50 percent, respectively.

19 According to the EU's long-term expenditure budget for 2021 – 2027 with a total budget of 1.07 trillion euros, with additional budget from the Next Generation EU economic recovery plan and temporary support measures for emergency unemployment risk relief (SURE) of 0.8 trillion euros and 94 billion euros, respectively.

20 The Ministry of Labor and Welfare has announced a nationwide minimum wage increase by 30-33 yen per hour, which is effective from October 1st, 2022 onwards.

21 On October 27th - 28th, 2022, the Bank of Japan's Monetary Policy Meeting decided to continue its expansionary monetary policy by maintaining the short-term policy interest rate at (-0.1) percent and maintain the 10-year long-term government bond interest rate at 0 percent (Yield curve control). The Bank of Japan tends to conduct expansionary monetary policy until core inflation can be maintained at 2 percent. Moreover, the Bank of Japan estimates that the current output gap is still below zero.

22 On October 28th, 2022, the Cabinet of Japan approved additional stimulus measures. The objective is to maintain economic growth and mitigate the effects of higher cost of living, totaling 39.0 trillion yen or 4.6 percent of GDP, with important measures including (1) Measures to mitigate the impact of rising oil prices and wages in the amount of 12.2 trillion yen (2) Measures economic recovery in sectors and areas affected by the depreciation of the yen, in the amount of 4.8 trillion yen, (3) Measures to accelerate the implementation of "new form of capitalism" measures, in the amount of 6.7 trillion yen, and (4) Measures to strengthen the society with a budget of 10.6 trillion yen, such as COVID-19 outbreak prevention measures, or disaster prevention and mitigation measures.

23 The Chinese government has announced the key economic policies included: (1) increasing public investment, especially in public infrastructure, and increase the debt ceiling for local governments to stimulate development of public infrastructure, (2) allowing local governments to intervene the unfinished real estate projects, together with supporting liquidity measures through commercial banks. In addition, the National Development and Reform Commission (NDRC) on October 25th, 2022 announced measures to promote foreign investment, which has important measures as follows (1) providing help in financial, areas for business operations, logistics, and human resources, (2) supporting for the low-carbon emission and environmental friendly investment, and (3) supporting for innovation development. There are also measures encouraging investors to bring back investment profits and re-invest in China.

The Newly Industrialized Economies (NIEs) are expected to slightly decelerate due to a slowdown in exports and manufacturing production. This is in line with the economic deceleration of major trading partners, combined with rising inflationary pressure in the global market which could affect production costs. In addition, domestic demand tends to slow down owing to rising policy rates to mitigate inflationary pressure, as well as a slower adjustment after a sharp acceleration in 2022. South Korea's economy is expected to expand by 2.1 percent in 2023, down from 2.9 percent in 2022, while the Bank of Korea is likely to continue its tightening monetary policy direction[24]. Besides, Singapore's and Taiwan's economies are expected to expand by 2.1 percent and 2.5 percent in 2023, slowing from 4.1 percent and 3.1 percent in 2022, respectively. Meanwhile, Hong Kong's economy is expected to increase by 3.0 percent, recovering from a 0.4-percent contraction in 2022, thanks to the easing of lockdown measures in both Hong Kong and China, and the relaxation of travel restriction in Hong Kong.[25]

The ASEAN economy tend to expand in line with the expansion of domestic demand and the recovery of the tourism sector. However, the economies of most countries in the region are likely to slow down due to the recovery in manufacturing and global trade which is constrained by the economic slowdown of major trading partners especially the US, Europe, and Japan. As a result, many central banks are likely to continue to raise their policy interest rates, especially in the first half of 2023[26]. The economic support from the governments are expected to subside due to the end of measures against COVID-19 epidemic. In addition, many countries have to reduce their budget deficits to offset their increasing public debts[27]. It is expected that in 2023, the economy of Indonesia, Malaysia, the Philippines and Vietnam will grow by 4.5 percent, 4.2 percent, 4.5 percent and 5.2 percent, decelerating from 4.8 percent, 5.2 percent, 6.4 percent and 7.0 percent in 2022, respectively.

The Thai economy in 2022 is projected to expand by 3.2 percent, increasing from a 1.5-percent growth in 2021. Headline inflation is expected to be at 6.3 percent and the current account is projected to record a deficit of 3.6 percent of GDP, compared with a deficit of 2.2 percent of GDP in the previous year.

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24 At a meeting on October 12th, 2022, the Bank of Korea decided to raise its policy rate from 2.50 percent to 3.00 percent, marking the eighth consecutive increase with an aim to reduce inflation to be at the long-term target level of 2.0 percent.

25 On September 23rd, 2022, Hong Kong announced to lift the hotel quarantine measures for travelers arriving in Hong Kong, starting from September 26th, 2022. There will be medical surveillance for a 3-day period for arriving tourists. Meanwhile, Hong Kong citizens can self-monitor for COVID-19 symptoms at home. After the end of medical surveillance, they will need to self-quarantine for an additional 4 days, totaling 7 days of surveillance.

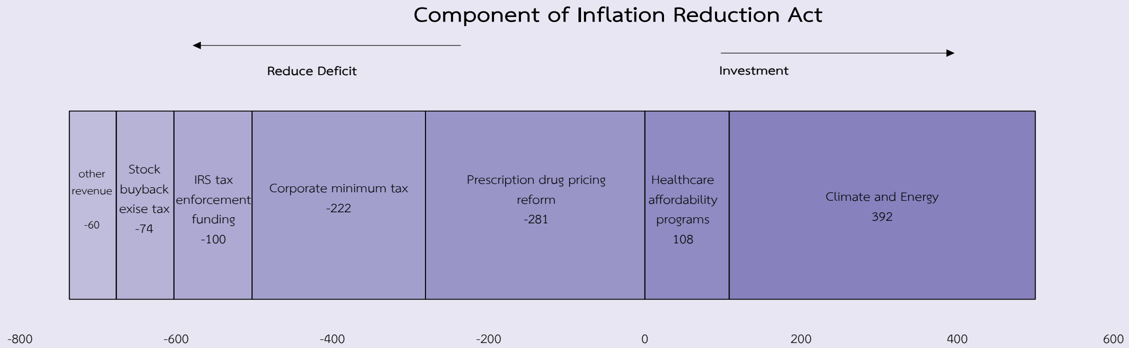
26 The Bank Indonesia announced an increase in the policy rate on October 20th, 2022 from 4.25 percent to 4.75 percent, while the Central Bank of Malaysia raised its policy rate on November 3rd, 2022 from 2.5 percent to 2.75 percent. Also, the State Bank of Vietnam increased the policy rate on October 25th, 2022 from 5.0 percent to 6.0 percent.

27 ASEAN governments will reduce their budget deficits to offset their recent increases in public debt levels. For instance, the Indonesian government set the budget framework in FY2023 at 3,041.7 trillion rupiah, which is about 2 percent lower than in FY2022. At the same time, there is a plan to increase tax revenue in FY2023 from the previous fiscal year by about 13 percent. The intention is to reduce the fiscal deficit to only 2.85 percent of GDP from 4.5 percent of GDP in FY2022.

The Inflation Reduction Act and The CHIPS and Science Act of the United States

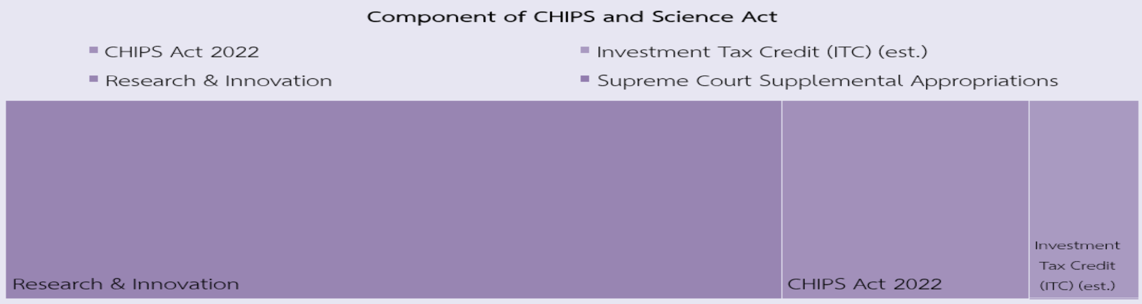
In the third quarter of 2022, the US government has passed two important bills, worth a record of 985 billion US dollars, aiming to mitigate the impact of high inflation rate through reducing government deficit, along with budget allocated for investing in the key sectors, including energy, public health, and targeted industries, especially the semiconductor industry. These include (i) the Inflation Reduction Act, worth 737 billion US dollars and (ii) the CHIPS and Science Act, worth 248 billion US dollars, which were in addition to the Infrastructure Investment and Jobs Act, worth 550 billion US dollars that was previously signed on November 15th, 2021. Details can be summarized as follows:

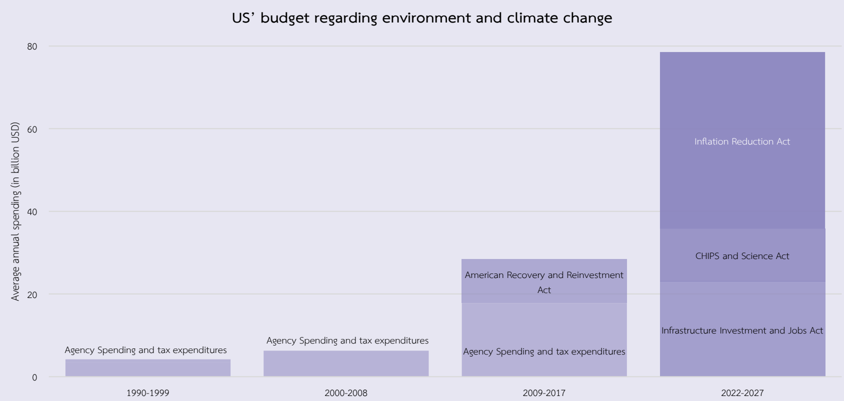
1) The Inflation Reduction Act of 2022, effective on August 16th, 2022, which aims to suppress inflation through reducing fiscal deficit, and investing in critical sectors. The key investment includes: (i) energy security and climate change investment worth 391 billion US dollars, such as infrastructure investment regarding clean energy aiming to reduce carbon emission, and consumer tax credit; and (ii) healthcare affordability program worth 108 billion US dollars. Moreover, the legislation is expected to increase government's revenue by enhancing tax collection capacity and law enforcement together with raising the minimum corporate tax rate for large companies to 15 percent, implementing a 1 percent stock buyback tax, and restructuring prescription drug prices. The analysis from the Congressional Budget Office (CBO) estimates that the law will reduce the US government deficit by approximately 237 billion US dollars over a 10-year period (2022 - 2031).



Unit: Billion US Dollar.
Source: The Inflation Reduction Act: Here's what's in it, McKinsey & Company

2) The CHIPS and Science Act, effective on August 9th, 2022, with the goal to enhance competitiveness of modern industry, especially the semiconductor industry, as well as strengthen trade security in the future. The total investment value is 248 billion US dollars across 5 years (2022 - 2026), dividing into 3 main provisions, namely: (i) CHIPS Act of 2022 or the law Creating Helpful Incentives to Produce Semiconductors (CHIPS) for American Fund worth 54.2 billion US dollars. This budget will support industrial development and provide incentives for semiconductor manufacturers, including a tax credits of 24 billion US dollars; (ii) research and innovation development worth 170 billion US dollars, focusing on funding research institutions in the US; and (iii) supplemental appropriations to address threats to the supreme court of the United States worth 20 million US dollars.





Source: RMI "Congress's Climate Triple Whammy: Innovation, Investment, and Industrial Policy" 22 Aug 2022

5. Thai Economic Outlook for 2022

In the November 21st, 2022, press release, the NESDC forecasted that the Thai economy is expected to expand by 3.2 percent, which is the upper bound of the range of 2.8 - 3.2 percent in the previous projection, released on August 15th, 2022, together with the revision in key growth components to be consistent with actual data and revised assumptions as follows.

1) **The revision in private consumption,** from 4.4 percent in the previous estimation to 5.4 percent, to be consistent with the better-than-expected 9.0 percent growth in the third quarter. This has resulted in a 6.5-percent expansion in the first nine months of 2022 while the growth momentum is expected to continue through the last quarter. The strong growth was also in line with a pickup in economic activity, recovery of consumer spending, improving labor market and income base, as well as government supporting measures.

2) **The revision of private investment** from 3.1 percent in the previous anticipation to 3.9 percent to be in accordance with a stronger -than-expected growth of 11.0 percent in the third quarter which resulted in 5.3-percent growth of private investment in the first three quarters of 2022. Nonetheless, private investment throughout the last quarter of the year is likely to slow down following deceleration of exports.

3) **The revision of net export**. Export volume of goods in 2022 is expected to grow by 3.2 percent, down from 3.4 percent in the last estimation. The adjustment was in line with the downward revision in world economy and global trade volume growth assumption. Meanwhile, import volume of goods is projected to expand by 5.3 percent, compared with 3.4 percent in the previous estimation to be in tandem with the actual data in the first three quarters of 2022 and the revision of private investment.

6.The Thai economic outlook 2023

The Thai economy in 2023 tends to improve continually from 2022, mainly supported by the recovery of the tourism sector, continued expansion of domestic demand in both consumption and investment, and the favorable condition of agricultural production. However, the economic recovery could be experienced with some downside risks and limitations, including the volatility and global economic slowdown trend, weakening financial conditions of households and businesses regarding debt burden, and the uncertainty of the emergence of new COVID-19 variants that may cause the Thai economy to expand less than expected.

Key components of Economic growth;

1) **The recovery of the tourism sector** due to the demand for traveling that tends to return to normalcy after fully relaxing international travel restriction both in Thailand and major tourism origin countries since the middle of 2022[28], together with the increasing trend of inbound flights. As a result, in October 2022, the number of international tourist arrivals was 1,437,841 persons, or 46,382 persons per day, the highest level since the outbreak. which notably increased from 17,387 people per day and 39,218 people per day in the second quarter and the third quarter, respectively. Meanwhile, it is expected in the baseline scenario that the Chinese government will continue to ease the containment measures and start to fully lift the entry restrictions within the last quarter of 2023[29], resulting in a significant increase in the number of foreign tourists. This is in line with the United Nations World Tourism Organization (UNWTO) forecast that the number of global tourists in 2023 will be around 1 billion, representing a 71 percent increase compared to 2022. Besides, domestic tourism is likely to return to normalcy and support the recovery of the tourism sector.

2) **The expansion of investment in both the private and public sector. Private investment** in 2023 is likely to expand continuously, reflected by the amount of applications for investment promotion in 2021, the total value of 636 billion Baht, which is the historical highest level. Meanwhile in the first 9 months of 2022, the amount of applications for investment promotion remained at a high level of 439 billion Baht and approved investment promotion and investment promotion certificates totaling 502 billion Baht and 357 billion Baht, representing an increase of 43.1 percent and 57.0 percent compared to the same period of the previous year, respectively. Investment in 2023 will continue to expand under the new five-year investment promotion strategy (2023 - 2027) that will be effective from January 3rd, 2023, in line with the value of imports of raw materials and products. Numerically, imports of raw materials and intermediate goods excluding fuel products imports in the third quarter increased by 4.4 percent, while total imports of raw materials and intermediate goods grew by 5.5 percent, with high import values of goods such as machinery, electronic parts, and chemicals. The private sector is also likely to be supported by the progress of public-private partnership (PPP) projects, as well as the relocation of production bases by large foreign firms investing in many key industries. such as electric vehicles and electronic parts. In terms of **public investment** in 2023, it is likely to expand according to the FY2023's investment budget framework, amounting to 695 billion Baht, compared to 613 billion Baht in the FY2022, representing an increase of 13.5 percent. In addition, there will be supporting factors from continual progress of the state-owned enterprises investment in major infrastructure investment projects, particularly, Khon Kaen - Nong Khai double-track railway, Tao Poon - Rat Burana MRT Purple line Railway, Thailand Cultural Center - Bank Khun Non MRT Orange line Railway, Rama III - Dao Kanong - Western Bangkok Outer Ring Expressway, and the Provincial Electricity Authority's Transmission Line Development Phase II.

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[28] The CCSA has announced the cancellation of the Test and Go measure since May 1st, 2022, allowing foreign tourists to enter Thailand without quarantine. In addition, from July 1st, 2022, there is an announcement that cancelled COVID-19 as a prohibited disease for foreigners who visit Thailand.

[29] On November 11th, 2022, the National Health Commission of China relaxed the containment measures. Firstly, people entering the country require only one COVID-19 test (PCR test) that indicates no infection for 48 hours before traveling, which required two tests previously. Moreover, the number of days for quarantine in hotels have been reduced to five days from seven days for those who were tested negative, but still have to continue self-quarantine at home for another 3 days as before. Domestic control measures include reducing the number of detention days from 5 days to 3 days for people at high-risk person by having to quarantine at home, quarantine lift for those who are close to high-risk people who have not yet been tested positive. In addition, the quarantine of those traveling from high-risk areas has also been lifted, including canceling penalties for airlines with infected passengers traveling to the country.

3) **The continued expansion of domestic consumption,** which is in line with the returning to the pre-COVID level of both economic activities and private spending, owing to gradually easing pandemic situation after the ministry of public health removing COVID-19 from a dangerous contagious disease category. The recovery will also be supported by a higher consumer confidence index of 47.7 in October 2020, which has been increased for the fifth consecutive months and was the highest level in 39 months. Moreover, income bases of households and those in some businesses sectors, particularly in the agricultural and tourism sectors, tend to enhance. In addition, the labor market tends to recover to a pre-epidemic level, reflecting from the unemployment rate in the third quarter of 2022 of 1.23 percent, compared to 1.93 percent and 1.10 percent in the same period last year and the year 2019, respectively. This is in line with the increase in total employment of 39.57 million persons, compared with 37.71 million persons in the same quarter last year, which is the highest level in history.

4) **The favorable condition of the agricultural sector** following the expected expansion of agricultural products. This will be supported by the favorable weather conditions and sufficient water levels. According to the data on October 31st, 2022, the amount of usable water in major dams in the area of Chao Phraya River basin (Bhumibol Dam, Sirikit Dam, Kwae Noi Bumrung Dan Dam, and Pasak Jolasid Dam) was at 14,056 million cubic metres, higher than those in the same period of last year by 83.3 percent which will significantly attribute to the expansion of agricultural production in crop year 2023/2024.

The 5-Year (2023 - 2027) Investment Promotion Strategy: Key role in driving Thai investment in the next period

On November 4th, 2022, the Thailand Board of Investment (BOI) has announced new investment promotion measures under the 5-year (2023 - 2027) investment promotion strategy which will articulate its investment promotion policies through 7 key pillars of the investment promotion strategies to create "New economy" and elevate Thailand to be the investment center of the region. The pillars consist of (i) The upgrade of existing industries, in parallel with the building of new industries in which Thailand has the high potential and overall strengthening of the supply chain; (ii) The acceleration of industrial transition to green and smart industries through investments in automation, digital adoption and decarbonization; (iii) The promotion of Thailand as a business center and international trade and investment gateway for the region; (iv) The strengthening of SMEs and startups, ensuring they are connected to the global market and supply chain; (v) The promotion of investments in the different regions of Thailand that fits the potential of each area and enables inclusive growth; (vi) The promotion of investments that will promote community and society development; and (vii) The promotion of Thailand's overseas investment to expand business opportunities for Thai companies. The strategies will be driven through three key forces, namely (i) incentive measures both tax and non-tax benefits (Whole Package); (ii) comprehensive pre- and post-investment supporting; and (iii) building an ecosystem and improving regulations to facilitate investment.

In addition, to achieve such goals, The BOI has announced 9 key investment promotion measures to drive new investment promotion strategy (2023-2027), which will be effective from January 3rd, 2023, consisting of (i) investment promotion measures for potential industries that are important to the country's development, (ii) Measures to enhance competitiveness, (iii) Measures to maintain and expand existing production bases (Retention and Expansion Program), (iv) Measures to promote integrated business relocation (Relocation Program), (v) Measures to stimulate investment in the economic recovery period, (vi) Measures to upgrade the industry to Smart & Sustainability, (vii) Measures to promote SMEs investment, (viii) Measures to promote investment in the targeted areas, and (ix) Investment promotion measures for community and social development. Under the 9 aforementioned investment promotion measures, original measures are improved to be more precise and understandable. Also, there are new measures added under the promotions, such as the Retention and Expansion Program and the Relocation Program, which are proactive measures to emphasize the investment base for new industries and international business center by raising up the strengths of Thailand that can meet the challenges in the current important issues of the world such as food security clean energy, and supporting Thailand to be a strong industrial base. These are the important factors to investment in the future. Moreover, the new promotions also add investment measures in the 4 Special Economic Corridor Regions to create opportunities and enhance competitiveness in all regions of the country.

The new BOI investment promotion strategy also focuses on the restructuring of the Thai economy towards "New economy" presenting 3 core concepts, namely (i) innovation, technology, and creativity; (ii) competitiveness and the ability to adapt quickly; and (iii) inclusiveness, taking into account environmental and social sustainability.

In the next period, the Investment Promotion of Thailand, amid the posed opportunities and challenges from global change, will lead to the adjustment of supply chains and supporting the relocation of production bases, which are the great opportunities of Thailand to achieve the goal of becoming an important regional hubs of investment, namely, (i) Tech Hub, a center for investment in technology and innovation; (ii) BCG Hub, an investment hub based on the BCG economic model to achieve the sustainable development; (iii) Talent Hub, a center for potential talent from around the world; (iv) Logistics & Business Hub, the logistics hub to connect the region as well as being a center for international business; and (v) Creative Hub, the center of creative industries such as design fashion and lifestyle, movie industry digital content, and games and e-sports.

Source: The Thailand Board of Investment

Key Foreign Direct Investment in ASEAN and its implication for the Thai economy

Over the past few years, global economy has faced significant risk factors and impacts from the COVID-19 pandemic and prolonged geopolitical conflicts which affected global value chain, including the tensions of superpowers. An interesting topic for policymakers regards how these situations affect or benefit to ASEAN economy, especially Thailand, through a flow of investments from overseas. According to the data, foreign direct investment in ASEAN had a total investment value of 174.1 billion US dollars[1] in 2021, an expansion of 42.3 percent compared with a 29.7-percent decline in 2020, (ASEAN - Foreign Direct investment in 2020 was 122.4 billion US dollars). This expansion was higher than the average growth rate of developing countries and Asian countries with an average growth of 30.0 percent and 19.3 percent, respectively. This reflected that ASEAN is still the high potential area for being one of the significant productions and investment basements of the world. Among the developing countries, ASEAN is the second largest base of foreign direct investment after China. The share of ASEAN's FDI compared to global FDI increased to 11.0 percent in 2021, increasing from a 7.4-percent share on average during 2011 - 2017. Notably, the sectors with a high percentage of investment in ASEAN were electric vehicles, semiconductors and digital.

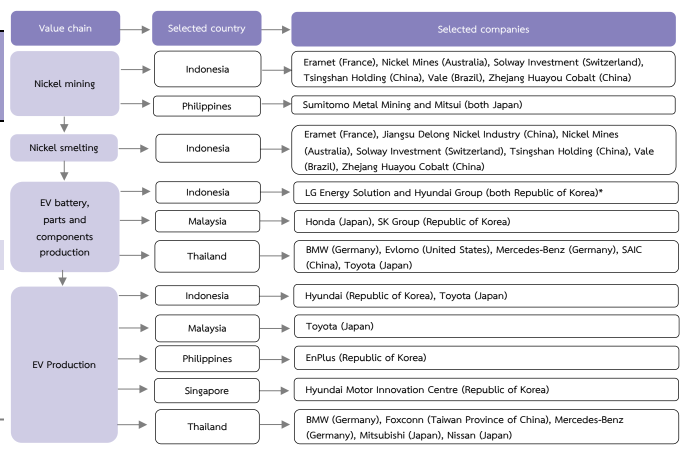
Under the trend of global electric vehicle production and demand that tends to grow rapidly, whether in the US, China and Europe, it was found that countries in the ASEAN are interesting choices as the areas having potential for being production basements in the electric vehicle industry due to the comparative advantage in each country in terms of infrastructure support, an important source of raw materials for battery production, and the high growth rate of the EV domestic market. In case of Thailand, FDI in 2021 worth 11.4 billion US dollars[2], representing a high growth rate of 335.6 percent, and equivalence to a proportion of 6.6 percent to total FDI in ASEAN (10). It is ranked fifth after Singapore, Indonesia, Vietnam and Malaysia, respectively. The investment in electric vehicle manufacturing and production of batteries for electric vehicles were the major segment. During the first nine months of 2022, the amount of Thai foreign direct investment applying for investment promotion through the Thailand Board of Investment (BOI) stood at 275,624 million Baht[3]. The top three were China invested the most value at 45,024 million Baht, followed by Taiwan at 39,256 million Baht, and Japan at 37,591 million Baht. Most of the investments from China and Taiwan were still in the automotive and parts industry totaled at 76,876 million Baht and the highest investment was the electric vehicle manufacturing totaling 53,991 million Baht. Previously, the Thai government used to support the electric vehicles industry and related clusters through many tax exemptions, for examples, the reduction of import taxes on cars and parts, and the reduction of excise taxes on electric vehicles. This is to encourage more domestic use of electric vehicles and promoting foreign investors to invest more in the production of electric vehicles in Thailand. Since 2017, there are 13 foreign Battery Electric Vehicle (BEV) manufacturers receiving Promotional Certificates from the Board of Investment (BOI), such as MITSUBISHI, TOYOTA, MAZDA, TAKANO, SKYWELL, MG, NISSAN, HONDA, FOMM, BENZ, GWM, BYD, and HORIZON PLUS, and there are two manufacturers, namely FOMM and TAKANO, which are Japanese company that has already produced and sold commercial vehicles.

Flows of Inward Foreign Direct Investment (FDI) to ASEAN Countries in 2021

	FDI (million of USD)	Proportion of FDI to ASEAN (10) (%)	Change (%YoY)	Contribution to Growth (%CTG)
Singapore	99,061.5	56.9	31.3	19.3
Indonesia	20,081.2	11.5	8.0	1.2
Viet Nam	15,660.0	9.0	-0.9	-0.1
Malaysia	11,593.9	6.7	264.0	6.9
Thailand	11,422.6	6.6	335.6	13.3
Philippines	10,518.0	6.0	54.2	3.0
Cambodia	3,483.5	2.0	-3.9	-0.1
Laos	1,071.9	0.6	10.8	0.1
Myanmar	1,005.0	0.6	-54.4	-1.0
Brunei	204.8	0.1	-64.5	-0.3
ASEAN (10)	**174,102.4**	**100.0**	**42.3**	**42.3**

Source: https://data.aseanstats.org/indicator/FDI.AMS.TOT.INF

EV Value Chain in ASEAN



Source: ASEAN Investment Report 2022 research

Note: *LG consortium consists of LG Chem, LG Energy Solution, LG International, Posco (all Republic of Korea) and Huayou Holdings (China)

Going forward, amid increasing economic competition leading to the relocation and expansion of production and investment bases to the ASEAN and the 30@30 Policy which focuses on pushing Thailand to be a production base for electric vehicles and important parts of the region by the goal of producing at least 3.0 percent of total vehicle production by 2030, Thailand needs to have some developments to cope with the issues, in particular, accelerating the attraction of foreign investment through aggressive investment promotions and facilitations to attract investors, investing in economic areas and developing important infrastructure, preparing skilled labors and upgrading production by applying innovations and creativities to adjust and match the global demands.

[1] World Investment Report 2022

[2] ASEAN Investment Report 2022

[3] Foreign Direct Investment Statistics and Summary, Year 2022 January – September, Thailand Board of Investment

Major Foreign Direct Investment (FDI) in ASEAN Countries between 2019 – 2023

Companies	Nationality / Headquarters	Total project cost ($ million)	ASEAN country	Year construction started	Categories
Nissan	Japan	15	Thailand	2019	EV battery, parts and components production
BMW	Germany	16	Thailand	2019	
Toyota Motors*	Japan	119	Thailand	2019	
Mercedes-Benz	Germany	120	Thailand	2019	
Honda Motor	Japan	136	Thailand	2021	
Evlomo	United States	1,060	Thailand	2021	
SAIC	China	75	Thailand	2022	
LG Chem	Republic of Korea	1,500	Viet Nam	2019	
Contemporary Armperex Technology Limited	China	5,200	Indonesia	2021	
Hyundai Motor, LG Chem	Republic of Korea	1,100	Indonesia	2021	
LG Energy Solution	Republic of Korea	9,800	Indonesia	2021	
Foxconn	Taiwan Province of China	8,000	Indonesia	2022	
Samsung SDI	Republic of Korea	175	Malaysia	2021	
SK Nexilis	Republic of Korea	568	Malaysia	2021	
SK Innovation	Republic of Korea	553	Malaysia	2021	
FOMM	Japan	31	Thailand	2019	EV production
Toyota Motors	Japan	622	Thailand	2019	
Mercedes-Benz	Germany	20	Thailand	2019	
Mitsubishi Motors	Japan	819	Thailand	2019	
Nissan	Japan	352	Thailand	2020	
GWM	China	71	Thailand	2022	
SAIC	China	782	Thailand	2022	
FORD	United States	900	Thailand	2022	
Foxconn* (HORIZON PLUS)	Taiwan Province of China	1,000	Thailand	2022	
BYD	China	480	Thailand	2023	
Toyota Motors	Japan	65	Malaysia	2021	
Hyundai Motor	Republic of Korea	1,500	Indonesia	2021	
Toyota Motors	Japan	2,000	Indonesia	2022	
ENPlus	Republic of Korea	101	Philippines	2021	
First Pacific	Hong Kong, China	-	Philippines	-	EV charging stations
Shell	United Kingdom	-	Malaysia	-	
Chevron	United States	-	Singapore	-	
ABB	Switzerland	-	Indonesia	-	
Bosch	Germany	-	Indonesia	-	
Grab	Singapore	-	Indonesia	-	
Huawei Technologies	China	15	Thailand	2020	5G innovation center
Equinix	United States	144	Singapore	2020	Data Center / Cloud - Computing
Singapore Telecommunications*	Singapore	253	Thailand	2021	
Amazon Web Services	United States	5,000	Thailand	2023	
Digital Edge (Singapore) Holding, Threadborne	Singapore, Philippines	100	Philippines	2021	
Alibaba Cloud Computing	China	263	Philippines	2021	
Nippon Telegraph & Telephone	Japan	248	Viet Nam	2021	
PT Smartfren Telecom, Group 42 Holding	Indonesia, United Arab Emirates	283	Indonesia	2021	
Pure Data Centres Group, Ara Investment	United Kingdom, Cayman Islands	171	Indonesia	2022	
Chindata Group Holding	China	595	Malaysia	2022	
Wiwynn	Taiwan Province of China	47	Malaysia	2022	
Sony Semiconductor Solutions	Japan	71	Thailand	2022	Automotive sensors

Source: ASEAN Investment Report 2022, and Compiled by NESDC

Note: *Joint venture in Thailand

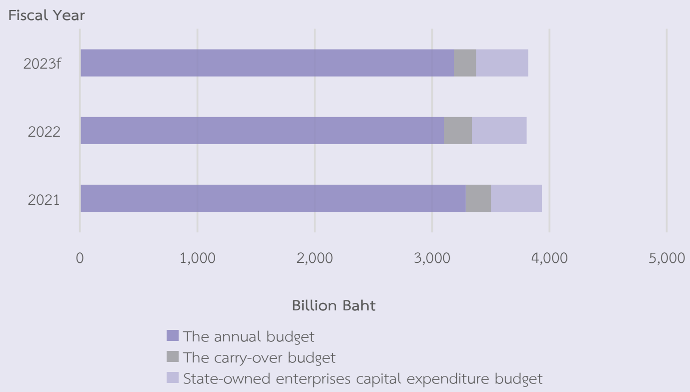
Preserving the level of public investment

Budget expenditures for the FY2023 are 3.185 trillion Baht, an increase of 85 billion Baht, or 2.7 percent from the FY2022, consisting of current expenditures set at 2.5 trillion Baht, which declined by 0.6 percent from the FY2022. Meanwhile, capital expenditures are set at 664.7 billion Baht, an increase of 17.8 percent from the FY2022. Besides, the investment budget of state-owned enterprises is 443.4 billion Baht which is consisted of (i) an investment budget for 44 state-owned enterprises (226.2 billion Baht) and (ii) an investment budget for five public limited companies (217.1 billion Baht). Furthermore, the proportion of investment budget classified by investment sectors were as follows: energy sector (61.0 percent), transportation sector (24.5 percent), public utility sector (6.0 percent), and other sectors (8.5 percent).

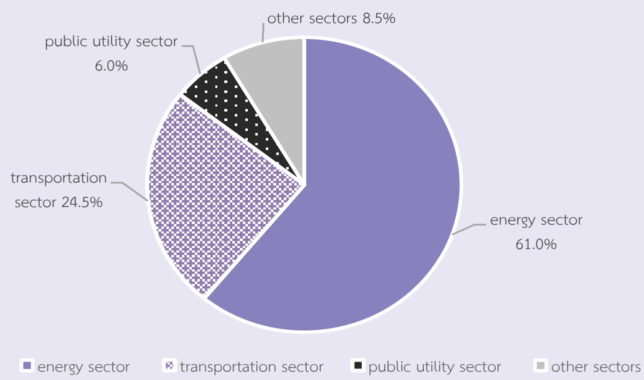
The investment budget of state-owned enterprises in 2023 is estimated to disburse in the 65 significant projects (141.1 billion Baht), accounting for 31.8 percent of total investment budget. The top 10 projects expected to have the most disbursement in the FY2023 include investments in the transport sector (5 projects), energy sector (3 projects), commerce and services sector (1 project), and public utility sector (1 project). The disbursement of the investment budget for 10 projects, totaling 83.9 billion Baht, accounted for 59.5 percent of the 65 significant projects.

Therefore, it is essential that the government should prioritize the disbursement of the projects that have already been committed as well as expedite the investment projects that have been approved for expenditure in order to meet the target. As a result, public investment would expand and drive the economic growth for 2023 and the period ahead.

Budget framework for the annual budget and state-owned enterprises



The investment budget of state-owned enterprises for 2023



source: [1/]GFMIS as of 25 October, 2022
[2/]NESDC

Top 10 significant projects of 2023

Project	SOEs	Sector	Operational approval limit (Mil. THB)	Estimated Disbursement of Investment Budget
The first phase of the Thai-Sino high-speed rail linking Bangkok and Nong Khai (Bangkok-Nakhon Ratchasima section)	SRT	transport sector	143,280.94	18,138.21
The MRT purple line project: Tao Pun - Rat Burana	MRT	transport sector	91,974.00	10,646.56
Transmission system and distribution system development project, phase 2	PEA	energy sector	28,585.93	10,552.04
The expressway linking Rama III Road-Dao Khanong and the western Outer Ring Road	EXAT	transport sector	20,767.34	8,608.31
Railway construction project: Ban Phai - Maha Sarakham - Roi Et - Mukdahan - Nakhon Phanom	SRT	transport sector	61,273.31	7,498.62
The government complex: Zone C area	DAD	commerce and services sector	17,343.86	6,129.02
The twelfth power distribution system improvement and expansion plan, Year 2017 - 2021	MEA	energy sector	15,493.84	5,863.73
Railway construction project: Den Chai - Chiang Rai - Chiang Khong	SRT	transport sector	76,368.66	5,752.88
The 9th waterworks improvement master plan	MWA	public utility sector	28,142.50	5,459.68
Mae Moh power plant units 8-9 replacement project	EGAT	energy sector	42,557.14	5,296.06

source: NESDC

Risk and limitations to economic growth;

1) **The global economic slowdown and volatility in global financial market** could affect growth and stability of the economy as a result of following external risks that need to be closely monitored and assessed including: **(i) a continuation of monetary policy tightening,** implemented by various central banks in order to alleviate inflationary pressure, however, this hawkish response will lead to tightening financial market and also higher borrowing cost. Moreover, it could undermine economic activity and could ignite an economic recession. At the same time, the divergence of monetary policy direction between major economies and others could introduce fluctuations in global financial and capital markets, as well as in exchange rates, which could severely affect those with fragile economic stability, especially those countries with high proportion of foreign debt; **(ii) the prolonged geopolitical conflicts,** especially the ongoing conflict between Russia and Ukraine which might lead to a new set of sanction as well as the retaliated measures, particularly if European countries continue to reduce import of natural gas from Russia, and will not be unable to secure energy resource from other countries, or could not accumulate sufficient energy stock. Additionally, the tension between the US and China, regarding the Taiwan issue, which is still highly uncertain and might be intensified with additional trade and investment protection measures, and thus worsen global supply chain disruption; **(iii) the slower-than-expected recovery pace of the Chinese economy** despite the expected acceleration of economic growth in the baseline assumption owing to continual easing lockdown and containment measures since the end of 2022. However, there remains uncertainty regarding a resurgence of domestic outbreak[30] which could lead to reimplementation of strict lockdown measures which could derail the recovery of domestic demand. Moreover, the Chinese economy remains fragile due to the prolonged debt problem in the real estate sector, as well as possible impacts from trade protection policy implemented by the US due to China-Taiwan tension.

2) **The remaining high levels of household and corporate debts** amidst rising interest rates, where the ratio of Non-Performing Loans (NPLs) and Special Mention Loans (SMLs) to total loans of small and medium enterprises (SMEs) were 7.6 percent and 11.7 percent in the second quarter 2022, increasing from 4.5 percent and 3.2 percent in the same quarter of 2019, respectively. Similarly, the ratio of household debt to GDP in the second quarter of 2022 stood at 88.2 percent, comparing to 78.8 percent in the same quarter of 2019. Thus, the high debt burden in business and household sectors might constrain the recovery of both domestic demand and debt servicing ability under the rising interest rates, especially SMEs and low-income households as well as those debtors who have been under the debt moratorium measure, which will be ended soon.

3) **The risk of the emergence of new COVID-19 variants.** Even though the situation of the epidemic of COVID-19 both domestic and in other countries continued to improve and the distribution of vaccines to the public has been progressing accordingly[31], there remain risks from mutations of the COVID-19 virus, such as the BQ.1, BQ.1.1, BA5, BN1, and XBB sub strains of the omicron variant, along with the highly potent Deltacron XBC hybrid strain that might be able to escape immune response gained from previous infection and vaccination and tends to spread faster and more severely than the COVID-19 virus previous strains. In addition, there remain low vaccination rates among low-income countries, where could possibly face with widespread outbreak and have a risk that the virus could mutate in the future.

[30] The number of new cases in China on November 14th,2022, is 1794 cases, a record high since April 2022.

[31] Fully vaccination and booster-dose vaccination rates in Thailand on November 4th,2022, is 77.5 percent and 46.6 percent of the population, respectively.

EU Energy Security: The Effects of the Russian-Ukrainian War

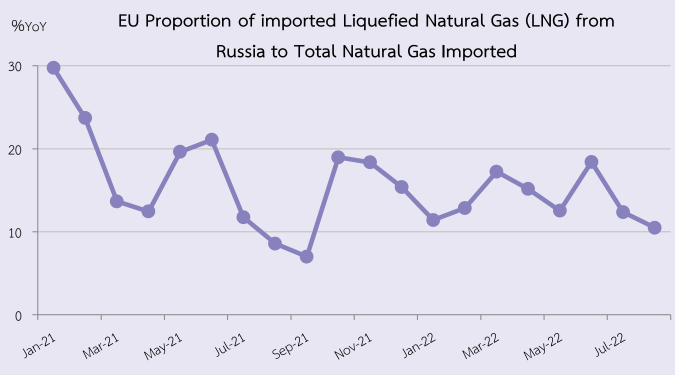
The prolonged conflict between Russia and Ukraine has led European Union (EU) countries to impose sanctions on Russia and, in turn, caused retaliation from Russia by limiting crude oil and natural gas exports to the EU[1], which undermines region's energy security since the EU has a high energy import dependency, particularly import from Russia. As of 2020, the EU imported 57.5 percent of its total energy consumption, and the 24.4 percent of the total energy imports was from Russia, or a 14.0 percent of total energy consumption is imported from Russia[2]. Specifically, the countries that are heavily relied on energy imports from Russia are Lithuania, Greece and the Netherlands. Nonetheless, most European countries will be affected by the conflict and highly exposed to energy security risk.

Preparing for those potential disruption, the EU members have increasingly adjusted and diversified their energy import structures away from Russia to other countries. By considering changes in the import structure of EU crude oil and natural gas, the proportion of crude oil importing from Russia have dropped significantly, and it was compensated by those from the US, Iraq and Saudi Arabia. Nevertheless, natural gas imports from Russia remain in the same proportion as in the previous period, despite increasing imports from the US. Therefore, the energy security of the EU remains fragile if and only if the EU could acquire natural gas supply from other sources to substitute Russia's import shortly. Notwithstanding, several countries have continually accumulated natural gas stock, and hence the EU's natural gas reserves was significantly higher than the previous year. In the 41st week of 2022, the EU's natural gas reserves stood at 102.9 billion cubic meters, comparing with 82.3 billion cubic meters in 2021, or increasing by 25.1 percent. Therefore, there are sufficient natural gas reserves for the EU during the high demand period in winter 2022/2023, and the impact of Russian gas shortfall would be mitigated. However, if the natural gas supply in 2023 declines constantly, this will intensify regional energy security risk and affect inflation and overall economy.

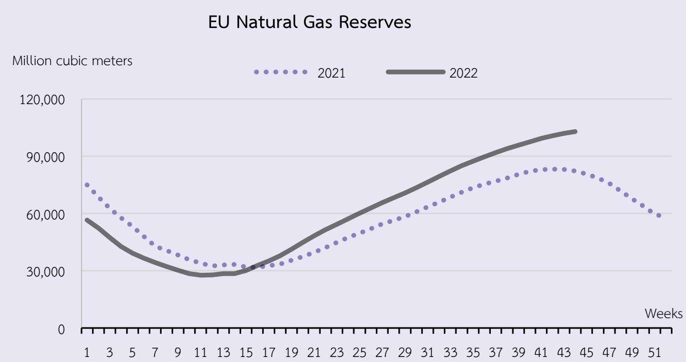
EU Energy Import Dependency and Inflation Rates

Unit: %	Energy Import Dependency Rate (1)	Energy Imported from Russia (2)	Import Dependency x Imported from Russia (1) X (2)	Inflation Rates Q3/22
EU	57.5	24.4	14.0	10.3
Lithuania	74.9	96.1	72.0	22.7
Greece	81.4	46.5	37.8	11.7
Netherland	68.1	49.0	33.3	12.3
Slovakia	56.3	57.3	32.2	14.0
Hungary	56.6	54.2	30.7	16.5
Germany	63.7	31.1	19.8	8.5
Belgium	78.1	24.3	19.0	10.3
Finland	42.0	45.0	18.9	7.8
Italy	73.5	23.8	17.5	8.4
Poland	42.8	35.0	15.0	16.4
Latvia	45.5	31.0	14.1	21.7
Croatia	53.6	24.7	13.3	12.5
Austria	58.3	16.5	9.6	9.8
Denmark	44.9	21.1	9.5	9.2
Czech Republic	38.9	23.7	9.2	17.6
Slovakia	45.8	17.6	8.1	10.6
Malta	97.6	7.5	7.3	7.1
Bulgaria	37.9	15.4	5.8	17.8
Spain	67.9	7.5	5.1	10.1
Romania	28.2	17.0	4.8	15.4
France	44.5	8.4	3.7	5.8
Portugal	65.3	4.9	3.2	9.1
Sweden	33.5	8.5	2.9	9.7
Ireland	71.3	3.2	2.3	8.7
Estonia	10.5	21.4	2.2	23.7
Cyprus	93.1	1.7	1.6	9.5

Source: Eurostat proportions of overall and from Russia energy imported in 2020



Source: Eurostat



Source: Bruegel

[1] Russia has suspended natural gas exports via the Nord Stream 1 pipeline since September 1st, 2022, after a 10-day suspension in July, 2022, and a reduction on natural gas exports to only 20 percent of the pipeline capacity thereafter.

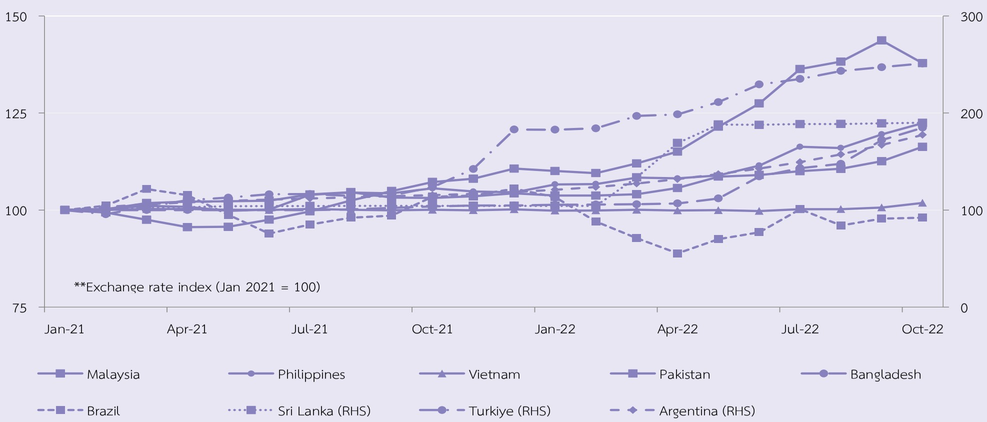
[2] Energy dependency ratio on Russia = Dependence on energy imports x Share of Russian energy imports to total energy imports

The impact of interest rates hikes by major central banks to economic stability in developing and emerging economies

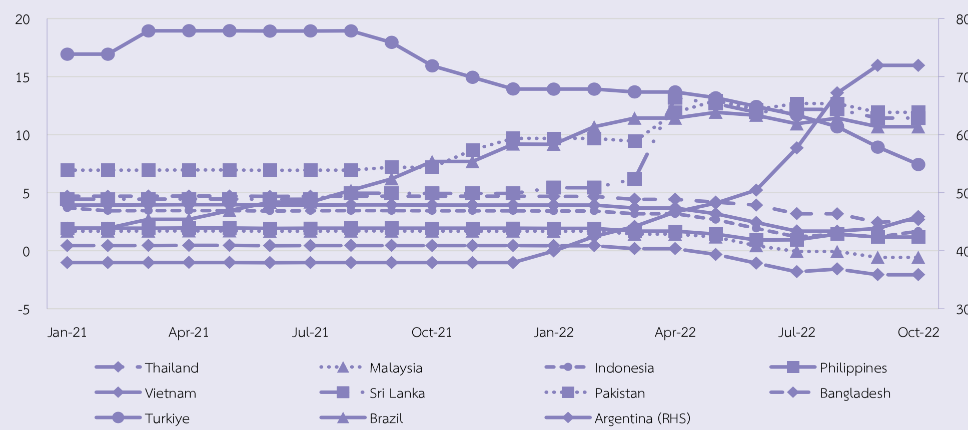
The aggressive interest rates hikes by major central banks, especially the US Federal Reserve aiming to alleviate inflationary pressure. This also induces other central banks in developing and emerging economies to raise their policy rates, in order to reduce not only the inflationary pressure, but also the depreciation pressure of the local currencies by maintaining the policy rate gap with major economies to curb capital outflow. However, for countries with sluggish economic recovery, monetary policy has to play a significant role to support domestic demand, and those countries' central banks that cannot raise their rates aggressively. Hence, the policy gap of those economies had increased notably and is more vulnerable to exchange rate depreciation.

In addition, countries with weak economic fundamentals, such as low international reserves, high proportion of foreign debt, or a continually high current account deficit, are prone to economic instability especially under the tendency of rising US Fed Fund rate and the appreciation of the US Dollar.

Exchange Rates of developing countries are depreciating, comparing to USD



Interest Rate Spread between developing countries and Fed Fund Rate



Major economic stability indicators of developing and emerging economies

Country	Unemployment rate			Public debt		10-year maturity government bond yield			NPLs to total credits		Capital adequacy ratio	Headline inflation					Foreign exchange reserve			Short term foreign debt		Foreign debt	Current account
	(%)			(% of GDP)		(%)			(%)		(%)	2021	2022				(billion US dollar)		(% of one month import volume)	(% of foreign exchange)	(% of foreign debt)	(% of GDP)	(% of GDP)
	2019	2021	2022	2019	2021	2019	2021	Oct 22	2019	2021	2020	All	Q1	Q2	Q3	Oct	2021	2022	2021	2020	2020	2021	2021
Thailand	1.0	1.9	1.2	41.2	52.8	2.0	1.8	3.3	3.0	3.0	11.1	1.2	4.7	6.5	7.3	6.0	246.0	180.0	7.0	29.0	36.6	38.2	-2.2
Malaysia	3.3	4.6	3.7	52.4	63.4	3.6	3.3	4.4	1.5	1.5	9.0	2.5	2.2	3.8	4.5	-	116.9	97.2	6.3	-	-	70.0	3.8
Indonesia	5.2	6.5	5.8	30.2	40.7	7.6	6.5	7.6	2.5	3.0	12.6	1.6	2.3	4.8	5.2	5.7	144.9	118.4	6.0	32.7	10.7	35.1	0.3
Philippines	5.3	6.4	5.2	39.6	60.4	4.5	4.8	7.3	2.0	4.0	9.7	3.9	3.4	6.4	6.5	7.7	108.8	80.3	6.7	12.9	14.4	27.0	-1.8
Vietnam	2.2	3.2	2.3	48.0	57.6	3.3	2.1	4.7	1.6	1.5	7.2	1.8	1.9	4.0	3.3	4.3	109.4	92.1	3.0	28.1	21.3	47.9	-2.0
Sri Lanka	4.8	5.2	4.6	81.9	99.5	6.2	3.2	30.1	4.7	4.5	6.8	7.0	18.6	45.9	70.2	-	2.8	1.7	1.3	148.2	14.9	57.7*	-3.7
Pakistan	6.9	6.3	6.3	72.2	71.5	9.2	8.0	8.0	8.6	7.9	5.8	9.5	12.6	16.8	25.1	26.6	22.8	8.5	1.6	81.3	12.9	35.1	-0.8
Bangladesh	4.4	5.2	5.2	16.4	19.2	7.8	5.6	8.1	9.3	7.9	4.8	5.5	6.1	8.1	8.7	8.9	46.2	32.9	4.8	25.4	16.2	19.6	-1.0
Turkiye	13.7	12.0	10.1	32.6	42.0	12.4	6.5	10.8	5.4	3.0	10.5	19.6	54.8	75.0	81.1	85.5	109.5	60.9	1.9	148.0	31.8	52.5	-10.4
Argentina	9.8	8.8	6.9	72.3	76.8	-	-	-	5.7	4.3	12.7	48.4	52.8	61.9	77.5	-	39.7	32.7	4.7	108.1	16.8	56.6	-0.8
Brazil	12.1	13.5	8.7	74.4	80.3	6.2	4.8	7.2	2.9	2.3	9.7	8.3	10.7	12.9	8.7	6.5	362.2	298.4	12.0	19.4	12.6	35.3	-4.1

Note: * The data is available as of 2020.

Source: CEIC and World Bank, accumulated by NESDC as of November 15th, 2022

Key assumptions for 2022 and 2023 economic projection:

World Economic Projection and Other Key Assumptions

	Actual Data		Projections		
			2022		2023
	2020	2021	Aug 15, 2022	Nov 21, 2022	Nov 21, 2022
World Economic Growth (%)[1/]	-3.0	5.3	3.3	3.1	2.6
US	-2.8	5.9	2.2	1.7	0.7
Eurozone	-6.3	5.4	2.6	2.4	0.3
Japan	-4.6	1.6	1.7	1.4	2.0
China	2.2	8.1	3.3	3.0	4.2
Global Trade Volume (%)	-7.8	10.1	4.3	4.0	2.0
Exchange Rate (Baht/US Dollar)	31.3	32.0	34.5 - 35.5	35.2	35.5 - 36.5
Dubai Crude Oil (US Dollar/Barrel)	42.4	69.5	95.0 – 105.0	98.5	85.0 - 95.0
Export Price (US Dollar) (%)	-0.8	3.3	4.0 – 5.0	4.3	(-0.5) – 0.5
Import Price (US Dollar) (%)	-3.8	5.2	8.5 – 9.5	12.5	(-1.5) – (-0.5)
Income from Tourism (Trillion Baht)[2/]	0.42	0.15	0.66	0.57	1.20

Source: NESDC as of 21st November 2022

Notes: [1/] World economic growth is a trade-weighted average of key economic partners in 2019 (15 economies)

[2/] based on the Bank of Thailand's balance of payment data and forecasted by the NESDC

1) **The world economy and global trade volume in 2023 are projected to grow by 2.6 percent and 2.0 percent,** decelerating from 3.1 percent and 4.0 percent in 2022. The slowdown trend will be due to the tightening monetary policy to alleviate inflationary pressures. In addition, the economy is likely to be undermined by geopolitical conflicts, particularly, the prolonged conflict between Russia and Ukraine, which has led to sanctions and plan to decrease in energy imports from Russia, as well as the tension between the US and China as a result of impacts from the CHIP and Science Act which could intensify global supply chain disruption. Thereafter, the emerging and ASEAN economies are anticipated to experience economic slowdown due to the deceleration of world economic activity and global trade volume.

2) **The average value of Thai Baht in 2023 is expected to be within the range of 35.5 - 36.5 Baht per US dollars, depreciating from an average of 35.2 Baht per US dollars.** This is due to the continual depreciation of Thai baht during the latter half of 2022, and in line with the appreciation of the US Dollar trade weighted index following the aggressive Fed fund rate hike where an average exchange rate in October 2022 was at 37.9 Baht per US dollars, significantly depreciating from an average of 34.4 Baht per US Dollar and 36.4 Baht per US dollars in the second quarter and the third quarter of 2022, respectively. Nonetheless, the Thai Baht throughout 2023 is expected to appreciate gradually in line with improving current account due to increases in foreign tourism receipts, coupled with the US dollar depreciation trend after the US Federal Reserve slower its policy interest rate hike particularly in the latter half of 2023.

3) **The average Dubai crude oil price in 2023 is expected to be within the range of 85.0 - 95.0 US dollars per barrel, down from an average of 98.5 US dollars per barrel in 2022,** mainly owing to the global economic slowdown. In particular, the slowdown in major economies such as the US and the Eurozone would undermine crude oil demand. Similarly, the US Energy Information Administration (EIA) in October 2022 projected that the global oil demand in 2023 tends to increase only by 0.8 percent, downward revision from a 2.0 percent increase in the September estimation. In addition, the number of US oil rigs continually increases. According to the data 11th November 2022, there are 622 rigs, the highest number since April 3rd, 2020. Furthermore, the US and allied countries would continue to release crude oil from their strategic oil reserves, as agreed in March 2022. Nonetheless, there are some factors that could delay crude oil price to rapidly decrease, particularly, the plan of OPEC+ to reduce production capacity, the Chinese economic acceleration after the relaxation of containment measures, and the US dollar depreciated tendency.

4) **Export and import prices in terms of US dollars in 2023 are expected to increase in the range of (-0.5) - 0.5 percent and (-1.5) – (-0.5) percent,** decelerating from 4.3 percent and 12.5 percent in 2022, in line with the assumption of crude oil prices, the slowdown in the global economy and merchandized trade, the decelerated prospect of international freight cost, as well as the high base effect.

5) **The revenue from foreign tourists in 2023 is expected to be 1.20 trillion Baht, with a total of 23.5 million foreign tourists,** significantly increasing from 0.57 million Baht and 10.2 million people in 2022. This is according to the increasing tourism demand after the relaxation of international travel restrictions of major countries of origin along with reopening borders with neighboring countries, resulting in a continuous escalating number of inbound tourists. Countries of origin with a significant number of tourists include Malaysia, India, South Korea, and Japan. Furthermore, in the baseline scenario, it is expected that China will continue to ease lockdown and control measures and allowing international travel by the latter half of 2023.

6) **The budget disbursement** is expected to be as follows: (i) The FY2023's annual budget disbursement rate of 93.0 percent of the overall budget, compared with 94.6 percent in FY2022. The current budget and capital budget are expected to be disbursed by 98.0 percent and 75.0 percent, compared with 99.2 percent and 73.7 percent in the previous fiscal year, respectively; (ii) The carry-over budget disbursement rate of 86.0 percent, compared with 90.1 percent in FY2022. The current budget and capital budget are expected to be disbursed by 90.0 percent and 85.0 percent, compared with 93.1 percent and 88.8 percent in the previous fiscal year, respectively; and (iii) the state-owned enterprises' capital budget disbursement of 70.0 percent of total budget, or approximately 345 billion Baht.

The Thai Economic Outlook for 2023

In November 21st, 2022's press release, NESDC estimated that the Thai economy in 2023 will expand by 3.0 - 4.0 percent, with a midpoint projection of 3.5 percent, accelerating from a 3.2-percent growth in 2022. Meanwhile, the headline inflation is expected to be in a range of 2.5 - 3.5 percent, and the current account tends to register a surplus of 1.1 percent of GDP, compared with a deficit of 3.6 percent in 2022.

Key growth components include as follows:

1) **Total consumption: (1) Private consumption expenditure** is expected to increase by 3.0 percent in 2023, compared with a 5.4-percent growth in 2022, owing to the expansion of income base and the continual recovery in the labor market. (2) **Government consumption expenditure** is projected to drop by 0.1 percent, compared with a 0.2-percent contraction in 2022. This is in line with the assumption of current budget disbursement rate under FY2023 which is 2.48 trillion Baht, decreasing by 1.8 percent from 2.5 trillion Baht in FY2022, and declines in the disbursement under the 1-trillion Baht and 500-billion Baht loan decrees.

2) **Total investment** is expected to grow by 2.5 percent, compared with 2.6 percent in 2022. (1) **Private investment** is estimated to increase by 2.6 percent, slowing from a 3.9-percent growth in 2022. This was in accordance with the slowdown in the world economy and export sector. (2) **Public investment** is expected to grow by 2.4 percent, recovering from a 0.7-percent decline in the previous year owing to the FY2023's capital budget framework of 695.08 billion Baht, increasing by 13.5 percent from 612.57 billion Baht in FY2022. Moreover, there will be additional supports from the progress in key infrastructure projects under state-owned enterprises' investment budget.

3) **Export value of goods in US dollar terms** is anticipated to increase by 1.0 percent, compared with a 7.5-percent growth in 2022. The export volume is forecasted to grow by 1.0 percent, decelerating from a growth of 3.2 percent in the previous year, owing to the slowdown of the global economy and merchandized trade. Additionally, the export price is expected to increase within the range of (-0.5) - 0.5 percent, compared with 4.3 percent in 2022. Meanwhile, the export of services is expected to continually improve following increasing numbers of international travelers. Consequently, revenue from foreign tourists in 2023 is projected to be 1.2 trillion Baht, compared with 0.57 trillion Baht in 2022. Thus, in 2023, the export quantity of goods and services is estimated to increase by 8.5 percent, compared with 8.2 percent in 2022.

4) **Import value of goods in US dollar terms** is anticipated to increase by 1.6 percent, decelerating from a 17.8-percent growth in 2022. The import volume is forecasted to grow by 2.6 percent, decelerating from a growth of 5.3 percent last year, in line with the slowdown of private investment and export of goods. However, the import price is expected to decrease within the range of (-1.5) - (-0.5) percent, compared with a 12.5-percent growth in 2022, and in line with the assumption on crude oil price. Meanwhile, the import of services is expected to continually improve following increasing numbers of outbound travelers. Consequently, in 2023, the import quantity of goods and services is estimated to increase by 3.6 percent, compared with 6.8 percent in 2022.

5) **Trade balance** is estimated to register a surplus of 17.7 billion US dollars, compared with a surplus of 19.1 billion US dollars in 2022, following the decelerated trend of export value of goods. Meanwhile, service accounts tend to register a surplus due to the expected increasing number of inbound tourists. Consequently, the current account is expected to register a surplus of 5.6 billion US dollars (1.1 percent of GDP), recovered from a deficit of 18.2 billion US dollars (3.6 percent of GDP) in 2022.

6) **Economic stability:** the headline inflation is expected to be in the range of 2.5 - 3.5 percent, compared with 6.3 percent in 2022, and in line with the assumption on crude oil price.

7. Economic Management for the Year 2022

The Thai economy in 2023 is likely to improve from 2022, mainly supported by the recovery of the tourism sector, expansion of domestic demand and agricultural production. However, the recovery of the Thai economy is likely to face limitations and risks from volatility and a slowdown in the global economy. This could affect the export and manufacturing sectors. In addition, weak financial balance sheet of household and business sectors are likely to constrain the recovery of domestic demand, especially during the rising interest rates. There is also a risk from an epidemic of COVID-19 new variants. This may cause the Thai economy to grow slower than expected from the baseline scenario. Under such conditions, economic management for the remainder of 2022 and 2023 should therefore prioritize on the following issues;

1) **Closely monitoring and resolving retail debts amidst the rising interest rate tendency,** of both households and small and medium enterprises (SMEs), to be more targeted and adjustable to appropriately solve difference conditions. The objective should be prioritizing on reducing existing debt burden, debt restructuring, and managing informal debt, in order to enhance borrowers' capability to pay back and to relieve constraints on domestic demand recovery and economic growth.

2) **Supporting agricultural production and farmers' income,** by rehabilitating the flood damaged areas and preparing policy to support agricultural products during the cultivation season 2023/24 which is likely to have a high output yield.

3) **Maintaining momentum from export sector,** in order to support economic growth under the tendency of global recession along with maintaining employment in manufacturing sector, to support continual economic recovery, by emphasizing on: (i) boosting exports to major markets with strong economic recovery coupled with expanding to new markets for potential products particularly those who benefit from rising energy and commodity prices including those impacted from the conflict and the consequent trade restrictions; (ii) monitoring the global economic and trade conditions, to utilize benefits from economic and trade policies in major economies; (iii) improving quality of agricultural, food, and manufacturing products to achieve international standard; (iv) utilizing benefits from the Regional Comprehensive Economic Partnership (RCEP), along with expediting the ongoing Free Trade Agreement negotiations and endeavoring for future negotiations with new potential trading partners, as well as accelerating the consideration process regarding the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) with focuses on the benefits of the country; and (v) encouraging the business sector to appropriately manage risk of exchange rate fluctuation.

4) **Catalyzing the recovery in tourism and related service sector,** by: (i) preparing and assisting the tourism sector to be ready for the resuming of foreign tourists such as inbound flight availability, sufficient labour supply for tourism and related service sectors, along with facilitating liquidity for business sector to be able to resume business; (ii) promoting the development of high-quality tourism, and enhancing potential, to achieve sustainable tourism. In particular, the emphasis should be placed on enhancing facilities and infrastructure, improving area and environmental management, and ensuring safety of tourists; (iii) continually supporting the tourism promoting events to attract long-term residents with high potential and high purchasing power; and (iv) promoting domestic tourism particularly to attract Thai tourists who generally prefer traveling abroad to travel domestically instead.

5) **Stimulating private investment,** by: (i) assisting the liquidity for the business amidst upward interest rate tendency and global economic slowdown such that potential business can resume their operation; (ii) speeding up projects already approved and obtained investment promotion certificates in 2020 - 2022 to start their actual investments, especially those in the targeted industries; (iii) solving difficulties and obstacles hindering investors and entrepreneurs from investing and conducting businesses, including labor shortages in manufacturing sector; (iv) implementing proactive investment promotions and facilitating investors in targeted industries to invest in Thailand as well as new investors with high potential; (v) stimulating investments in the Eastern Economic Corridor (EEC), other special economic zones, as well as the regional economic corridors; (vi) supporting investment in the key economic areas and transport infrastructure to be in accordance with the prospected plan; and (vii) enhancing high-skilled labors to brace the growth of technology-and-innovation-intensive industries.

6) **Maintaining growth momentum from public expenditure, by:** (i) expediting the FY2023's annual budget disbursement rate to be at least 93 percent of the total budget, state-owned enterprises' capital budget disbursement rate to be at least 70 percent of the total budget; (ii) accelerating large-scale public infrastructure projects, in both economic zone development and transportation infrastructure, especially key investment projects that already approved; and (iii) prioritizing fiscal consolidation by focusing on increasing the efficiency of revenue collection and expenditure in order to maintain fiscal position to support economic recovery amid domestic and external uncertainties.

7) **Monitoring, scrutinizing, and preparing for the volatilities from including highly unstable geopolitical risks** which will markedly impact global economy and stability, along with economic instability in countries with weak economic fundamental which could affect global economy in general.

8) **Monitoring, scrutinizing, and preparing for the epidemic of the new variants of COVID-19,** as well as other infectious diseases in order to appropriately and promptly response.

Key economic measures to remedy and mitigate impacts from COVID-19 outbreak and measures to reduce the impact of rising product prices

Measures	Details
1. Measures to remedy households	
Household Consumption Supporting	Measures to reduce the cost of living for people in the group who need continuous financial assistance from the government as follows: • the fifth phase of the social welfare card holders and those in need of special help with additional allowance by 200 Baht per person per month for 2 months (Sep-Oct 22) • the fifth phase of the "Kon-La-Kreung" or "Half-Half co-payment" scheme, a half subsidy for purchase at eligible stores, with a maximum spending of 150 Baht per person per day or 800 Baht per person during the program (Sep-Oct 22) • "Shop-dee-mee-kuen" program, tax deduction in the tax 2022 year for individual income taxpayers who shopped (maximum tax allowance of 30,000 Baht) (Jan 22 - Mar 23)
Soft loans by Specialized Financial Institutions (SFIs)	• Credit for personal expenses for freelancers and employees affected by COVID-19 (totaling 25,000 million Baht) (GSB) • Thai fight COVID-19 credit to mitigate the impact of a new wave of COVID-19 pandemic (totaling 20,000 million Baht) (BAAC and GSB) • Credit for wage earners, freelancers, small farmers, and farm workers (totaling 20,000 million Baht) (BAAC)
Tax measures	• Reduction in fees for the registration of a sale and mortgage of real estate by reducing the transfer fee from 2 percent to 0.01 percent, and the mortgage fee from 1 percent to 0.01 percent • Excise of Jet fuel tax cuts (Until 30 Jun 2022) • Import tax exemption for medicines, medical supplies, and medical tools to use against COVID-19 • The penalty exemption for the government construction, which has delivered the final installment • Exemption of license fees on businesses which sell liquor, tobacco, and cards
2. Measures to support the tourism sector	
We Travel Together	The government subsidizes 40 percent for hotel accommodation per night, up to nights per person for a total of 2 million rooms with e-voucher up to 600 Baht per room per night and airplane ticket cashback up to 3,000 Baht. The program has been extended for additional 1.5 million room nights and extended program until the end of October 2022.
Tour Tiew Thai	The government subsidizes 40 percent of tourist package costs up to 5,000 Baht per person for a total of 200 thousand persons, a limit of 5,000 million baht, which has been extended to the end of October 2022
Measures to reopen for foreign tourists	Remove the mandatory quarantine for inbound traveling from June 1st, 2022, and then terminated the Thailand Pass Program on July 1st, 2022, for those who have been vaccinated to present proof of vaccination PCR or Professional ATK valid up to 72 hours prior to travel, including health insurance covering medical treatment in Thailand with a minimum limit of 10,000 US dollars.
3. Measures to support businesses and SMEs	
Financial measures for SMEs	• Debt restructuring through Asset Warehousing with Buy-Back options under the 2020 Soft Loan Emergency Decree (totaling 100 billion Baht) • BOT's policies for affected borrowers include; ⇒ Providing financial institutions assistance to debtors by considering the appropriation of credit types and risk levels, such as (i) Debt restructuring, (ii) Providing working capital and additional liquidity, (iii) Consideration of postponed debt repayment, and (iv) Easing of other conditions as appropriate ⇒ Additional measures to support small business debtors with debt consolidation ⇒ Utilizing criteria for classification and flexible bank reserves ⇒ Measures to support and mitigate debt for borrowers with multi-creditors (DR BIZ program) by the Bank of Thailand ⇒ Reduction of interest rates and Financial Institutions Development Fund (FIDF) fee as well as the adjustment of default interest calculations for debt repayment ⇒ The adjustment of default interest calculations for debt repayment • Support Small and Medium Enterprises' (SMEs) accessibility to public procurement • Setting the new standard for credit term in Thailand (Trade debtors must settle within 3 - 45 days) • Tax and fee measures to support debt restructuring with exemptions of Income tax, value-added tax (VAT), Specific Business Tax, and revenue stamp to debtors and creditors, as well as easing bad debt disposal from accounts receivable of creditors for debt restructuring of debtors under financial institutions, non-financial institution, and other creditors who have negotiated with financial institutions in accordance with the BOT regulations

Key economic measures to remedy and mitigate impacts from COVID-19 outbreak and measures to reduce the impact of rising product prices (cont.)

Measures	Details
3. Measures to support businesses and SMEs (cont.)	
Measures to support financial liquidity	• Loans for businesses with Financial Rehabilitation measures (totaling 250,000 million Baht) under the 2020 Soft Loan Emergency Decree • Loan for small entrepreneurs (SMEs Bank) (totaling 10,000 million Baht) • Thai tourism recovery relief loan scheme by GSB (totaling 5,000 million Baht) • Loan for the local economy (SMEs Bank) (totaling 50,000 million Baht) • Land guarantee scheme for SMEs by GSB (totaling 10,000 million Baht) • GSB SMEs to help SMEs operators by GSB (totaling 5,000 million Baht) • EXIM Biz Transformation Loan (totaling 5,000 million Baht) • Loan for job creation, and career creation by GSB (totaling 5,000 million Baht) • SMEs D Plus loans, SMEs D loans for investment, and SMEs D loans to enhance liquidity (totaling 15,000 million Baht) (SMEs Bank) • Soft Loan for re-open accommodation businesses and the accommodation supply chain by GSB (totaling 5,000 million Baht)
Measures to support financial liquidity (credit guarantee)	• SMEs portfolio guarantee scheme: Thai fight COVID-19 (under portfolio guarantee scheme phase 9 worth 150 billion Baht) (Thai Credit Guarantee Corporation: TCG) (the budget of 5,000 million Baht) • Micro portfolio guarantee scheme: Thai fight COVID-19 (under portfolio guarantee scheme phase 4 worth 25 billion Baht) (TCG) • Loan Guarantee scheme under the 2020 Soft Loan Emergency Decree • Portfolio Guarantee Scheme special phase (Soft Loan Extra worth 90 billion Baht)
Long-term resident vis	The scheme aims to attract foreigners for long-term stay in Thailand, targeted high potential and wealthy people, in order to stimulate the economy, investment, and employment by drawing 1 million long-term residents. This program is expected to increase 1 trillion Baht of domestic spending, boost domestic investment by 800 billion Baht, generate 250 billion Baht in tax revenue, as well as increase the number of experts in various fields for industrial and business sectors.
4. Measures to support affected workers	
Increasing unemployment benefits	• Increasing unemployment compensation for the insured workers under section 33, receiving compensation by 50 percent of their wage up to 90 days in case they are laid off or resigned • Protection of workers under chapter 33 in case of being laid off or resigned
Entrepreneurs and the section 33, 39, and 40 remedy schemes	• Compensation support to insurers under section 33 in businesses affected by government measures in 13 dark-red zone provinces, Compensation support to entrepreneurs of 3,000 Baht per person, up to 200 persons, and Compensation support to section 33 of 2,500 Baht per person by extending the period compensation until Mar 2022 • Compensation support to insurers under section 39, and section 40 in businesses affected by government measures in the maximum restriction areas, including; (1) Compensation support to section 39 of 5,000 Baht per person (2) Compensation support for insurers under section 40 as follow; (i) Compensation in 16 dark-red zone provinces of 5,000 Baht per person, (ii) Compensation in 13 dark-red zone provinces of 5,000 Baht per person, and (iii) Compensation in 3 additional provinces of 5,000 Baht per person by extending the period compensation until Mar 22 • Compensation support insurers under section 39 and section 40, who are engaged in the entertainment business and self-employed persons that are still unable to work due to the temporary closure of businesses following the government's order, by 5,000 Baht per person for 1 month, starting the first round of transfer on Dec 29, 2021, and the next round on Jan 7 until Mar 31, 2022

Key economic measures to remedy and mitigate impacts from COVID-19 outbreak and measures to reduce the impact of rising product prices (cont.)

Measures	Details
5. Measures to support expenses	
Measures of agricultural insurance programs	• Rice: rice farmers income insurance, the crop year 2021/22 (totaling 13,604 million Baht), and the additional first round crop year 2021/22 including, loan for the first crop of paddy rice storage (totaling 26,255 million Baht), a loan to incentivize to enhance value-added by agricultural institutions (totaling 15,562 million Baht), a compensation scheme for rice traders in keeping rice stocks (totaling 540 million Baht), and production insurance the crop year 2022 (totaling 1,925 million Baht) • Maize: maize farmers income insurance, the crop year 2021/22 (totaling 1,863 million Baht), and the additional measures for the crop year 2021/22, loan to incentivize to storage production and enhance value-added by agricultural institutions, the crop year 2021/22 (totaling 1,030 million Baht), a compensation scheme for production storage, the crop year 2021/2022 (totaling 1,515 million Baht), and maize insurance, the crop year 2022 (totaling 224.44 million Baht) • Cassava: cassava farmers income insurance, the crop year 2021/22 (totaling 6,811 million Baht), and the additional measures for the crop year 2021/22, increase the productivity of cassava cultivation, the crop year 2021/22 (totaling 41.4 million Baht), loan to incentivize to storage production and enhance value-added by agricultural institutions, the crop year 2021/22 (totaling 500 million Baht), a compensation for storage, the crop year 2021/2022 (totaling 225 million Baht), and program to increase productivity of cassava production, the crop year 2021/2022 (totaling 10 million Baht) • Oil Palm: farmers income insurance for the year 2021/22 (totaling 7,660 million Baht) • Rubber: loan for rubber processing (totaling 2,980.24 million Baht), farmer income insurance phase 1-3 (totaling 46,789 million Baht), promoting the use of rubber by government agencies (totaling 1.5 million Baht), supporting credit for rubber product entrepreneurs phase 2 (totaling credit 25,000 million Baht), credit line for farmers' institutions for collecting rubber (totaling 1,400 million Baht), and loan for rubber wood and products entrepreneurs (totaling 20,000 million Baht)
Measures to support energy expense	• Reduction of excise tax on diesel by 5 baht per liter (21 Sep - 20 Nov, 22) • Diesel price subsidies by the Oil and Fuel Fund (Oct - Dec 22) • Additional gas subsidy for LPG users who hold social welfare cards by 100 baht per 3 months (Oct - Dec 22) • Discount of LPG cost by 100 baht per month for 1,500 street vendors with social welfare cards (Oct - Dec 22) • Discount of gasohol by 5 baht per liter, totaling 50 liters, for 157 thousand motorcycle-taxi drivers (May - Jul 22) • Maintain the NGV retail price at 16.59 baht per kg (From 16 Sep 22) • Quota for purchasing LPG at a constant price of 13.62 baht per kg for taxi drivers who are in the "Giving Breath Project" for 10,000 baht per month (16 Sep - 15 Dec 22) • Electricity Discount by reducing FT fees for 4 months for 20 million households using less than 300 units of electricity (Sep - Dec 22) • Electricity Discount by reducing FT fees for households using between 301 - 500 units of electricity by a step-rate ranging from 15 - 75 percent (Sep - Dec 22) • Reduction of contribution to Social Security Fund from 5 percent of monthly wage to 1 percent for 11.2 million employers and insures under Section 33 (May-Jul 22) • Reduction of contribution to Social Security Fund from 9 percent to 1.9 percent, or from 432 baht per month to 91 baht per month for 1.9 million insurers under Section 39 (May - Jul 22) • Maintaining the ex-refinery selling price of LPG excluding VAT at 19.9833 baht per kilogram (1 Oct - 31 Oct 22) • Extending the period for collecting excise tax at zero rate for diesel (B0) and fuel oil used in electricity generation (16 Sep 22 - 15 Mar 23)
Living costs support scheme	The special discount stores with 700 locations across country, by the Ministry of Commerce, provide the essential goods for people with up to 62 percent lower than market price (Aug – Oct 2022).
Measures to reduce the cost of chemical fertilizers and animal feed materials	• **Fertilizer; short-term measures (2022)** (i) a fertilizer management project to support farmers experiencing high chemical fertilizer costs; (ii) promoting the organic production and using of organic fertilizers; (iii) developing community soil management and fertilizers; (iv) loan for local businesses through the BAAC; and (v) transferring knowledge to farmers about the proper and efficient use of fertilizers; **short-term measures (2022 - 2024)** by promoting the domestic fertilizer production particularly potash and negotiations on the exchange of fertilizer plants with Malaysia and other countries; and **long-term measures (2022 - 2026)** by establishing a chemical fertilizer price stabilization fund and negotiating the price of nitrogen-phosphorus fertilizer and potassium with Malaysia and China as the main fertilizer producer countries in the region. • **Animal Feed; Phase 1** Promoting domestic raw materials particularly husked rice, bran, broken rice, and cassava chips and encouraging farmers to use more local ingredients, including adjusting animal feed formulas; **Phase 2** Introducing local recipes with lower cost and proactively accommodating farmers to be able to access to motor pool lending and other services of animal feed centers, and **Phase 3** Advising farmer to utilize local materials and products as well as raw material analysis service for farmers.

Projection for 2022 and 2023[1/]

	Actual Data		Projections		
			2022		2023
	2020	2021	Aug 15, 2022	Nov 21, 2022	Nov 21, 2022
GDP (at current prices: Bil. Baht)	15,636.9	16,178.7	17,634.8	17,634.8	18,781.1
GDP per capita (Baht per year)	224,962.4	232,160.1	252,464.9	252,928.1	268,144.2
GDP (at current prices: Bil. USD)	499.7	505.6	503.9	500.5	521.7
GDP per capita (USD per year)	7,189.6	7,255.0	7,213.3	7,165.1	7,448.4
GDP Growth (CVM, %)	-6.2	1.5	2.7 - 3.2	3.2	3.0 - 4.0
Investment (CVM, %)[2/]	-4.8	3.4	2.8	2.6	2.5
Private (CVM, %)	-8.2	3.3	3.1	3.9	2.6
Public (CVM, %)	5.1	3.8	2.0	-0.7	2.4
Private Consumption (CVM, %)	-1.0	0.3	4.4	5.4	3.0
Government Consumption (CVM, %)	1.4	3.2	-0.2	-0.2	-0.1
Export volume of goods & services (%)	-19.7	10.4	9.0	8.2	8.5
Export value of goods (Bil. USD)[3/]	227.0	270.6	291.8	290.9	293.8
Growth rate (%)[3/]	-6.5	19.2	7.9	7.5	1.0
Growth rate (Volume, %)[3/]	-5.8	15.5	3.4	3.2	1.0
Import volume of goods & services (%)	-14.1	17.9	5.6	6.8	3.6
Import value of goods (Bil. USD)[3/]	186.1	230.7	259.3	271.8	276.1
Growth rate (%)[3/]	-13.8	23.9	12.4	17.8	1.6
Growth rate (Volume, %)[3/]	-10.5	17.9	3.4	5.3	2.6
Trade balance (Bil. USD)	40.9	39.9	32.6	19.1	17.7
Current account balance (Bil. USD)	21.2	-11.0	-8.0	-18.2	5.6
Current account to GDP (%)	4.2	-2.2	-1.6	-3.6	1.1
Inflation (%)					
CPI	-0.8	1.2	6.3 - 6.8	6.3	2.5 - 3.5
GDP Deflator	-1.3	1.9	5.8 - 6.3	5.8	2.5 - 3.5

Source: Office of the National Economic and Social Development Council, 21st November 2022

Note: [1/] Data was calculated based on new National Accounts Office's Series, published on www.nesdc.go.th

[2/] Investment means Gross Fixed Capital Formation

[3/] Export and import base on the Bank of Thailand's data

www.nesdc.go.th