ธนาคารแห่งประเทศไทย

Monetary Policy Report

December 2021

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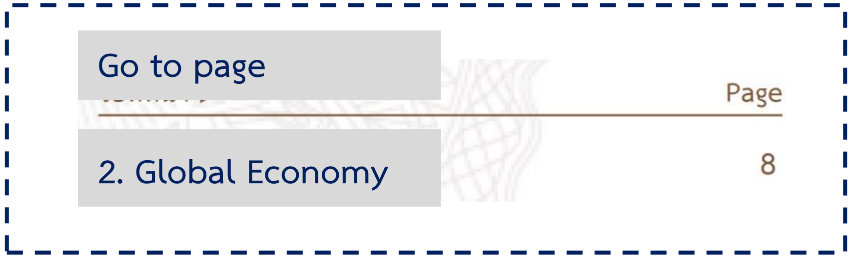

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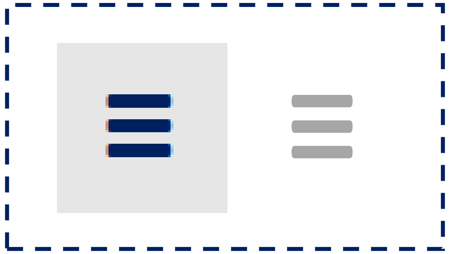

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Monetary Policy Report

The Monetary Policy Report is prepared quarterly by staff of the Bank of Thailand with the approval of the Monetary Policy Committee (MPC). It serves two purposes: (1) to communicate to the public the MPC's consideration and rationales for the conduct of monetary policy, and (2) to present the latest set of economic and inflation forecasts, based on which the monetary policy decisions were made

The Monetary Policy Committee

Mr. Sethaput Suthiwartnarueput	Chairman
Mr. Mathee Supapongse	Vice Chairman
Miss Vachira Arromdee	Member
Mr. Kanit Sangsubhan	Member
Mr. Rapee Sucharitakul	Member
Mr. Somchai Jitsuchon	Member
Mr. Subhak Siwaraksa	Member

Monetary Policy in Thailand

Monetary Policy Committee

Under the Bank of Thailand Act, the Monetary Policy Committee (MPC) comprises the governor and two deputy governors, as well as four distinguished external members representing various sectors of the economy, with the aim of ensuring that monetary policy decisions are effective and transparent.

Monetary Policy Objective

The MPC implements monetary policy under the flexible inflation targeting regime. While regarding medium-term price stability as its primary objective, the MPC also aims at supporting sustainable, full-potential economic growth and preserving financial stability, attributing to long-term price stability and economic sustainability.

Monetary Policy Target

On December 14, 2021, the Cabinet approved the monetary policy target for 2021, which was mutually agreed between the MPC and the Minister of Finance to set the headline inflation within the range of 1–3 percent as the target for the medium-term horizon and for 2022. In the event that average headline inflation in the past 12 months or a forecast of average headline inflation over 12 months ahead breaches the target range, the MPC shall send an open letter to the Minister of Finance to explain reasons for the breach of the target range, together with measures taken and estimated time to bring inflation back to the target. In addition, the MPC will write an additional open letter to the Minister of Finance every six months if average headline inflation based on the above criteria remains outside the target range.

Monetary Policy Instrument

The MPC utilizes the 1-day bilateral repurchase transaction rate as the policy interest rate to signal the monetary policy stance.

The MPC has adopted the managed float exchange rate regime to stabilize and limit the volatilities in the exchange rate, as to let the baht reflect economic fundamentals

Evaluation of Economic Conditions and Forecasts

The Bank of Thailand takes into account information from all sources, the macroeconomic model, data from each economic sector, as well as surveys of large enterprises, together with small and medium-sized enterprises from all over the country, and various financial institutions to ensure that economic evaluations and forecasts are accurate and cover all aspects, both at the macro and micro levels.

Monetary Policy Communication

Recognizing the importance of monetary policy communication to the public, the MPC employs various channels of communication, both in Thai and English, such as (1) publishing a press statement at 14:00 and holding a press conference regarding the results of the meeting at 14:30 on the day of the Committee meeting (2) publishing edited minutes of the MPC meeting two weeks after the meeting, and (3) publishing the Monetary Policy Report every quarter

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Data in this report is as of 21 December 2021 (1 day prior to the Monetary Policy Meeting)

1. Executive Summary

ธนาคารแห่งประเทศไทย
BANK OF THAILAND

Monetary Policy Conduct in the Fourth Quarter of 2021

At the meetings on November 10 and December 22, 2021, the Monetary Policy Committee (MPC) voted unanimously to maintain the policy rate at 0.50 percent. The Committee assessed that the Thai economy had bottomed out in the third quarter of 2021 and would continue to recover. However, the Omicron outbreak was a key risk to the growth outlook and must be closely monitored.

The MPC continued to put emphasis on supporting the economic recovery in deliberating policy decision. The Committee viewed that continued accommodative monetary policy would support economic growth and decided to keep the policy rate unchanged.

Headline inflation would rise temporarily due to supply-side factors which would likely be resolved in 2022. There was a low likelihood that inflationary pressure would continue to mount due to limited ability of businesses to pass on higher costs to customers as well as fragile labor market conditions. Nevertheless, it was deemed necessary to closely monitor inflation developments given the rapid increase in inflation rates globally.

Assessment of the Economic and Financial Outlook as the Basis for Policy Formulation

Global Economy

- **Trading partner economies would continue to grow albeit at a slower pace.** Growth rate in 2021 was expected to be lower than previously assessed due to the COVID-19 Delta outbreak in the third quarter of 2021 and prolonged supply disruption. For 2022, trading partners' growth would slow down due to the outbreaks at the beginning of the year which is during winter in the northern hemisphere, as well as the Omicron outbreak. Nevertheless, the impact would be limited to early 2022. For 2023, trading partners' growth was expected to pick up as the pandemic and supply disruption resolve.
- **Many central banks have signaled less accommodative monetary policy stances,** partly because inflation rates continue to rise above the target, and the economies continue to recover.

The Thai Economy

- **The Thai economy was projected to grow 0.9% in 2021,** slightly revised up from the previous assessment due to better-than-expected outturns towards the end of the year. **For 2022, the Thai economy was projected to grow 3.4%.** The impacts of Omicron on domestic economic activities, merchandise exports, and foreign tourist figures were assessed to be limited to early 2022. **For 2023, the economy would pick up and register a growth of 4.7%** driven mainly by the recovery in foreign tourist figures.
- **Headline inflation was projected to be within the target range throughout the forecast period. The forecasts for headline inflation were revised up to 1.2% in 2021 and 1.7% in 2022** as energy prices would rise temporarily in tandem with global crude oil prices. **Headline inflation was projected to be 1.4% in 2023.**

Financial Conditions and Financial Stability

- **Overall financial conditions in Thailand remained accommodative.** Businesses could still obtain financing although credit risks remained an financial obstacle for SMEs. **On exchange rates, the baht against the U.S. dollar and the effective exchange rate depreciated from the previous quarter.** The depreciation was due to (1) the Omicron outbreak which weighed on the recovery prospects of tourism sector and (2) major central banks adopting less accommodative monetary policy stances sooner than expected.
- **The Thai financial system remained vulnerable, especially as balance sheets of households and businesses** were affected by several waves of COVID-19 outbreaks. Such vulnerability could derail economic growth in the period ahead. It was thus deemed necessary to closely monitor their development and prepare for medium-term risks that could arise in the future.

2. Global Economy

Global Economy: Key Issues

Trading partners would continue to expand, albeit at a slower pace as uncertainties remained

Inflation in trading partner economies would continue to accelerate driven by high commodity prices, especially energy prices

Many central banks signaled a tighter monetary policy stance in response to rising inflation

Trading partner economies would continue to expand in the period ahead, albeit at a slower pace.

Assumptions on trading partners' growth

%YOY	Weight (%)	2021		2022		2023
		MPR Sep 21	MPR Dec 21	MPR Sep 21	MPR Dec 21	MPR Dec 21
United States	20.4	5.9	5.5	4.6	3.8	2.2
Euro area	9.2	5.1	4.9	4.1	4.0	2.2
Japan	13.9	2.4	1.8	2.6	2.6	2.0
China	18.1	8.2	7.6	5.2	4.9	5.1
Asia (excluding Japan and China)**	30.6	5.2	5.1	4.4	4.4	3.9
Total***	100.0	5.6	5.3	4.3	4.0	3.3

Note: *Outturns

** Asia (ex Japan and China) includes 7 countries weighted by major Thai trades' share in 2020

*** Weighted by major Thai trades' share in 2020 (13 countries) Asia (30.6%) = Singapore (5.8%) + Hong Kong (6.9%) + Malaysia (5.3%) + Taiwan (2.3%) + Indonesia (4.7%) + South Korea (2.6%) + Philippines (3.1%)

In 2021, trading partners posted a strong economic recovery from the previous year but growth would be slower overall when compared to the previous forecast. This was due to the COVID-19 outbreak and the prolonged supply disruption posing a greater impact on consumption and production than previously expected.

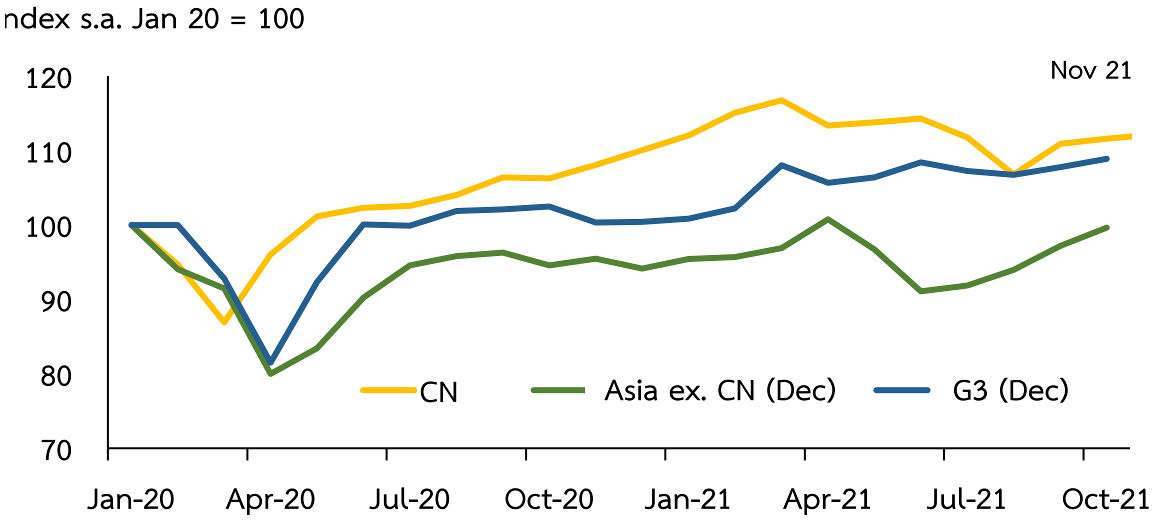
Similarly, for 2022, it was expected that trading partners would continue to expand, albeit at a slower pace than previously assessed. This was attributed to the outbreak of COVID-19 during the beginning of the year which coincides with winter for countries in the northern hemisphere such as Europe and the U.S., as well as the outbreak of the Omicron variant. In addition, it was assessed that the impact of the outbreak would be limited to early 2022 and that the economy would gradually recover thereafter.

By 2023, trading partner economies were expected to continue expanding with economic growth returning to normal levels as the outbreak subsides and supply disruption is resolved. This would also result in a less divergent growth outlook between advanced economies and emerging market economies.

Private consumption gradually recovered after the outbreak began to subside, but recovery remained fragile due to concerns of another wave of outbreak during the winter.

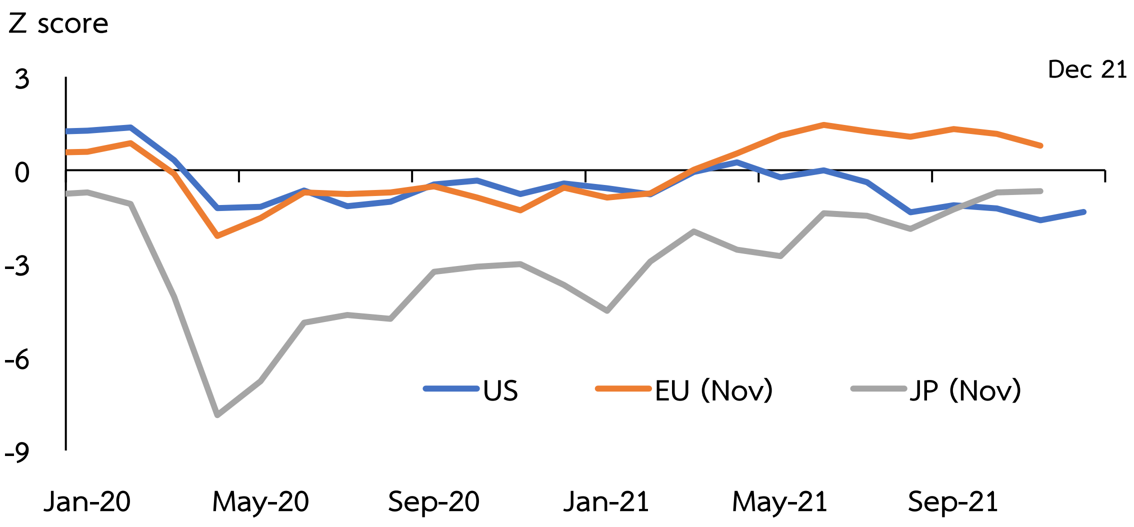
Overall, consumption picked up as containment measures were relaxed after the number of new COVID-19 cases declined. This was reflected by the increase in retail sales, especially among Asian economies. For G3 countries (U.S., Japan, and the euro area), the U.S. in particular, the pickup in retail sales was attributed to front-loaded spending ahead of the holiday seasons to avoid delays caused by the ongoing supply disruption. **However, the recovery remained fragile** as reflected in the declining consumer confidence. This was in part due to concerns over another outbreak during the winter as the euro area saw the rise in new COVID-19 cases after the re-opening, as well as concerns regarding the rising inflation.

Retail Sales



Source: CEIC

Consumer Confidence Index in G3 economies



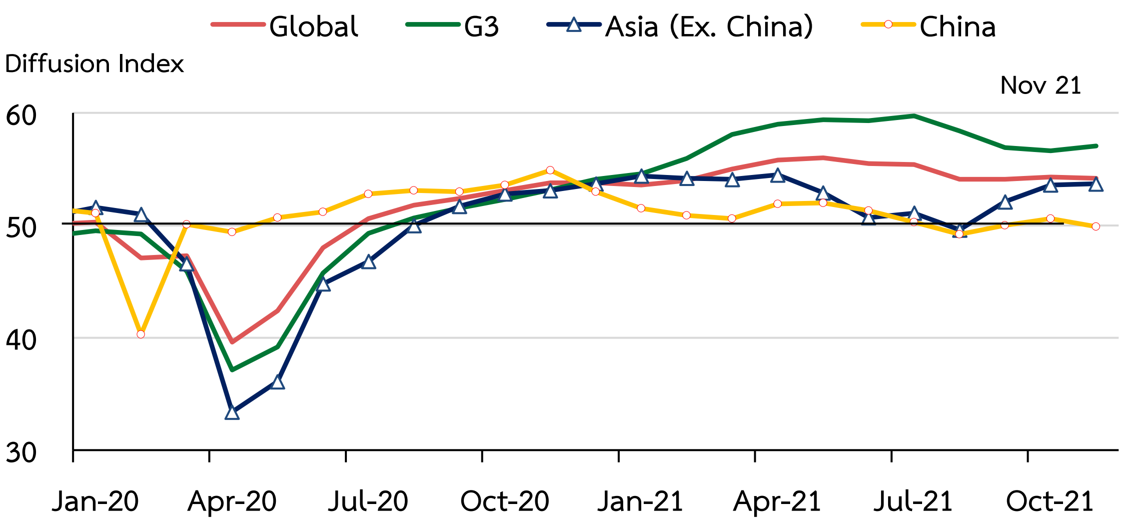
Source: CEIC

Manufacturing and exports were expected to slow down as the ongoing supply disruption would likely be prolonged further due to the new wave of COVID-19 and more stringent containment measures in some countries.

Manufacturing and exports in some countries would slow down due to the ongoing supply disruption being prolonged further. This was in part due to more stringent containment measures in several countries like China where its policy goal was to see zero new COVID-19 cases. At the same time, the shortage of freight containers and raw materials, especially electronic parts, was still an ongoing problem, while the demand for goods would also ramp up during the new year thus leading to longer delivery time.

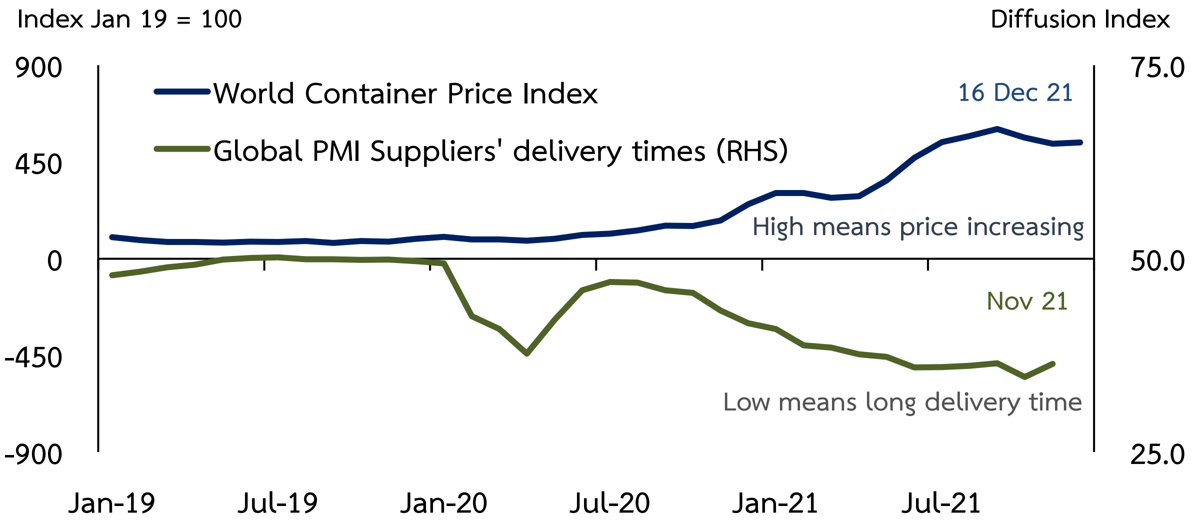
The ongoing supply disruption was expected to gradually unwind from the second half of 2022 onwards after the pandemic subsides and as economic activities gradually return to normal.

Manufacturing Purchasing Manager Index (PMI)



Source: IHS Markit, CEIC

World Container Price Index and Delivery Times

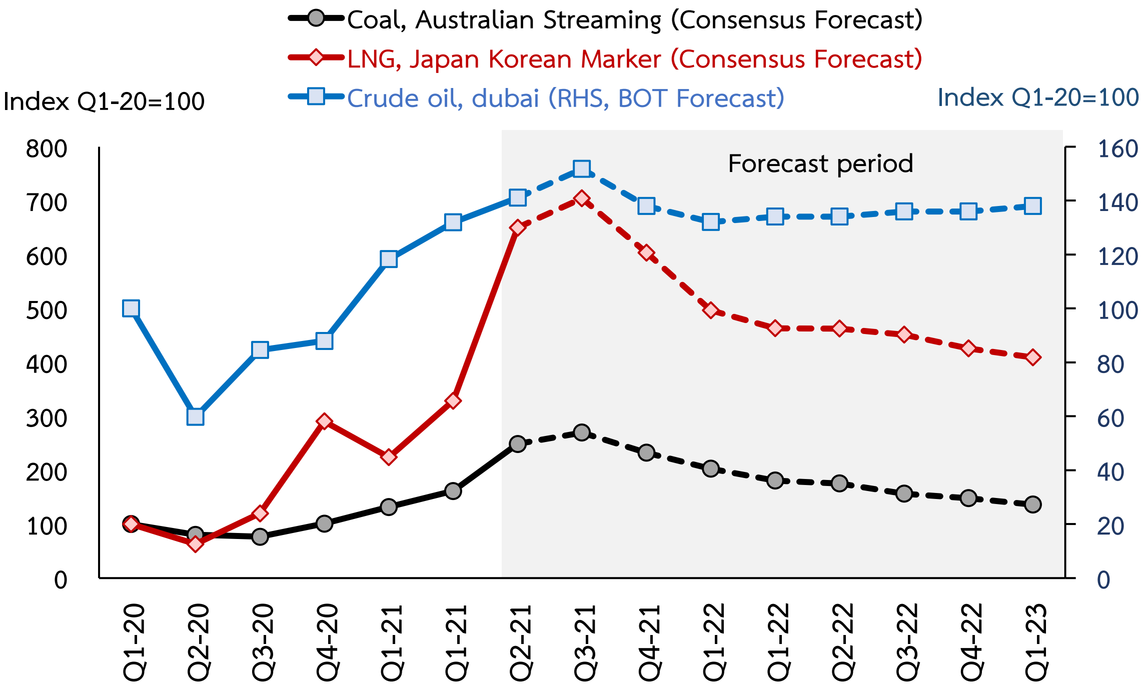


Note: Composite Container Freight Benchmark Rate per 40 Foot Box
Source: Bloomberg, JP Morgan

Global energy prices remained high in Q4/2022 due to increased demand for natural gas and oil during the winter. Onwards, global energy prices would declined in Q1/2022 due to higher oil output.

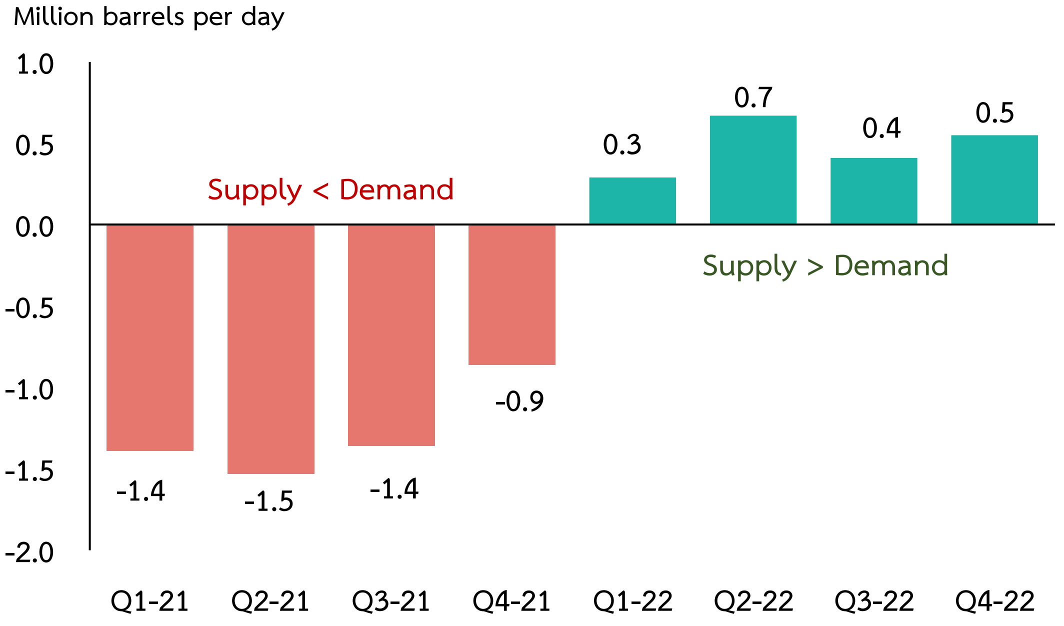
In the fourth quarter of 2021, the global oil market tightened due to increased demand. This included increased demand for oil during the winter for electricity generation as a substitute for natural gas and coal whose prices were high, as well as increased demand from the gradual economic recovery. However, the U.S. and its partners releasing crude oil from their strategic petroleum reserves would likely help ease market conditions. **In this regard, it was expected that the global oil market conditions would ease from the first quarter of 2022 onwards as increases in oil supply surpass demand.**

Global energy prices forecasts



Source: PTT, Investing., World Bank, Energy and Metals Consensus forecast, calculations by BOT

Demand-Supply Gap in the global oil market



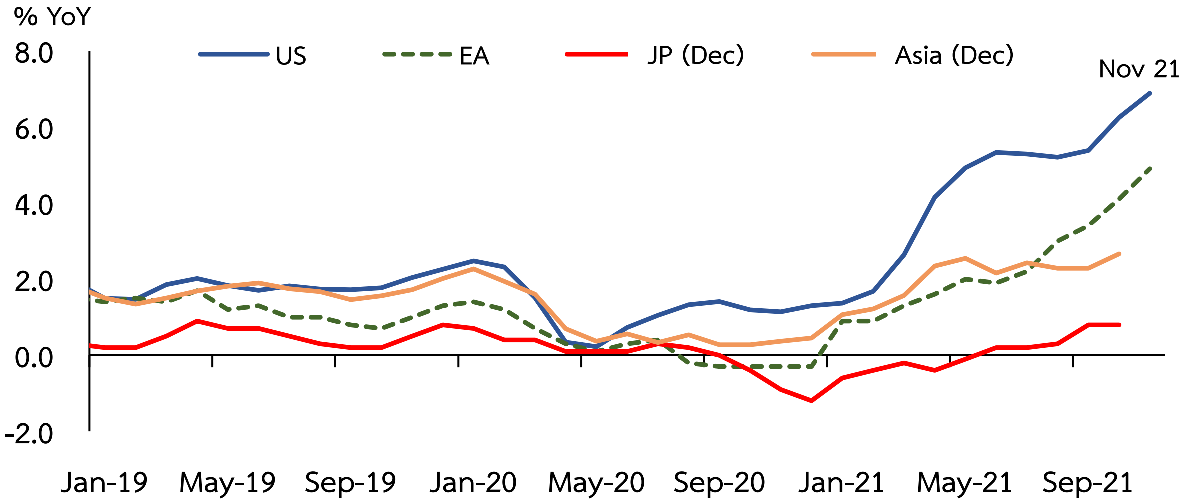
Source: U.S. Ministry of Energy's assessment as of 7 Dec 2021, calculations by BOT

Inflation continued to pick up in many countries due to high commodity prices, especially energy prices, and supply disruption which led to higher prices of certain goods. Inflation among EMs, especially EM Asia, was lower than in AEs partly due to government measures.

Inflation continued to pick up in advanced economies (AEs), especially the U.S., driven by economic recovery and higher energy prices. **Meanwhile, inflation in emerging market economies (EMs) was not as high overall.** Some EMs are net energy importers and therefore saw higher inflation. Nevertheless, inflation in many EM Asia countries remained low due to government measures such as energy price controls in Indonesia and Singapore, reduced energy taxes in South Korea, and government price subsidies in the Philippines and Malaysia.

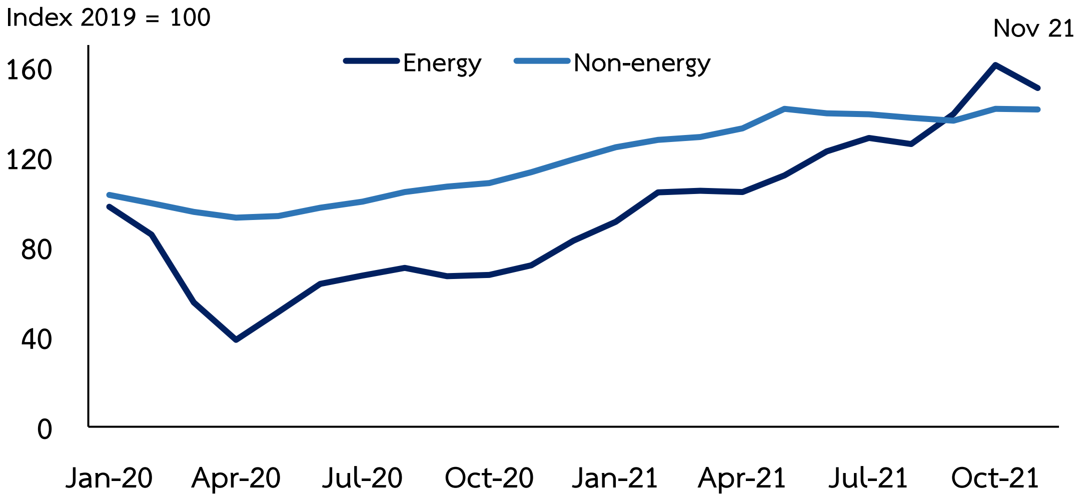
The increase in energy prices that drove the recent increase in inflation was partly a result of temporary supply shortages. Notwithstanding, inflation remained on the rise globally partly due to the ongoing supply disruption.

Headline Inflation



Note: Asia include China, Hong Kong, Indonesia, South Korea, Taiwan, Malaysia, the Philippines, and Singapore
EA stands for the Euro Area
Source: CEIC

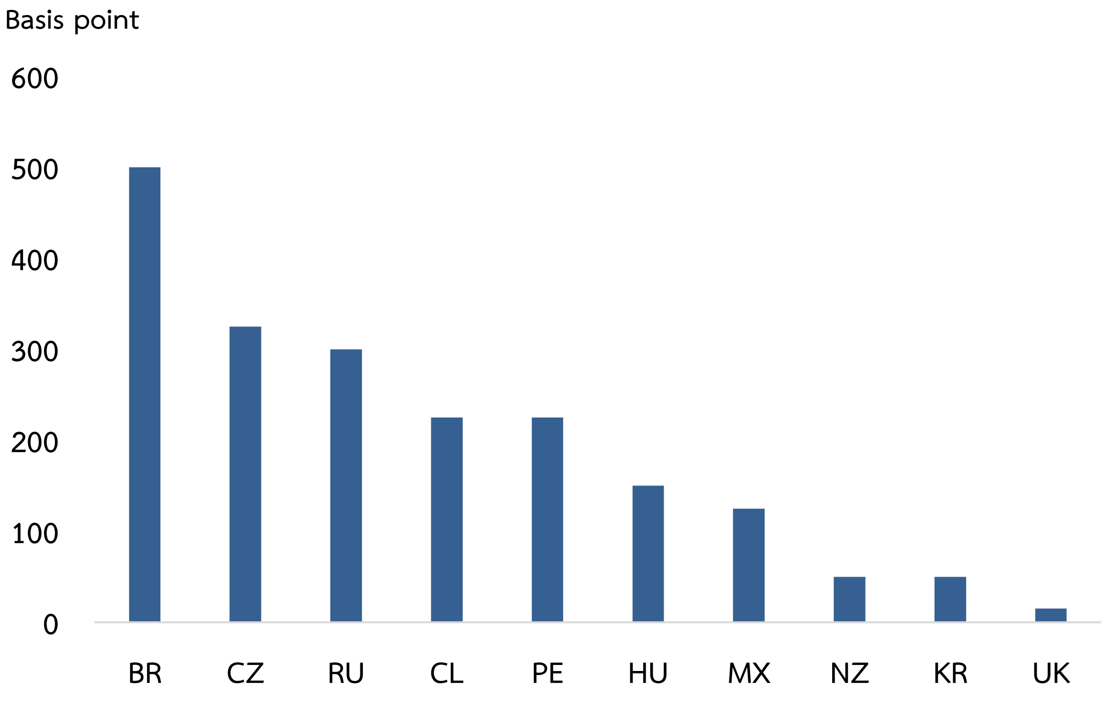
Commodity Price



Note: Energy includes Coal, Crude oil, Gas
while Non-energy includes Agricultural products, Fertilizers, Metals & Minerals
Source: World Bank Commodities Price Data

Many central banks signaled a tighter monetary policy stance partly due to rising and above-target inflation, as well as prospects of a strong economic recovery.

Changes in policy rate of central banks in H2/2021



Note: The Monetary Authority of Singapore tightened its monetary policy by increasing the slope of the exchange rate framework (policy band) on Oct 2021

Source: Bloomberg, calculations by the Bank of Thailand (as of 29 Dec 2021)

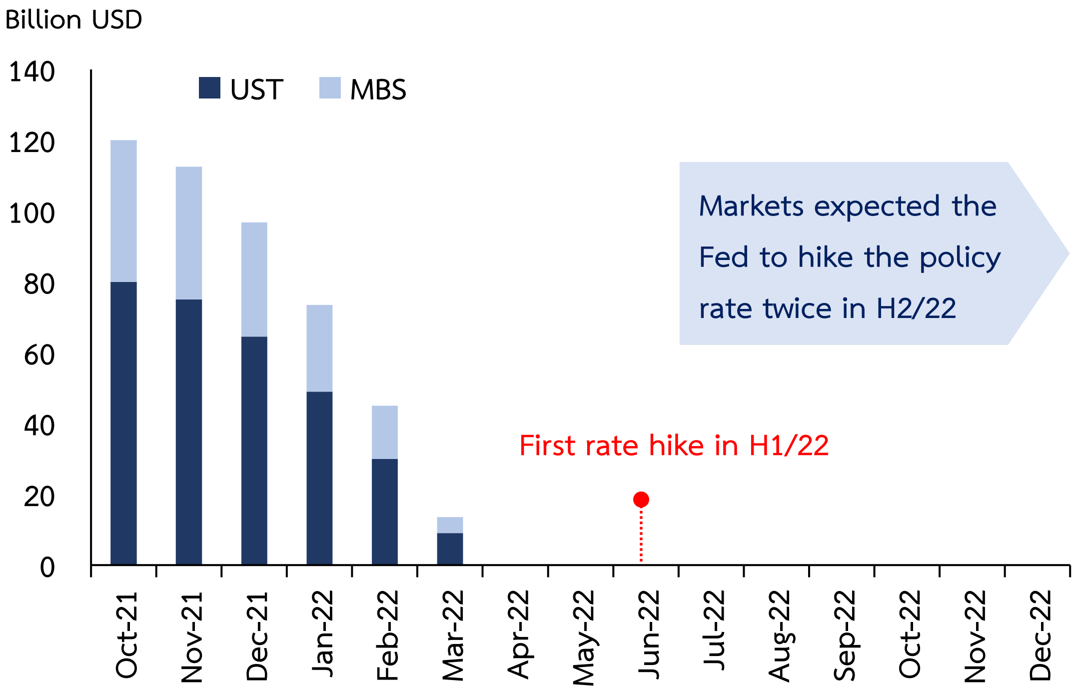
On the whole, AE central banks would keep their policy rates low to support economic recovery which was still subjected to large degrees of uncertainty. However, **rising inflation has pressured many central banks into signaling a tighter monetary policy stance.** For instance, the Bank of England began raising its policy rate at the MPC Meeting in December 2021.

Most central banks in Asia were also likely to keep their policy rates low to support the gradual economic recovery that has been underway after the pandemic started to subside. The Bank of Korea had its second policy rate hike in November 2021 in response to rising inflation which exceeded the target. The decision was also underpinned by concerns over elevated household debt levels. Meanwhile, the People's Bank of China reduced the Required Reserve Ratio (RRR) to shore up economic growth which had slowed down following the implementation of measures to cool down the Chinese property market, and to maintain overall growth momentum in 2022.

Many EM central banks also hiked their policy rates. This was mostly the case for countries that faced mounting inflationary pressure such as Brazil, the Czech Republic, Russia, Colombia, Peru, Hungary, and Mexico.

In the fourth quarter of 2021, the Federal Reserve and the European Central Bank announced a tapering of their asset purchases given that the economic recovery was underway and inflation was above target.

Projection of Fed's tapering in 2021-2022



Source: Bloomberg, calculations by the Bank of Thailand

The Federal Reserve (Fed) announced its plans to taper its asset purchases (QE tapering) in November 2021. An additional announcement in December 2021 stated that the Fed would speed up the tapering process which would be completed by March 2022. The announcement was underpinned by a strong economic recovery, strong labor markets, and consistently high inflation. In addition, **the December 2021 FOMC Statement also indicated that the Fed might start raising the policy rate in the first half of 2022, with two additional rate hikes in the second half of the year.**

The European Central Bank (ECB) announced that it would gradually ease its quantitative easing operations. The ECB would reduce asset purchases under the Pandemic Emergency Purchase Programme (PEPP) starting from the fourth quarter of 2021 and would conclude in March 2022. Nevertheless, asset purchases under the Asset Purchase Programme would continue. The policy rate would likely remain low for the foreseeable future in order to support the economic recovery which was subjected to large degrees of uncertainty.

3. The Thai Economy

The Thai Economy: Summary of Key Issues

The Thai economy would continue to recover. The Omicron outbreak would impact the Thai economy in early 2022 amidst high uncertainty.

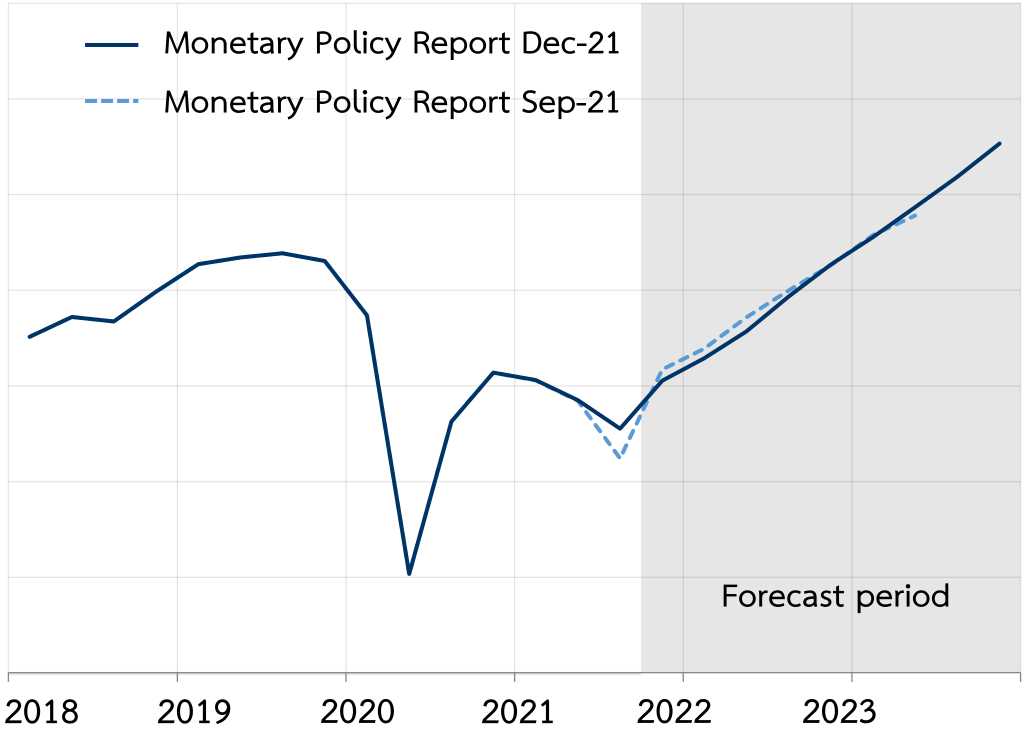
The recovery would be uneven across sectors. Tourism-related services would recover at a slower pace than other sectors.

Labor market remained fragile and would recover more slowly than the overall economy. It would take a long time to return to pre-COVID levels.

Headline inflation would rise temporarily in tandem with energy prices but would remain within the target range

The Thai economy would grow 0.9% in 2021 and continue to register positive growth in 2022 and 2023 at 3.4% and 4.7%, respectively. Growth would be driven by the recovery in domestic spending and the gradual return of foreign tourists despite some impacts from the Omicron outbreak in early 2022.

Real GDP



Source: Office of the National Economics and Social Development Council, forecast by Bank of Thailand

Click for more details on forecast assumptions related to the Omicron outbreak, oil prices, etc.

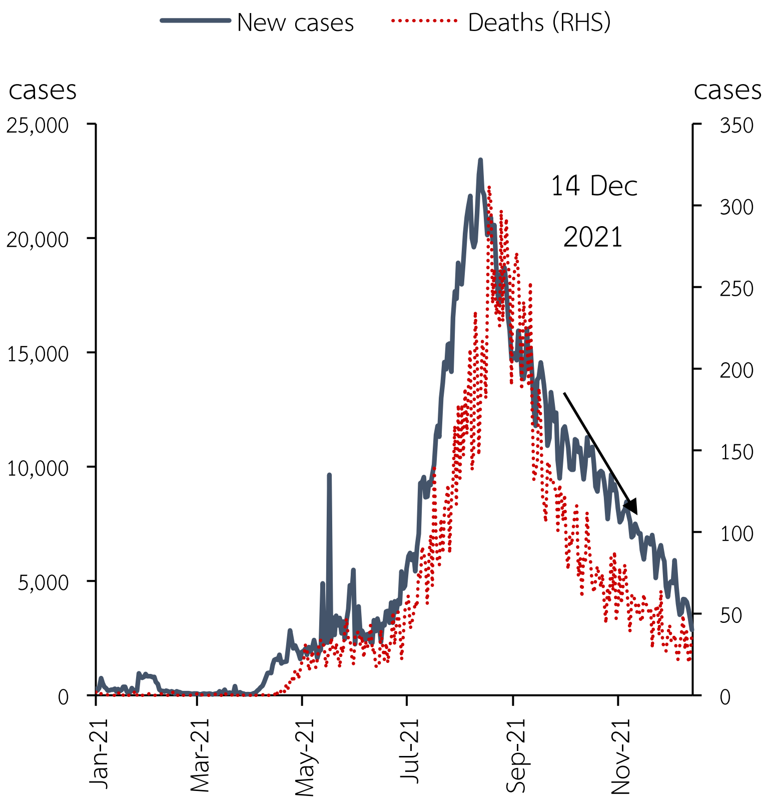
%YoY	2020 (outturn)	2021 Sep-21	2021 Dec-21	2022 Sep-21	2022 Dec-21	2023 Dec-21
GDP Growth	-6.1	0.7	0.9	3.9	3.4	4.7
Domestic demand	-1.6	1.9	1.7	4.7	4.3	3.2
Private consumption	-1.0	0.0	0.4	5.7	5.6	3.8
Private investment	-8.4	4.2	4.0	6.7	5.4	5.0
Government consumption	0.9	3.3	2.1	-0.5	-0.3	0.3
Public investment	5.7	8.0	5.5	6.4	3.6	1.4
Exports of goods and services	-19.4	8.7	9.3	6.1	5.5	9.7
Imports of goods and services	-13.3	15.3	17.4	4.8	4.6	4.6
Current Account (billion, U.S. dollars)	21.2	-15.3	-10.0	1.0	1.5	19.7
Value of merchandise exports	-6.5	16.5	18.0	3.7	3.5	2.9
Value of merchandise imports	-13.8	23.8	22.3	4.8	4.8	3.7
Number of foreign tourists (million persons)	6.7	0.15	0.28	6.0	5.6	20.0

Overview of economic forecasts

Economic Growth	2021	2022	2023
	0.9%	3.4%	4.7%
Private Consumption	Revised up on account of outturns in the third quarter which registered a smaller contraction than expected. For the fourth quarter, private consumption would continue to recover as the outbreak gradually subsides, vaccination targets are met, and fiscal stimulus measures are rolled out.	Growth would be strong driven by a continued recovery in economic activities and government measures despite a lower growth rate compared with the previous forecast in early 2022 due to the impacts of Omicron outbreak on consumer confidence.	The recovery would continue.
Private Investment	Private investment would continue to grow but at a slower pace than previously assessed because some large investment projects are likely to be delayed, as well as domestic demand and business confidence are affected by the Omicron outbreak.		Growth would continue in tandem with domestic demand and the recovery in the tourism sector
Merchandise exports (Value)	Growth would be higher than expected owing to strong growth in export volumes as well as higher export prices which are in line with higher world commodity prices and costs of transportation.	Growth would be lower than the previous forecast due to the the impacts of Omicron outbreak on demand for Thai goods, and the ongoing supply disruption which would likely persist in early 2022.	Growth would continue at a slower pace from 2022, in line with the global economic outlook
Foreign tourists	Foreign tourist figures would recover after the government announced a quarantine-free travel policy for foreign tourists. As a result, foreign tourist figures were projected to increase from 0.15 million to 0.28 million persons in 2021.	Foreign tourist figures was revised down from 6 million to 5.6 million persons due to the Omicron outbreak which would affect confidence in international travel in early 2022.	Foreign tourist figures would see a strong rebound due to the gradual admission of foreign tourists. Foreign tourist figures were expected to be around 20 million persons in 2023.

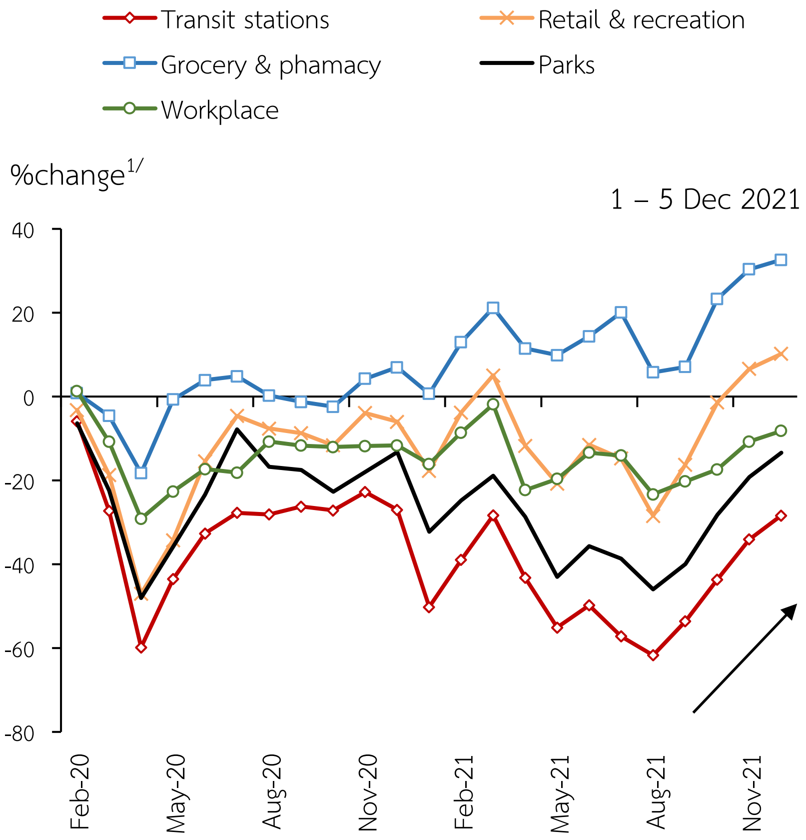
Latest outturns in the fourth quarter of 2021 indicated an improvement in the COVID-19 situation in Thailand and a gradual recovery in domestic travel and economic activities following the relaxation of containment measures.

The COVID-19 situation in Thailand



Source: Department of Disease Control

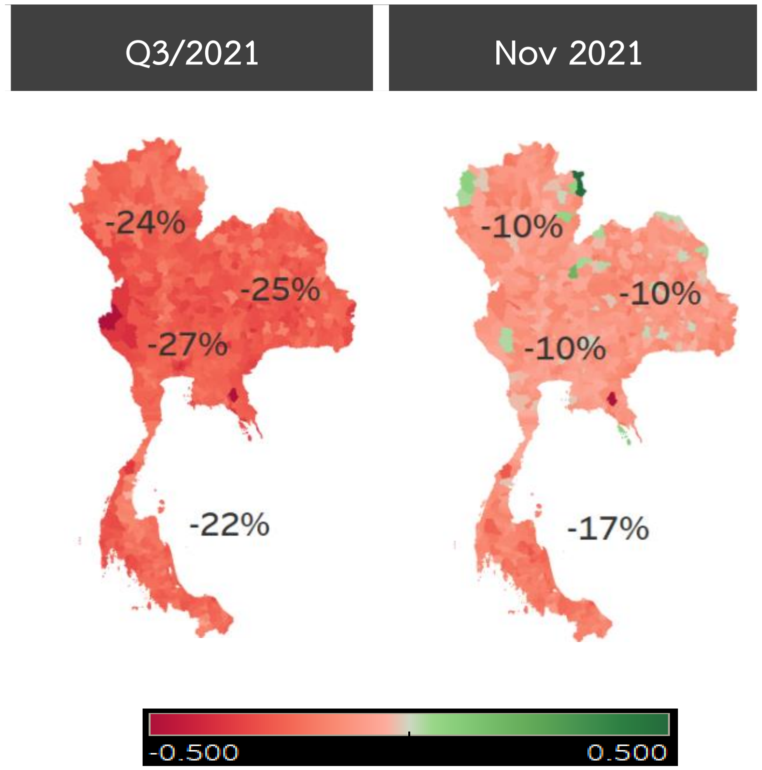
Google Mobility data (Thailand)



1/ Change vis-à-vis the mid-point of each day between 3 Jan - 6 Feb 2020

Source: Google

Facebook Movement Range (Thailand)



Unit: % change from Feb 2020

Source: Facebook Data for Good

Fiscal stimulus would play a major role in shoring up consumer purchasing power in the period ahead.

Examples of government measures in the second half of 2021 and the first half of 2022

	budget (bn baht)	Time period	Spending ratio[1/] as of 30 Nov 2021
The More You Spend, the More You Get Scheme	10.0	Second half of 2021	1.8%
Half-Half co-payment scheme (phase 3)	126.0		72.3%
Extra allowance for state welfare card holders (phase 3)	24.9		93.5%
Additional allowance for vulnerable group	4.4		55.9%
Measure to remedy workers and entrepreneurs in the urgent phase[2/]	112.0	Aug – Dec 21	92.8%
We Travel Together campaign (phase 3)	6.0	Oct 21 – Apr 22	12.0%
Travel around Thailand campaign	5.0		0.1%
Measure to promote and maintain employment for SMEs	37.5	Nov 21 – Jan 22	22.6%
Measure to remedy insured persons in entertainment businesses	0.6	Dec 21 – Jan 22	-
Shop and Payback scheme 2022	6.2[3/]	1 Jan – 15 Feb 22	-
Total	325.8		

Measures with increased budget or extended period (compared with *Monetary Policy Report* September 2021)   Newly announced measures

Note: [1/] Spending ratio = accumulated spending (both public and private) / target for each project
[2/] This includes measures that target taxi drivers and motorcycle taxi drivers
[3/] Estimation of the government's income loss from lower personal income tax

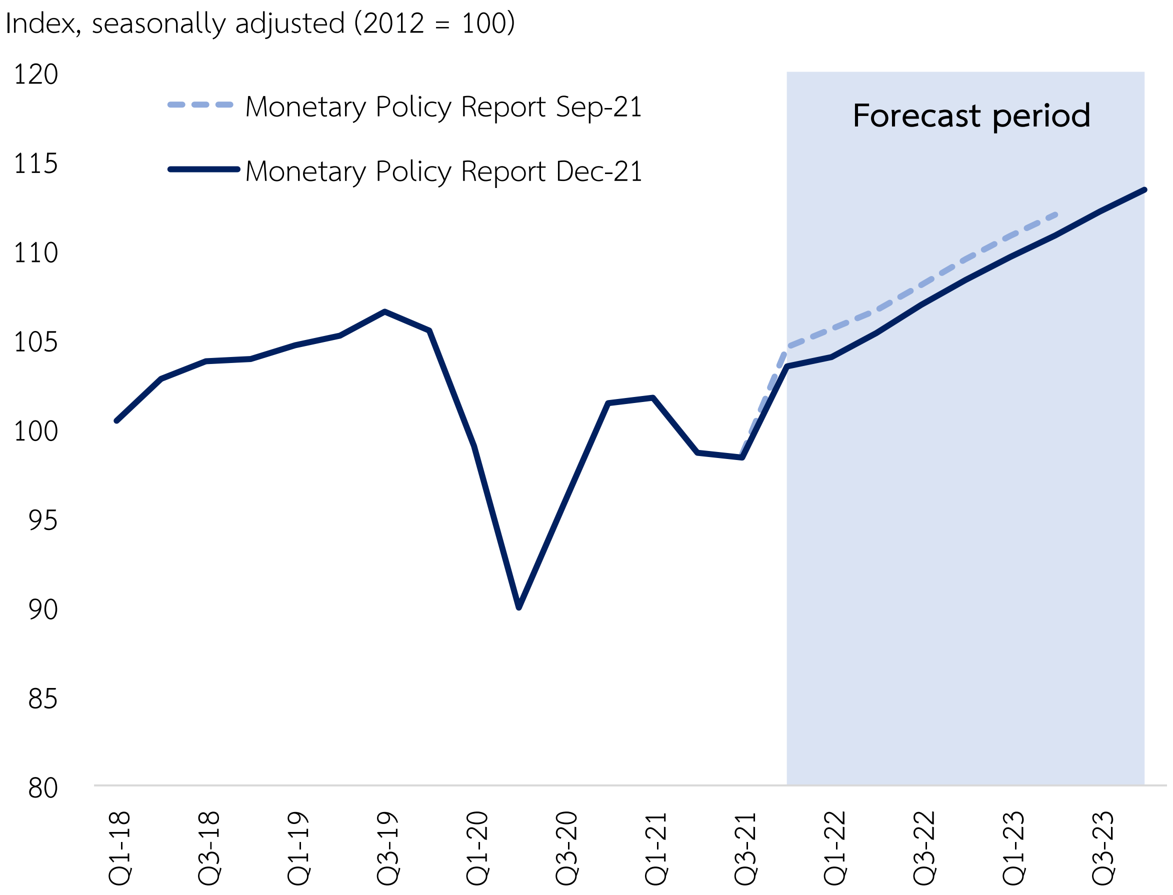
Source: The Cabinet Resolution, compiled by Bank of Thailand and Ministry of Finance

The government announced additional measures to **boost consumption and maintain employment** in the fourth quarter of 2021. These included (1) increasing budgets for the previously approved programs such as the Half-Half co-payment scheme, extra allowance for state welfare card holders and vulnerable groups, and the More You Spend, the More You Get scheme, and (2) new measures to promote and maintain employment for SMEs.

Nevertheless, fiscal stimulus effects would gradually fade out in the first quarter of 2022. It is necessary to monitor the approval of additional measures as well as risks related to relatively low spending ratios of some measures.

Private investment would recover on the back of domestic and external demand, as well as investment in large-scale infrastructure projects. However, the growth rate would be lower than previously assessed.

Private investment outlook



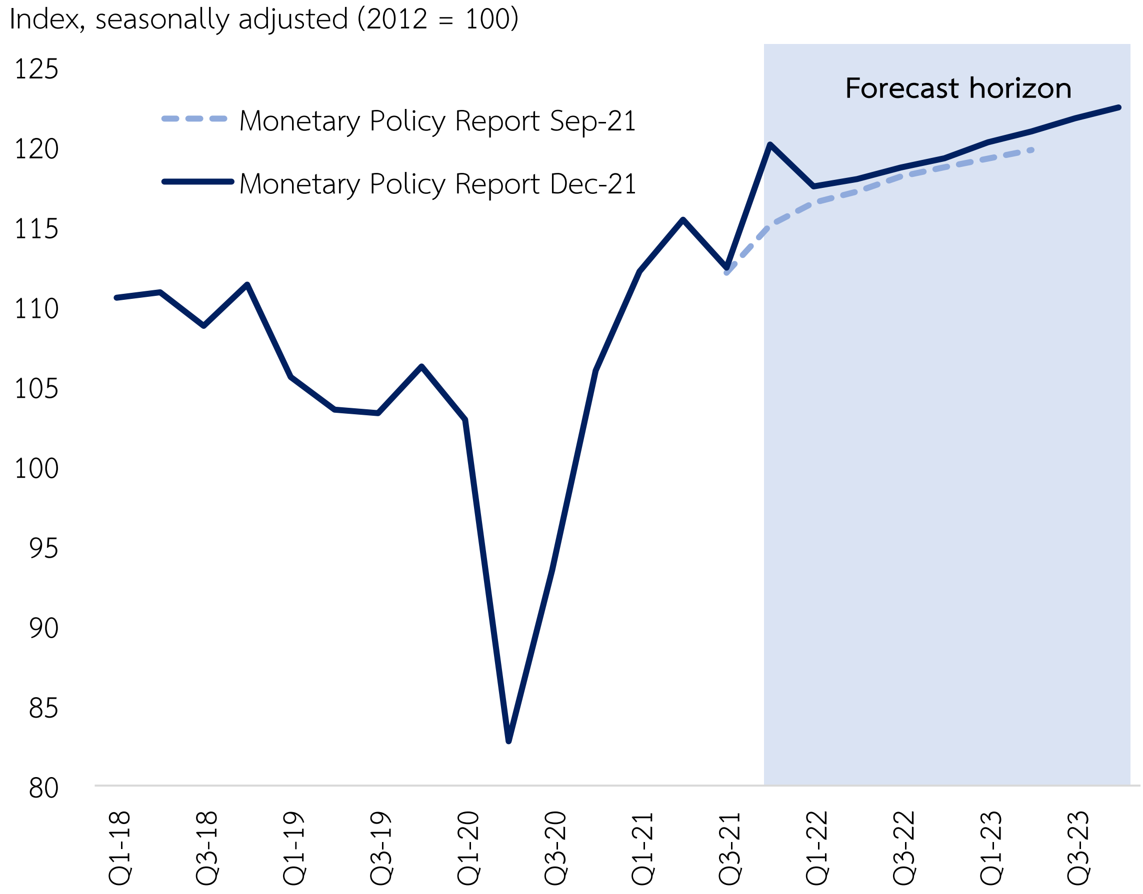
Private investment would grow at a lower pace than previously assessed owing to

(1) Delays in some large-scale infrastructure investment projects, both within and outside the Eastern Economic Corridor (EEC), due to many factors such as delays in handing over construction sites to the private sector, and delays in the process of selecting investors from the private sector.

(2) The impacts of uncertainties surrounding the Omicron outbreak on businesses' investment decisions.

Merchandise exports was projected to see a stronger recovery in late 2021 than previously assessed, but would slow down in 2022 in line with trading partners' economic growth.

Merchandise exports outlook (excluding gold)



Tailwinds

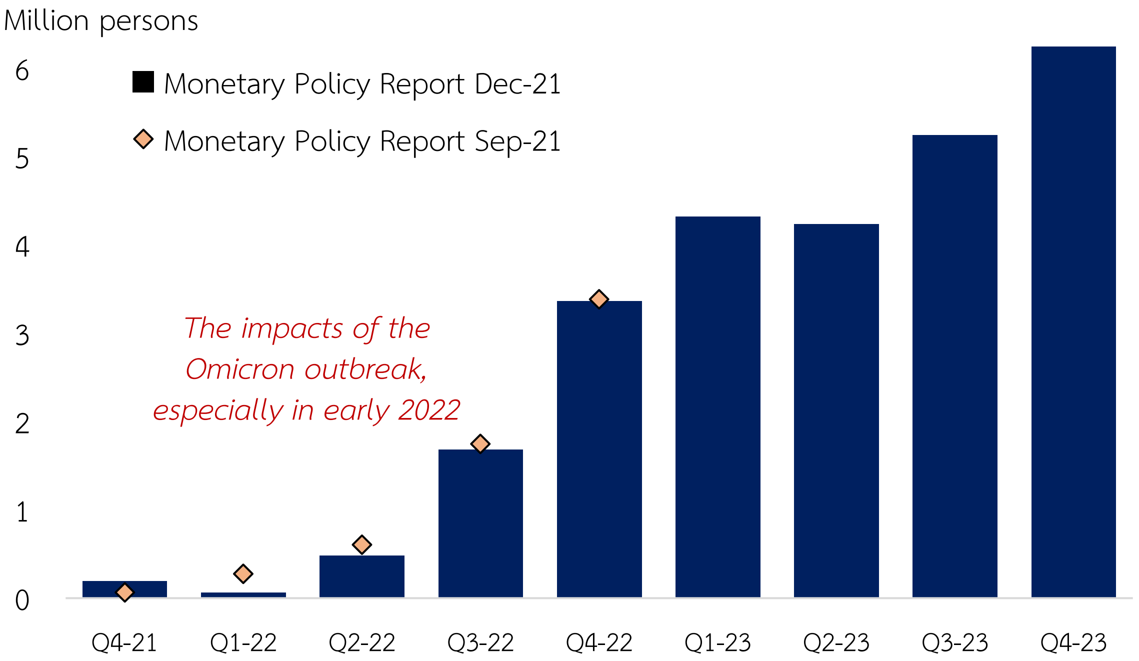
- **Exporters were able to ship more back-ordered goods from the third quarter of 2021 at a faster pace than expected** following the relaxation of containment measures in Thailand and abroad.
- **Semiconductor shortage had eased somewhat in the short run** especially for electronic parts in the automotive industry.

Headwinds

- **Multiple waves of COVID-19 outbreaks,** including the Omicron variant, impacted confidence and incomes of trading partners' economies
- **The shortage of containers would be more prolonged than expected** given the strict containment measures in China. The problem was expected to alleviate in the second half of 2022.

The Omicron outbreak would affect foreign tourist figures mainly in early 2022.

Projected foreign tourist arrival



Million persons	2021		2022		2023
	Sep 21	Dec 21	Sep 21	Dec 21	Dec 21
Foreign tourists	0.15	0.28	6.0	5.6	20.0

Source: forecasted by Bank of Thailand

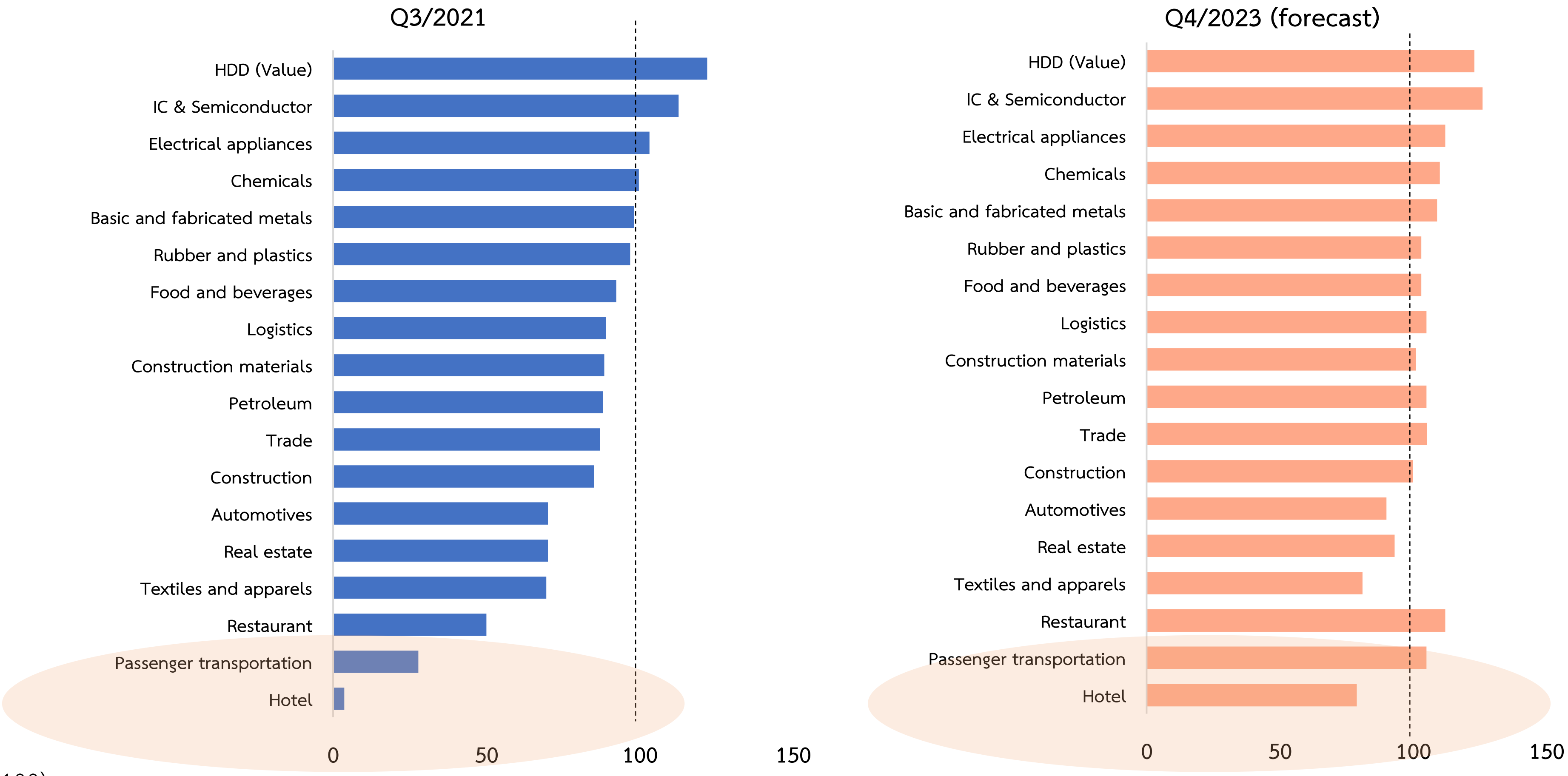
- **Foreign tourist figures in 2021 was revised up slightly** on account of tourist confidence which turned out better than expected after the Thai government had permitted vaccinated foreign tourists from low-risk countries to enter Thailand without any quarantine requirements (Test & Go scheme) since November 2021. However, registration for Test & Go entry has been temporarily suspended since 21 December 2021.

- **Foreign tourist figures in 2022 was revised down** especially for early 2022 due to the impacts of the Omicron outbreak on foreign tourist confidence, as well as the tightening of international travel restrictions during early 2022 in many countries including Thailand.

- **For 2023, foreign tourist figures would continue to gradually recover** and reach 20 million persons (half of the pre-COVID level) as tourist confidence improves in tandem with widespread vaccination globally and as the pandemic subsides. Another supporting factor is the return of Chinese tourists as the Chinese government would likely ease international travel restrictions in 2023.

There is an uneven recovery across different business sectors. While the recovery outlook has improved in many sectors, tourism-related services would recover more slowly. Hotels are unlikely to return to the pre-COVID level by 2023.

Recovery in economic activities by business sectors

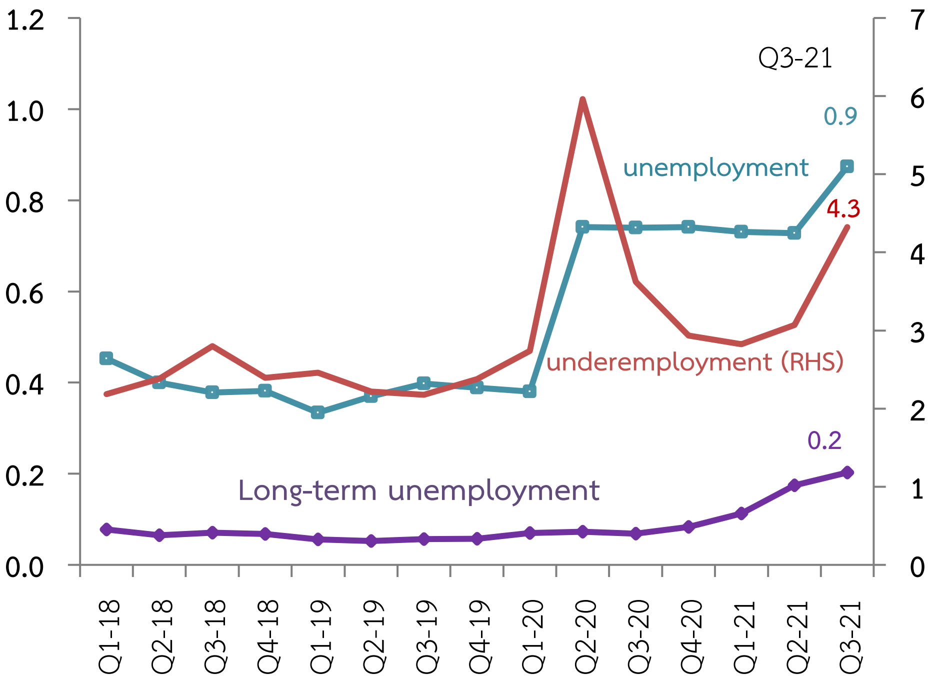


Recovery rate (2019 = 100)

Source: Office of Industrial Economics, Revenue Department, Department of Land, Ministry of Tourism and Sports, interviews with businesses.
Data compilation, calculation, and forecasts are done by Bank of Thailand

Thai labor market has not returned to the pre-pandemic levels after facing multiple waves of COVID-19 outbreaks and would take a long time to recover.

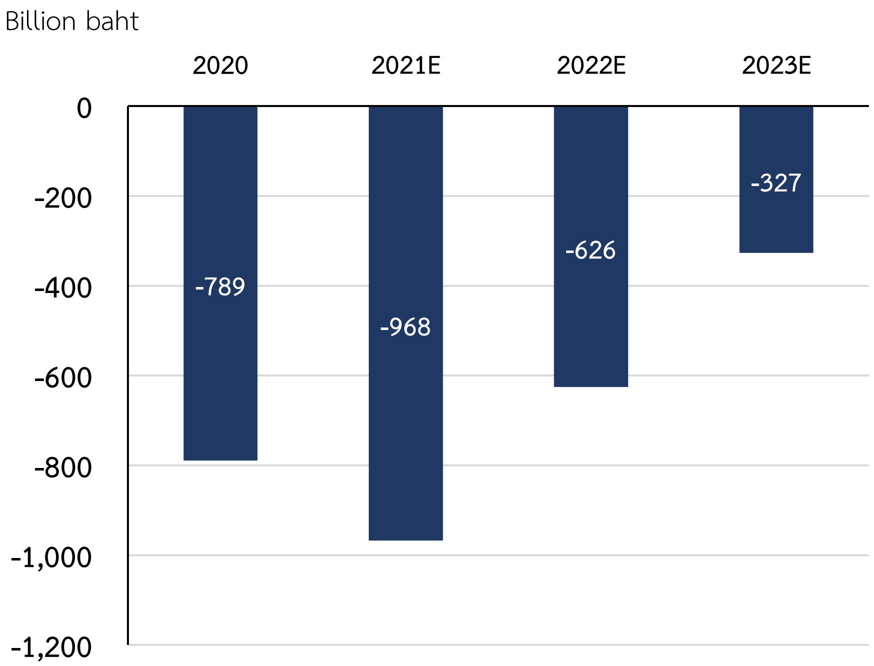
Labor market indicators



Note: 1. Long-term unemployment refers unemployment for at least 1 year
2. Underemployment refers to workers who work less than 4 hours per day

Source: Labor Force Survey by National Statistics Office, calculated by Bank of Thailand

Projected income loss for non-farm workers compared with 2019



Note: E means estimation

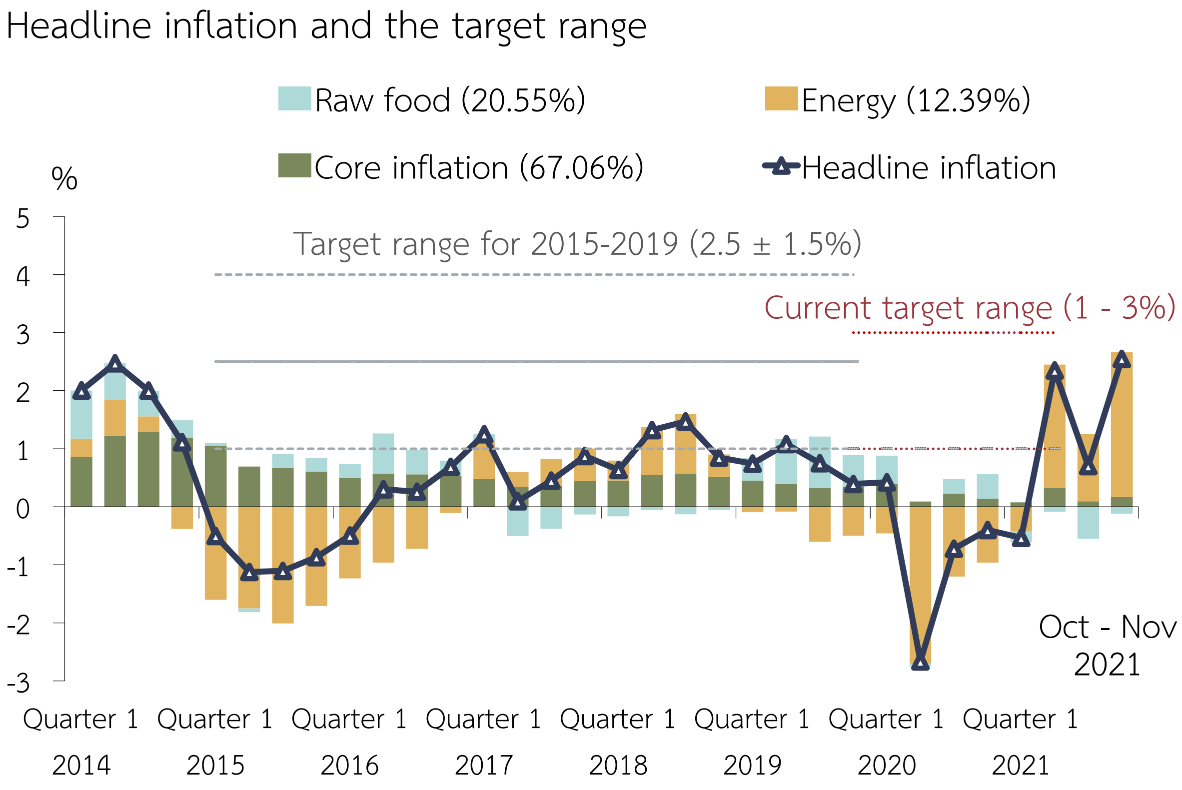
ที่มา: The Labor Force Survey and the Household Socio-Economic Survey by the National Statistical Office of Thailand, calculated and estimated by Bank of Thailand (as of Dec 2021)

Labor market conditions have not yet returned to the pre-COVID levels while vulnerabilities have accumulated over multiple waves of COVID-19 outbreaks. In the third quarter of 2021, a number of unemployed and underemployed persons rose sharply by 2.1 million from the pre-COVID level (the third quarter of 2019). Long-term unemployment also increased which indicated risks of losing skills over the long term.

After the government relaxed containment measures in late 2021, the labor market showed some signs of improvement, especially for consumer confidence among various professions and economic activities among the self-employed workers in non-farm sectors. **However, the labor market overall would recover slowly as reflected by non-farm incomes in 2022 and 2023 which were projected to be lower than levels seen in 2019.**

Headline inflation in the fourth quarter of 2021 increased from the previous quarter mainly due to energy prices.

Headline inflation and the target range



Note: ( ) is weight in Consumer Price Index basket.

Source: Ministry of Commerce, calculated by Bank of Thailand

Headline inflation in the first two months of the fourth quarter of 2021 **averaged 2.55%, increasing from 0.70% in the previous quarter.** The increase was mainly attributed to energy prices as the effects of the government's electricity bill subsidy measure, which helped lower costs of living, in the previous quarter have dissipated, as well as higher retail oil prices in tandem with global crude oil prices. Meanwhile, fresh food prices exhibited a smaller contraction than the previous quarter as the floods caused vegetable prices to rise.

Core inflation in the first two months of the fourth quarter of 2021 **averaged 0.25%, increasing from 0.14% in the previous quarter.** The increase was attributed to higher prices of housing and furnishing after the effects of the government's water bill subsidies in the previous quarter have dissipated, as well as higher prices of seasoning and condiments which rose in tandem with vegetable oil prices.

Special Issue 1: Inflation dynamics in Thailand and risks to the inflation outlook in 2022 and in the medium term

Headline inflation would rise temporarily and stay within the target range. Inflation expectations remained anchored within the target.

Inflation forecasts

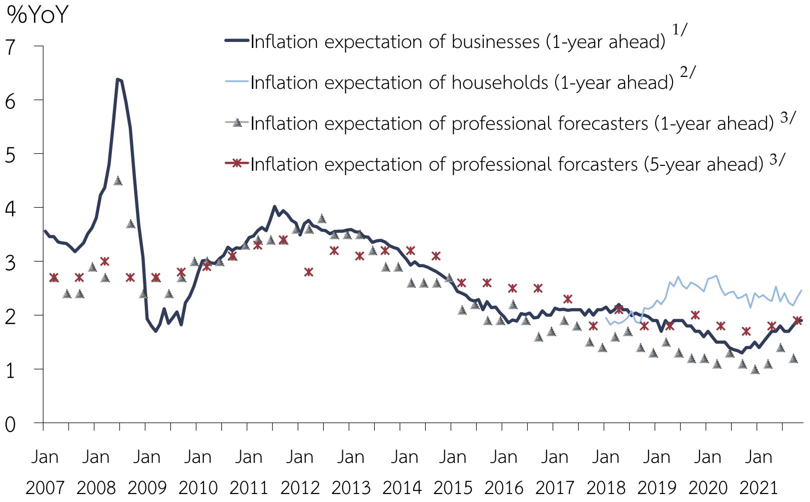
	2020 (Outturn)	2021	2022	2023
Headline inflation	-0.8%	**1.2%** (1.0%)	**1.7%** (1.4%)	**1.4%**
		Headline inflation forecasts were revised up mainly due to supply-side factors. While core inflation did not see a significant rise, energy price inflation would increase as retail fuel prices move in tandem with global crude oil prices which would be at a high level especially in the fourth quarter of 2021 and the first quarter of 2022. Electricity costs were expected to rise given higher production costs.		Expected to remain within the target range
Core inflation	0.3%	**0.2%** (0.2%)	**0.4%** (0.3%)	**0.7%**
		Core inflation forecast was unchanged and would remain low in line with the fragile growth outlook	Revised up on account of increased excise taxes on tobacco products and cost pass-through of some businesses when the economy is gradually recovering.	Expected to pick up

Note: ( ) = previous forecast from Monetary Policy Report (September 2021)

Source: Ministry of Commerce, calculated by Bank of Thailand

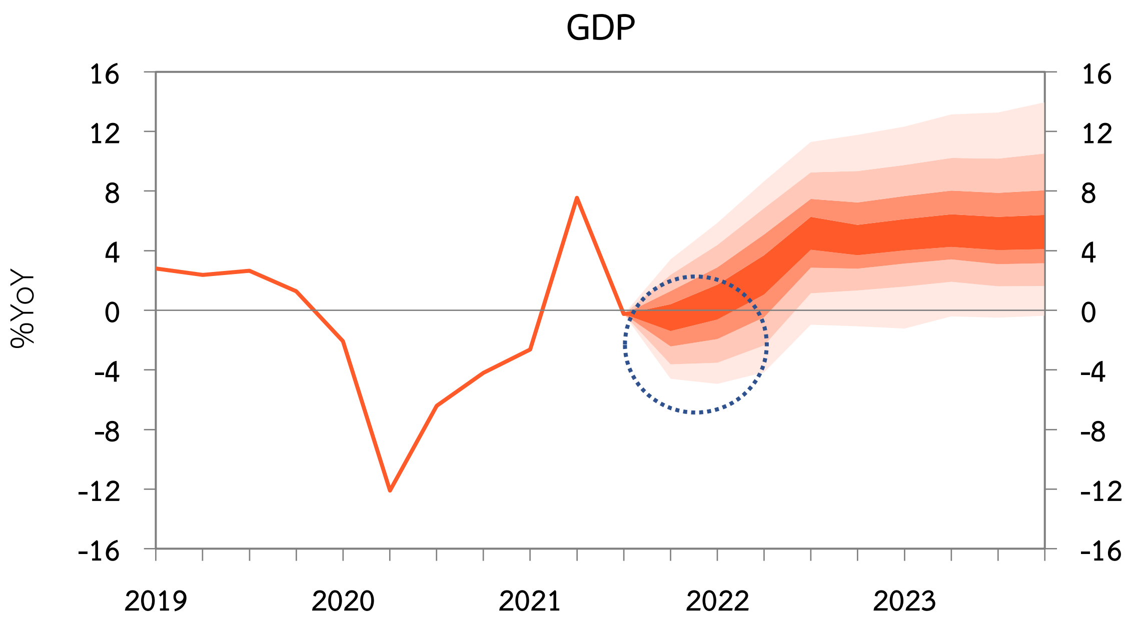
Inflation expectations

Forecast period	Types of forecasters	Latest inflation expectations
1-year ahead	Businesses	1.9% (Nov 2021)
	Households	2.5% (Nov 2021)
	Professional forecasters	1.0% (Dec 2021)
5-year ahead	Professional forecasters	1.9% (Oct 2021)



Source: [1] Business Sentiment Index (BSI) survey by Bank of Thailand
[2] Consumer Confidence Index (CCI) survey by Ministry of Commerce
[3] Asia Pacific Consensus Forecast

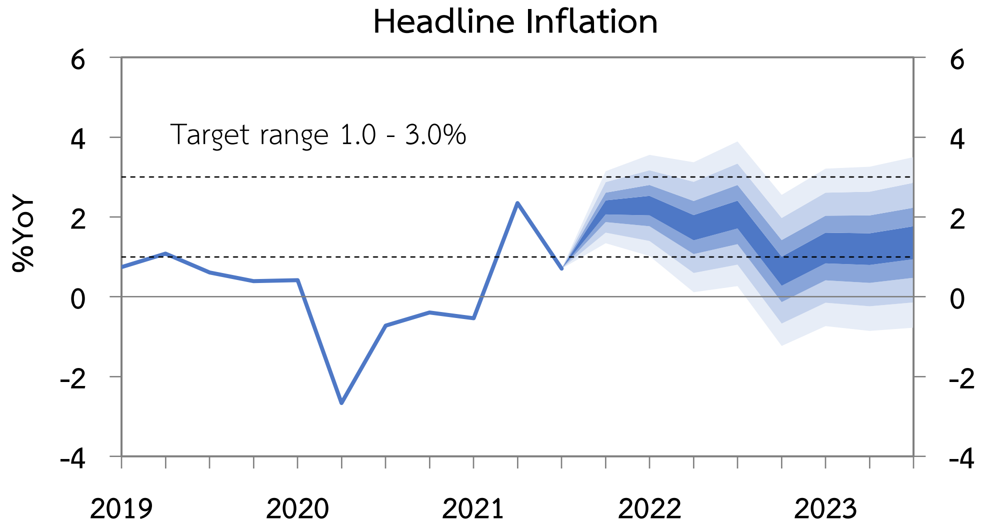
The economic growth could underperform the baseline projections, especially in the first half of 2022 due to uncertainties surrounding the Omicron outbreak. This is reflected in the fan chart which is skewed to the downside.

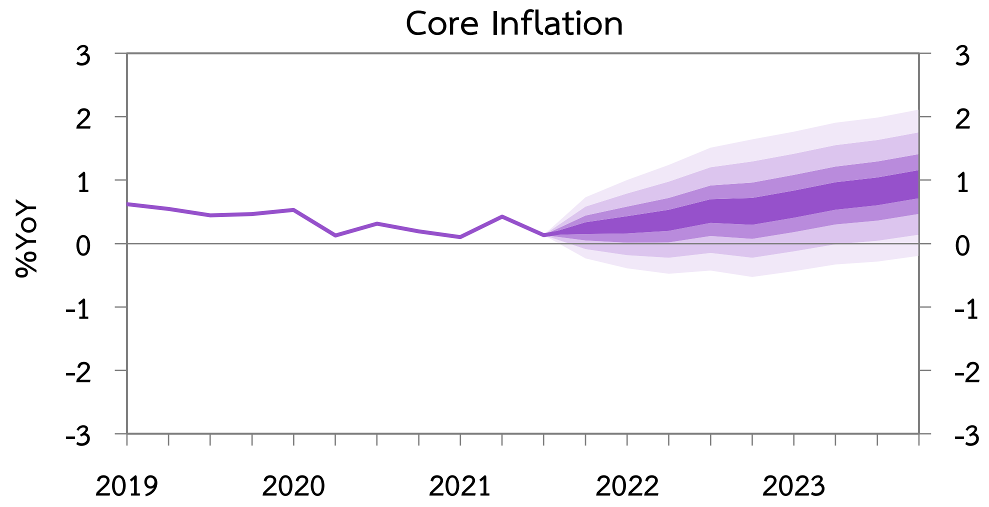


Key risks to the growth outlook

- **The impacts of the Omicron outbreak could become more widespread, severe, and prolonged than in the baseline.** More countries could impose international travel restrictions and keep them in place for longer than expected. Many countries including Thailand might also impose domestic containment measures more widely.
- **Household and business confidence could be dampened than previously assessed** given multiple waves of COVID-19 outbreaks and household debt overhang.
- **Support from government measures could lack of continuity** thus affecting private consumption. Political uncertainty could also arise.
- **The supply disruption problem could be prolonged** and weigh on manufacturing businesses and exporters.

Headline inflation could outperform the baseline projection due to uncertainties of potentially higher cost pass-through and prolonged supply disruption. This is reflected by the fan chart for headline and core inflations which is skewed to the upside throughout the forecast period.





Key risks to the inflation outlook

- Businesses might pass on higher costs to consumers more than expected if costs remain high for an extended period of time.
- The supply disruption problem could be more prolonged than expected under the baseline scenario due to the Omicron outbreak.
- Risks pertaining to Dubai crude oil prices as prices could turn out higher than the baseline as a result of geopolitical risks in major oil producing countries. On the other hand, prices could become lower than the baseline if the Omicron outbreak leads to a decline in global oil demand.

Special Issue 1: Inflation dynamics in Thailand and risks to the inflation outlook in 2022 and in the medium term

Forecast assumptions (1/3)

The Omicron outbreak will impact economic growth in early 2022.

- **The Omicron variant is more contagious than the Delta variant.** Current vaccines would thus be rendered less effective but could partly help reduce the severity of the outbreak.
- **Household and business confidence is temporarily affected especially in early 2022.**

International travel restrictions	• Many countries impose more restrictions on international travel, especially for countries with a widespread Omicron outbreak. Meanwhile, some countries close their borders and permit only their citizens to enter the country with quarantine requirement. • Relaxation is expected by early 2022.
Containment measures abroad	• Containment measures are targeted and applied only to certain regions of the country. • Economic activities are restricted for those who are not yet vaccinated. • Strict movement controls are imposed in areas where the local healthcare system almost reaches its full capacity in handling critical patients.
Containment measures in Thailand	• Registration for the Test & Go scheme has been temporarily suspended since 21 Dec 2021. • Containment measures are applied only to areas with Omicron outbreak.

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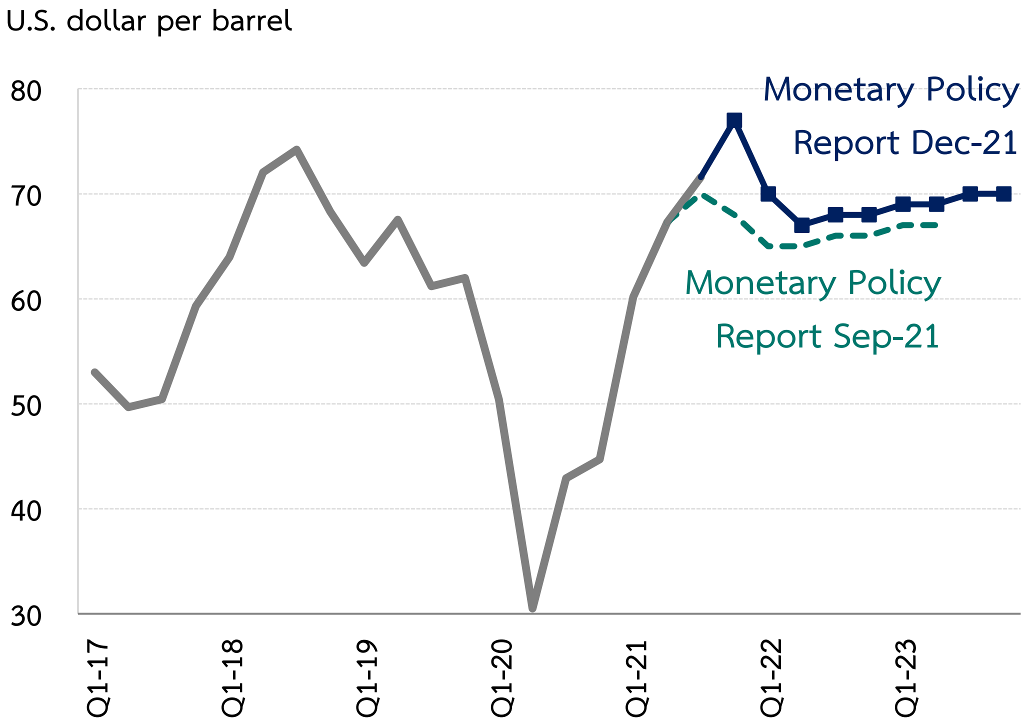
Forecast assumptions (2/3)

Dubai crude oil prices would be higher than previously assessed although oil prices in 2022 and 2023 would decline from current levels.

Projected Dubai crude oil prices



U.S. dollar per barrel	2021	2022	2023
Dubai crude oil prices (annual average)	69.0	68.3	69.5

Dubai crude oil prices forecast for 2021 was revised up on account of higher-than-expected price outturns.

- Oil demand during winter season (the fourth quarter of 2021 and the first quarter of 2022) is higher than expected due to the switch from natural gas to oil in electricity generation as the increase in gas prices had outpaced the increase in oil prices.
- Many countries have relaxed containment measures.
- An increase in OPEC's oil output is less than expected because some countries such as Nigeria are unable to increase oil production as agreed due to limited investment capital and maintenance delays.

Although the forecasts for oil prices in 2022 and 2023 were revised up from the previous assessment, oil prices in those two years would decline from current price levels.

- Oil output from OPEC and its allies, and the U.S. would increase.
- Oil demand would decline due to the Omicron outbreak. Many countries have already tightened containment measures. This would continue to weigh on economic activities until early 2022.

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Forecast assumptions (3/3)

Summary of key forecast assumptions

Annual percentage change	2020*	2021	2022	2023
Trading partners' GDP growth (% YoY)[2/]	-3.4	5.3	4.0	3.3
		(5.6)	(4.3)	
Fed funds rate (% year end)	0.00 – 0.25	0.00 – 0.25	0.75 – 1.00	1.50 – 1.75
		(0.00 – 0.25)	(0.00 – 0.25)	
Regional currencies (exc. China) vis-à-vis the U.S. dollar (index)[3/]	157.1	153.4	155.1	154.6
		(153.1)	(154.3)	
Dubai crude oil prices (U.S. dollar per barrel)	42.2	69.0	68.3	69.5
		(66.4)	(65.5)	
Farm income (% YoY)	1.6	4.3	2.2	1.0
		(6.5)	(0.6)	
Government consumption at current price (billion baht)[1/]	2,780	2,894	2,943	3,001
		(2,927)	(2,973)	
Public investment at current price (billion baht)[1/]	1,011	1,081	1,135	1,166
		(1,107)	(1,192)	

Notes: [1/] Assumptions include loans for economic and social development under Section 22 in Public Debt Management Act, B.E. 2548 (2005)

[2/] Weighted by each trading partner's share in Thailand's total exports

[3/] Increasing index represents depreciation, decreasing index represents appreciation

* Outturns

( ) Monetary Policy Report September 2021

- Trading partner economies' growth was revised down on account of actual outturns in the third quarter of 2021 which pointed to a sharper slowdown than expected. In the period ahead, trading partners would be further impacted by new waves of COVID-19 outbreak, especially the Omicron variant. In addition, the China's economy would be additionally pressured by the government's hawkish stance on manufacturing activates that are not environmentally friendly as well as by problems in the real estate market.
- The Federal Funds Rate would be raised three quarters earlier than previously assessed from the first quarter of 2023 to the second quarter of 2022, and there would be three rate hikes each year in 2022 and 2023 given rising inflationary pressure and strong economic recovery.
- Regional currencies (excluding the Chinese yuan) would depreciate throughout the forecast period in line with the Fed's QE tapering and earlier policy rate hike.
- Dubai crude oil prices would rise mainly in the fourth quarter of 2021 and the first quarter of 2022 as the global oil market tightens from oil demand outpacing oil output during winter season. Meanwhile, OPEC+ countries are unable to ramp up production by a significant margin.
- Farm income (excluding government support measures) was revised down for 2021 due to the flood which resulted in destroyed rice crops. For 2022, farm income would increase owing to higher tapioca and rubber prices which are driven by strong demand.
- Public spending at current prices was revised down on account of lower-than-expected government consumption outturns and lower projected state-owned enterprise investment in tandem with the Fiscal Year 2022 Budget.

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Special Issue 1

Inflation dynamics in Thailand and risks to the inflation outlook in 2022 and the medium-term

Headline inflation would likely edge up temporarily in Q4/2021 and 2022, mainly due to supply-side factors. The likelihood that inflation would pick up further was expected to be limited given that cost passthrough from businesses to consumer prices would be limited, and the economy would still be recovering at a gradual pace. This contrasts with the situation among major advanced economies where economic activities have already returned to pre-COVID levels, and demand-pull inflationary pressure is more prominent. However, there remained the risks that inflation in Thailand could turn out higher than expected amidst the sharp rise in global inflation.

Key factors affecting inflation	Offsetting factors	Impact on inflation in 2022	Risks to inflation outlook
Increase in energy prices - Crude oil - Natural Gas (LPG, LNG)	• Oil Fund to subsidize diesel and cooking gas prices • Measures to control fuel adjustment surcharge (Ft) • Unwinding of high global crude oil prices in early-2022	• Impact limited in the short term thanks to government measures. Going forward, the impact could become more significant given that Ft costs and the price of cooking gas are on the rise.	⇧ OPEC+ members slow down oil production ⇩ Lower demand for oil due to the outbreak of Omicron in many countries
Increase in global inflation - Commodity prices - Supply disruption **Baht depreciation**	• Businesses opting to absorb costs arising from higher prices of raw materials and exchange rate depreciation as purchasing power among consumers remained weak. • Products whose costs increased from baht depreciation constitute a small share in the CPI basket.	• There would be limited cost passthrough to consumer prices as most businesses are unlikely to do so within the next 3 months. Thus there would be limited passthrough to inflation (i.e. no 2nd round effect) • Baht's depreciation affects inflation mainly through higher retail oil prices	⇧ Supply disruption lasts longer than expected due to the outbreak of Omicron. ⇧ Businesses opt to pass on higher costs to consumer sooner or to a larger extent.
Pent-up Demand	• Purchasing power and labor market conditions remained fragile. Employees do not have much bargaining power to ask for higher wages.	• Cost passthrough to consumer prices could edge up slightly as domestic demand gradually improves	⇩ The economy recovers slower than expected due to the outbreak of Omicron

Inflation would rise temporarily in tandem with higher global energy prices which were expected to subside after Q1/2022 while government measures to control domestic energy prices would help offset the impact.

Global energy prices

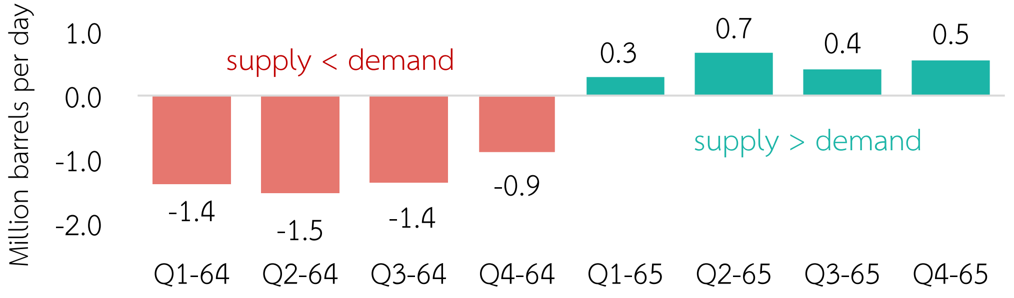
In Q4/2021, **the oil market tightened due to increased demand** during winter as electricity generation substituted oil for switches from using the more expensive natural gas and coal to using oil instead, as well as the global economic recovery. However, the release of oil from strategic petroleum reserves would help ease the oil market. After Q1/2022, **oil market conditions would further ease as oil output increases.**

Domestic energy prices

- In Q4/2021, **domestic energy prices would likely be driven higher by retail fuel prices domestically, although price adjustment mechanisms of the oil fund would help offset the impact*.** The diesel pricing ceiling of 30 baht per litre maintained by the oil fund and recent policy to reduce the mixture of biodiesel in diesel fuels would help keep diesel costs down and lessen the costs borne by the oil fund.
- In 2022, **domestic energy prices would increase slightly.**
  - **Cooking gas price** was expected to gradually rise in Q2 after having been pegged since early 2020.
  - **Electricity costs** would increase in Q1/2022 and continue to gradually pace rise throughout the remainder of the year in tandem with rising prices of key inputs, especially natural gas which would likely remain stable at high levels in 2022.

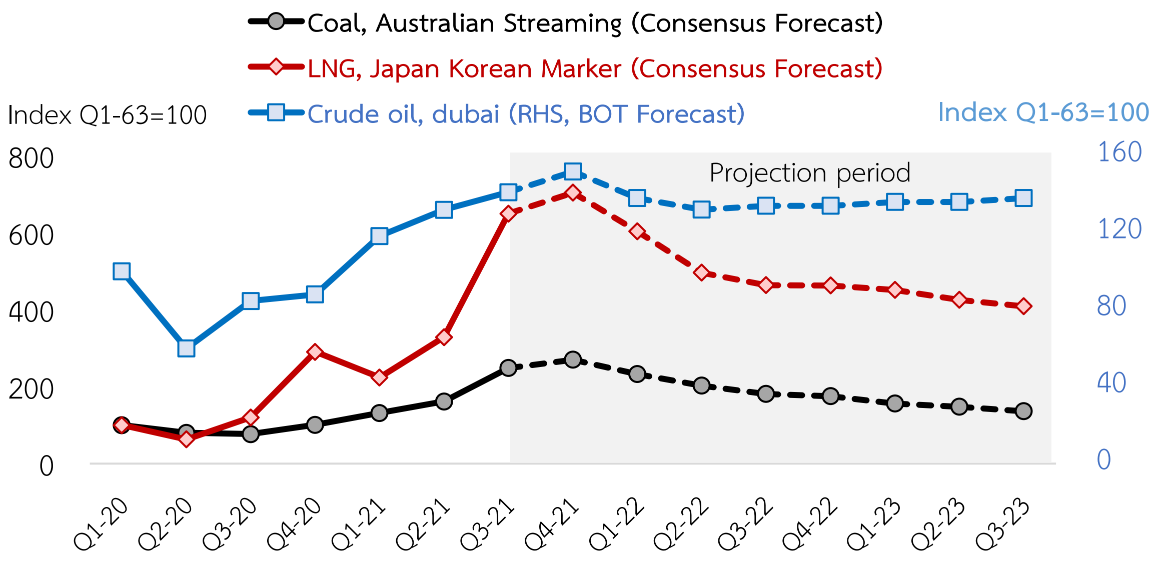
*Note: This is under the assumption that the Oil Fund is able to borrow an additional 30 billion baht as authorized by the Decree issued on 27 November 2021.

Global oil supply would outpace global oil demand in 2022



source: US Department of Energy as of 7th December 21, calculated by BOT.

Global energy prices would gradually decline in 2022



source: PTT, Investing., World Bank, Energy and Metals Consensus forecast calculated by BOT

Higher global commodity prices and the ongoing supply disruption have resulted in a slight increase in production costs although this would likely be resolved in H2/2022. The impact on consumer prices in Thailand was limited because businesses still absorbed the higher costs. However, there remained the need to monitor risks that businesses might pass on those costs to consumers if the supply disruption is more prolonged than expected.

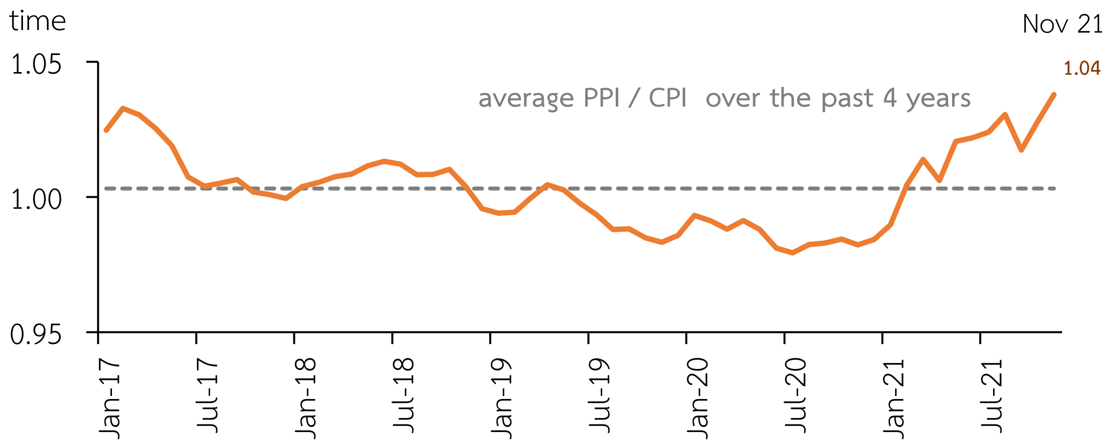
Cost passthrough is currently limited

The increase in Producer Price Index (PPI), from higher global commodity prices such as metals and chemicals **had limited passthrough to Consumer Price Index (CPI)**

1. Affected goods constituted a small share in the CPI and did not show a marked increase in price
2. Businesses still absorbed and able to manage its costs

It was expected that high commodity prices and the supply disruption would be resolved within 2022

PPI to CPI ratio (Thailand)

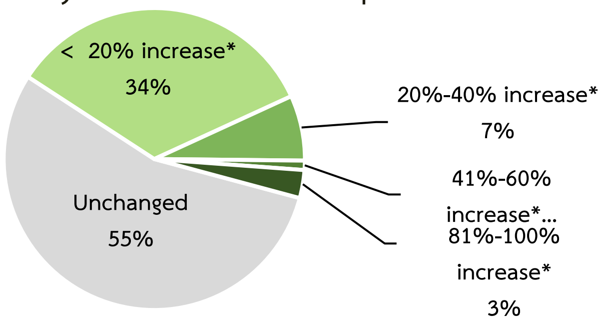


Source: MOC calculated by Bank of Thailand

Cost passthrough would be limited over the next 3 months

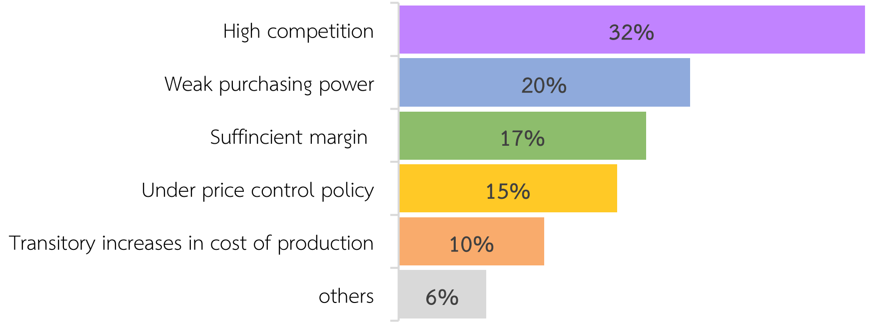
55% of Thai businesses have kept prices unchanged due to high level of competition in the market, low consumer purchasing power. Meanwhile, these businesses still had sufficient profit margin to absorb the costs.

Tendency of business to raise prices in the next 3 months



Note: * as % of incremental costs

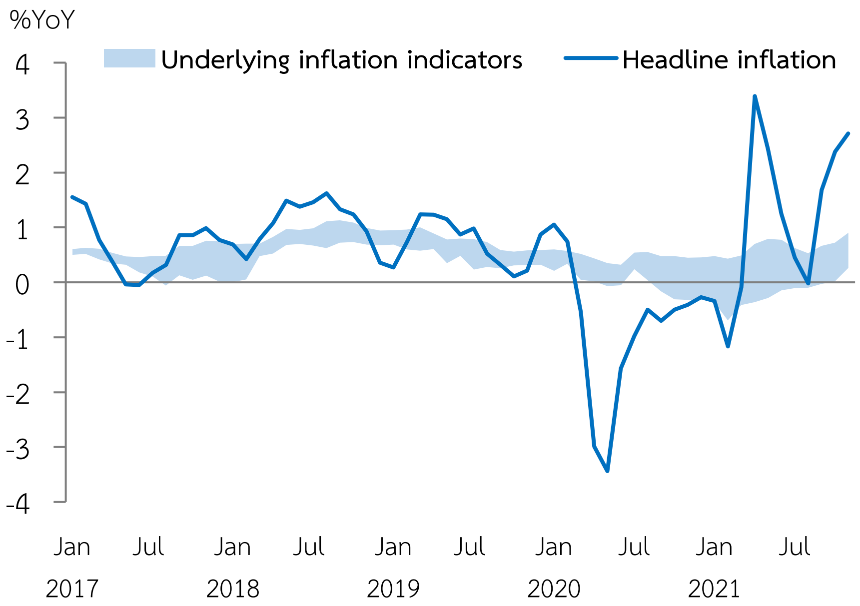
Rationales for not raising prices (% of respondents)



source: A survey of business about the impacts of the COVID-19 pandemic in Nov 2021

Underlying inflation indicators remained low in line with the gradual recovery in demand. For the medium-term outlook, it would be necessary to monitor structural factors that could lead to both upward and downward inflationary pressure

Underlying inflation indicators after removing the effects of temporary factors and government measures



Note: the shaded area reflects the upper and lower bounds of the various underlying inflation indicators which were calculated using (1) excluding goods and services with most volatile price changes, removing the bottom 15 percentile and the top 10 percentile, (2) principal component model and (3) core inflation excluding rent and government measures.

Source: Ministry of Commerce, BOT calculations

Structural factors leading to downward inflationary pressure over the medium-term

Growing adoption of e-commerce, especially during the pandemic, resulting in higher level of price competition among sellers and easier price comparison for buyers.

Consumer purchasing power remained soft due to elevated household debt and widening inequality from the K-shaped economic recovery. Longer-term unemployment also increased post-pandemic and hiring by businesses had shifted in favor of part-time workers instead of full-time workers.

Technological advancements and the adoption of automation technology resulting in improved productivity and low manufacturing costs

Structural factors leading upward inflationary pressure over the medium-term

Business closure / mergers allows businesses more control over prices due to less competition

Geopolitical Risks could lead to higher production costs as a result of relocating the production base or higher import tariffs.

The transition to a green economy could result in higher costs of production due to businesses adjusting their production process to be more environmentally friendly or higher oil prices as oil producers reduce investment. However, lower oil demand abroad could also result in a decline in oil prices and therefore this dynamic and its impact on oil price must be monitored going forward.

4. Monetary Policy Decision

Monetary Policy Decision: Summary of Key Considerations

Monetary Policy

The MPC voted to maintain the policy rate at 0.5% to preserve accommodative financial conditions to support economic recovery

Financial conditions

Financial conditions remained accommodative and businesses were still able to obtain financing. The baht depreciated due to concerns over the COVID-19 situation and the shift in monetary policy stance for major central banks.

Financial stability

Vulnerabilities in the financial sector remained, namely those pertaining to the balance sheets of households and businesses. It was deemed necessary to prepare for medium-term risks that could arise in the future.

Financial and fiscal measures

The coordination between financial and fiscal measures would support the economic recovery in 2022 which was still subject to large degrees of uncertainty

Monetary policy: the MPC voted to maintain the policy rate to preserve accommodative financial conditions and support overall economic growth

MPC Meeting 7/2021 (10 Nov 2021)	MPC Meeting 8/2021 (22 Dec 2021)

MPC voted unanimously

To maintain the policy rate at **0.50%**

Special Issue 2: Monetary policy target for medium-term price stability and the year 2022

The Thai economy **would continue to recover on the back of domestic spending and tourism recovery.** The outbreak of Omicron would impact the economy in early 2022 and is a key risk to the growth outlook in the period ahead depending on the severity of the outbreak and the strictness of containment measures.

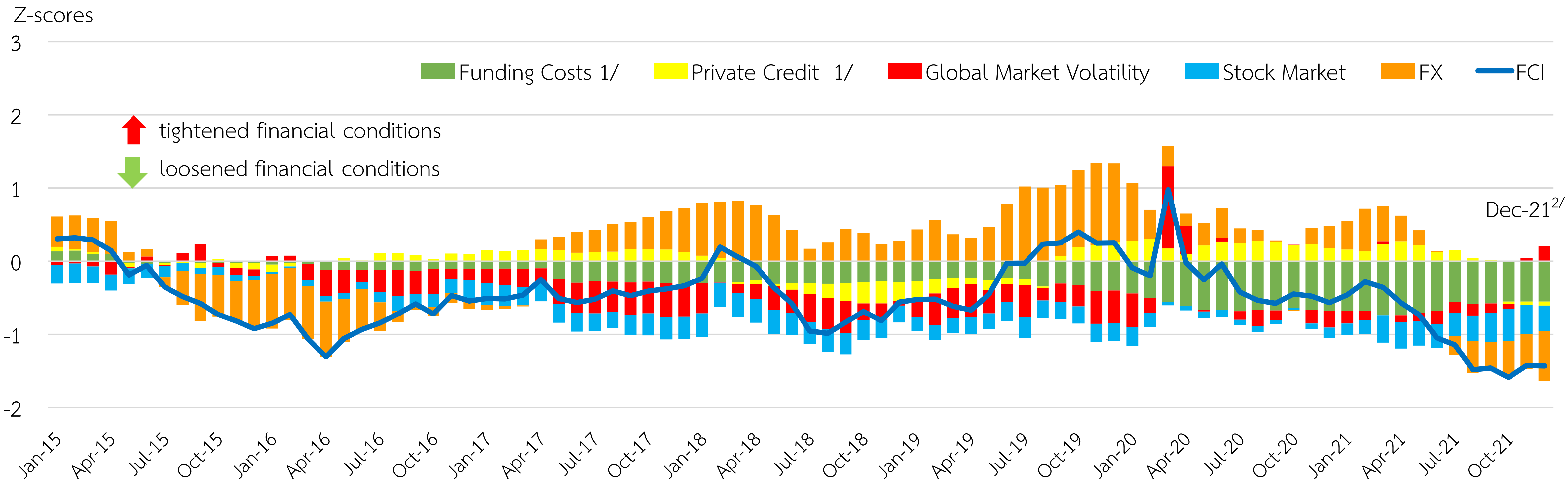
Inflation **is expected to remain within the target range over the medium term. Headline inflation increased temporarily mainly from higher energy prices but there remains a need to closely monitor global inflation developments and cost pass-through of businesses.** At the present, the likelihood that inflation would rise continuously is limited because (1) businesses have limited ability to pass on higher costs to consumers as economic recovery is still gradual and (2) employment and labor income remained fragile.

Financial stability. **Elevated debt levels among households and businesses could hinder future economic growth.** It was deemed necessary to prepare for medium-term risks that could arise in the future.

The MPC continues to place emphasis on economic recovery in deliberating policy decisions and would continue to monitor factors that could impact the economic outlook. These factors include developments pertaining to COVID-19, the adequacy of fiscal, financial and credit relief measures, and cost pass-through from businesses to consumers. **The MPC stands ready to deploy additional appropriate monetary policy tools if necessary.**

Financial conditions remained accommodative overall, especially financing costs and the exchange rate. Meanwhile, increased global financial market volatilities from concerns over the Omicron outbreak led to a slight tightening in financial conditions.

Financial Conditions Index (FCI) for Thailand

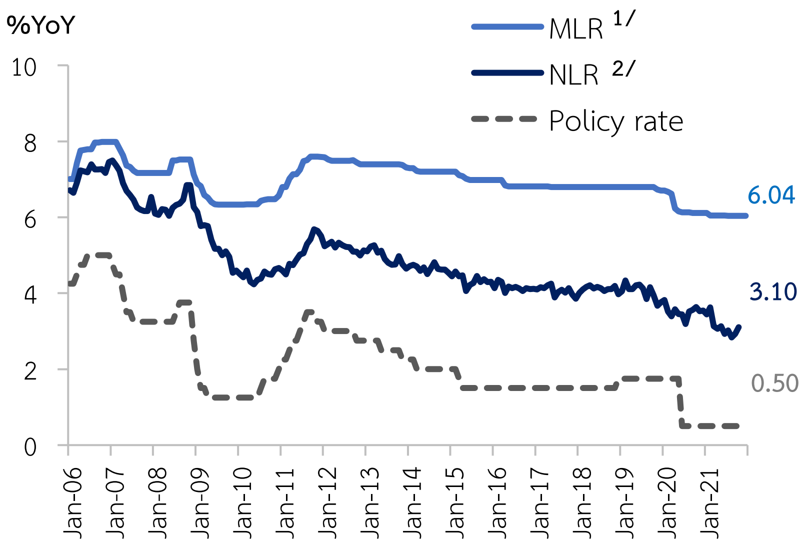


Notes:
FCI is calculated using first principal components of both FX and non-FX financial condition indicators which are weighted by their respective sizes of accumulated impulse response on real GDP (%yoy) over 8 quarters using VAR(2) model. For funding costs and private credit categories, weights of each variable are adjusted according to its proportion in total private funding structure. Non-FX indicators include (1) funding costs, (2) private credit, (3) global market volatility, and (4) stock market.
1/ New loan rate (NLR), average of 6 banks' floating mortgage rates, and new loan amounts extended to businesses and households in the most recent month are assumed to be equal to the previous month's data.
2/ Average of data points up until 14 Dec 2021
Source: Bank of Thailand

For more details on how the FCI was constructed, see FAQ 184 Thailand's Financial Condition Index (only available in Thai)

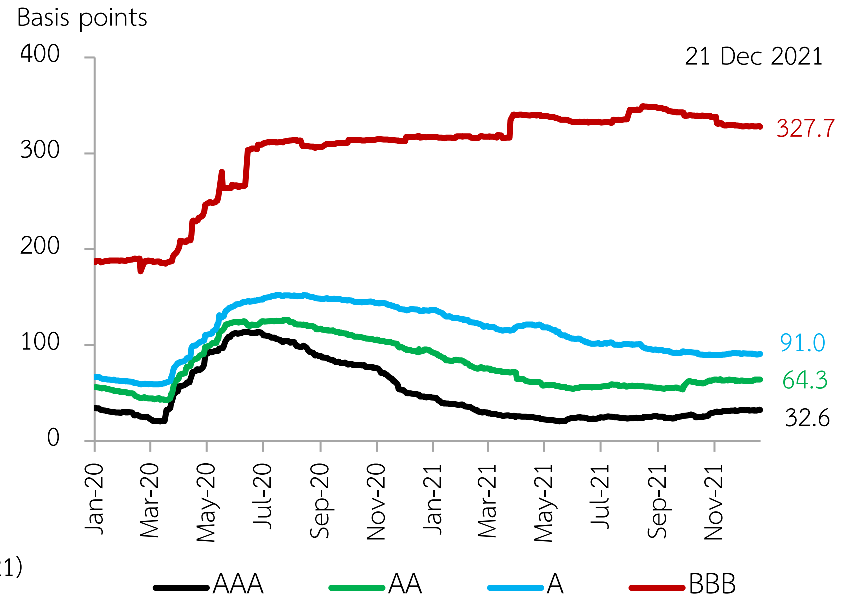
Private sector financing costs through both credit and the bond market remained low.

Commercial bank lending rates



Note:[1]Monthly average of 13 commercial banks (data as of 21 Dec 2021) as TMB Bank and Thanachart Bank completed the merger on 5 July 2021 and rebranded under TMB Thanachart Bank (ttb)
[2]New Loan Rate (NLR) (Data as of Oct 2021)
Source: BOT

Corporate credit spreads (maturity of 3 years or less)



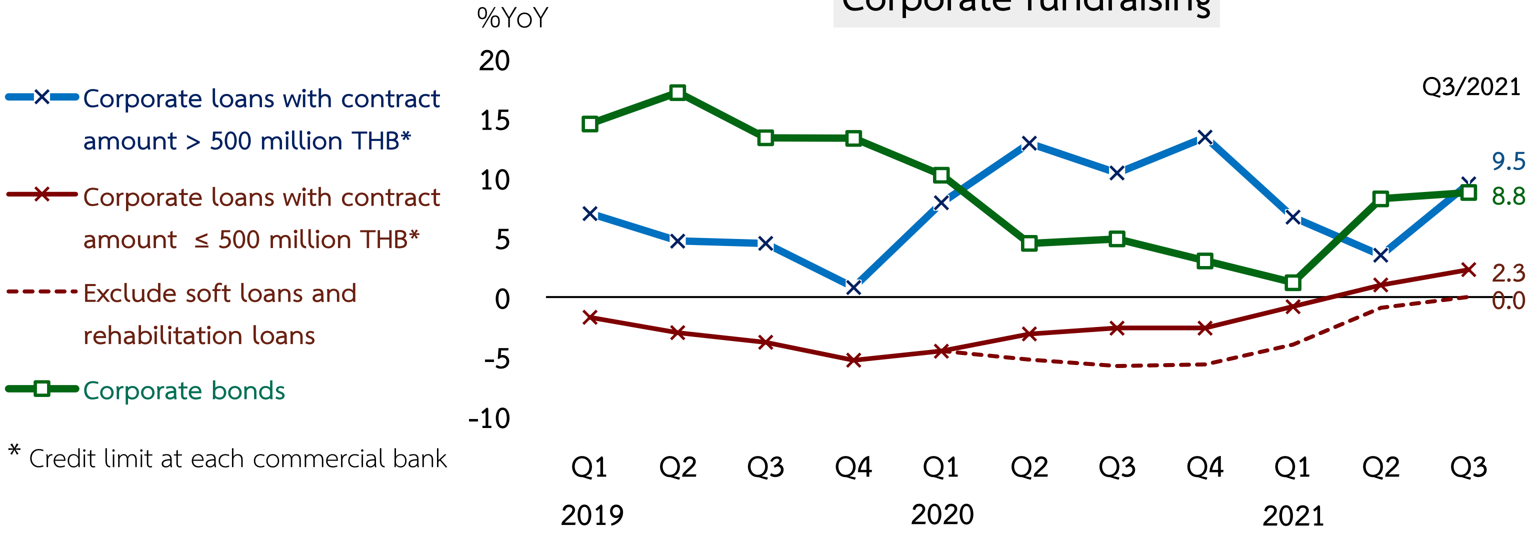
Source: ThaiBMA (data as of 21 Dec 2021)

The minimum loan rates (MLR) offered by commercial banks remained below pre-COVID levels. Meanwhile, **new loan rates (NLR)** increased slightly from September 2021 especially for loan contracts larger than 500 million baht of businesses in utilities, commercial, and property sectors where loan demand has increased. Commercial banks remained concerned about the credit risks of their borrowers. NLR also increased for contracts smaller than 100 million baht of businesses in the commercial and manufacturing sectors.

The yield spread between corporate and government bonds (corporate credit spread) with maturities below 3 years remained stable from the previous quarter. The corporate credit spread for BBB-rated bonds decreased slightly but remained high overall. Notwithstanding, the private sector was still able to obtain financing through the bond market as normal.

Businesses were still able to obtain financing although there remained the need to accelerate the implementation of financial and credit relief measures, especially those aimed at restructuring debt (long-term debt relief measures 3 Sep 2021) that are well-tailored to the long-term debt repayment serviceability of different groups of borrowers.

Corporate fundraising



Source: Bank of Thailand

Large corporates were still able to obtain financing in the third quarter of 2021. **Large corporate loans (credit limit > 500 million baht) expanded across almost all sectors.** This was driven by their need for more capital in anticipation of an economic recovery once containment measures are relaxed. **Corporate bond issuance continued to expand at around the same rate** mainly driven by the need to finance business expansions and repay existing debt.

SME loans (credit limit ≤ 500 million baht) saw continued **improvements** in the third quarter of 2021. in part supported by the soft loan facility. SME loans growth was particularly strong for manufacturing and commercial businesses. However, loan growth for tourism-related services such as hotels and restaurants was still recovering at a gradual pace.

Soft loan facility	Approved amount 131 billion baht	Number of recipients 40,987
Asset warehousing	Value of assets transferred 28 billion baht	Number of recipients 199

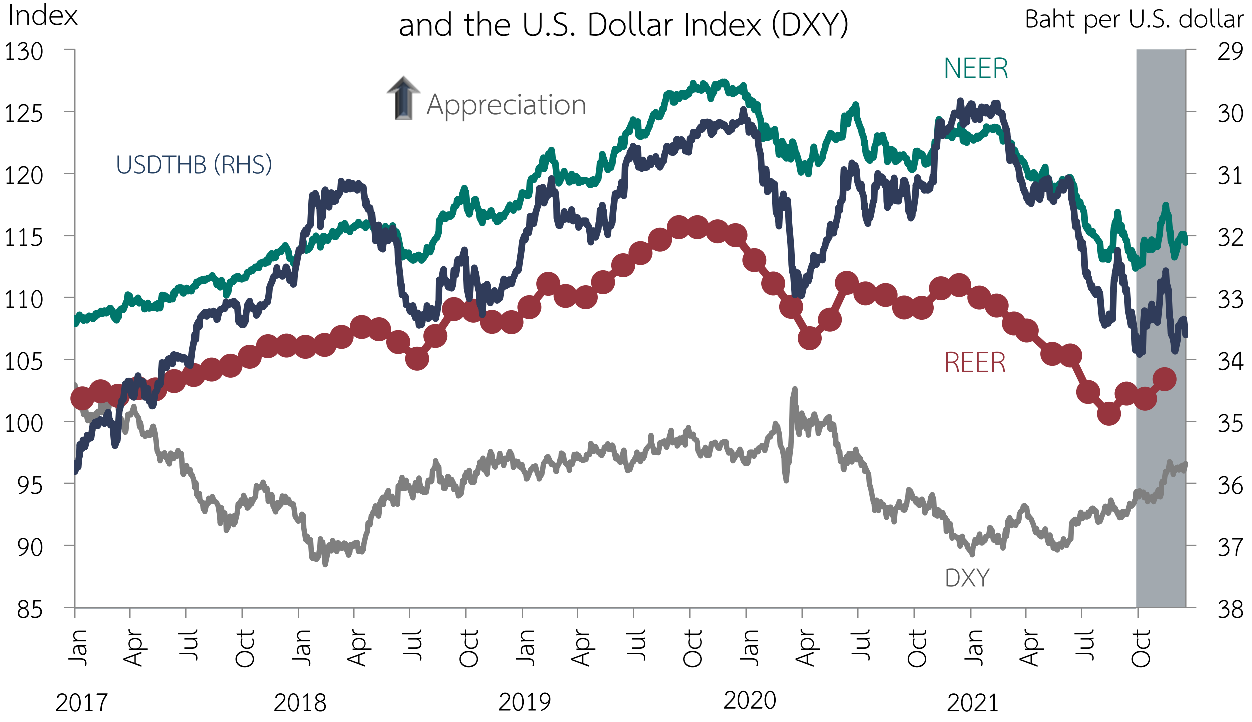
Click to download the latest data on the progress of the soft loan facility and asset warehousing measures (time series, excel format)

Source: Bank of Thailand Note: Data as of 13 Dec 2021

The baht depreciated owing to the outbreak of Omicron and the tightening of monetary policy in advanced economies

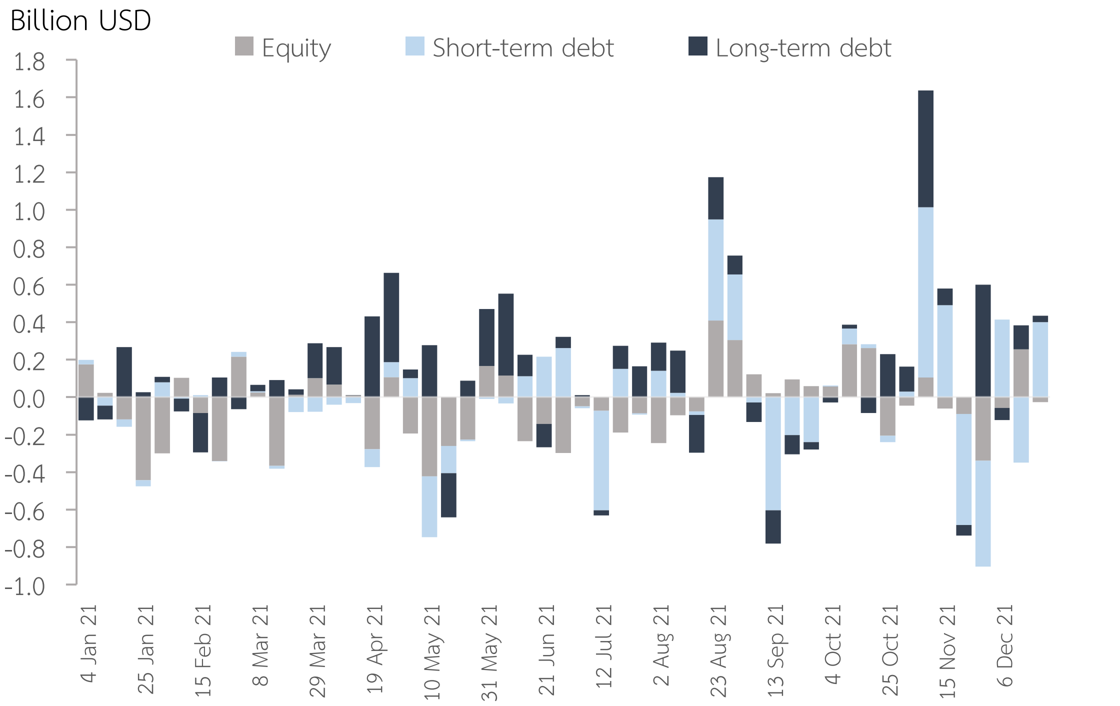
- **In the fourth quarter of 2021, the baht averaged 33.3 baht per U.S. dollar, a depreciation of 1.3% from the previous quarter. The baht's movements during the period have been volatile due to increased uncertainties.** Around mid the fourth quarter, the baht appreciated from improved sentiment after Thailand's re-opening plans were announced. This eased concerns among investors and resulted in capital inflows returning to Thailand. However, the baht depreciated sharply in December from two main factors: (1) the outbreak of Omicron affecting the recovery of the tourism sector and (2) major central banks tightening their monetary policy stance sooner than expected. These factors led to a decline in investor sentiment and capital outflows from risky assets. Notwithstanding, there were still capital inflows for the Thai bond market.
- **The nominal effective exchange rate (NEER) averaged 114.6**, a 0.15% depreciation from the previous quarter, indicating that the baht depreciated slightly more than regional peers.

Baht per U.S. dollar (USDTHB), Nominal Effective Exchange Rate (NEER), and the U.S. Dollar Index (DXY)



Source: Bank of Thailand, Bloomberg and Refinitiv (data as of 20 December 2021)

Capital flows into Thai securities (weekly)



Source: ThaiBMA and Bloomberg Note: weekly data is complied from trading days in each week

Risks pertaining to volatility in global financial markets have increased, especially from monetary policy divergence. However, there are offsetting factors and available policy tools that could alleviate the impacts on the Thai economy.

Transmission channels of global financial market volatility

- Capital outflow
- Exchange rate depreciation
- Higher Thai government bond yields

The Thai economy has offsetting factors that help reduce the impacts of external factors

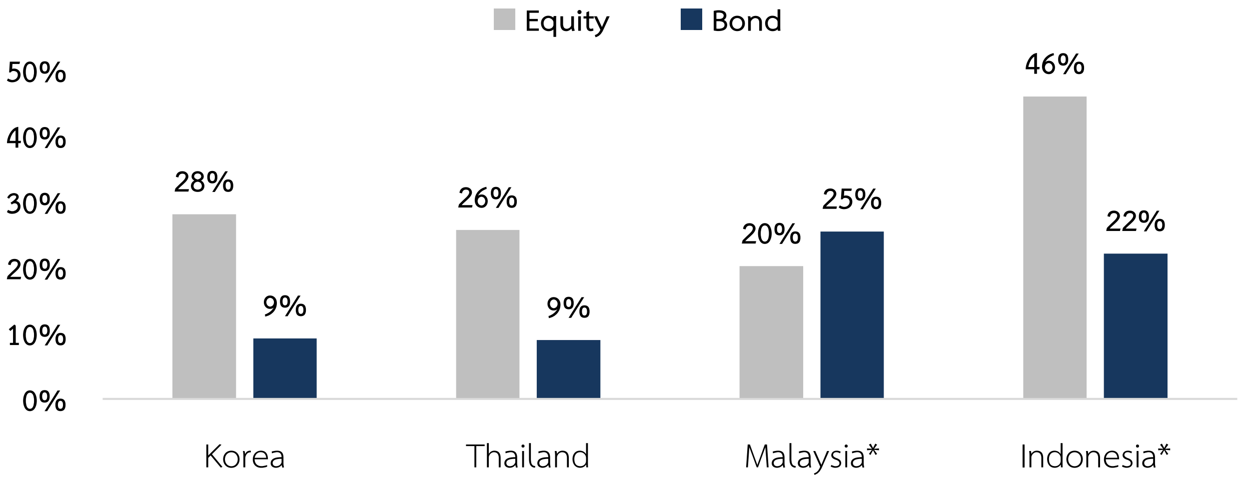
- **Limited non-resident participation in Thai capital markets:** 26% in the stock market and 9% in the bond market.
- **High level of international reserves,** representing the 12th highest international reserves in the world, is 3 times larger than short-term external debt.
- **Limited impacts on private funding costs** as 90% of financing in Thailand is obtained through bank credits, especially for SMEs and households.

The BOT has available tools to be deployed should the Thai financial markets experience excessive volatilities

- Addressing excessive volatility in the foreign exchange market
- Addressing any malfunctioning problems in the bond market

Thailand has relatively low non-resident participation compared to other regional peers

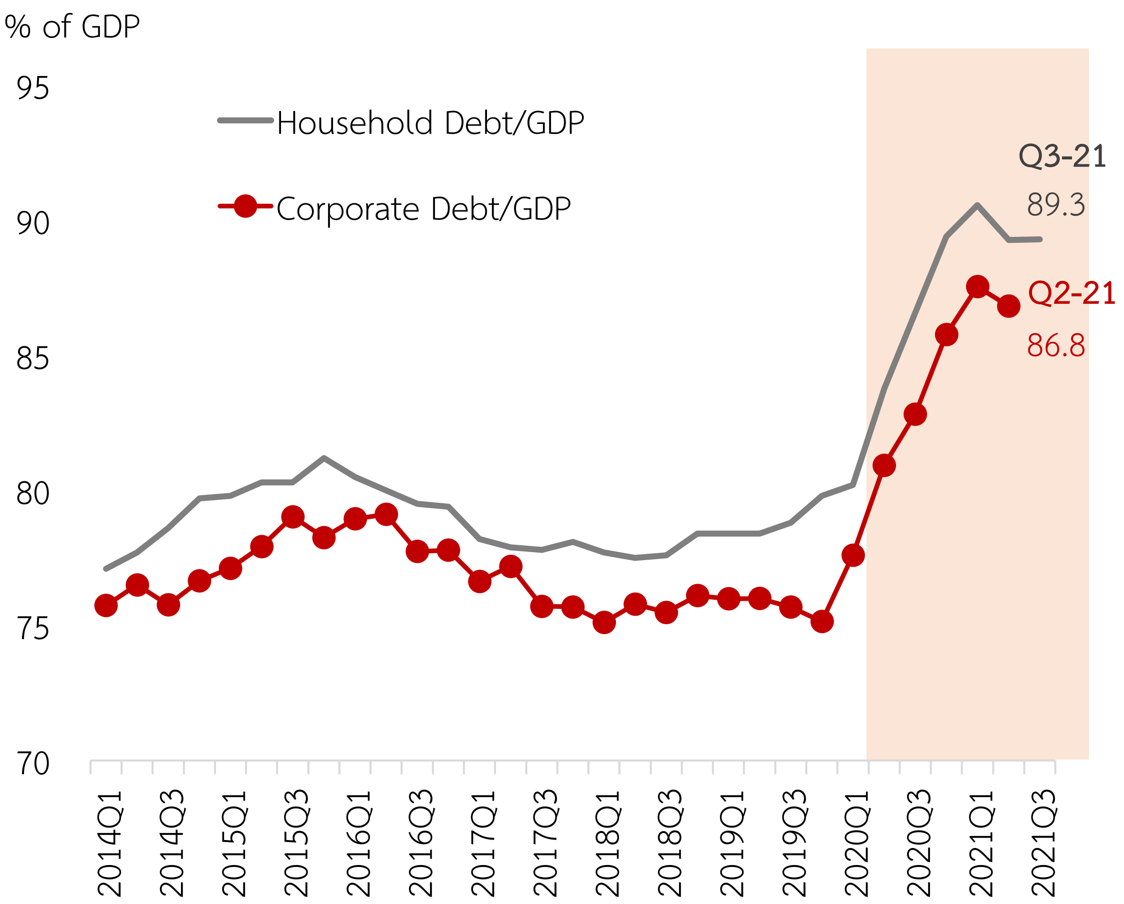
Non-resident participation in the equity and bond markets (Oct 2021)



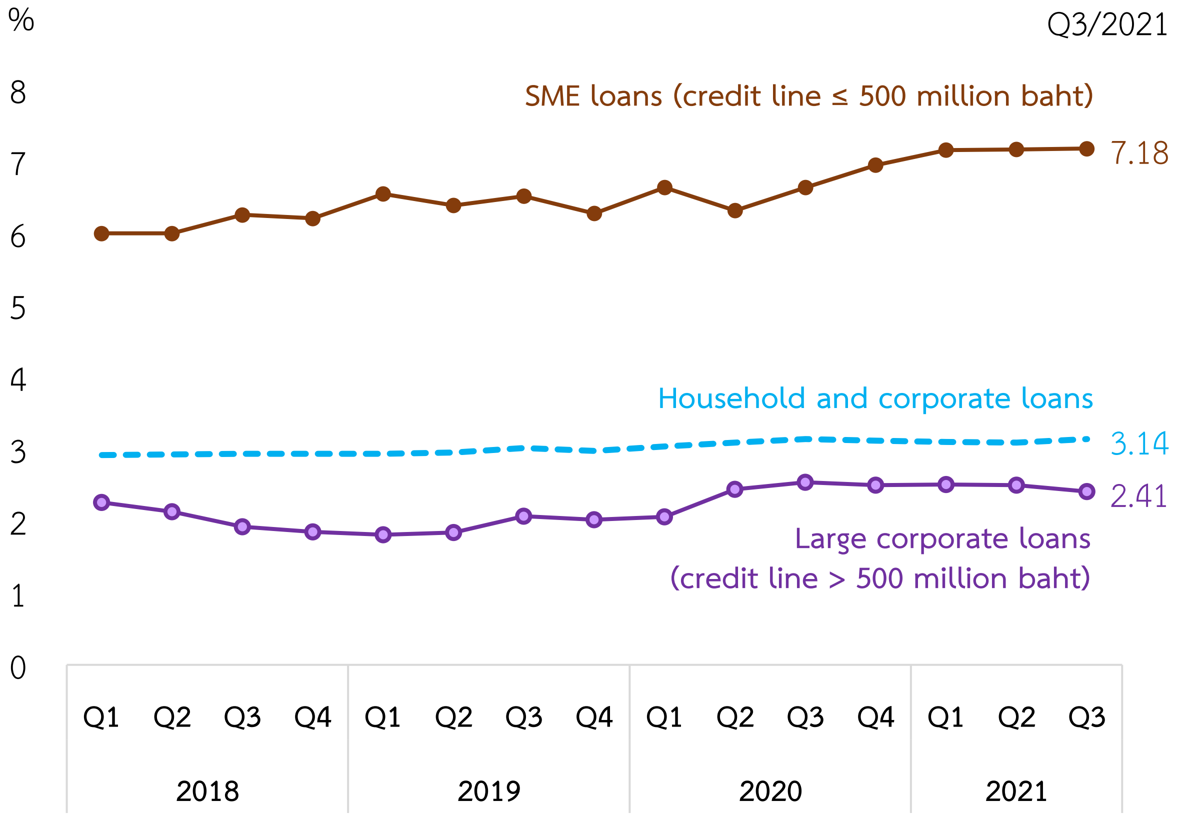
*Note: Bond market data for Malaysia and Indonesia is calculated from government bonds only. Equity market data as of end-Jul 2021 for Malaysia, and as of end-Sep 2021 for Indonesia.

Balance sheets of households and businesses remained fragile as reflected in high levels of household and corporate debt to GDP ratios.

Household debt and corporate debt (% of GDP)



Commercial banks' non-performing Loan (NPL) ratios



Medium-term risks to financial stability in Thailand: It was deemed necessary to prepare tools and measures to address medium-term risks that could arise amidst the COVID-19 pandemic, which could be prolonged and become more severe from outbreaks of new COVID-19 variants.

Household Debt	**Elevated and unsustainable levels of debt (i.e. debt overhang)** might affect financial institutions' balance sheets and weigh on economic growth in the period ahead.
Savings Cooperatives	**Contagion risks could spread if large savings cooperatives or the Federation of Savings and Credit Cooperatives faced challenges.** For instance, if they suffer significant loss from their investment in bonds and stocks, members could rapidly withdraw deposits thus leading to liquidity shortages.
Financial Institutions	**Financial institutions could face rising NPLs,** resulting in an erosion of capital to the point that it could impact their credit ratings or ability to extend new loans
Large Corporates	**Contagion risks could stem from large corporates (significant corporate: SiCorp) if faced with problems.** Examples of these problems include liquidity shortages, significant balance sheet losses, or credit rating downgrade to the point that could affect their ability to roll over debt.
Financial Market	**Financial market volatilities could lead to liquidity shortages for some groups of investors.** Bond market mutual funds, for instance, could see their NAV decline from volatile bond yields and result in mass redemption by their unit holders and affects the liquidity of the fund itself.

See more details in the Financial Stability Report 2021

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Coordination between financial and fiscal measures would help support the economic recovery in 2022 which was still subject to large degrees of uncertainty.

Financial measures		Macroprudential Policy	Fiscal measures
Solving debt overhang	Liquidity support		
▪ Long-term debt relief measures (3 Sep 2021) ▪ Debt consolidation measures new ▪ Suspension of prepayment penalty fees to support debt refinancing new ▪ DR Biz Program ▪ Debt Clinic / "Debt Doctor for the People" ▪ Debt Mediation	▪ Soft loans facility ▪ Asset warehousing ▪ Reduced FIDF fee ▪ Increased credit limit on credit card loans, personal loans, digital personal loans ▪ Minimum loan repayment reduction ▪ Digital supply chain finance	▪ Temporarily relaxed the maximum loan to value (LTV) to 100% of the residential property's value until end of 2022 to bolster the real estate sector and the economy new	▪ "Half-Half" co-payment scheme / "Ying Chai Ying Dai" scheme ▪ "Shop Dee Mee Kuen" program (Jan-Feb 2022) ▪ Reduced fees on transfer and mortgages of residential property until end of 2022 ▪ Measures to promote and sustain employment by SMEs (Nov 2021 – Jan 2022) ▪ Temporarily increased public debt ceiling in accordance with Article 28 of the Fiscal Responsibility Act from 30% to 35% for 1 year

For more details on the new measures, see "Special Issue 3: Additional financial measures in Q4/2021"

Special Issue 2

Monetary policy target for medium-term price stability and the year 2022

Prolonged outbreak of COVID-19 has impacted both the global economy and the Thai economy. In line with recent inflation outturns in Thailand, it was expected that inflation in the period ahead would rise above the lower bound of the inflation of the 1-3% target range but still remain within the target range overall

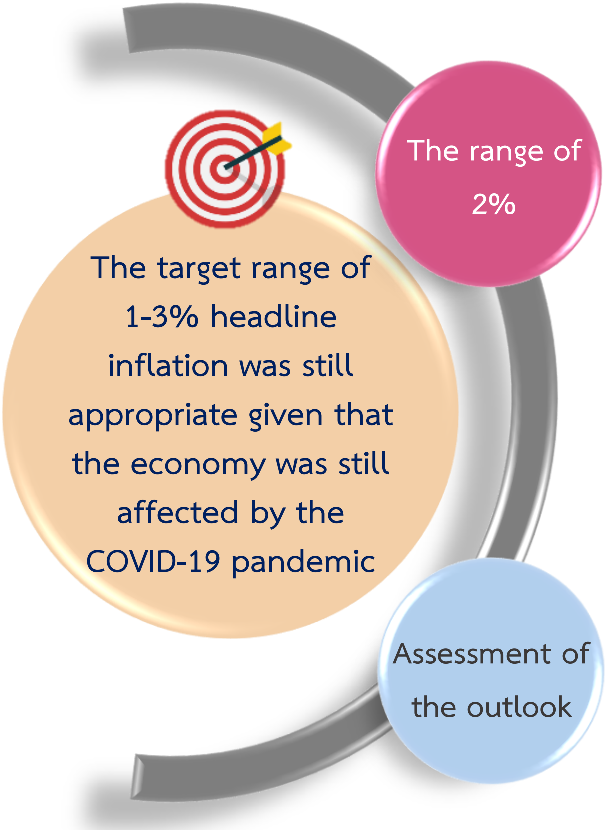
The Finance Minister and the Monetary Policy Committee (MPC) mutually agreed to set the monetary policy target for price stability such that headline inflation was to remain within the range of 1-3% for the medium-term horizon and the year 2022.

Inflation in the period ahead would remain above the lower bound of the target range. This is because:

1. **Economic activities would likely recover at a gradual pace** after the relaxation of containment measures
2. **Income and purchasing power remained low overall** due to rising unemployment and persistently high levels of household debt
3. **Prices of goods have declined** from increased price competition through e-commerce as well as lower production costs from the adoption of automation in the manufacturing process

However, inflation in Thailand would likely be more volatile in the period ahead due to:

- Volatilities in energy and fresh food prices
- Supply disruption and deglobalization leading to higher production costs



- ...is appropriate for the conduct of monetary policy amidst heightened uncertainties as it provides flexibility to address all 3 policy objectives – price stability, economic growth, and financial stability
- ...could still anchored the public's inflation expectations and could accommodate inflation volatility in the future

It would be necessary to assess both the short-term and long-term impacts of COVID-19 on the inflation outlook after the pandemic subsides. This is in line with other central banks that decided to keep their monetary policy targets unchanged.

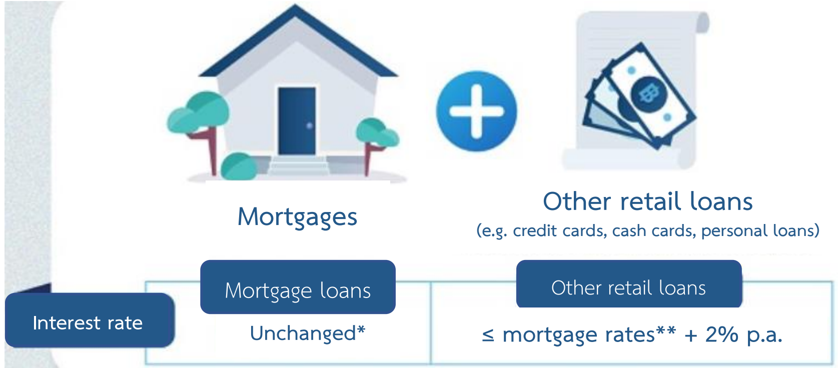
For more details, see Notification of the Monetary Policy Committee No. MPG.2/2021 Re: The Monetary Policy Target for 2022

Special Issue 3

Additional financial measures in Q4/2021

Debt restructuring through debt consolidation

Details of the measure

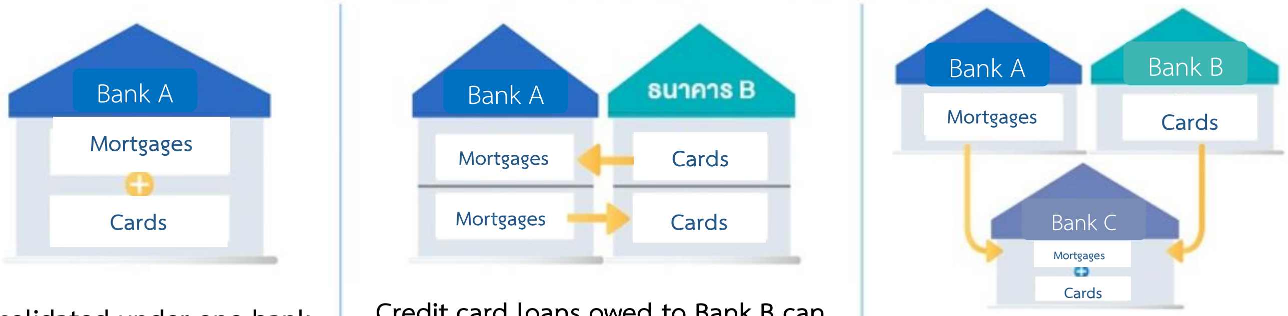


What is debt restructuring through debt consolidation?

Consolidation of mortgage and other retail credit to reduce interest burden and repayment installments

*except for the cases where there is refinancing for mortgage loans, the interest rate is determined by the commercial bank
**mortgage rates after sales promotion campaign have concluded

Loans from the same banks and loans from other banks can be consolidated



Consolidated under one bank

Credit card loans owed to Bank B can be consolidated with mortgages owed to Bank A, and vice versa.

Mortgages and credit card loans owed to Bank A and B could be moved and consolidated under Bank C alone.

Expected benefits

Interest rates on retail loans are lower after debt consolidation
Debtors would have more liquidity

Debt repayment is easier
There is now only one outstanding debt contract with one interest rate

No negative impact on debtors' credit score
If debt restructuring is concluded before outstanding debt turns into NPLs

More details (only available in Thai): https://www.bot.or.th/Thai/PressandSpeeches/Press/2021/Pages/n8764.aspx

Special Issue 3: Additional financial measures in Q4/2021 (2/3)

Measures to support refinancing activities

Details of the measures

Prepayment fees are temporarily suspended until 31 December 2023.

- Personnel loans under supervision
- Retail loans for working capital under supervision

Loans applicable for suspension of prepayment fees	
new Personal loans under supervision	Temporarily suspended until 31 Dec 2023
new Retail loans for working capital under supervision	Temporarily suspended until 31 Dec 2023
Mortgage loans	No prepayment after 3 years has lapsed*
Auto loans	No prepayment fee
Digital personal loans	No prepayment fee
Consumer loans such as loan to employee as welfare benefit or other secured loans	No prepayment fee

Expected benefits

Promote competition among financial institutions in consolidating debt for its borrowers to reduce debt burden, which complements the new debt consolidation measure.

More details (only available in Thai): https://www.bot.or.th/Thai/PressandSpeeches/Press/2021/Pages/n8764.aspx

Loan to Value (LTV) ratio temporarily relaxed until the end of 2022 to boost economic growth through the property sector

Details of the measure

- Relaxed maximum LTV to 100% for residential mortgages from the previous 70-90% for new residential mortgages (include refinancing loans and top-up loans)
- Effective from 20 October 2021 to 31 December 2022

Why relax the LTV ratio?

- To further stimulate economic activities and sustain employment
- To accommodate increased demand in the property market, especially among those with purchasing power

Expected benefits

The measure would bring in new liquidity into the Thai economy and help sustain employment through the property sector and other related businesses, which account for more than 9.8% of GDP and employs around 2.8 million people

The measure would help those looking to buy new residential properties to accommodate the new lifestyle brought about by COVID-19 and those with high purchasing power. Down payments could be as low as 0%, compared to the previous minimum of 10-30% of the property value.

More details (only available in Thai): https://www.bot.or.th/Thai/PressandSpeeches/Press/2021/Pages/n7564.aspx

Data tables

Percent	2019	2020	2020				2021		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP growth	2.3	-6.1	-2.1	-12.1	-6.4	-4.2	-2.6	7.6	-0.3
Production									
Agriculture	-0.6	-3.6	-9.9	-3.1	-1.1	0.4	1.3	1.9	4.3
Non-agriculture	2.5	-6.3	-1.3	-12.9	-6.7	-4.7	-3.0	8.1	-0.5
Manufacturing	-0.7	-5.7	-2.4	-14.7	-5.3	-0.7	1.0	16.9	-1.4
Construction	1.7	2.2	-9.3	7.5	10.8	-0.3	12.7	3.9	-4.1
Wholesales and retail trade	4.5	-3.7	3.6	-10.9	-6.1	-3.1	-2.2	5.5	3.3
Transport and storage	3.0	-21.0	-5.5	-36.6	-22.2	-21.1	-17.7	11.2	-0.9
Accommodation and Food Service	7.8	-36.6	-23.3	-49.9	-39.3	-35.2	-35.5	14.6	-18.7
Information and Communication	12.3	4.6	4.4	4.1	4.5	5.4	4.7	5.7	6.8
Financial intermediation	2.2	2.7	4.3	1.7	1.6	3.3	3.4	2.6	3.5
Real estate and renting	3.8	1.4	1.7	0.9	1.5	1.3	2.2	2.7	0.7

*Data may be subject to change in line with periodic revisions or changes to data collection methodologies

Source: Office of the National Economic and Social Development Board National Statistical Office and Bank of Thailand

Percent	2019	2020	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3
GDP growth	2.3	-6.1	-2.1	-12.1	-6.4	-4.2	-2.6	7.6	-0.3
Expenditure									
Domestic demand	3.0	-1.6	-0.6	-5.6	-0.5	0.3	2.0	4.8	-1.3
Private consumption	4.0	-1.0	2.7	-6.7	-0.6	0.9	-0.3	4.8	-3.2
Private investment	2.7	-8.4	-5.3	-14.9	-10.6	-3.3	3.0	9.2	2.6
Government consumption	1.7	0.9	-2.5	1.0	2.5	2.2	2.1	1.0	2.5
Public investment	0.1	5.7	-9.1	12.6	17.6	0.6	19.6	4.1	-6.0
Imports of goods and services	-5.2	-13.3	-3.0	-23.6	-19.3	-7.0	1.7	30.3	27.8
imports of goods	-5.8	-11.2	-2.2	-21.2	-18.1	-3.1	6.4	32.2	26.8
imports of services	-2.7	-21.1	-6.2	-32.4	-23.9	-22.1	-15.5	22.8	31.8
Exports of goods and services	-3.0	-19.4	-5.8	-27.5	-23.3	-21.5	-10.5	27.7	12.3
exports of goods	-3.7	-5.8	1.7	-15.8	-7.5	-1.5	3.2	30.7	12.3
exports of services	-0.5	-60.1	-26.8	-67.7	-73.1	-75.2	-63.6	0.1	11.8
Trade balance (billion, U.S. dollars)	26.7	40.9	9.2	8.8	14.1	8.7	8.9	10.9	9.3
Current account (billion, U.S. dollars)	38.0	21.2	11.2	1.5	8.0	0.4	-1.2	-2.5	-5.1
Financial account (billion, U.S. dollars)	-15.7	-12.0	-9.6	6.0	-6.3	-2.0	-5.1	-1.9	2.2
International reserves (billion, U.S. dollars)	224.3	258.1	226.5	241.6	251.1	258.1	245.5	246.5	244.7
Unemployment rate (%)	1.0	1.7	1.0	2.0	1.9	1.9	2.0	1.9	2.3
Unemployment rate, seasonally-adjusted (%)	n.a.	n.a.	1.0	1.9	1.9	1.9	1.9	1.9	2.3

*Data may be subject to change in line with periodic revisions or changes to data collection methodologies

Source: Office of the National Economic and Social Development Board National Statistical Office and Bank of Thailand

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Indicators	2019	2020	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Oct	2021 Nov
1. Financial market sector											
Bond market											
Bond spread (10 years - 2 years)	0.3	0.9	0.6	0.8	0.8	0.9	1.5	1.3	1.3	1.3	1.2
Equity market											
SET index (end of period)	1,590.6	1,449.4	1,125.9	1,339.0	1,237.0	1,449.4	1,587.2	1,587.8	1,605.7	1,623.4	1,568.7
Actual volatility of SET index [1/]	9.4	30.4	46.9	25.2	13.7	23.0	13.6	12.4	11.8	7.4	11.2
Price to Earnings ratio (P/E ratio) (times)	19.4	28.8	13.0	18.9	21.2	28.8	41.4	30.2	20.5	21.0	19.6
Exchange rate market											
Actual volatility of Thai baht (%annualized) [2/]	4.1	5.4	5.5	5.5	5.3	5.2	4.4	4.4	5.5	7.7	7.6
Nominal Effective Exchange Rate (NEER)	123.2	122.6	123.3	122.5	122.0	122.5	122.8	119.3	114.8	113.7	115.5
Real Effective Exchange Rate (REER)	112.8	110.2	114.4	113.0	111.1	110.4	109.0	106.0	101.7	101.8	103.4
2. Financial institution sector [3/]											
Minimum Lending Rate (MLR) [4/]	6.08	5.36	5.93	5.36	5.36	5.36	5.36	5.36	5.49	5.49	5.49
12-month fixed deposit rate [4/]	1.33	0.49	0.75	0.49	0.49	0.49	0.44	0.42	0.45	0.45	0.45
Capital adequacy											
Capital funds / Risk-weighted asset (%)	19.6	20.1	18.7	19.2	19.8	20.1	20.0	20.0	19.9	n.a.	n.a.
Earning and profitability											
Net profit (billion, Thai baht)	270.8	145.2	67.5	32.4	28.0	17.1	43.8	60.4	38.5	n.a.	n.a.
Return on assets (ROA) (times)	1.4	0.7	1.0	0.6	0.5	0.3	0.8	1.1	0.7	n.a.	n.a.
Liquidity											
Loan to Deposit and B/E (%)	96.2	92.3	92.5	92.8	93.0	92.3	92.2	92.8	93.8	n.a.	n.a.

Note:

[1/] Calculated by 'annualized standard deviation of return' method

[2/] Daily volatility (using exponentially weighted moving average method)

[3/] Based on data of all commercial banks

[4/] Average value of 6 largest Thai commercial banks from July 2021

Indicators	2019	2020	2020				2021				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Oct	Nov
3. Household sector											
Household debt to GDP (%)	79.8	89.4	80.2	83.8	86.6	89.4	90.6	89.3	89.3	n.a.	n.a.
Financial assets to debt (times)	3.0	2.9	2.8	2.9	2.9	2.9	2.9	3.0	n.a.	n.a.	n.a.
Non-Performing Loans (NPLs) of commercial banks (%)											
Consumer loans	2.9	2.8	3.2	3.1	2.9	2.9	2.9	2.9	2.9	n.a.	n.a.
Housing loans	3.7	3.8	4.0	4.0	3.9	3.8	3.7	3.7	3.6	n.a.	n.a.
Auto leasing	1.9	1.4	2.1	1.9	1.6	1.4	1.6	1.6	1.7	n.a.	n.a.
Credit cards	2.4	2.4	3.5	3.0	2.4	2.4	3.0	3.5	3.0	n.a.	n.a.
Other personal loans	2.3	2.4	2.6	2.5	2.3	2.4	2.5	2.5	2.4	n.a.	n.a.
4. Non-financial corporate sector[5/]											
Operating profit margin (OPM) (%)	6.8	6.5	6.3	4.5	7.5	7.7	9.4	8.5	8.1	n.a.	n.a.
Debt to Equity ratio (D/E ratio) (times)	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	n.a.	n.a.
Interest coverage ratio (ICR) (times)	4.4	4.1	3.8	2.7	4.3	5.4	6.5	6.5	6.0	n.a.	n.a.
Current ratio (times)	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.5	1.6	n.a.	n.a.
Non-Performing Loans (NPLs) of commercial banks (%)											
Large businesses	2.5	3.0	2.6	2.9	3.0	3.0	3.0	3.0	2.8	n.a.	n.a.
SMEs	6.4	7.0	6.7	6.4	6.7	7.0	7.3	7.3	7.3	n.a.	n.a.

Note:

[5/] Only listed companies on SET (median); with revisions to data and methodoloty.

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Indicators	2019	2020	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Oct	2021 Nov
5. Real estate sector											
Number of approved mortgages from commercial banks (Bangkok and Vicinity) (units)											
Total	70,876	70,950	14,882	17,531	18,977	19,560	15,958	17,238	14,413	4,140	n.a.
Single-detached and semi-detached houses	16,167	17,367	3,553	4,408	4,790	4,616	4,445	4,954	4,169	1,224	n.a.
Townhouses and commercial buildings	24,763	23,062	5,314	5,559	6,128	6,061	5,709	6,133	4,775	1,239	n.a.
Condominiums	29,946	30,521	6,015	7,564	8,059	8,883	5,804	6,151	5,469	1,677	n.a.
Number of new housing units launched for sale (Bangkok and Vicinity) (units)											
Total	118,975	73,022	18,591	11,535	23,122	19,774	10,187	15,050	10,242	6,551	10,995
Single-detached and semi-detached houses	19,683	17,746	3,682	3,495	5,483	5,086	2,306	3,565	2,678	404	2,666
Townhouses and commercial buildings	32,925	29,370	8,132	6,046	9,396	5,796	2,788	6,619	5,203	2,322	3,619
Condominiums	66,367	25,906	6,777	1,994	8,243	8,892	5,093	4,866	2,361	3,825	4,710
Housing price index (2009 = 100)[6/]											
Single-detached houses (including land)	127.9	133.2	132.2	132.4	133.37	134.77	134.10	135.04	136.5	137	n.a.
Townhouses (including land)	150.0	156.2	155.5	156.0	156.47	156.86	158.78	159.59	161.5	163	n.a.
Condominiums	162.8	170.1	169.9	174.2	166.40	169.76	177.18	178.79	185.4	186	n.a.
Land	151.4	163.4	159.0	162.2	165.13	167.12	171.03	172.21	179.2	183	n.a.
6. Fiscal sector											
Public debt to GDP (%)	41.2	51.8	41.7	45.8	49.4	51.8	54.3	55.2	58.2	58.8	n.a.
7. External sector											
Current account balance to GDP (%)	7.0	4.2	8.4	1.4	6.5	0.3	-0.9	-2.0	-4.3	n.a.	n.a.
External debt to GDP (%)[7/]	34.2	36.8	32.5	33.6	33.5	36.8	35.9	36.0	36.6	n.a.	n.a.
External debt (billion, U.S. dollars)	171.9	190.7	165.9	171.9	172.2	190.7	186.5	187.1	189.9	n.a.	n.a.
Short-term (%)	34.8	39.2	36.1	36.1	36.3	39.2	38.7	38.2	37.7	n.a.	n.a.
Long-term (%)	65.2	60.8	63.9	63.9	63.7	60.8	61.3	61.8	62.3	n.a.	n.a.
International reserves / Short-term external debt (times)[8/]	3.1	3.0	3.1	3.2	3.4	3.0	2.8	2.9	2.8	n.a.	n.a.

Note:

[6/] The October data is preliminary.

[7/] External debt / 3-year average nominal GDP

[8/] Short-term external debt comprises debt with remaining maturity not exceeding 1 year.

Probability distribution of GDP growth forecast

Percent	2021	2022				2023			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
> 18	0	0	0	0	0	1	1	1	2
16.0-18.0	0	0	0	0	0	1	1	1	1
14.0-16.0	0	0	0	0	1	1	1	2	1
12.0-14.0	0	0	0	0	2	2	3	3	3
10.0-12.0	0	0	0	2	5	5	6	6	6
8.0-10.0	0	0	1	5	12	10	11	12	11
6.0-8.0	0	0	4	11	20	15	16	16	16
4.0-6.0	0	2	10	17	23	22	24	25	23
2.0-4.0	0	14	19	19	19	26	23	21	22
0.0-2.0	0	27	22	17	10	10	8	7	9
(-2.0)-0.0	100	26	19	14	4	3	3	3	3
(-4.0)-(-2.0)	0	21	15	9	2	2	2	2	1
(-6.0)-(-4.0)	0	9	8	4	1	1	1	1	1
< -6	0	0	2	2	1	1	1	1	1

Probability distribution of headline inflation forecast

Percent	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4
> 4.5	0	0	0	1	0	0	0	1	1
4.0-4.5	0	1	0	2	0	1	1	1	2
3.5-4.0	1	4	2	5	0	2	2	3	4
3.0-3.5	6	11	5	10	1	4	5	6	7
2.5-3.0	24	22	12	15	3	7	8	9	10
2.0-2.5	39	27	19	19	6	12	12	13	13
1.5-2.0	25	21	22	19	11	15	15	15	15
1.0-1.5	6	10	19	15	15	17	16	16	15
0.5-1.0	1	3	12	9	18	16	15	14	12
0.0-0.5	0	1	6	4	17	12	11	10	9
(-0.5)-0.0	0	0	2	1	13	8	7	6	6
(-1.0)-(-0.5)	0	0	0	0	8	4	4	3	3
(-1.5)-(-1.0)	0	0	0	0	4	2	2	2	1
< -1.5	0	0	0	0	2	1	1	1	1

Probability distribution of core inflation forecast

Percent	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4
> 2.4	0	0	0	0	0	1	1	1	2
2.1-2.4	0	0	0	0	1	1	2	2	3
1.8-2.1	0	0	0	1	2	3	4	5	6
1.5-1.8	0	0	1	3	4	6	7	8	10
1.2-1.5	0	2	4	8	8	10	12	13	14
0.9-1.2	1	6	10	13	12	14	16	16	17
0.6-0.9	10	16	17	18	16	17	17	17	16
0.3-0.6	31	26	22	20	18	17	16	15	14
0.0-0.3	38	26	21	17	16	14	12	11	9
(-0.3)-0.0	17	16	14	11	11	9	7	6	5
(-0.6)-(-0.3)	3	6	7	5	6	5	4	3	2
(-0.9)-(-0.6)	0	1	2	2	3	2	1	1	1
(-1.2)-(-0.9)	0	0	1	1	1	1	0	0	0
< -1.2	0	0	0	0	0	0	0	0	0