ธนาคารแห่งประเทศไทย
BANK OF THAILAND

MONETARY POLICY REPORT

December

2019

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
December 2019

Mr. Veerathai Santiprabhob	Chairman
Mr. Mathee Supapongse	Vice Chairman
Mr. Paiboon Kittisrikangwan	Member
Mr. Sethaput Suthiwart-Narueput	Member
Mr. Kanit Sangsubhan	Member
Mr. Subhak Siwaraksa	Member
Mr. Somchai Jitsuchon	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 sets monetary policy to promote the objective of supporting sustainable and full potential economic growth, without causing inflationary problems or economic and financial imbalances or bubbles.

Monetary Policy Target

The Cabinet approved the annual average headline inflation target of 2.5 $\pm$ 1.5 percent as the target for the medium term and for 2019. The inflation target is to assure the general public that the MPC will take necessary policy actions to return headline inflation to the target within an appropriate time horizon without jeopardizing growth and macro-financial stability. In the event that headline inflation deviates from the target, the MPC shall explain the reasons behind the target breach to the Minister of Finance and the public, together with measures taken and estimated time to bring inflation back to the target.

Monetary Policy Instrument

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

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) organizing a press statement at 14:00 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.

Content

Note: Data in this report is as of December 17, 2019 (one day before the Monetary Policy Committee meeting)

Executive Summary

Monetary Policy Conduct in the Fourth Quarter of 2019

The Thai economy was expected to expand at a lower rate than previously assessed and below potential due mainly to a decline in exports which affected employment and domestic demand. Headline inflation in 2019 was projected to be lower than previously assessed and below the lower bound of the inflation target. Nonetheless, economic growth and inflation were expected to gradually improve in 2020. Financial stability risks had already been addressed to some extent, although there remained pockets of risks that might pose vulnerabilities to financial stability in the future. **The Committee voted 5 to 2 to cut the policy rate by 0.25 percentage point from 1.50 to 1.25 percent at the meeting on November 6, 2019 and voted unanimously to maintain the policy rate at 1.25 percent at the meeting on December 18, 2019.** At the most recent meeting, the Committee viewed that accommodative monetary policy stance following two policy rate cuts in the recent period would support economic growth and the rise of headline inflation toward target. The Thai baht movements were two-way and more in line with regional currencies. However, the Committee remained concerned about baht appreciation against trading partner currencies, and thus saw the need to continue to closely monitor developments of exchange rates and capital flows amid elevated uncertainties. Moreover, the Committee would monitor the effectiveness of the relaxation of foreign exchange regulations to encourage capital outflows and would also consider implementing additional measures if necessary. To ensure financial stability in the period ahead, the Committee viewed that the policy rate, microprudential measures, macroprudential measures, as well as structural policy such as debt restructuring, should be used jointly in an appropriate and well-targeted manner.

Looking ahead, the Committee would be data-dependent by closely monitoring the developments of the outlook for growth, inflation, and financial stability, together with associated risks, in deliberating appropriate monetary policy going forward. The Committee would stand ready to use policy tools as appropriate and monitor structural problems which would affect competitiveness and growth outlook going forward. This should be firmly addressed by all related parties.

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

1. Global Economy

The global economic outlook was expected to further expand. Despite a slowdown in 2019, the global economy would start to exhibit more stabilizing growth in 2020, especially in the manufacturing sector which was expected to improve in tandem with global trade volume, a recovery of the electronics cycle, and improved sentiment after the US and China unofficially reached an agreement on the phase one trade deal. **The Committee thus revised down growth projection of Thailand's trading partner economies to 2.7 percent in 2019, while maintained growth projection at 2.7 percent in 2020. Nonetheless, the probability of trading partner economies underperforming the baseline projection remained** owing to risks to global financial stability which were expected to be more vulnerable. Lower-for-longer policy rates would partly contribute to debt accumulation and increase risks of search-for-yield behavior, which could lead to underpricing of risks. Moreover, uncertainties pertaining to trade tensions remained high as the situation could be prolonged and intensified. Geopolitical risks could also be heightened and widespread. These risks might impact the manufacturing sector, exports, global trade volume, as well as confidence and investment in the period ahead.

Most central banks maintained a dovish monetary policy stance to shore up the economy**.** The Federal Reserve (Fed) cut its policy rate in October 2019 to 1.50 – 1.75 percent. The Fed was expected to keep its policy rate on hold throughout 2020. The European Central Bank (ECB) announced a package of additional monetary policy easing measures in November 2019. The Bank of Japan (BOJ) would likely ease monetary policy further should the economy experience a significant slowdown. Other regional central banks, including Bank Indonesia (BI), Bangko Sentral ng Pilipinas (BSP), the Reserve Bank of India (RBI), Bank of Korea (BOK), and the Reserve Bank of Australia (RBA) lowered their policy rates further to support weakening economic and inflation outlook.

2. Financial Conditions and Financial Stability

Thailand's overall financial conditions were more accommodative following a policy rate cut in November. This was reflected by the real policy rate which declined from the previous quarter and remained at a low level relative to those of other emerging markets (EMs). Interest rates in Thailand's financial markets, including short-term government bond yields, corporate bond yields, and some commercial banks' lending rates, declined in tandem with the policy rate cut. Meanwhile, long-term government bond yields increased in line with their US counterparts, propelled by improved sentiment in the global financial markets following an unofficial agreement between the US and China over the phase one trade deal. Private credit continued to slow down for both business and consumer loans as a result of economic slowdown and more tightening credit standards among financial institutions. The baht appreciated against the U.S. dollar from the end of the previous quarter. However, movements of the baht were two-way and more in line with regional currencies following the policy rate cut and the relaxation of foreign exchange regulations in November to encourage capital outflows. The real effective exchange rate (REER) index also appreciated from the last quarter.

There remained risks in the financial system that could pose vulnerabilities to financial stability in the future. These risks included, for instance, (1) a weakening ability of households to manage liquidity and service debt amid the economic slowdown, (2) substantial oversupply in the real estate market, especially for condominiums, which caused condominium prices to start declining, and (3) the search-for-yield behavior which would persist as domestic and international policy rates would likely be lower for longer. This could lead to underpricing of risks, particularly among saving cooperatives and large corporates.

3. Economic and Inflation Outlook

The Thai economy was expected to expand at 2.5 and 2.8 percent in 2019 and 2020, respectively, which would be below its potential and lower than the previous assessment. Merchandise exports were projected to recover more slowly than expected due to the slowdown in global trade volume affected by trade tensions and the impact of structural changes in the Thai economy on export sector. Public expenditure and private investment would expand more slowly than the previous forecast. However, private consumption in 2019 was expected to be better than estimated thanks to the government's short-term economic stimulus measures. In 2020, consumption was nonetheless projected to slow down in tandem with slower growth in household income and the drought. In 2021, the Thai economy was expected to continue to gain further traction as some public-private partnership (PPP) and public investment projects were postponed to take place in 2021. Details of the forecasts are as follows:

The value of merchandise exports in 2019 was expected to contract by more than previously estimated. Global trade volume would slow down in line with global economy and trade tensions. Moreover, Thai exports would face additional pressures from (1) structural factors including a trade diversion loss to China and the loss of competitive advantage on production cost, (2) baht appreciation, and (3) lower-than-expected prices of export products which were sensitive to oil prices. **However, Thai exports in the period ahead were projected to record a moderate growth in 2020** thanks to improvements in global trade, a gradual pick up in the electronics cycle, as well as an unofficial agreement between the US and China over the phase one trade deal which would lead to reduction and exemption of previously imposed tariffs on import goods.

Exports of services were expected to continue expanding, in line with the outlook of most foreign tourist nationalities. The expansion was partly due to government measures to boost tourism through extending the exemption of visa-on-arrival (VOA) fees until the end of April 2020, although tourist spending per head was expected to somewhat slow down following subdued global economic growth.

Private consumption, in the short-term, was supported by government stimulus measures, but was expected to exhibit slower growth in the period ahead after the effects of such measures wane off and household income becomes weakened. The outlook of employment and work hours would continue to decline and the decline would become more broad-based across many business sectors. Meanwhile, farm income in 2020 was projected to contract following falling production as a result of the drought. In addition, elevated household debt would remain weighing on private consumption.

Private investment was projected to expand at a lower rate than previously assessed due to export contraction which had become more evident. Moreover, profitability and business confidence in investment continued to deteriorate while PPP projects were also delayed. Nonetheless, **private investment in the period ahead would be supported** by export recovery and the continuing infrastructure investment projects, including the 5G network investment.

Public expenditure was expected to expand more slowly than the previous forecast following the ability of government agencies to incur carry-over budget obligations under the new Budget Procedure Act, prolonged delays in state-owned enterprise (SOE) investment, and a reduction in SOE investment budgets in 2020.

Headline inflations in 2019 and 2020 were projected to be below the target and below the previous estimate due mainly to supply-side factors including (1) lower-than-expected energy prices over recent periods and downward revisions in the projection for crude oil prices in the period ahead, and (2) minimum wage hike in 2020 that would be lower than previously assessed. Moreover, core inflation would remain low in line with decelerating demand-pull inflationary pressures. However, **headline inflation was projected to increase from 0.7 percent in 2019 to 0.8 percent in 2020. Meanwhile, core inflation was projected to increase from 0.5 percent in 2019 to 0.7 percent in 2020 in line with the outlook of economic recovery and the impact of minimum wage hike. Headline inflation was anticipated to return to the target during the second half of 2021.**

Risks to economic growth and inflation projections remained tilted to the downside. The possibilities that the Thai economy would underperform the baseline projection would be due to (1) slower-than-expected growth in global trade volume and trading partner economies as a result of trade tensions which could re-intensify, (2) more-than-expected impact of a potential delay in the enactment of the Annual Budget Expenditure Act, B.E. 2563 (A.D. 2020) on public expenditure, as well as potential implementation delay and lack of continuity in government policies, (3) larger-than-expected effects from a slowdown in household income growth on private consumption, as well as the impact of intensifying drought, and (4) global financial stability risks which could impact the economy in the medium term. On the other hand, **there were possibilities that the Thai economy would outperform the baseline projection attributable to** (1) higher-than-projected growth of trading partner economies if there were additional government stimulus measures, improvements in trade tensions, as well as faster- and better-than-expected recovery in the electronics cycle, and (2) higher-than-expected domestic demand as a result of public infrastructure investment and PPP projects, which may incentivize private sector to invest at a higher level and faster, as well as the potential implementation of additional government stimulus measures. **There remained downside risks to headline and core inflation projections** in line with risks to the economic growth projection.

1. Global Economy

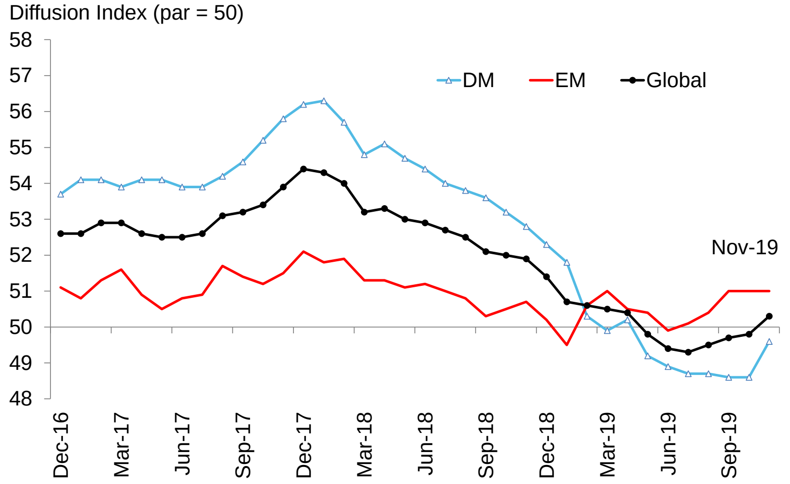
Despite a slowdown in 2019, major advanced economies would start to exhibit more stabilizing growth in 2020.

In the third quarter of 2019, the U.S. and euro area economy expanded at a slightly faster pace than in the previous quarter. While exports, investment, and production continued to moderate, private consumption could still expand on account of robust labor markets, especially in the services sector. Moreover, additional monetary policy accommodation in the recent period was a key supporting factor for economic growth. **The Japanese economy** also improved from the previous quarter, driven by domestic demand expansion due to accelerated spending prior to an increase in consumption tax from 8 to 10 percent, which became effective since October 1, 2019. In addition, investment in machinery to mitigate labor shortages lent additional support to economic growth.

In the period ahead, major advanced economies would start to exhibit a more stabilizing growth in 2020, despite a slowdown in 2019. In particular, the manufacturing sector would improve in tandem with global trade volume. (Chart 1.1). Meanwhile, private consumption would remain the key driver of economic growth supported by employment in the services sector. However, employment in the manufacturing sector which remained soft, and some country-specific factors including an increase in consumption tax in Japan, could moderate private consumption growth somewhat in the period ahead. Moreover, a greater role of fiscal policy to boost the economy, such as the Japanese government's 26 trillion yen stimulus package to be implemented in 2020, would also support growth in the period ahead.

Chart 1.1 Global manufacturing outlook exhibited signs of improvement in major advanced economies and Asia

Global manufacturing Purchasing Manager Index (PMI)



Note: DM = Developed Markets; EM = Emerging Markets

Source: CEIC, Markit PMI, JP Morgan (Global PMI)

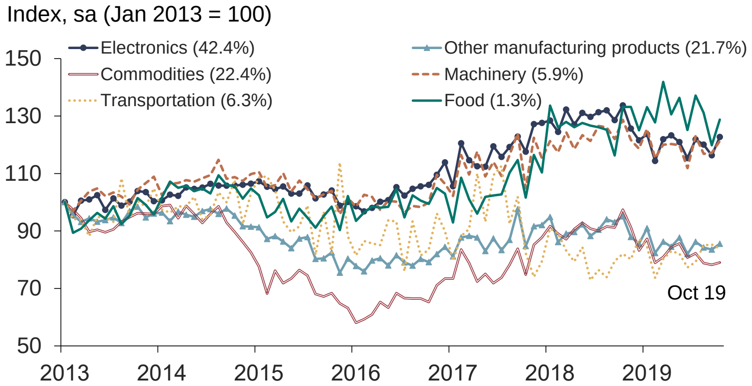
Asian economies expanded at a slower pace on account of trade tensions between the U.S. and China, but were expected to improve in line with improving leading indicators, a recovery of the electronics cycle, and improving sentiment after the U.S. and China unofficially reached an agreement on the phase one trade deal.

In the third quarter of 2019, the Chinese economy expanded at a slower pace than in the previous quarter, mainly as private investment and exports were affected by trade tensions. However, the economy in the recent periods was supported by government stimulus measures, including infrastructure investments through issuances of local government special bonds and reduction of financing costs to a low level. In the period ahead, the Chinese government would be cautious when implementing stimulus policies in order to maintain financial stability, which could be done through a wide range of stimulus measures, such as tax reductions and monetary policy easing. This would ensure a quality economic growth in accordance with the government's growth target.

In the third quarter of 2019, Asian economies (excluding Japan and China) moderated from the previous quarter as production and exports were affected by trade tensions, as well as prolonged protests in Hong Kong which resulted in an economic contraction. Looking ahead, Asian economies were expected to recover gradually, as merchandise exports were expected to improve relative to the previous quarter. (Chart 1.2) This was in line with improving outlook of global trade volume and the electronics cycle, which began to show stabilizing sign and was expected to recover in the first half of 2020. Although manufacturing sector and investment were partly affected by trade tensions in the recent periods, sentiment began to improve after the U.S. and China unofficially reached an agreement on the phase one trade deal on December 13, 2019. Moreover, robust private consumption and employment, and a greater role of government stimulus measures, would support Asian economic growth going forward.

Chart 1.2 Asian exports still contracted in line with global trade slowdown and some country-specific factors, despite some positive signs

Asian exports value*, classified by product categories



Note: *Asian exports include Hong Kong, Taiwan, South Korea, Malaysia and Singapore.
( ) denotes share of total exports in 2018. Commodity-related products include crude oil, metals, chemicals, rubber, and vegetable oil. Other manufacturing products include textile, papers, furniture, footwear and miscellaneous.

Source: CEIC

Growth projections for Thailand's trading partner economies in 2019 were revised downward, but projections for 2020 were maintained. Meanwhile, risks tilted to the downside in line with the previous assessment.

Trading partner economies in 2019 were expected to expand at a slightly slower pace than in the previous assessment as the economic data outturns for the third quarter of 2019 were lower than expected. In particular, the Hong Kong economy contracted due to prolonged protests. **The Committee thus revised down growth projections for Thailand's trading partners in 2019 from 2.8 to 2.7 percent.** In 2020, trading partner economies would begin to exhibit a more stabilizing growth, although the euro area economy might moderate as implementation of fiscal measures could face constraints and be delayed longer than anticipated. Nevertheless, the U.S. and China's unofficial agreement on the phase one trade deal, which led to the reduction and cancellation of previously imposed import tariffs, would benefit the expansion of trading partner economies in 2020, especially the U.S. and China. The Japanese economy could also outperform the previous projection, given the government's stimulus package. **The Committee thus maintained growth projection for trading partners at 2.7 percent in 2020** (Table 1.1).

Table 1.1 Assumption on trading partner growth

Annual change (%YoY)	Weight (%)	2018*	2019	2020
United States	15.9	2.9	2.3 (2.3)	1.8 (1.7)
Euro area	10.3	1.9	1.2 (1.2)	1.1 (1.3)
Japan	14.1	0.3	1.0 (1.0)	0.4 (0.2)
China	17.1	6.6	6.1 (6.1)	5.9 (5.8)
Asia (excluding Japan and China)**	34.2	4.1	2.6 (2.9)	3.2 (3.3)
Total***	100	3.5	2.7 (2.8)	2.7 (2.7)

Note: *Outturn
**Weighted by 7 trading partners' shares in Thailand's exports in 2018, namely, Singapore (5.3%), Hong Kong (7.1%), Malaysia (6.6%), Taiwan (2.2%), Indonesia (5.7%), South Korea (2.8%), and Philippines (4.5%)
***Weighted by 13 trading partners' shares in Thailand's exports in 2018 (including the United Kingdom and Australia)
( ) as reported in Monetary Policy Report, September 2019

The Committee assessed that there were possibilities that trading partners' growth could underperform the baseline projection, in line with greater downside risks in the medium to long term arising from a more vulnerable outlook of the global financial stability. Lower-for-longer policy rates would partly contribute to debt accumulation of businesses, non-banks, and the public sector in several countries, and increase risks of search-for-yield behavior, which could lead to underpricing of risks. These risks included (1) investment in government bonds with negative yields which were more sensitive to interest rate changes, (2) investment in illiquid assets, and (3) investment in high-risk assets, such as corporate bonds issued by companies with high indebtedness.

Moreover, there remained risks that warranted monitoring given potential impact on production, exports, and global trade volume, as well as confidence and investment going forward. Such risks included (1) trade tensions between the U.S. and China, where the next phase of trade negotiations could be prolonged and the situation could intensify, with the possibility that the U.S. might raise tariffs on auto imports in the future, (2) uncertainties pertaining to Brexit scenarios and timing, and (3) geopolitical risks which could intensify and become widespread. In particular, protests that occurred in similar pattern and more often including prolonged and intensifying protests in Hong Kong, Chile, Bolivia, and Lebanon, could heighten volatilities in the financial and commodity markets.

Most central banks maintained a dovish monetary policy stance to shore up the economy.

Monetary policies of major advanced economies' central banks remained accommodative to support the economy. The Federal Reserve (Fed) cut its policy rate for the third time in September 2019 from 1.75-2.00 percent to 1.50-1.75 percent. The Fed kept its policy rate unchanged at the December meeting and was expected to keep the policy rate on hold throughout 2020. Going forward, the Fed's monetary policy would mainly follow a data-dependent approach. Moreover, the European Central Bank (ECB) kept its policy rate at a low level and injected liquidity in the financial system through the third targeted longer-term refinancing operations (TLTROs) for a more efficient credit extension from commercial banks to the real economy. The ECB also started to purchase bonds under the asset purchasing programs (APPs) since November 1, 2019, as previously announced in the package of additional monetary policy easing measures. Meanwhile, the Bank of Japan (BOJ) would likely ease monetary policy further should the economy experience a significant slowdown.

Monetary policies of most regional central banks were more accommodative. The Bank Indonesia (BI), Bangko Sentral ng Pilipinas (BSP), the Reserve Bank of India (RBI), Bank of Korea (BOK), and the Reserve Bank of Australia (RBA) cut their policy rates to support weakening economic and inflation outlook. Meanwhile, Bank Negara Malaysia (BNM) kept its policy rate on hold after having cut its policy rate in the beginning of 2019.

Emerging markets experienced net capital inflows following positive developments on the U.S.-China trade negotiations and Brexit, and a more dovish monetary policy stance of central banks in major advanced economies.

In the beginning of the fourth quarter of 2019, net capital inflows to emerging markets (EMs) increased in both equity and bond markets. This was on account of improved global financial market conditions following positive developments on the U.S.-China trade negotiations and Brexit, and a more dovish monetary stance of central banks in major advanced economies. As a result, investor sentiment shifted toward risk-on in line with a marked decline in the VIX Index[1/] (Chart 1.3). However, since the middle of November 2019, capital inflows to EMs began to slow down amid investor concerns over risks including slowing global economic growth outlook, and prolonged and uncertain trade negotiations between the U.S. and China. At the beginning of December, risks in the global financial markets heightened somewhat after the U.S. passed the Hong Kong Human Rights and Democracy Act to support protests in

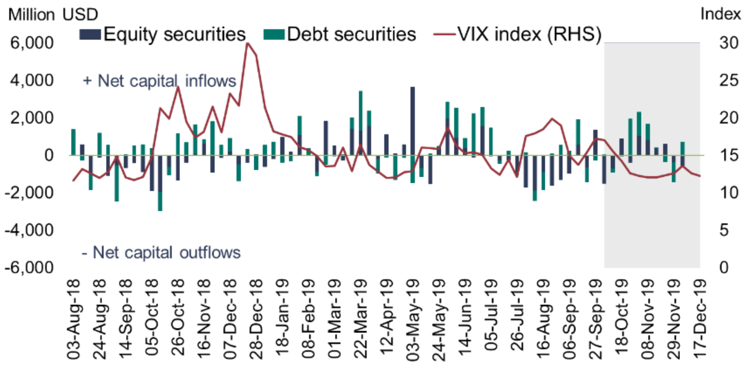
[1/] VIX Index is a measure of the stock market volatility implied by S&P 500 Index options.

Hong Kong, and raised tariffs on imported goods from Argentina, Brazil and France. However, risks in the global financial markets abated after the U.S. and China unofficially reached an agreement on the phase one trade deal, which would benefit global trade recovery in the period ahead.

Looking ahead, capital inflows to EMs would still be supported by heightened global liquidity resulting from monetary policy easing in major advanced economies. However, global financial markets would remain highly volatile due to several risk factors. In the short term, global financial markets would experience lower risks thanks to the U.S.-China's unofficial agreement on the phase one trade deal, although there remained risks regarding the next phase of trade negotiations and heightened geopolitical risks. In the medium to long term, outlook of lower-for-longer policy rates would pose greater risks to global financial stability.

Chart 1.3 EMs experienced net capital inflows following positive developments of the US-China trade negotiations and Brexit, and further monetary policy easing by central banks of major advanced economies

Net capital inflows to EMs* and VIX index (weekly)



Note: *EMs include Thailand, Indonesia, India, South Africa, and Turkey
Sources: Bloomberg and Institutional Institute of Finance

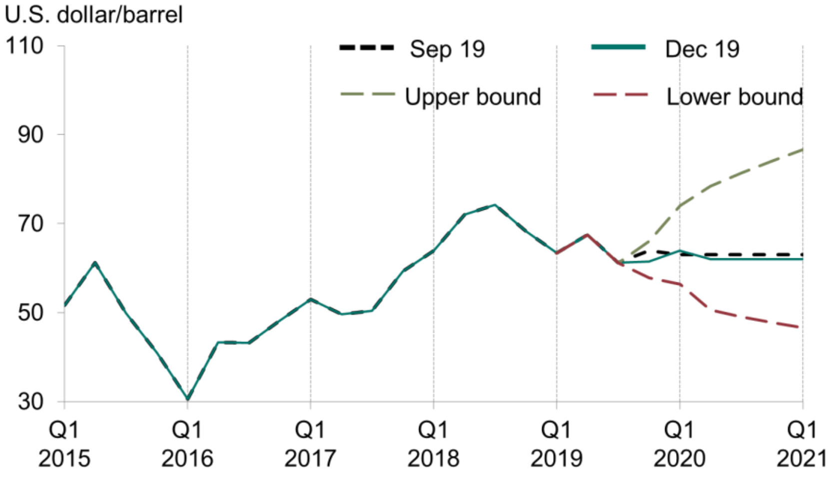
Dubai crude oil prices in the fourth quarter of 2019 were largely unchanged from the previous quarter. Factors pushing down prices included Saudi Arabia's fast return to normal production capacity and the global economic slowdown. Meanwhile, upward pressures were from additional crude oil production cut agreed by OPEC members and allies, and the U.S. and China's unofficial agreement on the phase one trade deal.

Dubai crude oil prices in the fourth quarter of 2019 were largely unchanged from the previous quarter. Factors that put downward pressures on crude oil prices were: (1) the return of Saudi Arabia's oil production capacity to normal level since October following attacks on its oil processing facilities at the end of the previous quarter, and (2) slower growth of crude oil demand owing to the global economic slowdown, partly as a result of trade tensions between the U.S. and China. **On the other hand, factors that pushed crude oil prices upward in some periods include** (1) an agreement by OPEC members and allies at the latest meeting to additionally cut crude oil production from 1.2 to 1.7 million barrels per day, which would be effective from January 1 to March 31, 2020 in accordance with the time frame of the previous agreement, and (2) the U.S. and China's unofficial agreement on the phase one trade deal, which eased the downward pressure on crude oil prices. As the effects on prices of downward and upward pressures were more or less in balance, Dubai crude oil prices in the fourth quarter of 2019 were thus largely unchanged from the previous quarter.

The Committee thus revised down the projection for Dubai crude oil prices in 2019 and 2020 from 64.0 and 63.0 U.S. dollars per barrel to 63.4 and 62.5 U.S. dollars per barrel, respectively. The downward revision was due to a faster-than-expected return of Saudi Arabia's oil production capacity to normal level, and a slower-than-expected outlook of the global economic growth than in the previous assessment. Nevertheless, **risks to the projection of Dubai crude oil prices were revised to tilt upward** from being in balance as previously assessed in the previous *Monetary Policy Report.* This was because the intensity of geopolitical risks could be greater than expected. Moreover, OPEC members, especially Saudi Arabia, could make a larger production cut than the agreement and could extend the agreement to cut crude oil production further. On the contrary, crude oil prices might decline due to a larger-than-expected economic slowdown driven by potentially prolonged and intensifying trade tensions. In addition, the International Maritime Organization (IMO)'s enforcement of the new marine fuel regulations might result in a lower demand for high-sulfur oil, including Dubai crude oil, than the baseline projection.

Chart 1.4 Dubai crude oil prices in 2019Q4 were largely unchanged from the previous quarter, where factors pushing down prices included a fast return of Saudi Arabia's oil production capacity to normal level and global economic slowdown. Factors pushing up prices included an additional crude oil production cut by OPEC members and allies and the U.S. and China's unofficial agreement on the phase one trade deal.

Crude oil price projection



2. The Thai Economy

2.1 Recent developments

The Thai economy in the third quarter of 2019 expanded at a slower pace than the previous quarter mainly due to external demand.

In the third quarter of 2019, the Thai economy expanded 2.4 percent from the same period last year. The growth rate was in line with that of the previous quarter. However, it was lower than previously assessed in the previous *Monetary Policy Report*, mainly due to a lower-than-expected growth of external demand. Thai merchandise exports (excluding gold) continued to contract on the back of contraction in manufacturing exports, including petroleum-related products, machinery and equipment, and electronics parts. The export contraction was driven by the slowdown in trading partner economies, impacts of trade tensions between the U.S. and China, a prolonged down cycle of electronic products, as well as a fall in global crude oil prices. Merchandise exports contraction was in line with the decline in export-related manufacturing. Similarly, exports of agricultural products continued to contract due to the decline in exports of rice, cassava, and rubber, given high level of importers' stocks and loss of Thailand's price competitiveness. Meanwhile, exports of services, despite a negative growth, improved from the previous quarter, thanks to the increase in foreign tourist figures, especially Chinese tourists. Meanwhile, domestic demand continued to grow. Private investment expanded thanks to investment in machinery and equipment, particularly in other vehicles item, following a rise in imports of electric trains and ships during periods of baht appreciation. Public spending growth improved, supported by expenditures on personnel compensation, and on goods and services. Also, public investment continued to grow thanks to construction in state-owned enterprise (SOE) investment projects, such as the Phase 2 expansion of Suvarnabhumi Airport. However, private consumption growth moderated in almost all categories, in tandem with slower growth in the trading sector. Although the government had allocated extra budget for the social welfare card scheme, factors supporting overall household purchasing power weakened, especially given slower growth in household income in line with lower employment and deteriorating consumer confidence.

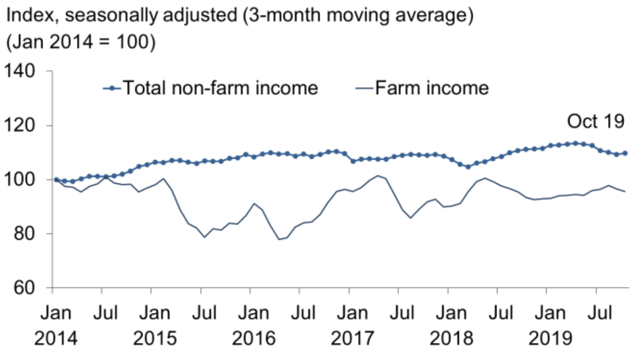
In the fourth quarter of 2019, most recent economic indicators pointed to a softer economic growth relative to the previous quarter. Private consumption would decelerate, although government's economic stimulus measures helped shore up consumption of non-durable goods to some extent. However, the support was not sufficient to offset the impact from the decline in household income and employment, especially in export-related manufacturing sectors. Elevated household debt would also weigh on private consumption. Public expenditure slowed down mainly on account of public investment, as the delay in the enactment of the Annual Budget Expenditure Act, B.E. 2563 (A.D. 2020) resulted in delay in disbursements of capital expenditure for new investment projects. Public investment also moderated due to a prolonged delay in SOE investment and a reduction in SOE investment budget for fiscal year 2020. Meanwhile, private investment growth was largely unchanged from the previous quarter, thanks to a greater clarity pertaining to the public-private partnership projects in major infrastructure investment, such as the Mabtapud Industrial Port development project. Private investment also benefited from the ongoing relocation of production base of some industries to Thailand, as businesses seek to avoid the impact from trade tensions. On the external side, merchandise exports continued to contract in line with the significant decline in export-related manufacturing and employment, as a result of the slowdown in trading partner economies and global trade volume due to trade tensions. Thai merchandise exports were also indirectly affected by increased competition from Chinese merchandise exports in the regional market. Meanwhile, exports of services resumed growth thanks to the increase in foreign tourist figures, especially Chinese, Indian, and Taiwanese tourists, supported by the extended exemption of visa-on-arrival (VOA) fees until the end of April 2020.

The economic slowdown led household purchasing power to be more vulnerable, as reflected by the decline in non-farm employment across all sectors. In addition, impact of the drought on farm income must be monitored.

Employment and income of **non-farm households** continued to contract from the same period last year across all sectors (Charts 2.1 and 2.2). The decline was particularly observed in export-related manufacturing sectors, such as rubber and plastic, food, and motor vehicles. However, employment in tourism-related services sectors improved somewhat thanks to the increase in foreign tourist figures. Moreover, weaker household purchasing power had a negative impact on income of self-employed workers who relied heavily on purchasing power of other groups of workers. Nevertheless, there remained a need to monitor structural changes in the labor market and impacts on the market from the economic slowdown. These included (1) changes in employment pattern from monthly to daily contract in some industries, (2) the increasing adoption of automation which led to challenges in upskilling and reskilling the labor force, (3) employers' temporary suspension of business operation and employees' reduction in work hours which led to lower wages according to Section 75 of the Labor Protection Act, and (4) exits from the labor force of workers from all educational levels that were not old-age workers.

Chart 2.1 Overall purchasing power weakened

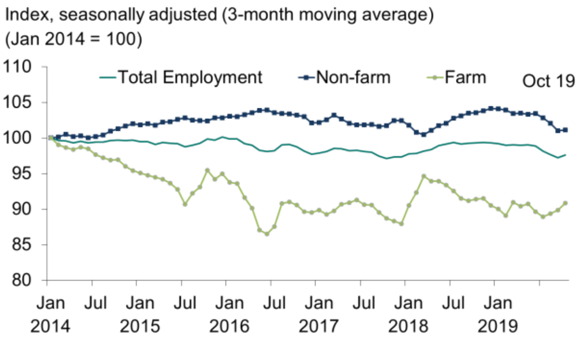
Household income indicators



Note: All indicators are calculated in real terms, excluding price effects.
Sources: Bank of Thailand, Office of Agricultural Economics, National Statistical Office, Ministry of Commerce, calculations by Bank of Thailand

Chart 2.2 Overall employment still experienced impact from the economic slowdown, especially non-farm employment which contracted mainly in export-related industries.

Employment indicators



Source: National Statistical Office

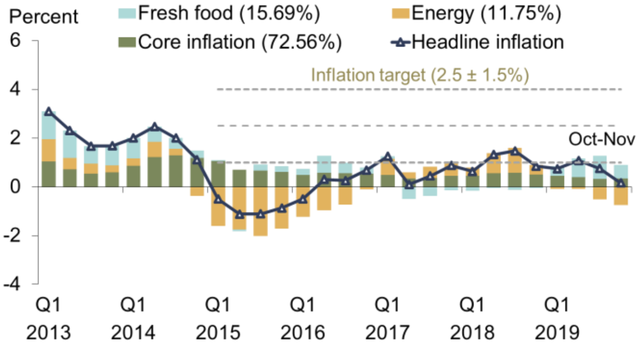
Income of **farm households** moderated due to lower agricultural output as a result of the drought. Also, prices of some agricultural products, such as rubber, remained low. Nevertheless, government measures to support income of farm households helped alleviate the impact to some extent. These measures included, for example, the income guarantee scheme for farmers and subsidies for rice harvesting and rice quality improvements. In the period ahead, farm households would face risks from low water levels in dams, especially in some major dams[2/] where water levels were critically low. Such water shortage could affect agricultural output in the period ahead.

Headline inflation declined in line with food and energy prices.

Headline inflation averaged at 0.16 percent in the first two months of the fourth quarter of 2019, down from 0.61 percent in the previous quarter (Chart 2.3). The decrease was due to a fall in fresh food prices. This was in line with lower vegetable and fruit prices given large supply to the market, and a drop in meat prices, especially pork prices which were weighed down by lower domestic demand following the African swine fever (ASF) epidemic in neighboring countries. Meanwhile, energy prices fell on the back of domestic retail oil prices, which declined in tandem with global crude oil prices.

Chart 2.3 Headline inflation decreased from the previous quarter mainly due to fresh food prices

Headline inflation and inflation target



Note: Headline inflation for the first 11 months of 2019 recorded 0.69 percent
( ) denotes share in inflation baskets
Source: Ministry of Commerce, calculations by Bank of Thailand

Core inflation averaged at 0.46 percent in the first two months of the fourth quarter of 2019, largely unchanged from the previous quarter. Food-in-core inflation fell (Chart 2.4) mainly in line with prices of prepared food. However, prices of non-alcoholic beverages rose slightly following the increase in excise tax on sugar-sweetened beverages. Meanwhile, core inflation in the non-food categories increased slightly (Chart 2.5), mainly driven by the increase in prices of personal care. In other categories, prices slowly increased amid slowdown in domestic economy, and were influenced by changes in structural factors including the expansion of e-commerce, rising price competition, and lower production costs from higher production efficiency. These factors contributed to low core inflation in the non-food categories in recent periods (Table 2.1).

Short-term (one-year ahead) inflation expectations according to the survey of businesses in November 2019 stood at 1.7 percent, a slight decline from 1.8 percent in the previous quarter. Inflation expectations of professional forecasters in September 2019 stood at 1.2 percent, down slightly from 1.3 percent in the previous quarter. Meanwhile, **long-term (five-year ahead) inflation expectations** according to the survey of professional forecasters in September 2019 recorded 2.0 percent, an improvement from the previous survey's result of 1.8 percent (April 2019). In addition, inflation expectations based on a macro-finance term structure model with bond yields and macroeconomic data stabilized at 1.6 percent in the third quarter of 2019.

[2/] Dams with critically-low water levels included major dams in the Chao Phraya river basin such as Bhumibol Dam, Sirikit Dam, Pa Sak Dam, Kwai Noi Dam, and Ubol Ratana Dam in the Northeastern region of Thailand.

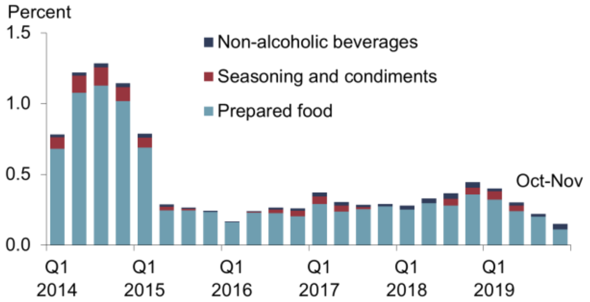
Table 2.1 Inflation

Annual percentage change	2017	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Oct - Nov
Headline Consumer Price Index (Headline CPI)	1.07	0.64	1.31	1.47	0.84	0.74	1.08	0.61	0.16
Core Consumer Price Index (Core CPI)	0.71	0.61	0.76	0.78	0.71	0.62	0.54	0.45	0.46
Raw food	-0.63	-1.04	-0.35	-0.82	-0.35	2.50	4.98	5.78	3.70
Energy	5.66	3.01	7.30	9.11	3.39	-0.79	-0.70	-4.97	-6.12

Source: Bureau of Trade and Economic Indices, Ministry of Commerce

Chart 2.4 Core inflation in the food category (28% of core inflation) declined mainly on account of a decrease in prepared food prices

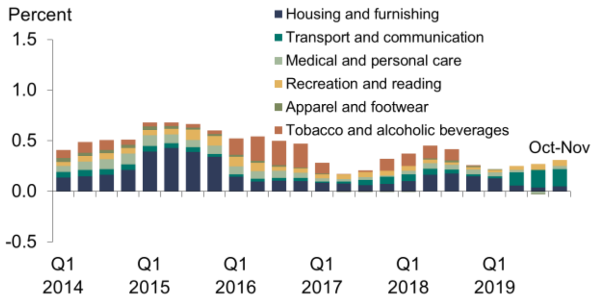
Contribution* to core inflation in the food category



Note: *Contributions to core inflation decompose core inflation into inflation of each component within the basket, weighted by its corresponding share.
Source: Ministry of Commerce, calculations by Bank of Thailand

Chart 2.5 Core inflation in the non-food category (72% of core inflation) increased as a result of a rise in personal care prices

Contribution* to core inflation in the non-food category



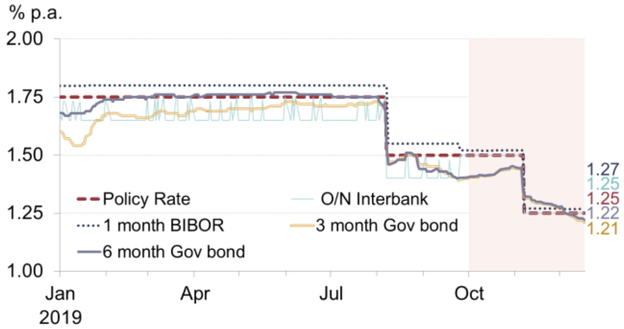
Note: * Contributions to core inflation decompose core inflation into inflation of each component within the basket, weighted by its corresponding share.
Source: Ministry of Commerce, calculations by Bank of Thailand

Short-term money market rates, short-term government bond yields, and some types of bank lending and deposit rates fell in line with the policy rate. However, long-term government bond yields rose mainly due to external factors.

In the fourth quarter of 2019, **short-term money market rates and short-term government bond yields** continued to decline, mainly in line with the policy rate cut by 0.25 percent to 1.25 percent on November 6, 2019 (Chart 2.6). Meanwhile, **medium- to long-term government bond yields** (Chart 2.7) rose in tandem with U.S. treasury yields, on the back of risk-on sentiment in the global financial markets following positive developments on trade negotiations between the U.S. and China and Brexit. In addition, many central banks were expected to pause the additional monetary policy easing. Nevertheless, the rise in long-term Thai government bond yields would be limited due to increased demand from domestic investors, such as mutual funds, and foreign investors following an increase in the weights of Thai government bonds in the J.P. Morgan Government Bond Index.

Chart 2.6 Short-term money market rates and short-term government bond yields declined in line with the policy rate

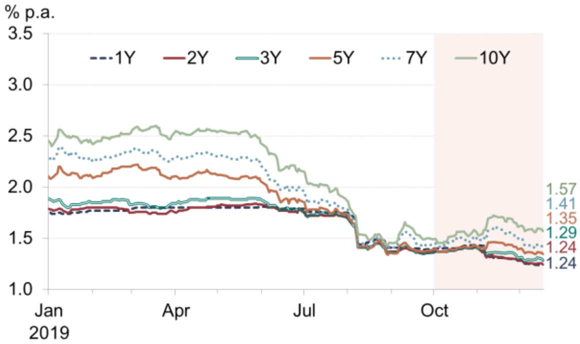
Short-term rates in financial markets



Sources: Bank of Thailand and Thai Bond Market Association (Thai BMA) (data as of 17 Dec 2019)

Chart 2.7 Medium- to long-term government bond yields increased in line with the U.S. treasury yields

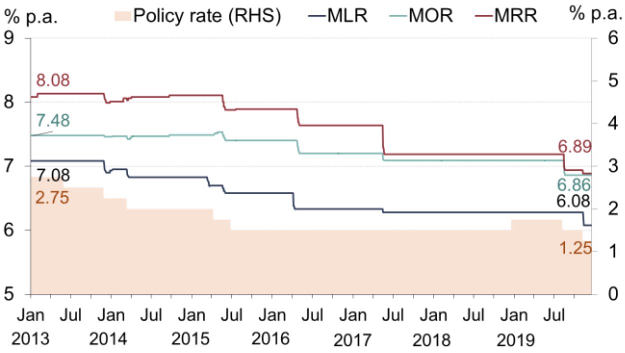
Government bond yields



Source: Thai Bond Market Association (Thai BMA) (data as of 17 Dec 2019)

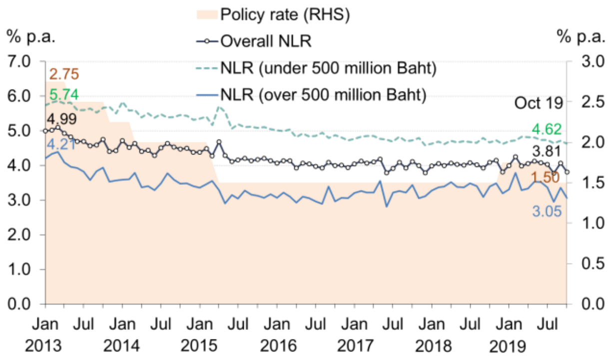
Overall corporate bond yields declined in the fourth quarter of 2019 in line with the policy rate. Similarly, **costs of financing through commercial banks** became more accommodative, as many Thai commercial banks cut their minimum loan rates (MLR) for the first time in 14 quarters. Also, the minimum retail rates (MRR) were reduced slightly further from the previous quarter (Chart 2.8). Meanwhile, new loan rates (NLR)[3/] declined to 3.8 percent in October 2019 from the end of the previous quarter (Chart 2.9). The fall in NLRs was seen across all contract sizes among many types of businesses, partly for the purpose of short-term working capital. **Deposit rates** also fell (Chart 2.10) in tandem with lending rates, especially for 3-month, 6-month, and 12-month fixed deposits. Meanwhile, average saving rates remained unchanged.

Chart 2.8 Commercial banks reduced MLR and MRR in tandem with the policy rate



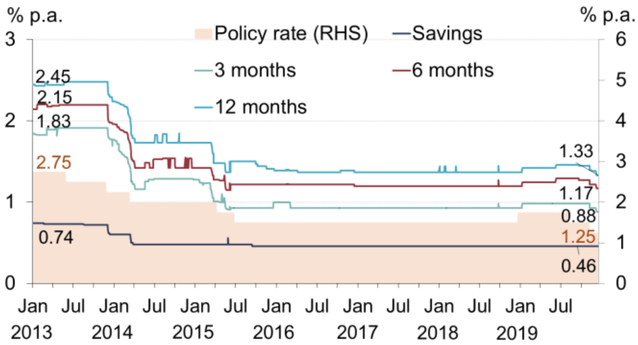
Note: Averages of 5 largest commercial banks' lending rates
Source: Bank of Thailand (data as of 17 Dec 2019)

Chart 2.9 Overall New Loan Rate (NLR) of commercial banks slightly decreased from previous quarter



Source: Bank of Thailand (data as of 17 Dec 2019)

Chart 2.10 Commercial banks gradually reduced deposit rates of 3, 6, and 12 months fixed deposits



Note: Averages of 5 largest commercial banks' lending rates
Source: Bank of Thailand (data as of 17 Dec 2019)

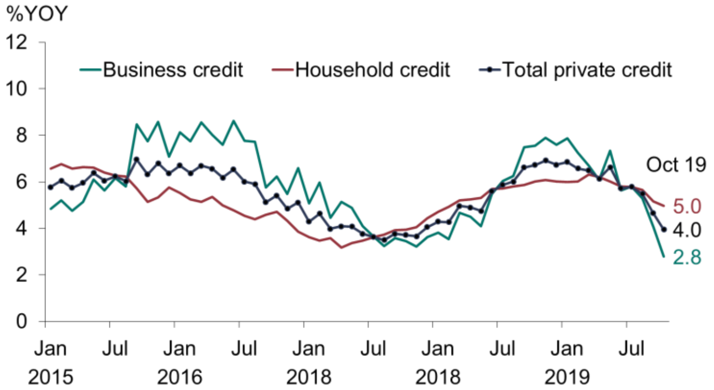
[3/] NLR is the weighted average of interest rates on new loan contracts extended by 14 Thai commercial banks each month. The loan contracts exclude consumer loans, credit card loans, repurchase agreements, bank guarantees, as well as loans extended to financial intermediaries, the public sector and non-residents. The dataset covers loans with value of 20 million baht or higher for all loan types, purposes and maturities, and includes both secured and unsecured loans. Moreover, interest rates used in the calculation refer to the mid-rate between the lowest and the highest rates in each loan contract

Private sector financing continued to moderate in line with economic conditions

In September and October 2019, **private credit**[4/] **continued to slow down** in both business and household sectors in line with economic conditions. In particular, business and household credit expanded 2.8 and 5.0 percent in October 2019, respectively (Chart 2.11).

Chart 2.11 Private credit continued to slow down in both business and household sectors

Growth of private credit



Note: 1) Private credits include credit extended by (1) Other Depository Corporations (ODCs) namely commercial banks, specialized financial institutions, finance companies, saving cooperatives, and money market mutual funds, (2) Other Financial Corporations (OFCs), and (3) non-resident

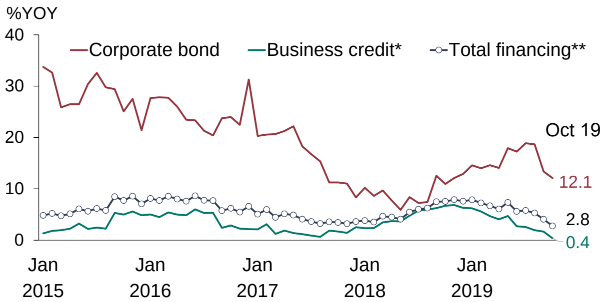
2) The definition of private credit was redefined to cover broader types of lenders and financial instruments. The data was first published in the MPR in 2019Q4, where the data was available from January 2012.

Source: Bank of Thailand

Business credit moderated mainly in the loan category, where business loans exhibited a slower growth of 0.4 percent in October 2019. This was partly because businesses in electricity power generation, transmission, and distribution raised funds in the equity market to repay bridge loans to financial institutions. Moreover, **issuance of corporate bond slowed down**, after having accelerated in earlier periods (Chart 2.12). However, businesses in information and communication technology continued to raise funds through the bond market, mainly to repay their matured debt.

Chart 2.12 Overall business financing continued to decelerate, especially business credit

Growth of business credit and corporate bond outstanding



Note: * Business loans covers lending activities of Other Depository Corporation (ODCs), Other Financial Corporations (OFCs), and non-resident

** The definition of private credit was redefined to cover broader types of lenders and financial instruments. The data was first published in the MPR in 2019Q4, while the data was available from January 2012.

Sources: Thai Bond Market Association (Thai BMA) and Bank of Thailand

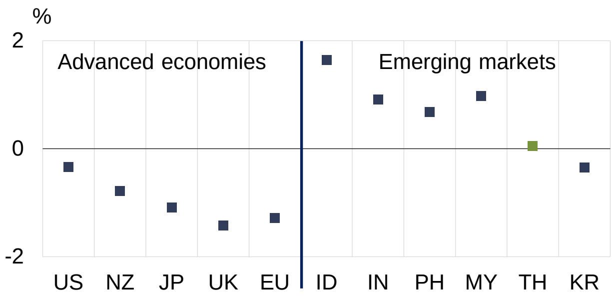
[4/] Loans extended to the private sector consist of those extended by (1) other depository corporations (ODCs) including commercial banks, specialized financial institutions, finance companies, saving cooperatives and market mutual funds (2) other financial institutions (OFCs) and (3) non-residents.

Household credit growth slowed down slightly to 5.0 percent in October 2019. The slowdown was observed across all purposes, including other consumer loans, auto leasing and mortgage loans. This was in line with economic conditions and a more cautious credit extension by financial institutions in order to comply with macroprudential measures implemented by the Bank of Thailand.

Financial conditions were more accommodative following the policy rate cut in November 2019, which allowed the real policy rate to decline from the previous quarter and remained at a low level relative to those of other emerging markets (EMs) (Chart 2.13). Meanwhile, private sector financing moderated in almost all channels, except equity financing. Regarding credit underwriting standards in the fourth quarter of 2019,[5/] financial institutions were expected to tighten credit underwriting standards for both business and household loans, particularly loans extended to businesses related to real estate and hotel, given the economic slowdown and potentially intensifying trade tensions. Moreover, financial institutions would be more cautious in extending household loans for almost all purposes. This was partly due to deteriorating credit quality, and partly as financial institutions conformed to the Bank of Thailand's guidelines on responsible lending in order to address household over-indebtedness.

Chart 2.13 Thailand's real policy rate* decreased due to the policy rate cut and remained at a low level relative to those of other EM countries.

Real policy rates*



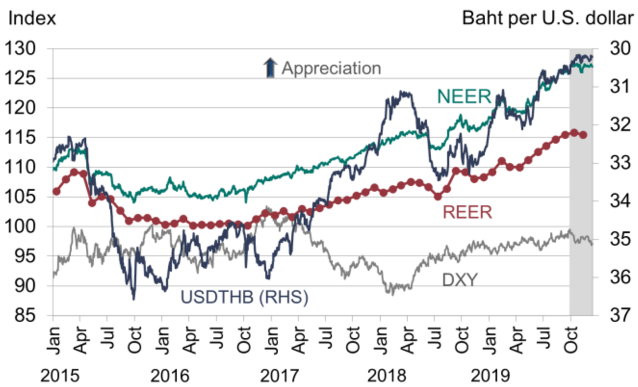
Note: *Calculated from policy rate subtracted by one-year-ahead inflation expectation according to the survey by Consensus Economics (data as of 11 November 2019)
Sources: Bloomberg and Consensus Economics, calculation by Bank of Thailand

The baht against the U.S. dollar and the nominal effective exchange rate (NEER) index appreciated and exhibited two-way movements

In the fourth quarter of 2019, **the baht appreciated against the U.S. dollar** relative to the end of the previous quarter (Chart 2.14). In particular, at the beginning of the quarter, a fast appreciation of the baht was in line with regional currencies, following the U.S. dollar depreciation due to lower-than-expected U.S. economic data outturns and market expectations that the Fed would keep its policy rate unchanged for extended periods. The baht appreciated once again toward the end of the quarter as the U.S. dollar weakened, following an unofficial agreement between

Chart 2.14 The baht appreciated against the U.S. dollar at the beginning of the quarter

USDTHB, NEER, DXY

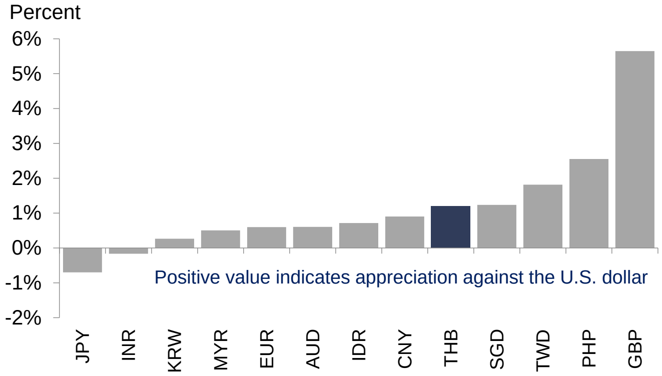


Source: Bank of Thailand, Bloomberg and Reuters
(data as of 17 December 2019)

[5/] Results of financial institutions' survey as published in the Report on Credit Conditions Q3/2019 and Outlook for Q4/2019 the US and China over the phase one trade deal, together with heightened geopolitical risks in several countries including Hong Kong and Chile. However, the baht weakened somewhat following the MPC's policy rate cut to 1.25 percent on November 6, 2019 and the relaxation of foreign exchange regulations to encourage capital outflows on the same day. As of December 17, 2019, the baht closed at 30.22 baht to U.S. dollar, a 1.2 percent appreciation from the end of the previous quarter.

The nominal effective exchange rate (NEER) index as of December 17, 2019 stood at 126.9, an appreciation of 0.7 percent from the end of the previous quarter. This was attributable to the baht strengthening against most trading partner currencies, except pound sterling, Philippine peso, Taiwanese dollar and Singaporean dollar (Chart 2.15). Meanwhile, the preliminary **real effective exchange rate (REER)** at the end of November 2019 rose slightly by 0.1 percent from the end of the previous quarter. Going forward, exchange rates would likely remain volatile due to uncertainties surrounding trade tensions, fiscal policies of major advanced economies and regional economies, as well as geopolitical risks which could intensify and become widespread.

Chart 2.15 The baht appreciated against the U.S. dollar in line with movements of other regional currencies (17 Dec 19 compared to the end of Sep 19)



Source: Bank of Thailand and Reuters (data as of 17 December 2019)

There remained pockets of risks in the financial system that could pose vulnerabilities to financial stability in the future. These risks included (1) a weakening ability of households to manage liquidity and service debt amid the economic slowdown, (2) oversupply in the real estate market, and (3) the search-for-yield behavior which would persist and could lead to underpricing of risks, particularly among saving cooperatives and large corporates.

Thailand's financial stability remained sound overall, particularly with regard to external stability, as indicated by the high level of international reserves and sustained current account surpluses. The low external debt to GDP[6/] also provided cushion for the Thai economy against risks of volatile global financial markets. Meanwhile, financial institutions maintained robust financial positions, reflected by high levels of commercial banks' capital buffers, providing cushion against risks of deteriorating credit quality. Nevertheless, there remained other risks that warranted continued monitoring going forward:

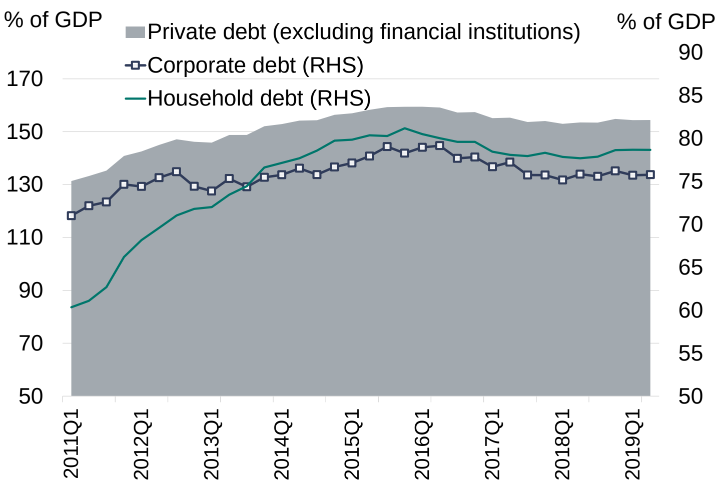
1. Weakening ability of households to manage liquidity and service debt amid the economic slowdown. Household debt to GDP ratio in the second quarter of 2019 remained high at 78.7 percent (Chart 2.16). In addition, household income was expected to slow down in line with the economy. These raised default risk of the household sector. The NPL ratio of consumer loans in the third quarter of 2019 rose from the previous quarter to 2.8

[6/] The latest data as of the third quarter of 2019 showed the external debt to GDP ratio at 35.6 percent.

percent. Meanwhile, the special mention loan (SM) ratio, which reflected the inability to service consumer loans for 1-3 months, also increased, indicating deteriorating quality of consumer loans across almost all loan types, particularly mortgage, auto, and credit card loans. Going forward, household debt to GDP ratio would continue to rise, since the economy could slow down at a faster pace than household debt. In addition, Thailand's household debt was largely concentrated in personal consumption loans with short repayment period and high interest rates, thereby exposing households to a high monthly debt burden. (**Box**: *Thailand's household debt composition and implications on financial positions*) Hence, there remained a need to monitor households' ability to cope with vulnerabilities from negative economic and income shocks going forward.

Chart 2.16 The ratio of household debt to GDP exhibited an increasing sign

The ratio of private credit to GDP



Source: Bank of Thailand

Financial position of businesses became more vulnerable, especially small enterprises. This was reflected by sustained negative operating profit margin (OPM) and interest coverage ratio (ICR) of some small businesses.[7/] Meanwhile, the continuation of economic slowdown started to have an impact on medium-sized enterprises, as suggested by their NPL ratio which rose gradually. In addition, credit quality of loans extended to small enterprises continued to deteriorate, causing NPL ratio of SME loans to rise to 4.8 percent in the third quarter of 2019 relative to the previous quarter.[8/]

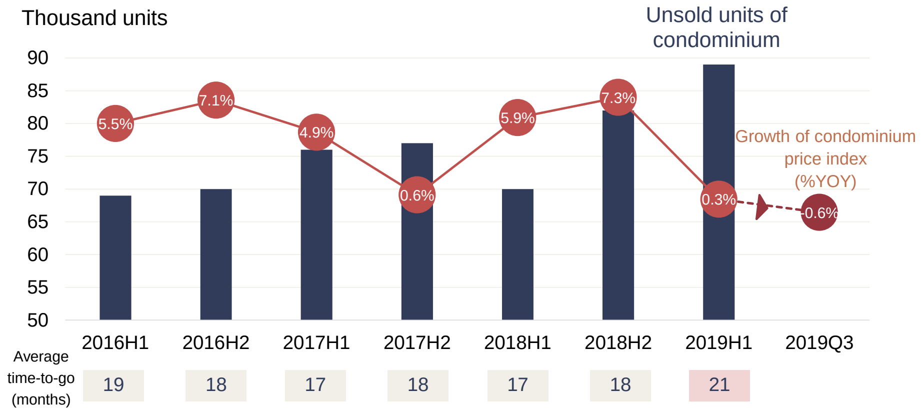
2. Substantial oversupply in the real estate market, especially for condominiums, caused condominium prices to start declining. Unsold units of condominiums increased from 82,000 units at the end of 2018 to around 89,000 units during the first half of 2019, while time-to-go rose from 18 to 21 months. As a result, condominium price index recorded a slower growth of 0.4 percent in the second quarter and a contraction of 0.6 percent in the third quarter of 2019, compared to the annual average of 6.5 percent over the past 5 years (Chart 2.17).

7/ As reflected by the ICR and OPM of 25th-percentile small-sized listed companies, which remained in the negative territory.

8/ The NPL ratio of SME loans from 2013 to date averaged at 4.0 percent.

Chart 2.17 Unsold units and average time-to-go of condominium increased, causing condominium price index to fall

Condominium unsold units, average time-to-go, and price index

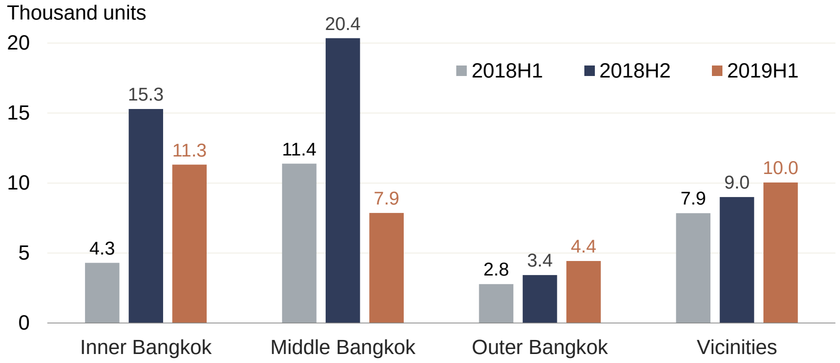


Source: REIC, AREA and Bank of Thailand

The number of new condominium project launches in Bangkok and vicinities declined, especially in inner and central Bangkok (Chart 2.18), reflecting adjustments of developers which helped reduce oversupply of condominiums. However, ability of developers to adjust still warranted monitoring, as demand for residences was affected by both domestic and global economic slowdown. In addition, the implementation of the LTV measure weighed on speculative demand for residences, especially condominiums. This could, in turn, result in an imbalance between supply and demand in the real estate market, which would increase liquidity risks of developers going forward.

Chart 2.18 Real estate developers, especially in inner and middle Bangkok, slowed down launches of new condominium projects

New condominium launches in Bangkok and vicinities



Note : 1. Zoning is based on Bangkok Metropolitan Administration 2001 (21 districts in inner Bangkok, 18 districts in middle Bangkok and 11 districts in outer Bangkok)

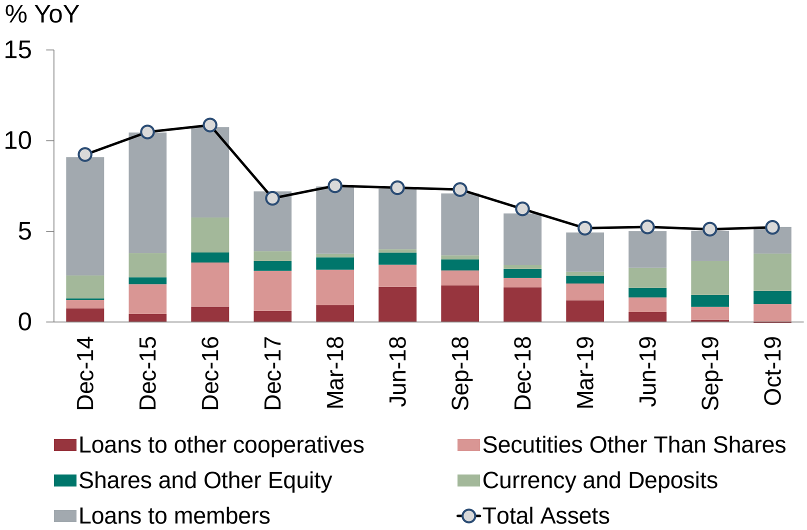
2. Vicinities include Nonthaburi, Pathum Thani, Samutprakarn, Nakhonpathom, and Samut Sakhon

Source: AREA and the Bank of Thailand

3. Search-for-yield behavior would persist as domestic and international policy rates would likely be lower for longer. This could lead to underpricing of risks and thus warranted continued monitoring. First, search-for-yield behavior of saving cooperatives continued, despite the slower expansion in assets in line with deposits and equities. Saving cooperatives increasingly raised funds through deposits and reduced their borrowing (Chart 2.19) after regulatory authorities collaborated in revising regulations to enhance supervisory standards. However, there remained a need to monitor systemic risk in the saving cooperatives system from high borrowings between saving cooperatives, as well as the search-for-yield behavior of some surplus and large saving cooperatives given a continued increase in their investment in corporate bond. Second, large cooperates accelerated their fundraising under prolonged low interest rates, especially by increasingly issuing high-yield bonds. These cooperates had significant interconnectedness with the financial system, and hence could lead to concentration risks in the financial markets. Third, outward investment through foreign investment funds (FIF), which was highly concentrated in some countries, warranted monitoring going forward.

Chart 2.19 Assets of saving cooperatives decelerated, but there remained pressure to search for higher yield

Contribution to growth of savings cooperatives' assets



Note: Saving cooperatives were subjected to tighter regulation by the government since 2017H2

Source: Cooperative Auditing Department, calculations by Bank of Thailand

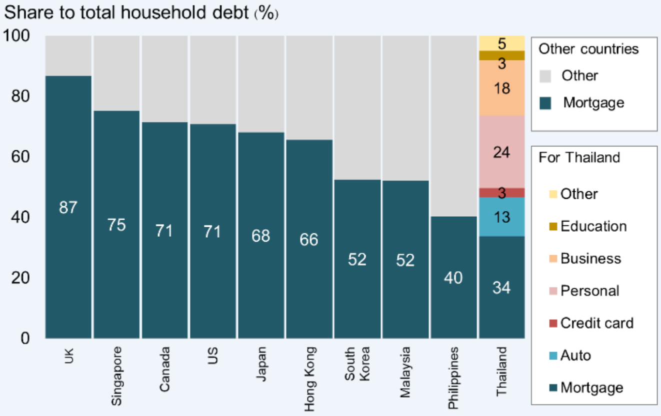
Thailand's household debt composition and implications on financial positions

Recent studies on Thailand's household debt have revealed that "Thai households save little and become indebted quite early, in large amount, and over long periods". Such findings have drawn public attention to household debt problem and to pay more interests in household debt data. The Bank of Thailand (BOT) has been publishing data on Thailand's household debt on a quarterly basis, classified by type of financial institutions that lend to households. In the second quarter of 2019, total household debt stood at 13.1 trillion baht, or 78.7 percent of GDP[9/]. Recently, **the BOT has prepared a new dataset called "Loans to household classified by loan purpose" to provide a more comprehensive household debt data to the public**, which was first published on the BOT website on January 31, 2020. An analysis based on the new dataset on household debt composition revealed the implications on Thailand's financial stability as follows.

Thailand's household debt was largely short-term loans for personal consumption, whereas the share of long-term loans for purchases of fixed assets was relatively lower. In particular, mortgage loans accounted for only 34 percent of total household debt in Thailand, in contrast to other countries where mortgage loans accounted for more than half of total household debt (Chart 1). Data on household debt composition in the second quarter of 2019 suggested that loans for personal consumption[10/] accounted for 32 percent of total household debt. Commercial banks, specialized financial institutions (SFIs) and non-banks were the main issuers of these loans, although leasing companies and savings cooperatives played an increasingly role in recent periods. Meanwhile, only 18 percent of total debt was incurred to finance households' business operations, where nearly half of such debt was issued by SFIs for agricultural businesses.

Chart 1 Thailand's household debt was largely short-term loans for consumption, while a share of mortgage loans was lower relative to other countries.

Thailand's household debt composition, classified by purpose



Note: Data as of Q2/2019 for all countries except Malaysia whose data is as of 2017 Other loans, in the case of Thailand, comprises loans for purchasing securities and for other purposes.

Source: CEIC, Bank of Thailand, Hong Kong Monetary Authority, Monetary Authority of Singapore, Bank Negara Malaysia, Bank of Korea, Bank of England, Bangko Sentral ng Pilipinas, calculations by Bank of Thailand

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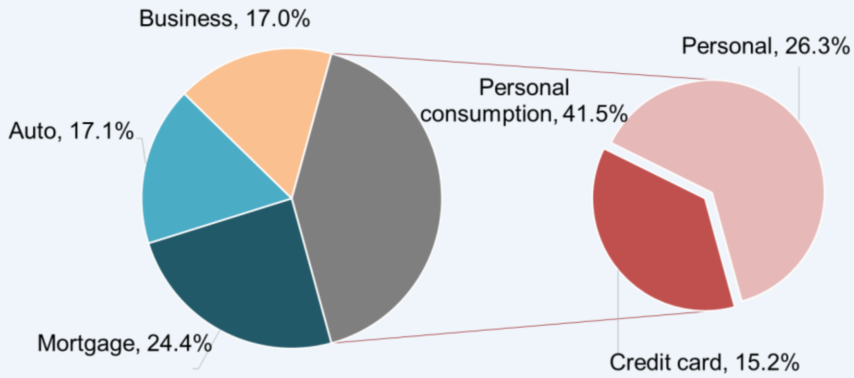
9/ The data is published on the BOT website under the statistics table "EC_MB_039 Loans to Household". It comprises loans to households from commercial banks, SFIs, saving cooperatives, credit card, leasing and personal loan companies; life insurance and non-life insurance companies; securities companies and asset management corporations; pawnshops; Government Pension Fund; and other financial institutions. The data excludes lending from Student Loan Fund, National Village and Urban Community Fund, Pico-finance loans, loans under litigations, and informal loans. Including these loans will consequently increase Thailand's household debt to more than 80 percent to GDP.

10/ Loans for personal consumption include personal loans, credit card loans, and loans for other purposes, most of which are likely for consumption purpose.

Higher share of personal consumption loans compared to other countries partly contributed to higher debt burden of Thai households, as this type of loans mostly have short repayment periods and high interest rates. An analysis on monthly debt burden of Thai households[11/] (Chart 2) found that personal consumption loans constituted around 42 percent of total debt burden. This could pose problems to households in the long run as personal consumption loans do not generate income, unlike business loans. In other words, a large share of debt burden on personal consumption loans reflected overspending behavior of households or spending beyond their income. Moreover, part of personal consumption loans are unsecured. Thus, in the event of adverse income shocks, households may face severe liquidity shortages, as they would still have obligations to repay the entire amount of debt.

Chart 2 Thai households bore high monthly debt burden as most of their debt was personal consumption loans, which had short repayment periods and high interest rates

Ratio of household debt burden (principal and interest expense) classified by purpose



Note: Data as of Q2/2019, calculations exclude loans for purchasing securities
Source: Bank of Thailand and National Credit Bureau, calculations by Bank of Thailand

Furthermore, part of Thailand's household debt composition comprised secured loans, including mortgage and auto loans, which could help mitigate potential loss to financial institutions in case of household debt defaults. However, from the perspective of a borrower, collaterals might not help reduce default risks. This is because overall debt serviceability of households depends on economic conditions given direct impact on household income, such as wages and business profits of borrowers. In this case, income shocks could cause households inability to service debt and risk losing collaterals, including their homes. This would have a negative wealth effect on households, consequently affecting overall economic activities, and could lead to knock-on effects on financial system stability. **Hence, it is important to prevent over-indebtedness of households, so that Thai households can reap the most benefits from their borrowings without posing threats to financial stability in the long run. This would support the Thai economy to grow sustainably going forward.**

[11/] Debt burden of Thai households is determined from remaining maturity of debt and interest rates of each loan type based on micro-level data from the National Credit Bureau and data reported by commercial banks to the BOT.

2.2 Outlook for the Thai Economy

The Committee assessed that the Thai economy would expand below its potential and at a lower rate than the previous assessment in the previous *Monetary Policy Report*. The growth forecasts for 2019 and 2020 were 2.5 and 2.8 percent, respectively. Merchandise exports were projected to recover more slowly than expected due to the slowdown in global trade volume affected by trade tensions and the impact of structural changes in the Thai economy on export competitiveness. Public expenditure and private investment would expand more slowly than the previous forecast, partly due to delayed investment of state-owned enterprises and PPP projects. However, private consumption in 2019 was expected to be better than previously estimated thanks to government's short-term stimulus measures. In 2020, consumption was nonetheless projected to slow down in tandem with slower growth in household income and the drought. **In 2021, the Thai economy was expected to continue to gain further traction as some PPP and public investment projects were postponed to take place in 2021.**

The annual averages of headline inflation in 2019 and 2020 were projected to be 0.7 and 0.8 percent, respectively, lower than the previous forecast and below the lower bound of the inflation target. This would be due to lower energy prices consistent with downward revisions in the projection of crude oil prices. Core inflation would remain low in line with decelerating demand-pull inflationary pressures and lower-than-expected cost-push pressures from minimum wage hike in 2020. Nonetheless, headline and core inflation would gradually increase in 2020 from the previous year on account of the outlook of economic recovery and the impact of minimum wage hike. **Thus, headline inflation was anticipated to return to the target during the second half of 2021**.

Table 2.2 Forecast summary

Percent	2018*	2019	2020
GDP growth	4.1	2.5 (2.8)	2.8 (3.3)
Headline inflation	1.1	0.7 (0.8)	0.8 (1.0)
Core inflation	0.7	0.5 (0.6)	0.7 (0.9)

Note: * Outturn
( ) Monetary Policy Report September 2019
Sources: NESDB, Ministry of Commerce, Bank of Thailand's estimates

Summary of the key forecast assumptions

- Trading partner economies were projected to expand slightly below the estimate in 2019 due to Hong Kong economic data outturns in the third quarter, and prolonged and escalating geopolitical risks. However, trading partner economies would expand at a rate close to the previous forecast in 2020. Despite weaker employment indicators of the euro area economy, this would be compensated by improving growth of Japan propelled by fiscal stimulus package.

- The federal funds rate declined in October 2019 to 1.50-1.75 percent. The Fed was expected to keep the policy rate steady throughout the forecast horizon, compared with the previous assessment of one policy rate cut in 2020.
- Regional currencies (excluding the Chinese yuan) appreciated in the fourth quarter of 2019, partly thanks to positive developments on trade negotiations between the U.S. and China. However, looking ahead, regional currencies would depreciate somewhat due to uncertainties surrounding future trade negotiations, monetary and fiscal policy stance of major advanced economies, as well as potentially intensifying and widespread geopolitical risks.
- Dubai crude oil prices were revised down throughout the forecast horizon due to subdued global economic growth, as well as a faster-than-expected return to normal level of Saudi Arabia's crude oil supply.
- Farm income, excluding government support measures, was close to the previous forecast. Agricultural output in 2019 and 2020 would likely contract due to the drought and low water level in dams. However, agricultural prices were expected to rise, especially prices of rice, palm oil, and sugarcane. Moreover, government measures to directly support income of farm households would partially offset the adverse impact of the drought on output. These measures included, for instance, subsidies for rice harvesting and rice quality improvement, income guarantee scheme for cassava farmers, and subsidies for in-season rice cultivation during the 2019-2020 crop year.
- Public spending at current prices was revised down throughout the forecast horizon due to reduction in carry-over budget in line with the ability of government agencies to incur carry-over budget obligations under the new Budget Procedure Act, as well as a smaller investment budget and a prolonged delay of state-owned enterprise (SOE) investment.

Table: Summary of forecast assumptions

Annual percentage change	2018*	2019	2020
Dubai crude oil price (U.S. dollar per barrel)	69.6	63.4 (64.0)	62.5 (63.0)
Farm income (% YoY)	1.3	2.1 (2.0)	-0.8 (-1.0)
Government consumption at current price (billion baht)[1/]	2,637	2,747 (2,762)	2,889 (2,929)
Public investment at current price (billion baht)[1/]	962	987 (998)	1,067 (1,080)
Fed funds rate (% at year end)	2.375	1.625 (1.625)	1.625 (1.375)
Trading partners' GDP growth (% YoY)[2/]	3.6	2.7 (2.8)	2.7 (2.7)
Regional currencies (excl. China) vis-à-vis the U.S. dollar (index)3/	153.8	156.6 (157.3)	157.4 (158.0)

Notes: [1/] Assumption includes spending on infrastructure investment plans
[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 2019

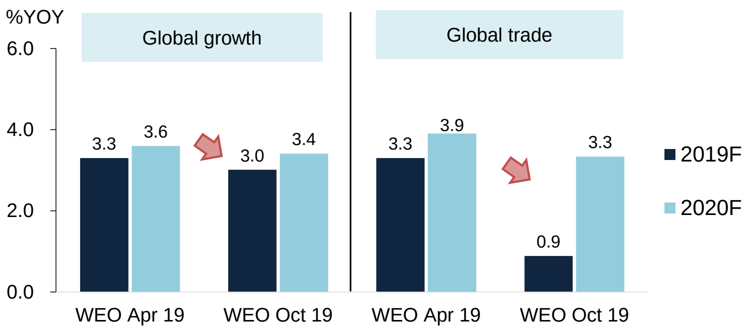
Merchandise exports were expected to recover slowly due to larger-than-expected impact from trade tensions.

The value of merchandise exports in 2019 was expected to contract by more than previously estimated, primarily due to the decline in export volume. Global trade volume would slow down in line with the global economy and trade tensions which would undermine trade and investment climate (Chart 2.20). Moreover, some categories of Thai merchandise exports would face additional pressures from, first, structural factors including a trade diversion loss to China in the ASEAN market (Chart 2.21) and the loss of competitive advantage on production cost. Second, the baht appreciation would have an impact on price competitiveness, and redirect orders to trading partners with relatively weaker currencies. The value of imports would also decline in tandem with lower imports of raw materials and intermediate goods for export-related manufacturing. Third, the downward revision of crude oil price projection led to lower-than-assessed prices of export products which were sensitive to crude oil prices, such as petroleum-related products, and petrochemical and chemical products.

However, **Thai exports in the period ahead were projected to record a moderate growth in 2020** on account of higher export volume. Thai exports would benefit from improvements in the global trade, a gradual pick up in the electronics cycle, as well as an unofficial agreement between the U.S. and China over the phase one trade deal which would lead to a reduction and cancellation of previously imposed import tariffs. **The Committee projected that the value of merchandise exports would contract 3.3 percent in 2020 and expand 0.5 percent in 2021, lower than the estimates in the previous *Monetary Policy Report.***

Chart 2.20 Global trade volume would slow down in line with the global economy and trade tensions which would undermine trade and investment climate

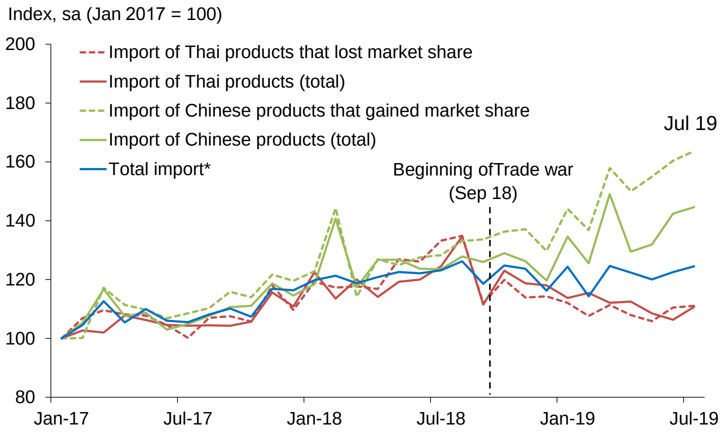
IMF forecasts of outlook of global economic growth and trade volume



Source: World Economic Outlook (WEO) of the International Monetary Fund (IMF)

Chart 2.21 ASEAN imported more from China, but less from Thailand

ASEAN import value



Note: *imports from top 10 trading partners, incluing Thailand (accounts for around 70 percent of total import from ASEAN)

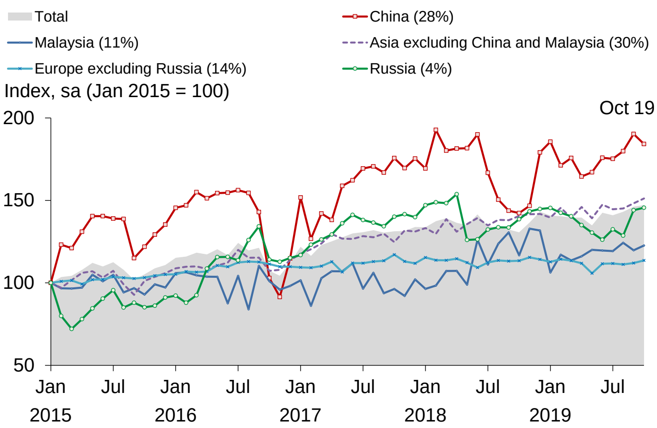
Source: Trademap and Customs Department, calculation by the Bank of Thailand

Exports of services were expected to expand thanks to an increase in foreign tourist figures.

Exports of services were expected to continue expanding from almost all nationalities of foreign tourists (Chart 2.22). The expansion was partly due to government measures to boost tourism through extending the ex emption of visa-on-arrival (VOA) fees until the end of April 2020, although tourist spending per head was expected to somewhat slow down. This was following subdued global economic growth and baht appreciation which would make Thai goods and services relatively more expensive for foreign tourists. **The foreign tourist figures were projected to be 39.9 and 41.7 million persons in 2019 and 2020, respectively, higher than the estimates in the previous *Monetary Policy Report*.**

Chart 2.22 Foreign tourist figures were expected to grow

Number of foreign tourists by country



Note: figures in () show ratio to total number of tourists in 2018

Source: Department of Tourism, calculation by the Bank of Thailand

The current account was projected to record 35.2 and 30.0 billion U.S. dollar surplus in 2019 and 2020, respectively. The surplus was in line with (1) improvements in exports of services due to an increase in the number of foreign tourists, (2) lower import value in line with smaller imports of raw materials and intermediate goods for export-related manufacturing and private investment, and (3) lower import prices in accordance with the downward revision of global crude oil price projection.

Private consumption expanded by more than expected in the short-term, mainly supported by government stimulus measures, but was expected to exhibit slower growth in the period ahead on account of weaker household income.

Private consumption toward the end of 2019 was supported by additional government stimulus measures. These included, for example, the second and third phases of the Taste-Shop-Spend program, measure to support farm income through transfers and loans, stimulus measure for small-scale local infrastructure investment, and real estate stimulus measure.[12/] However, **as the effects of such measures would gradually wane off, private consumption in 2020 was projected to exhibit a slower growth than previously estimated on account of weaker household income.** In particular, non-farm income would weaken as the outlook of both employment and work hours would continue to decline. Moreover, the decline in income would become more broad-based across many business sectors, after having been concentrated in export-related manufacturing sectors. Meanwhile, farm income was projected to contract in 2020, mainly due to falling production. In addition, elevated household debt would remain weighing on private consumption, especially as household income was expected to slow down. This could worsen debt serviceability of households and lead to tightening credit

[12/] Cabinet resolutions on October 22, November 12 and 26, 2019 underwriting standards of financial institutions, consequently exerting additional pressures on private consumption in the period ahead.

Private investment was projected to expand at a lower rate than previously assessed, partly due to delays in PPP investment projects.

Private investment was projected to expand at a lower rate than previously assessed due to export contraction which had become more evident. Profitability and business confidence in investment continued to deteriorate, while PPP investment projects were postponed. These projects included, for instance, the western extension of the Orange Line mass rapid transit project (Bangknunnon-Thailand Cultural Center), which was during the review of investment model. However, looking ahead, private investment would be supported by a gradual recovery of export sector and the continuing infrastructure investment projects, including the 5G network investment which was expected to commence immediately after the auction for spectrum license in the first quarter of 2020. Such investment would support private investment to grow at a higher rate in 2020 than in 2019.

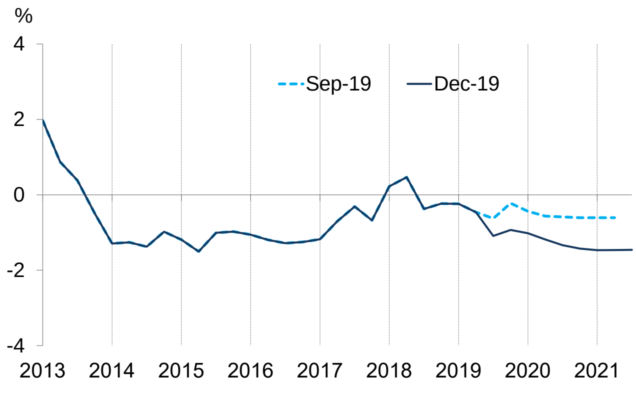
Public expenditure would continue to drive the economy, despite at a lesser extent than previously assessed.

Public expenditure was expected to expand at a lower rate than previously assessed, both for consumption and investment spending. Public consumption declined following the downward revision of carry-over budget to be consistent with the ability of government agencies to incur carry-over budget obligations under the new Budget Procedure Act. The decline was also due to a smaller proportion of current expenditure and a larger proportion of capital expenditure in the carry-over budget for fiscal year 2020, according to the latest data of the Comptroller General's Department. Public investment would decelerate mainly due to a longer-than-expected delay in state-owned enterprises (SOE) investment. The delays were owing to (1) a reduction in investment budget of SOE in the energy sector, (2) the dual-track railway project between Den Chai-Chiang Rai-Chiang Khong, which was postponed due to problems during the process of land expropriation and project bidding, and (3) the Missing Link along the Red Line mass rapid transit project that underwent reviews regarding investment in overlapping land with the high-speed rail project connecting three airports.

Projections of headline and core inflation were revised down in line with a more negative output gap throughout the forecast horizon.

Headline inflation in 2019 and 202 were projected to be below the target and lower than the previous estimate in the previous *Monetary Policy Report* due mainly to supply-side factors. These included (1) lower-than-ex pected energy prices over recent periods and downward revisions in the projection of crude oil prices in the period ahead, resulting in lower energy inflation, and (2) minimum wage hike of 1.5 percent in 2020,

Chart 2.23 Output gap

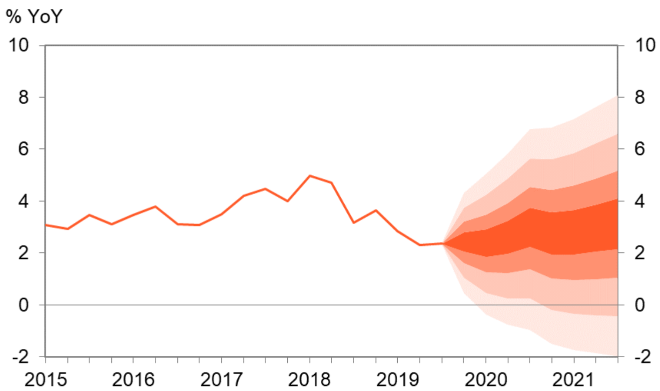


which would be lower than the previous assessment of 6 percent. Moreover, core inflation would remain low in line with decelerating demand-pull inflationary pressures amid subdued economic conditions. This was reflected by the lower-then-expected and more negative output gap throughout the forecast horizon (Chart 2.23). However, **headline inflation was projected to increase from 0.7 percent in 2019 to 0.8 percent in 2020. Meanwhile, core inflation was projected to increase from 0.5 percent in 2019 to 0.7 percent in 2020 in line with the outlook of economic recovery and the impact of minimum wage hike. Headline inflation was anticipated to return to the target during the second half of 2021**.

Risks to growth and inflation projections remained tilted to the downside.

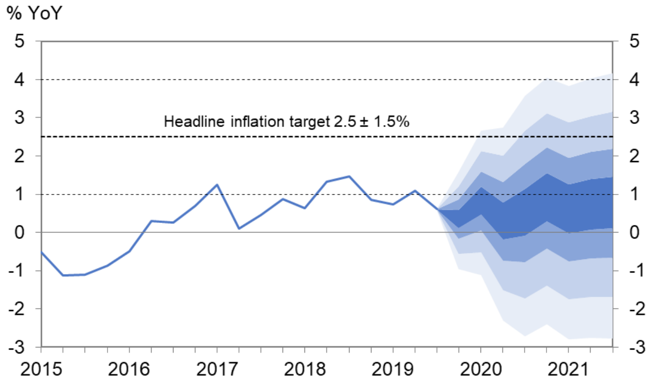
Under the Committee's assessment, **risks to economic growth and inflation projections remained tilted to the downside, but became more balanced than the assessment in the previous *Monetary Policy Report*** (Chart 2.24) after incorporating international trade tensions, which significantly affected Thai exports, into the baseline projection. **The possibilities that the Thai economy would underperform the baseline projection** would be due to (1) slower-than-expected growth in global trade volume and trading partner economies as a result of trade tensions which could re-intensify, (2) more-than-expected impact of a potential delay in the enactment of the Annual Budget Expenditure Act, B.E. 2563 (A.D. 2020) on public expenditure, as well as potential implementation delay and lack of continuity in government policies, (3) larger-than-expected effects from a slowdown in household income growth on private consumption driven by factors including a severe impact from export sector on employment, and the impact of intensifying drought on farm income, and (4) global financial stability risks which could impact the economy in the medium term. On the other hand, **there were possibilities that the Thai economy would outperform the baseline projection** attributable to (1) higher-than-expected growth of trading partner economies if there were additional government stimulus measures, improvements in trade tensions, as well as faster- and better-than-expected recovery in the electronics cycle, and (2) higher-than-expected domestic demand as a result of public infrastructure investment and PPP projects, which may incentivize private sector to invest further and faster, as well as the potential implementation of additional government stimulus measures such as continuation of private consumption stimulus measures in 2020 and investment promotion policy. Meanwhile, **there remained downside risks to headline and core inflation projections,** (Chart 2.25 and Chart 2.26) in line with risks to the economic growth projection.

Chart 2.24 Growth forecast



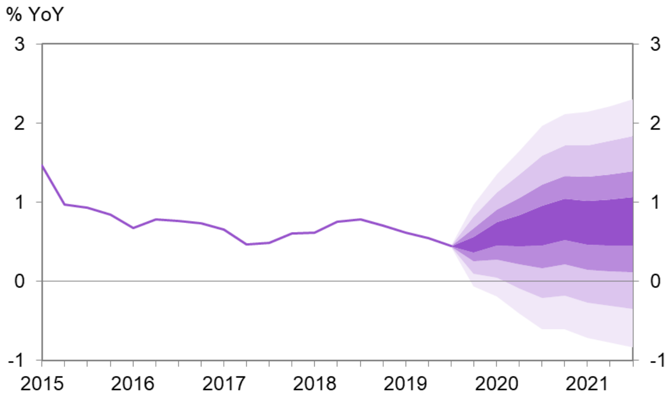
Note: Fan chart covers 90% of the probability distribution

Chart 2.25 Headline inflation forecast



Note: Fan chart covers 90% of the probability distribution

Chart 2.26 Core inflation forecast



Note: Fan chart covers 90% of the probability distribution

Table 2.3 Forecasts of GDP and components

Annual percentage change	2018*	2019	2020
GDP growth	4.1	2.5 (2.8)	2.8 (3.3)
Domestic demand	3.9	3.4 (3.3)	3.2 (3.7)
Private consumption	4.6	4.4 (3.8)	3.0 (3.1)
Private investment	3.9	2.5 (3.0)	3.4 (4.8)
Government consumption	1.8	2.2 (2.3)	2.6 (3.4)
Public investment	3.3	1.7 (2.5)	6.3 (6.3)
Exports of goods and services	4.2	-4.8 (-2.3)	1.4 (2.3)
imports of goods and services	8.6	-4.3 (-2.6)	1.6 (2.9)
Current account (billion, U.S. dollars)	28.5	35.2 (34.2)	30.0 (30.4)
Value of merchandise exports	7.5	-3.3 (-1.0)	0.5 (1.7)
Value of merchandise imports	13.7	-5.2 (-3.6)	1.4 (3.5)
Number of foreign tourists (million person)	38.2	39.9 (39.7)	41.7 (41.2)

Note: *Outturns

( ) Monetary Policy Report September 2019

3. Monetary Policy Decision

More accommodative monetary policy should support economic growth and the rise of headline inflation toward target. Meanwhile, there remained financial stability risks which warranted monitoring and should be addressed by a wide range of targeted measures.

At the meeting on 6 November 2019, the Committee voted 5 to 2 to cut the policy rate by 0.25 percentage point from 1.50 to 1.25 percent. Two members voted to maintain the policy rate at 1.50 percent. The Committee assessed that the Thai economy would expand at a lower rate than previously assessed and further below its potential due to a decline in exports which affected employment and domestic demand. Headline inflation was projected to be lower than the lower bound of the inflation target. Overall financial conditions remained accommodative. Financial stability risks had already been addressed to some extent, although there remained pockets of risks that warranted monitoring. Most members viewed that more accommodative monetary policy stance should support economic growth and the rise of headline inflation toward target. They thus voted to cut the policy rate at this meeting. Nevertheless, two members viewed that under the already accommodative monetary policy at present, the policy rate cut might not lend additional support to economic growth, compared with potentially increased financial stability risks. In addition, there remained a need to preserve the limited policy space for coping with potentially increasing risks in the future.

At the meeting on 18 December 2019, the Committee voted unanimously to maintain the policy rate at 1.25 percent. The Committee assessed that the Thai economy would expand at a lower rate than the previous forecast and below its potential due to a decline in exports which affected employment and domestic demand. Headline inflation was projected to be below the lower bound of the inflation target. Overall financial conditions remained accommodative due to the previous two policy rate cuts. Financial stability risks had already been addressed to some extent, although there remained pockets of risks that warranted monitoring. The Committee viewed that more accommodative monetary policy stance in the recent period would support economic growth and the rise of headline inflation toward target. The Committee thus voted to maintain the policy rate at this meeting.

Looking ahead, the Committee would be data-dependent by closely monitoring the developments of the outlook for growth, inflation, and financial stability, together with associated risks, in deliberating appropriate monetary policy going forward. The Committee would stand ready to use policy tools as appropriate and monitor structural problems which would affect competitiveness and growth outlook going forward. This should be firmly addressed by all related parties.

In determining the most appropriate course of monetary policy, details on the key assessment are as follows.

The Thai economy and inflation were expected to expand at a lower rate than previously assessed, but would gradually improve in 2020.

Developments of economic indicators in the fourth quarter of 2019 reflected that economic activities would slow down more than previously assessed. In particular, clearer impacts of trade tensions on merchandise exports were observed. In addition, structural changes in the manufacturing sector affected export competitiveness, which in turn had increasingly knock-on effects on investment, private consumption, and employment. Nevertheless, **the Committee viewed that the global economic outlook started to exhibit more stabilizing growth, resulting in an improving outlook for Thai exports and economic growth in 2020.** Meanwhile, the output gap would remain negative throughout the forecast horizon, reflecting that demand-pull inflationary pressures remained subdued. This partly contributed to **headline inflations in 2019 and 2020 which would be below the lower bound of the inflation target.** Looking ahead, the Thai economy would still face downside risks from uncertainties pertaining to trade tensions and geopolitical risks. Although the US and China had unofficially reached an agreement on the phase one trade deal, trade negotiations in the period ahead could be prolonged and intensified. Despite additional government stimulus measures implemented in the fourth quarter of 2019, public expenditure might not lend full support to economic growth going forward due to a potential delay in the enactment of the Annual Budget Expenditure Act, B.E. 2563 (A.D. 2020), as well as prolonged delays in some government and state-owned enterprise (SOE) investment projects. Moreover, risks from the drought, as well as structural changes in the labor market, could weigh on private consumption in the period ahead. Such changes included changes of employment pattern from full-time to temporary contracts, adoption of automation, and challenges in upskilling and reskilling the labor force. Against this backdrop, **the Committee viewed that more accommodative monetary policy stance would partly contribute to economic growth and support the rise of headline inflation toward target, allowing both public and private sectors time to adjust themselves during economic slowdown.**

With regard to monetary policy under the flexible inflation targeting framework which places emphasis on maintaining price stability in the medium term, ensuring sustainable and full-potential economic growth, and preserving financial stability, **the Committee and the Minister of Finance had mutually agreed to propose headline inflation within the range of 1.0 – 3.0 percent as the monetary policy's medium-term target and the target for 2020.** (**Box:** *Monetary policy target for the medium-term horizon and for 2020*) The new target was consistent with changing economic and financial context.

The Committee was concerned and closely monitored impact of the baht on the economy.

Over recent periods, the baht continued to strengthen mainly on account of a large current account surplus and foreign direct investment (FDI) inflows in some periods. However, there were net outflows of non-resident portfolio investment from the bond and stock markets, partly as a result of the Bank of Thailand's measures to enhance surveillances of short-term capital flows implemented in July 2019 which helped limit channels for speculation on the baht appreciation. The Committee assessed that a continued appreciation of the baht had a more pronounced impact on merchandise exports and the overall economy amid a slowdown of trading partner economies and stronger international competition. Signs of such impact were evident in lower corporate profitability and liquidity, deteriorating debt serviceability, and a fast reduction in employment in export-related manufacturing sectors. **The Committee remained concerned about the baht appreciation against trading partner currencies and supported the relaxation of foreign exchange regulations to encourage capital outflows and lessen pressures on the baht,** as well as allow greater flexibility when undertaking foreign exchange transactions so that private sector would be able to manage foreign exchange risks more conveniently. (**Box:** *Measures to manage the baht and capital flows in 2019*) **The Committee would also closely monitor impacts from developments of exchange rates on the economy and assess the**

effectiveness of the implemented relaxation of foreign exchange regulations to encourage capital outflows and consider implementing additional measures if necessary. The additional measures included those under the Bank of Thailand's authority and those required collaboration with other organizations, including efforts to stimulate investment to reduce large current account surplus. **In addition, the Committee pointed out that movements of the baht were more two-way** following the Bank of Thailand's relaxation of foreign exchange regulation to encourage capital outflows, and there were signs of capital outflows in the recent periods such as a merger and acquisition abroad by Thai commercial bank and sales of Thai businesses by foreign investors.

Financial stability risks had been addressed to some extent, although there remained pockets of risks that warranted monitoring and should be addressed by a wide range of targeted measures.

The Committee assessed that financial stability remained sound overall. However, there remained a need to monitor risks that could pose vulnerabilities to financial stability in the future, especially during the period of economic slowdown which might increase risks from income shocks to households and businesses. An assessment using various types of financial stability indicators revealed risks in the real estate market abated, following the implementation of the loan-to-value (LTV) measure and softening economic growth outlook. This was reflected by a continued slowdown in mortgage loans, more tightening lending standards among financial institutions, postponement of new project launches by some real estate developers, and a decline in residential prices, especially condominium prices. Nevertheless, some risks had yet to improve. These risks included, **(1) risks from vulnerabilities to income shocks during periods of economic slowdown**, as households and businesses, especially SMEs, were already highly vulnerable in terms of debt serviceability due to structural problems, **(2) oversupply of condominium in certain areas**, with additional impact on developers due to both domestic and external demand slowdown, and **(3) risks stemming from the search-for-yield behavior, which could lead to underpricing of risks, in the environment that both domestic and international policy rates could stay lower for longer**. Leverages of large corporates might increase to the point that they could create risks to the whole financial system (too big to fail), or saving cooperatives might increase investment in risky assets which could lead to risks to a wide range of their members (too many to fail). In addition, given the low interest rate environment, households would likely accumulate more debt inconsistently with their debt serviceability.

The Committee expressed concerns about elevated household debt that was expected to rise further, as it could affect ability of households to cope with income shocks. Thus, the Committee would closely monitor the debt service ratio (DSR) data in accordance with the standardized calculation methodology agreed between the Bank of Thailand and commercial banks, where financial institutions started reporting the data since the end of 2019. In addition, the Committee would monitor debt serviceability of households and SMEs, which was expected to deteriorate during economic slowdown. Meanwhile, the Committee viewed that addressing financial stability risks in the period ahead would require a holistic consideration of the policy interest rate, microprudential measures, macroprudential measures, as well as structural measures including debt restructuring. Understanding of different groups of households, such as vulnerable households with high debt or households without financial discipline, would be crucial in considering targeted and appropriate solutions for different groups of households. Appropriate timing of implementation would also be considered in order to prevent adverse impact to the economic growth.

Monetary policy target for the medium-term horizon and for 2020

The Monetary Policy Committee (MPC) implements monetary policy under the flexible inflation targeting framework. 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.

Setting the monetary policy target **consistent with changing economic and financial context, as well as changing inflation dynamics**, is a crucial factor that allows the MPC to conduct monetary policy **to achieve all 3 objectives effectively**. In the review of monetary policy target for 2020, the MPC and the Minister of Finance mutually agreed on December 6, 2019, to propose a new monetary policy target, specifying **headline inflation within the range of 1.0 – 3.0 percent as the monetary policy target on price stability for the medium-term horizon as well as for 2020.** The new target replaces an annual average headline inflation of 2.5 ± 1.5 percent, which had been set as the monetary policy target since 2015.

Reasons for proposing the new monetary policy target

The revisions of the monetary policy target strove to ensure that the new target was appropriate and consistent with changing economic and financial context, as well as changing inflation dynamics, which comprise:

1. The downward trend of inflation due to structural changes, which have taken place both in Thailand and other countries. Such changes **include (1) technological advancements,** which boost production and reduce costs. In particular, technological advancements in extracting shale oil have increased global supply of crude oil, hence putting downward pressures on global crude oil prices and driving down Thailand's energy inflation. Meanwhile, the advancements in agricultural technologies, which help increase production and reduce costs, have contributed to lower fresh food inflation over recent periods. In addition, the adoption of modern technologies in production processes has led to a decline in costs and prices of technological products such as electronic products and electrical appliances. **(2) An expansion of e-commerce** has reduced the cost of sales for goods and services, and enhanced price competition since consumers can compare prices of goods and services more easily. Hence, prices of goods and services cannot be raised rapidly as in the past. **(3) The aging society** has led to an overall declining trend in demand for goods and services. As the elderly normally have lower income after retirement, a rise in the old age population exerts a negative effect on demand-pull inflationary pressures. All these structural factors have, to a significant extent, led to low headline inflation since 2015, thereby weighing on the ability to anchor the public's inflation expectations and reducing the effectiveness of monetary policy in maintaining price stability.

2. High volatilities and uncertainties prevailing in the global and Thai economies. The global economic and financial systems have become more complex and interconnected, rendering the Thai economy more exposed to external factors such as trade protectionism and geopolitical risks. Moreover, **preserving financial stability becomes of greater importance.** In particular, the currently prolonged low interest rate environment has induced more search-for-yield behavior and could lead to underpricing of risks. This might, in turn, contribute to the build-up of risks to the financial system that could escalate into a financial crisis. Consequently, **monetary policy must be sufficiently flexible to cope with changes in economic circumstances and financial stability risks that may build up in the period ahead.**

Details of the monetary policy target for the medium-term horizon and for 2020

1. Changing the type of inflation target from the point target with tolerance band to the range target to enhance flexibility in monetary policy formulation amid more volatile and uncertain global economic circumstances. The range target will allow the MPC to fulfill economic growth and financial stability objectives more effectively.

Under the original point target with tolerance band, although headline inflation can deviate away from the target midpoint in the short term, monetary policy is required to attain the midpoint in the medium term, which may have adverse side-effects on other policy objectives, i.e., ensuring sustainable, full-potential economic growth and preserving financial stability. Meanwhile, the range target will help reduce the need to attain the target midpoint, while allowing movements of inflation in the medium term to reflect more of the prevailing structural changes at any given time period.

2. Setting the lower bound and the upper bound of monetary policy target at 1.0 and 3.0 percent, respectively, in line with changing inflation dynamics. The MPC assessed that such inflation range was sufficiently flexible and could accommodate future inflation pressures that would remain low due to structural factors. The lower bound of 1.0 percent was not too low to trigger the de-anchoring of the public's inflation expectations, which if impaired, might contribute to even more deflationary pressures and limited monetary policy space over the long term. Meanwhile, the upper bound of 3.0 percent was not too high to affect households' costs of living and the economy's growth potential, while also indicating limited inflationary pressures. Furthermore, the target band of 2.0 percentage points was not too wide and was well-aligned with that of other countries. It also ensured the MPC's commitment in maintaining price stability, even though the new policy target would allow for greater monetary policy flexibility to promote sustainable and full-potential economic growth as well as to preserve financial stability.

In addition, the MPC and the Minister of Finance also mutually agreed to **adjust the criteria for issuing an open letter in case of headline inflation breaching the inflation target.** The former criterion stipulated that the MPC would issue an open letter whenever headline inflation averaged over the calendar year remained outside the inflation target. Meanwhile, under the new criteria, **the MPC shall send an open letter to the Minister of Finance, should average headline inflation in the past 12 months or a forecast of average headline inflation over 12 months ahead breach the target range. The MPC will also write an additional open letter every 6 months if average headline inflation based on the above criteria remains outside the target range.** The adjustment in the criteria will enable the MPC to show accountability and communicate with the public in a timely manner, i.e., without having to wait until end of the calendar year, while also complying with the forward-looking principle for the conduct of monetary policy.

Chart 1 Monetary policy target for the medium-term horizon and for 2020

Source: Bank of Thailand

Implications of the new target on the conduct of monetary policy

The revisions of the monetary policy target will enhance flexibility in conducting monetary policy to attain all 3 objectives more effectively. In particular, through reducing the need to bring inflation back to the target midpoint, the MPC can deliberate monetary policy in the manner that is more appropriate and consistent with changes in the economic and financial context in each time period.

Despite the target revisions, the MPC's principles for the conduct of monetary policy remain unaltered. That is, (1) at each meeting, the MPC will be data-dependent by closely monitor developments of economic growth, inflation, and financial stability, together with other associated risks, in formulating appropriate monetary policy. **(2) The MPC will consider thoroughly the importance of each of the 3 policy objectives at a given time period,** by taking into consideration the impact of implementing each monetary policy option on the economy overall, both in the short and long term, and appropriately weighing benefits and costs of each option, i.e., policy trade-offs, under the prevailing economic context at a given time period. And, **(3) the MPC stands ready to utilize various policy tools in an integrated manner**, such as the policy rate, microprudential measures, and macroprudential measures, which should allow the conduct of monetary policy to achieve the 3 policy objectives effectively.

Nonetheless, **adopting the range target as the new monetary policy target may reduce the ability to anchor the public's inflation expectations** since the target midpoint is not clearly stated as in the previous target. Furthermore, greater monetary policy flexibility **increases challenges for the public's expectations about in the policy rate path**, which could in turn affect decision-makings in various economic activities as well as the effectiveness of monetary policy. Therefore, **communication aimed at anchoring the public's inflation expectations will be more crucial** in each period. The good communication will promote public confidence in the MPC's key mandate to maintain price stability and allow better public's expectations on the future directions of monetary policy. This will empower the conduct of monetary policy to fulfill its mandates and extend the greatest benefits to the Thai economy.

Measures to manage the baht and capital flows in 2019

The Bank of Thailand (BOT) has conducted monetary policy under the flexible inflation targeting framework with managed floating exchange rate regime. The BOT will manage the baht in case of excessive volatility that could affect the economy and business adjustments. In this light, in 2019, the BOT has implemented measures to manage the baht and capital flows through multiple policy tools as summarized below. (Chart 1)

Chart 1 Measures to manage the baht and capital flows in 2019

Source: Bank of Thailand

Measures to enhance surveillance of short-term capital flows[13/]

The global financial market became increasingly volatile in 2019. Trade tensions between the US and China, together with global economic slowdown, prompted central banks in many countries to shift towards more accommodative monetary policy stance. These developments have driven capital inflows back to the emerging markets (EMs) once again, particularly during June – July. Meanwhile, as most foreign investors had a more positive outlook on the baht relative to other EMs currencies, they increased their positions in the baht and Thai securities, in part for short-term speculative purpose. This led to a rapid appreciation of the baht relative to regional currencies, which could lead to unfavorable economic repercussions. Thus, the BOT announced measures to enhance surveillance of short-term capital flows on July 12, 2019. Details of the measures are as follow.

(1) Enhance measures to prevent Thai baht speculation by reducing the limit on the outstanding balance of Non-resident Baht Account (NRBA) and Non-resident Baht Account for Securities (NRBS) at the end of the day from 300 million baht to 200 million baht per non-resident. This measure will help limit channels for short-term speculative flows of non-residents.

(2) Enhance the reporting requirements for non-residents' holdings of debt securities issued in Thailand where custodians are required to report more information on all non-residents' holdings of Thai debt securities in order to get further information on the names of ultimate beneficial owners (UBOs). This measure will help enhance the BOT's surveillance of non-residents'

[13/] BOT Press Release No.38/2019, July 12, 2019, "Measures to Enhance Surveillance of Short-term Capital Flows" behaviors of debt security investment, which will be beneficial for analyses on capital flow outlook and formulation of appropriate policies going forward.

Following the implementation of the abovementioned measures, foreign investors' investments in Thai securities, both in the debt and equity markets, have become net capital outflows since August 2019. These measures were therefore effective in managing capital flows of non-residents to some extent. However, the baht movements remained volatile in line with other factors apart from non-residents' capital flows. In particular, a persistent current account surplus due to proceeds from merchandise exports and tourism, while imports for investment remain low, results in a continuation of net capital inflows from international trades. Hence, foreign investors still perceive the baht as a safe-haven asset among EMs.

Relaxation of rules to facilitate capital outflows and lessen pressure on the Thai baht[14/]

Given the aforementioned circumstances where capital flow imbalances have pressured the baht to continue appreciating, the Ministry of Finance and the BOT decided to relax regulations to facilitate capital outflows to help promote balances of capital flow and lessen pressure on the baht. Such relaxations will also provide greater convenience in conducting foreign exchange transactions. These relaxations were announced on November 6, 2019, and have been effective since November 8, 2019, with details as follows:

(1) Exemptions on repatriation of export proceeds

(1.1) Exporters with proceeds below USD 200,000 per bill of lading are allowed to keep the proceeds abroad, without a time limit and without having to repatriate proceeds back to Thailand in accordance with the previous regulations. Meanwhile, bills of lading with value less than USD 200,000 in 2018 amounted to export value of over USD 100 billion, accounting for almost half of all Thai exports.

(1.2) Exporters are allowed to use the revenues from exports to offset foreign currency expenses (multilateral netting), without prior approval from the BOT.

(1.3) Businesses are allowed to open just only one foreign currency deposit (FCD) account with onshore banks, whereas the previous regulation required an opening of two separate accounts according to sources of foreign currency.[15/]

The above relaxations will allow exporters to keep proceeds abroad for future transactions, help reduce fund transfer costs, and manage foreign exchange risks more efficiently. Exporters are able to wait for the appropriate time to repatriate the proceeds back and exchange to baht at their own convenience. Meanwhile, **the BOT has a preliminary discussion with the Minister of Finance to increase the threshold for export proceeds that do not need to be repatriated from USD 200,000 to USD 1 million per bill of lading within the next 3 months** (around the first quarter of 2020). Such relaxations will cover a larger amount of exports, accounting for approximately 80 percent of total export value.

(2) Investment in foreign securities

(2.1) Retail investors are allowed to invest up to USD 200,000 per year in foreign securities, without having to invest via a domestic intermediary or to meet a specified criteria in terms of asset ownership.

14/ BOT Press Release No.66/2019, November 6, 2019, "The BOT relaxes rules to facilitate capital outflows and lessen pressure on the Thai baht"

15/ Two accounts include FCD account for foreign currencies that are received from overseas and FCD account for foreign currencies that are purchased from domestic sources for future payments overseas. Consolidation of the two accounts will allow greater flexibility for businesses in receiving and transferring funds via FCD account.

(2.2) The aggregate investment limit for investment in foreign securities allocated to investors regulated by the Thai Securities and Exchange Commission (SEC), such as securities companies and mutual funds, is increased to USD 150 billion (from the previous aggregate investment limit at USD 100 billion).

This relaxation will allow both institutional and retail investors in Thailand to invest more in foreign securities. In addition to increased investment opportunities and risks diversification, it will also encourage more capital outflows to offset capital inflows. This will in turn promote capital flow balance and help lessen pressure on the baht.

(3) Outward transfers

(3.1) Outward transfers are allowed freely except for a few specific purposes that require prior approval from the BOT (negative list).

(3.2) Individuals who wish to relocate abroad or transfer funds to relatives abroad will be able to do so freely. Those who wish to purchase real estate abroad will be allowed to do so up to USD 50 million per year and the property can be both in own name or the name of a family member. This relaxation will help facilitate migration as well as sending children to study abroad.

(3.3) Documentation will no longer need to be provided to commercial banks when conducting outward transfers of less than USD 200,000 to facilitate the ease of conducting foreign exchange transactions

This relaxation is a change in concept: Outward transfers, which were previously allowed based on specific purposes (positive list), are now allowed freely except for a few specific purposes (negative list). Moreover, the increase from USD 50,000 to USD 200,000 in the outward transfer limit at which documentation submission is not needed will help promote faster and easier outward transfers.

(4) Settlement of gold trading in foreign currency

Thai investors are allowed to trade gold in foreign currencies, through FCD accounts opened with onshore commercial banks, with designated gold trading companies that have received approval from the BOT. Investors are able to keep foreign currency proceeds from gold investment in their FCD accounts, without having to exchange into baht for the next purchases. In addition, the BOT is also prepared to approve gold futures trading in foreign currencies in the next phase.

Allowing for gold trading in foreign currency will help reduce pressures on the baht. This was because in the recent period, when Thai investors sold gold to gold trading companies, these companies would export gold, repatriate the proceeds from gold trading, and exchange into baht. This exerted pressures on the baht, especially when there was accelerated sale of gold in the period of a rapid increase in gold prices.

Promoting structural policies and building an ecosystem that encourages businesses to manage foreign exchange risk

A large current account surplus is considered a major structural factor causing the baht to continue appreciating. An increase in domestic investment, by boosting imports of capital goods, will help reduce current account surplus and pressure on the baht, as well as enhance competitiveness in the long run. The BOT supports the government's focus on infrastructure investment in the Eastern Economic Corridor (EEC) and the public-private partnership (PPP), where investment should be accelerated to take place within the planned time frame. In addition, the government's focus on investment in digital infrastructure, including 5G network and related technologies will also provide a foundation for driving Thailand's digital economy going forward.

In this regard, the BOT has continued to take various actions in order to prevent and mitigate the impact of the baht volatilities, by focusing on **building an ecosystem that encourages the private sector to manage foreign exchange risks appropriately. Specifically, the BOT provided knowledge on foreign exchange risk management to businesses, particularly to SMEs,** supported the use of FCD account and other financial instruments such as forwards, futures, and options through the FX Risk Management Program for SMEs Phase 2[16/]. **Furthermore, businesses were also encouraged to use local currencies for international trade and investment** to reduce risks from volatilities of major currencies. In this regard, the BOT has cooperated with many central banks in the Association of Southeast Asian Nations (ASEAN), including Malaysia, Indonesia, Cambodia, Laos, and the Philippines, to support the use of local currencies.

Looking ahead, exchange rates and capital flows would likely be more volatile, which will be a challenge for every party to adjust themselves in a timely manner. The private sector should manage foreign exchange risk regularly. Nevertheless, acceleration of domestic investment and the relaxation of regulations to facilitate capital outflows will help reduce pressures from a large current account surplus on the baht. However, this would take times for businesses and Thai investors to adjust themselves. In the period ahead, the BOT will closely monitor developments of exchange rate and capital flows, and stand ready to use several policy tools jointly in an appropriate manner to cope with volatilities in the financial market in the future.

[16/] The FX Risk Management Program for SMEs Phase 2 (November 2018 – November 2019) aims to furnish SMEs with knowledge on benefits and foreign exchange risk hedging tools, as well as provide opportunities for SMEs a trial on the currency insurance or FX options trading by offering money support of THB 50,000 per business.

4. Appendix

4.1 Table

Thai Economy Dashboard

Percent	2017	2018	2018 Q1	Q2	Q3	Q4	2019 Q1	Q2	Q3
GDP growth	4.0	4.1	5.0	4.7	3.2	3.6	2.8	2.3	2.4
Production									
Agriculture	3.7	5.1	6.8	10.5	3.2	0.7	1.7	-1.3	1.5
Non-agriculture	4.1	4.0	4.8	4.2	3.1	4.0	2.9	2.6	2.3
Manufacturing	3.0	3.0	3.7	3.1	1.5	3.5	0.6	-0.2	-1.5
Construction	-2.8	2.7	1.2	1.9	4.5	3.4	3.0	3.4	2.7
Wholesales and retail trade	7.0	7.3	7.0	7.4	7.5	7.5	6.8	5.9	5.6
Accommodation and Food Service	10.6	7.9	13.1	8.8	4.1	5.3	4.9	3.7	6.6
Transport and storage	8.2	5.7	7.1	5.4	4.5	5.4	3.5	2.3	2.5
Information and Communication	2.7	6.8	5.2	7.7	7.4	6.9	6.5	8.7	7.4
Financial intermediation	5.4	3.3	3.5	4.6	3.1	1.8	2.0	1.8	3.8
Real estate and renting	6.5	5.2	6.0	4.0	5.9	4.9	4.7	3.1	2.6
Expenditure									
Domestic demand	2.1	3.9	3.3	3.6	4.3	4.3	4.1	3.3	3.4
Private consumption	3.0	4.6	3.8	4.1	5.2	5.4	4.9	4.6	4.2
Private investment	2.9	3.9	3.1	3.1	3.8	5.5	4.4	2.1	2.4
Government consumption	0.1	1.8	1.8	2.3	1.9	1.4	3.4	1.1	1.8
Public investment	-1.2	3.3	4.0	4.9	4.2	-0.1	-0.1	1.4	3.7
Imports of goods and services	6.2	8.6	9.1	8.8	11.0	5.7	-0.1	-2.6	-6.8
imports of goods	7.4	8.1	10.4	7.9	9.9	4.5	-2.6	-3.4	-7.7
imports of services	1.3	10.7	3.9	12.8	16.1	10.4	10.6	0.2	-2.8
Exports of goods and services	5.4	4.2	8.0	9.6	-0.9	0.7	-6.1	-7.9	-1.0
exports of goods	5.7	4.1	7.2	9.5	-0.5	0.8	-5.9	-5.8	-0.3
exports of services	4.6	4.4	9.9	10.3	-2.2	0.0	-7.2	-14.7	-3.2
Trade balance (billion, U.S. dollars)	32.6	22.4	7.4	6.4	3.9	4.6	6.7	6.0	8.0
Current account (billion, U.S. dollars)*	44.0	28.5	14.2	4.2	3.8	6.3	12.4	5.2	9.2
Financial account (billion, U.S. dollars)	-12.5	-14.9	-3.3	-8.1	-1.1	-2.5	-5.1	-2.5	-1.1
International reserves (billion, U.S. dollars)	202.6	205.6	215.6	206.8	204.5	205.6	212.2	215.8	220.5
Unemployment rate (%)	1.2	1.1	1.2	1.1	1.0	0.9	0.9	1.0	1.0
Unemployment rate, seasonally-adjusted (%)	n.a.	n.a.	1.2	1.0	1.0	1.0	0.9	0.9	1.0

Note: *Outturns, which are subject to revisions according to changes in statistical compilation methods

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

Financial Stability Dashboard

Indicators	2017	2018	2018				2018				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Oct	Nov
1. Financial market sector											
Bond market											
Bond spread (10 years - 2 years)	1.1	0.7	1.2	1.1	0.9	0.7	0.7	0.4	0.1	0.2	0.3
Equity market											
SET index (end of period)	1,753.7	1,563.9	1,776.3	1,595.6	1,756.4	1,563.9	1,638.7	1,730.3	1,637.2	1,601.5	1,590.6
Actual volatility of SET index[1/]	6.5	12.1	9.4	12.3	11.6	14.0	8.4	7.8	10.7	10.0	10.8
Price to Earnings ratio (P/E ratio) (times)	19.1	14.8	18.3	16.2	17.3	14.8	17.1	18.6	18.7	18.5	19.5
Exchange rate market											
Actual volatility of Thai baht (%annualized)[2/]	4.4	3.3	4.6	4.4	4.5	4.7	4.6	4.5	4.5	3.2	2.7
Nominal Effective Exchange Rate (NEER)	110.6	115.6	114.8	115.2	115.4	117.0	120.0	121.2	125.0	127.1	126.8
Real Effective Exchange Rate (REER)	103.7	107.2	106.3	106.8	107.0	108.3	110.1	111.3	114.6	115.9	115.4
2. Financial institution sector[3/]											
Minimum Lending Rate (MLR)[4/]	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.28	6.08
12-month fixed deposit rate[4/]	1.37	1.37	1.37	1.37	1.37	1.37	1.42	1.46	1.45	1.45	1.38
Capital adequacy											
Capital funds / Risk-weighted asset (%)	18.2	18.3	18.1	17.9	18.4	18.3	18.2	18.0	19.2	n.a.	n.a.
Earning and profitability											
Net profit (billion, Thai baht)	187.1	207.2	50.2	56.4	51.1	49.5	57.1	60.8	96.5	n.a.	n.a.
Return on assets (ROA) (times)	1.1	1.1	1.1	1.2	1.2	1.1	1.2	1.2	2.0	n.a.	n.a.
Liquidity											
Loan to Deposit and B/E (%)	96.1	98.2	95.0	96.8	98.2	98.2	96.8	97.9	97.1	n.a.	n.a.
3. Household sector											
Household debt to GDP (%)	78.4	78.6	77.8	77.7	77.9	78.6	78.7	78.7	n.a.	n.a.	n.a.
Financial assets to debt (times)	2.6	2.4	2.7	2.6	2.5	2.4	2.5	n.a.	n.a.	n.a.	n.a.
Non-Performing Loans (NPLs) of commercial banks (%)											
Consumer loans	2.7	2.7	2.8	2.7	2.7	2.7	2.8	2.7	2.8	n.a.	n.a.
Housing loans	3.2	3.2	3.4	3.4	3.4	3.2	3.3	3.3	3.5	n.a.	n.a.
Auto leasing	1.6	1.7	1.5	1.5	1.6	1.7	1.7	1.8	1.9	n.a.	n.a.
Credit cards	2.6	2.3	3.2	2.4	2.5	2.3	2.5	2.2	2.4	n.a.	n.a.
Other personal loans	2.5	2.5	2.7	2.5	2.5	2.5	2.6	2.5	2.4	n.a.	n.a.
4. Non-financial corporate sector[5/]											
Operating profit margin (OPM) (%)	8.0	7.5	7.9	7.8	8.0	6.5	7.5	5.9	7.4	n.a.	n.a.
Debt to Equity ratio (D/E ratio) (times)	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.8	n.a.	n.a.
Interest coverage ratio (ICR) (times)	6.5	6.4	7.1	6.5	6.6	5.4	5.2	3.8	4.8	n.a.	n.a.
Current ratio (times)	1.7	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	n.a.	n.a.
Non-Performing Loans (NPLs) of commercial banks (%)											
Large businesses	1.8	1.7	1.7	1.7	1.5	1.7	1.5	1.7	1.7	n.a.	n.a.
SMEs	4.4	4.5	4.5	4.5	4.7	4.5	4.6	4.5	4.9	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 5 largest Thai commercial banks

[5/] Only listed companies on Stock Exchange of Thailand (median value); with data revisions

Financial Stability Dashboard (continue)

Indicators	2017	2018	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Oct	2019 Nov
5. Real estate sector											
Number of approved mortgages from commercial banks (Bangkok and Vicinity) (units)											
Total	65,124	73,361	15,012	17,921	18,805	21,623	19,710	15,983	17,141	4,894	n.a.
Single-detached and semi-detached houses	14,517	15,912	3,527	3,827	3,948	4,610	4,446	3,460	4,136	1,101	n.a.
Townhouses and commercial buildings	21,469	25,042	5,167	6,055	6,325	7,495	7,290	5,719	6,129	1,674	n.a.
Condominiums	29,138	32,407	6,318	8,039	8,532	9,518	7,974	6,804	6,876	2,119	n.a.
Number of new housing units launched for sale (Bangkok and Vicinity) (units)											
Total	110,575	114,477	26,829	19,836	42,451	35,861	29,498	25,999	26,505	14,451	17,503
Single-detached and semi-detached houses	19,433	14,280	4,223	2,790	6,248	5,050	4,458	4,213	4,822	1,938	3,280
Townhouses and commercial buildings	32,792	36,571	6,657	6,548	8,759	10,385	5,236	7,940	8,837	2,178	5,664
Condominiums	58,350	63,626	15,949	10,498	27,444	20,426	19,804	13,846	12,846	10,335	8,559
Housing price index (2009 = 100)											
Single-detached houses (including land)	130.9	138.8	137.8	138.0	139.5	139.0	141.9	142.9	145.0	144.9	n.a.
Townhouses (including land)	141.1	149.9	146.0	149.6	151.2	151.1	156.6	154.7	154.6	156.8	n.a.
Condominiums	169.6	180.9	179.8	177.6	180.1	185.9	181.6	177.0	179.0	177.3	n.a.
Land	171.7	175.8	170.4	173.5	172.9	177.6	175.5	168.1	167.1	169.8	n.a.
6. Fiscal sector											
Public debt to GDP (%)	40.7	41.2	41.2	41.0	42.1	41.9	41.9	41.4	41.5	41.0	n.a.
7. External sector											
Current account balance to GDP (%)	9.6	5.6	11.0	3.4	3.1	4.9	9.3	4.0	6.8	n.a.	n.a.
External debt to GDP (%)[6/]	36.7	35.5	36.5	35.1	35.5	35.5	35.1	34.8	34.0	n.a.	n.a.
External debt (billion, U.S. dollars)	155.2	162.4	157.5	154.2	159.0	162.4	164.5	166.7	166.2	170.2	169.5
Short-term (%)	44.3	39.0	42.9	42.9	41.6	39.0	38.5	37.5	35.3	34.3	34.5
Long-term (%)	55.7	61.0	57.1	57.1	58.4	61.0	61.5	62.5	64.7	65.7	65.5
International reserves / Short-term external debt (time	2.9	3.2	3.2	3.1	3.1	3.2	3.4	3.5	3.8	3.8	3.8

Note:

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

Table: Probability distribution of GDP growth forecast

Percent	2019		2020				2021		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
> 9	0	0	0	0	0	1	1	2	3
8-9	0	0	0	0	1	1	2	2	3
7-8	0	0	0	1	3	3	3	4	5
6-7	0	0	1	3	6	5	6	7	7
5-6	0	1	4	7	10	9	9	9	10
4-5	0	7	11	13	14	13	12	12	12
3-4	0	22	19	18	17	15	14	14	13
2-3	100	33	24	20	16	16	15	14	13
1-2	0	24	20	17	14	14	13	12	11
0-1	0	10	13	11	10	10	10	9	9
(-1)-0	0	2	6	6	6	7	7	7	6
(-2)-(-1)	0	0	2	3	3	4	4	4	4
(-3)-(-2)	0	0	0	1	1	2	2	2	3
< (-3)	0	0	0	0	1	1	2	2	2

Table: Probability distribution of headline inflation forecast

Percent	2019		2020				2021		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
> 4.0	0	0	0	1	3	5	4	5	6
3.5-4.0	0	0	1	1	2	4	3	3	4
3.0-3.5	0	0	2	2	4	5	4	5	5
2.5-3.0	0	0	4	4	5	7	6	6	6
2.0-2.5	0	1	8	6	7	8	7	8	8
1.5-2.0	0	5	13	9	9	9	9	9	9
1.0-1.5	0	13	16	11	10	10	10	9	9
0.5-1.0	100	23	17	13	10	10	10	10	9
0.0-0.5	0	25	15	13	10	9	10	9	9
(-0.5)-0.0	0	19	11	12	9	8	9	8	8
(-1.0)-(0.5)	0	10	7	10	8	7	8	7	7
(-1.5)-(1.0)	0	3	4	8	7	5	6	6	6
(-2.0)-(-1.5)	0	1	2	5	5	4	5	5	5
< -2.0	0	0	1	7	10	7	10	10	10

Table: Probability distribution of core inflation forecast

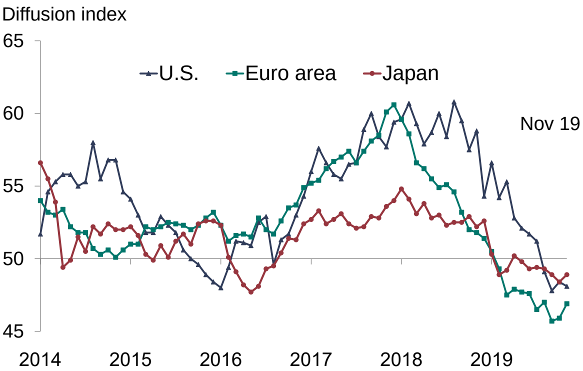
Percent	2019		2020				2021		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
> 4.0	0	0	0	0	0	0	0	0	0
3.5-4.0	0	0	0	0	0	0	0	0	0
3.0-3.5	0	0	0	0	0	0	0	0	1
2.5-3.0	0	0	0	0	1	1	2	2	2
2.0-2.5	0	0	0	1	4	5	5	6	6
1.5-2.0	0	0	2	7	11	12	12	12	12
1.0-1.5	0	4	17	20	20	21	19	19	18
0.5-1.0	0	42	39	31	25	24	23	22	21
0.0-0.5	100	47	31	25	21	19	19	18	18
(-0.5)-0.0	0	7	9	12	12	11	12	12	12
(-1.0)-(0.5)	0	0	1	3	5	5	6	6	6
(-1.5)-(1.0)	0	0	0	0	1	1	2	2	2
(-2.0)-(-1.5)	0	0	0	0	0	0	0	1	1
< -2.0	0	0	0	0	0	0	0	0	0

4.2 Chart Pack

Global Economy

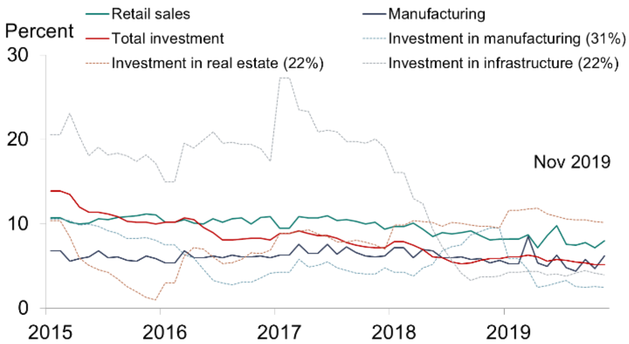
Major advanced and Asian economies slowed down but would exhibit a more stabilizing growth in the period ahead. In particular, the manufacturing sector would improve in line with global trade volume, partly due to monetary easing and expansionary fiscal policy, as well as an unofficial agreement between the U.S. and China over the phase one trade deal. The agreement would lead to a reduction and exemption of import tariffs previously imposed.

Manufacturing Purchasing Manager Index



Sources: Bloomberg and Eurostat

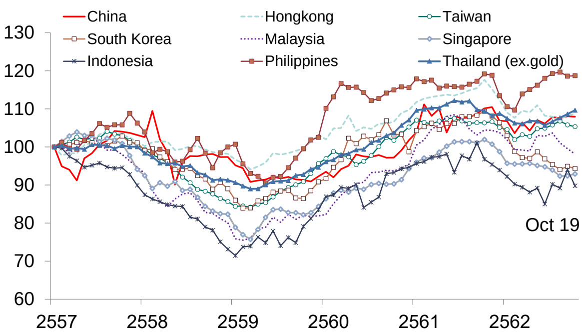
China's economic indicators (Change from the same period last year)



Note: ( ) denotes share to total investment
Source: CEIC

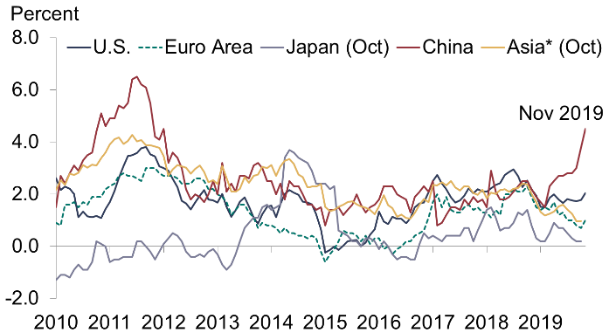
Asian exports

Export Value Index, 3-month moving average, seasonally adjusted (Jan 2014 = 100)



Source: CEIC

Headline inflation of Thailand's major trading partners

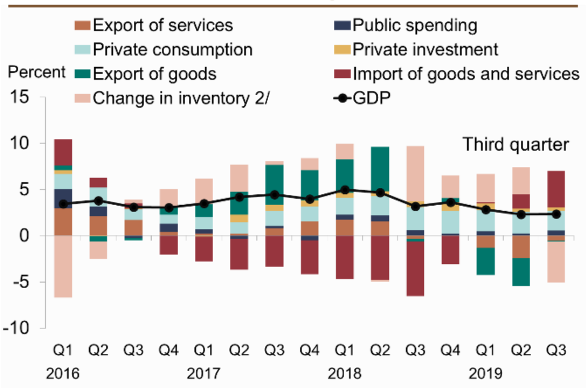


Note: *Average of headline inflation in Indonesia, South Korea, Malaysia, the Philippines, Singapore, and Taiwan
Source: CEIC

Thai economy

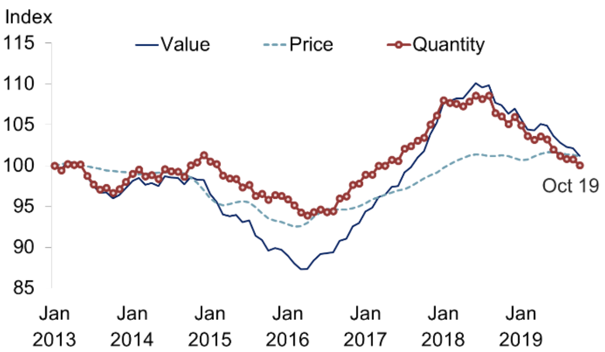
The Thai economy expanded at a slower rate mainly due to a slowdown in external demand. Government stimulus measures helped shore up the economy in the short term but could not compensate for the effects of trade tensions on merchandise exports, a slow recovery in the electronics cycle, lower global crude oil prices, and Thailand's declining price competitiveness. These would affect private consumption and private investment.

Contribution to Thailand's GDP growth[1/]



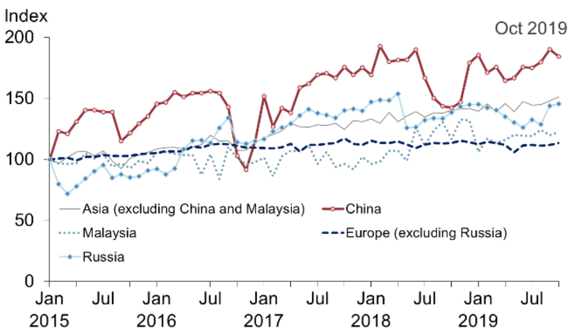
Note: [1/] Calculated by Chain Volume Measure method (CVM)
[2/] Change in inventory and statistical discrepancy
Source: Office of National Economic and Social Development Council, calculations by the Bank of Thailand

Thai exports (excluding gold): value, price and quantity
(3-month moving average, seasonally adjusted; January 2013 = 100)



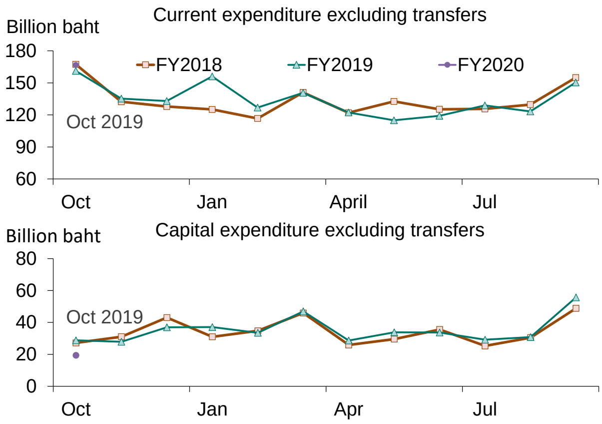
Source: Customs Department and Ministry of Commerce, calculations by Bank of Thailand

Index of foreign tourists classified by nationality
(three-month moving average, seasonally adjusted; January 2015 = 100)



Source: Department of Tourism

Public spending by central government

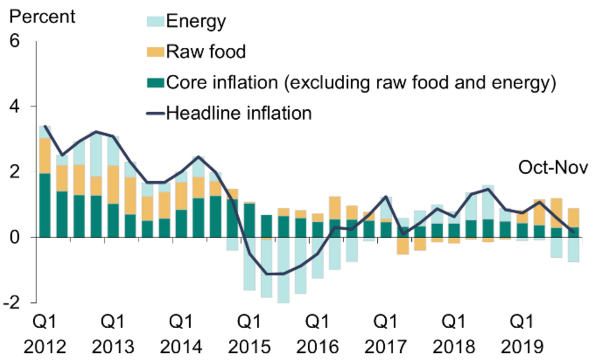


Source: Bureau of Budget, Fiscal Policy Office

Inflation

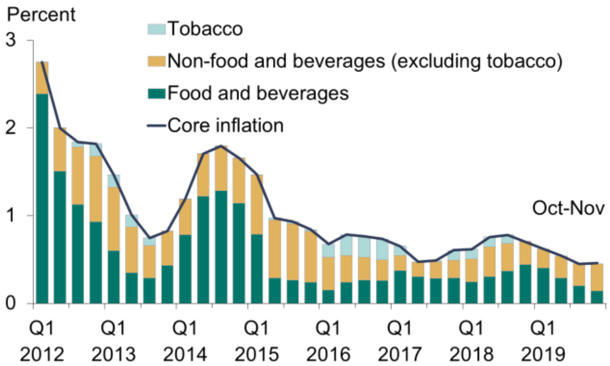
Headline inflation declined due to prices of fresh food and energy, consistent with global crude oil prices. Core inflation remained unchanged as falling prices of prepared food were off-set by rising prices of personal care. Prices of other categories slowly increased in line with the domestic economy and effects of structural factors. Short-term inflation expectations declined while long-term inflation expectations increased.

Contribution to headline inflation



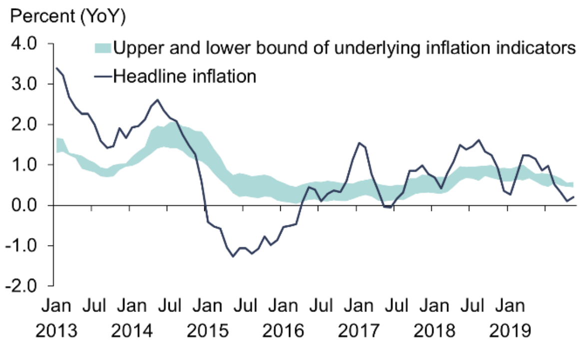
Source: Bureau of Trade and Economic Indices, Ministry of Commerce, calculations by Bank of Thailand

Contribution to core inflation



Source: Bureau of Trade and Economic Indices, Ministry of Commerce, calculations by Bank of Thailand

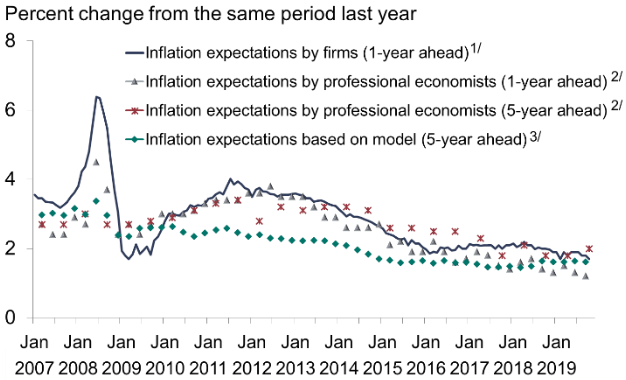
Underlying inflation indicators



Note: The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are 1. **Trimmed mean** (excludes goods and services with most volatile price changes, removing the bottom 15 percentile and the top 10 percentile), 2. **Principal component model** (calculates changes in common statistical components that attribute price movements across categories of goods and services) and 3. **Core inflation excluding rents and government measures.**

Source: Bureau of Trade and Economic Indices, Ministry of Commerce, calculations by Bank of Thailand

Inflation expectations

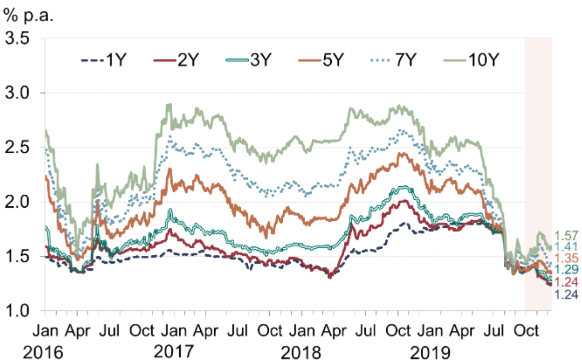


Source: [1/] Business Sentiment Survey (BSI) by the Bank of Thailand
[2/] Asia Pacific Consensus Forecast
[3/] Calculations based on macro-finance term structure model using bond yield and macroeconomic data

Financial conditions

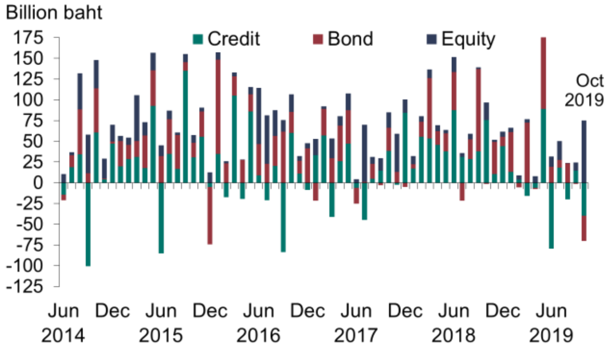
Short-term money market rates, short-term government bond yields, as well as some lending rates and deposit rates of commercial banks decreased in line with the policy rate. Medium- to long-term government bond yields increased mainly due to external factors. Corporate financing activities slowed down in both bank credits and bond market in tandem with economic slowdown and tightening lending standards among financial institutions. The baht appreciated against the U.S. dollar but exhibited more two-way movements after the MPC lowered the policy rate and the Bank of Thailand relaxed foreign exchange regulations to encourage capital outflows on November 6, 2019.

Government bond yields



Source: Thai Bond Market Association (Thai BMA)
(data as of 17 December 2019)

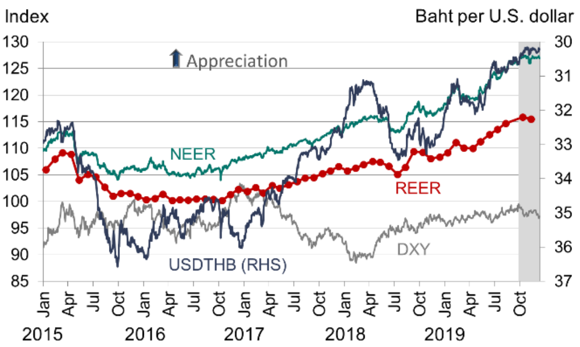
Total corporate financing by instrument*



Note: * Monthly change in outstanding of corporate loans (seasonally adjusted), corporate bonds excluding those issued by commercial banks, and newly issued equities.

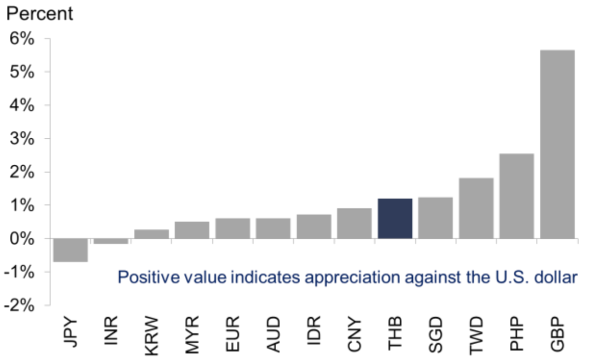
Sources: Bank of Thailand and Thai Bond Market Association (Thai BMA)

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



Source: Bank of Thailand and Reuters (data as of 17 December 2019)

Currency movements against the U.S. dollar
(17 December 2019 compared to 30 September 2019)

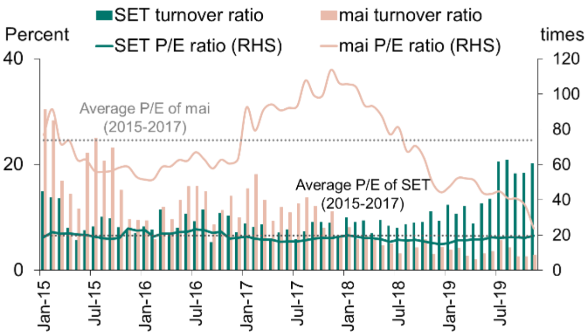


Source: Bank of Thailand and Reuters (data as of 17 December 2019)

Stability: financial markets

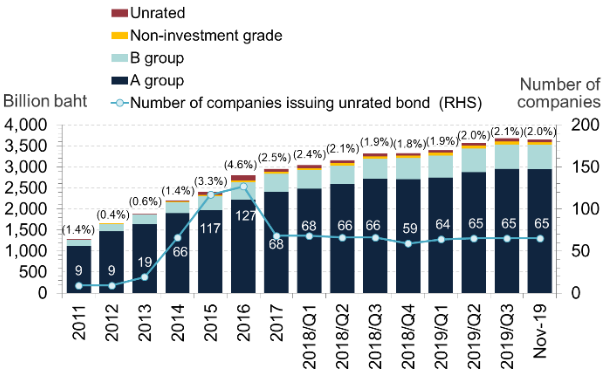
The price-to-earning (P/E) ratio of the Stock Exchange of Thailand (SET) stabilized close to its historical average, while that of the Market for Alternative Investment (mai) declined. The share of unrated bond issuance remained stable.

Current price-to-earning ratio and turnover ratio of SET and mai



Source: Stock Exchange of Thailand (as of November 2019)

Corporate bonds outstanding

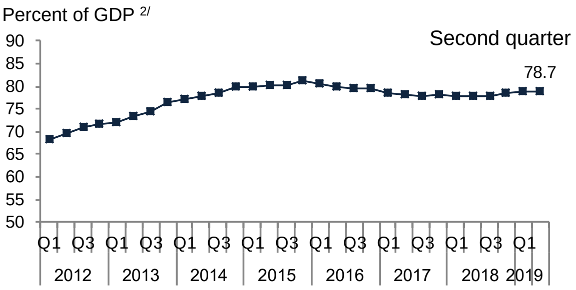


Note: ( ) represents percentage of unrated bonds to total corporate bonds
Source: Thai Bond Market Association (Thai BMA)

Stability: household sector

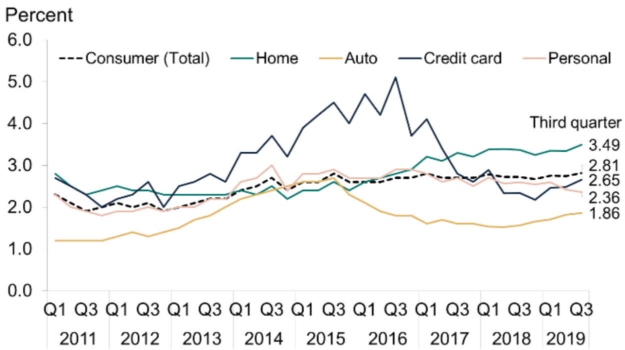
The ratio of household debt to GDP in the second quarter of 2019 remained high and stabilized from the previous quarter but would likely continue to increase going forward. Regarding credit quality of households, the NPL ratio slightly increased overall. The ratio of special mention loans (SM) increased, reflecting deterioration of consumer credit quality in almost all loan categories, particularly among mortgage, auto-leasing, and credit card loans.

Household debt[1/]



Note: 1/ Loans to households by financial institutions
2/ Calculated by averaging the 4 latest quarterly GDP
3/ Household debt and GDP data are revised. This results in the difference in household debt to GDP ratios compared with the previous MPR.
Source: Bank of Thailand

Share of non-performing loans (NPL) in consumer loans, classified by loan type

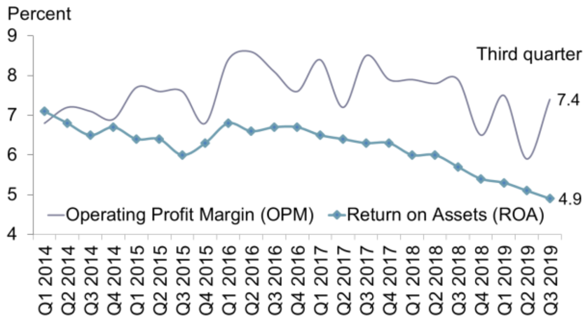


Source: Bank of Thailand

Stability: corporate sector

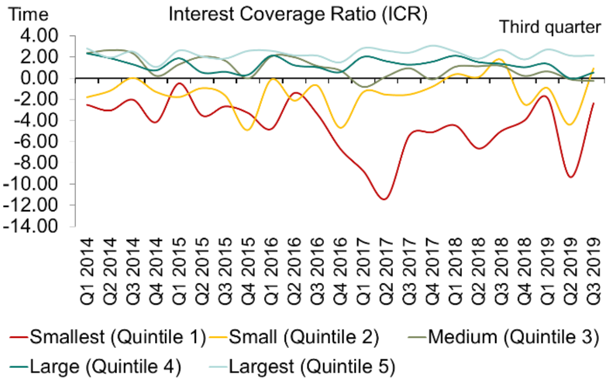
Overall stability in the corporate sector remained sound in the third quarter of 2019. However, there was a need to monitor vulnerability of the export sector and debt serviceability of SMEs which would likely continue to deteriorate. The NPL ratio among SMEs increased and remained at a high level.

Operating Profit Margin (OPM) and Return on Assets (ROA)*



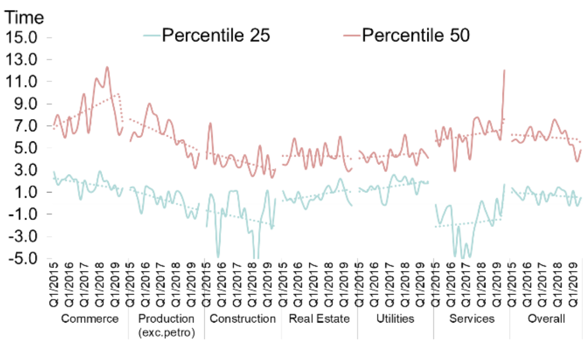
Note: * Median estimates; ROA is returns to average assets.
OPM is operating profits to total sales.
Source: Stock Exchange of Thailand, calculation by Bank of Thailand

Debt serviceability at 25th percentile of each group of firm size



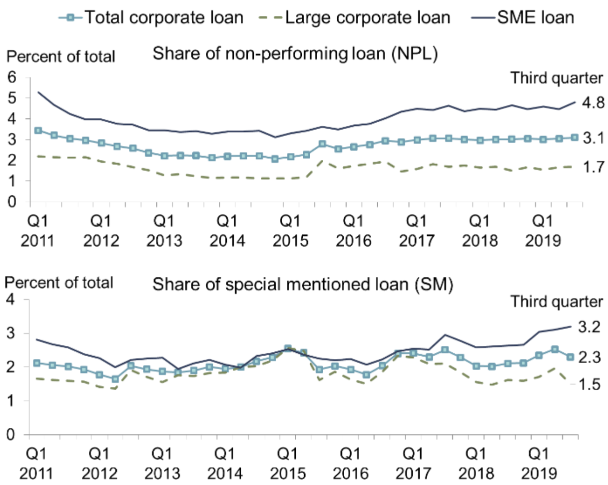
Source: Stock Exchange of Thailand, calculation by Bank of Thailand

Interest Coverage Ratio, classified by sectors



Note: *production exclude Petroleum and chemicals
Source: Stock Exchange of Thailand, calculation by Bank of Thailand

Loan quality of corporate sector

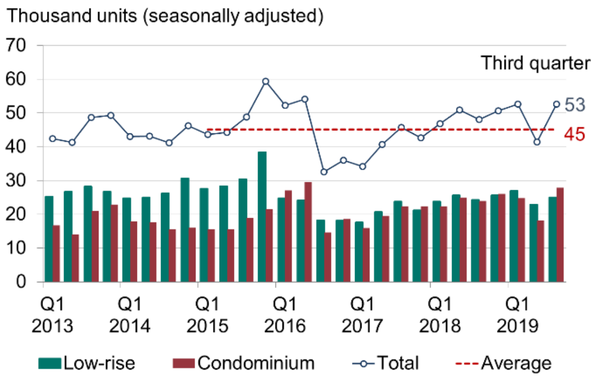


Source: Bank of Thailand

Stability: real estate

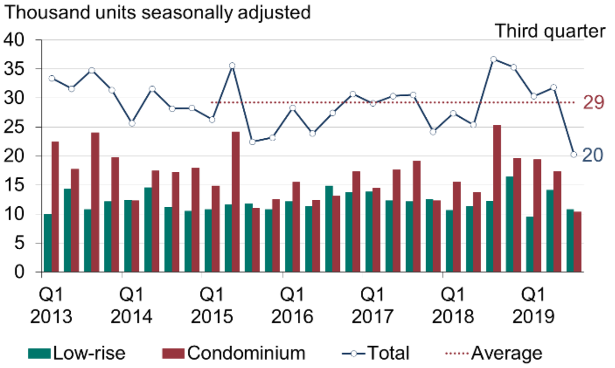
Oversupply in the real estate market remained high, especially for condominiums. This led to a decline in prices of condominiums in the third quarter of 2019 compared with the same period in 2018. However, a number of new units launched in Bangkok and its vicinity declined, suggesting that real estate developers made adjustments which helped mitigate the oversupply concern. Nonetheless, there was a need to monitor the ability of developers to adjust to economic slowdown and the LTV measure which put pressures on demand.

Residential transfer units in Bangkok and its vicinity



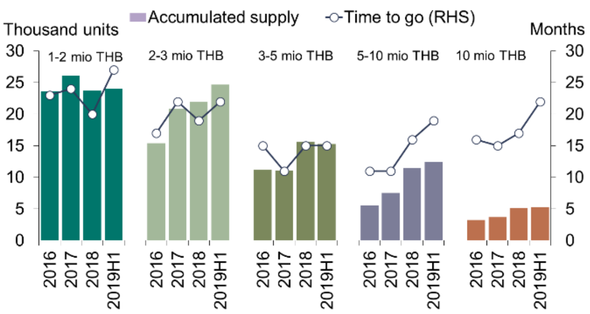
Source: Real Estate Information Center
Note: *Average during 2014 - 2018

New residential projects in Bangkok and its vicinity



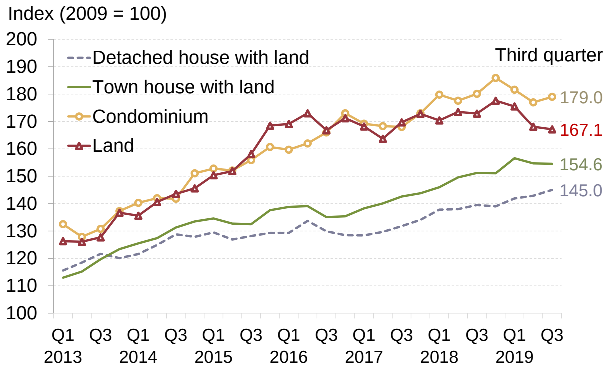
Source: Agency for Real Estate Affairs (AREA), calculation by Bank of Thailand
Note: *Average during 2014-2018

Condominium inventory (in Bangkok and vicinity) and 'Time to go'



Note: 'Time to go' is the time taken for all real estate inventory to be sold out at the average sales rate per month (since projects launched) given no additional supply.
Source: AREA and calculation by the Bank of Thailand

Real estate price indices

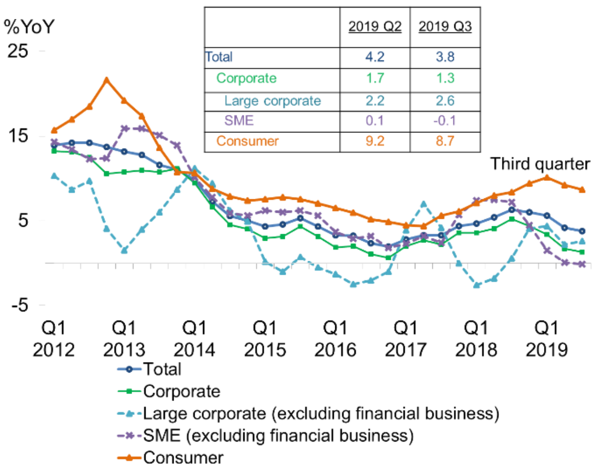


Note: Calculation based on commercial bank loan data
Source: Bank of Thailand

Stability: financial institutions

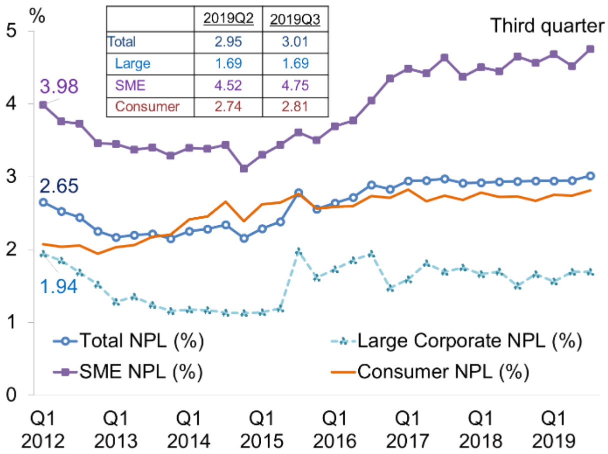
Financial institutions maintained strong financial positions, as reflected in high levels of capital buffers among commercial banks to cushion against risks should credit quality deteriorate. In the third quarter of 2019, commercial bank credits expanded at a slower rate in line with softening economic growth outlook. Meanwhile, overall NPL ratio somewhat increased.

Credit growth in the commercial bank system



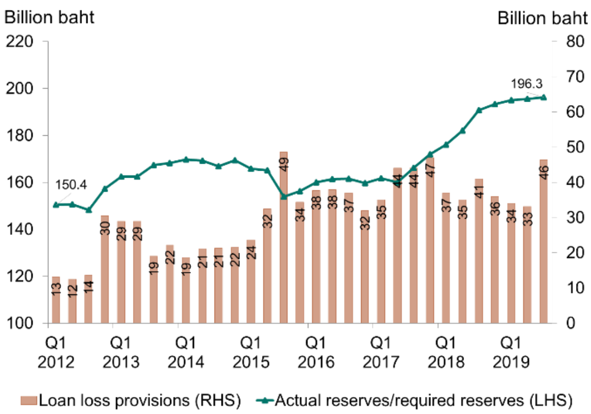
Source: Bank of Thailand

Non-performing loan (NPL)



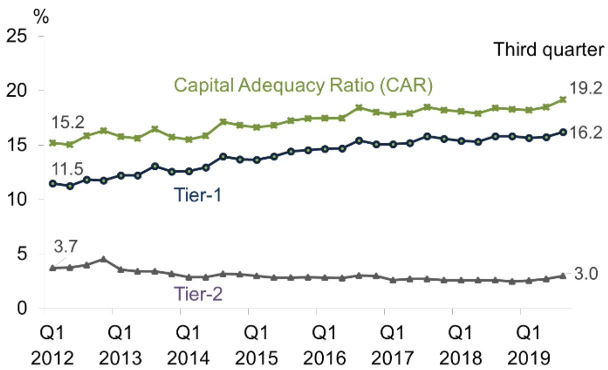
Source: Bank of Thailand

Provisions in commercial bank system



Source: Bank of Thailand

Capital buffers in commercial bank system

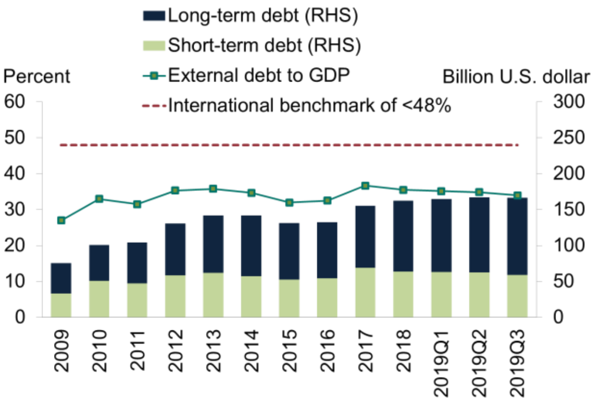


Source: Bank of Thailand

Stability: external positions

Thailand's external stability remained sound, as reflected in high levels of international reserves. The ratio of external debt to GDP was below an international benchmark. This would help the Thai economy to be resilient against volatilities in the global financial market.

Thailand's external debt



Source: Bank of Thailand

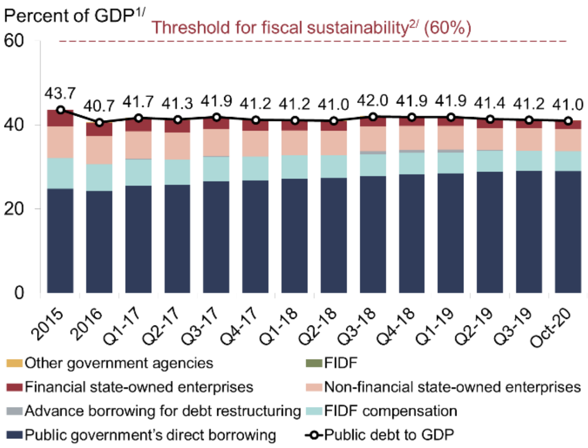
Reserve to short-term debt

Source: Bank of Thailand

Stability: fiscal sector

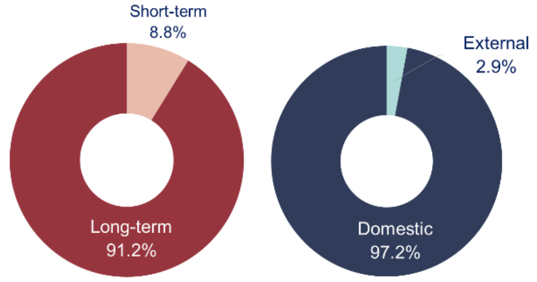
Fiscal stability remained sound. The ratio of public debt to GDP remained below the fiscal sustainability threshold.

Public debt to GDP



Note: [1/] Calculated from GDP by Chain Volume Measure method
[2/] Set by Monetary and Fiscal Policy Committee by the authority of State Fiscal and Financial Disciplines Act, B.E. 2561 (2018)
Source: Public Debt Management Office

Outstanding debt as of October 2019



Note: Share of short-term and long-term debt calculated from remaining duration until maturity
Source: Public Debt Management Office

Pursuing Sustainable Economic Well-Being

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