Research Focus

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Will Thailand's low inflation continue under economic expansion?

— Negative aspects of long lasting low inflation should be taken into consideration—

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<<Summary>>

- This report analyzes prolonged low inflation in Thailand and points out that further continuous low inflation could have negative impacts on medium to long term growth.
- Low inflation has been continuing since 2015 and the headline inflation rate was basically less than the lower range of the BoT's (Bank of Thailand) inflation target (2.5±1.5%).
- ①Commodity price declines in 2015 and 2016, ②the Baht's appreciation since 2016, ③ economic stagnation between 2013 and 2016, and ④tightened price monitoring for price control, have all contributed to the long lasting low inflation.
- As external factors have significantly contributed to low inflation and it supported economic growth, prolonged low inflation is not widely recognized as a matter of concern. However, further continuous low inflation could have negative impacts on medium to long growth through various channels such as lower wage growth, real interest rates and debt increase, etc.
- Looking forward, recent commodity price increases and growth recovery will provide inflationary pressures. However, CPI inflation is expected to be very weak due to further tightening of price controls and the strong Baht.
- The BoT will continue to deal with deflationary pressure associated with the Baht's appreciation through relaxation/simplification of capital controls and FX intervention. However, further reduction of the policy rate can't be expected because of the high household debt problem and the financial instability risk associated with additional rate hikes in the US.
- The government's fiscal situation seems to be sound. However, as the current healthy situation is supported by a surplus of social security funds and this sector's balance could deteriorate soon reflecting rapid aging, the room for expansionary fiscal policy is limited. Therefore, inflationary pressure from an expansionary fiscal policy can't be expected.

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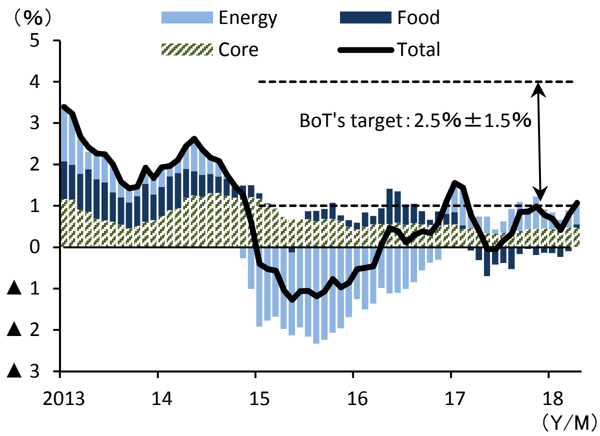
This is English short version of forthcoming RIM (Research for International Management) paper. More detail analysis and discussions are available in that paper (written in Japanese).

<Introduction>

Low inflation has been continuing in Thailand since 2015. Except for several months between the end of 2016 and the beginning of 2017, headline CPI (Consumer Price Index) inflation (year on year) has been below 1%, the lower range of the BoT's (Bank of Thailand) inflation target (2.5±1.5%) since January 2015 (Fig.1). Although the latest inflation rate (+1.1%, in April 2018) returned to the target range for the first time since March 2017, the momentum is still not strong.

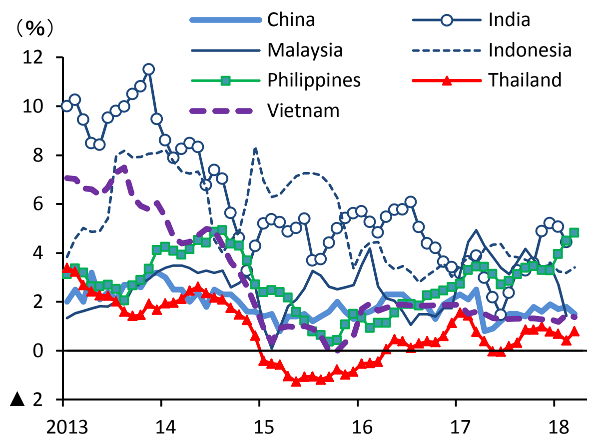
Reflecting significant international commodity price declines in 2015-2016, low inflation can be observed in other emerging Asian countries, but Thailand's inflation has been lower than that of other emerging Asian economies (Fig.2). This short report examines the background of the prolonged low inflation and points out that low inflation could continue regardless of recent economic expansion.

Fig.1 Thai's CPI (YoY)



(Source) Ministry of Commerce, Bank of Thailand

Fig.2 CPI in emerging Asia(YoY)



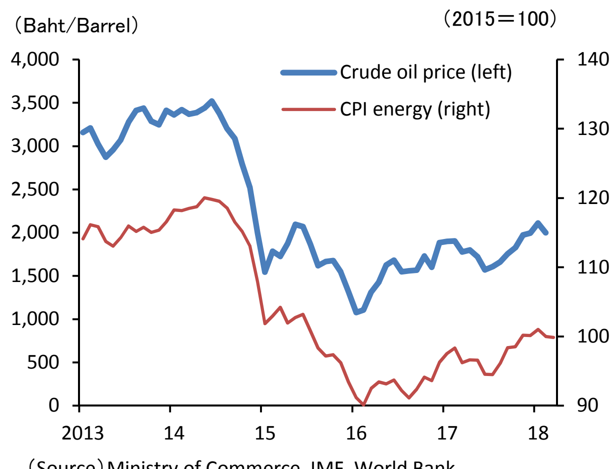
(Source) Various Sources

<Why has CPI inflation been so low in Thailand?>

Four factors can be identified as responsible for the long lasting low inflation.

Firstly, commodity price declines in 2015-2016 posed significant deflationary pressure. The crude oil price decreased from more than 100 USD/barrel to below 30 USD/ barrel in 2016. Domestic energy prices such as for electricity, LPG, petroleum, also declined due to this factor (Fig.3). Although international commodity prices have been recovering since the second half of 2016, the prices are still much lower than before 2014 and second/third spillover impacts from previous energy price declines still exert deflationary pressure on other goods and services prices.

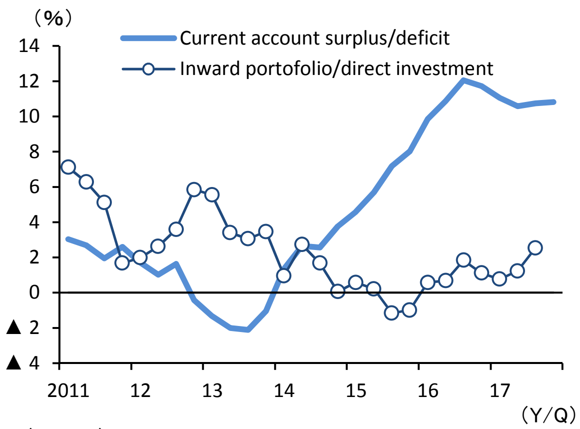
Fig.3 Crude oil price and CPI energy (YoY)



(Source) Ministry of Commerce, IMF, World Bank

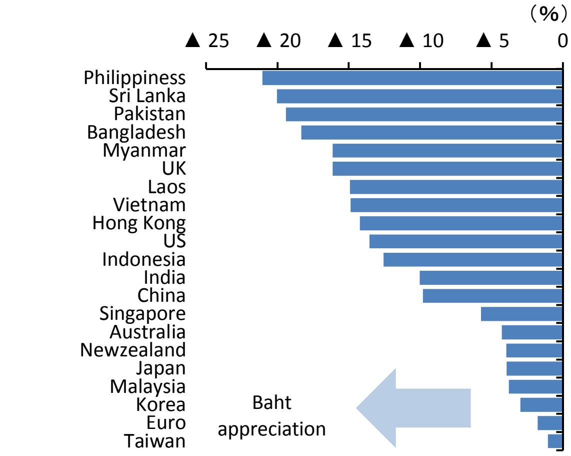
Secondly, Baht appreciation associated with the expansion of the current account surplus and inward portfolio/direct investment has also been providing deflationary pressure. Given the decrease in energy import costs and export growth reflecting global trade expansion, the current account surplus increased to more than 10% of GDP while inward investment has been gradually increasing reflecting economic recovery (Fig.4). Due to these, the Baht has been appreciating against USD and other currencies since 2016(Fig.5).

Fig.4 Current account surplus/deficit, inward portfolio/direct investment (% of GDP, 4 quarters moving average)



(Source) Bank of Thailand, National Economic Social Development Board

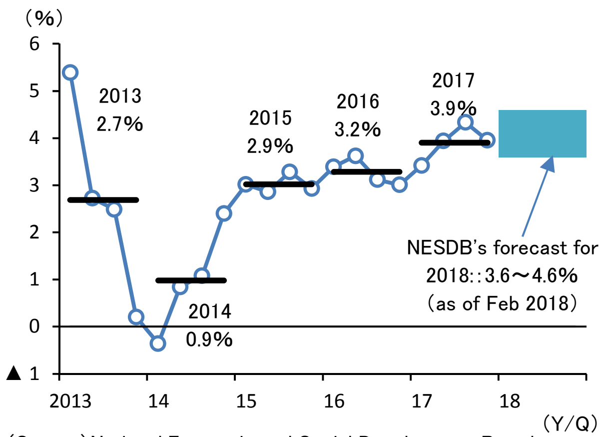
Fig.5 Baht's appreciation (2016 Jan⇒ 2018 Mar)



(Source) Bank of Thailand

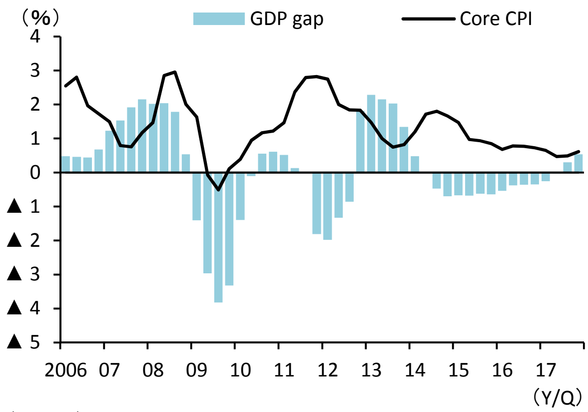
Thirdly, weak economic growth between 2013 and 2016 posed deflationary pressure. A significant decline in car sales after the end of the "First car buyer scheme", cyclical weak construction demand after flood related reconstruction demand, stagnation of exports, etc., the Thai economy rapidly slowed downed from 2013 (Fig.6). Deterioration of consumer/business confidence and a decrease in the number of foreign tourists associated with political instability between the second half of 2013 and the first half of 2014 also posed downward pressure. Since the military coup in May 2014, the economy has been on a recovery trend but, around 3% is still weak and the GDP gap had been negative until the middle of 2017 (Fig7).

Fig.6 Real GDP (YoY)



(Source) National Economic and Social Development Board

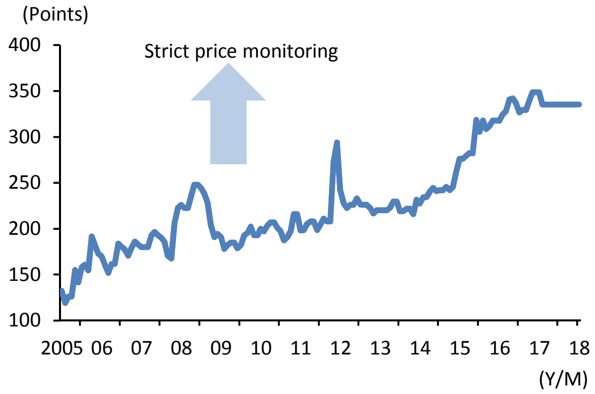
Fig.7 GDP gap and core CPI inflation



(Source) Ministry of Commerce , JRI's estimate based on National Economic and Social Development Board
(Note) GDP gap is calculated by HP-Filter

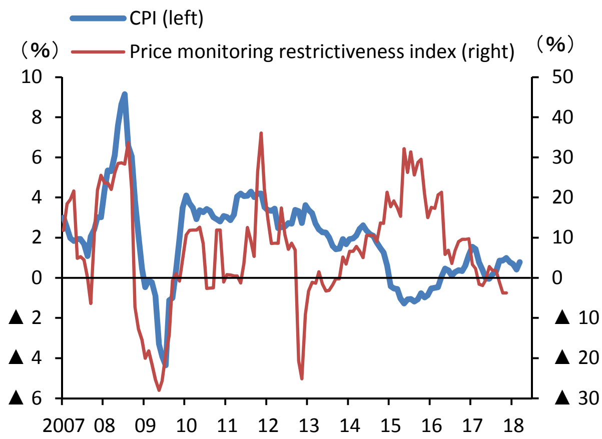
Lastly, the DIT's (Department of Internal Trade, under Ministry of Commerce) strict price monitoring for price control has been providing deflationary pressure. The DIT periodically monitors the price of items to protect consumers from unfair price increases and the DIT has the power to order companies to cancel price increase if the reason for the price increase is not clear and the DIT regards it as unfair. Currently, the DIT monitors about 230 goods and services. These items are classified into three categories. Items on the SL (Sensitive List) are monitored daily, those on the PWL (Priority Watch List) are monitored twice a week, and those on the WL (Watch List) are monitored every 2 weeks. Although the total number of monitored items did not change much between 2014 and 2017, the DIT tightened price monitoring by shifting items from the WL to SL/PWL. The number of SL items increased to 26 in 2017 from 9 in 2013. The "price monitoring restrictiveness index" which, the author calculated by using the number of items on SL/PWL/WL and frequency of price monitoring also shows that price monitoring became significantly stricter after 2014 (Fig.8). Correlation between this index and CPI (Fig.9) and simple regression suggest that the above factors have been contributing to low inflation (Fig.10).

Fig.8 Price monitoring restrictiveness index



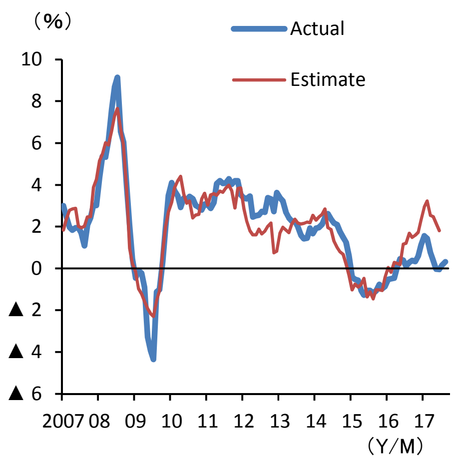
(Source) JRI's estimate based on Ministry of Commerce
(Note) The index is based on the number of items in SL (sensitive list)/ PWL (Priority Watch List) /WL(Watch List) and frequency of price monitoring.

Fig.9 Price monitoring restrictiveness index and CPI (YoY)



(Source) JMinistry of Commerce, JRI's estimate

Fig.10 CPI estimate



(Source) JRI's estimate based on Bank of Thailand, IMF, Ministry of Commerce, etc
(Note) Regression is based on following equation

CPI (YoY)＝α＋β ×Baht based crude oil price (YoY) ＋γ ×GDP gap (12 month backward moving average)＋δ ×Price monitoring restrictiveness index (YoY) (Before 2014 Apr)＋ε × δ ×Price monitoring restrictiveness index (YoY) (After 2014 May)＋Error term
Estimate periods：2007 Jan～2017 Jun、Adjusted R2＝0.819
Coefficient (t value)
α : 1.90 (19.00)
β : 0.04 (9.11)
γ : 0.33 (4.52)
δ : 0.06 (6.44)
ε : -0.05 (-4.16)
＊GDP gap was decomposed into monthly data after it was estimated in quarterly data

<Negative aspects of long lasting low inflation should be taken into consideration>

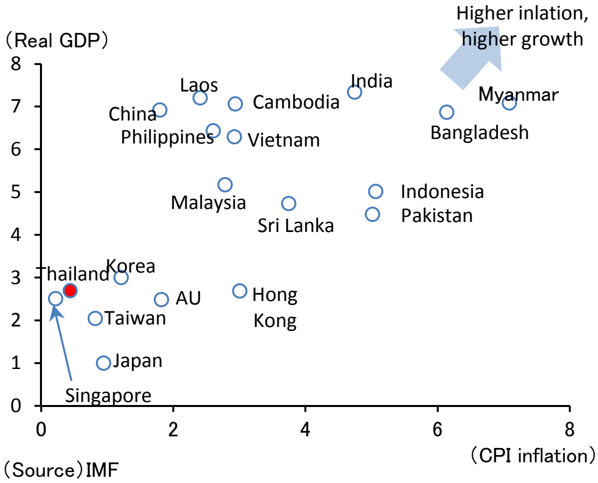
So far, long lasting low inflation has not widely been considered a concern. This is because temporary external factors have significantly contributed to recent low inflation. In addition to this, low inflation supported growth while the Thai economy had stagnated. However, further continuous too low inflation could have a negative impact in the medium to long term and the economy could be stuck in a "low growth and low inflation trap" as the IMF pointed out in its's article Ⅳ consultation paper in 2017 (IMF[2017]). In, fact, the scatter diagram of CPI inflation and real GDP growth of Asian economies shows that Thailand's recent growth and inflation are already close to those of mature economies such as Singapore, Taiwan, and Korea rather than other similar income level countries (Fig 11).

Low inflation could have negative impacts on medium to long term growth through various channels. Firstly, low inflation could contribute to lower wage growth through lower minimum wage increase. Although average wages rapidly increased between 2011 and 2014 due to the less than 1% of unemployment rate and drastic minimum wage increase in 2012-2013 under the Yingluck administration, they have been stagnating since 2014 and the year on year change became negative in 2017 Q1(Fig 12).

An increase in real interest rates also could hamper investment and consumption of durable goods. Although the BoT reduced its policy rate to its lowest level in 2015, the real policy rate (= nominal policy rate − CPI inflation) is still higher than that in the first half of the 2010s (Fig.13).

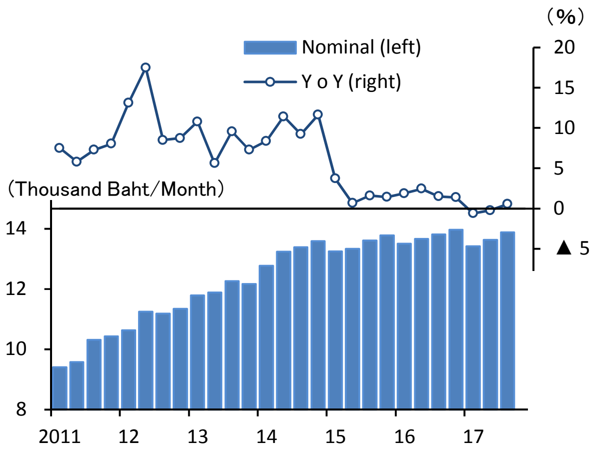
Moderate inflation is also essential for government fiscal sustainability and too low

Fig.11 CPI inflation and GDP growth (2013-2017 average)



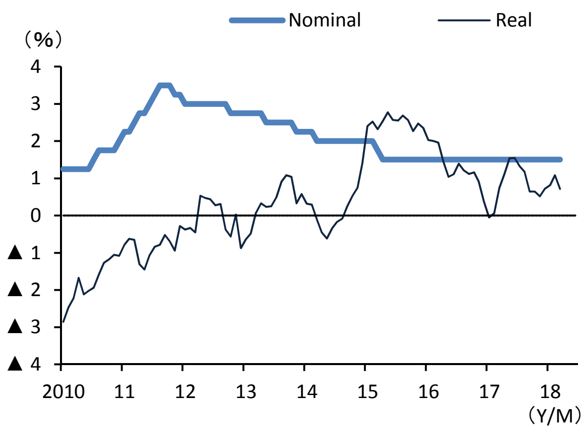
(Source) IMF

Fig.12 Average wage



(Source) Bank of Thailand

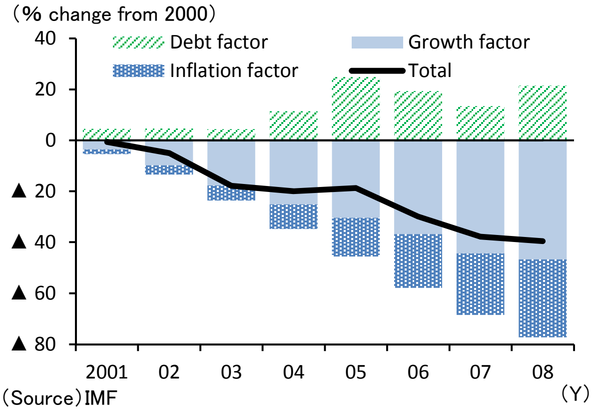
Fig.13 Nominal /real policy rate



(Source) Ministry of Commerce, Bank of Thailand inflation could have a negative impact on that. In fact, inflation significantly contributed to the improvement of general government gross debt to GDP between 2000 and 2008 (Fig.14).

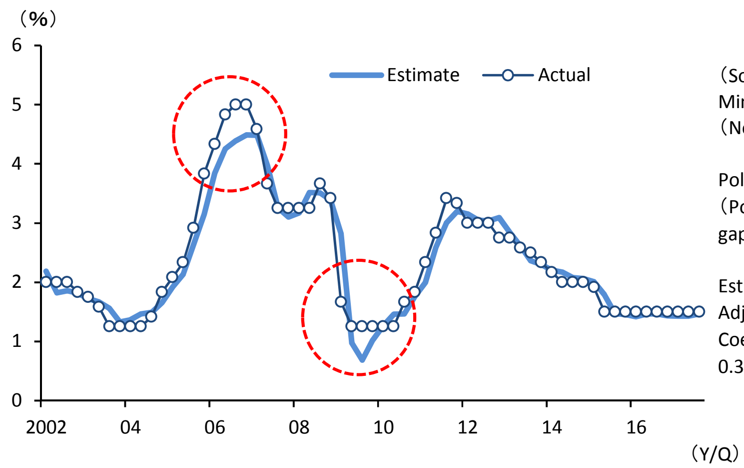
To minimize these downside risks, the IMF recommended the Thai authorities to expand their monetary and fiscal policy in 2017. As for monetary policy, the Ministry of Finance and the FTI (Federation of Thai Industries) also recommended the BoT to reduce its policy rate to deal with the negative impact of Baht appreciation on export competitiveness. However, the BoT has continued to maintain its policy rate since 2015 April. Expectations of increasing inflationary pressures reflecting growth and commodity price recovery, and uncertainty about the impact of additional US rate hikes are the factors why the BoT held its policy rate. Although it became difficult to assess the appropriateness of the BoT's policy rate as the inflation target changed to CPI total (2.5±1.5%) from core CPI (1～4 %) in Jan 2015, a modified Taylor rule with the previous inflation targeting framework suggests that the current policy rate is consistent with economic fundamentals (Fig.15). Large significant deviations are not observed as existed in 2006 and 2009.

Fig.14 Gross government debt to GDP (Change from 2000 to 2008)



(Source) IMF
(Note) Gross debt to GDP change ≒ Debt outstanding change－Real GDP growth rate －GDP deflator change

Fig.15 BoT's policy rate: actual and estimate based on modified Taylor rule



(Source) JRI's estimate based on NESDB、Bank of Thailand, Ministry of Commerce ,etc
(Note) Estimation is based on the following equation

Policy rate＝λ＋Previous month's policy rate＋(1－λ) × (Potential growth＋Inflation target median ＋α × Inflation gap＋β × GDP gap (2 quarters moving average))

Estimation periods 2002/Q3～2017/Q3
Adjusted R2 ＝0.91
Coefficient (t-vale) : λ＝0.74 (16.1)、α＝1.07 (7.30)、β＝0.30 (3.22)

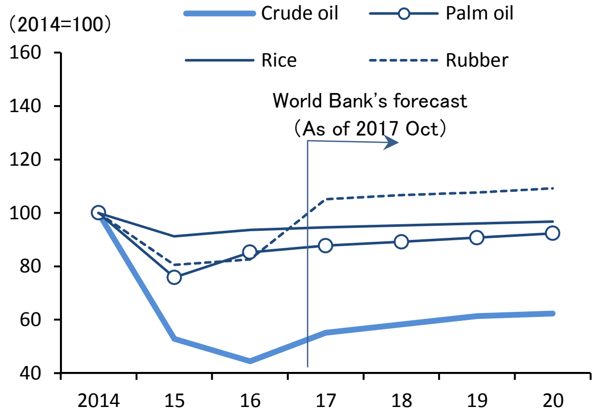
<u><Inflation outlook: inflationary pressures</u>

Looking forward, there are both inflationary and deflationary pressures.

As for inflationary pressures, the year on year energy CPI is expected to increase due to commodity price recovery after 2016. The crude oil price has increased to around 65 USD/barrel and is expected to continue to maintain current price level. The World Bank also forecast that major commodities such as crude oil, rubber, rice, palm oil etc., are expected to remain stable at their current levels (Fig.16).

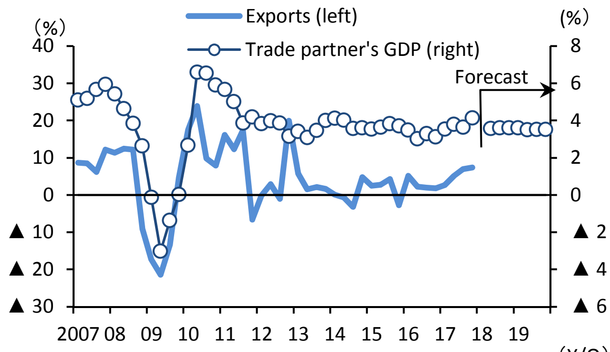
Recent economic expansion will also provide inflationary pressures. Realization of "Thailand 4.0" , infrastructure development related to the EEC (Eastern Economic Corridor), further economic integration in ASEAN/Asia are expected to contribute medium to long term economic growth. As for exports, appreciation of the Baht could be a downside pressure while the robust economic growth of major trading partners continued to support exports. (Fig.17).

Fig.16 International commodity price



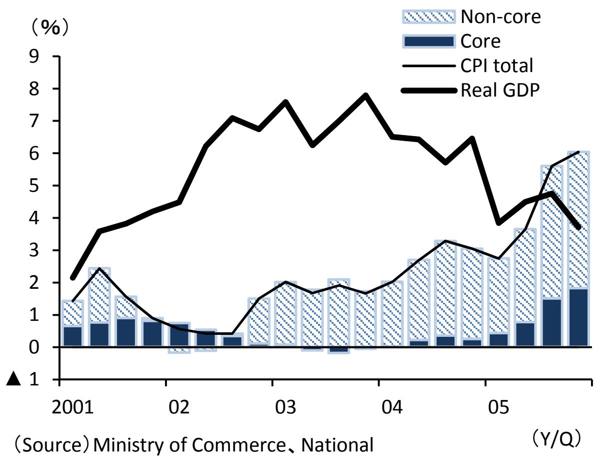
(Source) World Bank

Fig.17 Thai's real exports and trading major trading partner's aggregated growth



(Source) JRI's estimate based on Bank of Thailand, IMF
(Note) Trading partner's growth is estimated quarterly GDP growth of Japan, China, Korea, EU, US, Singapore, Malaysia, Indonesia, Philippiness, Australia, India. The oultlook of individual economy is based on IMF's forecast

Fig.18 Real GDP growth and CPI inflation



(Source) Ministry of Commerce、National Economic and Social Development Board

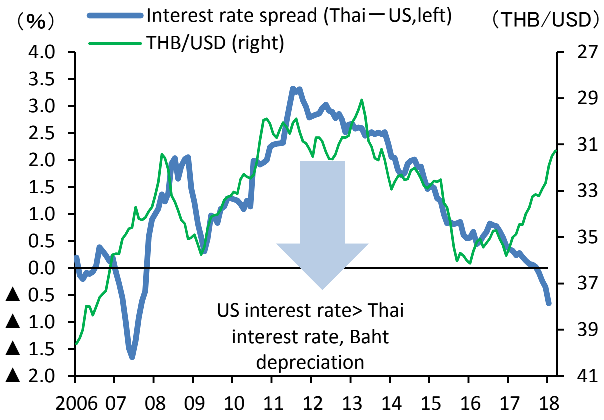
<Inflation outlook: Deflationary pressures>

However, low inflation is expected to continue because of strong deflationary pressures.

Firstly, continuous restrictive price monitoring for price control will continue to hamper healthy inflation. Regarding this, the MoC (Minister of Commerce) announced that the MoC will not allow price increases associated with the minimum wage increase which was implemented in April 2018. The MoC also encouraged consumers to report to the DIT if they observed an "unfair" price increase. There is a possibility that the government will strength pressure for price control further to gain public support before the general election. Considering the relationship between growth and inflation in the first half of the 2000s, low inflation could continue to be weak regardless of economic expansion and energy price increases. Between 2003 and 2005, real GDP growth was around 5% and energy prices were also on an upward trend. However, core inflation had been close to zero (Fig.18). In that period, the DIT rapidly tightened price control by increasing the number of monitored items from about 70 in 2003 to 200 in 2006[2].

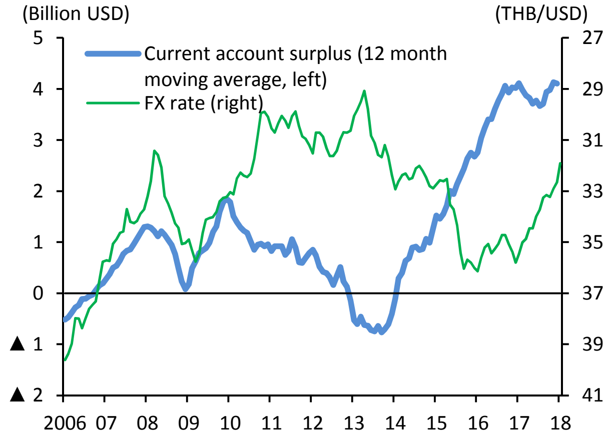
In addition to this, the strong Baht will continue to pose deflationary pressures. Although, additional rate hikes in the US and normalization of monetary policy in Europe are providing US/Euro appreciation pressures, Baht depreciation could be limited because of large current account surplus and robust inward investment. Looking back to the Baht appreciation trend in the second half of the 2000s, reflecting expansion of the current account surplus and strong financial inflow, the Thai Baht continued to appreciate against the USD between 2006-2007 regardless of the negative interest spread between Thailand and the US (Fig.19, Fig.20).

Fig.19 Interest spread between Thailand and US (2 years government bond) and FX rate



(Source) Bloomberg L.P.

Fig.20 FX rate and current account

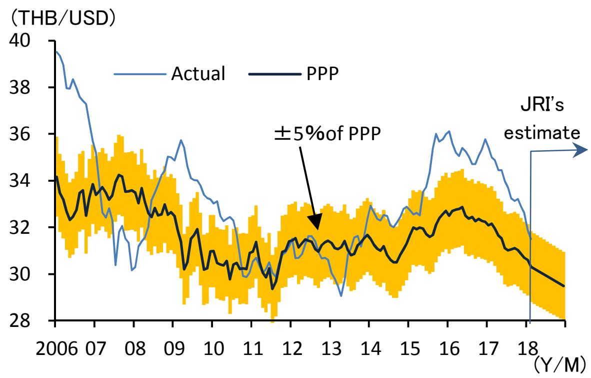


(Source) Bank of Thailand

There is correlation and a relationship between inflation and the FX rate, but PPP (Purchasing Parity Price), calculated based on the PPI (Producer Price Index) also implies that continuous low inflation provides Baht appreciation pressure (Fig21).

It should be noted that there are downside risks for the Thai economy. Investment may not recover as smoothly as is expected if there is low capital utilization, political uncertainly could also hamper investment demand.

Fig.21PPP (Purchasing Power Parity) based on PPI (Producer Price Index)



(Source) JRI's estimate based on Bureau of Labor Statistics, Ministry of Commerce, Bank of Thailand, IMF
(Note) 2011 was setas a base yearbecause the difference between absolute PPP and relative PPP was narroweset since 2011.Forecast is based on recent PPP inflation trends in both countries.

[2] BIS[2009] points out that items which account for 40% of CPI weightage are administered prices. Kanin Peerawattanachart[2015] mentioned that the price control effects on the BoT's inflation target.

<Monetary policy under low inflation>

The BoT is expected to deal with continuous deflationary pressures without reducing its policy rate. The BoT could relax/simplify capital controls to encourage outward investment and intervene in FX market to avoid excessive Baht appreciation. As for the impact of capital regulation change on investment and FX, as outward investment depends on not only capital regulation on the Thai side, but also depends on other factors such as host countries' capital controls, investor's financial situation and business strategy, regulation change does not guarantee outward investment increase and, it's impact on FX and inflation could be limited.

Given the relationship between foreign reserves and FX between 2016 and now, the impact of FX intervention could also be limited. Although foreign reserves have been rapidly increasing since 2016 due to the BoT's market intervention, the Baht's appreciation didn't stop[3] (Fig. 22). foreign reserves increased to more than 200 billion USD in 2018 from 160 Billion in 2016 and reserve adequacy measured by reserves to imports/external debt are much higher than those of benchmark for adequacy (Fig 23).

Fig.22 Foreign reserves and FX rate

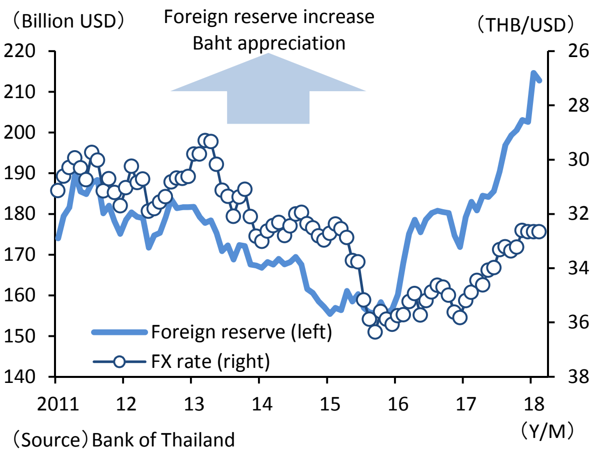
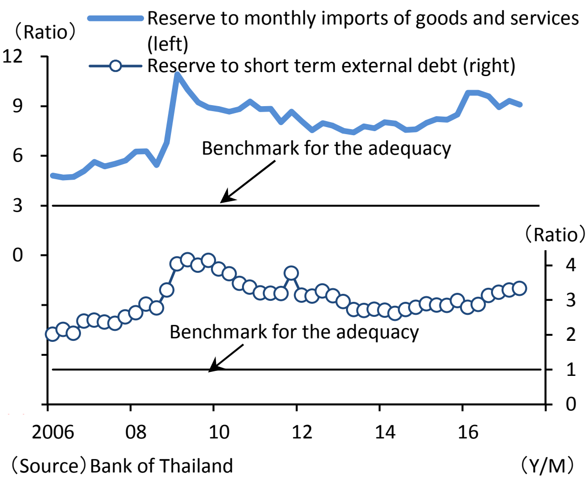


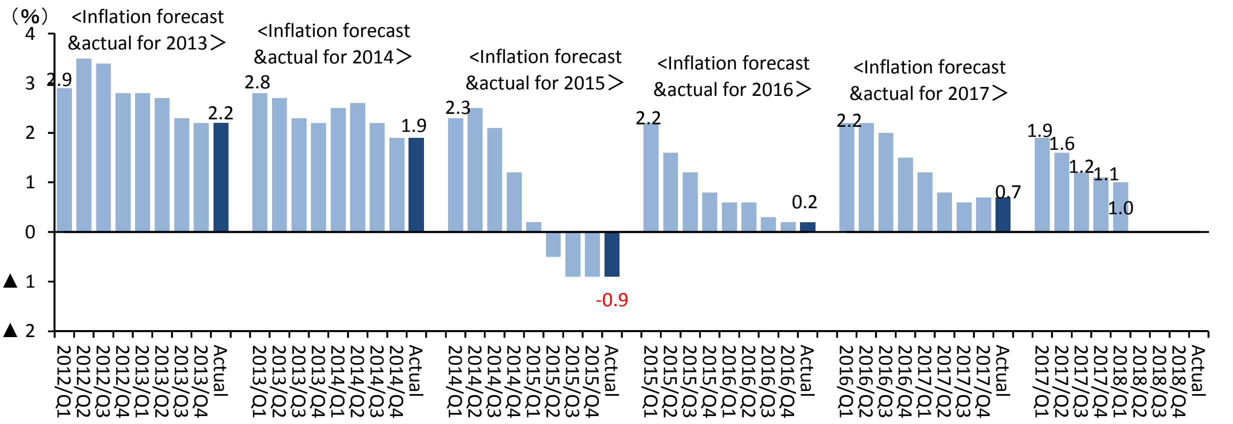
Fig.23 Foreign reserve to imports / short term external debt



As the effectiveness of other measures such as promotion of capital goods imports and investment, utilization of FX swaps, trade transaction currency change, etc. are not clear, it seems to be difficult for the BoT to achieve its inflation target through adjustment of monetary policy. Incidentally, the BoT's inflation forecast revision study also implies that the BoT could fail to achieve its inflation target this year. The downward revised trends can be observed for the BoT's CPI inflation forecast even before commodity prices sudden drop in 2015 (Fig. 24). This shows this year's actual average inflation could be lower than 1.0 %, the latest BoT's forecast and the lower boarder range of inflation target.

[3] This implies that Baht could appreciate further than current level if BoT didn't intervene FX market.

Fig.24 BoT's CPI forecast: Revision study



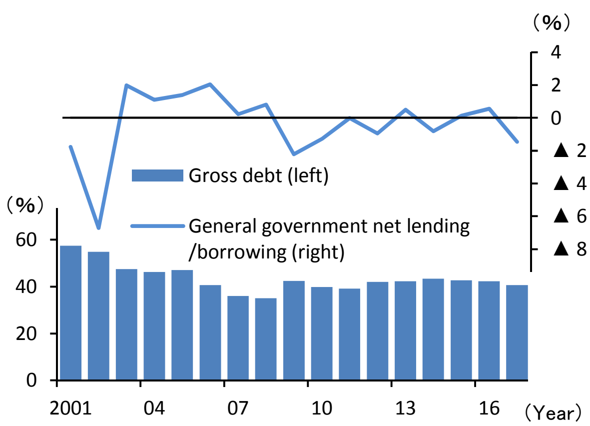
(Source) Bank of Thailand

<Government fiscal policy under low inflation>

As for fiscal policy, both gross debt to GDP and general government net lending/borrowing seem to be sound. Government gross debt is about 40% of nominal GDP and this is much lower than those of other Asian countries(Fig.25). As for the fiscal balance, it recorded a surplus in 2015 and 2016. Although the balance turned negative in 2017, it is still less than 2% of GDP.

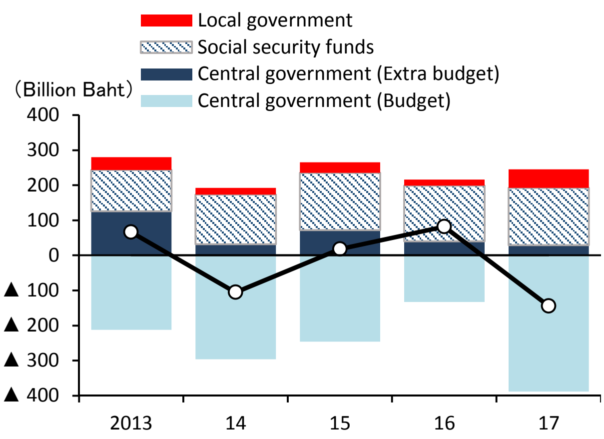
However, fiscal balance by sector shows that room for an expansionary fiscal policy is limited. The current stable and sound fiscal situation is supported by the surplus of social security funds while the balance of central government is widening (Fig 26). As the balance of social security funds is expected to deteriorate soon due to the rapidly aging society, the MoF will continue to put more importance on fiscal sustainability than on moderate inflation. In fact, there is a discussion about rising the pensionable age from 55 to 60 and increasing pension contributions. The room for an expansionary fiscal policy could be smaller than it looks.

Fig.25. General government fiscal balance and debt outstanding (% of GDP)



(Source) IMF
(Note) 2017 is IMF's estimate

Fig.26. General government fiscal balance by institution



(Source) Ministry of Finance

<Final remarks>

The negative aspects of low inflation can be easily missed, as they appear gradually. However, as Japan's experience shows, it is quite difficult to get out of deflation once the economy is stuck in deflation. Therefore, proactive actions are required to avoid a low inflation and low growth trap. Well-coordinated policies among the BoT, MoF, and MoC, are essential for realizing appropriate inflation.

<Reference>

- BIS[2009]: "Monetary policy and the measurement of inflation: prices, wages and expectations" BIS Papers, No 49
- Kanin Peerawattanachart [2015] "Administered Price and Inflation Targeting in Thailand" Chulalongkorn University Undergraduate Journal
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