

AMRO Annual Consultation Report

Thailand - 2016

The ASEAN+3 Macroeconomic Research Office (AMRO)

November 2016

Acknowledgements

1. This Annual Consultation Report on Thailand has been prepared in accordance with the functions of AMRO to monitor, assess and report to its members on their macroeconomic status and financial soundness and to identify the relevant risks and vulnerabilities, and assist them, if requested, in the timely formulation of policy recommendation to mitigate such risks (Article 3(a) and (b) of AMRO Agreement).
2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Thailand from 29 August to 2 September 2016 (Article 5 (b) of AMRO Agreement). The AMRO Mission team was headed by Dr Sumio Ishikawa, Group Head and Lead Economist. Members include Dr Seung Hyun (Luke) Hong (Group Head and Lead Specialist), Ms Wanwisa Vorrarikulkij (Specialist), Dr Jade Vichyanond (Economist) and Mr Thipsavahn Vongphranakhone (Seconded). AMRO Director Dr Junhong Chang and Chief Economist Dr Hoe Ee Khor also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Thailand for 2016 was approved by Dr Hoe Ee Khor, AMRO Chief Economist.
3. The analysis in this Report is based on information available up to 11 November 2016.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term “member” or “country” in this Report, AMRO does not intend to make any judgements as to the legal or other status of any territory or area.
5. On behalf of AMRO, the Mission team wishes to thank the Thai authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

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Executive Summary

The March 2016 report assessed that Thailand's economic recovery remained gradual but uneven, with weak private consumption and investment. Meanwhile, subdued exports stemmed from a slowdown in global and regional trade as well as structural issues embedded in Thailand's export sector. Therefore, public infrastructure investment needed to be made in a timely manner to shore up business sentiment, and structural problems, especially the human capital development, needed to be addressed to enhance the country's trade competitiveness. In terms of inflation, the authorities were encouraged to stay vigilant on headline inflation, since downward price pressure remained high given low commodity prices and weak domestic demand. Since March, the Thai economy has continued to gain momentum, driven by a strong recovery in private consumption, expanding public spending and net exports, mainly due to tourist receipts. Political uncertainty appears to have diminished after the constitutional referendum on 7 August.

1. **The Thai economy is expected to expand at 3.0 percent in 2016 and 3.2 percent in 2017.** The recovery in private consumption is expected to be moderate due to high household indebtedness and a tepid rise in household income. Private investment will remain lackluster reflecting weak export outlook and political uncertainty prior to the general election. Meanwhile, on the external front, sluggish global trade is expected to prolong export revival. As the economic fundamentals have improved, the mourning period following King Bhumibol Adulyadej's passing, would have limited impact on the economy provided the government pushes forward with infrastructure projects and expansionary fiscal policy. The main drivers for growth in 2017 are government consumption and more public infrastructure investment.
2. **Headline inflation is expected to edge up gradually.** Headline inflation edged up in Q2 2016 as downward pressure on oil and food prices abated, while core inflation has remained subdued at around 0.75 percent. Headline inflation expectations for the next one year declined, but stayed within the policy target band. Going forward, inflation is expected to rise gradually, reflecting the moderate recovery of domestic demand and abating downward pressure of low energy prices. In 2017, headline inflation is expected to rise to the middle of the target band.
3. **The external position has strengthened on the back of a sizable current account surplus and ample international reserves.** After King Bhumibol Adulyadej's passing and the U.S. presidential election, there was a temporary and contained net selloff of foreign investors in Thai financial markets. Meanwhile, the current account surplus has remained sizeable at 8.5 percent of GDP as of Q2 2016. A part of the surplus is expected to be invested abroad in the form of outward direct investment by domestic corporates and portfolio outflows by residents, with the rest accumulated as international reserves. Reflecting the strong increase, international reserves have reached USD 180.3 billion as at the end of October 2016, more than three times short-term of external debt and equivalent to more than 10 months of imports. Going forward, the current account surplus is expected to narrow reflecting an increase in infrastructure investment and the resultant revival of imports in capital goods and raw materials. Given its strong external position, Thailand is expected to be resilient in the face of capital flow volatility.
4. **As private investment has remained lackluster, the government should continue its expansionary fiscal stance to support the economy within a prudent medium term fiscal framework.** The current economic recovery is partially due to fiscal stimulus

measures taken so far. Therefore, these measures should be continued to maintain the economic momentum and, in particular, should focus on supporting private investment and the service sectors that will face a slowdown in the mourning period. In addition, investment in public infrastructure should be executed in a timely manner within a well-coordinated long-term framework. As infrastructure investment will crowd-in private investment, the government should formulate a comprehensive land development plan along transport links. However, expansionary fiscal measures could lead to a larger budget deficit than expected and an increase in public debt. In this regard, the authorities' efforts in pushing forward the expansion and diversification of the tax base should be continued. The enactment of Fiscal Responsibility Law is encouraged to safeguard long-term fiscal sustainability.

5. **The current monetary policy stance is sufficiently accommodative.** Given the current moderate economic growth and low inflation, monetary policy could be further eased to support a recovery in domestic demand. However, a reduction in the policy rate may not be fully effective due to low loan demand from the corporate sector and ample liquidity in the financial system. Moreover, the banks have reduced their lending rates recently. In addition, potential risks to financial stability may arise from the growing search-for-yield behavior of investors in a low interest rate environment. In view of the strong external position, a persistent appreciation of the Thai baht could weigh on the country's competitiveness and on export revival. Thus, the exchange rate should be managed appropriately to avoid exchange rate misalignments.
6. **Risks to financial stability are contained, although the loan quality of the banking system has deteriorated and the level of household debt remains high. Despite gradual economic recovery,** credit quality of commercial banks and specialized financial institutions (SFI) has continued to deteriorate. However, commercial banks remain sound with a strong capital buffer and high loan-loss provisions, and the ongoing SFI regulatory reform will enhance their financial soundness. Separately, the protracted recovery in private consumption shows that the high household debt has not only posed a risk to Thailand's financial stability, but has also been a drag on economic growth. Therefore, notwithstanding the recent moderation in household debt, additional macroprudential measures such as a debt-to-income ratio or a debt servicing ratio should be considered in order to promote prudent borrowing behavior by households going forward.
7. **To improve the growth potential, Thailand needs to improve the productivity of the agricultural sector, upgrade the skills of the labor force, and enhance the ease of doing business.** The sluggish economic recovery has highlighted structural challenges in the Thai economy that need to be addressed. First, the majority of the Thai population is in the agricultural sector and most Thai farmers still employ traditional methods of cultivation and harvesting. The government should encourage the development of agricultural technology and mechanization. Second, more resources should be devoted to human resource development, since the lack of skilled labor remains a key challenge in the private sector, especially as it strives to move up the value chain. Finally, further streamlining of regulations and administrative procedures are encouraged to improve the ease of doing business and attract more investment into the economy.

A. Recent Developments and Outlook

A.1 Macroeconomic Developments and Outlook

1. **The economy in the first half of 2016 continued to gain momentum, driven by private consumption, public spending, and net exports, mainly due to tourist receipts (Figure 1).** Private consumption accelerated, partly owing to promotional offers and the launches of new car models. At the same time, private investment was weighed down by tepid business confidence (Figure 2) and political uncertainty prior to the constitutional referendum, but showed some revival in a few sectors such as construction and telecommunication. Meanwhile, net exports remained strong on the back of import compression and receipts from tourist arrivals.

Figure 1. Real GDP Growth, Expenditure Side

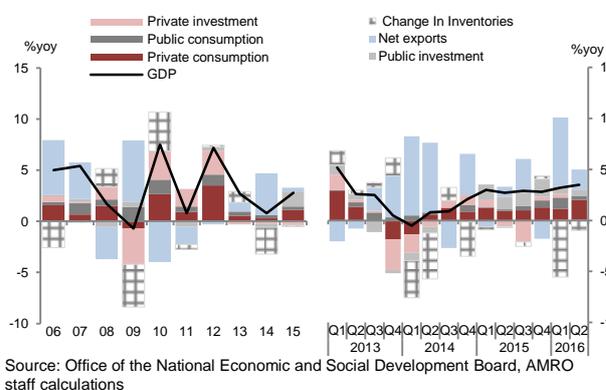
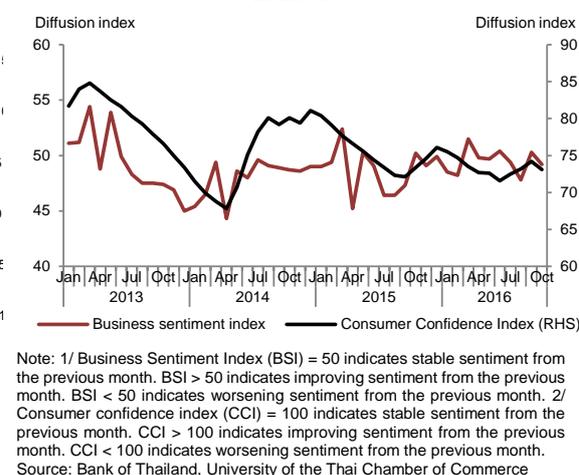


Figure 2. Consumer and Business Confidence Indices



2. **On the supply side, the economic expansion in the first half of 2016 was mainly owing to the strong performance of the service sector, while the improvement in the agricultural and manufacturing sectors remained uncertain.** The service sector performed well due to tourists' demand for hotels and restaurants as well as the recovery in wholesale and retail sales. Meanwhile, overall manufacturing production did not show a strong sign of broad-based recovery. Although firms built up more inventories as compared to 2015, capacity utilization stayed flat (Figure 3). In the area of labor inputs, firms rarely opted for job cuts as reflected in the low unemployment rate; however, they continued to keep a low level of overtime work. In the agricultural sector, easing drought conditions and favorable agricultural prices led to improving agricultural production and thus rising farm income in Q2 and Q3 2016 (Figure 4).

Figure 3. Manufacturing Production

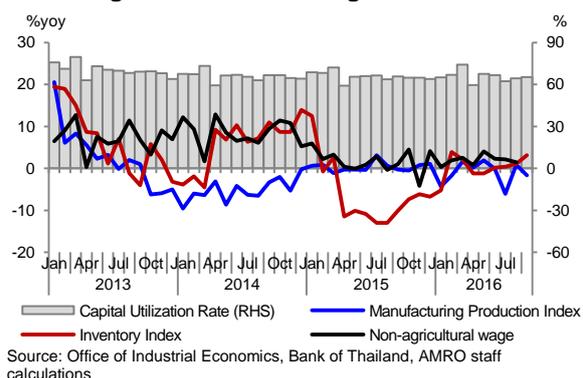
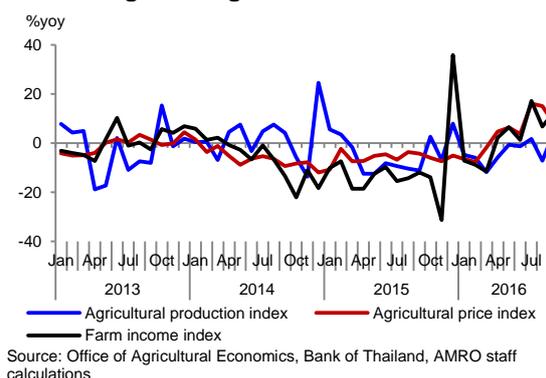


Figure 4. Agricultural Production



3. Going forward, the economy is projected to grow moderately at 3.0 percent in 2016 and 3.2 percent in 2017 (Table 1). Weighed down by high household debt, the recovery in private consumption is expected to be modest due to a tepid rise in household income. Private investment has remained soft reflecting a weak export outlook, due to uncertainties in the global economy, and Thailand's political uncertainty but also continuing consolidation in the auto industry. On the external front, sluggish global trade is expected to weaken exports. Imports will continue to contract due to low global oil prices and tepid economic activities but the contraction will be mitigated by higher demand from public infrastructure investment. Therefore, the main drivers of growth in 2016 are government consumption and investment. The period of mourning for His Majesty's King Bhumibol Adulyadej's passing is likely to have a limited impact on economic activity provided that the government continues to push forward with infrastructure projects and stimulus measures.

A.2 Inflation

4. Headline inflation is expected to edge up slowly. Headline inflation edged up in Q2 2016 as downward pressure on oil and food prices abated, while core inflation has remained low and stable at below 1.0 percent (Figure 5). Headline inflation expectations for the next one year declined, but remained within the band of the policy target (Figure 6). Going forward, inflationary pressure in 2016 is expected to remain moderate, reflecting a moderate recovery in domestic demand and dissipation of the base-year effects of low energy prices. Moreover, an increase in daily minimum wage in 2017¹ will also partly put upward pressure on inflation². Therefore, headline inflation is expected to continue to rise to the middle of the target band in 2017. Meanwhile, the pace of a price increase will be subject to global oil price movement.³

¹ The Central Wage Committee agreed to an increase in the daily minimum wage of 5 to 10 baht in 69 provinces. The new wage rates will be in effective from 1 January 2017.

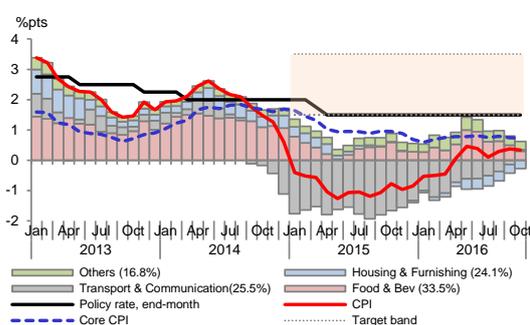
² According to the Bank of Thailand, an increase in a minimum wage at about 1.8 percent in 2017 is expected to have a limited impact to an inflation as an increase in a minimum wage in 2012 and 2013, at 40 percent and 20 percent respectively, had limited impacts on inflation.

³ Meanwhile, the Monetary Policy Committee viewed that headline inflation in 2017 was expected to rise and return to the lower bound of the target band but there remained risks from weak demand and lower-than-expected energy prices. Specifically, the timing of the return of headline inflation to the target band would depend mainly on global oil price movements. (Monetary Policy Report, September 2016)

5. Monetary policy rate has been kept at 1.5 percent per annum since the rate cut in April 2015, while commercial banks reduced minimum lending rates in early 2016.

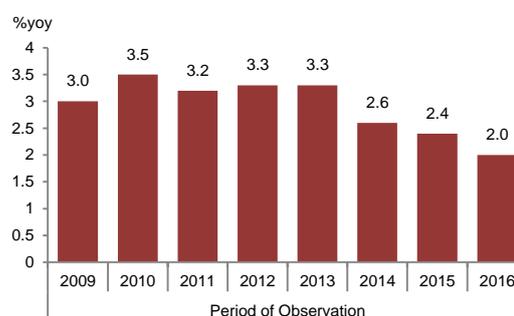
The Monetary Policy Committee cut the policy rate by 25 bps in their March 2015 meeting and another 25 bps in their April 2015 meeting and has maintained the rate at 1.5 percent since then. In April 2016, several commercial banks reduced their minimum lending rates and minimum retail rates which act as benchmark rates for large corporate borrowers as well as retail borrowers, amidst an unchanged policy rate. According to the Chairman of the Thai Bankers' Association, the rate change was aimed at reducing interest expenses and shoring up the liquidity condition of SMEs and retail borrowers.⁴

Figure 5. Inflation



Note: The monetary policy target changed from core inflation to headline inflation in January 2015.
Source: Ministry of Commerce, AMRO staff calculations

Figure 6. Inflation Expectations for the Next One Year



Source: Bloomberg

A.3 External Sector and the Balance of Payments

6. The current account surplus remained large in the first half of 2016 on the back of import compression and strong tourism receipts. Tepid economic activities in major trade partners resulted in continuing export contraction (more elaboration in Part C.1), while import compression was moderate due to rising oil prices and the revival in imports of raw materials and capital goods (Figure 7). The tourism industry continued to be a bright spot in the economy and contributed to the robust service account surplus (Figure 8). The bomb explosions in tourist destinations in Southern Thailand in early August 2016 had limited impact to the tourism industry as a whole. The number of tourist arrivals in August 2016 dropped by 3.6 percents from July. However, the tourism industry in the last quarter of 2016 may be affected somewhat by the mourning period as well as measures to curb a zero-dollar tour⁶ which is expected to result in a temporary drop in Chinese tourists. Going forward, the current account is expected to remain in surplus in 2017 but the surplus is expected to narrow with an

⁴ E. (2016, May 9). Determinants of saving and borrowing rate: indicators of slow economic recovery. Retrieved June 1, 2016, from <http://www.thairath.co.th/content/617044>

⁵ Seasonally adjusted

⁶ A zero-dollar tour is a tour package from China to Thailand that some Chinese travel agencies sold with a low price. In order to make a profit, Chinese travel agencies forced Chinese tourists to buy expensive souvenirs from companies' contractors. In order to restrict the zero-dollar tour, Thailand's Ministry of Tourism and Sports, in cooperation with Tourism Authority of Thailand and China National Tourism Administration, set a price floor for a tour packages from China to Thailand at THB 1,000 per night. In addition, travel agencies are prohibited to offer an additional tour package with a very high price (normally THB 3,000 per trip).

increase in infrastructure investment and the resultant revival of imports in capital goods and raw materials.

Figure 7. Trade Balance

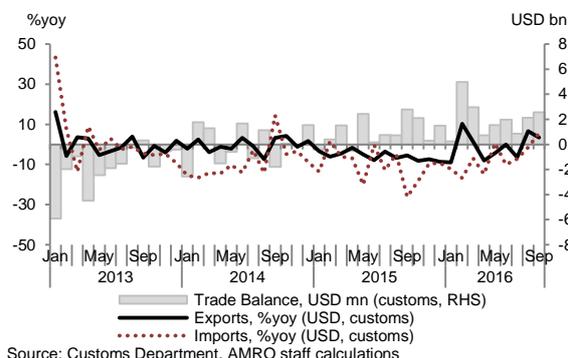
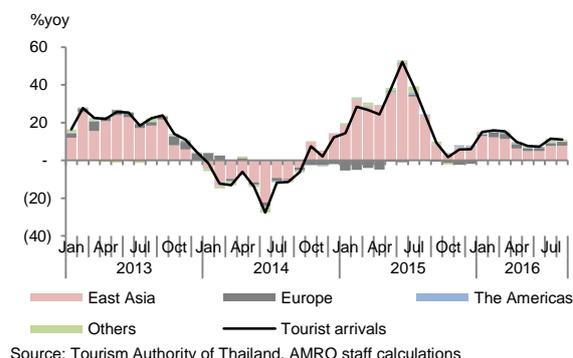


Figure 8. Tourist Arrivals



7. **The financial account registered a deficit, driven mainly by net direct investment outflows (Figure 9).** Since 2009, outward direct investments by Thai multinational corporations (MNCs) have increased significantly. The outward direct investment mainly focused on the power generation industry and labor-intensive industries such as textiles and agro-business. In terms of destination, the CLMV countries and Indonesia have been the top destinations for Thai MNCs due to their cheap labor, special treatments for exports due to the E.U.'s Generalized Scheme of Preferences, plentiful natural resources, and growing domestic markets in these economies. In contrast, net inflows of foreign direct investment (FDI) to Thailand have been low since 2014, partly due to political instability in Thailand and outflows of direct trade credits to affiliates. However, after political conflict subdued in 2015, FDI inflows improved slightly.

8. **Bond and stock markets have received inflows since January 2016 (Figure 10).** The delay of the U.S. Fed rate hike together with the monetary easing by the Bank of Japan led to capital flows to Thailand and some ASEAN-5 countries. In addition, an improvement in GDP growth and progress in public infrastructure investment also attracted foreign investors to the Thai financial markets. The stock exchange continues to experience net purchases by non-resident investors, especially after China's stock market meltdown, the U.K.'s Brexit referendum, and Thailand's constitution referendum. Meanwhile, there was an inflow of funds into the Thai bond market partly due to attractive yields in the Thai bond market, and the relatively stable value of the Thai baht. In the week following King Bhumibol Adulyadej's demise, there was a selloff by foreign investors in the stock exchange; however, the market volatility and its adverse impact on Thailand's financial markets have been contained so far.

Figure 9. Financial Account

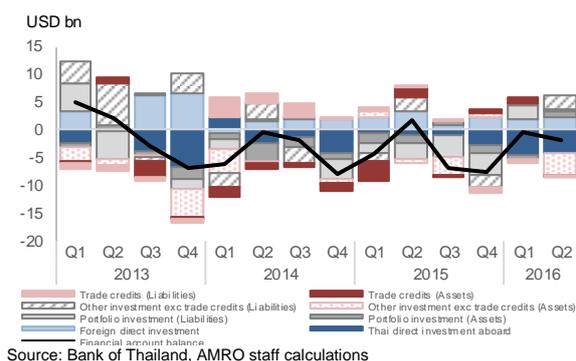
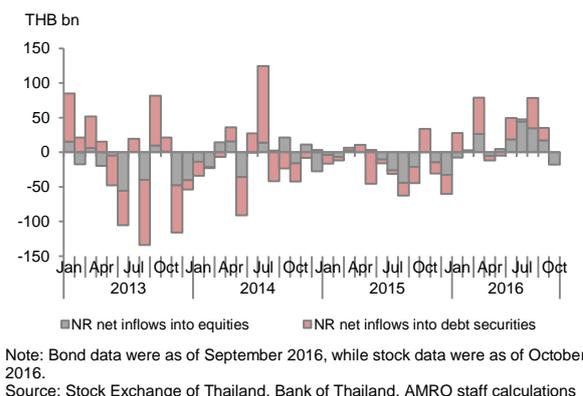


Figure 10. Net Inflows of Non-resident Investment into Stock and Bond Markets



9. **Thailand maintains ample international reserves.** Thailand’s external position has strengthened on the back of its large current account surplus and an upturn in foreign portfolio inflows. A part of the current account surplus is expected to be invested abroad in the form of direct investment by domestic corporate and portfolio outflows by Thai residents, with the rest accumulated as international reserves. Reflecting the strong increase in the current account surplus, international reserves have reached USD 180.3 billion as at the end of October, which is more than three times short-term external debt and equivalent to more than 10 months of imports. Given its strong external position and flexible exchange rate, Thailand is expected to be resilient in the face of capital flow volatility.

10. **The Thai baht has strengthened against the U.S. dollar and in NEER term (Figure 11).** The large current account surplus together with portfolio inflows contributed to an appreciation of the baht against the U.S. dollar during the first three quarters of 2016. Compared with other regional currencies, the Thai baht has been relatively stable in terms of the real effective exchange rate since September 2015 (Figure 12). However, the baht depreciated significantly during the first week following the announcement of the unstable health and the subsequent passing of His Majesty King Bhumibol Adulyadej and stabilized again afterward.

Figure 11. Exchange Rate

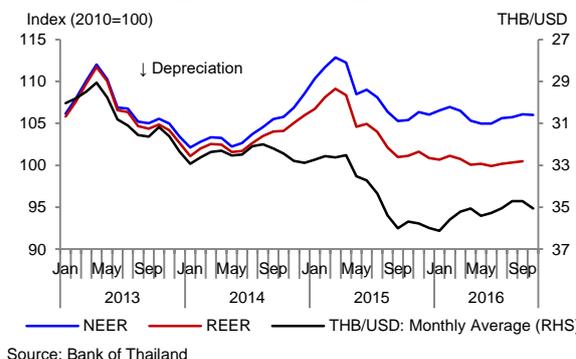
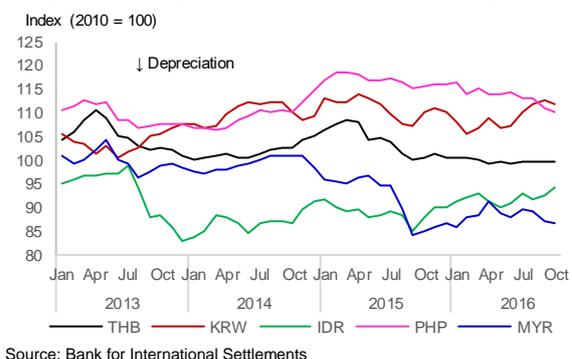


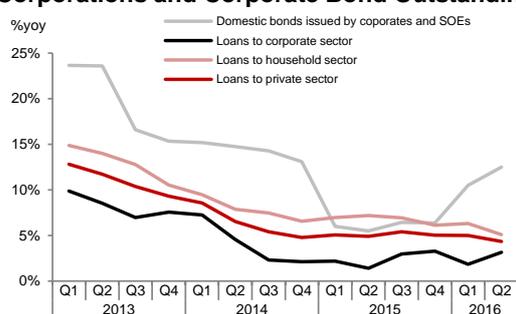
Figure 12. Regional Real Effective Exchange Rate



A.4 Financial System

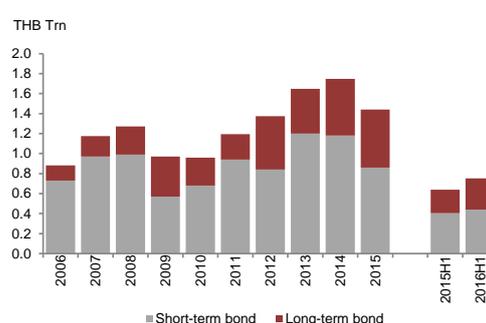
11. **Private sector financing and household debt have continued to moderate.** Loans extended to the private sector, including corporates and households, have continued to grow moderately (Figure 13). Amid a tepid recovery of the manufacturing sector and deteriorating loan quality in the banking system, SMEs are largely facing tightening credit underwriting standards despite SME loans edging up slightly in Q3 2016. Meanwhile, bank loans to large corporates have declined due mainly to weak demand for loans and tighter credit underwriting standards⁷. Separately, household debt remains at approximately around 80 percent of GDP, but its growth rate has moderated. Although the household debt problem has abated, policy measures and initiatives are put in place or under consideration to promote households' financial discipline and help contain their leverage level in the long term. For example, the authorities are encouraging savings co-operatives to submit borrowers' credit history to the National Credit Bureau in order to reduce information asymmetry in the credit market. In addition, regulations and supervision of saving-cooperative are being reviewed and improved.⁸ Considering households' financial literacy, the authorities are supporting saving co-operatives to educate their members about appropriate saving and investment strategies at each age.

Figure 13. Loans Extended by Other Depository Corporations and Corporate Bond Outstanding



Source: Bank of Thailand, AMRO staff calculations

Figure 14. Corporate Bond Issuance



Source: Thai Bond Market Association

12. **Similarly, corporate bond issuance has increased (Figure 14).** Some large corporates, especially in the property and energy sectors, have resorted to issuing bonds instead of borrowing from banks because of the low interest rates. In addition, the issuance of non-rated corporate bonds has increased, but the risk to the financial system shall be limited due to small sizes and short tenors.⁹ The majority of these non-rated bonds¹⁰ were issued by

⁷ The contraction of loans to large corporates have been moderated in Q3 2016. The contraction mainly attributed loans to the manufacturing sector, while loans to services and commerce sectors expanded.

⁸ The proposed regulatory reform for savings cooperatives and credit unions is now under the consideration of National Reform Steering Assembly. The reform involves three pillars: (1) enhancing the financial literacy of cooperative members and management; (2) improving the financial infrastructure of saving cooperatives and credit unions e.g. IT system, accounting system, data management; and (3) establishing a regulatory and supervisory agency separate from an oversight body i.e. Ministry of Agriculture and Agricultural Cooperatives. In addition, the Bill on Saving Cooperatives and Credit Union is being drafted and will be considered by the Cabinet later.

⁹ As of April 2016, long-term non-rated bonds accounted for only 3.0 percent of total long-term corporate bonds outstanding, while short-term non-rated bonds accounted for around 22.0 percent of total short-term corporate bonds outstanding. (Source: Thai Bond Market Association)

¹⁰ A non-rated bond is not allowed to be offered via public offerings. It is allowed to be sold to private placement to no more than 10 investors, institutional investors or high net-worth investors who have net capital more than 50 million baht or income more than 4 million baht per year or investment in securities and forward contracts more than 10 million baht.

listed companies. Moreover, a non-rated bond is not allowed to make a public offering, but can be sold through private placement to a maximum of 10 investors and to institutional investors or high net-worth investors only.

13. Commercial banks remain sound with strong capital buffers and high loan-loss provisions, while the ongoing regulatory reform of specialized financial institutions (SFIs) will enhance their financial soundness. The gradual and uneven economic recovery has adversely affected the banking sector through deteriorating asset quality and weakening loan demand. In Q2 2016, banks' profitability slightly declined, mainly due to maintenance of high loan loss provisions¹¹. Despite increasing credit risk and declining profitability, the banks are well capitalized. Actual loan loss provisions exceed that required by regulations by around 1.61 times, and the capital adequacy ratio has remained high at 17.5 percent. In addition, banks' liquidity remains ample with the liquidity coverage ratio at 167.7 percent. SFIs' are gradually building up their capital, while their loan loss provisions remain high at around 1.7 times of NPLs. Regulatory reform is ongoing and expected to enhance the financial soundness of SFIs thereby mitigating the risk of their becoming a fiscal burden going forward.

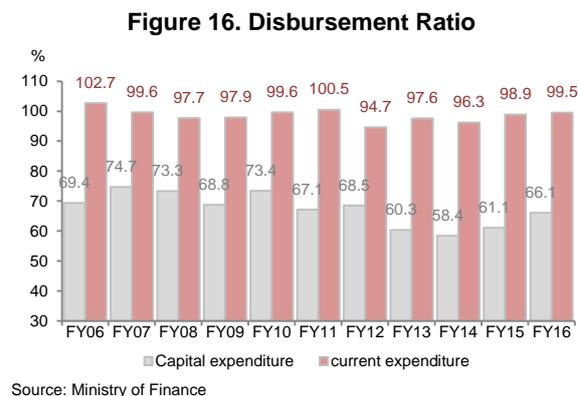
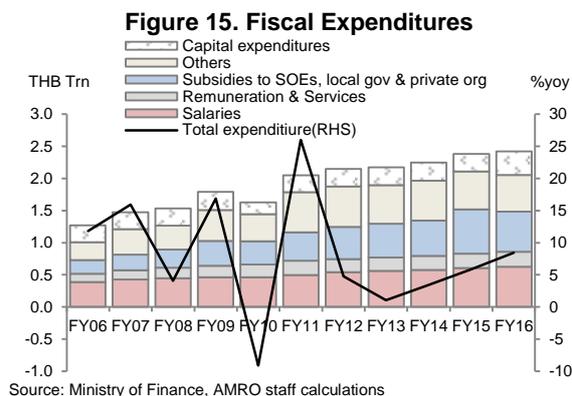
A.5 Fiscal Position

14. The government has continued to employ an expansionary fiscal stance to support the economic recovery (Table 2). In FY2016, fiscal expenditures expanded by 7.9 percent. (Figure 15) In particular, capital expenditure has expanded dramatically and its disbursement rate has outpaced that seen in the past three years. (Figure 16) Moreover, the government has implemented several quasi-fiscal measures¹² as well as tax exemption to support SMEs and the property sector while introducing fiscal measures to stimulate private consumption and investment. In FY2017, the fiscal stimulus will decline slightly compared to FY2016. The FY2016 budget was expanded by around 60 billion baht from its original plan due to the supplementary budget which was triggered by an increase in revenue from a license auction for a 4G broadband service. The FY2017 fiscal expenditure will drop by 1.5 percent as compared to FY2016. However, in order to maintain the economic growth momentum, the government announced front-loaded spending for training expenditures and capital expenditures for small projects in Q1 FY2017. On the revenue side, the government has postponed an increase in the VAT rate from 7 to 10 percent for another fiscal year. In addition

¹¹ According to the Ministry of Finance, net profits of overall banking system marginally declined by 0.3 percent yoy. In Q3 2016, banks' operating profits declined due to a high base effect in Q3 2015, while net interest income increased, attributable to banks' funding cost management.

¹² Quasi-fiscal measures are subsidized loans and loan guarantee to SME borrowers, a venture capital fund for SMEs and start-up business, a rehabilitation plan for distressed SMEs in the form of capital injection, mortgage loans with special conditions (partly subsidized by the government) for low-income people, and subsidized loans to village funds.

to these fiscal measures, some mega infrastructure projects were started in 2014-2016, and a number of projects will begin in the 2017-2019 period (Table 3 and Section B.2).



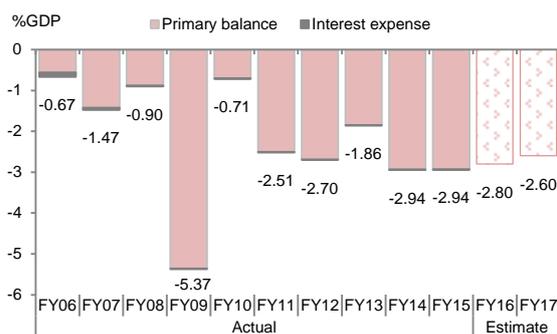
15. Government revenue has continued to expand due to rising excise and non-tax revenues combined with tax reform. In FY2016, revenue collection expanded by 8.1 percent over FY2015 (Table 2-3), owing to the 4G license auction, and an increase in petroleum-related tax and the automobile tax reform,¹³ which are a part of the government's tax reforms. In addition, to prepare for future increases in fiscal expenditures, tax reforms have been implemented during 2016-2017. First, the tax structure has been modified. For example, an asset-based tax, namely the inheritance tax, was put in place in early 2016, and personal income tax will be restructured in 2017, such as increasing deductible expenses and some kind of tax allowances. Second, tax administration has been enhanced by incentivizing SMEs to adopt single financial account.

16. Reflecting its declining fiscal deficits, Thailand's fiscal position has remained strong with a moderate level of public debt. The fiscal deficit is estimated to improve slightly from -2.9 percent of GDP in FY2015 to -2.8 percent in FY2016 and is expected to decline further to -2.6 percent in FY2017 (Figure 17).¹⁴ Meanwhile, the level of public debt in August 2016 stood at 42.6 percent of GDP, below the 60 percent ceiling set in the Fiscal Sustainability Framework (Figure 18). Of the total public debt, more than 90 percent are long-term domestic currency debt. In addition, the Fiscal Responsibility Bill has been recently drafted, which is aimed at enshrining fiscal and monetary discipline of the government into law and at ensuring medium-term fiscal sustainability.

¹³ The new excise tax structure for automobiles has been in effect since 1 January 2016. The old tax structure was based on engine size (cc) and horsepower in order to reflect luxury pricing and petrol consumption. Under the new structure, the excise tax is based on carbon dioxide emissions. The new tax rates have decreased the prices of eco cars by 10,000-15,000 baht but have increased the prices of other cars by 85,000-200,000 baht, depending on their carbon dioxide emissions.

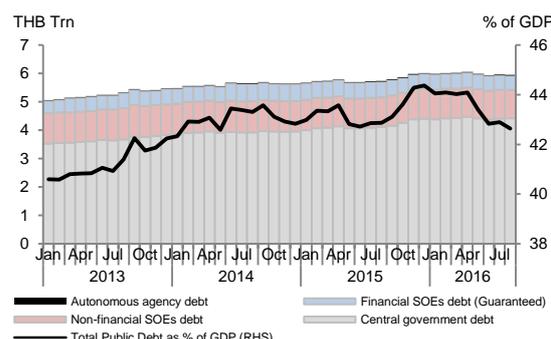
¹⁴ Source: Fiscal Policy Office. The actual fiscal deficit of FY2016 is not available yet due to lagged GDP data.

Figure 17: Fiscal Deficit



Source: Office of National Economic and Social Development Bureau, Public Debt Management Office, AMRO staff calculations

Figure 18: Public Debt



Source: Public Debt Management Office, AMRO staff calculations

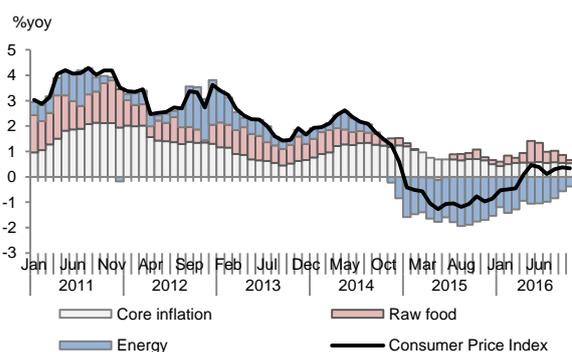
B. Selected issues

B.1 Why is Inflation Low?

Recent developments relating to the consumer price index and sub-indexes

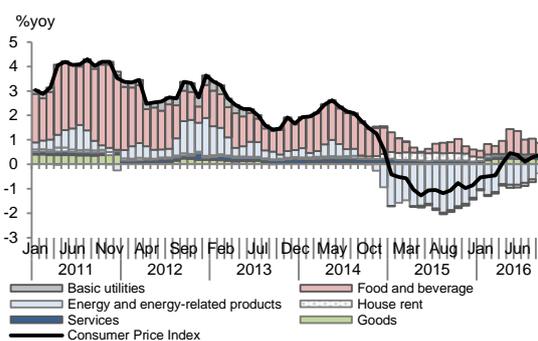
17. **Inflation has been low since December 2014 reflecting the weak domestic demand and low oil prices. (Figure 19)** Headline inflation had declined since June 2014 and stayed in negative territory from January 2015 onward for 15 consecutive months. The negative headline inflation bottomed out in May 2015 and has gradually increased until it became positive in April 2016. At the same time, core inflation has been gradually declining since September 2014 and reached a trough of 0.59 percent in January 2016. Although core inflation has shown some upward movement since February, it has consistently remained at below 1.0 percent.

Figure 19: Headline Inflation And Core Inflation



Source: Ministry of Commerce, AMRO staff calculations

Figure 20: Headline Inflation and Its Composition



Source: Ministry of Commerce, AMRO staff calculations

18. **The protracted period of low inflation was driven by a slump in global energy prices since late 2014 (Figure 20).** As a result of weak global demand and oversupply in the oil market, global oil prices fell sharply in late 2014 and have remained low for more than a year, putting downward pressure on inflation in Thailand. As a result, retail petroleum prices and prices of oil-related products in Thailand have fallen and remained low, notwithstanding an increase in a petroleum excise tax. Moreover, prices of basic utilities, especially electricity,

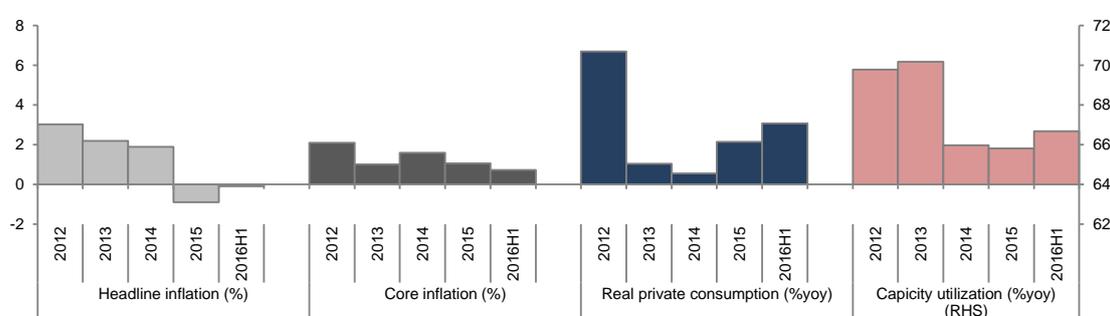
declined due to the lower costs of power generation. At the same time, low oil prices also have indirect effects on inflation by lowering production and transportation costs of goods.

19. **In addition, a broad moderation in inflation of other goods and services also contributed to a declining consumer price index.** In line with commodity prices in the global market, prices of fresh food and hence cooked food in Thailand, fell in the first half of 2015 and remained at a low level in the second half. In contrast, food prices have increased since the beginning of 2016 and helped ease the negative headline inflation. Separately, inflation of non-food-and-beverage goods moderated through 2015, and into 2016. On the other hand, vehicle prices increased recently owing to the successful launch of new car models combined with an increase in excise tax implemented in January 2016, as did the prices of some housing construction and furnishing products owing to government measures to stimulate demand in the residential property market.

Drivers of Low Inflation - A Partial Analysis

20. **In addition to the sharp decline in global oil prices, disinflation was also a result of weak domestic demand and global disinflation.** (Figure 21) The first key factor is a long period of subdued domestic demand. Through 2014 and the first half of 2015, private consumption was subdued and weighed down by a high level of household debt and stagnant household income. At the same time, capacity utilization was relatively low and investment activity sluggish. In terms of spillovers from the global price levels, Manopimoke and Direkudomsak (2015) found that, after 2000, the Thai economy has increasingly integrated with other countries in Asia-Pacific region; therefore, Thailand's inflation dynamics have been influenced by worldwide economic conditions.¹⁵ As a result, recent global disinflation was also transmitted to Thailand's consumer price inflation via a fall in import prices of non-oil consumer goods, although the Thai baht depreciated significantly in the first half of 2015.

Figure 21: Inflation And Domestic Economic Activities

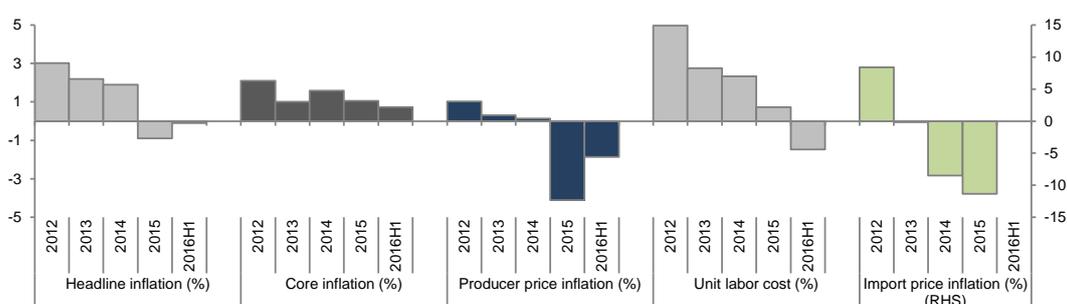


Source: Office of National Economic and Social Development Board, Ministry of Commerce, AMRO staff calculations

¹⁵ Manopimoke, P., & Direkudomsak, W. (2015, November). Thai Inflation Dynamics in a Globalized Economy. Retrieved October 24, 2016, from <https://www.bot.or.th/Thai/MonetaryPolicy/ArticleAndResearch/SymposiumDocument/>

21. **A fall in production costs has also kept consumer prices at low levels (Figure 22).** The movement of Thailand's producer price inflation (PPI) always leads the movement in consumer price inflation (CPI) by a period of around two months.¹⁶ The PPI fell in September 2014 and stayed in a negative territory until October 2016¹⁷; the negative PPI inflation in turn had a dampening effect on headline and core inflation. The first factor, which led to a drop in PPI, was a decline in global energy prices. As energy prices also have an impact on other costs of production, the recent fall in producer prices broadly happened in all sectors and was not limited to energy-intensive industries. The second was plummeting global commodity prices together with lower prices of imported raw materials and capital goods. Most manufactured products, which account for around 85 percent of the PPI basket, contain significant amount of imported content.¹⁸ Finally, labor costs also declined¹⁹. Although Thai firms avoided job and salary cuts during the recent economic slowdown, firms kept a lid on overtime work.

Figure 22: Inflation and Costs of Production



Note: Unit Labor Cost (ULC) is ratio of compensation per unit of labor input over the volume of output per hour or labor productivity. The index is calculated as the ratio of earning per GDP at constant price. ULC is compiled on a quarterly basis (base year 2013), using wages and salaries or earnings estimated from the Labor Force Survey which has been undertaken by the National Statistical Office and real GDP data compiled by the National Economic and Social Development Board
Source: Office of National Economic and Social Development Board, Ministry of Commerce, Bank of Thailand, AMRO staff calculations

22. **The period of low inflation in Thailand was a result of diverse factors.** Domestic demand was soft which led to subdued production and thus declining labor costs. In addition, plummeting global oil prices curbed headline inflation directly and indirectly through production costs of other goods and services. Although an accommodative monetary stance has been employed to boost domestic demand and shore up sluggish production, there are exogenous downside risks to inflation, namely global disinflation and declining oil prices.

¹⁶ Buddhari, A., & Chensavasdjai, V. (2003). Inflation dynamics and its implications for monetary policy. BOT Symposium 2003. Retrieved from http://econ.tu.ac.th/archan/rangsun/ec_460/ec_460_readings/thai_economy/Macroeconomy/Inflation/Inflation_Dynamics_and_Implications_for_Monetary_Policy.pdf

¹⁷ PPI bottomed out in April 2015 and gradually showed an upward trend.

¹⁸ Buddhari, A., & Chensavasdjai, V. (2003).

¹⁹ In this study, labor costs are based on Unit Labor Cost (ULC), which is published by the Bank of Thailand, instead of a minimum wage rate, as the ULC has a boarder coverage by taking into account all earnings that a labor receives, including wage, salaries and overtime work income. However, AMRO acknowledges the authorities' point that the average daily minimum wage, the labor costs in the authorities' views, has an upward increasing trend. It increased from 175.8 baht/day in March 2012 to 245.2 baht/day in June 2012, then increased again to 300 baht/day in June, 2013. 0 as of September 2016 is still at 300 baht/day.

B.2 Megaprojects for Logistics Infrastructure

23. **The Transport Infrastructure Development Plan 2015-2022 aims to reduce logistics costs, establish logistics network between Thailand and other continental ASEAN countries, and thereby enhance the country's competitiveness.** The plan will comprehensively expand and upgrade transportation connectivity including the inter-city rail network, mass rapid transit in Bangkok and its vicinity, expressways and highways connecting with neighboring countries, airport capacity and maritime transport. In the first phase of the development plan, infrastructure projects comprise about 2.1 trillion baht, including 0.3 trillion baht worth of ongoing projects and 1.8 trillion baht for 20 megaprojects under the Ministry of Transport's action plan in 2016 (Table 3). The majority of 1.8 trillion baht for megaprojects is allocated to the railway system which covers most regions, while the second largest portion is assigned to the Bangkok mass transit system, followed by highways, air and maritime transport. Based on our preliminary estimates, if these infrastructure projects are executed as planned, they will contribute 0.23 percent of GDP growth in 2016 and 0.49 percent of GDP growth in 2017,²⁰ regardless of spillover effects and the crowding-in effect for private investment.

24. **A majority of the 20 megaprojects are financed by public debt, and the government has also opted for alternative sources such public-private partnerships (PPP) and an infrastructure fund to reduce the reliance on the fiscal budget and the public debt.** The government or state owned enterprise (SOE) borrowing is financing about 63.0 percent of the amount needed for the 20 megaprojects. As a result, public debt is projected to increase from 43.6 percent of GDP at the end of FY2013 to around 49.7 percent at the end of FY2020.²¹ Meanwhile, approximately 21.0 percent of the funding will come from PPPs—according to the PPP Strategic Plan 2015-2019,²² the construction of the mass transit railway in and around Bangkok, an airport rail link, standard gauge railways and seaports costing around 779.4 billion²³ baht will be done under PPPs, while tolled intercity highways will be done under either PPP or solely public money.²⁴ Separately, the rest of the 16 percent of megaproject financing will come from the annual fiscal budget (12.0 percent), SOEs' revenue (3.0 percent) or the toll road fund (1.0 percent). In addition, the government has set up the Thailand Future Fund (TFF) at the beginning of 2016. TFF is a financial product that

²⁰ For the 20 megaprojects under the action plan, the estimation included only projects that are under construction or for which contracts have yet to be signed by the first half of 2017. Meanwhile, planned disbursement in 2017 onwards is estimated to be allocated throughout a construction period until projects' end. In addition, we assumed 20.0 percent of imports of construction materials in 2017, while the construction in 2015-2016 was assumed to have no import content due to the early stage of the project which always uses local materials. In terms of GDP data, nominal GDP was referred to our projection shown in Table 3.

²¹ The projection was done as at the end of June 2016 by Public Debt Management Office and Fiscal Policy Office.

²² According to the Public-Private-Partnership Act B.E. 2556, the government is prescribed to deliberate the Public-Private-Partnership Strategic Plan which acts as a guidance of PPP projects during the five-year period.

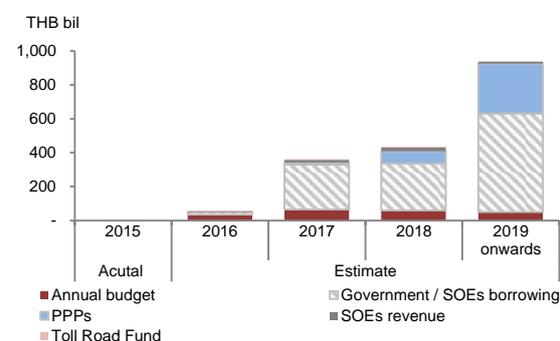
²³ This value includes only projects that were designated in the list of 20 megaprojects.

²⁴ Mass transit railway in Bangkok and the vicinity, an airport rail link, standard gauge railways and seaports are classified as out-out projects for which the government 'should' convene the private sector's partnership. Meanwhile, the intercity highway projects were classified as opt-in projects that the government 'is encouraged' to finance through PPP.

will be sold to investors through local asset management companies and will be invested in public infrastructure. At the initial phase, a size of the first launch will be 100 billion baht with the government contributing 10 billion baht. The fund will be invested in brown-field projects in the first phase and will be allocated to green-field projects in the later phase.

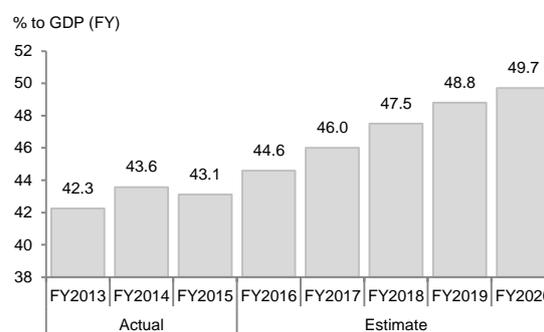
25. **The megaprojects will increase the fiscal burden in terms of debt and expenditure, and will lower liquidity in the financial system.** As more infrastructure investment will be executed, public debt will increase significantly from 2017, although projected higher public debt ratio is below the 60% threshold of the Fiscal Sustainability Framework (Figure 23-24). In order to reduce the public debt burden and contain the budget deficit, the government has decided to raise funds via PPPs and the TFF. However, these options will tighten the liquidity in the financial system and may crowd-out some private investment, since a part of national saving will be mobilized for public investment. Separately, the government must prepare a budget to pay for guaranteed rates of return to TFF investors during the initial phase of each infrastructure project. An infrastructure investment is generally subject to high risks during the first few years and generates net profit only after many years of operation.

Figure 23: Projected Financing of Infrastructure Investment



Source: Public Debt Management Office

Figure 24: Projected Public Debt to GDP



Source: Public Debt Management Office, Fiscal Policy Office

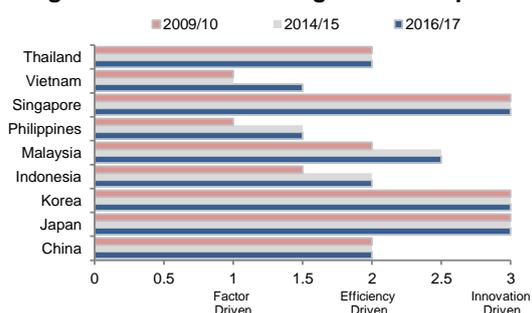
B.3 Thailand in a Middle Income Trap?

26. **The Thai economy finds itself in a middle income trap.** In the 1980s, the Thai economy recorded impressive growth which saw almost 40 percent of the Thai population come out of absolute poverty.²⁵ However, since the Asian Financial Crisis in 1997, Thailand has not succeeded in achieving rapid economic growth. The country has transformed from an agricultural-based economy to a labor-intensive manufacturing-based economy, and has now become a semiheavy industry-based economy. According to the countries' stage of development categorized by World Economic Forum, Thailand is lagging behind its regional

²⁵ Jitsuchon, S. (2012), 'Thailand: Achieving Social-Economic Development Balance', Zhang, Y., F. Kimura and S. Oum (eds.), Moving Toward a New Development Model for East Asia- The Role of Domestic Policy and Regional Cooperation. ERIA Research Project Report 2011-10, Jakarta: ERIA. pp.255-278.

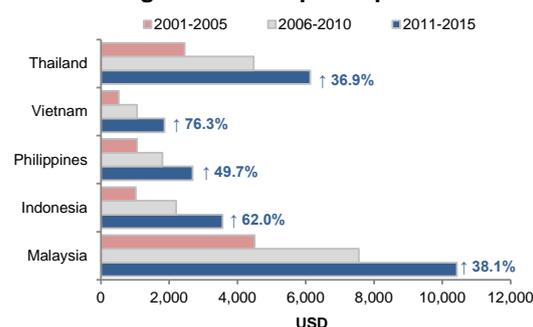
peer Malaysia. It has stagnated as an “Efficiency-Driven” economy and has not been able to move to an “Innovation-Driven” economy over the last decade (Figure 25). Meanwhile, other regional economies such as Indonesia, the Philippines and Vietnam have progressively improved their economic structures. Thailand’s per capita income growth from 2011 to 2015 was also outpaced by other regional developing economies (Figure 26). The relatively slow progress of the Thai economy is attributed to external headwinds emanating from global economic conditions as well as the specific factors such as the massive flood in 2011, unfavorable political conditions, and impacts from certain government policies in the past.

Figure 25: Countries’ Stage of Development



Source: Global Competitiveness Report, World Economic Forum

Figure 26: GDP per Capita^{1/}



Note: 1/ A five-year average of annual GDP per capita 2/ The percentages show the growth rate of a five-year average of GDP per capita in 2011-2015 against 2006-2010.
Source: World Bank, CEIC

27. **The sluggish economic transition has highlighted structural challenges.** First, the education system needs to be improved to meet a demand of the new economy. For the country to transition to a high-technology economy, relevant skills such as science, technology and engineering are increasingly in demand. However, the quantity of graduates in scientific fields and vocational students in Thailand is inadequate, and the quality of Thai students’ mathematics and science performance remains relatively low and thus needs to be improved (Figure 27). Second, the level of research and development (R&D) in the business sector remains low²⁶ and Thai industrial production techniques heavily rely on foreign technology. Expenditure on R&D remained lower in Thailand than Singapore and Malaysia (Figure 28). The third factor is low productivity in the agricultural sector where about thirty percent of population is. Thai farmers’ agriculture techniques remain basic and labor-intensive; therefore, agricultural yields are overly sensitive to weather conditions²⁷. Finally, regulations and public administration have not been fully conducive to business operations. In investors’ views, Thailand’s ease of doing business and public institutional arrangement still lags countries such as Singapore, a regional business hub; and Malaysia, a neighboring country that already

²⁶ Jitsuchon, S. (2012, June). Thailand in a Middle-income Trap. TDR Quarterly Review, 27(2), 13-20. Retrieved from <http://tdri.or.th/wp-content/uploads/2012/12/t5j2012-somchai.pdf>

²⁷ However, in recent years Thailand has been attempt to lift agricultural productivity via: (1) rapid increase of machinery usage. (2) the government’s zoning policy that tries to determine the suitable commodities for each area.

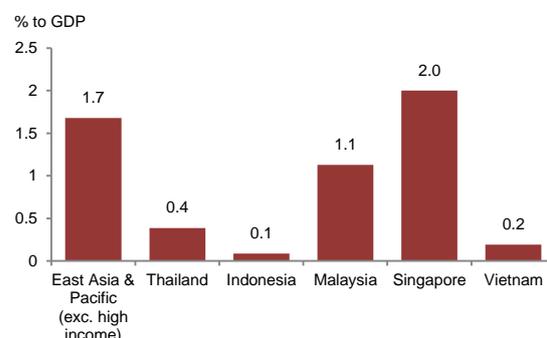
transformed from an efficiency-driven economy (Thailand’s current status) to an innovative-driven economy (Figures 29, 30).

Figure 27: OECD’s Programme for International Student Assessment (PISA)

Country	Overall rank	Mean PISA by subject in 2012		
		Math	Science	Reading
OECD average		494	501	496
Shanghai, China	1	613	580	570
Singapore	2	573	551	542
Korea	5	554	538	536
Japan	7	536	547	538
Vietnam	17	511	528	508
Thailand	49	427	444	441
Malaysia	51	421	420	398
Indonesia	63	375	382	396

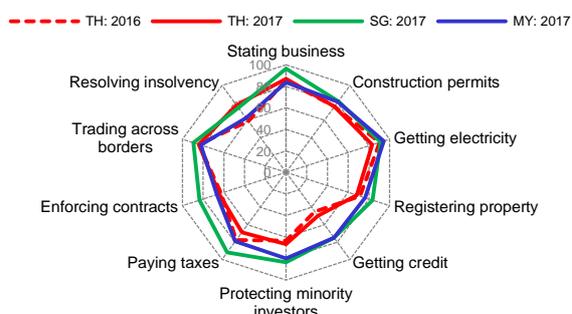
Note: PISA, conducted by OECD, is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. The most recently published results are from the assessment in 2012. Source: OECD

Figure 28: R&D Expenditure to GDP



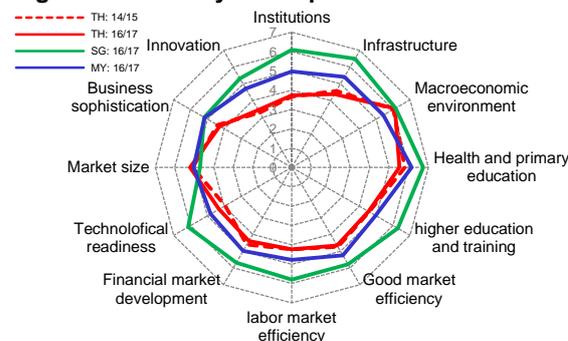
Note: The graph showed the most recent data of each economy namely 2011 for Thailand and Vietnam, 2012 for Malaysia and Singapore, and 2013 for Indonesia. An average of East Asia and Pacific economies is as of 2011 due to the most complete coverage of economies. Source: World Bank

Figure 29: Ease-of-Doing Business Indicators



Source: Doing Business Report, World Bank

Figure 30: Country’s Competitiveness Indicators



Source: Global Competitiveness Report, World Economic Forum

28. To address these challenges, the government is implementing extensive structural reforms that aim to boost potential growth and move Thailand out of the middle income trap. A key priority for the government is to foster technological advancement²⁸. Several policies have been implemented to stimulate investment in high-technology and heavy industries and to promote a higher level of research and development in the business sector²⁹. Meanwhile, human capital development is another policy focus. A broad range of short and medium term policy measures have been formulated by recognizing the importance of economic transition and the needs of the private sector. The industrial sector is being encouraged to collaborate with vocational institutions and universities to promote R&D and improve the quality of vocational education³⁰. At the same time, Thailand has made

²⁸ Thai government has launched New S-curves project (10 targeted high-technology industries) for moving Thailand toward “Innovation-Driven” economy. To attract FDI on target industries such as robotics, aviation and logistics, biofuels and biochemical, and digital; the government has initiated special investment promotion act that cover all aspects of business for example exemption of corporate income tax for up to 15 years, exemption of import duties, permission to own land, 15% personal income tax rate – the lowest rate in ASEAN – for foreign executives, and five-year work visa issuance etc.

²⁹ In addition, the government has selected agro industry, agriculture and biotechnology, and food for the future as one of high-growth potential industry, providing privilege support.

³⁰ New incentive scheme of the Board of Investment has been launched with an aim to improve skills of workers in order to meet the market demand. Enterprises could become eligible for the incentive scheme should their new investments adopted work-integrated learning in cooperation with academic institutions or research institutions in the designated areas. In addition, the BOI has recently implemented a new investment promotion

important progress in digitalizing the economy. The national e-payment system is being implemented this year in an attempt to transform the country to a cashless society, to boost e-commerce activities and to increase the efficiency of the financial industry and tax collection.

29. The sluggish transition of the Thai economy reflects the need to enhance R&D in the private sector, increase the number of experts in scientific fields, improve productivity of the agricultural sector and streamline the bureaucracy and public administration. So far, several policies have been put in place to foster technological advancement and improve in the quality of vocational students. However, there are a few structural issues that still need to be addressed, namely agricultural productivity, the orientation and quality of the overall educational system, and complication of public administration procedures that relate to the private sector's business registration and operations.

C. Risks and Vulnerabilities

C.1 External Headwinds

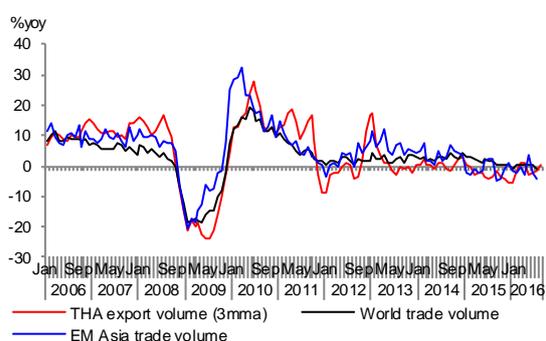
30. Downside risks to exports stem from weaker-than-expected growth among its major trading partners and structural issues embedded in Thailand's export sector. Thailand's exports grew in line with the global trade in the last decade (Figure 31). However, since 2013, Thailand's exports have grown persistently slower than global trade owing mainly to a slowdown in regional trade as well as structural factors in Thailand's export sector. Going forward, a revival in exports remains uncertain owing to potential downside risks emanating from stalled global trade, rebalancing of China's economy, and uncertain economic recovery in advanced economies. These downside risks could worsen given the trend towards greater trade protectionism in Thailand's main trading partners, especially the U.S.

31. An appreciation of the Thai baht would continue as a result of a sizeable current account surplus and would undermine export outlook at certain level. Despite export contraction, import compression combined with strong tourist receipts have resulted in a sizable current account surplus. As a result, the Thai baht is under upward pressure, which might not be conducive to exports to some extent going forward. In light of a pressure on the Thai baht from a large current account surplus, we conducted a simple sensitivity analysis to assess whether the surplus can be smaller, given current external conditions—a potential increase in oil prices, sluggish global trade, and a slowdown in tourism during the one-year

policy, focusing on promoting knowledge-based and high-tech industries. Furthermore, apart from sector-based incentive, merit-based incentive will be introduced in order to encourage competitiveness enhancement activities such as R&D, design, advanced technological training, and local supplier development.

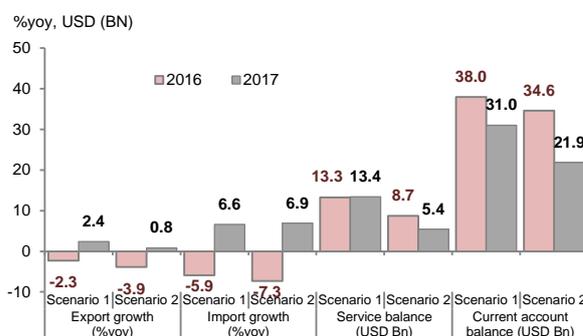
mourning period. The assessment includes two scenarios, a baseline (Scenario 1) which assumes the current external position will continue until year end vis-à-vis an intensifying risk scenario (Scenario 2) which assumes oil prices rising at a pace faster than the market's expectation, more sluggish global trade and exports, lower tourist arrivals and spending during the mourning period, and stagnant global trade (Figure 32).³¹ The result of Scenario 1 indicates that the current account surplus would remain large for another year. Meanwhile, the Scenario 2 shows that even with external conditions that tend to dampen trade, the surplus would remain relatively strong. Therefore, a pressure from the current account surplus on the baht appreciation would undoubtedly remain.

Figure 31: World Trade and Thailand's Exports



Source: CPB World Trade Monitor, Bank of Thailand, AMRO staff calculations

Figure 32: Sensitivity Analysis on Current Account Balance



Note: Scenario 1 is a baseline scenario which assumes the recent trade developments will continue to the year-end and improve in 2017. Scenario 2 assumes intensifying risks including (1) oil prices rising drastically in 2016 and 2017; (2) exports contracting further due to low global growth and lackluster global trade; and (3) a decline in tourist receipts due to lower tourist arrivals and spending as a result of tepid global economic activity and the mourning period.
Source: AMRO staff calculations

32. Risks to external stability emanate from uncertainty in global financial markets, but remain contained due to Thailand's strong external position. Weak global growth prospects, the pace of monetary policy normalization in the U.S., and concerns about monetary policies in some advanced economies could heighten volatility in global financial markets. Thailand's stock and bond markets have seen net inflows from non-resident investors in the first nine months of 2016 (Figure 33). Going forward, there will likely be changes in monetary policy stances among major advanced economies. As a result, risks of market volatility and a sharp depreciation of the baht due to large foreign portfolio outflows would materialize in the short-term as had happened during the taper tantrum and following the Chinese stock market turbulence (Figure 33-34). However, Thailand's ample international

³¹ Assumptions of both scenarios are as follows: Everything being equal,

Unit: %yoy	Scenario 1		Scenario 2	
	2016	2017	2016	2017
Crude oil prices	-15.4	17.9	-10.0	20.0
Export volume				
- Agriculture	-5.0	1.0	-6.0	-2.0
- Manufacture	-3.7	-1.9	-6.0	-3.9
Tourist arrivals	10.0	8.0	5.0	5.0

reserves and continued current account surplus would provide the economy with a strong cushion against any sizable outflows.

Figure 33. Net flows of Non-resident Investors to Thailand's Stock and Bond Markets

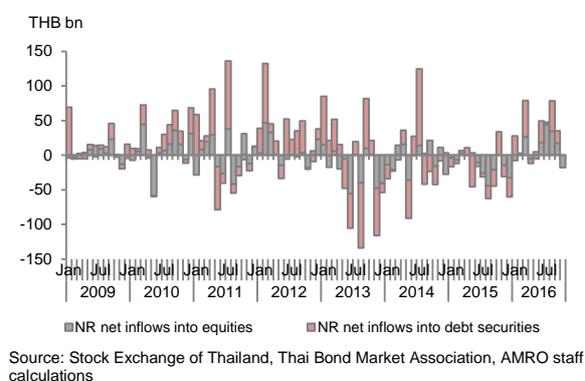
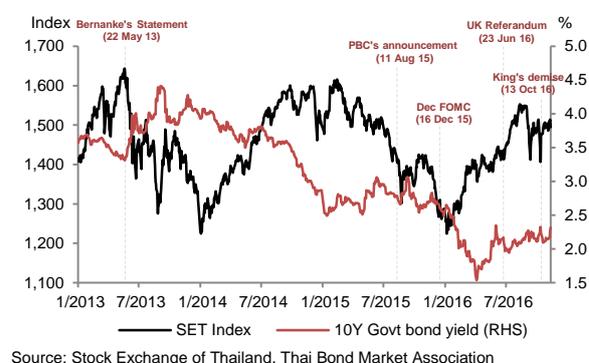


Figure 34. Stock Market Index and Bond Yields

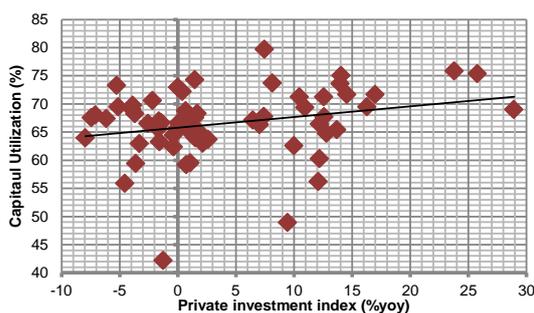


C.2 Risks to Macroeconomic Outlook

33. **Private investment has been stagnant partly due to world trade slowdown, re-emerging political uncertainty, and a delay in infrastructure projects.** A protracted period of export contraction resulted in an excess capacity in the private sector and a delay in private investment. In addition, political uncertainty together with tepid economic activity have weighed on the investment climate over the past two years. Although several measures have been implemented to boost private investment, weak business confidence and slow exports fend off some new investment. Moreover, some investors continue to adopt a wait-and-see approach until infrastructure investment, which has been delayed, shows significant progress. Going forward, private investment will continue to recover at a slow pace. Historical data suggests that an increase in capacity utilization would lead to a slight improvement in private investment (Figure 35).³² As a result of subdued global trade, it will take more time for current excess capacity to be reduced, thereby holding back the recovery in private investment (Figure 36). Although political uncertainty appears to diminish after the recent constitutional referendum, private investors will likely delay investment until the general election occurs.

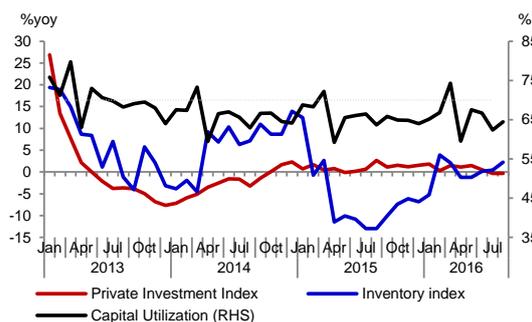
³² According to the Office of National Economic and Social Development Board, private investment edges up when capital utilization ratio is about 70 percent.

Figure 35: Capital Utilization and Private Investment



Source: AMRO staff calculations

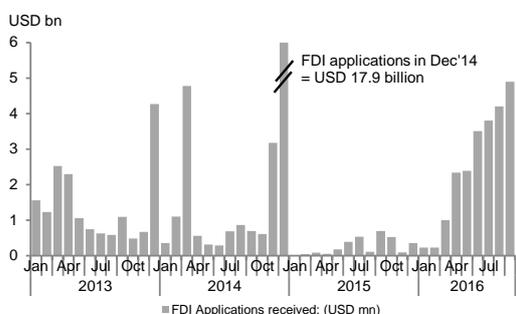
Figure 36: Private Production and Investment Indices



Source: Office of Industrial Economics, Bank of Thailand, AMRO staff calculations

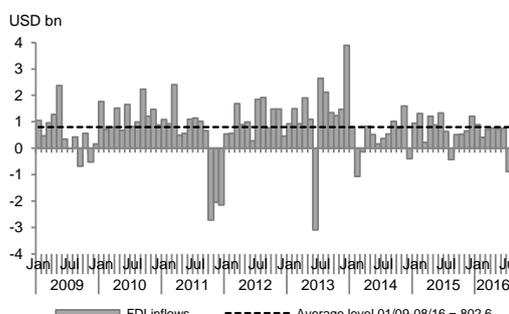
34. **Similarly, political uncertainty and structural challenges plagued actual FDI inflows while FDI applications have improved in recent months.** FDI applications for the Board of Investment (BOI)'s investment incentives dropped sharply in 2015 as a result of a change in the BOI's promotional scheme and concerns about political stability prior to the constitutional referendum and the general election. After the government's announcement of more investment incentives and targeted cluster industries in late 2015, FDI applications showed an improvement in 2016³³ (Figure 37). However, actual FDI inflows remained subdued. Likewise, the relocation of foreign MNCs outside Thailand has been periodically reported after the 2011 flood and an increase in the minimum wage rate in 2012-2013 (Figure 38). Some foreign companies have also gradually shifted labour-intensive production to CLMV countries, but continue to keep their main production base in Thailand, in what is known as the Thailand-plus-One strategy. Going forward, actual FDI is expected to remain flat as foreign investors are likely to continue to use a wait-and-see approach, at least, in the near future. Although Thailand's economic fundamentals have gradually improved, concerns on political uncertainty until the general election may affect FDI outlook in 2017. In addition, the country is still facing many challenges such as a lack of skilled labor and technicians in the science field, a low ease of doing business ranking, and risks from the frequent floods and droughts.

Figure 37: FDI Applications for BOI Investment Promotion



Note: The value of FDI applications was converted from Thai baht terms to the USD terms by using a monthly average rate of the Thai baht against the USD.
Source: Board of Investment, Bank of Thailand, AMRO staff calculations

Figure 38: Actual FDI Inflows from BOP



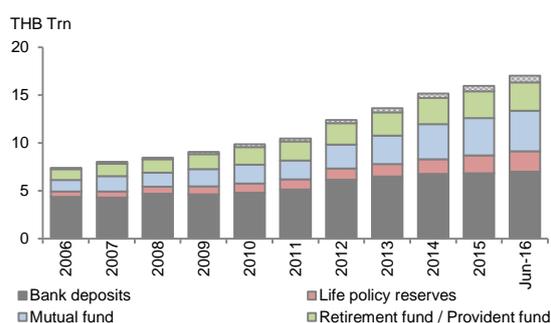
Source: Bank of Thailand, AMRO staff calculations

³³ Services and public utilities; electronic and electrical appliances; and metal products, machinery and transport equipment were the top-three attractive industries, based on the total number of FDI applications submitted to the BOI from January to September 2016.

C.3 Risks to Financial Stability

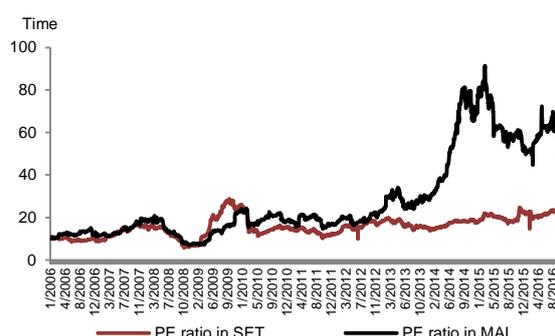
35. **Risks to financial stability emanating from the growing search-for-yield behavior are limited.** A strong current account surplus combined with a tepid investment climate has led to an increase in aggregate saving at the national level. In a low interest rate environment, the saving behavior of households partly shifted from using bank deposits to other financial instruments (Figure 39). In particular, investment in fixed income funds and foreign investment funds has expanded significantly in recent years due to higher yields compared with savings and term deposits at commercial banks. Redemption risk of fixed income funds remains low, since fixed income funds are required to maintain minimum liquid assets that can be rapidly liquidated. In addition, stock prices in the Market for Alternative Investment rose rapidly indicating that speculative trading on small stocks became active in the past two years (Figure 40). However, the speculation did not spread to the trading of large stocks and a number of regulations were enforced to address the problem. Similarly, according to discussions with market participants, speculation in the real estate sector, especially condominiums, is only limited to some locations and will unlikely lead to systemic risks to the financial sector.

Figure 39. Household Saving and Investment



Note: 1. Mutual funds NAV is exclusive of RMF. 2. Retirement fund comprise-Provident Fund NAV, Government Pension Fund NAV, RMF NAV and Social Security Fund NAV.
Source: Association of Investment Management Companies, Government Pension Fund, Social Security Office, Bank of Thailand, Thai Life Assurance Association

Figure 40. Price-to-Earnings Ratio in SET and MAI



Note: SET stands for Stock Exchange of Thailand. MAI stands for the Market for Alternative Investment.
Source: Stock Exchange of Thailand

36. **The slow and long economic recovery has adversely affected bank loan quality.** The profitability of many Thai listed companies improved in the first half of 2016 (Figure 41), while the recovery in the SME sector remained fragile. On the other hand, in the financial system, the credit quality of commercial banks and specialized financial institutions continued to deteriorate in all loan categories except loans to public utility and hire purchase, reflecting the continuing adverse impact of sluggish economic activity (Figure 42). Despite an improvement in large corporates' profitability, commercial bank loans extended to large corporates continued to deteriorate as well. In addition, loan restructuring and rescheduling programs grew recently, as banks assisted borrowers that were assessed to be fundamentally viable, but are temporarily adversely impacted by the economic slowdown. Going forward,

loan quality may worsen further as the economic recovery is not broad-based and export-oriented sectors are facing pronounced external risks.

Figure 41. Net Profit Margins of Listed Firms

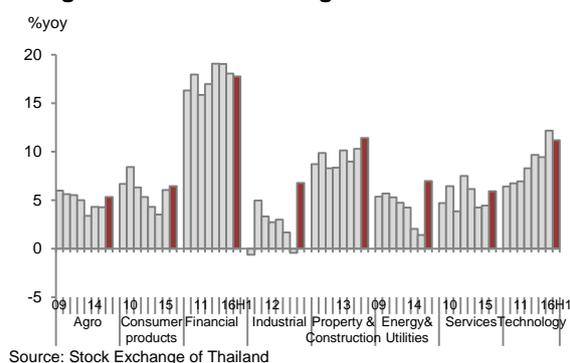
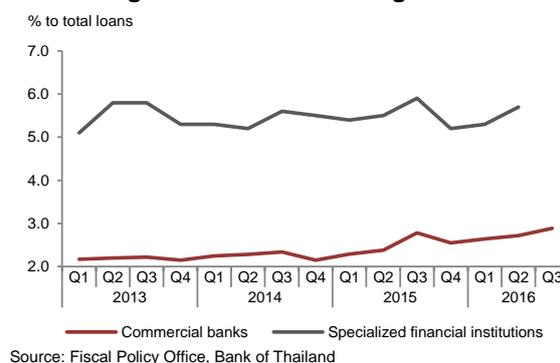


Figure 42. Non-Performing Loans



D. Policy Recommendations

D.1 Fiscal Role in Boosting Recovery and Restoring Private Investment

37. As private investment has remained lackluster, the government should continue with expansionary fiscal stance within a medium term prudent fiscal management framework. The current economic recovery is partially due to fiscal stimulus measures taken so far. Expansionary fiscal measures should therefore be continued with in order to support the economy in Q4 2016 and all of 2017. The measures should focus on private investment and the service sectors that may experience a slight slowdown in activity during the mourning period. In addition, the government should speed up capital expenditure, since its disbursement rate in the last four years was low compared with the FY2006-FY2011 period. The expansionary fiscal measures are expected to lead to a budget deficit and an increase in public debt. In this regard, the authorities' efforts in pushing forward with the expansion and diversification of the tax base should be continued to boost fiscal revenue and help contain the widening deficit. In addition, the enactment of the Fiscal Responsibility Law is encouraged to safeguard Thailand's long-term fiscal sustainability.

38. Public infrastructure investment should be maintained to support the economic recovery. While growth has recovered, private investment is still weak and the economy needs a support from the public sector, the government should accelerate the implementation of the Transport Infrastructure Development Plan 2015-2022. Upgrading logistics infrastructure would stimulate domestic demand and crowd in private investment through lowering logistics costs in the country. Moreover, infrastructure investment would also induce private investment, especially in sectors related to infrastructure such as construction, steel and cement. In additional, to maximize the crowding-in gains from infrastructure investment,

the government should also formulate a land development plan which incorporates detailed local area development and promotion of residential and commercial properties along transport links.

39. Investment in public infrastructure should be stepped up and executed in a timely manner within a well-coordinated long-term framework. A revival in private investment will be delayed by the tepid climate during the mourning period and concerns over political uncertainty relating to the general election. The government should therefore keep infrastructure investment going in order to shore up the private sector's confidence and stimulate domestic economic activity. Separately, several projects have shown slow progress and have been characterized by slow disbursement partly because getting approval from the line ministries and concerned SOEs takes time. In addition, public expenditure and infrastructure investment normally involve many authorities, including SOEs, which limit the government's ability to comprehensively plan and coherently execute all megaprojects. Moreover, the progress of projects has been overseen in parts by different authorities instead of one central unit. As a result, different transportation infrastructure projects are not well-connected.

D.2 Accommodative Monetary Environment

40. The current monetary policy stance is sufficiently accommodative. Given the currently moderate economic growth and low inflation, monetary policy could be further eased to support a recovery in domestic demand. However, a reduction in policy rate may not be fully effective due to low loan demand from the corporate sector and ample liquidity in the financial system. In addition, potential risks to financial stability may arise from the growing search-for-yield behavior of investors in a low interest rate environment. The authorities should stay vigilant about investors' speculation in the stock market and the housing market.

41. In view of the strong external position, the exchange rate should be managed appropriately to avoid exchange rate misalignments. The appreciation of the Thai baht against the US dollar and in an NEER term during the first three quarters of 2016 was driven by a large current account surplus and capital inflows. However, the surplus was mainly on account of import compression rather than an expansion of exports. Meanwhile, exports have remained lackluster with downside risks from sluggish global activity as well as structural constraints that are embedded in the Thai export sector. This suggests the need to manage the appreciation of the baht to avoid an overvaluation as that could weigh on the competitiveness of the export sector and hamper its recovery.

D.3 Safeguarding Financial Stability

42. In light of the financial stability risk posed by high household debt, the authorities should continue to adopt measures to address the problem. The protracted recovery in private consumption shows that the recent surge in household debt has not only posed a risk to Thailand's financial stability, but has also become a headwind to economic growth. Therefore, notwithstanding the recent moderation in household debt, the implementation of a macroprudential measure such as debt-to-income ratio or debt service ratio is encouraged in order to promote prudent borrowing behavior by households in future. For non-financial institutional creditors, the regulatory reform relating to savings co-operatives should be carried out in order to prevent potential risks emanating from the insolvency of some big savings cooperatives.

D.4 Structural Issues

43. Thailand needs to improve the productivity of its agricultural sector and upgrade labor force skills. The sluggish economic recovery has highlighted structural challenges in the economy that need to be addressed. First, about 30 percent of the Thai population is in the agricultural sector and most Thai farmers still employ traditional methods of cultivation and harvesting. The government should encourage the development of agricultural technology and mechanization³⁴. Second, more resources should be devoted to human resource development, since a lack of experts and skilled labors remains a key challenge in the private sector, especially as Thailand strives to move up the manufacturing value chain.

44. Doing business should be made easier to attract more inward investment. The stagnant level of private investment shows that investment incentives, in particular tax exemptions, are not sufficient in encouraging new investment. According to discussions with the private sector, one of the major obstacles in stimulating private investments is the lack of ease in doing business—for example, complicated business registration and customs clearance procedures³⁵. In addition, based on the World Bank's report on doing business 2017, despite some improvement from the previous year, the private sector in Thailand still faces difficulty in starting a new business and getting credit³⁶. Therefore, business regulations,

³⁴ The government acknowledges the importance of this sector and try to promote greater utilization of capital and technology by provide credits to the farmers. Moreover, the government encourages capital sharing for the farmers in the same neighborhood.

³⁵ According to Ministry of Finance, the government is streamlining several public administration procedures in order to improve Thailand's Doing Business ranking. First, the government is in the process of establishing National Single Window (NSW) which would provide importers and exporters a one-stop service for all customs procedures. All documents can be submitted online to NWS instead of the current procedures which all documents are required to be submitted in a hard version separately to all relevant departments. NSW will also synchronize the data from 33 government agencies including Customs department, Department of Natural Resources, Department of Provincial Administration and Board of Investment. The new system would reduce all transaction costs of the private sector, lift up the country's trade competitiveness and promote international trade. Second, Business Collateral Act B.E. 2558 has been effective since 2 July 2016. With this act, private firms can use movable assets as collaterals. In addition, Bankruptcy Act B.E. 2558 would give the creditors shorter legal process as well as an alternative channel to appeal for foreclosure.

³⁶ Despite some improvement in the overall ranking of Thailand, the ranking for the starting a business, getting credit, and payment taxes are relatively low in Doing Business 2017. However, it recognizes the progress of reform during 2015/16 in the area of (1) starting business such as

together with current administrative procedures, should be streamlined. In addition, the use of an electronic system should be promoted for government administrative procedures in order to reduce transaction costs, to expedite the overall process of dealing with authorities, and to facilitate the private sector's business operations.

creation of a single window for registration payment, (2) getting credit such as improving access to credit information by starting to provide credit scores to banks and financial institutions, and (3) resolving insolvency by introducing new restructuring for small and medium-size companies and by streamlining provisions related to company liquidation.

Table 1: Thailand's Selected Economic Indicators, 2011 - 2017

	2011	2012	2013	2014	2015	2016	2017
						Projection	
National income and prices	(In percent change unless specified)						
Real GDP	0.8	7.2	2.7	0.8	2.8	3.0	3.2
Final consumption (in percent of GDP)	69.0	69.2	68.8	69.7	68.8	68.0	68.0
- Private sector	52.9	52.9	52.4	52.7	51.6	51.7	52.0
- General government	16.1	16.3	16.5	17.0	17.2	16.3	16.0
Capital formation (in percent of GDP)	26.8	28.0	27.5	24.1	24.1	24.1	26.5
- Private sector	20.1	21.1	19.7	19.6	18.5	18.3	18.5
- General government	5.7	5.9	5.7	5.2	6.4	6.7	7.1
- Change in inventories	1.0	1.0	2.1	-0.7	-0.8	-1.0	1.0
Savings (in percent of GDP)	29.2	27.7	26.4	27.9	32.1	33.6	33.8
GDP deflator	3.8	1.9	1.7	1.0	0.2	1.4	1.4
Consumer price inflation (period average)	3.8	3.0	2.2	1.9	-0.9	0.2	1.8
Consumer price inflation (end of period)	3.5	3.6	1.7	0.6	-0.9	1.1	2.1
External sector	(in billions of U.S. dollars unless specified)						
Current account balance	8.9	-1.5	-5.2	15.4	31.6	38.0	31.0
(In percent of GDP)	2.4	-0.4	-1.2	3.8	8.0	9.5	7.3
Trade balance	17.0	6.7	6.7	24.6	34.6	40.2	34.1
Exports, f.o.b.	219.1	225.7	225.4	224.8	212.1	207.2	212.2
Imports, f.o.b.	202.1	219.1	218.7	200.2	177.5	167.0	178.0
Services, net	-10.6	-3.4	3.7	2.1	10.1	10.8	9.7
Receipts	41.6	49.6	58.6	55.3	61.1	61.1	62.9
Payments	52.1	53.0	54.9	53.2	51.0	50.3	53.2
Primary income, net	-8.3	-17.0	-26.0	-20.1	-20.4	-19.8	-19.5
Secondary income, net	10.8	12.2	10.5	8.8	7.2	6.7	6.7
Financial account balance	-8.3	12.8	-2.5	-16.2	-17.1	-22.1	-19.1
Direct investment	-4.7	-1.4	3.8	-0.8	4.0	-9.0	-10.0
Portfolio investment, net	6.2	3.4	-4.8	-12.0	-16.5	-4.0	-5.0
Other investment, net	-9.1	10.2	-1.2	-4.1	-5.5	-9.6	-4.6
Overall balance	1.2	5.3	-5.0	-1.2	5.9	13.6	9.1
Gross official reserves	175.1	181.6	167.3	157.1	156.5	175.0	184.1
(In months of imports of goods & services)	7.9	7.3	6.6	6.7	7.4	9.7	9.6
Short-term in percent of total external debt	45.3	44.5	43.6	40.2	40.0	40.5	40.5
General government ^{1/}	(In billion baht)						
Revenue	1,892.0	1,977.7	2,163.5	2,075.7	2,207.0	2,427.7	2,343.0
(In percent of FY GDP)	16.6	16.8	16.8	15.9	16.5	16.9	15.6
Expenditure	2,177.9	2,295.3	2,402.5	2,460.0	2,601.4	2,720.0	2,733.0
(In percent of FY GDP)	19.2	19.5	18.7	18.8	19.4	18.9	18.1
Budget balance	-285.8	-317.7	-239.0	-384.3	-394.4	-292.3	-390.0
(In percent of FY GDP)	-2.5	-2.7	-1.9	-2.9	-2.9	-2.0	-2.6
Monetary sector	(In percent change)						
Domestic credit	27.6	15.2	7.9	5.6	4.6	4.7	7.3
Broad money	15.1	10.4	7.3	4.7	4.4	4.4	4.9
Memorandum items:	(In percent change unless specified)						
Export volume	8.7	2.3	0.3	0.6	-3.4	-0.8	0.9
Export unit value (in US\$)	15.1	2.9	-0.3	-0.4	-5.8	-1.5	1.4
Import volume	14.3	7.1	2.0	-6.2	0.2	-1.9	5.1
Import unit value (in US\$)	25.1	8.9	0.5	-9.0	-11.0	-4.2	1.4
Terms of trade	-4.0	-1.0	1.7	0.9	9.6	2.7	0.0
Debt service in percent of exports of goods and services	3.5	4.2	4.0	4.9	4.2	4.3	4.2
Total external debt in percent of GDP	28.1	32.8	33.8	35.0	33.3	33.9	32.0
Exchange rate (THB per US\$, average)	30.49	31.08	30.73	32.48	34.29	35.35	34.70
Exchange rate (THB per US\$, end of period)	31.55	30.61	32.86	32.90	36.00	34.70	34.70
GDP in billions of baht	11,300	12,349	12,901	13,132	13,534	14,133	14,792
GDP in billions of U.S. dollars	370.6	397.3	419.8	404.3	395.2	399.8	426.3

Note: 1/ Fiscal year is October-September. FY2017 is the budget proposal.

Sources: Data provided the Thai authorities, AMRO staff estimates.

Table 2: Government Accounts^{1/}

Unit: THB billion	FY2014			FY2015			FY2016			FY2017
	Budget	Actual outturn	%yoy	Budget	Actual outturn	%yoy	Budget ^{12/}	Actual outturn	%yoy	Budget
Fiscal revenue (accrual basis)										
Gross revenue ^{2/}	2,718.3	2,494.0	-3.0	2,765.5	2,619.5	5.0	2,835.4	2,812.7	7.4	2,800.0
- Tax revenue	2,547.6	2,289.8	-4.9	2,582.2	2,364.2	2.4	2,655.6	2,387.1	1.0	2,601.1
• Revenue Dept.	1,890.3	1,729.5	-2.0	1,965.2	1,729.2	0.0	1,895.0	1,757.9	1.7	1,867.0
• Excise Dept.	463.6	382.4	-11.6	421.4	439.1	14.7	496.3	517.7	17.9	549.9
• Customs Dept.	131.8	109.1	-3.8	112.8	115.5	5.5	120.5	111.5	-3.1	120.5
• Others ^{3/}	62.9	71.9	-27.3	85.5	80.4	11.8	146.4	n.a.	n.a.	66.8
- Other revenue ^{4/}	174.2	204.2	24.0	183.3	336.1	27.1	179.8	425.6	26.6	198.9
Net revenue ^{5/}	2,275.0	2,077.7	-4.0	2,325.0	2,213.4	6.7	2,386.0	2,393.5	8.1	2,343.0
(% of GDP)		15.9		17.2	16.5		16.6	17.1		16.0
Fiscal cash balance (cash basis)										
Revenue collected by Government ^{6/}		2,075.7	-4.1		2,207.0	6.3		2,411.5	9.3	
Expenditure ^{7/}	2,525.0	2,459.9	2.4	2,575.0	2,601.4	5.8	2,776.0	2,807.4	7.9	2,733.0
(% of GDP)		18.8		19.1	19.4		19.7			18.4
- Current expenditure	2,014.6	1,962.3	3.6	2,027.9	2,106.6	7.4	2,127.8	2,214.1	5.1	2,103.4
- Capital expenditure	441.1	284.1	2.7	449.5	271.6	-4.4	564.4	364.9	34.4	548.4
Budget balance	-250.0	-384.3	-	-250.0	-394.4	-	-390.0	-395.8	-	-390.0
(% of GDP)	-1.9	-2.9		-1.8	-2.9		-2.8	n.a.		-2.6
Non budgetary balance ^{9/}		25.0	-		74.9	-		21.0	-	
Cash balance: before financing		-359.3	-		-319.6	-		-374.9	-	
Borrowing to Finance the Deficit		250.0			250.0			390.0		390.0
Fiscal cash balance		-109.3	-		-69.6	-		15.1	-	
Treasury Reserve Account ^{10/}		495.7	-18.1		426.2	-14.0		441.3	14.3	
Public Debt (% of GDP) ^{11/}		43.6			43.1			42.6		

Note: 1/ FY2016 is October 2015-September 2016.

2/ Revenue is recorded by accrual, thus the figures are slightly different from the revenues in Table 1, which are recorded on a cash basis.

3/ Referred to Thailand's budget in brief, other tax revenue include revenue collected by the Department of Mineral Fuels, the National Police Office, The Office of the National Broadcasting and Telecommunications Commission and other government agencies.

4/ Other revenue include revenue from SOEs and other government agencies.

5/ Net revenue is the gross revenue excluding the tax rebate of the Revenue Department, the VAT allocation to provincial and local administrative organizations and export duty compensation.

6/ The revenues are recorded on a cash basis, thus the figures are slightly different from the revenues in the Table 2, which are recorded on an accrual basis.

7/ Expenditure includes current-year expenditure and carry over.

8/ Actual deficit refers to the budget balance.

9/ The Non-budgetary balance cover the operation of autonomous organizations that are established under specific laws, such as the National Health Security Office and Social Security Office. Therefore, their budget proposals do not need to be scrutinized by the government.

10/ The treasury reserve account is in the terms of the end-of-period outstanding number.

11/ The numbers for FY2013-FY2015 are as of the end of the fiscal year (September), while the number for 2016 is as of August 2016.

12/ The budget structure of FY2016 is according to Thailand's budget in brief FY2017, excluding the supplementary budget.

Source: Bureau of The Budget, The Comptroller General's Department, Fiscal Policy Office, Public Debt Management Office, AMRO staff calculations

Table 3: Progress of Public infrastructure investment

Projects	Project value	Expected year of completion	Status				Plan and actual disbursement						
			EIA process	Bidding process	Contract signed	Construction / Execution	2015	2016			Until July 2016		2017 - 2022 (Plan)
							THB Mn	Plan	Disbursement (Jan-Jul)	% to plan in 2016	Disbursement	% to total project value	
7 projects of MRT in Bangkok Metropolitan Area	237,914.3						110,197.3	37,112.4	17,211.1	46.4	127,408.3	53.6	69,214.6
1. SRT dark red line (Bang Sue - Rangsit)	88,003.4	2019	●	●	●	●	22,105.1	20,859.1	9,463.0	45.4	31,568.2	35.9	45,370.9
2. SRT light red line (Bang Sue - Talingchan)	5,947.2	2018	●	●	●	●		847.3					5,099.9
3. MRT purple line (Bangyai - Bangsue)	38,254.6	2016	●	●	●	●	38,896.3	1,169.9	659.8	56.4	39,556.0	103.4	16.6
4. MRT blue line (Hualumpoong-Bangkae, Bangsue-Thapra)	53,928.1	2019	●	●	●	●	36,516.1	6,889.8	3,330.0	48.3	39,846.1	73.9	198.6
5. MRT green line (Baring-Samutprakarn)	17,092.2	2018	●	●	●	●	10,116.2	5,013.1	3,013.5	60.1	13,129.6	76.8	1,922.1
6. MRT green line (Mochit-Kukod)	29,834.4	2019	●	●	●	●	2,563.5	2,333.2	744.8	31.9	3,308.4	11.1	16,606.5
7. Airport rail link	4,854.4	n.a.	●	●									
7 projects of rail network	43,696.7						17,560.3	8,576.4	2,920.7	34.1	20,481.0	46.9	16,782.1
1. Track improvement of of rail bridges	17,676.7	2017	●	●	●	●	13,834.0	3,639.1	1,642.5	45.1	15,476.5	87.6	290.9
2. Fence construction along railway sideway	1,048.5	2015	●	●	●	●	1,048.5				1,048.5	100.0	
3. Double track railway (Chachoengsao-Saraburi)	10,682.0	2020	●	●	●	●	3.2	1,950.1	1,058.9	54.3	1,062.1	9.9	8,728.1
4. Purchase of AC-DC diesel electric locomotive	2,334.7	2015	●	●	●	●	1,974.3	219.4	219.4	100.0	2,193.6	94.0	
5. Diesel electric locomotive procurement project	6,562.5	n.a.	●	●	●	●							6,562.5
6. Bogie container flat wagons procurement project	723.3	2018	●	●	●	●							
7. Purchase of 115 commercial buses	4,668.9	2018	●	●	●	●	700.3	2,767.9			700.3	15.0	1,200.7
1 projects of Bangkok Mass Transit	2,200.5							2,200.5					
1. 489 NGV buses procurement	2,200.5	n.a.	●	●				2,200.5					
Total = 15 projects	283,811.5						127,757.6	47,889.4	20,131.8	42.0	147,889.4	52.1	85,996.8
3 projects signed in 2015	42,879.5						1,524.0	11,905.8	6,575.0	55.2	8,099.0	18.9	34,585.2
1. Leam Chabang Sea Port A	1,098.0	2018	●	●	●	●		664.0	213.5	32.2	213.5	19.4	434.0
2. Double track railway [Jira Road - Khon Kean]	23,962.0	2019	●	●	●	●		5,135.5	2,407.1	46.9	2,407.1	10.0	23,962.0
3. Motorways [Pattaya - Mabtaput]	17,819.5	2020	●	●	●	●	1,524.0	6,106.2	3,954.4	64.8	5,478.4	30.7	10,189.3
5 projects signed in 2016	196,543.8						198.6	21,465.5	2,841.7	13.2	3,040.3	1.5	174,879.7
1. Leam Chabang Shipping Center Development (Phase 1)	1,926.0	2018	●	●	●	●		819.8	173.5	21.2	173.5	9.0	1,106.3
2. Motorway (Bangpa In - NakhonRatchasima)	76,600.0	2020	●	●	●	●		9,392.1	2,167.8	23.1	2,167.8	2.8	67,207.9
3. Motorway (Bangyai - Kanchanaburi)	49,120.0	2020	●	●	●	●		4,853.7	487.8	10.0	487.8	1.0	44,266.3
4. Double track railway (Prachuabkiri - Chumporn)	17,290.6	2019	●	●	●	●		1,720.0					15,570.6
5. Suvarnabhumi International Airport Phase II	51,607.2	2019	●	●	●	●	198.6	4,680.0	12.8	0.3	211.3	0.4	46,728.6
12 projects signed in 2017 ONWARD	1,519,582.8							106.2					1,519,582.8
1. MRT orange line (Cultural center - Minburi)	92,532.0	2022	●	●	●	●			9.2				92,532.0
2. MRT pink line (Karai - Minburi)	56,691.0	2020	●	●	●	●			7.5				56,691.0
3. MRT Yellow line (Ladprao - Samrong)	54,644.0	2020	●	●	●	●			6.0				54,644.0
4. SRT light red line in a suburb zone	44,157.8	2020	●	●	●	●			31.5				44,157.8
5. MRT purple line (Taopoon - Ratburana)	131,004.3	2022	●	●	●	●							131,004.3
6. Double track railway (Nakornpathom - Hua Hin)	20,036.5	2019	●	●	●	●			4.6				20,036.5
7. Double track railway (Lopburi - Paknumpo)	24,840.5	2019	●	●	●	●			4.6				24,840.5
8. Double track railway (Marbkabao - Jira intersection)	29,853.2	2019	●	●	●	●			6.8				29,853.2
9. Standard gauge railway (Nongkhai - Mabtaput)	369,148.6	2021	●	●	●	●							369,148.6
10. Standard gauge railway (Bangkok - Chiangmai)	449,473.8	2021	●	●	●	●							449,473.8
11. Standard gauge railway (Bangkok - Hua Hin)	94,673.2	2022	●	●	●	●			18.0				94,673.2
12. Standard gauge railway (Bangkok - Rayong)	152,528.0	2022	●	●	●	●			18.0				152,528.0
Total = 20 projects	1,759,006.1						1,722.6	33,477.5	9,416.7	28.1	11,139.2	0.6	1,729,047.8
Total 35 projects	2,042,817.6						129,480.2	81,366.9	29,548.5	36.3	159,028.6	7.8	1,815,044.6

Note: The values of the first 27 projects were referred to project value indicated in their contracts. Meanwhile, the value of the other eight projects (MRT purple line from Taopoon to Ratburana and onward) were referred to project value that the Cabinet approved before a contract is completed and signed. Source: Public Debt Management Office, AMRO staff calculations

Table 4: Data Adequacy for Surveillance Purposes: A Preliminary Assessment

Surveillance Areas	Data Availability ⁽ⁱ⁾	Reporting Frequency/Timeliness ⁽ⁱⁱ⁾	Data Quality ⁽ⁱⁱⁱ⁾	Consistency ^(iv)	Others, if Any ^(v)
National Account	Available	Quarterly, eight weeks after the end of the reference quarter, based on an advance release calendar.	-	-	-
Balance of Payment (BOP) and External Position	Available	BOP data are reported monthly with a two month lag (one month lag for trade data), released on last business day of the month. Official reserve assets reported weekly with a one-week lag. External debt reported quarterly with a one quarter lag. Exchange rates reported daily with a one day lag.	-	-	-
State Budget and Government/ External Debt	Available	Planned budget announced before the beginning of the fiscal year in October (annual). Budget implementation (expenditure and revenue) reported monthly with a one month lag. Government/external debt reported monthly with a one month lag.	-	-	-
Money Supply and Credit Growth	Available	Monetary aggregates and monetary survey reported monthly with a one month lag. Credit and deposit data reported monthly with a six-week lag.	-	-	-
Financial Sector Soundness Indicators	Available	"Performance of the Thai Banking System", as well as related data, reported quarterly by the BOT with a six-week lag.	-	-	-
State-Owned-Enterprises' Statistics	Available	(1) State Enterprise Key Indicators (quarterly, in Thai) by the State Enterprise Policy Office (SEPO) under the MOF. (2) State Enterprise Review published annually by SEPO for individual SOEs as well. (3) Monthly and (4) Quarterly report on data and performance review (respectively) of Specialized Financial Institutions (no fixed calendar of release) Listed companies must follow stock exchange disclosure requirements.	-	-	-

Notes:

- (i) Data availability refers to whether the official data are available for public access by any means.
(ii) Reporting frequency refers to the periodicity that the available data are published. Timeliness refers to how up-to-date the published data are relatively with the publication date.
(iii) Data quality refers to the accuracy and reliability of the available data given the data methodologies are taken into account.
(iv) Consistency refers to both internal consistencies within the data series itself and its horizontal consistency with other data series of either same or different categories.
(v) Other criteria might also apply, if relevant. Examples include but are not limited to potential areas of improvement for data adequacy.

Source:

AMRO Staff Compilations. This preliminary assessment will form the "Supplementary Data Adequacy Assessment" in the EPRD Matrix.