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## Fiscal Sustainability Assessment: The Case of Thailand

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### ABSTRACT

This paper aims to illustrate various aspects of fiscal sustainability. First, conceptual and literature reviews of fiscal sustainability are provided, as well as exemplifications of policy implementations in numerous countries. The paper also presents some of the challenges in maintaining fiscal soundness in the context of Thailand. It is shown that as a result of favorable conditions, Thailand's fiscal stance remains robust. However, the country is facing several medium-term challenges. In addition, as fiscal unsustainability could bring about economic instability, market participants should closely monitor the actions of the government; hence, fiscal sustainability can be assessed through the expectations or perceptions of agents as represented by various indices. This paper provides various perspectives from various sectors as alternative approaches to determine fiscal soundness in Thailand.

*Keywords: Fiscal Sustainability, Thailand's Fiscal Soundness, Public Finance*

### Introduction

In the recent years, the global financial crisis of 2007-09 and its aftermath led to a significant rise in public debt, especially that of advanced economies, including the United States, Japan, France and the PIIGS countries (Portugal, Ireland, Italy, Greece, and Spain). The increase in debt stock posed substantial risks to economic stability among these countries, particularly the PIIGS. These governments are in need of increasing significant amount of government spending to remedy severe economic downfall. Hence, the countries have entered into the "doom loop" of uncontrollable increase in sovereign debt and banking crisis. The costs of remedial measure are substantially high as a result of fiscal austerity, bringing about economic hardship among the countries.

In case of Thailand, the country has been maintaining strong fiscal stance throughout the century, except for the periods of the Asian financial crisis in 1997 and the global financial crisis in 2007-09. Despite spikes of debt stock during crisis time, the government of Thailand has had public debt under control through the commitments to fiscal discipline. However, the prospects of debt sustainability look bleak as a result of several challenges, such as adverse demographic trend, poverty and income inequality. Moreover, looking at fiscal balance of Thailand over the period of 30 years, it shows persistent budget deficit of 1.5 - 3% and even more than 3% recently

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albeit for a few times Thailand experienced unplanned and unintentionally budget surplus. This is worrying as fiscal deficit generally should not be above 3%, and therefore a consistent method of measuring fiscal sustainability is warranted.

A fiscal imbalance, associated with large fiscal deficits and debt accumulation, could lead to economic instabilities, shattering the confidence of any country. Moreover, an adjustment of fiscal policy in response to unsustainable fiscal regime incurs substantial costs to the country's economy by posing risks to the country's macroeconomic environment by worsening resource allocation, accumulating excessive debt stock that could adversely affect future generation and escalating inflation (Agnello & Sousa, 2009). In addition, excessive public debt could lead to an increase in interest rates, leading to sluggish economic growth (De Castro Fernandez & Hernandez de Cos, 2006). For example, a surge of debt from excessively accumulating deficit in Greece has given rise to risks of bankruptcy which, in turn, startles market expectations. Therefore, austerity measures are required to resolve the situation.

However, the definition of fiscal sustainability regime remains nebulous and controversial. Nevertheless, there is a wide consensus, as a prerequisite, that a government must fulfill the intertemporal solvency, meaning that it must raise the resources enough to cover its obligations so as to preclude default and debt restructuring (Burnside, 2005). Practically, several indices have been employed to reflect the fiscal sustainability through different perspectives, such as credit rating of the government bonds, credit default swap.

This paper consists of four main sections and is organized as follow. The first section is to illustrate various conceptual reviews of fiscal sustainability and methodology of assessing the issue, based on literatures. The second section is an illustration of several factors regarding fiscal sustainability in the context of Thailand. In addition, the paper also provides international examples of approaches towards fiscal sustainability. The third section is to illustrate challenges for the Thai government in maintaining fiscal sustainability. Lastly, the fourth section is to conclude and show fiscal sustainability assessments from various points of view.

## **Conceptual Reviews and Exemplifications of Policy Implementation**

To study on fiscal sustainability, it is crucial to understand the concept and framework of the issue. However, there is no consensus regarding the definition of fiscal sustainability. While several literatures have defined different approaches towards assessing such issue, it is useful to illustrate various views on the topic as well as policy implementations in an international arena.

### **1. Framework of Fiscal sustainability assessment**

There are various views on the evaluation of fiscal sustainability. Based on literatures, several concepts regarding such issue are exemplified as following.

#### **1.1 Debt Dynamic Approach**

Considering debt dynamic allows for understanding the evolution of the stock of public debt, measured in Debt-to-GDP ratio, over time and the factors affecting the flow

(Chucherd, Angklomkiew, & Apaitan, 2016). Debt dynamic is also useful in illustrating risks of public finance and guiding remedial measures against such issue. The framework of debt dynamic decomposes factors affecting the debt stock into three subcategories: (1) Automatic Debt Dynamic (ADD), (2) Overall Primary Balance (OPB), (3) Stock Flow Adjustment (SFA).

Firstly, automatic debt dynamic reflects the flow of debt resulting from interest payments and exchange rate fluctuations. It consists of two elements: Interest rate- growth differential (IRGD) and exchange rate depreciation. Interest rate-growth differential represents the interest payment of the government's debt, adjusted for output growth. If the gap is negative, meaning that the growth of interest payment is smaller than the output growth, this leads to a decrease in public debt, *ceteris paribus*. Exchange rate depreciation is another factor affecting the flow of debt. When the currency depreciates, the value of external debt rises, leading to an increase in public debt. The sensitivity to exchange rate depreciation depends primarily on the proportion of external debt the government owes.

The overall primary balance includes the government budget balance, representing the direction of fiscal policy. In case of expansionary fiscal policy, the government spending exceeds its revenue, leading to primary deficit, and vice versa for contractionary fiscal policy.

The stock flow adjustment includes miscellaneous factors altering the flow of public debt, such as off-budget activities and contingent liabilities.

### 1.2 Intertemporal Budget Constraint Approach

Blanchard (1990) argued that fiscal policy is sustainable when it does not cause explosive public debt, and the government is not forced to cut spending, increase taxation and monetize the debt. In addition, the conditions for maintaining fiscal soundness is that the expected primary surpluses can finance the initial debt stock, implying the government's solvency to repay debt in the future.

However, since the model is forward-looking oriented, the major issue is that it is difficult to estimate variables, such as government revenue, government expenditure and interest rates in 20-30 years' time.

### 1.3 Fiscal Reaction Function Approach

Bohn (1998) suggested the fiscal reaction function, illustrating the government's responsiveness to an increase in debt stock as an assessment of fiscal sustainability. The model implies the ability of the government to generate surpluses in short run to meet the conditions imposed by the intertemporal budget constraint in the long run. The fiscal reaction function can be estimated by regressing primary balances on the debt-to-GDP ratio. The regression model also includes other macroeconomic controlling variables, such as business cycles, temporary government spending, and several other explanatory variables (Barro, 1979), that could affect the results, preventing misspecification bias. It is argued that fiscal sustainability is achieved, when the estimated coefficient is positive, meaning that a government responds positively on

an increase in debt by accumulating surpluses. Conversely, if the estimated coefficient turns out to be negative, the government will respond to an increase in debt stock by lowering surpluses, hindering fiscal sustainability.

#### 1.4 Fiscal Sustainability Index: An operation of Recursive Algorithm

The framework of producing the fiscal sustainability index integrates three equations (Wan, Zulkefly, & Khalid, 2015), including law of debt motion ratio ( $d_t$ ), targeted variable ( $ps^*$ ) and reaction function ( $ps_t$ ).

Law of motion debt ratio:

Target variable:

Reaction function:

By  $d$  is debt-to-GDP ratio  $d_t = \beta_t d_{t-1} - ps$

$d^*$  is targeted debt-to-GDP ratio  $ps^* = (\beta^* - 1)d^*$

$\beta$  is growth-adjusted real interest rates  $ps_t = ps^* + \lambda_t(d_{t-1} - d^*)$

$ps$  is primary surplus

$ps^*$  is targeted primary surplus

$\lambda$  is the intensity of policy response towards the gap between actual and targeted debt ratio

By combining and rearranging the equations, the law of motion debt ratio becomes the following equation.

$$d_t = (\beta_t - \lambda_t) d_{t-1} - (\beta^* - \lambda_t - 1) d^*$$

Therefore, the actual debt ratio is determined by two components, first the difference between growth-adjusted real interest rates and government's policy response multiply by the lagged debt ratio and the second component is the difference between the mean of growth-adjusted real interest rates and the current policy response and one multiply by targeted debt ratio. It is argued that the fiscal soundness is achieved when the difference between growth-adjusted real interest rates and policy response ( $\beta_t - \lambda_t$ ), representing the fiscal sustainability index, is below one, with the assumption that the previous debt ratio is greater than the targeted one.

#### 1.5 Fiscal Space Approach

Fiscal space refers to a room for discretionary fiscal policy that a government can implement without interrupting fiscal sustainability (Ostry, Ghosh, Kim, & Qureshi, 2010). It measures the differential between the actual debt-to-GDP ratio and the highest debt-to-GDP ratio that the government can bear before defaulting on loans. The model incorporates the responsiveness of the government in managing fiscal stance to calculate debt ceiling of a country, and the fiscal space can be retrieved from differencing the ceiling with the actual or the equilibrium debt level.

2. Exemplifications of Policy Implementation

As a resulting of growing concerns about the fiscal legacy of the crisis, many countries have started or considered enacting fiscal rules as a framework to fiscal sustainability. A fiscal rule is a long-lasting demarcation line on fiscal policy through numerical limits on budgetary aggregates which cannot be frequently changed (Schaechter, Kinda, Budina, & Weber, 2012). The fiscal rules have been spread out widely in many countries across the world, representing by the increasing number of countries imposing such measures. According to Schaechter et al. (2012), they are now in effect in 45 countries. In 2018, Thailand also adopted fiscal rule as a key to safeguarding fiscal sustainability. Moreover, over 45 countries in currency unions and the EU have agreed to adopt the supranational rules to constrain the nations from deviating fiscal stance from the objectives of the unions.

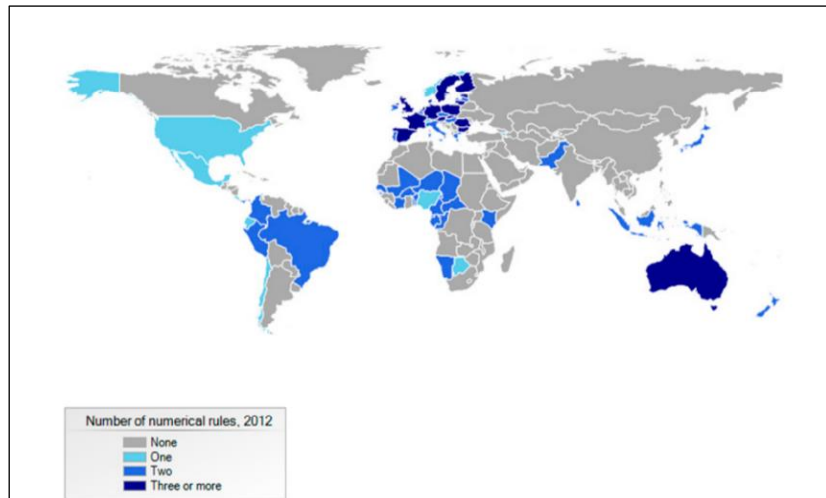


Figure 1 Countries with Fiscal Rules

Source: Lledó et al. (2017)

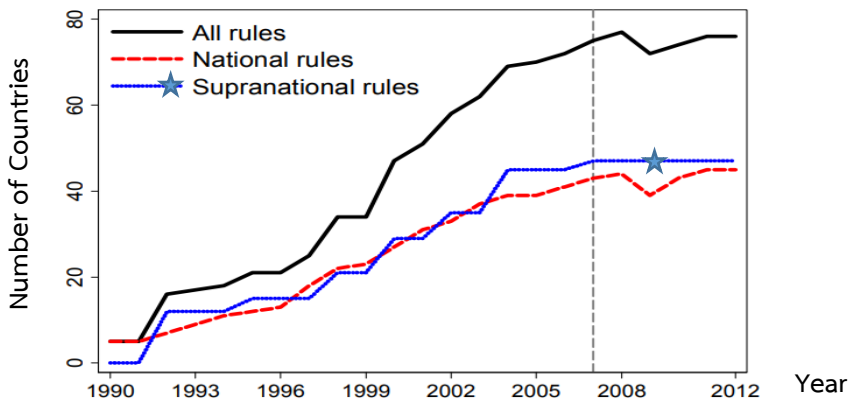


Figure 2 The Number of Countries with Fiscal Rules

Source: Lledó et al. (2017)

The fiscal rules can be classified into four main types based on the type of constrained budgetary aggregates, including debt rules, budget balance rules, revenue rules and expenditure rules, which have different properties, objectives, operational implications.

Debt rules set a limit or constraint on debt-to-GDP ratio. The rule is the most effective way to converge the debt ratio to the targeted level as it gives a clear and relatively easy to communicate anchor. However, the disadvantages are that the policy response with respect to debt ratio takes time to be fully in effect; therefore, it lacks short-term operational guidance that links towards long-run goals.

Budget balance rules aim at the government budget balance which directly influences the debt ratio; therefore, it provided clear and easy to monitor and communicate short-term operational guidance towards targeted debt ratio. Consequently, the measure is widely used in many countries.

Expenditure rules are a constraint on government spending. It is typically set in absolute terms, growth and percentage of GDP, with a time horizon. Although the measure provides clear operational guideline, the linkages to debt sustainability remains vague as the rule does not influence the revenue side. Therefore, it is generally used with balance budget rule to provide a tool for fiscal consolidation to sustain fiscal soundness.

Revenue rules set the ceiling and floor to keep the government revenue in the targeted range. Similar to expenditure rules, the rule does not directly link to debt sustainability as it ignores expenditure side. Moreover, the revenue rule is practically difficult to implement since revenue might be procyclical, hindering economic stabilization features of fiscal policy.

Given trade-offs of each type of rule, many countries have adopted two or more measures as a guideline towards fiscal sustainability. Table 1 shows some examples of the combinations of rules in emerging economies.

**Table 1** Fiscal Rules in Emerging Economies

Country	Budget Balance Rule	Expenditure Rule	Revenue Rule	Debt Rule
<b>Brazil</b>	-	- Personnel expenditure not exceed 50% of net revenue for federal government	-	Changeable limits set by the Senate are in effect only in states and municipalities, not the central government
<u>Note:</u>		- Permanent spending cannot be created without permanent revenue increases or spending cuts		
- corrective measures are imposed in case of violations				
- Escape clause available in case of exceptional economic conditions				

Table 1 (Continued)

Country	Budget Balance Rule	Expenditure Rule	Revenue Rule	Debt Rule
<b>Chile</b>	<ul style="list-style-type: none"> <li>- Expenditures are budgeted based on ex-ante revenue (full employment, price of copper is at natural level)</li> <li>- set a target path to converge deficit to 1% of GDP</li> </ul>	-	-	-
<b>Colombia</b>	<ul style="list-style-type: none"> <li>- Set a target path for deficit</li> <li>- Lower deficit to 2.4% in 2014</li> <li>- Lower deficit to 1% in 2022</li> <li>Allow for fiscal expansion in case of adverse shocks</li> </ul>	Based on current expenditure growth	-	-
<b>Hungary</b> Notes: Subjected to both national and supranational fiscal rules (EU's Maastricht treaty)	<ul style="list-style-type: none"> <li>- Budget deficit not exceed 0.5% of GDP</li> </ul>	-	-	- Debt ratio not exceed 50% of GDP
<b>Indonesia</b>	Budget deficit is limited to 3% per year	-	-	Debt ratio not exceed 60% of GDP
<b>India</b>	Aiming to target deficit less than 3% of GDP in 2015			
<b>Malaysia</b>	<ul style="list-style-type: none"> <li>- Adoption of golden rule of fiscal policy, government can only borrow to invest</li> <li>- Implicit attempt to keep budget deficit under 3%</li> </ul>	-	-	<ul style="list-style-type: none"> <li>- Debt ratio not to exceed 55% of GDP</li> <li>- Control external debt (not exceed 35 million RM), debt issued by the government (not exceed 10 billion RM)</li> </ul>

Table 1 (Continued)

Country	Budget Balance Rule	Expenditure Rule	Revenue Rule	Debt Rule
<b>Mexico</b>	- Target budget balance in key public enterprises (e.g. central government, social security, electricity company)	SCS cannot grow faster than 2 percent in real terms through 2017 *structural current spending (SCS) defined as current primary expenditure including transfers to state and local governments for capital but excluding those outlays governed by automatic rules (pensions, subsidies for electricity and sub-national revenue-sharing)	-	-
<b>Peru</b>	- Structural deficit cannot exceed 1 percent of GDP for non-financial public sector	Set a ceiling for real growth expenditure of 4%	-	- Debt ceiling for non-financial public sector at 30% of GDP - Debt/revenue ratio should not exceed 100% for SNGs
<b>Poland</b> Notes: Subjected to both national and supranational fiscal rules (EU's Maastricht treaty)	- Set nominal anchor of budget deficit at 30 billion PLN for central government - Maintain balanced budget for local government	- Set a cap for expenditure to grow no more than GDP growth	-	- Debt ceiling at 60% of GDP - Corrective measures triggered when debt ratio reaches 50%,55%
<b>Russia</b>	-	- Ceiling on expenditure not to exceed 1% of GDP - Excess oil revenue from oil price above the base price should be saved up to 7% of GDP	-	-

Source: Schaechter et al. (2012)



In 2018, Thailand has legislated the fiscal responsibility law as a key to safeguarding governance in the fiscal system of the country. The act stipulates regulations on fiscal discipline, particularly in numerical limits. The main points are following.

1. The act sets up the framework on budget formulation, including the proportion of investment budget and repayment budget. The budget for investment should account for more than 20 percent of annual budget, and budget deficit must be no more than the capital expenditure. In terms of repayment budget, it must be sufficient to cover principal and interest repayments as well as expenses incurred by raising the loans.

2. The act also sets numerical targets for public debt management through setting a ceiling on following indicators.

- debt-to-GDP ratio must not exceed 60 percent.
- government debt service must be no more than 35 percent of estimated revenue.
- external debt to total debt must be no more than 10 percent.
- external debt service must be less than 5 percent of total exports.
- The budget for contingency fund for emergencies or immediate need shall be set to a minimum of 2 percent of total annual budget, but not exceed 3.5 percent of total annual budget.

- The budget for principal payments shall be set to a minimum of 2.5 percent of total annual budget, but not exceed 3.5 percent of total annual budget.

- Multi-year commitment budget shall not exceed 10 percent of total annual budget.

- Multi-year commitment which falls outside those stipulated in the Budget Act shall not exceed 5 percent of total annual budget.

- Compensation rate or revenue loss of government agencies shall not exceed 30 percent (Ministry of Finance, 2018)

Moreover, as instructed in the fiscal responsibility act, the medium term fiscal framework (MTFF) is instituted. It is a guideline to budget planning and debt management in accordance to the fiscal rules. The framework sets the timeframe of no less than three years, and it must be formulated within three months after the end of each fiscal year. The main features include the objectives of policy measures, the overview of current macroeconomic conditions, and the analysis of fiscal position and debt status.

### **Concerns regarding fiscal sustainability (The case of Thailand)**

Fiscal soundness can be sustained as a government can smoothly finance its obligations without exploding public debt over time. In case of Thailand, following factors are considered to be challenges for the government in maintaining fiscal sustainability.

#### **1. Debt-relevant ratios**

The ultimate goal of fiscal policy is to enhance economic resilience; therefore, in response to unfavorable shocks, fiscal policy could play a big role in economic stabilization. In this case, such action could affect the fiscal stance of the country. In order to gauge fiscal

soundness, debt-relevant ratios are traditionally used. Making a ratio provides an ease in terms of interpretation and comparison, compared with the absolute term. Therefore, a traditional way of assessing fiscal sustainability commonly normalizes the country's debt stock or deficits to its GDP, measuring the financial leverage of the economy. The ratio also illustrates the ability to finance the country's obligation as it incorporates the economic growth, represented by GDP, into consideration.

Debt to GDP ratio is used internationally as an appraisal of fiscal soundness. The ratio represents the accumulation of public debt of a country. However, due to a limited and delayed policy impact on the stock, the measure is long-term oriented, leading to unclear operational guidance in the short run. On the other hand, another worth-examining ratio is the proportion of budget balance to GDP. The ratio provides short run prospects of debt sustainability since it measures revenue and expenditure relatively to the annual budget; therefore, it is easier to formulate operational guideline for debt management strategy.

In case of Thailand, the debt ratio ceiling has been included into fiscal responsibility law, stating that the ratio should not exceed 60 percent of the GDP. The number is consistent with the results from the empirical research based on the concept of fiscal space (Asava-vallobh, 2014). The research estimated the fiscal reaction function and calculated the ceiling of sustainable debt ratio. Figure 3 shows that, throughout the history, Thailand has been committing to the ceiling of 60 percent, reflecting sustainable fiscal position. Despite a surge of debt stock during crisis period, the Thai government has been pursuing fiscal consolidation to lessen the debt level to an acceptable range

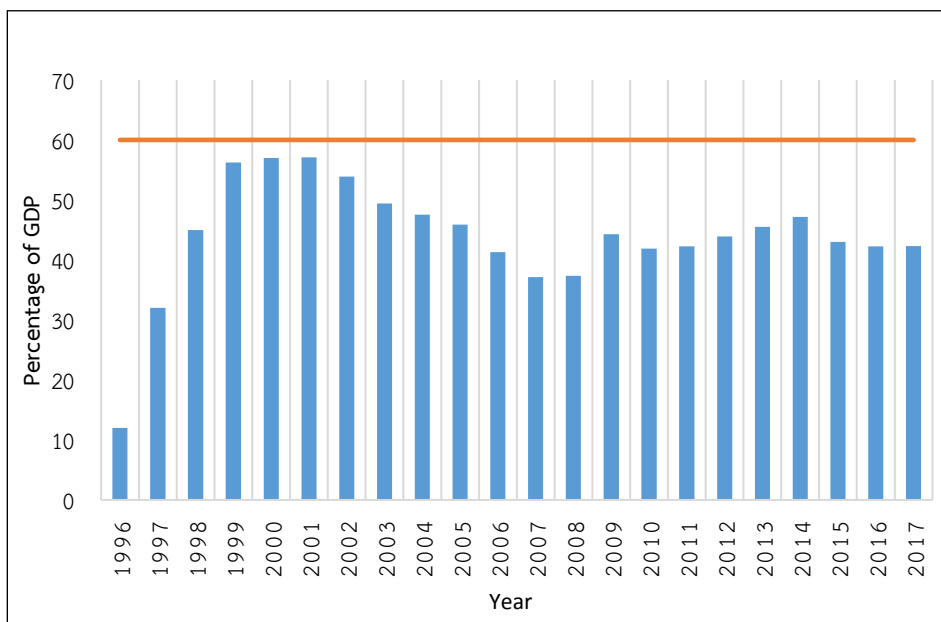
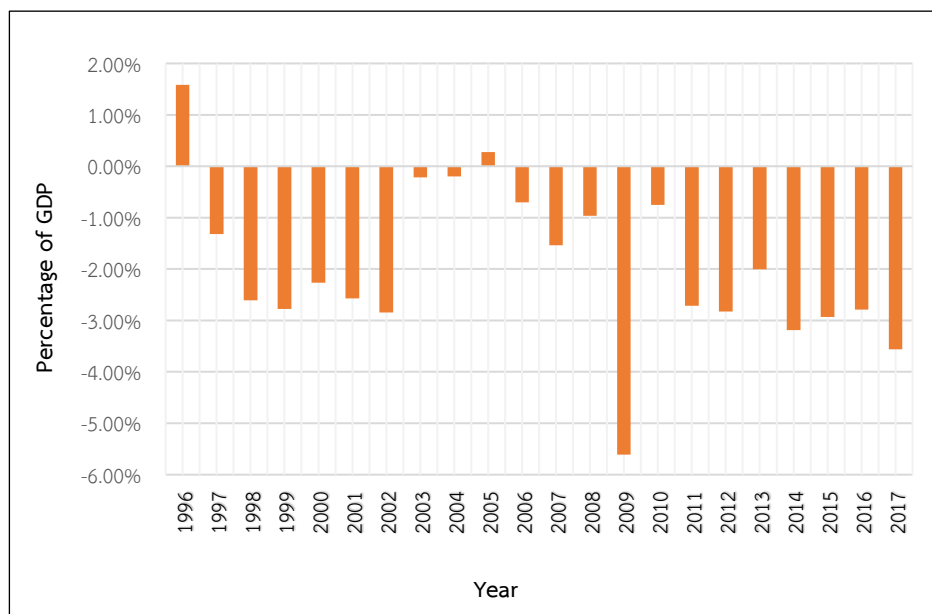


FIGURE 3 Thailand government debt to gdp

Source: Fiscal Policy Office (2018)



**Figure 4** Government Budget Balance to GDP

Source: Fiscal Policy Office (2018)

The ratio between government budget to GDP is another measure used internationally to assess fiscal sustainability. Generally, many countries have set the extent of budget deficit not to exceed three percent. When considering in the context of Thailand, as a result of near term stimulus and investment in infrastructure, the deficits are expected to be widened in 2017. However, the country's ongoing fiscal regime does not create excessive budget deficits. Moreover, the country's fiscal stance remains robust as the debt stock is in line with the threshold set by the recently enacted fiscal responsibility law

## 2. Macroeconomic Environment

Macroeconomic environment also plays an important role in determining fiscal sustainability of a government. Under the view of macroeconomics, various sectors are closely intertwined. Consequently, to maintain fiscal sustainability, it is crucial to consider movement of such sectors. The macroeconomic identity states that the sum of private sector, public sector and foreign sector balance must equal to zero, meaning that money comes from somewhere and goes somewhere (i.e. the transaction balances). After rearranging the identity, equation 2 implies that cutting the deficit is not just simply decreasing government expenditure and increasing tax revenue since these actions will affect the other variables in the national income identity. Therefore, in order to maintain primary budget surplus, necessary conditions are narrowing foreign sector balance by maintaining a positive current account by promoting exports and narrowing private sector balance by increasing domestic investment.

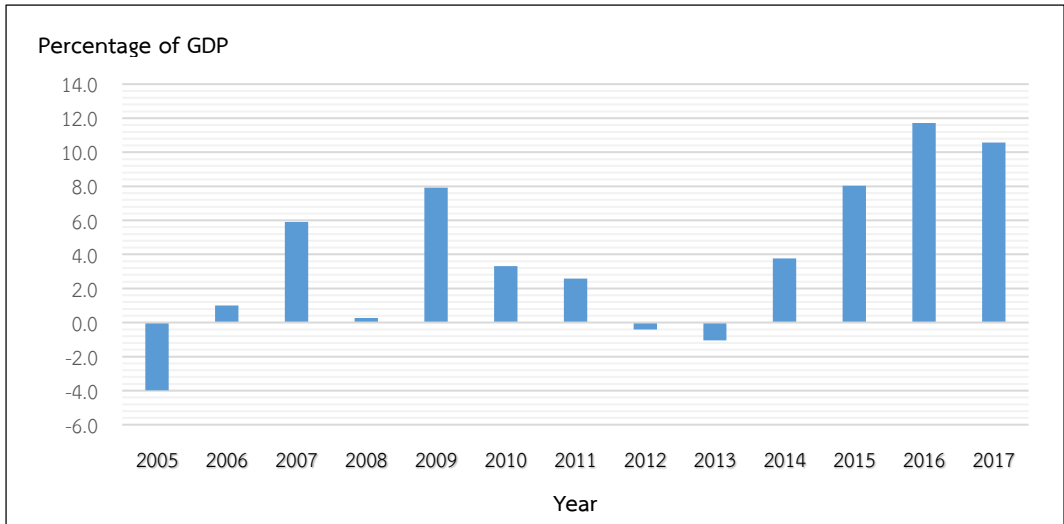
$$\underbrace{(I-S)} + \underbrace{(G-T)} + \underbrace{(X-M)} = 0 \quad (1)$$

Private sector balance	Public sector balance	Foreign sector balance
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$$T - G = (X - M) + (I - S) \quad (2)$$

- Notes:
- I stands for investment.
  - S stands for saving.
  - G stands for government expenditure.
  - T stands for tax revenue.
  - X stands for exports.
  - M stands for imports.

Thailand's macroeconomic environments (i.e. exports and investment) have been supportive in achieving fiscal sustainability. Firstly, figure 5 illustrates Thailand's current account as percentage of GDP from 2005-2017. Overall, the country has been maintaining current account surplus which is favorable to fiscal soundness. Averagely, throughout the period of 13 years, Thailand has maintained a surplus of 3.81 percent to GDP. Moreover, the government of Thailand also promotes exports by enhance competitiveness of Thai exporters and focusing 10 targeted industries as in Thailand 4.0 plan which could be emerging export industries. In terms of investment, Thailand has been a destination for foreign direct investment. Owing to strategic location and highly developed infrastructure, the country has been experiencing the inflow's growth of 21 percent over the past 6 years (Thailand Board of Investment, 2018). Furthermore, Thailand Board of Investment was established to promote investment by supporting favorable environment as well as providing investment incentives. Moreover, as in the fiscal sustainability law in 2018, it is mandatory that 20 percent of total budgetary expenditure must be allocated to investment spending; hence, this assures the investment from public sector.

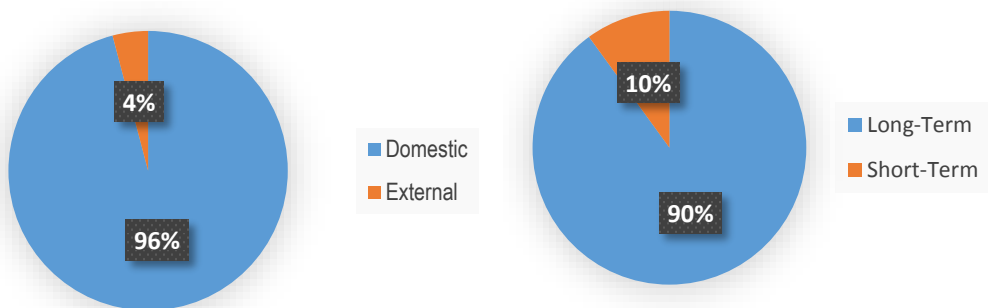


**FIGURE 5** Current Account As Percentage of GDP

Source: Fiscal Policy Office (2018)

### 3. Debt Structure

The qualitative feature of debt also plays a vital role in determining fiscal sustainability. According to European Commission (2018), there are strong linkages between the structure of debt and fiscal sustainability in the sense that debt structure can determine the vulnerability of the country’s fiscal stance to exogenous shocks. Several aspects, including debt denomination and term structure, pose additional risks to public finance. Domestic debt could put the economy at risks of crowding out effect, while foreign debt could bring about exchange rate fluctuation risks and risks of capital flight. In terms of term structure, it is recommended to match the maturity of debt to the term of the projects being financed to prevent maturity mismatch which could lead to higher rollover risks.



(a) Term Structure (Time to Maturity)

(b) Debt Denomination

**Figure 6** Thailand’s Debt Structure

Source: Public Debt Management Office (2018)

Thailand has been well-managing the debt structure. The public debt management office closely monitors such issue to prevent the aforementioned risks and lower costs of capital. Figure 6 illustrates the structure of debt of Thai government in 2018. In terms of the term structure, fiscal risks associated with this angle appear to be modest since 90 percent of debt is in long-term which is consistent to the government's long-term infrastructure investment project. Moreover, Thailand has a low risk of crowding out effect since the country has sufficient liquidity due to persistent current account surplus and the maintenance of stability of financial system by the BOT through nondistortionary instruments. Therefore, liquidity and rollover risks are mitigated. On the other hand, Thailand has robust external debt position as represented by large current account surplus, high foreign reserves and low commodity dependence (Fitch, 2017). Moreover, the economy has learnt the lessons from the Asian Financial crisis in 1997 as Thai baht depreciated by half, causing the value of external debt to double. Hence, to mitigate risks from exchange rate fluctuations, the government of Thailand overwhelmingly finances itself in domestic currency. Therefore, as a prudential approach to prevent overreliance on external financing, the country's fiscal responsibility law states that the external debt is imposed not to exceed 10 percent of total debt.

#### 4. Contingent Liabilities

Contingent liabilities can pose a number of risks to fiscal sustainability (Kawai & Morgan, 2013). During economic downturns, the output growth is stagnated, causing contingent liabilities to be realized as the number of non-performing loans increases. If they exceed some extent, the government may have to bail out certain sectors. Moreover, an increase in debt from the realization of contingent liabilities could stagger the confidence of the country, giving rise to the emergence of a sovereign and banking crises which require remedial actions from the government. In other word, a fall in the value of government bonds resulted from loss of confidence leads to solvency problems among banks, causing them to sell more bonds, and eventually setting a vicious cycle; hence, it is suggested that the holders of government bonds should be diversified, limiting holdings among certain sectors, particularly in banking sector.

Compared to other Asian emerging economies, the share of government bond held by investors in Thailand (as shown in Table 2) is relatively well-diversified than the others, showing smaller risks to fiscal sustainability.

**Table 2** Share of Government Bond held by Investor in Asian Emerging Economies

Country	Banks	Other domestic Fls	Government		Central bank	Foreign holdings	Others
China		77.0	10.5	0.0	0.0	--	13.3
Indonesia		39.1	17.8	--	0.6	29.6	42.7
Japan		38.4	27.6	9.6	10.2	8.7	14.2
Republic of Korea		18.8	43.3	23.2	2.8	10.0	31.2
Malaysia		44.1	71.6	1.0	0.4	27.1	27.1
Thailand		15.8	51.6	1.0	6.2	15.0	10.4

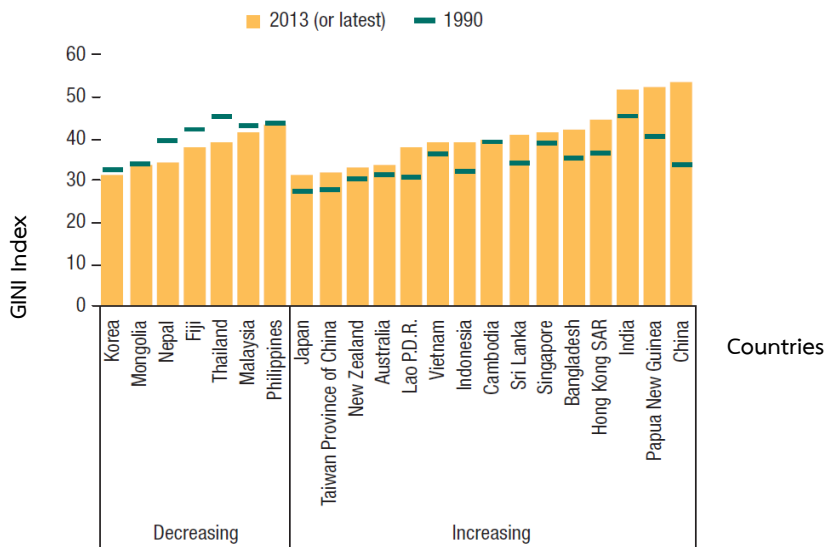
Source: Kawai and Morgan (2013)

In addition, as a guarantor of state-owned enterprises, the government also intends to reduce the burden of contingent liabilities by commercializing the state-owned enterprise (SOEs). As in the law on improving Governance of State-owned enterprise, the government intends to become a regular shareholder in the organizations, reducing transfer payment and increasing revenue contribution from the entities (Moody's, 2017). In addition, by so doing could reduce bureaucratic procedures and promote business agility.

#### 5. Medium-Term Challenges

Despite strong fiscal stance, Thailand is encountering several challenges of fiscal sustainability, including aging population and income inequality.

Firstly, the country's population is aging rapidly. Not only does the labor force shrink, but the phenomenon also incurs substantial costs to the government as the expenditure on pension, healthcare and old-aged related spending increases. According to World Bank (2016), along with China, Thailand has the highest proportion of elderly people among developing countries, reaching 11 percent in 2016. Moreover, it is forecasted that the number will reach 35 percent of total population in 2040. Therefore, the demographic transition towards aging society poses greater fiscal burden to the government in the long-run.



**Figure 7** Net GINI Index in Selected Asian Countries

Source: International Monetary Fund (2017)

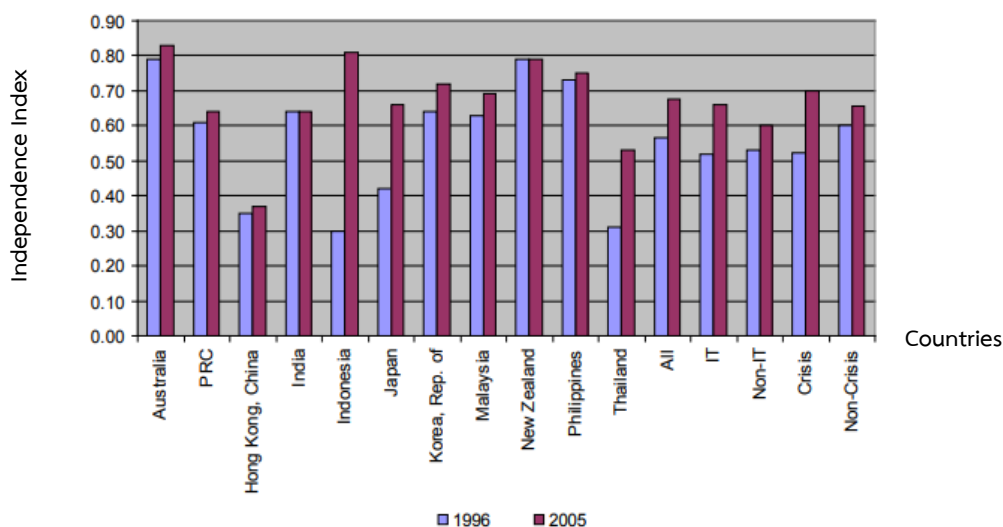
Secondly, Figure 7 shows inclusive growth with equitable distribution is a key to sustain growth in the long run. According to International Monetary Fund (2016), the durability of growth is negatively correlated with the inequality within a country, meaning that the higher the levels of inequality the shorter growth spells. Hence, in order to maintain favorable interest rate growth differential and viable tax revenue stream, it is imperative to reduce inequality and promote inclusive growth.

In response to such challenges, the government has implemented several policies as a key to safeguarding the sustainability. Despite shrinking labor force, Thailand 4.0 policy has been promoted to enhance the technological progress; hence, this could increase the productivity and offset the impact of aging population. Moreover, the labor market has shown a sign of slackness as the unemployment rate, especially in manufacturing sector, increases slightly in the past two years. However, the PMI index is still above the threshold of 50, showing that the industry is still expanding. In terms of inequality, the government has been undertaking pro-poor initiatives to promote inclusive growth, such as the Universal Healthcare Program and the Revolving Funds for villages. The policies are found to benefit the poor more than the rich; hence, it is progressive in the sense that it transfers prosperity from the rich to the poor (International Monetary Fund, 2016). In addition, welfare card project also aims at alleviating poverty by providing subsidy for those who live under poverty line and promote their career prospects by offering job training programs. Through the past two decades, Thailand has achieved an impressive reduction of inequality. The country's GINI coefficient index fell from 45.3 in 1990 to 37.8 in 2013 (International Monetary Fund, 2016).



## 6. Good Governance Practices

Poor governance practices are considered to be a main impediment of public finance sustainability since it results in inefficient budget utilization. As a path way to greater efficiency, Thai government has been trying to incorporate technologies and innovation into policy formulation and implementation. This is exemplified by the use of big data in the government's subsidy projects for the poor to enhance their livelihood. The technology allows for result tracking, leading to greater efficiency, accountability and inclusion. In addition, the big data technology likewise helps the government in terms of tax collection as it provides a greater access to the lists of tax payer and track their tax payment. Hence, such initiative is believed to help in exalting fiscal policy quantitatively and qualitatively. Moreover, it is imperative to set up the mechanism dealing with temptations to create excessive debt. As in the aforementioned fiscal responsibility act, it is required to report the situation of public debt to the committee twice a year to evaluate and ensure that the situation is on track and under control. Any diversion is subjected to punishment by laws. In addition, central bank independence is also crucial in controlling public debt. As empirical evidences show, many countries experiencing soaring debt level appear to monetize the debt, accelerating inflationary pressure as money supply increases. Therefore, independence should be granted to the central bank to safeguard themselves from the short-term influence of the government. The Bank of Thailand is said to be independent. The study about central bank's independence in 72 countries by Alex, Steven, and Bilin (1992) showed that Thailand is ranked number 35. Moreover, the independence index has been improved considerably from 1995 to 2005 (as shown in Figure 8).



**Figure 8** Central Bank Independence and Governance  
Source: Ashan, Skully, and Wickramanayake (2008)

## Assessing Fiscal Sustainability in Thailand

In the previous section, factors affecting fiscal sustainability are discussed, and the current situation in Thai context is illustrated. As fiscal sustainability is a national phenomenon; therefore, the issue is under profound surveillance by market participants. Hence, the perceptions from various economic sectors are a good proxy for current fiscal stance as well as the results of the government's endeavor on managing fiscal sustainability.

1. Legal Perspective. Preceding the recently enacted fiscal responsibility act, an important framework on maintaining fiscal soundness is the budget setting laws, stating that budget deficit from financing budgetary budget deficit shall not exceed 20 percent of annual budget expenditure and 80 percent of principal repayment budget. In 2018, the extent of budget deficit in Thailand is far less than the aforementioned ceiling. The ceiling is set to be 680 billion THB in accordance to the annual budget. However, the actual budget deficit (including additional budget) is 550 billion THB.

In addition, a legislation of fiscal responsibility act, which is in effect since April 20th, 2018, could assure greater fiscal resilience. As shown in table 3, Thailand has been committing fiscal discipline consistent with the act by maintaining the following numerical limits under the predetermined level.

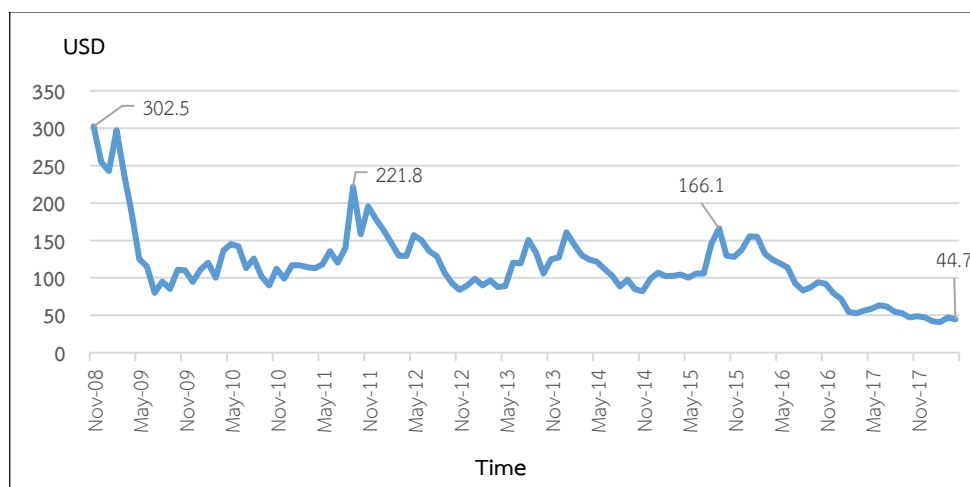
**Table 3** Numerical Ceilings on Fiscal Discipline

List of Ratios	Predetermined Ceiling (in percentage)	Current value	
		2017	2018
Debt to GDP	60%	42.4%	40.78%
Government Debt Service to Estimated Revenue	35%	27.1%	19.6%
External Debt to Total Debt	10%	4.8%	3.9%
External Debt to Total Export in Foreign Currency	5%	0.7%	0.4%
The Budget for Contingency Fund for Emergencies or Immediate Need to Total Annual Budget	2-3.5%	3.3%	3.2%
The Budget for Principal Payments to Total Annual Budget	2.5-3.5%	2.8%	2.9%
Multi-year Commitment Budget to Total Annual Budget	10%	8.5%	8.4%
Multi-year Commitment which falls outside those stipulated in the Budget Act to Total Annual Budget	5%	0.1%	4.4%

Source: Fiscal Policy Office (2018)

2. Market Perspective. The reflection of government's creditability is channeled through the return or premium of sovereign financial securities, especially government bonds. However, several forces could alter the figure in an erroneous manner, including the policy rates, inflation expectation, and investor's speculation. Therefore, a good proxy representing market perception of sovereign default risks is the premium of the credit default swap of sovereign bonds (CDS). Generally, CDS acts like an insurance policy for sovereign bonds holders. The higher the

premium, the higher possibility of CDS. Hence, CDS is a good measure to assess the fiscal position of the government. Figure 9 shows Thailand's sovereignty CDS spread. The premium has been showing a downward trend, reaching the lowest point at 44.7 USD in January 2018.



**Figure 9** Thailand's Credit Default Swap Premium

Source: Bloomberg 2018

Moreover, comparing with countries with similar credit rating, Thailand has the lowest CDS spread among the peer group with 'BBB' credit rating (as shown in table 4), meaning that the country's sovereign default risk is relatively lower as a result of strong fiscal position.

**Table 4** Credit Rating and CDS Spread

Country	S&P's Credit Rating	Lowest CDS Spread
Thailand	BBB+	44.7
Poland	BBB+	66.70
Portugal	BBB-	96.30
Russia	BBB-	144.95
Mexico	BBB+	178.00
Italy	BBB	203.80
Brazil	BB-	269.10

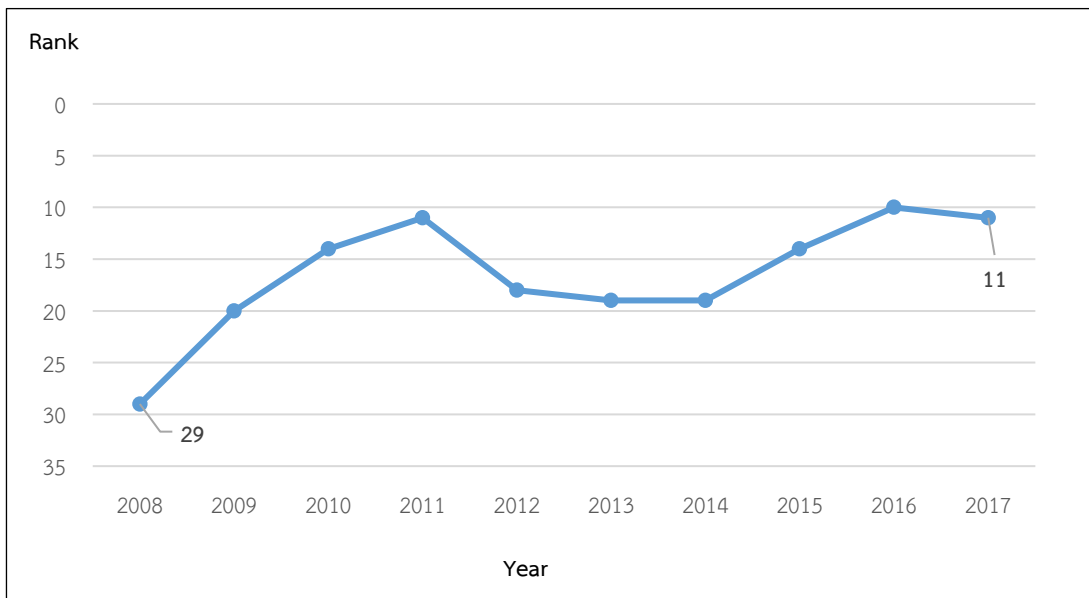
Source: Worldgovernmentbonds.com (2018), Tradingeconomics.com (2018)

3. Credit Rating Agencies Perspective. The perception of fiscal stance from credit rating agencies might reflect different views from the perspectives from the financial market. Credit rating agencies would generally incorporate facts and fundamental factors, representing unbiased long-term prospects, while the financial markets view mostly pays attention to

short-term economic outlook and speculation. Hence, the results from credit rating agencies could be a explanatory measure of fiscal sustainability.

According to Fitch (2017), comparing with the peer group with ‘BBB’ rating, Thailand’s public finance stance was in a strong position. This was due to the fact that the budget deficit is lower than the median of ‘BBB’ peer group, despite a substantial increase in capital expenditure, and the deficit is funded in local currency, lowering exchange rates fluctuation risks. Moreover, the country’s macroeconomic environment is resilience from external shocks. The result is also in line with the analysis from Moody’s (2017). Thailand’s fiscal strength was set at “very high” level as reflected by its well-performed debt levels and debt affordability. Moreover, in terms of sovereign credit rating, Thai government bonds receive the rating of Baa1, BBB+ and BBB+ from S&P, Moody’s and Fitch respectively. In addition, the prospects of the rating will remain stable.

4. Business Sector Perspective. The perspective of business sector is represented by the IMD competitiveness index published by the Swiss-based International Institute for Management Development (IMD). The measure illustrates competitiveness of a nation in different facets. In 2018, Thailand received the score of 79.45. In 2018, Thailand is ranked at the 30th place in the overall competitiveness (International Institute for Management Development, 2018). Furthermore, in terms of public finance, the country is in high ranked position. In 2017, the country is ranked at the 11th place (as shown in figure 10). Therefore, fiscal position is considered to be one of Thailand’s competitive edge.

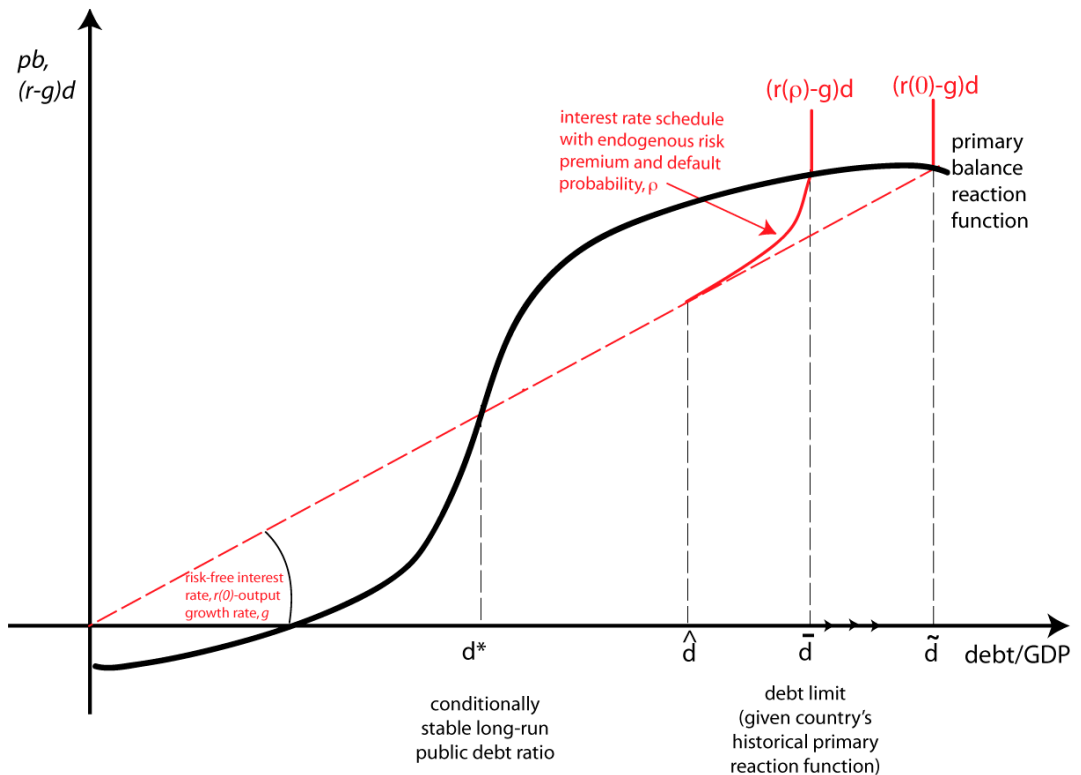


**Figure 10** IMD Competitiveness Index (Public Finance)

Source: International Institute for Management Development (2018)

5. Academic Perspective. Asava-vallobh (2014) conducted a detailed study about fiscal sustainability in Thailand. The research adopted the concept of fiscal space to determine whether or not the country has enough room for discretionary fiscal policy by examining the government’s responsiveness to an increase in public debt.

The government reaction function can be estimated by regressing a primary balance on public debt and other controlling variables (i.e. output gap, government expenditure gap, inflation and trade openness). The s-curve illustrates the reaction function, and the straight line from the origin is the product of interest rates-growth differential (IRGD) and debt level, representing growth-adjusted interest burden of public debt. In addition, the intersection point determines the equilibrium debt stock ( $d^*$ ) since the primary surpluses fully cover the interest payments, and the debt ceiling  $\tilde{d}$  is where the dotted line and the s-curve intersect.



**Figure 11** Determination of Equilibrium Debt Level and Debt Ceiling

Source: Ostry, Ghosh, Kim, and Qureshi (2010)

The empirical results show that the intersection of the s-curve and the IRGD line, representing the equilibrium debt level, is at 45.3 percent. The number is quite consistent with the country’s current debt-to-GDP ratio at 40.8 percent (as of May 2018).

**Table 5** Credit Rating and CDS Spread

Variables	Estimated Coefficient	P-value
Lagged Debt-to-GDP (LD)	-3.804407	0.0149
Squared Lagged Debt-to-GDP (LD <sup>2</sup> )	0.089893	0.0439
Cubed Lagged Debt-to-GDP (LD <sup>3</sup> )	-0.000680	0.0851
Output Gap (OG)	-6.80E-06	0.0054
Government Expenditure Gap (GEG)	-6.40E-05	0.0167
Trade Openness (OPEN)	0.357924	0.0000
Inflation (INF)	-0.205367	0.0082

Note: Assume that the interest rate-growth differential is -3 percent, given that an average of the interest rate on loans is 4.5 percent, and an average of medium term nominal GDP growth is 7.5 percent.

Source: Asava-vallobh (2014)

In addition, the model also determines the ceiling of the debt ratio at 60 percent. It shows that Thailand has been well-maintaining its debt-to-GDP ratio below the ceiling, reflecting fiscal sustainability in the country.

## Conclusions

The issue of fiscal sustainability has been given an utmost importance recently as a result of surging debt level in many advanced economies. Therefore, to address such issue, it is crucial to understand the concept of fiscal sustainability. However, the definition and the approach towards assessing fiscal sustainability remain ambiguous. Consequently, several studies illustrate the concept in various ways, such as debt dynamic, intertemporal budget constraint, fiscal reaction function and fiscal space. Moreover, many countries, including Thailand, have started enacting fiscal rules which are classified into four main types, including debt rule, budget rule, revenue rule and expenditure rule. As a result, Thailand is able to keep its debt-to-GDP ratio well below 60% which is the limit set by Thailand's fiscal responsibility law. Budget deficit is contained within 3% with no sign of excessive deficit. Macroeconomic environment of Thailand in exports and investment has been supportive for achieving fiscal sustainability with current account surplus of 3.81% to GDP and high level of infrastructure investment. Debt structure has been kept predominantly long-term preventing short-term debt shocks and sharp increase in debt dynamics. Thailand is also well-diversified in share of government bond holders. However, like many countries with similar development, Thailand is also facing aging population which proves to be fiscal burden in the future forecasting the number of aging population to be 35% in 2040 and moderate income inequality that can impede growth path of Thailand. Several measures have been implemented since to alleviate all these medium-term challenges.

In addition to outstanding debt sustainability performance from Thailand perspectives, perceptions from various economic sectors also confirm this is the case. In legal perspective, Thailand manages to maintain its debt lower than legal ceiling of 60% to GDP. Thailand also

maintain a low CDS premium, which reflects that Thailand is less likely to default implying a healthy debt figures. Credit rating agencies such as Fitch and Moody have also rated public finance of Thailand as strong and resilient. Moreover, IMD competitive index has rated Thailand as highly efficient in public finance management. Finally, academic research has also confirmed that current debt-to-GDP ratio is well below the ceiling.

In conclusion, it is imperative to consider allocating the budget to the most efficient use. To maintain sufficient resource for policy implementation and remain in strong fiscal stance, fiscal sustainability is an attentive issue. Therefore, further study on the way to manage such risks and create that fine balance is recommended as a pathway to maintain long-term fiscal soundness and resource sufficiency for future fiscal policy implementation.

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