# **ASSESSMENT ON THE IMPACT OF STIMULUS, FISCAL TRANSPARENCY AND FISCAL RISK**

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# **TABLE OF CONTENTS**

	Table of Contents	i
	List of Project Members	ii
CHAPTER 1.	Assessment on the Impact of Stimulus, Fiskal Transparency and Fiskal Risk: Overview of the 8 Asian Countries	1
CHAPTER 2.	Takatoshi Ito   Sustainability of Japanese Sovereign Debt	29
	Takatoshi Ito	
CHAPTER 3.	China's Fiscal Policy and Fiscal Sustainability	77
	Shuanglin Lin	
CHAPTER 4.	Efficacy and Sustainability of Fiscal Policies - A Case of Korea -	117
	Seok-Kyun Hur and Seong Tae Kim	
CHAPTER 5.	Mild Crisis, Half Hearted Fiscal Stimulus: Indonesia During The GFC	169
	Muhammad Chatib Basri and Sjamsu Rahardja	
CHAPTER 6.	Assessment on the Impact of the Fiscal Stimulus, Fiscal Risk and Fiscal Transparency: The Philippines	213
	Rosario G. Manasan	
CHAPTER 7.	Fiscal Issues in ThailandAssessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk	253
	Kanit Sangsubhan and Rapeesupa Wangcharoenrung	
CHAPTER 8.	Fiscal Issue in Vietnam Economy: Assessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk	301
	Nguyen Ngoc Anh, Nguyen Dinh Chuc, Nguyen Duc Nhat and Bui Thu Ha	
CHAPTER 9.	Assessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk: Evidences from India	335

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# **CHAPTER 1**

# Assessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk: Overview of the 8 Asian Countries

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#### 1. Global and Regional Background

#### Introduction

Although the theme of this volume is fiscal policy in the wake of the Global Financial Crisis (GFC), what happened in the GFC have to be explained first as a background. The GFC is commonly identified as financial and capital markets difficulties, failures of financial institutions, mainly in the US and Europe, and global declines in economic activities in 2007-2009. The financial troubles were limited among the US and European investment banks between 2007 and fall of 2008, and the global spillovers occurred after the failure of Lehman Brothers in September 2008.

The GFC of 2007-09 has left serious scars on the Asian economies as well as the US and European economies. The epicenter of GFC was the housing bubble in the early 1990s to 2007 and eventual burst in 2007-2009 in the United States. However, through securitization, the burst bubble in the United States made damaging impacts on financial institutions, institutional investors, such as pension funds, hedge funds, and retail investors across the world, but more so in advanced countries, and especially in the United States and Europe. As the global risk aversion suddenly rose after the

failure of the Lehman Brothers in September 2008, many money and capital markets suddenly lost normal pricing and became dysfunctional. The US and European markets were most severely affected.

The Asian financial institutions were mainly distant from a chaos in the United States and Europe because they did not own "toxic assets," i.e., mortgage back securities (MBS) and structured products (CDO) that have MBS as underlying assets, in contrast to major US and European banks. The Asian economies were not affected severely before the fall of 2008, unlike the slowdown in the US economy that had already started in 2007. However, after the Lehman failure, the economic activities, business sentiment and consumer confidence completely changed in a global scale. Major global financial markets also became very dysfunctional and even Asian financial institutions were affected in obtaining US dollar liquidity. The exchange rate became volatile, as the yen soared and the euro plummeted. Several emerging market exchange rates experienced heavy depreciating pressure, as hedge funds and other institutional investors pull reversed their investment to prepare for retail investors' cash redemption.

In response to these developments in the financial markets, many central banks immediately eased their monetary policies, and the government started to employ expansionary fiscal policies. Both monetary and fiscal policies were quickly directed to managing aggregate demand.

Sharp slowdown of the US economy and, to lesser extent, the European economies occurred in the wake of the Lehman failure. Import demands in these economies plummeted, and the Asian economies, as exporters to these markets, found themselves in a severe recession. Exports declined with unprecedentedly high rate in the last

quarter of 2008 and first quarter of 2009; in some countries by more than 50% compared to the same quarter of the previous year. Japan, Korea and Singapore, among others were hit with declines in their exports of semi-durable consumer goods and high tech components. With the exports being an important engine for growth, the Asian economies went into severe output losses. The more sophisticated consumer semi-durables they export, the more they suffered, as the US and European consumers delayed purchase of consumer durables. Negative growth rates were registered in the last quarter of 2008 and the first quarter of 2009 in many Asian countries, with notable exceptions of China, India, and Indonesia, where domestic demand growth more than offset sharp decline in exports. In China, India, and Indonesia, the growth rates

Asia was no exception to active policy interventions responding to declines in activities in private-sector activities. Central banks quickly lowered the interest rate and fiscal policies were employed.

#### **GFC Impact on Macroeconomic Performances in Asia**

The GFC was a major downward shock for the Asian countries, but how bad was it? The GFC was talked about among advanced countries, as one in 100 year event. But was it so for Asian countries? In fact, the economic downturn for most Asian countries in 2009 was less severe than that in the aftermath of the Asian currency crisis in 1998. Figure 1 shows this. There are three reasons for this. First, the Asian currency crisis destroyed the financial markets and institutions in Asia—just like the US and Europe in 2008-09—while Asia did not experience a systemic problem in the financial sectors in GFC. Second, the epicenter of the crisis was in Asia in 1998, while a crisis was transmitted to Asia mainly via trade channels in 2009. It was much milder in 2009 as a shock to the Asian economies. Third, the Asian countries reacted to the shock with monetary and fiscal policies appropriately in 2009. Lowering the interest rate and massive fiscal spending was much faster in 2009 than in 1998.



Figure 1. Gross domestic product, constant prices

Data Source: IMF, WEO data base, April 2011

As buyers of securities have disappeared from many traditionally-safe financial markets in the US and Europe, the Federal Reserve of the United States and European Central Bank poured in a large amount of liquidity, and started to purchase risky assets, which they do not hold in normal times, directly from the market. Credit easing was the term that Chairman Bernanke used to explain the new central bank policy to counter severe market stress in 2009. Both Bank of England (BOE) and European Central Bank (ECB) started to purchase government bonds. The three central banks, FRB, BOE, and ECB rapidly expanded their balance sheets after the Lehman failures. FRB

also extended the swap agreement with G10 countries and several emerging market economies. Among the Asian countries, Korea and Singapore received the swap agreements with the FRB, and Korea used it extensively. As the Asian economies fell into a serious recession, Asian central banks also lowered the interest rate and support the economy.

In addition to unconventional monetary policy, the governments of major countries also used the fiscal policy. They started to increase spending and to lower taxes. Prior to GFC, many economists had become skeptical about the virtue of Keynesian fine-tuning, i.e., use discretionary fiscal spending/tax cut during a recession, while reverse it when the economy is in boom. However, when the GFC occurred, the United States and European countries did not hesitate to introduce expansionary fiscal policies. In the London Summit of G20 coordinated fiscal expansion was pledged.

During the GFC, the advanced countries experienced deflationary pressure along with stagnation in output. Asian countries also received deflationary pressure. The inflation rate of the most Asian countries dropped from 2008 to 2009, as shown in Figure 2. However, significance of this deflationary pressure differs across countries. Some high-inflation countries like Vietnam and Indonesia, a correction was from too high an inflation rate to a moderate one. India did not experience any decline in the inflation rate.

There is a contrast between the Asian crisis and the GFC in terms of the inflation rate. In 1998, the inflation rate for most crisis countries rose sharply, reflecting importing inflation caused by sharp currency depreciation. In 2009, although output activities were subdued due to decreased export demand, while the exchange rate depreciated only mildly. In short, the Asian crisis produced stagflation in 1998, while

the GFC produced a traditional recession from decreased exports. In terms of policy responses, it was much easier to cope with in 2009. The straight fiscal spending to stimulate domestic demand that would replace diminished external demand is the right policy.



Figure 2. Inflation, average consumer prices

Data Source: IMF, WEO data base, April 2011

The movement of the unemployment rate is also consistent with the findings from Figures 1 and 2, namely, the GFC was milder compared to the Asian crisis for Asian countries. The sharp increases in the unemployment rate in Thailand ad Korea during the Asian crisis was much more prominent that any increase in the unemployment rate in 2009, as depicted in Figure 3. In the GFC period, only Japan, Vietnam, and Korea experienced a moderate increase in the unemployment from 2008 to 2009.

Figure 3. Unemployment rate



Data Source: IMF, WEO data base, April 2011

#### **Policy Responses to GFC**

In response to the downturn in the GFC of 2007-09, most Asian countries adopted monetary easing and fiscal spending, just like the United States and European counties. advanced countries. From 2008 to 2009, all Asian countries cut interest rate, as shown in Figure 4. The policy rate of India declined by more than 5% point. Korea also cut the interest rate sharply. Japanese policy rate was only 0.5% before the Lehman Brother's failure, hence cutting it to zero did not have a large impact as the interest rate policy. However, the Bank of Japan adopted unconventional monetary policy, and started to purchase risky securities as well as increased the outright purchase of the government bonds.



Figure 4. Policy (Discount) Rate

Data Source: IMF, IFS and CEIC data base

Asian countries adopted traditional fiscal policies as well as monetary easing. In many countries, fiscal easing took place as stimulus packages that had spending programs as a main pillar, with some tax cut and subsidies. Figure 5 shows the general government fiscal expenditures. Except for India and Indonesia, all other countries experienced increases in the total expenditures form 2008 to 2009. Before GFC, the expenditure/GDP ratio was already high for Japan and Vietnam, and they increased the ratio more so than other countries.

Some countries increased subsidies and decreased taxes, which works on the revenue side. Combining both increases in spending and cuts in taxes, the fiscal deficits widened (or surpluses diminished) in all Asian countries from 2008 to 2009, as shown in Figure 6. The largest change was seen in Vietnam (8 % point) and Japan (6 % point). Other countries increased deficits by 2 to 3 % points.



Figure 5. General government total expenditure in % of GDP

Data Source: IMF, WEO data base, April 2011



Figure 6. General government net lending/borrowing in % of GDP

Data Source: IMF, WEO data base, April 2011

As a result of increasing deficits, the debt-GDP ratio, as shown in Figure 7, tends to increase. This is most evident for Japan. The debt-GDP ratio increased sharply from 2008 to 2009. However, the change in the debt-GDP ratio in other Asian countries in the same period was either minimal or negligible. Of course the sustainability of fiscal situation is not completely tied to the debt-GDP ratio,



Figure 7. General government gross debt in % of GDP

Data Source: IMF, WEO data base, April 2011

Figure 7 also reveals a history of fiscal prudence among Thailand, Korea, and China. They started to show an increasing trend only after 1997. India and the Philippines have had high debt/GDP ratio.

#### Role of G20

Triggered by sharp declines in financial and economic activities following the failure of Lehman Brothers, leaders of the major countries called for some framework to discuss financial issues to avoid the repeat of the Great Depression. Leaders of France and Germany, as well as Britain, were quite vocal in creating the new Summit that involves emerging market countries in addition to G7. As leaders were hasty in creating a group for leaders, they decided to use the grouping of G20 Finance Ministers and Central bank governors meeting. They created the leaders' version of G20—thus, "the G20 Summit" was born in November 2008. The meeting was held in Washington, DC.

In G7, Japan was the only Asian country. In G20, China, Japan, Indonesia, Korea, Australia, and India belong to G20. On the one hand, having six countries from Asia is a good beginning that Asian agenda can be pushed in the conference. On the other hand, the group of twenty countries may be too big to act timely, as GFC that united members subside.

One of the most prominent achievements of the G20 Summit, in its short history, was the coordinated fiscal expansion that was agreed in the London Summit, in April 1-2, 2009. At the time, there was a fear that the severe recession in both advanced economies and developing countries might deteriorate into the Depression of the 21<sup>st</sup> century. Leaders agreed to engage in the coordinated fiscal expansion. The Leaders' Statement April 2, 2009 declared: "We are undertaking an unprecedented and concerted fiscal expansion, which will save or create millions of jobs which would otherwise have been destroyed, and that will, by the end of next year, amount to \$5 trillion, raise output by 4 per cent, and accelerate the transition to a green economy. We are committed to

deliver the scale of sustained fiscal effort necessary to restore growth."

This paragraph gave comfort to leaders to engage in massive fiscal expenditures and tax cut. Any domestic opposition could be muted by the global commitment.

After 14 months form the London summit, the economic fundamentals and directions of policy challenges had changed. In the Toronto Summit, June 26-27, 2010, the European countries expressed concerns about ballooning fiscal deficits among some European countries, since the bond spreads and CDS rates for bonds issued by Greece, Ireland, Portugal, Spain and Italy had started to become higher. The European countries led the medium-term fiscal consolidation plan. The United States and Japan were not ready to move toward fiscal austerity. At the end, the Toronto Summit Declaration stated: "Reflecting this balance, advanced economies have committed to fiscal plans that will at least halve deficits by 2013 and stabilize or reduce government debt-to-GDP ratios by 2016. Recognizing the circumstances of Japan, we welcome the Japanese government's fiscal consolidation plan announced recently with their growth strategy." The exit in Japan seemed to lag behind other G20 member countries.

#### 2. Summary of Chapters

#### 2.1. Japan

Chapter 2 gives an overview of the Japanese fiscal situation and its response to GFC. Since Japan has run large fiscal deficits in the last twenty years, it debt-to-GDP ratio became so high, near 200%. The chapter analyzes why deficits continued to be in deficits and why the bond yield remains so low, despite growing debt-to-GDP ratio. Government expenditures and revenues started to diverge in the early 1990s. Deficits became larger and larger. Whenever the economy gets into a recession, stimulus packages were applied and supplementary budgets were formed. It has been shown that unexpected slowdown prompts a mid-year correction, namely stimulus package that is supported by a supplementary budget. The problem in the 1990s and 2000s was that the fiscal tightening was not applied during the ordinary years, and the growth rates tended to be lower than what the government thought to be potential. The large jumps in deficits were observed in 1998, Japan's banking crisis and 2009, the GFC.

Part of explanations why fiscal deficits persisted in the 1990s and 2000s was the systemic bias in supplementary budget and too optimistic forecast of growth rate, which results in larger supplementary budget given the countercyclical policy.

When fiscal sustainability is formally tested, it was shown that the current Japanese fiscal stance is not sustainable. It is on the explosive path of debts. The puzzle is that the bond yield has stayed rather low. Market participants firmly believe that JGBs would not default. This apparent irrationality can be explained by low consumption tax (VAT) rate. If and when the VAT rate is raised to a European norm, the fiscal situation would become sustainable.

The GFC affected Japan similar to its neighbors. Exports plummeted and the government tried to stimulate both consumption and investment as well as the government expenditures. In 2009, through supplementary budget, tax revenues became less than half of budget. New bond issues have important implications. Just when the Japanese economy recovered from the GFC, another disaster struck Japan,

namely the earthquake/tsunami on March 11 and nuclear disasters are putting pressure on the Japanese government to spend more like it did in 2009.

However, with already too high a level of debts, there is a danger that more bond issues may prompt the JGB yield to rise. The disaster could become a window of opportunity; but the disaster could become a last straw that would break "camel's back."

#### 2.2. China

In 1993, the government passed a law forcing the Ministry of Finance to finance all its budget deficits by issuing bonds instead of taking money from the People's Bank of China. China's total government revenue has increased at an extraordinary rate since the 1994 tax reform. In the wake of the Asian financial crisis in 1997, China adopted an expansionary fiscal policy for the first time, and as a result, budget deficits and government debt increased quickly.

In 2008, in order to stimulate the economy that was affected by GFC through trade channel, China adopted an expansionary fiscal policy again. As a result, economic growth quickly picked up, but central and local government debt rapidly increased, raising concerns among academics and business firms over China's fiscal riskiness and economic future. The GFC affected China mainly through decline in exports. GDP growth was 14.2% in 2007, down to 10.6% in the first quarter of 2008, 10.1% in the second quarter of 2008, and 9.0% in the third quarter of 2008. Unemployment was increasing, with the urban registered unemployment rate hitting 4%, the highest since 1980. FDI declined by -0.86% in October 2008 and by -36.52% in November 2008. From In November 2008, exports declined by -2.2%, the first time in seven year, and imports declined by 17.9%.

On November 5, 2008, the State Council announced that China would adopt expansionary fiscal policy with government investment of 4 trillion yuan to stimulate domestic demand and economic growth. This was well-publicized 4 trillion yuan stimulus package.

The followings were major spending items: (1) Housing for low income groups; (2) Rural social safety net and rural infrastructures; (3) Construction of railroads, highways, airports, bridges, urban electricity network, and other large infrastructures; (4) Healthcare, culture and education; (5) Ecological and environmental projects; (6) Innovation and industrial structure changes; and (7) Sichuan earthquake reconstruction. These expenditures add up to 4 trillion yuan.

The investments span was from the fourth quarter of 2008 to the end of 2010. The sources of the funds were planned as follows: central government 1.18 trillion yuan; local governments 1.25 trillion yuan; and banks and individuals or firms 1.57 billion yuan. The National Commission on Development and Reforms, The Ministry of Finance, and The People's Bank of China together made decisions to provide long-term low-rate loans to finance some of the projects. Firms undertaking the projects were encouraged to issue corporate bonds for their funding.

The funding sources of the local government included (1) local government revenue, (2) bonds issued by the central government on behalf of the local governments, (3) urban land rents or revenue from land sales (renting for 70 years), and (4) borrowing, through government-run investment companies, from commercial banks and policy banks. For example, in 2009, the amount of the bonds issued by the central government on behalf of the local governments was 200 billion yuan. Revenue from land sales and borrowing from banks by local governments were substantial but details

were not transparent in China.

It is clear that the stimulus package is a combination of government spending, i.e., fiscal policy, as well as a result of monetary easing. In fact, the actual government budget deficits were 126.231 billion yuan in 2008, 778.163 billion yuan in 2009 and 649.5 billion yuan in 2010. The total fiscal stimulus was about 1.6 trillion yuan, out of the package size of 4 trillion yuan.

Some concerns remain. The local government may be in worse shape than the central government. The pace of increase in local governments' revenues has been much slower than that of expenditures, resulting in severe deficits. Also, China's pay-as-you go social security system will result in funding problem as the one-child policy will generate a graying society. Although the size of China's government debt is smaller than that in the early 2000s and fiscal risk is limited in the short run, reforms are needed to increase local government revenue and reduce their debt, to increase fiscal transparency, to reduce government deficits and debt in the long run, and to reform the pay-as-you-go social security system for fiscal sustainability.

#### 2.3. Korea

In response to the Global Financial Crisis (GFC), Korean government announced several large fiscal stimulus packages. Chapter 4 examines whether these unusual expansionary fiscal policy contributed to the quick recovery from the crisis. Next, it evaluates the so-called "the exit plan" and forecasts whether the plan will retrieve fiscal balance effectively. Then, it identifies potential risk factors on various fiscal areas and suggests long-term measures for them.

An official report from Ministry Of Strategy and Finance (MOSF) confirmed that the size of fiscal stimulus package was 38.8 tril. won (3.6% of GDP) in 2009 and 17.1 tril. won (1.5%) in 2010. In terms of composition, the fiscal stimulus package consists of various fiscal items but seems to concentrate more on tax cut, SOC building and support for SMEs and self-employed. According to fiscal index such as FIS and FI, they increased sharply in response to the negative real GDP growth following the GFC. The fiscal stimulus package executed after the GFC was quite substantial and unusual in the fiscal history of Korea.

It is assessed that Korea's fiscal stimulus package was quite effective and has an important role for Korea's rapid recovery. Contribution of fiscal stimulus on real GDP growth in the first half of 2009 was 1.4% point and in the second half was 1.1% point. The effects of fiscal stimulus also continued in 2010, but its magnitudes became smaller than the preceding year. These empirical results lend support to the popular belief that countercyclical fiscal policy boosted aggregate demand and output at least in Korea as well as rest of developing Asia during the GFC.

Korean economy recently announced the exit plan via Medium Term Fiscal Management Plan for 2010~2014. The priority of fiscal policy is on fiscal consolidation. The medium-term fiscal targets are to return to balance of operational budget in 2013~14 and to reach the government debt to 31.8% in 2014. Details are explained in the Chapter.

There are several potential risk factors on fiscal sustainability of Korea mainly due to ageing demographic structure as well as hidden debt of public enterprises. According to a long-term fiscal projection, social welfare and health expenditure will grow gradually for the period of 2015 to 2050. In 2050, it is expected that social

welfare and health expenditure will be 16.9% and 3.6% of GDP respectively. Consequently, Korea's government debt continuously rises for the projection period. It is expected to get to 140.1% of GDP in 2050.

For fiscal sustainability, Korean government needs to perform the following reforms. In a short and medium term perspectives, Korea government should continue to establish fiscal foundation as well as enforcement of SOEs' debt reduction. On the tax revenue side, it is necessary to expand the tax base by diminishing tax redemption and reduction and non-refundable tax credit, while at the same time expand the tax revenue base by enhancing the accuracy of reporting income through consistent improvement in tax administration.

In the medium run, institutional reform associated with social welfare such as public pension is required. Periodical release a long-term fiscal outlook report which takes into account low fertility rate and population aging will be helpful to get publics' consent related to increase in contributions.

#### 2.4. Indonesia

The impact on economic growth in Indonesia also became evident after the Lehman Brothers' collapse. The decline in exports caused the decrease in Indonesia's overall economic growth. In the fourth quarter of 2008, economic growth slowed to 5.2% year-on-year, this was still much better than other emerging-market Asian countries, except China. In the second quarter of 2009, the global economy showed signs of improving, and so did the Indonesian economy. With the improvement of global economies, Indonesian exports grew. In monetary terms, inflation was strictly controlled, and in 2009 inflation reached its lowest levels since 2000, at only 2.8%. The low prices stimulated consumption, and contributed to macroeconomic stability, which in turn stimulated foreign investment to Indonesia. In 2009, Indonesia grew by 4.5%, and Indonesia became the third fastest growing G-20 country after China and India.

One factor which helped to limit the impact of the GFC on the Indonesian economy was support by the government in terms of economic stimulus. The share of total Indonesian exports on GDP is 29%. This is much lower than in countries like Singapore, Taiwan and Korea. So, there was a room for government spending. This emphasizes the importance of domestic demand. With exports hard hit plus weak investment, economic growth was practically totally dependent on household and government consumption.

It is somewhat puzzling why growth in domestic demand was relatively strong during the GFC. The chapter addresses the following questions: (a) What was the fiscal position before and after the GFC? How dis the fiscal stimulus minimize the impact of GFC? What challenges need to be anticipated in fiscal policy to face future economic crises? The chapter also discusses lessons learned and policy implications from the current global financial crisis.

The Minister of Finance unveiled a stimulus package for 2009, valued at Rp 73.3 trillion (US\$ 6.4 billion), to boost the economy amid the threat of an economic downturn. The package addressed three major areas: income tax cuts, tax and import duty waivers, and subsidies and government expenditure. Aiming to stimulate more household and corporate spending, almost 60% of the Indonesian fiscal stimulus was allocated to income tax cuts. The government cut personal income tax from 35% to 30% and corporate income tax from 30% to 28%.

In addition to the tax cut, around Rp 2.5 trillion was allocated to finance import duty waivers for raw materials and capital goods. This was part of the Rp 12.3 trillion tax and duty package, accounting for 18% of the total stimulus package, meant to support businesses. To help reduce operational business costs, the stimulus package also included diesel and electricity subsidies. Lastly, close to Rp 12 trillion was allocated to support infrastructure and rural sector development.

The total size of the budget expansion was criticized at the time as negligible. The forecasted deficit of 2.6% of GDP was partly driven by the decline in revenue (especially tax and non-tax revenues). Only about 1.2% of GDP can be considered as the real expansionary and discretionary stimulus, the authors argue.

Despite having a healthy fiscal position (relatively low debt/GDP), the size of the fiscal stimulus in Indonesia was modest compared to other economies including Malaysia, Thailand and Australia. The authors find two reasons. First, the State Financial Law and Government Regulation prescribes that the consolidated national and local government budget deficits be limited to 3% of GDP in any given year, and that total central and local government debt not exceed 60% of GDP—similar to the Maastricht criterion, to pre-commit the government to be fiscally prudent. Second, the government was worrying that a large deficit could not be financed with stable interest rate. Emerging economies, including Indonesia were hit particularly hard by the fallout from the financial crisis. In the end, it looked that only with the modest stimulus, the Indonesian economy performed well in the wake of the GFC.

#### 2.5. Philippines

The GFC caused a recession in advanced economies in the latter half of 2008, and it has had an adverse impact on the Philippine's exports and remittances of overseas workers. Exports from Philippine registered negative growth in the fourth quarter of 2008 and through all four quarters of 2009. The remittances of overseas workers continued to post positive growth in 2008 and 2009, but with much slower pace of growth. Growth rates of remittances were 13.2% in 2007 and 13.7% in 2008, but dropped to 5.6% in 2009. The growth of real GDP decelerated from a high of 7.1% in 2007 to 3.7% in 2008, to 1.1% in 2009.

Prior to GFC, the government expanded the rice price subsidy program and launched a number of programs meant to provide temporary relief to vulnerable sectors in response to the surge in the price of food and petroleum products in 2008. In response to projected economic downturn, which became evident with contraction of exports and remittances of overseas Filipino workers, the government formulated and announced the Economic Resiliency Plan (ERP) in early 2009. The Plan is designed to (i) to ensure sustained growth and attain the higher end of the government's economic growth targets, as a countercyclical policy; (ii) to save and create as many jobs as possible; (iii) to protect the most vulnerable workers, i.e., the poorest segment, returning overseas Filipino workers, and workers in export industries; (iv) to ensure low and stable prices; and (v) to improve competitiveness in preparation for the global rebound.

The ERP was worth PhP 330 billion, divided into PhP 160 billion of government budget interventions, PhP 40 billion of tax cuts, and PhP 130 billion of off-budget interventions

Chapter 6 aims (i) to assess the size and composition of the fiscal stimulus applied

in 2008-2009 and its effectiveness in increasing aggregate demand, (ii) to evaluate the country's exit strategy and (iii) to identify risks to fiscal sustainability. While the evidence on the relative effectiveness of expenditure expansion versus tax cuts is mixed, the overall effectiveness of the fiscal stimulus appears to be well supported by evidence. A number of fiscal risks associated with the fiscal stimulus package was noted by the First, the Philippine experience validate concerns raised in the literature that chapter. tax cuts made in response to an economic slowdown tends to be permanent or are difficult to reverse. Second, while most of the spending programs included in the fiscal stimulus package are temporary in nature, the expansion of the conditional cash transfer program is not. Third, even when the a country's fiscal position appears to be benign at the start of the crisis, countries with high debt-to-GDP ratio like the Philippines have very little elbow room to do countercyclical policy without running into fiscal sustainability concerns. Fourth, while the government's fiscal stance in 1998/1999 and 2009 is appropriately countercyclical, its fiscal stance was procyclical in about half the time in the period between 1991 and 2010. Given this perspective, there is a need to guard against procyclical policy as it tends to foster smaller than warranted fiscal balances and, consequently, higher levels of government debt over time. The lesson here is simple: fiscal prudence even during good times helps enhance the government's ability to do countercyclical fiscal policy when times are bad.

#### 2.6. Thailand

The Thai economy was affected by the Global Financial Crisis (GFC) through shocks to value chain (trade channel) and financial channel. Contraction in global demand led to declines in exports, manufacturing production and capital utilization

accordingly, which then led to declining in the country's consumption and investment. On the other hand, interest rate gap between Thailand and advanced economy widened, as advanced economy (mainly US) lowered the interest rate much faster than Thailand. Massive capital inflows resulted and the Baht appreciated. Baht had appreciated by 10% against the US Dollar in 2010. The labor intensive sectors suffered from export declines and baht appreciation. The sectors with high import content benefited from this incident.

The automatic stabilizer worked effectively during and after the GFC, as the government revenue declined significantly in 2009 and surged again in 2010 after the economies recovered. However, the government has adopted various discretionary fiscal stimuli to counter impacts of global crises, which resulted in fiscal deficits and an upward trend of the public debt. The fiscal stimulus packages have included short-term expenditure measures namely Stimulus Package 1 (SP1) which amounted THB116.7 Billions aiming to reduce impact of the GFC, long-term investment plan (Stimulus Package 2 (SP2)) which amounted THB 1.43 Trillion aiming to improve the country's competitiveness, and tax measures. In 2009, the budget deficit became 5.6% of GDP due to these measures.

The chapter measured the impacts of fiscal stimulus and monetary policies. The SP1 was found to have increased real GDP by 0.9% point, while the tax measures by 0.06% point. On the other hand, disbursements of the SP2, a multi-year investment program, are estimated to increase the growth rate by 1.5% point in 2010, by 1.2% point in 2011 and by 1.1% in 2012.

To maintain the fiscal sustainability of the country, the Thai Ministry of Finance (MOF) and the Bureau of Budget (BOB) have signed a MOU to recover balance of

budget by using fiscal policies and budget management tools within 5 years or 2015 which leads to MOF strategic plan to revise government expenditure (expenditure control) and revenues (revenue collection efficiencies and introduction of new tax measures) to respond to that obligation. Currently, due to higher revenue collection, projected stable economic growth and controlled expenditures, it is expected that the Thai government can resume budget balance by 2015.

#### 2.7. Vietnam

Like other Asian countries, Vietnam saw a fall in demand for its export and capital inflows in the wake of GFC. In particular, during the last quarter of 2008 and the early 2009, monthly exports dropped precipitously. Industrial production in the fourth quarter of 2008 slowed to 15.6% compared with 17.4% in 2007. Foreign direct investments declined significantly. Consumer sentiment was adversely affected and the stock market index kept falling. GDP growth rate fell from over 8% attained in 2007 to 6.28% in 2008, and deteriorated further in early 2009 when the GDP growth rate in the first quarter was only 3.1%. However, these declines were better than other Asian countries.

In the beginning of 2008, tight monetary and fiscal policies were implemented to combat its own home-made mini crisis (running inflation and twin deficits). Upon arrival of GFC, the government of Vietnam responded by reversing its tight monetary policy and the fiscal austerity. The government announced a large fiscal stimulus package (amounting to almost 10% of GDP). GDP growth rate bounced back to 7.7% in the fourth quarter of 2009. The annual GDP growth rate was 5.3% for 2009. In overall assessment, Vietnam has weather the global financial crisis relatively well.

It is still unclear how the government would manage its exit strategy. The economy recovered from the GFC and grew at 6.8 percent in 2010 (almost returning to the pre-crisis level). However, macroeconomic uncertainty remains as trade deficit keeps rising, government budget deficits is widening, external debt rising and inflation coming back. To complicate the question further, the economy is highly dollarized as evidenced by the commercial bank's offering US dollar interest bearing deposits and the state is captured by its own large SOEs and the soft budget constraint by the local (provincial) governments.

The government of Vietnam quickly and decisively responded to counter the negative effects of the global crisis. It reversed the course of the monetary tightening and fiscal austerity policy implemented in 2008. The central bank cut the base rate from 14% to 7% within a few months. In terms of fiscal policy, the stimulus package, was initially announced at \$6 billion aiming at mitigating the impact of the global financial and economic crisis on the Vietnamese economy and the population, and preventing a general slowdown of economic activities. This figure was later revised to be approximately USD 8 billion. The budget plan of late 2008 put the Vietnamese stimulus package in the top tier of the regional comparison.

#### 2.8. India

India has a long history of huge fiscal deficits and high inflation. The sharp increase in fiscal deficit in the wake of GFC is a major concern for academics and policy makers. The level of combined (central plus state governments) fiscal deficit in 2009-10 was 10.1 per cent of GDP, a record high. This follows a sharp rise in the fiscal deficit from 4.2 per cent of GDP in 2007-08 to 8.5 per cent in 2008-09. This is

considered to be unsustainable.

The debt to GDP ratio rose to 72.4 per cent for the year 2009-10, up from 71.6 per cent in 2008-09. This rise seems to have reversed all the fiscal gains made since 2003-04. The fiscal situation was reversed sharply as the government undertook a number of measures to stimulate the economy in the run up to the elections and subsequently in the wake of the global crisis. According to budget estimates for the year 2010-11, the ratio of fiscal deficit to GDP (for both the centre and states) is expected to be 8.5 per cent excluding off-budget bonds, and will be about 10 percent with the off-budget bonds (mainly oil bonds). Thus, the need for fiscal consolidation and the achievement of fiscal sustainability continue to be the key macroeconomic issues confronting Indian policy makers.

Chapter 9 cautions about off-budget items. More importantly, the growing practice of issuing special bonds to oil and fertiliser companies to support low consumer prices means that at least part of the subsidy burden is off the budget. Transparency is not perfect. The chapter also describes how taxation system has evolved to import duties and excise taxes to state-level VAT, to a proposed national goods and service tax.

The impact of the GFC has been transmitted to the Indian economy through three channels, viz., the financial sector, exports, and exchange rates. However, four factors helped India to cope with the crisis and soften its impact. They are: (1) the robust, well-capitalised and well-regulated financial sector; (2) gradual and cautious opening up of the capital account; (3) the large stock of foreign reserves and (4) greater dependence on domestic consumption as a driver of GDP growth. Consumption accounted for more than 70 per cent of India's GDP and the high potential GDP growth rate (the average for 2000-2007 being 7.3%.) India's GDP growth declined to 5.8 per cent

(year-on-year) in the second half of 2008-09 from 7.8 per cent in the first half. The growth improved to 7.4 per cent in 2009-10. Undoubtedly, the massive fiscal and monetary stimulus measures helped to prevent a sharper downturn in 2008-09 and promote recovery in 2009-10. The global economic recovery from second quarter of 2009 also helped.

#### 3. Concluding Remarks

The rest of this volume compiles the country papers as summarize in the preceding section. There are similarities and differences. Similarities are the extent of damages through the trade channel. Differences come from the stage of development, the reliance on exports as opposed to domestic demands, and room of policy measures. In short, emerging markets with larger domestic demands fared the crisis better than advanced economies.

As the acute stage of the crisis was over and many economies rebounded in 2010, the governments started to withdraw extraordinary fiscal measures. The debt level rose in many countries, and it would take years to lower the rate to the pre-GFC level. There will be differences in how easy or difficult fiscal consolidation will be, depending on demographic structure and growth potential. This volume is a handy reference to summarize basic facts and prospects on the fiscal issues in Asia during and post GFC.

## CHAPTER 2

# Sustainability of Japanese Sovereign Debt

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#### 1. Introduction

The Japanese government debt to GDP ratio has steadily increased in the 1990s and 2000s to reach a level unprecedented during peace time for any advanced countries. As of March 2011, the outstanding balance of Japanese government bonds (JGB) is estimated to be 160% of GDP, and total central government liabilities reach 200% of GDP. Although mild fiscal consolidation took place from 2003 to 2007, which was mostly due to economic recovery, the fiscal balance took a turn for worse in 2008 in the wake of the global financial crisis. The global financial crisis made all major advanced countries to apply large fiscal stimuli from the last quarter of 2008 to fiscal years of 2009, and again in 2010, and Japan was no exception. With the already large debt, continuing fiscal deficits look like a perfect case of an unsustainable fiscal situation. The timing of the global financial crisis (GFC) was could not be worse.

In the 2010 budget of the central government, tax revenues were less than half of the total expenditures (budget size). The amount of new debt issues became larger than that of tax revenues. This is an extraordinarily bad fiscal situation.

A puzzling feature of the Japanese situation is that the JGB yield came down as the debt continued to mount in the 1990s and 2000s. It came down to 1%-2% by mid-2000s, and has stayed in that range until now. Investors seem to be content with large

debt and do not demand special risk premium. Several factors have been several factors that have been pointed out for what seems to be a puzzle, too low yield for bonds that are on the unsustainable course.

However, even with optimistic investors, an eventual insolvency of Japanese government cannot be avoided, if the current pace of debt increases continues. The question is under what condition the default may become unavoidable, "if" the current pace of deficits continues for an indefinite future.

In the rest of the paper, we examine the following three questions: Why did the government fail to control deficits since 1990?; Why has the bond yield stayed so low, despite the high debt-GDP ratio?; When will the Japanese debt become really unsustainable? These questions will be answered in Sections 2, 3, and 4, respectively. Section 5 describes fiscal responses to GFC. Section 6 discusses the possibility of the exit. Section 7 concludes the paper.

#### 2. Deficits and Debt

#### 2.1. International comparison

The fiscal deficits and debt situation in Japan is first depicted in the international context. The OECD compiles fiscal statistics for its member countries. The international comparison is taken from OECD, Economic Outlook No. 88 (November 2010) and earlier issues. Figure 1 shows the fiscal deficits of general government to GDP ratio for G7 countries. It shows that Japan continued to run large deficits throughout the 1990s and 2000s.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> For an earlier overview, comparing fiscal issues and challenges of Japan and the United States, see Hubbard and Ito (2006).



**Figure 1. General Government Financial Balances** 

Data Source: OECD Economic Outlook, No.88, November 2010

Although the fiscal situation was deteriorating steadily from 1990 to 1997, other G7 countries were much worse than Japan. In the spring of 1997, the consumption tax rate was raised from 3% to 5% under the fiscal consolidation package that Prime Minister Hashimoto was pushing. The timing was the worst, *ex post*. The Asian currency crisis started three months later, and Japan's own banking crisis started 7 months later. What had thrown Japan off track of fiscal consolidation path were the banking crisis of November 1997, the Asian currency crisis and consequently, the severe recession of 1998. The government put priority on fiscal stimulus, rather than fiscal consolidation in 1998. As a result, fiscal deficits, larger than 6% of GDP continued from 1998 to 2005. The Japanese fiscal deficits shrank from 2006 to 2008. However, the size of fiscal deficits became much larger (about 8%) in 2009 and 2010 (not shown in the Figure 1, current version).

As fiscal deficits continued to be large, and economic growth rate continued to stagnate—being dubbed as "lost two decades"—in the 1990s and 2000s, the debt to GDP ratio became larger and larger. Figure 2 shows the gross debt-GDP ratio of general government for G7 countries.

Figure 2. Gross Government Debt-GDP



Data Source: OECD Economic Outlook, No.88, November 2010

It shows that Japan was in the middle of G7 countries in terms of the debt-GDP ratio in 1990. However, the ratio continued to rise, as other countries managed to keep the ratio stable or to make it lower. In 1998, the 100% percent mark was crossed and by 2000, Japan surpassed Italy to assume an infamous position of the most indebted government among advanced economies (OECD members). With the exception of the 2005-2008 years, the debt to GDP ratio has continued to rise.

Some scholars—such as Broda and Weinstein (2004)—argued that although the Japanese government has accumulated large debts, it also owns a large amount of financial assets. Hence, the "net" debt-GDP ratio would not look that bad. Figure 3 shows the net debt-GDP ratio. Indeed, it was only 2008 when Japan surpassed Italy, and the ratio remained only at around 110% in 2009. Does this observation offer any comfort?

Figure 3. Net Government Debt-GDP



(10.0) 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

Data Source: OECD Economic Outlook, No.88, November 2010

At the first sight, the net debt-GDP ratio may be a correct measure, since the government can sell those financial assets to buyback debts. However, it may not be so simple. Some of financial assets are held with non-JGB liabilities being behind it. For example, the Government Pension Investment Fund (GPIF) holds a large amount of government debts, but they are the reserve for future spending down for increasing pensioners. What is today's assets may be covering future liabilities.

However, the distinction between the gross and net measures is not getting any attention, lately. The question, which is the right measure to judge the Japanese situation, has become a moot point, as both gross and net measures continue to skyrocket. The trend and the speed of deterioration is the same in both measures, since no financial assets were gained. Sooner or later, the Japanese government would become insolvent, in any measure.

#### 2.2. Revenues and Expenditures

In this subsection, major budget items of the general budget of the central government will be examined in order to see what really happened (or not happened) to increase deficits. In this subsection, the Japanese government statistics are used. Figure 4 shows the movements of the total expenditure and total revenues.



Figure 4. Revenue and Expenditure

Data Source: OECD Economic Outlook, No.88, November 2010

It shows that the both lines moved in parallel, as they should be, until 1990, the peak of the Japanese bubble. However, since 1991, the expenditure has been slightly increasing, while tax revenues has been continuously declining. As a result the gap between the expenditure and revenue has steadily widened. The gap is mostly financed by new issues of Japanese government bonds (JGBs). In 2009-10, tax revenues are financing less than half of expenditures—quite an unusual situation.

Examining the Figure closely, a few phases in the twenty year period of deficit widening can be identified. Expenditures continued a gradual increase throughout the
1990s. This may reflect a series of economic stimuli throughout the 1990s by the government believing that the economy was experiencing output gap. From 2000 to 2008, expenditures were finally under control, apparently capped and on a slight decreasing trend. However, any restraint was off in 2009, responding to sharp output declines due to the global financial crisis.

Tax revenues started to decline immediately after the bubble burst in the early 1990s. It continued to decline until 2003. Tax revenues increased from 2003 to 2007, by about 20 percent. During the period of recovery, with expenditures being capped, new issues of JGBs declined for three years in a row—the first time since 1990. The improvement was cut short in 2008. In 2009, tax revenues plummeted, and issues of JGBs soared. New issues of JGBs in the 2009 and 2010 initial budget reached 44 trillion yen, about 8.8 percent of GDP.

Figure 5 shows the movements of consumption tax (which is value-added tax), individual income tax and corporate income tax. The consumption tax was introduced, replacing various excise taxes in 1989 and the rate increased from 3% to 5% in 1997. It clearly shows that during the lost two decades, revenues from individual income and corporate income taxes declined steadily. They are quite sensitive to wage income and GDP growth rates. Revenues from the consumption tax remained steady.

Figure 6 shows the major expenditure items of the general budget of the central government. The social security related spending show a steady increase, due to the aging of the society. The debt interest payments have been increasing since 2001, reflecting a continuous increase in the size of debts. This contrasts the steady decrease in the interest payments in the 1990s due to the declining interest rate outpacing the increase in the principal of debts (to be analyzed later). Transfers to local governments

35

has been stable. Although other items, including education and science and public works, have decreased slightly, the pace of increases in the social security was faster.

Whether the budget size has been increasing in ratio to the GDP growth rate is examined in Figure 7. The top line of Figure 7 shows the movement of the central government budget to GDP ratio. Throughout the 1980s, the ratio has been declining, reflecting a successful effort of fiscal consolidation in the 1980s, and high economic growth rates that are shown in the second and third lines. The budget/GDP ratio remained at around 15% from 1990 to 1997, that is, the level higher than that in the 1980s. However, the budget to GDP ratio decisively went up in 2008-2009. In 2009, the ratio went above 20% for the first time in the postwar Japanese history.

The increase in the size of the budget was partly due to negative growth rates that reflected the global financial crisis. Fiscal stimulus was applied to help the economy not to decline further.



#### Figure 5. Tax Revenues by Category



Figure 6. Expenditure Items, 1997-2010

Figure 7. Budget/GDP and growth rate



# 2.3. Keynesian countercyclical policy

One of the reasons why expenditures continued to rise in the post-bubble period, especially from 1990 to 2000, is the extended use of traditional, discretionary countercyclical Keynesian fiscal policy. Although Japan had used the countercyclical policy, issuing government bonds, between 1965 and 1990, there was a successful

consolidation effort during the 1980s.<sup>2</sup> When the government responds to downturn by applying discretionary fiscal stimulus, while it fails to withdraw it during a boom period, it results in accumulating debts as a trend. In order to analyze countercyclical policy, the government reaction to "unexpected" fall in activities should be examined. First, the Japanese government routinely produces various stimulus packages when the economy is hit by negative shocks. Table 1 shows the list of stimulus packages. It shows the large stimulus packages in 1993, 1995, 1998, 1999 and 2008. The total of stimulus package from 1992 to 2000 was 130 trillion yen, while that from 2001 to 2008 was 57 trillion yen.

However, these amounts include budget items that had been appropriated before the package was announced and other measure that are not included in the central government budget. Hence, a pure incremental part of central government budget—that is, often called *Mamizu*, real water—is much less. However, it clearly shows that the stimulus packages have been applied when the growth rate is lower than the average of the decade.

Fiscal Year	Prime	Total	Major items (trillion yen)				
	Minister	Size	Infrastructure	Tax cut	Land	SME	Housing
		(trillion			Purchase		Investment
		yen)					
1992			-	-	-	-	-
1992	Miyazawa	10.7	5.7	-	1.6	2.1	-
1993		13.2	6.6	-	1.6	2.4	0.8
1993	Heelen	6.2	2.0	-	-	0.8	2.9
1993	нозокаwa	15.3	3.9	5.9	2.8	1.3	1.2
1995			-	-	-	-	-
1995	Murayama		-	-	-	-	-
1995		14.2	9.1	-	3.2	1.3	0.5

<b>T</b>	1
Table	1.

<sup>&</sup>lt;sup>2</sup> See Asako, Ito, and Sakamoto (1991) for an analysis with similar method for data up to 1990.

1997	Hashimoto		_	-	-	-	-
1998		16.7	7.7	4.6	-	2.0	0.7
1998	Obuchi	23.9	8.1	6.0	-	-	1.2
1999		18.0	6.8	-	-	7.4	2.0
2000	Mori	11.0	4.7	-	-	4.5	1.1
2001			-	-	-	-	-
2001	Koizumi	4.1	1.1	_	_		
2001	Koizumi	4.4	2.6			0.5	-
2008	Fukuda						
2008	Aso	11.5				9.1	
2008	Aso	26.9				21.8	0.4
2008	Aso	10.0		1.1			
1992-2008	TOTAL	186.1					
1992-2000	TOTAL	129.2					

Another way to measure countercyclical policies is to look at the "supplementary budget." The supplementary budget is normally for the natural disaster and other unforeseen budget items. However, it also reflects the mid-year correction of budget, in response to higher- or lower-than-expected growth rate.

The Japanese government routinely forms a supplementary budget every year. Most of the time, a supplementary budget is formed in the third or fourth quarter of the year based on the GDP performance up to the second or third quarter of the year. For the first approximation, let us assume that a supplementary budget is formed in the third quarter of the year, based on the mid-year forecast error in growth, namely, the difference between the year-on-year growth rate of the second quarter of calendar year t (or the first quarter of fiscal year) and the government forecast that was announced in January of year t (that is about 10 months earlier).

Every year, the supplementary budget has been formed, some year being large, and some other not so large. A good countercyclical Keynsian government will form a large supplementary budget if the economy is performing less than the forecast at the time of initial budget formation. Table 2 shows the forecast error and the size of supplementary budget (ratio to the initial budget size), where forecast error, FError, is defined as the year-on-year growth rate of the second quarter of year t (the information available at the time of mid-year correction on the part of the government) minus the forecast of the growth rate for fiscal year t as of January of year t (time when the government made the forecast); the supplementary budget of fiscal year t, SBudget, is defined as the size of the supplementary budget of fiscal year t in the ratio to the initial budget size.

	FErrors	SBudget
1992	-2.7	-1.01
1993	-3.2	7.02
1994	0.0	0.48
1995	-0.6	9.93
1996	0.0	3.55
1997	0.1	1.48
1998	-4.2	5.98
1999	-0.3	8.75
2000	1.5	5.63
2001	-0.7	4.48
2002	-0.2	3.03
2003	0.7	0.18
2004	1.4	5.81
2005	0.4	5.50
2006	0.1	4.73
2007	0.3	1.08
2008	-2.4	7.04
2009	-5.7	15.82

Table 2

The average of forecast errors is minus 0.9 percent, suggesting that the government's forecast was too optimistic. Hence, as the actual growth rate tends to fall short of expectation, it prompts the mid-year stimulus package as a supplementary budget. The positive bias of the supplementary budget can be viewed as a response to systematic optimism about the growth rate. It seems that a positive supplementary budget has been institutionalized in the Japanese budgetary process—always finding ways to spend on something in the middle of the year, in some years, heavily on public works and in some years, on tax cut. The over-estimating the potential growth rate

causes the *ex post* upward bias in supplementary budget, given the Keynesian countercyclical behavior of the government. Thus, fiscal deficits tend to remain high.

Figure 8 shows the scatter diagram showing the relationship between forecast errors of the government forecasts of growth and the supplementary budget, where the forecast is made in January, year t, and the supplementary budget in year t in ratio to initial budget of year t.

Figure 8. Forecast Error (t) and the Supplementary Budget ratio



In order to test a hypothesis of the systematic bias and the counter-cyclical behavior, the supplementary budget (SBudget) is regressed on growth forecast errors (FError). Definitions are:

FError: year-on-year growth rate of the second quarter of year t

-government growth forecast of year t, as of January, year t

SBudget: {the size of supplementary budget of Fiscal year t}/{initial budget size} The sample period is from 1992 to 2009. The estimated coefficients are as follows:

SBudget(t) = 4.09 - 1.02FError(t)

(4.36) (2.28)

adjusted R-sq=0.24, and DW=1.61,

where t-statistics in the (bracket), and the p-value in the [square brackets].

According to the estimate, the 1 percent surprise in growth forecasts turns into an increase in the supplementary budget by 1 percent of the initial size of the budget. Moreover, even without the forecast error, there is always supplementary budget, that is, the systemic bias toward fiscal stimulus.

In sum, a part of explanations why fiscal deficits persisted in the 1990s and 2000s was the systemic bias in supplementary budget and too optimistic forecast of growth rate, which results in larger supplementary budget given the countercyclical policy.

Then the next question is why growth forecasts turned out to be on average too bullish. Three years stand out as large negative forecast errors, that is, 1992, 1993 and 1998, prior to the GFC. The growth rates in 1992 and 1993 turned out to be lower that forecasts, because the government underestimated the negative effects of collapse of the bubble. The growth rate of 1998 turned out to be much lower than the forecast, because of the government underestimated the financial system from the banking crisis of November 1997.

In the beginning of the global financial crisis of 2007-09, the Japanese economy as well as the Asian economy did not suffer much, because the Japanese financial institutions and investors did not hold "toxic assets," that is, the subprime-related financial products. It was only after September 2008, when Japan and Asian economies experienced a sharp decline in their exports to the United States and Europe. The export decline triggered output decline and unemployment. The crisis contagion to Japan and Asia from the United States, the epicenter, was mainly through the trade channel. As exports to the United States experienced the sharp decline, an entire production/supply chain in Japan and Asia suffered a sudden stop. The growth rate dropped sharply in 2008 and 2009. This prompted large supplementary budget in these years.

## 2.4. Deficit Ratio

The growth performance of fiscal year t not only affects the supplementary budget but the initial budget of fiscal year t+1. However, by the time the initial budget of Fiscal Year t+1 is being formed, that is November and December of t, more information about the economy is available, compared to the time when a supplementary budget of Fiscal year t is formed.

Let us form a hypothesis that the deficit ratio of the initial budget tends to increase when the growth rate known at the time of fiscal year t-1 is lower. The change in the deficit ratio from t-1 to t, DefRatio(t), is defined as the amount of government bond "new" issues (that is, fiscal deficits) in the initial budget. For the growth rate known at the time of budget formation, the average of the year-on-year growth rates of Q3 and Q4, GQ34Av, is used. The growth rate of Q3 is known at the time of budget formation, but partial information that is helpful in predicting Q4 growth rate is known. Therefore the average of the two quarters is used.

Figure 9 shows the scatter graph of the average growth rate of Q3 and Q4 of year t-1 and the change in the deficit ratio in the initial budget of fiscal year t. It shows the negative correlation between the two variables, indicating that the hypothesis is

43

supported by data. A regression, with the sample period is from 1992 to 2010, produces the following estimates:



Figure 9. Growth(t-1) and change in deficit ratio from t-1 to t, 1992-2010

```
1992-2010
DefRatioChg(t) = 3.75 -2.36 \text{ GQ34Av(t-1)}
(2.95) (-3.44)
[0.009] [0.003]
Adjusted R sq = 0.376
```

```
DW = 2.63
```

where t-statistics in the (bracket), and the p-value in the [square brackets].

The regression confirms the implication of the hypothesis. When the growth rate is lower at the time of budget formation, the deficit ratio in the initial budget goes up. The result implies that a decline in the growth rate by 1 percentage point prompts an increase in the deficit ratio by 2.4 percentage point over the level of t-1. The fact that the constant term is estimated as 3.75 is worrisome. The deficit ratio tends to rise if the growth rate is less than 1.39%. This happened all too often.

#### 2.5. Effectiveness Debate

Although Japan repeatedly adopted large fiscal stimulus, both in the initial budget and the supplementary budget almost every year, as shown in the preceding subsection, the growth rate in the 1990s and 2000s never rose to the level observed prior to 1990. Any increase in the growth rate proved to be short-lived.

One possible reason for the low growth rate is that the potential growth rate somehow declined in the 1990s (cf. Hayashi and Prescott (2002)). This explanation is consistent with the finding that countercyclical Keynesian policy had a bias toward fiscal deficits. Another possible reason is that a combination of several factors including a burst bubble problem and associated nonperforming loans in the beginning of the 1990s; tighter than optimal monetary policy throughout the 1990s and possibly in the 2000s (c.f. Ito and Mishkin (2006)); the shocks like the Hanshin Earthquake in 1995, the banking crisis of 1997-98 and 2002-03; premature fiscal tightening in 1997; diminished fiscal multiplier due to pork-barrel projects. It is difficult to quantify each of these possible reasons.

Those who believe that Keynesian policies continue to be effective argue that when fiscal expenditure is applied, they do work. They point out that many stimulus packages indeed include those expenditures that have been already budgeted for other purposes. The real incremental budgetary increases, or *mamizu*, was in general not large (recall Table 1). Posen (1998) and Kuttner and Posen (2001) argue that when *mamizu* is large, fiscal policy has large impacts. They take a large stimulus introduced in 1995 as a main driver of higher economic growth in 1996.

#### Case 1 [Fiscal consolidation of April 1997].

In April 1997, the consumption tax rate (VAT rate) was raised from 3% to 5%; special income tax credit was repealed, and social security contribution rate was increased. The total contractionary effect was about 7 trillion yen or about 1.5% of GDP. The significant fiscal consolidation of April 1997 had been planned for two years. When a significant stimulus, such as a special income tax credit, was applied in 1995 (as budgeted in 1994), consolidation in the near future was committed.

The economy plunged into a recession in 1998. There are two different groups of people with regard to the association between the fiscal consolidation of April 1997 and a recession in 1998. Those who believe that fiscal stimulus/contraction has a strong power on the economy make a close association between the consumption tax hike and a recession in the next year. They use this case as an example of large multiplier effect. Those who deny the large multiplier effect of the consumption tax attributes the recession of 1998 to Asian currency crisis of 1997-98 and Japanese banking crisis of 1998. They think that the association of the consumption tax rate increases of 1997 and the recession of 1998 is quite misleading and unfortunate for the need for fiscal consolidation.

#### Case 2 [Shopping voucher plan of 1999]:

The shopping voucher program was a platform of the coalition government in 1999 to help families with children. 0.7 trillion yen was distributed to families with children and with elderly in the form of 20,000 yen per child or an elderly. Vouchers were distributed in April 1999, and had to be used in a participating stores in the same municipality before end of September 1999.

Theoretically, the total impact of incremental government expenditure on GDP is

larger than the total impact of tax cut by the same magnitude. Hence, handing out shopping voucher is not as effective of government expenditure in terms of stimulating GDP.

A survey was conducted by an agency of the government in June-July 1999, asking questions regarding how people were using the distributed vouchers. Of course, it is difficult to identify which consumption goods were bought from salary or existing saving and which consumption goods were bought especially from the shopping voucher. Questions were framed like: "Did you buy something extra? Or more expensive items than otherwise? Is by how much?" Then, the survey concluded that an incremental expenditure was 32% of the voucher they received. Therefore, the marginal consumption propensity (=c) is 0.32 and the multiplier (=c/(1-c)) turns out to be 0.47.

A more comprehensive study was conducted by Hori, et. Al (2002) using the individual responses of the household expenditure survey, which was available only to the specially approved researchers. They compare consumption patterns of two different groups: families with kids who received 20,000 yen per child; and families without a kid, which did not receive cash. After carefully estimating the consumption behavior controlling for many factors, they came up with estimates that the marginal consumption propensity (=c) to be 0.2 - 0.3 at the time they receive the voucher. This is consistent with the simpler survey just mentioned above. There are two additional notable conclusions from the study. First, the incremental consumption drops in the medium term to 0.1. The authors argue that shopping vouchers was used for a purchase of semi-durable goods, such as bicycles, by moving forward the planned purchase, but in the medium run, the consumption pattern does not change much. This makes sense from permanent income hypothesis. The amount of voucher is probably a very small

portion from their life time income. Second, families with low assets had higher consumption rate from the voucher. This is consistent with the consumption pattern of liquidity-constrained households.

Those who are skeptical of Keynesian type discretionary policy would argue these cases as a failed attempt of discretionary tax cut and consumption voucher plan is the evidence of low multiplier effects. When the stimulus measure is temporary, it does not stimulate spending, since the permanent income does not change. When the stimulus is funded by the government deficits (like the Japanese government in the1990s), then the families view these additional income to be cancelled out by the future increase in tax. This is the well-known theory of the Ricardian effect. There are many theoretical reasons that the Ricardian effect may not apply. But if it has any chance that may hold true, Japan in the 1990s and 2000s is the one, because of already high government debt level, which cannot be possibly paid back without increase in tax in the future, declining population and rather homogeneous households with strong intergenerational family ties.

Those who argue against discretionary fiscal policy also are skeptical of public works program—typical supplementary budget items. They divert resources to low productive projects (e.g., a "bridge to nowhere" project) and a sector (construction) itself. They are dynamically, cross-sectionally inefficient, because they divert the resources to relatively low productivity, and relatively stagnant, if not declining, industry. There was some interest in considering a non-Keynesian effect (cf Alesina and Perroti (1995), Giavazzi and Pagano (1996) and Giavazzi, Jappelli, and Pagano (2000)). There are some episodes in Europe that a major fiscal consolidation produces expansionary effects. But there was no serious study that took into account responses of

48

households and firms to permanent increases in various taxes and bond issues. The structural shift in fiscal balance (government bond issues), as distinct from cyclical automatic stabilizers, needs a careful examination.

# 3. Bond Yield Puzzle

## 3.1. Bond Yield, Facts and Hypotheses

As fiscal deficits continued to be large in the last twenty years, the debt-to-GDP ratio has soared (recall Figure 2). The sustainability of these debts has been debated in Japan for more than a decade. The discussion of sustainability will be summarized in the next section.

Usually, the possible breach on the sustainability is forewarned by the market, in terms of rising bond yield and downgrading by credit rating agencies, and the rising level of credit default swap (CDS). Usually when the solvency of the government is questioned, the bond yield starts to move up. This has been the case in Latin American debt crisis in the 1990s and European sovereign crisis in 2009-2010. Did the bond yield move up in Japan, as the stock of sovereign debts soared? Not really.

Figure 10 shows the stock of government bonds and the average nominal yield of 10-year government bonds. It appears that there is negative correlation, rather than theoretically predicted positive correlation.



Figure 10. Debt and Interest Rate (Debt&Yield.xlsx)

One might think that the size of government bonds should be scaled by the nominal GDP, but the nominal GDP in Japan has been basically flat since 1995. Hence, this is an approximately correct figure to discuss the burden to government bonds to the economy. Similarly, the correct measure of the bond yield may be the expected real bond yield that is the nominal yield minus the expected inflation rate of the following ten years. We just assume that the investors' expected inflation rate over the following ten years has not changed much. The inflation rate linked bonds (J-TIP) have been available in Japan in the last ten years, but many regard the market being not reflecting the investor' expectation.

Hence, it is fair to say that the Japanese bond rate has declined, *despite* the rising stock of government bonds, a major puzzle, unless one thinks that the almost 200 percent debt-GDP ratio is no concern to the Japanese economy.

## **3.2.** Hypotheses to Solve the Bond Yield Puzzle

Several reasons have been mentioned in the financial press regarding why the

Japanese bond yield has stayed low. Let us list them first:

- (1) Domestic saving surplus;
- (2) Domestic investors' home bias; and Domestic investors' risk aversion
- (3) Low policy (short-term) interest rate
- (4) Deflation
- (5) Trust in the (future) government actions
- (6) Room to increase the VAT

First, the domestic saving—the sum of savings of household, corporate, and the government—is still in the surplus. Although the government sector is in the large deficits, household and corporate savings more than offset deficits of the government sector. In the 1970s, the huge household surpluses were financing corporate borrowing, while the government was only slightly in the deficits. Household savings rate has precipitously declined in the 1980s and 1990s. In the 1990s, corporate savings increased more than the decline in household saving. Since, Japan does not have to borrow in net from abroad for its investment, the influence of external factors, such as long term interest rate of other major countries, is small.

The 95% of Japanese government bonds (JGBs) are owned by domestic residents, mainly Japanese financial institutions. Hence, foreigners' sentiment plays little in formation of the bond yield. Any sudden capital inflows and outflows and possible exchange rate concerns (either appreciation or depreciation) would not spillover to the JGB market.

Hence, for the JGB yield formation, it is critically important how domestic investors regard JGB as part of their portfolio. Japanese institutional investors and retail investors are known to have high "home bias," that is, the proportion of the yen-denominated domestic assets is extremely high, compared to other investors of major advanced countries. They are also risk-averse, the proportion of "safe" assets in their portfolio is typically high. The bank deposits are most favorite assets of individuals. The proportion of equities in the portfolio of a typical household is very low.

So, a large proportion of household savings, and more recently corporate savings also, are invested in the banking sector usually as deposits. Banks tend to buy more JGBs when more funds are deposited. Banks regard the currency risk of foreign bonds to be high (i.e, the volatility of the yen has been historically high). It is remarkable that corporations have paid back their borrowing from banks more than they newly borrow. Decreasing demand for bank loans is partly due to the reduced investment activities in the 1990s. Corporations have been fattening their cash reserves themselves, rather than investing, paying out as dividends, or increasing the wages. Constrained by the Basle capital adequacy requirements (Basle I, II, and III), banks regard JGBs to be ideal investment vehicle—zero risk weight.

Pension funds and insurance companies are also happy to hold JGBs, since their liabilities are also in the yen. Table 3 shows the portfolio distribution of households and the share of JGBs held by different institutional investors.

The Bank of Japan policy rate (overnight call rate) has declined quickly in the 1991-95 period. The policy rate has been at or below 0.5% since 1995. The long-term JGB rates follow a trend of the policy rate. The yield curve shifted down in the 1990s, but also it became flattened in 2000s.

#### Table 3. Household Portfolio and JGB Holders

Household Portfolio	
	Tril. Yen
Cash and Deposits	800
Bonds	42
Mutual Funds	50
Equities	93
Insurance and Pension Reserves	395
Others	62
Total	1442

JGB investors					
9	%				
Banks	19.6				
Insurance co.	17.1				
Post Banks and likes	20.9				
Pension funds	9.0				
Government Public Investment Fund	3.1				
Bank of Japan	8.9				
Households	3.9				
Overseas	6.5				
Others	11.0				
Total	100.0				

Japanese investors therefore have huge faith in the future government to stop the JGB runaway. Where does this optimism come from?

Most European countries have the VAT rate more than 15%, and some as high as 25%. The Japanese VAT (consumption tax) rate is 5%. There is a huge room for increasing VAT rate to the European norm. Just for the illustration, deficits (i.e., new issues of JGBs) of the central government initial budget was 44 trillion yen in Fiscal Year 2010, and this can be brought down to zero, if the consumption tax rate was raised to 20%. So, the difficulty of the Japanese situation is more of the political will than the hard economic calculation.

Tokuoka (2010) has investigated various measures of "JGB" as a determinant of the JGB yield, controlling for various macroeconomic factors. Since there is an apparent negative correlation between JGB stock and the JGB rate, it seems difficult to obtain a theoretically predicted positive coefficient on the JGB stock in explaining the JGB rate. He triesd several different specifications. The best regression result of his is as follows:

Variable	Gross debt	JGB held	Net financial wealth held	Share of	R square
	including	by Bank of	by household and	foreign	
	FILP	Japan	corporate sectors	holdings of	
				JGBs	
Estimate	0.02	0.01	-0.02	0.11	0.38
t-stat	(3.52)***	(0.36)	(-3.37)***	(2.06)**	

Dependent Variable. 10-year yield, quarterly, 1998Q1 – 2009Q1

Tokuoka (2010) Table II.6

Notes: FILP is the government investment program, which used to be in the special account that were funded by Postal Bank surplus funds, and later became a part of government bond issues

The result shows that the increase in the stock of JGB indeed increases the yield and the household and corporate net savings matter for the JGB yield, namely more surpluses lower the JGB yield, presumably because they increase demand for JGBs. It also shows that the more foreigners hold the JGBs, the higher the yield should be.

Household savings are expected to decline, due to the aging society, and corporations would not keep increasing their net saving forever. If their savings start diminishing, then the JGB rate will start increasing. The share of foreigners also matter, if JGB had to be sold to foreigners as domestic investors' total assets go down, then the foreigners would demand a higher JGB rate. In any case, the prospect of decreasing domestic population and aging is not good news for the JGB rate. Thus, he is not optimistic for the future development. His assessment is summarized below:

"Historically, Japan's public debt has been financed in a fairly smooth manner. The large pool of household savings and the stable domestic institutional investor base have contributed to keeping yields steady despite the rapid rise in public debt. However, Japan is undergoing rapid population aging, which will likely limit the market's absorptive capacity of public debt. In addition, shifts in institutional investors' behavior could serve to reduce inflows to the market. To maintain market stability, sound public debt management and fiscal consolidation will be critical."

(p.19)

How much more time does Japan have to avoid a fiscal disaster if the current loose fiscal policy continues? Once the JGB yield starts increasing, a selloff by domestic institutional investors would happen. If selloff happens, the yield would go higher, and the government budget for interest payments would be heavier and heavier until the government cannot issue any refinancing as well as new bonds. It is difficult to estimate how domestic institutional investors would behave. Unless corporations continue to repay their borrowings from banks and banks continue to purchase JGBs, the turning point would come sooner or later.<sup>3</sup>

# 4. Sustainability

There are enough worrying signs about the Japanese fiscal situation as depicted in the preceding sections. In this section, the issue of "sustainability" will be examined. Several authors have proposed tests of sustainability. However, there is no definite test that could determine one way or another to declare sovereign debts to be unsustainable.

In what follows, major tests of sustainability will be reviewed, and then one particular test is applied.

<sup>&</sup>lt;sup>3</sup> Ostry *et al.* (2010) attempts to define "fiscal space" and shows that Japan is losing the space quickly.

## Methodology

Let us define B(t) as Government debt at the end to period t, maturing in one period,  $\Delta$  is the first difference operator:

$$\Delta B(t) = B(t) - B(t-1)$$

Thus,  $\Delta B(t)$  is the amount of new issues of government debt at t. Let i(t) be the interest rate at the time of issue, t-1, to be payable at time t for debt B(t-1). Total interest payment in period t, contracted at time of issue in t-1: i(t)B(t-1). The debt at the beginning of time t is B(t-1), which equals the amount of debt at the end of t-1. The interest rate i(t) is applied as the interest rate on B(t-1), and this is known in t-1.

G(t) denotes Government expenditures. Then the government budget constraint is written as:

$$T(t) + \Delta B(t) = G(t) + i(t)B(t-1) \tag{1}$$

The Primary Balance is defined as PB(t) = T(t) - G(t). The surplus in primary balance means PB>0, while primary deficit means PB<0.

From eq. (1)

$$G(t) + (1 + i(t))B(t - 1) = T(t) + B(t)$$

For the stationary economy:

$$(1+i(t))B(t-1) = \{T(t) - G(t)\} + B(t)$$
$$(1+i(t))B(t-1) = \{T(t) - G(t)\} + B(t)$$
$$B(t-1) = \frac{1}{(1+i(t))}\{T(t) - G(t)\} + \frac{1}{(1+i(t))}B(t)$$

Solving forward,

$$B(t-1) = \sum_{j=0}^{\infty} \left\{ \prod_{s=0}^{j} \frac{1}{1+i(t+s)} \right\} \left\{ (T(t+j) - G(t+j)) \right\}$$
$$+ \lim_{j \to \infty} \prod_{s=0}^{j} \frac{1}{1+i(t+s)} B(t+j)$$

In order to have the current bond as the discounted value of the future primary balance, the second term on the right-hand-side (RHS) of (2), sometimes called the bubble term, should converge to zero. Then from the remaining relationship (LHS and the first term of RHS), the debt and primary balance have to be stationary, or if not, co-integrated with I(1).

For growing economy, all variables can be scaled by GDP. Denoting GDP by Y(t), the debt-GDP ratio is the ratio of B(t) to Y(t). The change in the debt-GDP ratio is defined as

$$\Delta\{\frac{B(t)}{Y(t)}\} = \frac{B(t)}{Y(t)} - \frac{B(t-1)}{Y(t-1)}$$
$$= \frac{\Delta B(t)}{Y(t)} - \frac{B(t-1)}{Y(t-1)}$$
$$= \frac{\Delta B(t)}{Y(t)} - \frac{B(t-1)}{Y(t-1)} \left[\frac{Y(t) - Y(t-1)}{Y(t)}\right]$$
$$= \frac{\Delta B(t)}{Y(t)} - \frac{B(t-1)}{Y(t-1)} \left[\frac{g(t)Y(t-1)}{Y(t)}\right]$$
$$= \frac{-PB(t) + i(t)B(t-1)}{Y(t)} - g(t)\frac{B(t-1)}{Y(t)}$$
$$= -\frac{PB(t)}{Y(t)} + \{i(t) - g(t)\}\frac{B(t-1)}{Y(t)}$$

Therefore whether the debt-GDP ratio increases or decreases depends on the two terms, primary balance and the interest-growth rate differential weighted by the previous year's debt. Even if primary balance is held zero, the debt-GDP ratio may become higher (or lower), when the interest rate is higher (or lower, resp.) than the growth rate.

$$\frac{\Delta B(t)}{Y(t)} = -\frac{PB(t)}{Y(t)} + \{i(t) - g(t)\}\frac{B(t-1)}{Y(t)}$$
$$= -\frac{PB(t)}{Y(t)} + \{i(t) - g(t)\}\frac{B(t-1)}{(1+g(t))Y(t-1)}$$
$$= -\frac{PB(t)}{Y(t)} + \frac{(i(t) - g(t))B(t-1)}{(1+g(t))Y(t-1)}$$
$$= -\frac{PB(t)}{Y(t)} + \frac{(i(t) - g(t))B(t-1)}{(1+g(t))Y(t-1)}$$

Rewriting the left-hand-side,

$$\frac{B(t)}{Y(t)} - \frac{B(t-1)}{Y(t-1)} = -\frac{PB(t)}{Y(t-1)} = -\frac{PB(t)}{Y(t)} + \frac{(i(t) - g(t))}{(1 + g(t))} \frac{B(t-1)}{Y(t-1)}$$
$$\frac{B(t)}{Y(t)} = -\frac{PB(t)}{Y(t)} + \frac{B(t-1)}{Y(t-1)} + \frac{(i(t) - g(t))}{(1 + g(t))} \frac{B(t-1)}{Y(t-1)}$$
$$\frac{B(t)}{Y(t)} = -\frac{PB(t)}{Y(t)} + \left[1 + \frac{(i(t) - g(t))}{(1 + g(t))}\right] \frac{B(t-1)}{Y(t-1)}$$
$$\frac{B(t)}{Y(t)} = -\frac{PB(t)}{Y(t)} + \left[\frac{(1 + i(t))}{(1 + g(t))}\right] \frac{B(t-1)}{Y(t-1)}$$

Or, using the approximation

$$\frac{1+i(t)}{1+g(t)} = 1+i(t) - g(t)$$

(3) can be rewritten as

$$\frac{B(t-1)}{Y(t-1)} = \frac{1}{1+i(t)-g(t)} \frac{PB(t)}{Y(t)} + \left[\frac{1}{(1+i(t)-g(t))}\right] \frac{B(t)}{Y(t)}$$
(4)

Denoting  

$$b(t) = \frac{B(t)}{Y(t)}$$
 and  $s(t) = \frac{PB(t)}{Y(t)}$ ; and  $r(t) = i(t) - g(t)$ 

Eq. (4) can be written as

$$b(t-1) = \sum_{j=0}^{\infty} \{\prod_{s=0}^{j} \frac{1}{1+r(t+s)}\}\{(s(t+j))\} + \lim_{j\to\infty} \prod_{s=0}^{j} \frac{1}{1+r(t+s)}b(t+j)$$
(5)

Eq. (4) can be solved as Eq. (2), replacing (1+i(t)) by (1+i(t)-g(t)). Note that if i(t) < g(t), for all t, then any debt level can be supported by shifting the burden to future generation, since the growth rate is higher than the interest rate.

The stationarity of the debt level (LHS) of Eq. (2) or the primary surpluses has been first proposed as a test of fiscal sustainability by Hamilton and Flavin (1986). They applied unit root tests to the US data, 1962-84, and obtained the result, the null hypothesis of nonstationarity was rejected, so that "investors rationally expected the budget to be balanced in present-value terms." (Hamilton and Flavin, (1986), p.816.) However, the work has been criticized by Trehan and Walsh that the rejection is only due to the significance of 10 percent and it is not rejected at 5 percent. The annual data for 22 years seems to be too short for robust unit root test.

Intuitively speaking, even in case of nonstationary of debt, if both debt, B(t-1), and discounted sum of the future primary surplus,  $\{T(t+j) - G(t+j)\}$  are growing at the same speed, then it can be regarded that the debt is sustainable. Technically, the cointegration test proposed by Trehan and Walsh (1988, 1991) tests this intuition. They propose to test cointegration among G+iB and T. The reason for using G+iB instead of G is derived from the tax smoothing hypothesis. They indeed showed that the variables are cointegrated so that sustainability is judged to be satisfied.

Te cointegration test falls into the same trap, in that the power of the test is very weak, if the data series is not long. Trehan and Walsh (1988) uses the long time series from 1890 to 1986. However, the US policy may have experienced the structural break(s) as the data set spans over the two World Wars.

The direct test of this condition is to test the second term of RHS of (2). Ihori, Nakazato, and Kawade (2003), tested the existence of the bubble term assuming that the future interest rate and the growth rate stay constant. Along with constructed the optimal deficit level for the Japanese economy in the 1990s. They evaluated the fiscal consolidation efforts of the Hashimoto government in 1997. They conclude that by late 1990s, the sustainability condition in Japanese data was seriously questioned.

#### <Bohn test>

Bohn (1998, 1991) proposed a test that is quite different from the above unit root and cointegration tests. He consider the reaction function of the government, in response to the debt level. If the government reacts to the increase in the debt level by increasing taxes or curtailing expenditures, that would work against a runaway debt. In specification, the test is whether primary balance (in ratio to GDP), s(t), rises, when debt (in ratio to GDP) b(t), rises, then the debt is defined to be sustainable. The regression is as follows:

If  $\beta > 0$ , then the debt is sustainable. Bohn (1998) found $\beta > 0$  in a univariate regression using the long US data.

## Broda and Weinstein (2005)

Broda and Weinstein (2005) made three kinds of innovation to the application of fiscal sustainability to Japan. First, they aggregated the public sector to define the government debt. The public sector includes the Bank of Japan. Second, it emphasized the *net* debt rather than *gross* debt. They subtracted public sector financial assets from gross debt. Therefore B(t) for them is net debt. At the time of their writing, the net debt to GDP ratio they calculated was 46% as opposed to gross debt of 161%. Third, they adopted the Blanchard, et. al (1990) definition of fiscal sustainability. Roughly speaking, fiscal situation is sustainable, if the debt-GDP ratio in the future (t+n) comes back to the debt-GDP ratio of now (t-1). Recall the relationship.

$$\frac{B(t)}{Y(t)} = -\frac{PB(t)}{Y(t)} + \left[\frac{(1+i(t))}{(1+g(t))}\right]\frac{B(t-1)}{Y(t-1)}$$

Calculate forward

$$\frac{B(t+n)}{Y(t+n)} = -\sum_{j}^{n} \prod_{s=0}^{j} \left[ \frac{(1+i(t+s))}{(1+g(t=s))} \right]^{s} \frac{PB(t+n-s)}{Y(t+n-s)} + \prod_{s=0}^{n} \left[ \frac{(1+i(t+s))}{(1+g(t+s))} \right]^{s} \frac{B(t-1)}{Y(t-1)}$$

Broda and Weinstein (2005) then assumes that the interest rate and the growth rate being constant: i(t+s)=i and g(t+s)=g for all s. They add complexity by differentiating workers and retirees in order to take into consideration the aging society of Japan. Then, by assuming future path of PB(t-s), the future path of B/Y can be simulated.

They argue that by raising tax burden to the average European level gradually, the Japanese debt is sustainable. By raising the tax rate to 34.6 percent, the debt-to-GDP ratio surpasses 160 percent around 2070, but will be reduced to the near 50% by year 2100.

There are several critical remarks. First, financial assets of the public sector include the government pension funds. Hence by deducting them from gross assets means the contingent liability of social security increases. So, it is questionable that the financial asset is really genuine asset (equity). Second, the interest rate is assumed to be constant (2 percentage point higher than the growth rate). However, there may be a case that as the debt-GDP ratio becomes higher, investors may require risk premium. Then before the debt-GDP ratio starts to decline, it may jump to an unsustainable path of a vicious cycle of higher debt and higher interest rate (risk premium). Third, the definition of sustainability may be politically too comfortable. Even when the debt level has risen, the government may say that it is possible to come back to the "current" level in the future. Every year, the base, the "current" year, becomes higher and higher. Put differently, the sustainable path that is calculated at year t is not time-consistent. Indeed, after six years of their paper, the debt-GDP ratio in Japan has gone up much higher than their assumed sustainable path back then.

#### Application of the Bohn Test to the Japanese Data

In the rest of this section, we apply the Bohn test to the Japanese data. Recall

The sustainability is defined as  $\beta > 0$ . As the concept of primary surplus and debt, we use two different concepts: (A) The general account of the central government budge; and (B) the general government (central and local combined) primary balance and public debt. The data set of (A) is constructed from the budget data obtained from the Ministry of Finance; and the data set of (B) is constructed from the GDP statistics of Cabinet Office. The primary balance in GDP is obtained in the Appendix table, the Government sector. The central government and the local government is added, but the social security account is not included for our purpose.

First, the relationship between Debt/GDP ratio (x-axis) and Primary Balance/GDP ratio (y-axis) is plotted in the Figures 11 (Budget basis) and 12 (GDP statistics basis). The sustainability implies the positive-slope relationship, which we cannot find for the entire sample period. However, if only the mid-1970s to 1990s is taken, there seems to exist a positive slope.

Figure 11. Debt and Primary Balance (Central Government, general budget base), 1969-2009



Figure 12. Debt and Primary Balance (General Government), 1970-2009



In order to bring out the time-varying coefficient of  $\beta$  for a series of regressions as follows:

- I. Budget basis, starting in Year 1969, ending in Year Y
- II. Budget basis, rolling regression, starting in Year Y-20, ending in Year Y
- III. General Government, starting in Year 1970, ending in Year Y
- IV. General Government, rolling regression, starting in Year Y-20, ending in Year Y

Figures 13 and 14 shows the changing  $\beta$ .

Figure 13. Changing Coefficient: Budget



Note: Author's calculation







The following conclusions can be drawn from these graphs. First, the Japanese fiscal sustainability was maintained until about 2000 in the budget of the central government, and about 1998 in the general government basis. However, the sustainability was very much lost in the general government sector between 1998 and 2003, as both primary deficits went to large and growing in the negative territory, as the debt became bigger and bigger. Even in the central government budget, sustainability was lost by 2003.

In both budget and general government, the severity of unsustainability became

lightened between 2003 and 2009, but still it is unsustainable, that is  $\beta < 0$ , as of 2009.

All the above literature assumes there is no limit in tax rate or expenditure cut. In fact, there is the income or VAT tax rate, somewhere between 0 and 1, that generates the highest revenue. The maximum revenue tax rate is the rate that makes the highest point of the Laffer curve. The expenditure also has the minimum rate that is essential to citizen's subsistence. However, the political constraint may be imposed even before those max tax rate or min expenditure rate is achieved. Ihori, Kato, Kawade and Besso (2006) is a paper that explore the limit for the debt sustainability from these extreme rates in the framework of an overlapping generation model.

# 5. Responses to GFC

During the GFC and in its aftermath, Japan adopted large stimulus packages. Most of the packages came after the failure of the Lehman Brothers in September 2008. Stimulus packages in 2008-2010 are listed in Table 4.

	Announcement date	Title of the package	New Fiscal Expenditure (Trillion Yen)	Total package size (Trillion Yen)	Notes
	4/4	Growth Policy	0	0	Explicitly No new fiscal expenditure
	8/29	Comprehensive Immediate Policy Package Easing Public Anxiety -	5.0	11.7	Of the 2 trillion yen, 0.1 is faster implementation of existing budget, 0.1 is by local government, and 1.6 is for various policies, plus additional expenditure of 0.2 for FY2009 budget.
2008	10/30	Economic Policy Package Measures to support People's Daily lives Supported by Supplementary Budget No. 1 (1 trillion Yen), approved 2008/10/16:	10.0	26.9	
	12/19	Immediate Policy Package to SafeguardPeople'sDaily livesSupported bySupplementary Budget No. 2 (4.8 trillion Yen), approved2009/1/5	15.4	NA	Measures include (for employment, 1.1 tril.); for transfer to local government (1), special reserve (1); tax cut (1.1), for Safeguard people's daily life (6)
	4/10	Policy Package to Address Economic Crisis Supplementary Budget No. 1 (13.9 trillion yen), 05/29	15.4	56.8	Measures include for immediate employment $(1.9/2.5)$ ; for preventing financial meltdown $(3.0/41.8)$ ; for growth strategy $(6.2/8.8)$ ; for peace of mind and revitalization $(4.3/5.0)$ and tax reform $(0.1/0.1)$
2009	10/23	Immediate Employment Package	0	0	
	12/8	Immediate Economic Package for Tomorrow's Peace of         Mind and Growth       Supported by         Supplementary Budget (2010/01/28), 0.085 trillion yen	7.2	24.4	Measures include for employment (0.6/0.6 trillion); for environment (0.8/4.1 trillion), for output activities (1.7/18.6 trillion); for peace off mind (0.8/1.0); for local communities (3.5/3.5)
2010	9/10	3-stage economic package to realize New Growth Strategy - Immediate Response to Yen Appreciation and Deflation	0.9	9.8	Measures include for employment (0.175); for promoting investment (0.12), for consumption ("eco points) (0.45); for earthquake/flood proof (0.165)
	10/8	Immediate Comprehensive Economic Package to respond yen appreciation and deflation (supported by Supplementary Budget, 10/28, size 4.4 trillion yen)	5.1	21.1	Measures include for employment (0.3/0.3 trillion); for growth strategy (0.4/1.3), for childcare and health (1.1/1.4), for social infrastructure and SME (3.1/17.8). Measures also include Transfer to Local Government, (1.3/1.3) Frontloading of public works, (0.2/0.25)
TOTAL			45.6	150.7	

# Table 4. Japan's Government Response to GFC

*Source*: Author's compilation from Cabinet Office website: <u>http://www5/cao.go.jp/keizai1/mitoshi-taisaku.html</u>

It started modestly, with fiscal expenditure of 2 trillion yen, in August 2008, and 5 trillion yen in October 30. Up to this point, reserves in the budget were used, and no new issues of bonds were planned. However, Japanese exports took a nose dive from October to December, as the US economy and the European economies were very much affected by the failure of Lehman Brothers. Alarmed by declines in exports, output, and employment, the Japanese government decided to have a supplementary budget right after the failure of the Lehman Brothers. The (first) supplementary budget was proposed in September 29 and approved in the Diet in October 16. The size of the supplementary budget was 1 trillion yen, of which 0.4 trillion was financed by the new bond issues, and 0.6 trillion yen was financed by surpluses of the preceding year's budget. The government immediately started another plan for supplementary budget, as exports nose dived, and the yen started to appreciate (as a safe haven currency). The second supplementary budget was proposed in December 20, 2008, along with the stimulus package, "Immediate Policy Package to Safeguard People's Daily Lives" The size of the package was 10 trillion, and the size of supplementary budget was about 4.8 trillion yen. What is remarkable in this supplementary budget is to decrease tax revenue by 7.1 trillion yen, and increase bond issues by 7.6 trillion yen. Non-taxation revenues (basically shifting revenues from special accounts to general accounts) is 4.5 trillion yen. Mid-year correction on the decreased tax revenue by more than 7 trillion yen (more than 1 percent of GDP) is remarkable. The economy growth getting into a negative territory made the government realize that it would not receive taxes as planned. So, increased bond issues replaced a decline in tax revenue. In the end (final budget), the tax revenue declined by 10 trillion yen, from 53.5 trillion yen to 44.2 trillion yen, and bond issues increased by 7 trillion yen, from 25 trillion yen to 33 trillion yen.

In the 2009 budget, which was formed by the cabinet in January 2009 and approved by the Diet at end-March 2009, economic assumptions became unrealistic as soon as the new fiscal year started. The first stimulus package was announced on April 10; and the first supplementary budget was proposed in April, and approved on May 29. The total size of supplementary budget was 13.9 trillion yen, more than 2.5% of GDP. This supported the stimulus package of 15 trillion yen. The supplementary budget was largely by increased issue of the JGBs. The expenditure of stimulus package included items to maintain employment, to prevent financial meltdown, and to promote renewed growth. This was a significant push toward bond-financed fiscal spending. This was partly encouraged by the internationally-concerted fiscal expansion, committed in the G20 London Summit: "We are undertaking an unprecedented and concerted fiscal expansion, which will save or create millions of jobs which would otherwise have been destroyed, and that will, by the end of next year, amount to \$5 trillion, raise output by 4 per cent, and accelerate the transition to a green economy. We are committed to deliver the scale of sustained fiscal effort necessary to restore growth." (Leaders' Statement, April 2, 2009)

Economic downturn did not stop despite large stimulus packages. The general election held at the end of August turned out to be a landslide victory for Democrats, the opposition party until the election. The new government quickly wanted to abolish some programs to introduce their agenda. First they suspended some items to get funds for their election promised, without increasing the budget size. This was the Immediate Employment Package in October. Later, the Democratic government proposed the second supplementary budget, after realizing that there would be shortfall for tax

revenue, just like the year before.

By the fall of 2009, it became clear that the economy is shrinking faster than expected. As a result, the tax revenue has declined so that there will be unanticipated deficits. With this in mind, the second supplementary budget is planned in December (voted on January 28, 2010). In the second supplementary budget, prospective tax revenue was reduced by more than 9 trillion dollars and almost same amount was financed by increased issues of bonds.

Combining increases of bond issues in the first and second supplementary budgets, it amounted to 20 trillion yen, almost 60% increase from bond issues in the initial budget. This was significant erosion in fiscal discipline. In the final (ex post) budget, tax revenue was less than 40%, and new bond issues accounted more than 50%. The final budget size became more than 100 trillion yen, more than 10 percent increase from the initial budget. See Table 5 to compare the initial and final budgets in 2008 and 2009.

		Initial	1st Sup	2nd Sup	Final	Final – Initial
2008	Total size	830,613	10,641	47,858	846,973	16,360
	Tax Revenue	535,540		-71,250	442,673	-92,867
	Bond Issue	201,632	3,950	74,250	191,664	-9,968
2009	Total size	885,480	139,256	846	1,009,734	124,254
	Tax Revenue	461,030		-92,420	387,330	-73,700
	Bond Issue	332,940	108,190	93,420	519,549	186,609
	t	đ d				
2010	Total size	922,992	44,292			
	Tax Revenue	373,960	22,470			
	Bond Issue	443,030				
	t					
2011	Total size	924,116				
	Tax Revenue	409,270				
	Bond Issue	442,980				

#### Table 5. Initial, Supplementary, and Final Budget
In the 2010 initial budget of 92 trillion yen, the tax revenue was lowered to 37 trillion yen (down from 46 trillion yen, a year earlier), and bond issues became 44 trillion yen. The bleak picture of finance—namely, less-than-half tax revenue and nearly half of the budget being financed by new bond issues—is similar to the final budget of the previous year than the initial budget of previous year. Year 2010 finally had a reasonably strong rebound from the deep recession of 2009, so the budget did not need large supplementary budget financed by bond issues.

The initial budget of 2011 is very similar to that of 2010. The heavy reliance on bond issues that was established during the trough of GFC was carried over to the post-GFC years. The lost fiscal discipline is hard to be reversed.

#### 6. Exit

Year 2010 turned out to be a good year for Japan in terms of growth rate. The growth rate of 2010 reached 3.9%, recovering from -6.3% in 2009 and -1.2% in 2008. Year 2011started out to be reasonably well. Prime Minister Kan asked Minister Yosano to form a reform plan of Tax and Social Security by June 2011. It was speculated among some scholars and observers that the reform plan would include a proposal of consumption tax increase and earmarking it for the future increase in social security. The contribution from the government to Basic Pension (Kokumin Nenkin) Account was raised in 2010 from one-third to one-half, without securing a permanent source of income. It had been anticipated that consumption tax increase was inevitable to pay for increasing deficits in social security funds.

However, the mega earthquake and tsunami on March 11 made the all political discussions focused on reconstruction from the devastation of the affected area. In addition, the near melt down and radiation leaks at the Fukushima Daiichi Nuclear Power Plant added great uncertainty about the condition of the economy in the near future. The direct loss in assets from the earthquake and tsunami is estimated by the cabinet office to be between 16 and 25 trillion yen. This does not include large losses resulting from radiation leaks at the Fukushima nuclear power plant.

If we take only the earthquake and tsunami, that would cause an investment boom, that would be a process to make up the loss by the disaster. There will be a medium-term increase in investment demand to rebuild and repair infrastructure, structures and private-sector capital stock; the increase amount will depend on how much of this loss value will be reconstructed by governments and businesses. If all of the estimated losses are reconstructed (to the value of 16 -25 trillion yen), there will be a big boom in reconstruction of 5 - 7.75 trillion yen in FY2011 (1 to 1.5 % GDP), then a further 6 - 9.5 trillion yen in FY2012, and a further 5 - 7.75 trillion yen in FY2013. This translates into up to 2% GDP increase in 2012. But, this depends on the assumption that all stock losses will be made up by new investment in the next 3 years; this may be an overly optimistic assumption. The government must be spending, very roughly, about 10 trillion yen.

There are further losses that are expected. First, production losses due to the broken supply chain are happening, which resulted from the wipe-out small companies producing irreplaceable key components for auto-makers and electronics firms.

Second, power shortage is likely this summer. Tokyo is now under the governmentled campaign of save-electricity. It is projected that electricity supply may be less than the peak demand in a summer hot day. With this in mind, corporations are shifting production out of the Tokyo area, and those in Tokyo are told to save electricity.

And, of course, the huge damages from nuclear leaks are making it unclear how to proceed to recover. It has forced relocation of many people, abandonment of agriculture, dairy farms, and fishery near the nuclear plant. There is not estimate for these losses.

How to fund government investment and assistance to tsunami-affected families is an important question. Some argue that they should be funded through JGB issues, possibly earmarked as disaster recovery. Others argue that they should be funded through increases in various taxes: VAT, real estate tax, income tax, corporate income Principal reasons for tax increases are as follows. First, according to the tax. reconstruction scenario, next year will be a reconstruction boom, so that raising consumption tax would not send the economy to a recession. Second, since population is decreasing, increasing outstanding balance of JGBs mean that burden of maturing debts is shifted to future generation with a fewer people. Issuing bonds means shifting burden to the future generation. Burden on the already-overly indebted government may finally makes the market participants worry over the sustainability. Puzzles of the low yield on JGB may finally come to an end, if the government hesitates to be raise revenues. The worst-case scenario would be a sudden jump in the JGB interest rate (flee from the sovereign) due to continuing large deficits Once the high interest rate occurs, the government finds it difficult to issue JGB to meet spending needs. None of politicians is courageous enough to insist a logical solution. However, in order to avoid the worst-case scenario of unsustainable debts, it will become necessary to raise taxes. The exit from deficits may be hastened due to the increasing need for government

spending.

When G20 Toronto Summit, June 26-27, changed the gear and declared fiscal consolidation: "Reflecting this balance, advanced economies have committed to fiscal plans that will at least halve deficits by 2013 and stabilize or reduce government debt-to-GDP ratios by 2016." However, Japan was explicitly exempted: "Recognizing the circumstances of Japan, we welcome the Japanese government's fiscal consolidation plan announced recently with their growth strategy."

Whether earthquake, tsunami and nuclear disasters turn into a window of opportunity to do a tax reform or they turn into a "last straw" that breaks back of a camel (fiscal sustainability) depends on politicians' will.

#### 7. Concluding Remarks

The above analysis made it clear the following conclusions. The Japanese fiscal situation has deteriorated steadily since 1990. The major unexpected developments include (1) unexpected slow down in the growth rate after the bubble burst; (2) failure of implementing structural reform on tax revenues; (3) unexpected shock from the banking crisis of 1997/98 and 2002/03

The trend (potential) growth rate became lower in the beginning of the 1990s, and this affected tax revenues, and the government failed to implement either expenditure cut or finding tax revenue sources. The situation got much worse between 1998 and 2003 when the country fights the banking crisis. The Bohn regression shows the sustainability was lost during this time period.

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## CHAPTER 3

## **China's Fiscal Policy and Fiscal Sustainability**

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This paper provides an overview of China's public finances, evaluates China's new round of expansionary fiscal policy and its impacts, examines the central government debt and local government debt and China's fiscal sustainability, and provides policy suggestions. China's total government revenue has increased at an extraordinary rate since the 1994 tax reform. However, local government revenue increases are much slower than their expenditure increases, resulting in a severe shortage of revenue. Also, China's pay-as-you go social security system will have fund a shortage problem in the future. The 2008 expansionary fiscal policy greatly stimulated China's economic growth through investment, but left the local governments with record high debt due to excessive borrowing from the banks. Although the size of China's government debt is smaller than that in the early 2000's and fiscal risk is limited in the short run, reforms are needed to increase local government revenue and reduce their debt, to increase fiscal transparency, to reduce government deficits and debt in the long run, and to reform the pay-as-you-go social security system for fiscal sustainability.

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#### 1. Introduction

The recent financial crisis and subsequent fiscal crises in Greece, Ireland, and Portugal, and the high government debt in other EU countries, the United States, and Japan have drawn much attention to the issue of fiscal riskiness and sustainability. This paper evaluates China's new round of expansionary fiscal policy and examines China's fiscal sustainability.

For a long time after the People's Republic of China was established, the government had adopted a balanced-budget fiscal policy. Before the economic reforms started in 1978, China was very poor, but the government had neither foreign nor domestic debt. After the economic reforms, the government began to run budget deficits and to issue a limited amount of foreign and domestic debt. In 1993, the government passed a law forcing the Ministry of Finance to finance all its budget deficits by issuing bonds instead of taking money from the People's Bank of China. Government debt started to increase. After the Asian financial crisis in 1997, China adopted an expansionary fiscal policy for the first time, and as a result, budget deficits and government debt increased quickly. In 2008, the financial crisis that started in the United States spread to the rest of the world. To stimulate the economy, China adopted an expansionary fiscal policy again. As a result, economic growth quickly picked up, but central and local government debt rapidly increased, raising concerns among academics and business firms over China's fiscal riskiness and economic future.

Although the Chinese government has a strong influence on the economy, studies on China's public finances are still limited. In the early 1990s, policymakers and economists were concerned with the decline of China's government revenue due to a series of decentralizing reforms. Bahl and Wallich (1992, p. 20) argued that the overall government revenue in China was inadequate and public service levels were deficient throughout China. Stiglitz (1998) believed that the size of Chinese government revenue was too small to fulfill China's ambitious development plan. Brean (1998) warned that low government revenue could threaten macroeconomic stability and jeopardize economic transition. Lin (2000a) explained the reasons and consequences of the decline in China's government revenue and provided policy suggestions. Without adequate budgetary revenue, governments at every level, particularly at the local level, heavily relied on fee collections and arbitrary charges to finance their expenditures. Most economists are critical of large, arbitrary, and unlawful fee collections (Wu, 1997; Wu, 1997; Gao, 1999; Jia, 2000; Liu, 2000, Lin, 2000b; Lin, 2005.) The problem was solved around 2005 through eliminating some fees and converting some fees into taxes (tax-for fee or *fei gai shui*).

Studies on China's fiscal debt emerged after China adopted an expansionary fiscal policy in 1998. By including state banks' non-performing loans and social security pension debt, some have concluded that China's government debt is as high as 150% of the GDP! <sup>1</sup> Predictions of an inevitable "collapse" of the Chinese economy due to high government debt and other problems also came out. Lin (2003) analyzes China's domestic debt as well as foreign debt up to the year of 2001. He showed that in 2001 the ratio of government debt to GDP was about 70-80%, including explicit fiscal debt 16%, local government debt 2%, and state banks' non-performing loans 41%. He argued that the emergence of state banks' non-performing loans was a result of state-owned enterprise reforms, and concluded that China's government debt was high but manageable.

Over the years, state banks' bad loans have greatly declined. Meanwhile, local government debt has increased dramatically, particularly after the 2008 financial crisis. Mingkang Liu, the Chairman of China Banking Regulatory Commission (CBRC), said that by the end of 2009, the loans of local government financing vehicles (local government-owned investment companies) was 7.38 trillion yuan, increased by 70.4% over 2008, accounting for 25% of GDP.<sup>2</sup> Some research claimed that China's local government financing vehicles have outstanding debt of 11.4 trillion yuan (\$1.7 trillion, or 33.5% of GDP) and commitments for a further 12.7 trillion yuan.<sup>3</sup> The alarming estimates have caused concerns over China fiscal riskiness and the possible bad loans of Chinese banks.

<sup>&</sup>lt;sup>1</sup> See Business Week, Businessweek.com, May 6, 2002.

<sup>&</sup>lt;sup>2</sup> See Information Website of Development Research Center of the State Council, November 4, 2010.

http://www.drcnet.com.cn/drcnet.common.web/DocViewSummary.aspx?docid=2386391&chnid=43 56&leafid=16658&gourl=/drcnet.common.web/DocView.aspx.

<sup>&</sup>lt;sup>3</sup> "Shell Game: Beijing Signals A Crackdown on Borrowing by Local Governments", *The Economists*, March 11, 2010.

Also, China has a mixed social security system which combines the social pooling account (based on a pay-as-you-go (PAYG) system) and individual accounts (forced personal saving system), with the social pooling account being the major part of the system. The social security system is run by local governments, provincial governments or prefectural governments or city governments. Right now, personal accounts are largely empty, with money being transferred to the social pooling account to pay for the current retirees. As the population ages, China will face severe social security payment problems in the future.

This paper provides an overview of China's public finances and discusses the challenges China faces, evaluate China's new round of expansionary fiscal policies and their impacts on the economy, analyze central government debt and local government debt, examine China's fiscal sustainability, and provide policy suggestions for further fiscal reforms.

The organization of the paper is as follows. Section 2 presents an overview of China's public finance. Section 3 analyzes China's expansionary fiscal policy and its consequences. Section 4 estimates the size of total government debt and discusses fiscal sustainability. Section 5 provides policy suggestions.

## 2. An Overview of China's Public Finance

In this section, we will discuss China's fiscal philosophy and provide an overview of China's public finances, including fiscal revenue and expenditure, extra-budgetary revenue and expenditure, local government finance, as well as social security.

#### 2.1. China's Budgetary Policy and Government Budget

China's budget policy evolved through four periods.<sup>4</sup> In the first period (1949-1957), the government financed deficits through both domestic and foreign borrowing. In the second period (1958-1978), China issued neither foreign nor domestic debt. The third period (1979-1993) was characterized by limited foreign and domestic borrowing.

<sup>&</sup>lt;sup>4</sup> See Lin (2000a).

Until the 1990s, the government had kept its debt at a low level and the Ministry of Finance was allowed to taking money from the People's Bank of China to finance its deficits. The fourth period started in 1994 and featured a large increase in domestic borrowing. In 1993 the government passed a law, prohibiting the Ministry of Finance from overdrawing money from the People's Bank. Since then the Ministry of Finance has to finance all its budget deficits by issuing bonds. After the Asian financial crisis occurred in 1997, China adopted an expansionary fiscal policy and budget deficits increased dramatically.

Table 1 shows China's fiscal revenue, expenditure, deficit, and outstanding debt from 1978 to 2010. The government has run budget deficits every year since 1985. Deficits started to increase after the Asian financial crisis in 1997, reached 2.6% of GDP in 2002, and have since declined. In 2007, the economic booms before the Beijing Olympic Games resulted in a large increase in government revenue and a budget surplus. However, the global financial crisis in 2008 forced the Chinese government to run budget deficits again. The ratio of government budget deficit to GDP was 0.4% in 2008, 2.3% in 2009 and 1.6% in 2010.

Year	Revenue (100 million yuan)	Expenditure (100 m yuan)	Surplus (100 m yuan)	GDP (100 m yuan)	Revenue /GDP	Budget Surplus /GDP
1978	1132.26	1122.09	10.17	3645.2	0.31	0.003
1979	1146.38	1281.79	-135.41	4062.6	0.28	-0.033
1980	1159.93	1228.83	-68.90	4545.6	0.26	-0.015
1981	1175.79	1138.41	37.38	4891.6	0.24	0.008
1982	1212.33	1229.98	-17.65	5323.4	0.23	-0.003
1983	1366.95	1409.52	-42.57	5962.7	0.23	-0.007
1984	1642.86	1701.52	-58.66	7208.1	0.23	-0.008
1985	2004.82	2004.25	0.57	9016.0	0.22	0.000
1986	2122.01	2204.91	-82.90	10275.2	0.21	-0.008
1987	2199.35	2262.18	-62.83	12058.6	0.18	-0.005
1988	2357.24	2491.21	-133.97	15042.8	0.16	-0.009
1989	2664.90	2823.78	-158.88	16992.3	0.16	-0.009
1990	2937.10	3083.59	-146.49	18667.8	0.16	-0.008
1991	3149.48	3386.62	-237.14	21781.5	0.14	-0.011
1992	3483.37	3742.20	-258.83	26923.5	0.13	-0.010
1993	4348.95	4642.30	-293.35	35333.9	0.12	-0.008
1994	5218.10	5792.62	-574.52	48197.9	0.11	-0.012
1995	6242.20	6823.72	-581.52	60793.7	0.10	-0.010
1996	7407.99	7937.55	-529.56	71176.6	0.10	-0.007
1997	8651.14	9233.56	-582.42	78973.0	0.11	-0.007
1998	9875.95	10798.18	-922.23	84402.3	0.12	-0.011
1999	11444.08	13187.67	-1743.59	89677.1	0.13	-0.019

Table 1. Government Revenue, Expenditure, and Deficit 1978-2010

Year	Revenue (100 million yuan)	Expenditure (100 m yuan)	Surplus (100 m yuan)	GDP (100 m yuan)	Revenue /GDP	Budget Surplus /GDP
2000	13395.23	15886.50	-2491.27	99214.6	0.14	-0.025
2001	16386.04	18902.58	-2516.54	109655.2	0.15	-0.023
2002	18903.64	22053.15	-3149.51	120332.7	0.16	-0.026
2003	21715.25	24649.95	-2934.70	135822.8	0.16	-0.022
2004	26396.47	28486.89	-2090.42	159878.3	0.17	-0.013
2005	31649.29	33930.28	-2280.99	184937.4	0.17	-0.012
2006	38760.20	40422.73	-2162.53	216314.4	0.18	-0.010
2007	51321.78	49781.35	1540.43	265810.3	0.21	0.006
2008	61330.35	62592.66	-1262.31	314045.4	0.20	-0.004
2009	68518.30	76299.93	-7781.63	340506.9	0.20	-0.023
2010	83080.00	89575.00	-6495.00	397983.0	0.21	-0.016

Table 1. (continued)

Sources: Data for 1978-2009: China National Bureau of Statistics, *Statistical Yearbook of China*, 2010; Data for 2010:

http://www.cei.gov.cn/loadpage.aspx?Page=ShowDoc&CategoryAlias=zonghe/ggmflm\_z h&BlockAlias=YBQ H1&filename=/doc/YBQH1/201101210152.xml GDP data for 2010: http://www.stats.gov.cn/tjfx/jdfx/t20110120\_402699441.htm

China's government revenue has changed as fiscal reforms proceed. Fiscal reforms at the beginning aimed at providing state enterprise production incentives, cutting off fiscal dependence of state-enterprises on government, equalizing tax burdens among enterprises, and promoting fair competition. As a result of these reforms, government revenues in GDP declined from 31% in 1978 to 12% in 1993, and central government revenue share in total revenues decreased to only 22% in 1993! In 1994, a new tax system - tax sharing system - was established, which divided taxes into three categories, central government taxes, local government taxes, and joint taxes. The 1994 reform has greatly changed the landscape of China's public finances. Central government's share in total revenue increased to 55.7% in 1994. In 2006, the government abolished the agricultural tax. In 2008, the corporate income tax rates for domestic enterprises and for foreign-invested enterprises were merged. In 2009, investment was excluded from the tax base of valued-added tax (VAT). In 2010, government revenue share in GDP reached 22% of GDP.

The factors that contributed to the decline in government budgetary revenues in the 1980s and early 1990s, include lowered corporate income tax rates (corporate submitted all their profits to the government before the reform), limited tax coverage (many economic activities are not taxed), and tax evasions [Lin (2000a)]. However, since

1994 government revenue has grown rapidly, with the growth rate being 32.4% in 2007 and 21.3% in 2010. The real growth rate is still high if the inflation factor is excluded. The reason for the rapid growth of fiscal revenue include: fast economic growth, tax-for-fee reforms, reinforcement of tax laws, strengthened collection of tax and non-tax revenue.

Figure 1 shows graphically the revenue shares of major taxes in China, including VAT, consumption tax, business tax, company (corporate) income tax, value-added tax on imports, and personal income tax. From 1994 to 2009, the revenue share of VAT in total tax revenue declined from 45% to 31.28%. The revenue share of business tax increased from 13.07% to 13.31%, and the revenue share of consumption tax decreased from 9.51% to 4.46%. Meanwhile, the revenue share of corporate income tax increased from 13.82% to 17.73%, and the revenue share of personal income tax was only 6.44% in 2009, lower than the 7.28% in 2005. It can be seen that China heavily relies on VAT and corporate income tax, business tax and consumption tax and VAT on imports; the share of personal income tax in total tax revenue is still small; and property tax has not been established.

Figure 2 shows the shares of major expenditures in total government expenditure from 1994 to 2006. Over the years, the shares of expenditures on education, healthcare and social welfare, as well as capital construction and national defense, in total expenditure have declined, while the shares of expenditures on government administration and social security have increased significantly. In 2006, the share of expenditures on education, healthcare, culture, and science was 18.4% of total expenditures; the share of expenditures on government administration was 14%; the share of capital construction was 10.9%, the share of social welfare was 10.8%, and the share of national defense was 7.4%.

The government changed classification of its expenditures in 2006. In 2010, total government expenditure was 8957.5 billion yuan. The major expenditure items are as follows: education 1245 billion yuan (accounted for 13.9% of total government expenditure), healthcare 474.5 billion yuan (5.3%), social security and employment 908.1 billion yuan (10.14%), housing for low income families 235.8 billion yuan (2.63%), agriculture, forester, and irrigation 805.2 billion yuan (2.71%), urban and rural community affairs 598 billion yuan (6.68%), resource exploration, electric power, and

information 349.7 billion yuan (3.9%), public security 548.6 billion yuan (6.12%), science and technology 322.7 billion yuan (3.6%), general public services 935.3 billion yuan (10.44%), and interest payment on national debt 184.5 billion yuan (2.06%).<sup>5</sup>



Figure 1. Revenue Shares of Major Taxes in China (%)

*Sources:* Data for 1994-2009 are from China National Bureau of Statistics, *Statistical Yearbook of China*, 2008, 2009, 2010; Data for 2010 are from the official website of China Ministry of Finance, <a href="http://gks.mof.gov.cn/zhengfuxinxi/tongjishuju/201101/t20110120\_421479.html">http://gks.mof.gov.cn/zhengfuxinxi/tongjishuju/201101/t20110120\_421479.html</a>

Figure 2. Shares of Major Expenditures in Total Government Expenditure in China (%)



Sources: China National Bureau of Statistics, Statistical Yearbook of China, 2007.

<sup>&</sup>lt;sup>5</sup> See China Ministry of Finance, website, January 20, 2011, or http://www.sina.com.cn

#### 2.2. Extra-budgetary Revenue and Off-budget Revenue

The Chinese government not only has budgetary revenue and expenditure, but also has large extra-budgetary revenue and expenditure. Extra-budgetary revenue includes the non-tax revenues collected by local governments, government agencies and institutions, and state-owned enterprises (SOEs). Extra-budget revenue includes usercharges for the services provided by government agencies and institutions, administrative fees (license fee, etc.), and revenues from businesses run by colleges and high schools. Extra-budgetary revenues are used for investment in fixed assets, city maintenance, welfare, bonuses and awards, administrative and business activities, etc. [Lin (2005)]. Extra-budgetary revenues were quite large in the late 1980s and early 1990s. The ratio of extra-budgetary revenue to budgetary revenue was 76% in 1985 and reached 111% of budgetary revenues in 1992. In the 1980s, the largest component of extra-budgetary revenue was the extra-budgetary revenue of the SOEs and their supervisory ministries, followed by that of administrative and institutional units, and local governments. The coverage of the extra-budgetary revenue and expenditures has been adjusted since 1993 by excluding the extra-budgetary revenue of the SOEs and their supervisory ministries [Lin (2000b, 2005)].

After the 1994 tax reform, central government no longer relied on extra-budgetary revenues, and the share of central government in extra-budgetary revenue has significantly decreased. The central government share of extra-budgetary revenue was 43.6% in 1992, down to only 8.7% in 2005 and 7.4% in 2008.<sup>6</sup> Thus, extra-budgetary revenue is important for local governments.

Fiscal reforms have aimed at reducing the size of extra-budgetary revenue and expenditure. The purpose of the reform is to improve fiscal transparency, facilitate the central government's supervision, prevent misuse of the fiscal revenue, and reduce corruption. Although extra-budgetary revenue is increasing in absolute value, the ratio of extra-budgetary revenue to budgetary revenue and the ratio of extra-budgetary revenue to budgetary revenue and the ratio of extra-budgetary revenue accounted for 38.55% of budgetary revenue in 1995, 28.57% in 2000, and 17.52% in

<sup>&</sup>lt;sup>6</sup> See China National Bureau of Statistics, *Statistical Yearbook of China*, 2010.

2005. Extra-budgetary revenue accounted for 4.12% of GDP in 1995, 3.43% in 2000, 3.02% in 2005, and 2.1% in 2008.

Besides extra-budgetary revenue, local governments in China also have off-budget revenue (called "the Little Golden Box"). Off-budgetary revenue is from fee collections and sales of urban land and other government properties. It is out of the central government's control and monitoring. Off-budget revenue is illegal and the central government occasionally calls for the elimination of the off-budget revenue. However, it still exists everywhere. The off-budgetary revenue is used for specific local infrastructure development, for entertaining higher-level officials and other visitors, for travelling expenses of local government or local economy, etc. The use of the off-budget revenue is monitored internally within the local government. For this reason, the central government does not really want to eliminate the off-budget revenue, leaving local governments with some fiscal freedom. At the moment, the size of the off-budget revenue is about 30% of local government revenue and about 3-4% of GDP.

Eliminating the extra-budget revenue seems unlikely. Extra-budgetary revenue even exists in the United States. Eliminating the off- budget revenue is possible, but it will reduce local governments' incentives for revenue collection, and the central government does not want to hurt the incentives of local governments. The key is to make the extra-budgetary account transparent and place it under local public supervision and along side higher-level authorities. Since extra-budgetary revenue and off-budget revenue are collected from and mainly used for local economic development, more responsibilities should be given to the local people to monitor and supervise the local government.

#### 2.3. Central and Local Fiscal Disparity

Central and local fiscal disparity is an important issue in China. The tax-sharing system established in 1994 put local governments in a very difficult fiscal position. In 1980, local government revenue accounted for 75% of total government revenue and local government spending accounted for 46% of total government spending. In 2010, local governments received 48.9% of total government revenue while covering 82.2% of total government spending.

86

Table 2 shows central, local, and total government budget deficits. It can be seen that, in all years from 1978 to 1985, local governments had budget surpluses. From 1986 to 1993, local governments had surpluses in some years and deficits in other years. The 1994 tax reform has changed the story completely. Since 1994, each year every province has had a budget deficit. Local governments begged for money from the central government and central government rebated money back to local governments. Out of 31 provinces central government transfers (tax rebates and other transfers) accounted for about 50% of their expenditures. Even the rich provinces needed large transfers to cover their deficits.

Before the early 2000, local governments relied on extensive fees and charges (Lin, 2003). As fee collections became arbitrary and extensive, the general public was outraged, and the government decided to merge some fees and charges into taxes, reduce some fees and charges, and eliminate some fees and charges. Fees and charges are mainly included in extra-budgetary revenue. It can be seen that the ratio of extra-budgetary revenue to budgetary revenue was 110.7% in 1992, 52.6% in 1996, 28.6% in 2000, and only 17.5% in 2005. After the agricultural tax was eliminated in 2006, fees were further reduced since many fees were related to agricultural tax collection.

When the local governments could no longer rely on fees and charges, they found a new way of raising revenue, selling urban land to real estate developers and purchasing farm land from farmers at low prices and selling it to the urban real estate developers at higher prices. According to the Minister Xu Shaoshi, in 2010, the value of land sale was 2.7 trillion yuan, up by 70% over 2009.<sup>7</sup> There is less and less land left to sell now. The central government set a red line for arable land, 1.8 billion mu, and it monitors land development through satellite surveillance. Reliance on land sales is not sustainable. Recently local government established many urban investment companies to borrow money from commercial banks.

To increase local government fiscal capacity, the experiment of residential property tax has started in Shanghai and Chongqing, two of the four municipalities in China. According to the regulation passed by the Shanghai government, starting January 28, 2011, (1) the newly purchased second house (or apartment) of a Shanghai resident, and

<sup>&</sup>lt;sup>7</sup> See http://news.dichan.sina.com.cn/2011/01/07/261264.html

the newly purchased house of a non-resident should pay the personal housing property tax; (2) the tax base is 70% of the housing price; (3) the tax rate is 0.6%, low value house (priced two times lower than the average price in Shanghai) is subject to 0.4% tax; and (4) a tax exemption will be given, for example, to families with apartment smaller than 60 square meters/person after the purchased of the second house, and families with grownup children. Based on new residential houses sold in Shanghai in 2010, the tax revenue from residential housing property would be around 1 billion yuan.<sup>8</sup> Total fiscal revenue for Shanghai in 2010 was 2,87.36 billion yuan.<sup>9</sup> Thus, the residential housing property tax only accounted for 0.35% of total revenue. Chongqing started taxing the newly purchased independent houses, large apartments (200 square meters or larger), the high priced houses/apartments (priced at least three times more than the average city price), and the tax rate is progressive. Since the tax base is very limited, the residential housing property tax will not solve all local government revenue shortage problems.

#### 2.4. China's Social Security System

Prior to the economic reform in 1978, China's social security pension system for workers in the state-owned enterprises (SOEs) was run by each enterprise separately. Government employees in administrative units and government agencies and state institutions were run by the government. After the economic reform, many SOEs were unable to pay social security benefits. To solve this problem, a mixed social security system which combines a social pooling account (an account through which the government collects social security contributions from the young and pays social security benefits to the old) and an individual account (a mandatory savings account through which an individual saves when young and withdraws savings and interest when old) has been adopted.

<sup>&</sup>lt;sup>8</sup> The value of a new residential house sold in Shanghai in 2010 is 239,538.7955million yuan (14213 yuan\*16.8535million square meters). The tax revenue is 1,006 million yuan (239,538.7955million yuan\*70%\*0.6%). See

http://www.guandian.cn/article/20110220/105800.html for original data.

<sup>&</sup>lt;sup>9</sup> See Shanghai 2010 Fiscal Report,

http://www.czj.sh.gov.cn/zwgk/czsj/czyjsqk/szzxqk/201101/t20110121\_119196.html

At present, the social pooling account is the major part. Thus, the social security system is largely PAYG in nature [Lin (2008a)].

In December 2005, the State Council promulgated the Decision on Improving the Basic Social Security System for Workers and Staffs in Enterprises. According to this decision, beginning January 1, 2006, the contribution to an individual account should be 8% of the employee's taxable wage and the employer no longer contributes to the individual account. The employer contributes 20% of the employee's wage to the social pooling account. Individuals don't contribute anything to the social pooling account. The self-employed contribute around 20% of the previous year's local average wage to the social security accounts, of which 8% goes to the social pooling account. A worker, who had been in the social security program for 15 or more consecutively years before retirement, will receive basic monthly social security benefit, which is the average of the previous year's local average wage and the individual's average wage (based on which the individual made social security contributions over the years). A person in the social security program will receive one percentage more of the average wage for every year after 15 years of participation. For example, a person enrolled in the social security program for 20 years will receive 25% of last year's local wage. The monthly payment to a retiree from the individual account is based on the individual's age, life expectancy at the birth, and total funds accumulated. Regions also provide other benefits to retirees. For example, in Beijing, retirees also enjoy subsidies on haircuts which the current workers also enjoy.

Funds from individual accounts have been used to offset fund shortages in the social pooling accounts, and the individual social security accounts are largely vacant. For example, in Shanghai in 2008, the revenue for the social pooling account was 52.659 billion yuan, while the expenditure was 61.522 billion yuan, with a deficit of 8.863 billion yuan, which accounts for 16.8% of the revenue; in 2009, the revenue for the social pooling account was 61.873 billion yuan, while the expenditure was 71.059 billion yuan, with a deficit of 9.186 billion yuan, which accounts for 14.9% of the revenue.<sup>10</sup> Thus, Shanghai city government has had to use the fiscal revenue of around

<sup>&</sup>lt;sup>10</sup> See Shanghai Social Security Network

http://www.12333sh.gov.cn/200912333/2009xxgk/ztxx/shbxxx/201006/t20100608\_1118299.shtml

10 billion yuan annually to offset the social security deficits in recent years.<sup>11</sup> Thus, the current social system is not sustainable. Also, by the end of 2009, the accumulated fund for Shanghai social security individual accounts was only 10.434 billion yuan. It was estimated that the population aged 65 or over accounted for 7% in 2000, 17% in 2020, and over 30% in 2050.<sup>12</sup> Social security reforms have become necessary.

Many economists have provided policy suggestions on China's social security reforms. The World Bank (1997) suggested that China adopt a unified pension system that combines a defined benefit basic public pillar with funded mandatory individual accounts, and the individual account should be the major part. However, China continues to expand the pension system and at the moment more than 25% of employees are covered by the system. This type of social security system has helped reform the state-owned enterprises (SOEs). With the output share of SOEs declining and the profitability of the SOEs increasing, China faces a rare opportunity to reform the pension system. Lin (2008a) provided reasons for the establishment of a pension system with forced savings, a social safety net, and family support. However, the government is still expanding the current system.

	Central and Local Budgetary Revenue					Central and Local Budgetary Expenditure				
	Al	osolute Amou	int		Al	Absolute Amount				
	(1	00million yua	un)	(%)	(100million yuan) (%)				Self-Sufficiency	
Year	National	Central	Local	Central	National	Central	Local	Central	<b>Rate (%)</b>	
1978	1132.26	175.77	956.49	15.5	1122.09	532.12	589.97	47.4	162.1	
1979	1146.38	231.34	915.04	20.2	1281.79	655.08	626.71	51.1	146.0	
1980	1159.93	284.45	875.48	24.5	1228.83	666.81	562.02	54.3	155.8	
1981	1175.79	311.07	864.72	26.5	1138.41	625.65	512.76	55.0	168.6	
1982	1212.33	346.84	865.49	28.6	1229.98	651.81	578.17	53.0	149.7	
1983	1366.95	490.01	876.94	35.8	1409.52	759.60	649.92	53.9	134.9	
1984	1642.86	665.47	977.39	40.5	1701.02	893.33	807.69	52.5	121.0	
1985	2004.82	769.63	1235.19	38.4	2004.25	795.25	1209.00	39.7	102.2	
1986	2122.01	778.42	1343.59	36.7	2204.91	836.36	1368.55	37.9	98.2	
1987	2199.35	736.29	1463.06	33.5	2262.18	845.63	1416.55	37.4	103.3	
1988	2357.24	774.76	1582.48	32.9	2491.21	845.04	1646.17	33.9	96.1	
1989	2664.90	822.52	1842.38	30.9	2823.78	888.77	1935.01	31.5	95.2	
1990	2937.10	992.42	1944.68	33.8	3083.59	1004.47	2079.12	32.6	93.5	

Table 2.Budgetary Revenues and Expenditures of Central and Local<br/>Governments

<sup>11</sup> See Ministry of Labor and Social Security, *China Labor and Social Security Statistics Yearbook*, Beijing: China Labor and Social Security Publishing House, Beijing, 2006; and

http://news.xinhuanet.com/comments/2011-02/17/c 121092068.htm

<sup>12</sup> See http://news.xinhuanet.com/society/2006-02/23/content\_4218570.htm

Central and Local Budgetary Revenue					Central and Local Budgetary Expenditure				Local
	A	bsolute Amou	int		Al		Government		
	(1	00million yua	n)	(%)	(1	00million yua	an)	(%)	Self-Sufficiency
Year	National	Central	Local	Central	National	Central	Local	Central	<b>Rate (%)</b>
1991	3149.48	938.25	2211.23	29.8	3386.62	1090.81	2295.81	32.2	96.3
1992	3483.37	979.51	2503.86	28.1	3742.20	1170.44	2571.76	31.3	97.4
1993	4348.95	957.51	3391.44	22.0	4642.30	1312.06	3330.24	28.3	101.8
1994	5218.10	2906.50	2311.60	55.7	5792.62	1754.43	4038.19	30.3	57.2
1995	6242.20	3256.62	2985.58	52.2	6823.72	1995.39	4828.33	29.2	61.8
1996	7407.99	3661.07	3746.92	49.4	7937.55	2151.27	5786.28	27.1	64.8
1997	8651.14	4226.92	4424.22	48.9	9233.56	2532.50	6701.06	27.4	66.0
1998	9875.95	4892.00	4983.95	49.5	10798.18	3125.60	7672.58	28.9	65.0
1999	11444.08	5849.21	5594.87	51.1	13187.67	4152.33	9035.34	31.5	61.9
2000	13395.23	6989.17	6406.06	52.2	15886.50	5519.85	10366.65	34.7	61.8
2001	16386.04	8582.74	7803.30	52.4	18902.58	5768.02	13134.56	30.5	59.4
2002	18903.64	10388.64	8515.00	55.0	22053.15	6771.70	15281.45	30.7	55.7
2003	21715.25	11865.27	9849.98	54.6	24649.95	7420.10	17229.85	30.1	57.2
2004	26396.47	14503.10	11893.37	54.9	28486.89	7894.08	20592.81	27.7	57.8
2005	31649.29	16548.53	15100.76	52.3	33930.28	8775.97	25154.31	25.9	60.0
2006	38760.20	20456.62	18303.58	52.8	40422.73	9991.40	30431.33	24.7	60.1
2007	51321.78	27749.16	23572.62	54.1	49781.35	11442.06	38339.29	23.0	61.5
2008	61330.35	32680.56	28649.79	53.3	62592.66	13344.17	49248.49	21.3	58.2
2009	68518.30	35915.71	32602.59	52.4	76299.93	15255.79	61044.14	20.0	53.4
2010	83080.00	42470.00	40610.00	51.1	89575.00	15973.00	73602.00	17.8	49.6

Sources: Data for1978-2009 are from China National Bureau of Statistics, *Statistical Yearbook of China*, 2010; Data for 2010 are from the website http://gks.mof.gov.cn/zhengfuxinxi/tongjishuju/201101/t20110120\_421479.html

*Note*: a) The central and local revenue in this table represents the income from the central and local level government themselves.

b) The figure here excludes debt revenue.

# 3. The 2008-2010 Expansionary Fiscal Policy and China's Economic Growth

The global financial crisis that occurred in 2008, resulted in a decrease in China's exports and GDP growth, and a rise in unemployment. GDP growth was 14.2% in 2007, down to 10.6% in the first quarter of 2008, 10.1% in the second quarter of 2008, and 9.0% in the third quarter of 2008. Unemployment was increasing, with the urban registered unemployment rate hitting 4% (excluding the hidden unemployment in the rural areas), the highest since 1980. Urban employment was around 10 million and 1 million college graduates were unemployed at end of 2008. Foreign direct investment

(FDI) actually used declined by -0.86% in October 2008 and by -36.52% in November 2008. From January to September 2008, total trade was US\$2 billion, an increase of 25.2%. However, in November 2008, exports declined by -2.2%, the first time in seven year, and imports declined by 17.9%.

On November 5, 2008, the State Council announced that China would adopt expansionary (proactive) fiscal policy by increasing investment by 4 trillion yuan to stimulate domestic demand and economic growth.

#### 3.1. The Four-trillion-yuan Stimulus Package

Areas of expenditures and planned investments are as follows: (1) Housing for low income groups (low-rent houses, endangered houses for low-income groups, etc.), 280 billion yuan; (2) Rural social safety net and rural infrastructures (including water safety projects, electricity network remolding projects, road construction projects, biogas projects, endangered housing remodeling projects and moving herdsmen settling projects), 370 billion yuan; (3) Construction of railroads, highways, airports, bridges, urban electricity network, and other large infrastructures, 1800 billion yuan; (4) Healthcare, culture and education (healthcare facilities, new hospitals, rural high school remodeling, rural cultural activity centers), 40 billion yuan; (5) Ecological and environmental projects (afforestation, sewage treatment, recycling, etc.), 350 billion yuan; (6) Innovation and industrial structure changes (high-tech projects, information technologies, etc.), 160 billion yuan; and (7) Sichuan earthquake reconstruction, 1000 billion yuan.

In March 2009, the State Council adjusted the investment plan: (1) Housing for low income groups, increased from 280 billion yuan to 400 billion yuan; (2) Rural social safety net and rural infrastructures (including water safety projects, electricity network remolding projects, road construction projects, biogas projects, endangered housing remodeling projects and moving herdsmen settling projects), remained at 370 billion yuan; (3) Construction of railroads, highways, airports, bridges and other large infrastructures, reduced from 1800 billion yuan to 1500 billion yuan; (4) Healthcare, culture and education, increased from 40 billion yuan to 150 billion yuan; (5) Ecological and environmental projects, reduced from 350 billion yuan to 210 billion yuan;

(6) Innovation and industrial structure changes, increased from 160 billion yuan to 370 billion yuan; and (7) Sichuan earthquake reconstruction remained unchanged at 1000 billion yuan.

The investments were planned to be made from the fourth quarter of 2008 to the end of 2010. The sources of the funds are as follows: central government should provide 1.18 trillion yuan; local governments should provide 1.25 trillion yuan; and banks and individuals or firms provide the remaining 1.57 billion yuan. The National Commission on Development and Reforms, The Ministry of Finance, and The People's Bank of China together made decisions to provide long-term low-rate loans to finance some of the projects. Firms undertaking the projects were encouraged to issue corporate bonds to solve their fund shortage problem.

The funding sources of the local government include (1) local government revenue, (2) bonds issued by the central government on behalf of the local governments, (3) urban land rents or revenue from land sales (renting for 70 years), and (4) borrowing, through government-run investment companies, from commercial banks and policy banks. For example, in 2009, the amount of the bonds issued by the central government on behalf of the local governments was 200 billion yuan. Revenue from land sales and borrowing from banks by local governments are substantial and not transparent in China. It is clear that the stimulus package is not only a fiscal policy, but also a monetary policy. In fact, the actual government budget deficits were 126.231 billion yuan in 2008, 778.163 billion yuan in 2009 and 649.5 billion yuan in 2010 (see Table 1). The total fiscal stimulus was about 1,553.9 billion yuan, compared to the package of 4 trillion yuan. Thus, it's safe to say that most of the stimulus came from monetary expansion.

#### 3.2. Value-added Tax Reduction and Export Tax Rebate

As another important stimulus for the economy, the Chinese government cut the value-added tax (VAT) by excluding investment from the tax base. The measure aims at reducing business tax burden and increasing investment.

China's VAT was production-type with the tax base being the total value added. Economists have suggested reforming the VAT system by excluding investment from the tax base [Lin (2008b)], as in many European countries. However, for years the Chinese government had used the VAT reduction as a policy tool to help targeted regions. On July 1, 2004, an experiment of the VAT reform started in three northeast provinces (Jilin, Liaoning, and Heilongjiang), where state-owned enterprises in heavy industries are concentrated. The reform was extended to eight industries in 26 old industrial cities in the central region on July 1, 2007. The central region of China is a less developed region. Since the start of the economic reforms, the government established special economic zones in the east coast, providing favorable economic policies; the government also initiated a west development program in 2000, providing subsidies to the west region. The central region was left behind, with low per capita GDP and low per capita government spending. The VAT reform was designed to help this region.

The financial crisis in 2008 provided an opportunity for the government to extend the VAT reform to the whole country. Beginning January 1, 2009, investment was excluded from the VAT base for all areas and all industries in China.

Meanwhile, the government increased tax rebates for some export goods. For example, on November 11, 2008, the government increased tax rebates for textile, clothing, toys, and other goods. The rebate rates for textile and clothing increased from 14% to 15% on February 1, 2009, and to 16% on April 1, 2009. On June 1, 2009, the government increased the tax rebates for some steel products, sewing machines, scissors, equipment for TV broadcasting, etc. On July 1, 2010, the government eliminated tax rebates for some products, including steel and non-ferrous metals.<sup>13</sup>

#### 3.3. Growth of GDP, Investment in Various Sectors, and Inflation

#### 3.3.1. GDP Growth

The expansionary fiscal policy, along with the easing of monetary policy, has greatly stimulated China's economic growth. China's GDP growth was 14.2% in 2007, 9.8% in 2008, and 9.2% in 2009, the lowest growth rate in recent years. With the large fiscal stimulus, China's GDP growth quickly bounced back to 10.3% in 2010. It is

<sup>&</sup>lt;sup>13</sup> See http://finance.eastmoney.com/news/1350,2010062279765785.html

expected that China's GDP growth will be around 10% in 2011. In fact, the Chinese economy performed better in this global financial crisis than the Asian financial crisis.

Figure 3 illustrates China's annual GDP growth rate and per capita GDP growth rate from 1978 to 2010. China's economic growth rate has been high since the early 1980s, with the exception of 1989 and 1990 when political instability occurred in China. China's GDP growth reached 14.24% in 1993 after Deng Xiaoping's south tour speech in 1992, which called for more market-oriented reforms and opening up. After the Asian financial crisis, China adopted expansionary fiscal policy for the first time, and GDP growth rate was 9.3% in 1997, 7.83% in 1998, 7.62% in 1999, 8.43% in 2000, 8.3% in 2001, and 9.08% in 2002. It took five years for China's GDP growth to bounce back. It only took two years for China's GDP growth to return to double digits and the reason is clear. In the Asian financial crisis, the Chinese government's stimulus package was much smaller. Government budget deficits were 92.2 billion yuan in 1998, 174.3 billion yuan in 2008, 739.7 billion yuan in 2009, and 649.5 billion yuan in 2010. It can be seen that the Chinese government was much more aggressive in using the fiscal tool to stimulate the economy in 2008 than in 1998.

Figure 4 shows China's quarterly GDP growth from the second quarter of 2007 to the fourth quarter of 2010. China's GDP growth was 10.6% in the first quarter of 2008, 10.1% in the second quarter, 9.0% in the third quarter, and down to only 6.8% in the fourth quarter. GDP growth reached a minimum level in the first quarter of 2009, with a quarterly growth rate of merely 6.1%. Under the stimulus plan, GDP growth increased to 7.9% in the second quarter of 2009, 8.9% in the third quarter, and 10.7% in the fourth quarter of 2009. China's GDP growth reached 11.9% in the first quarter of 2010, 10.3% in the second quarter, 9.6% in the third quarter, and 9.8% in fourth quarter. The decline in the quarterly GDP growth was caused by tight monetary policy and tighter control of local government borrowing.



Figure 3. China's GDP Growth and Per Capita GDP Growth 1978-2010

Sources: Data for 1978-2009 are from China National Bureau of Statistics, *Statistical Yearbook of China*, 2010; Data on GDP growth for 2009 are from the website of the China National Bureau of Statistics, http://www.stats.gov.cn/tjdt/zygg/gjtjjgg/t20110111\_402697636.htm; Data for 2010 are from the website http://www.stats.gov.cn/tjfx/jdfx/t20110120\_402699441.htm



Figure 4. Quarterly GDP Growth 2007-2010



China's recent growth was basically driven by investment. Total investment increased dramatically after the adoption of the expansionary fiscal policy. Investment

in fixed assets was 17,282.8 billion yuan in 2008, up by 25.85% from 2007; 22,459.9 billion yuan in 2009, up by 29.95%, and 27,814 billion yuan in 2010, up by 23.8%.

Figure 5 shows the share of consumption, investment (capital formation), and net exports in GDP from 1978 to 2009. Consumption was much larger than investment from 1978 to 2000. In fact, from 1995 to 2000, consumption share in GDP increased from 58.1% to 62.3% while investment share in GDP decreased from 40.3% to 35.3%. However, investment share in GDP increased while consumption share decreased after 2000, with investment increasing to 47.5% and consumption share down to 48.7% in 2009. After the financial crisis in 2008, consumption share in GDP remained stable, net exports share in GDP declined significantly, while investment share in GDP increased dramatically, keeping Chinese economic growth on a fast pace.

Figure 5. Share of Consumption, Capital Formation, and Net Exports in GDP (1978 to 2009)



Table 3 shows the contribution of consumption, investment, and net exports to GDP from 1996 to 2009. In 1999, 80% of GDP growth was caused by consumption growth, 34% by investment, and -14% by net exports. In 2007, 41% of GDP growth was caused by consumption growth, 38% by investment, and 21% by net exports; In 2008, 44.5% of GDP growth was caused by consumption growth, 57.5% by investment, and -2% by net exports; In 2009, 44% of GDP growth was caused by consumption growth, 75.6%

by investment, and -19.7% by net exports. Clearly, the government stimulus package was essential for economic growth.

Year	Consumption	Investment (capital formation)	Net Exports	Year	Consumption	Investment (capital formation)	Net Exports
1996	72.2	20.4	7.4	2003	32.1	68.8	-0.9
1997	45.0	5.6	49.5	2004	34.2	60.2	5.6
1998	69.7	28.4	1.9	2005	31.4	35.5	33.1
1999	79.9	34.4	-14.3	2006	35.6	40.3	24.1
2000	78.3	23.8	-2.0	2007	41.0	38.3	20.8
2001	51.1	49.7	-0.8	2008	44.5	57.6	-2.1
2002	42.6	50.4	7.0	2009	44.2	75.5	-19.7

 Table 3. Contribution to GDP Growth by Consumption, Investment and Net Exports (%)

*Note:* Calculated by the author based on data on real GDP, consumption, capital formation and net exports from China National Bureau of Statistics, *Statistical Yearbook of China*, 2010.

#### 3.3.2. Investment in Various Sectors

The impact of the fiscal policy on the output of the secondary industry was very strong. In 2010, the valued added of primary industry was 4,049.7 billion yuan, increased by 4.3%; the value added of secondary industry was 18,648.1 yuan, increased by 12.2%; while the value added of tertiary industry was 17,100.5 yuan, increased by 9.5%.<sup>14</sup> We now analyze some specific industries that are largely stimulated by the fiscal policy.

The first one is the transportation industry. Figure 6 shows investment in fixed asset in transportation, storage, and post. The growth rate of investment in fixed assets in the areas of transportation, storage, and post declined by nearly ten percentage points, from 26.5% in 2006 to 16.6% in 2007; it increased by nearly four percentage points in 2008. In 2009, the growth rate of investment reached 46.7%, an increase of 26 percentage points from 2008.

Investment in fixed assets in the areas of electric power, gas, and water system has also increased. Figure 7 shows investment in fixed asset in electric power, gas, and water. The investment growth in these areas had been going down since 2004, to about 10% in 2007. The growth rate accelerated to 16% in 2008 and 31% in 2009.

<sup>&</sup>lt;sup>14</sup> See http://www.sina.com.cn.



## Figure 6. Investment in Fixed Asset in Field of Transport, Storage and Post (2003-2009)

Sources: China National Bureau of Statistics, Statistical Yearbook of China, 2010

#### Figure 7. Investment in Fixed Assets in Electricity, Gas and Water (2003-2009)



Sources: China National Bureau of Statistics, Statistical Yearbook of China, 2010

The planned investment in education, healthcare, and cultural development was 150 billion yuan under the 4 trillion yuan stimulus plan. The growth rate of investment in these areas was about 17% in 2008 and jumped to 47.33% in 2009. Figure 8 shows the

level and growth rate of investment in fixed assets in education, healthcare, and cultural development.



Figure 8. Investment in Fixed Assets in Education, Healthcare, Social Securities and Culture (2003-2009)

Sources: China National Bureau of Statistics, Statistical Yearbook of China, 2010





Sources: China National Bureau of Statistics, Statistical Yearbook of China, 2010

Meanwhile, the growth rate of investment in fixed assets in manufacturing industries has been declining, although the level of investment has been growing.

Figure 9 shows investment in fixed assets in manufacturing from 2003 to 2009. The growth rate of investment was 30.55% in 2007, 27.41% in 2008, and 24.53% in 2009.

#### 4.3. Impact on Inflation

As mentioned earlier, a large part of the stimulus package was financed by bank loans. Thus, money supply and aggregate demand increased, resulting in a rise in the price level. Figure 10 shows the Consumer Price Index (CPI) in China from 1990 to 2010. It can be seen that the CPI had decreased from early 2008 to the middle of 2009, and then started to increase. The growth rate of China's CPI was 8.7% in February 2008, down to 1.2% in December 2008, and to -1.8% in July 2009. The CPI then started to increase, with the growth rate being 1.9% in December 2009, 5.1% in November 2010, and 4.6% in December 2010. In January 2011, the CPI increased by 4.9%, compared to the same month last year. These are official statistics and the actual inflation rate could be much higher. Inflation has become a serious concern in China now and controlled inflation is the prime target of the government this year.

Figure 10. The Consumer Price Index (CPI) in China (1990-2010)



Sources: China National Bureau of Statistics website. Data for 1994-2010 are from http://219.235.129.58/reportMonthQuery.do

### 4. China's Government Debt and Fiscal Sustainability

The expansionary fiscal policy has resulted in a large increase in government debt, particularly at the local level. We now discuss China's fiscal debt, foreign debt, state-banks non-performing loans and local government debt, as well as China's fiscal sustainability.

#### 4.1. Fiscal Debt

China's fiscal debt has been rising, but still low, when compared to many other nations. Table 6 shows China's government debt, including domestic debt and foreign debt. The debt-GDP ratio was 1% in 1981, 4.77% in 1990, 6.98% in 1997, 9.2% in 1998, 11.76% in 1999, 13.12% in 2000, 16.38% in 2005, and 17% in 2007, and 22% in 2007. The Debt-GDP ratio declined to 17.56% in 2008, and increased slightly to 17.81% in 2009.

#### 4.2. Foreign Debt

The size of foreign debt is an important indicator of a country's fiscal risk. Debt crises have often erupted in recent centuries. Many financial and fiscal crises in recent decades were caused by high foreign debt. In the early 1990s, Mexico increased its foreign borrowing to fulfill its ambitious development plan and foreign debt reached three times as high as foreign exchange reserves. In 1994, a financial crisis occurred in Mexico, and their economic development was heavily obstructed. In 1997, foreign debt-GDP ratio climbed to 62.6% in Thailand, 70% in Philippines, 65.3% in Indonesia, and 32.8% in South Korea, resulting in the 1997 Asian Financial Crisis.<sup>15</sup> It took many years for these Asian economies to recover. The recent fiscal crisis in Greece is also caused by large foreign debt. By the end of 2009, Greece's foreign debt reached 214.7 billion euro, accounting for 90% of GDP!<sup>16</sup> Debt crisis inevitably occurred in Greece in 2010, forcing Greece to borrow new debt at high interest rates to pay the old debt.

Since the early 1980s, China has started to borrow from the international capital Foreign debt can be classified as three major types by source: foreign markets. government loans, loans from international financial institutions, and commercial bank loans. Foreign debt can be classified by the maturity time as short-term debt (matures within one year) and long-term debt. Foreign debt can also be classified as government

 <sup>&</sup>lt;sup>15</sup> See The World Bank, *Global Development Finance*, 1999.
 <sup>16</sup> See Bank of Greece, http://www.bankofgreece.gr/Pages/en/Statistics/externalsector/debit.aspx

loans, government guaranteed loans (borrowed by private agents but guaranteed by government to be repaid), and private non-guaranteed loans. In 2006, 8.6% of China's foreign debt was from foreign governments, 8.6% from international financial institutions, 50.6% from international commercial banks, and 32.2% from trade loans. Long-term debt accounted for 43.1% and short-term debt 56.9%, compared to 91% and 9%, respectively, in 2000.

In addition to the debt-GNP ratio, safety indicators of foreign debt also include the ratio of debt to exports of goods and services (XGS), the ratio of total debt service to exports of goods and services, and the ratio of foreign debt to foreign exchange reserves [see Lin (2003)]. The lower each of these measures is, the smaller the burden of the country's foreign debt is. As can be seen, the ratio of debt to exports of goods and services (XGS) was 96.5% in 1993 (highest for China) and down to 32.2% in 2009; the debt-GNP ratio was 17.1% in 1994 (highest) and down to 8.7% in 2009; and the ratio of total debt service to exports was 15.4% (highest) in 1986, 1.8% in 2008, and 2.9% in 2009.<sup>17</sup>

The reasons for low foreign debt in China include sufficient domestic savings, the painful lessons learned from borrowing from the Soviet Union, and the lessons learned from the other heavily indebted developing nations.<sup>18</sup> China's savings rate has been extraordinarily high (more than 50% of GDP now) and China does not really need foreign savings to fill the savings and investment gap. In fact, China is a capital exporting country. China is now the largest holder of US treasury bonds, with \$895.6 billion by the end of November 2010, higher than the \$877.2 billions held by Japan and \$511.8 billions held by Great Britain. Thus, foreign debt is not currently a serious problem for China.

<sup>&</sup>lt;sup>17</sup> See China's National Bureau of Statistics, 2001, 2002, 2009, *Statistical Yearbook of China*, China's Statistical Press, 2009 data from China's National Bureau of Statistics, 2010, *China Statistical Abstract*, China's Statistical Press, p. 90.

<sup>&</sup>lt;sup>18</sup> See Lin (2003) for a detailed discussion.

Year	Domestic Debt Outstanding	Foreign Debt Outstanding	Domestic Debt Outstanding/GDP (%)	Foreign Debt Outstanding/GDP (%)	Public and Publicly Guaranteed Long-Term Foreign Debt/Long- Term Foreign Debt (%)
1981	4.87		1.00		
1982	9.28		1.74		
1983	13.45		2.26		
1984	17.67		2.45		
1985	23.80	46.48	2.64	5.16	
1986	29.36	74.18	2.86	7.22	
1987	39.18	112.43	3.25	9.32	
1988	55.85	148.90	3.71	9.90	
1989	77.14	155.49	4.54	9.15	
1990	89.03	251.33	4.77	13.46	
1991	106.00	322.38	4.87	14.80	
1992	128.27	382.28	4.76	14.20	
1993	154.07	481.55	4.36	13.63	
1994	228.64	799.87	4.74	16.60	
1995	330.03	890.13	5.43	14.64	
1996	436.14	966.73	6.13	13.58	
1997	550.89	1,085.63	6.98	13.75	
1998	776.57	1,209.10	9.20	14.33	
1999	1,054.20	1,256.89	11.76	14.02	
2000	1,302.00	1,206.41	13.12	12.16	78.90
2001	1,561.80	1,408.00	14.24	12.84	72.66
2002	1,933.61	1,418.35	16.07	11.79	73.55
2003	2,260.36	1,602.68	16.64	11.80	70.95
2004	2,577.76	1,892.08	16.12	11.83	69.14
2005	3,184.86	2,302.28	17.38	12.57	62.29
2006	3,438.02	2,574.81	16.22	12.15	57.40
2007	5,146.74	2,841.01	20.00	11.04	51.58
2008	5,279.93	2,602.05	17.56	8.65	
2009	5,973.70	2,928.11	17.81	8.73	

#### Table 6. Domestic and Foreign Debt Outstanding (billion yuan)

Sources: Domestic debt outstanding data for 1981-1999 from Jia and Zhao (2001); for 2000-2004 from The People's Bank of China, *The Balance of T-Bond*; for 2005-2006 data from China National Bureau of Statistics, 2007, *Statistical Yearbook of China*, China's Statistical Press, p. 283; 2007-2009 data from China's National Bureau of Statistics, 2009, 2010, *China Statistical Abstract*, China's Statistical Press. Foreign Debt Outstanding in the terms of Chinese yuan is obtained by using the average exchange rate of yuan against US dollars in each year from 1981 to 2008 and foreign debt outstanding in terms of the US dollars, both are from China's National Bureau of Statistics, 1987-2009, *Statistical Yearbook of China*, China's Statistical Press. Public and publicly guaranteed long-term foreign debt to long-term foreign debt ratio is calculated based on China's National Bureau of Statistics, 2002-2010, *International Statistical Yearbook*, China financial & economic publishing house.

#### 4.3. State Banks' Non-performing Loans

State banks' non-performing loans (NPLs) were an alarming problem in China in the early 2000. The ratio of the NPLs to GDP was 41-50% at the end of 2001, which was the largest part of China's government debt [see Lin (2003)]. The NPLs of main commercial banks have declined dramatically in the past decade. The NPLs were 2,279 billion yuan in 2002 (18.9% of GDP), 2,104 billion yuan in 2003 (15.5% of GDP), 1,718 billion yuan in 2004 (10.7% of GDP), 1,220 billion yuan in 2005 (6.7% of GDP), 1,170 billion yuan in 2006 (5.5% of GDP), 1,201 billion yuan in 2007 (4.7% of GDP), and 487 billion yuan in 2008 (1.62% of GDP). <sup>19</sup> According to the China Banking Regulatory Commission (CBRC), at the end of December 2009, the NPLs of the commercial banks (including state-owned commercial banks, joint-stock commercial banks, city commercial banks, rural commercial banks and foreign banks) were 497.33 billion yuan (1.46% of GDP). Thus, the NPLs are no longer a problem for China.<sup>20</sup>

The problem of NPLs emerged as a result of the SOE reforms. Under the centrallyplanned economic system, government policy towards the SOEs was "covering all expenditures and receiving all the revenues (*tongshou tongzhi*)," i.e., the government collected all the profits from or covered all the losses of the SOEs. In the beginning of economic reforms, the government still subsidized SOEs to prevent large unemployment. As the economic reforms went on, the government decided to establish market economy in 1993, and thus, it forced the SOEs to compete with private enterprises and with each other, and no longer covered their total expenditures. Many SOEs had to borrow from the banks. Due to poor performance, many SOEs were unable to pay back the loans, resulting in NPLs in the state-owned banks. The largescale bankruptcy of SOEs would result in large unemployment and the government was very reluctant to let it happen. In the late 1990s, the NPLs became so high, that the confidence of foreign investors in the Chinese economy was threatened. The Chinese

<sup>&</sup>lt;sup>19</sup> People's Bank of China, *Almanac of China's Finance and Banking*, Almanac of China's Finance and Banking Editor Board, 2002-2009. Main commercial banks include state-owned commercial banks, joint-stock commercial banks. NPL coverage ratio refers to the ratio of allowance for probable losses on non-performing loans (NPL) to total NPL.
<sup>20</sup> However, if the 23% loans to local government financing vehicles do go bad (1.76 trillion yuan),

<sup>&</sup>lt;sup>20</sup> However, if the 23% loans to local government financing vehicles do go bad (1.76 trillion yuan), NPLs ratio will dramatically increase. Since loans to local government financing vehicles have already been accounted for in the local government debt session, we don't count bad loans from local government financing vehicles in this section.

government realized the severity of the NPLs problem and took a series of measures to reduce the NPLs, including direct capital injection, the establishment of asset management companies (AMCs), the reduction of business taxes, and tougher restrictions on bank lending.

In 1998, the Ministry of Finance issued 270 billion long-term special treasury bonds (30 years) to increase capital of the big-four state banks (Bank of China, China Construction Bank, Industrial & Commercial Bank of China, and Agricultural Bank of China).<sup>21</sup> In 1999, the government established four asset management companies (AMCs), one for each state-owned commercial bank, to acquire the banks' NPLs at book value, i.e., detaching the NPLs from the big four commercial banks. The four AMCs acquired the NPLs from the four state-owned commercial banks several times. In 2000, the government announced that the business tax rate for the banking industry would be cut from 8% to 7% in 2001, 6% in 2002, and 5% in 2003.<sup>22</sup> The tax cut decreased the tax burden and increased the profitability of the banking industry. In 2003, the government Ltd (Huijin) to invest in major state-owned financial enterprises on behalf of the State. Meanwhile, the government toughened the state bank lending requirements and bank officers were lifetime responsible for the repayment of the loans they made.

All these efforts have contributed to the decrease in the NPLs of the big four commercial banks and the increase of their profitability. Unlike many other governments in the world, the Chinese government has strong administrative power and ability to solve some economic problems, such as the one we discussed.

<sup>&</sup>lt;sup>21</sup> Ma, Qingquan, 2003, *The History of China's Securities*, CITIC Press Corporation, p. 383.

<sup>&</sup>lt;sup>22</sup> China State Administration of Taxation, "Circular of the Ministry of Finance and the State Administration of Taxation on Reducing the Business Tax Rate of Finance and Insurance", from State Administration of Taxation website,

http://202.108.90.130/n480462/n480513/n480979/n554109/996587.html. In 1997, Chinese government revised "Provisional Regulations of The People's Republic Of China On Business Tax", which was released in 1993, to increase business tax for finance and insurance industries from 5% to 8%. See State Administration of Taxation website:

http://www.chinatax.gov.cn/n480462/n480513/n480979/n554109/999929.html.
#### 4.4. Local Government Debt

The biggest concern over China's fiscal risk and sustainability is the local government debt in China. Lin (2003) shows that the unreported township-level government debt was around 200 billion yuan or only 2.3% of GDP in 2001. For many years, demand for local infrastructures and a shortage of fiscal revenue have put local governments in severe fiscal difficulty. Although they don't have the right to issue bonds, local governments have accumulated debt through borrowing of local government investment companies, through central government bond issuance, through delaying project payments to local private companies, and through the delay of wage payments to government employees. Local government asked the local government to match the central government's huge investment.

The China Banking Regulatory Commission (CBRC) found that local governments of all levels have set up 8,221 financing vehicles nationwide, with 4,907 financing vehicles for county governments, and borrowed heavily from the banks for investment.<sup>23</sup>

How large is the local government debt? The Third Conference of Economic and Financial Situation held by the CBRC on July 20, 2010, indicated that the loans of local government financing vehicles were about 7.66 trillion yuan (\$ 1.14 trillion) at the end of June 2010, and that as much as 23% of those loans could go bad.<sup>24</sup> Total amount of urban investment bonds, including medium-term bonds and short-term financing bonds, amounted to 488 billion yuan. The amount of bonds issued by the Ministry of Finance on behalf of local governments was 267 billion yuan. Together, total local government debt exceeded 8.42 trillion yuan by the end of June 2010, accounting for 24.7% of GDP.<sup>25</sup> After June 2010, the Ministry of Finance issued a 133 billion yuan bond on

<sup>&</sup>lt;sup>23</sup> There are currently 2,862 counties and county-level cities or districts in China.

<sup>&</sup>lt;sup>24</sup> Of these 7.66 trillion yuan LGFV loans, 27% were found to have funded projects with sufficient cash flow to repay the loans. 50% must rely on "alternative sources" for loan repayment, either seizing collateral or invoking the public guarantee. 23% are categorized as "facing high credit risks", i.e., invalid qualification of borrowers, invalid guarantee by local governments, or loans misappropriated. See Chovanec, Patrick, "The Chinese Banking System is Seriously at Risk", *Business Insider*, July 27, 2010.

<sup>&</sup>lt;sup>25</sup> See Ba (2010). Urban investment bond is a special kind of enterprise bond backed by local governments. Its main issuers are local government financing vehicles and the funds raised are

behalf of local governments.<sup>26</sup> Thus, the total local government debt has exceeded 8.55 trillion yuan, accounting for 25% of GDP. It was estimated that the average ratio of financing vehicle loans to local government revenue was 97.8% and in some cities this ratio exceeded 200%.<sup>27</sup>

According to a study conducted by the Chinese Academy of Social Sciences, local government debt will reach 9 to 10 trillion yuan by the end of 2010 and will keep rising to 11 trillion in 2011. The calculation was based on the following consideration: Out of the 3.05 trillion yuan new loans to local government vehicles in 2009, 1.56 trillion yuan went to new projects. These new projects usually last about three to five years and in order to keep normal operation of these new projects, at least 1.17 trillion yuan in new loans is needed every year.<sup>28</sup>

Zhejiang province was the first in China to disclose its local government debt. Zhejiang government debt was 457.9 billion yuan at the end of 2009, 178.7 billion yuan higher than 2008. The ratio of local government debt to local GDP was 20.15%, 10.15% higher than the safety line set by Zhejiang province itself.<sup>29</sup> Zhejiang government revenue was only 214 billion yuan, accounting for 9.3% of regional GDP in 2009.<sup>30</sup> Clearly, Zhejiang government debt to local GDP in the other provinces are the same as that of Zhejiang, we can estimate local government debt in China. Since the sum of regional GDP in 2009 was 36.53 trillion yuan, the sum of local government debt would be 7.36 trillion, not far away from 8.55 trillion yuan estimated by the CBRC.<sup>31</sup>

The central government has taken tough measures to reduce local government debt. In June 2010, State Council announced a regulation on local government financing platforms, aiming at curtailing local government debt growth financing platforms unless they have sufficient capital and public schools, hospitals, parks cannot be used as their

mainly used for infrastructure construction. In November 2010, urban investment bond was renamed as Municipal Project Construction Bond.

<sup>&</sup>lt;sup>26</sup> Wind Database. See http://www.wind.com.cn/

<sup>&</sup>lt;sup>27</sup> "Local Government Debt Crisis", *China Business Times*, June 3, 2010.

<sup>&</sup>lt;sup>28</sup> "Local Government Debt May Reach Nine to Ten Trillion Yuan", *Cai Jing*, November 1, 2010.

<sup>&</sup>lt;sup>29</sup> "Zhejiang Disclosed Its Government Debt", China Daily, September, 29, 2010.

<sup>&</sup>lt;sup>30</sup> Zhengjiang Provincial Department of Finance website, *Report on the Implementation of Zhejiang Province Budgets for 2009 and on the Draft of Zhejiang Province Budgets for 2010*.http://www.zjczt.gov.cn/zwgk/czzl/czysbg/8398.htm

<sup>&</sup>lt;sup>31</sup> The sum of regional GDP is calculated based on the data from China National Bureau of Statistics, *China Statistical Yearbook*, Beijing, China Statistics Press, 2010.

initial capital. Local governments must sort out and reduce the loans of the financing platforms. MOF, DRC, and CBRC jointly issued a document, demanding local governments follow the regulation of the State Council. There is no doubt that the central government can do whatever it wants to reduce local government debt. However, facing increasing demand for local infrastructures, where are the sources of local government revenue?

#### 4.5. Total Government Debt and the Assets of the SOEs

With domestic debt being 17.8% and foreign debt being 8.7% of GDP, the central government explicit debt was about 26.5% of GDP in 2009. State banks' NPLs were about 1.5% of GDP in 2009, and local government debt was about 25% of GDP in 2009. The total government debt would be around 53% of GDP. Given that nearly half of the foreign debt is not government guaranteed, the total reliability to the government should be less than 50%.

Unlike other countries, China still has many SOEs despite privatization of small SOEs over the years. The assets of SOEs are still huge. In 1990, the assets of SOEs were 1639.30 billion yuan, accounting for 88% of GDP; in 2000, the assets of SOEs were 5755.44 billion yuan, accounting for 58% of GDP; and in 2008 the assets of SOEs were 13436.55 billion yuan, accounting for 45% of GDP.<sup>32</sup> These assets may be used to pay existing government debt when necessary.

It might be misleading to compare the size of China's debt with other countries, such as Japan and the United States since they are in different stages of economic development. During the period of rapid economic growth, the debt-GDP ratio was low in these countries. Japan's government debt-GDP ratio was only 9.6% in 1970, increased to 21.1% in 1975, 48% in 1980, 62.6% in 1985, 59.1% in 1990, 82.6% in 1995, 128.1% in 2000, 150.7% in 2005, and 157.5% in 2009.<sup>33</sup> Government debt-GDP ratio in the US was 94.1% in 1950, 56.1% in 1960, 37.6% in 1970, 33.3% in 1980, 55.9% in 1990, 58% in 2000, and 94.27% in 2010.<sup>34</sup> Thus, compared to the size of government debt in Japan and the US in 1970, China's government debt now is not low.

<sup>&</sup>lt;sup>32</sup> See China Ministry of Finance, *Finance Yearbook of China*, China's Fiscal Press, 1996, 2009.

<sup>&</sup>lt;sup>33</sup> See http://www.mof.go.jp/zaisei/con\_07.html. The figure for 2009 is estimated by the author.

<sup>&</sup>lt;sup>34</sup> See http://www.usgovernmentspending.com/federal\_debt\_chart.html.

#### 4.6. Housing Market "Bubbles" and Potential State Banks' NPLs

The rapid increase in housing prices in China has caused increasing concern over China's housing market bubble. Many compared the housing market in China now with that in Japan in the late 1980s. Some predicted that the bubble will inevitably burst, resulting in a collapse of the housing market and an economic recession in China. Housing prices are particularly high in some big cities, such as Beijing, Shanghai, Guangzhou and Shenzhen. In small cities, housing prices are still not high but are increasing.

The government has taken serious measures to control housing prices. On January 26, 2011, the State Council issued a regulation aimed at housing price adjustment and control. The document requires local governments: (1) announce its target housing price in the first quarter of 2011; (2) increase the construction of housing for low income families; (3) audit the land value-added tax payment of the developers who charge a substantially higher price than others, and collect sales tax on the houses sold within five years; (4) increase the down payment requirement to 60% and the interest rate (no less than 1.1 times the basic interest rate) for a family purchasing its second house; (5) increase land supply for houses for the low income families; (6) forbid the purchase of more houses by a family with two or more houses; (7) punish local officials for not reaching the goal of housing price. Many cities issued their own regulations on housing price control, following the State Council's regulation.

All these economic and administrative measures will reduce the investment demand for houses and stabilize the housing prices in the short run. The introduction of personal property tax will reduce the investment demand for housing. Meanwhile, China has been experiencing high inflation, and prices and wages are increasing, which will reduce the relative price of housing. With a large proportion of houses purchased with cash and with a high down payment for bank loans, it is unlikely that massive NPLs will emerge even if housing prices start to decrease.

## 5. Current Fiscal Policy and Policy Suggestions

In 2011, the Chinese government planned to continue the expansionary fiscal policy. Based on the speech delivered by the Finance Minister Xie Xuren, government budget deficit would be 900 billion yuan, 700 billion yuan for the central government and 200 billion yuan for the local governments. The total deficit is 105 billion yuan less than that in 2010.<sup>35</sup> The target growth rate of government revenue is 8%. The government planned (1) to increase the investment in the areas of agricultural irrigation systems, education, healthcare, housing for low-income groups, and employment promotion; (2) to adjust taxes to promote income equality and promote consumption; to optimize the expenditure structure; and (3) to support regional balanced growth, technological innovation, industrial structure upgrading, energy saving, pollution reduction, and resource conservation and environmental protection. Clearly, China's government debt will continue to increase.

The mismatch of local government revenue and expenditure and the severe shortage of local government revenue is a crucial problem in China's public finance. As mentioned earlier, local governments received 49% of total government revenue while covering 82% of total government expenditure. In the past, they relied on fee collection, urban land sales, and borrowing through their investment companies. Local public finance is not sustainable. Also, China now faces problems of growing income inequality, environmental deterioration, and shortage of natural resources, and thus, reforming China's tax system is necessary. In addition, China has a PAYG social security system which is not sustainable with the rapidly aging population. A new round of fiscal reforms is imperative for fiscal sustainability.

First, allow local governments to establish new taxes, such as a personal property tax. At the moment, provincial governments have the right to pass limited tax laws. But they have seldom used that right. Prefecture, county, and township governments have no right to enact their own tax laws. China is a large country and areas within it are quite different, such as different stages of economic development and different resources. The central government should give local governments the right to establish

<sup>&</sup>lt;sup>35</sup> See http://www.zaobao.com/cninvest/pages4/cninvest\_zong101228.shtml

their own taxes based on specific local situations. In the U.S., many state governments depend on sales tax for revenues, while many local governments rely on property tax. As the Chinese economy advances, collecting property tax in China will be inevitable.

Second, allow local governments to issue bonds. Normally it is not a good idea to transfer the current generation's tax burden to the future generations by issuing bonds. However, since infrastructures will usually benefit future generations, it would be appropriate to let the future beneficiaries share the burden of finance. For a long time in U.S. history, state and local governments were the main issuers of public debt, and only after the 1930s did the federal government begin to play a main role in debt issuing. Giving local governments the right to collect their own taxes and to issue bonds may cause overexpansion of local governments and corruption with limited accountability of local officials to the public. Thus, appropriate laws should be established.

Third, reform the tax system. To achieve equitable economic growth, China should increase direct taxes, such as personal income tax and personal property tax, while reducing indirect taxes, such as VAT, business tax, and consumption tax. China's tax rates are very high (e.g., the highest marginal tax rate for personal income is 45%). Based on Forbes, China's overall tax rate was the second highest in the world in 2009. Indeed, China's government revenue has increased at an extraordinary rate (32% in 2007), much higher than the GDP growth. Tax evasion is widespread in China. The direction of tax reforms should be to lower the tax rates, expand the tax base, and reduce tax evasion.

Fourth, establish a new social security system with a large personal savings account. China's social security system only covers a quarter of the labor force and the social security debt is not too large. The Chinese government still owns a large amount of assets, which can be used to pay the social security pension debt. Moreover, China's tax revenue has been increasing rapidly in recent years. The increased revenue can be used to repay the pension debt. In addition, the government owns all the land in urban areas and the revenue from land sale can also be used for social security reforms.

Fifth, reduce government budget deficit. The Chinese economy is growing around 10% annually, and inflation has become a concern to the policy-makers and the general public. Yet the government decides to continue adopting expansionary fiscal policy by largely increasing government spending. The government should follow the balanced

budget principle in the long run. At the moment, the government should cut its deficits and reduce the size of its debt, leaving room for future expansionary fiscal policy.

Sixth, increase fiscal transparency. Fiscal transparency is very important. The recent Greece fiscal crisis could have been prevented if its fiscal system was transparent and if it had not misreported its fiscal deficits over the years. China's fiscal system is far from transparent, particularly on the local level. If local governments obtain the right to establish new taxes and to issue bonds, they must be supervised by the local people.

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## **CHAPTER 4**

## Efficacy and Sustainability of Fiscal Policies -A Case of Korea-

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This study examines the expansionary fiscal policies taken in Korea during the recent Global Financial Crisis (GFC) and evaluates their effectiveness in the recovery process. Like other neighbor economies, Korean economy suffered from the tremor of the GFC mostly through the trade channel. However, rapidly depreciating Korean currency improved trade balance, which in turn absorbed the downward pressure at least in the initial period of the GFC. As the trade surplus simmered down, the growth in domestic demand took the place and led the quick recovery from the recession. In this context, we focus on the period after 2008. Q3 and discuss whether and how the unusually expansionary fiscal stimulus packages sustained the domestic demand.

Next, we also forecast how soon and easily the fiscal stance will return to normalcy based on the Medium Term Fiscal Management Plan (MFMP) announced by Korean government. In addition, from a long term perspective, we identify several potential risk factors on fiscal sustainability of Korea, such as National Public Pension, National Health Insurance, and hidden debt of public enterprises

<sup>&</sup>lt;sup>1</sup>The views and opinions expressed in this paper are those of the authors and do not necessarily reflect the official position of Korea Development Institute.

## **Executive Summary**

The turmoil triggered by the U.S. financial market in July 2007 spread fast around the world, plunging the global financial system into chaos. In response to the Global Financial Crisis (GFC), Korean government announced several fiscal stimulus packages. This paper is purposed to examine whether these unusual expansionary fiscal policy contributed to the quick recovery from the crisis. Next, it evaluates so called "the exit plan" of Korean government from a fiscal side and forecast whether the plan will retrieve fiscal balance effectively. Then, the paper identifies potential risk factors on various fiscal areas and suggests long-term measures for them.

An official report from Ministry Of Strategy and Finance (MOSF) confirmed that the size of fiscal stimulus package was 38.8 tril. won (3.6% of GDP) in 2009 and 17.1 tril. won (1.5%) in 2010. In terms of composition, the fiscal stimulus package consists of various fiscal items but seems to concentrate more on tax cut, SOC building and support for SMEs and self-employed. According to fiscal index such as FIS and FI, they increased sharply in response to the negative real GDP deviation following the GFC. We could recognize, regardless of measures to rely on, that the fiscal stimulus package executed after the GFC is quite substantial and unusual in the fiscal history of Korea.

It is assessed that Korea's fiscal stimulus package was quite effective and has an important role for Korea's rapid recovery. According to simulation results from KDI macroeconomic VAR model, expansionary fiscal policy during the GFC contributes to boost economic growth in 2009~2010. For example, contribution of fiscal stimulus on real GDP growth in the first half of 2009 was 1.4%p and in the second half was 1.1%p. The effects of fiscal stimulus also continued in 2010, but its magnitudes become smaller than previous year. These findings are also supported by circumstantial evidence in Hur *et al.* (2010). Overall, these empirical results lend support to the popular belief that countercyclical fiscal policy boosted aggregate demand and output at least in Korea as well as rest of developing Asia during the GFC.

Korean economy recently announced the exit plan via Medium Term Fiscal Management Plan for 2010~2014. The priority of fiscal policy is on fiscal consolidation. The medium-term fiscal targets are to return to balance of operational budget in 2013~14 and to reach the government debt to 31.8% in 2014. During these periods, government revenue will grow annually at 7.7%, while expenditure at 4.8% only. Then, operational budget deficit will be improved from  $\Delta 2.7\%$  to GDP in 2010 to  $\Delta 2.0\%$  in 2011 and will record 0.2% surplus in 2014. As a result, the government debt will be maintained not to exceed mid 30% of GDP and will continue to decrease until 2014. More specifically, the target areas for medium term resource allocations are R&D to enhance the future growth and social welfare spending to improve safety net. However, it is worth noting that the fiscal balance and the government debt to GDP ratio are based on too optimistic economic growth forecast.

Under these circumstances, there are several potential risk factors on fiscal sustainability of Korea mainly due to ageing demographic structure as well as hidden debt of public enterprises. According to a long-term fiscal projection, social welfare and health expenditure will grow gradually for the period of 2015 to 2050. In 2050, it is expected that social welfare and health expenditure will be 16.9% and 3.6% of GDP respectively. Consequently, Korea's government debt continuously rises for the projection period. It is expected to get to 140.1% of GDP in 2050.

For fiscal sustainability, Korean government needs to perform the following reforms. In a short and medium term perspectives, Korea government should continue to establish fiscal foundation as well as enforcement of SOEs' debt reduction. By reviewing a fiscal project on a zero-based budget, projects that are neither essential nor urgent should be terminated. Also by improving the performance evaluation and feedback systems, the fiscal programs should be streamlined consistently to effectively adjust tax expenditures. On the tax revenue side, it is necessary to expand the tax base by diminishing tax redemption and reduction and non-refundable tax credit, while at the same time expand the tax revenue base by enhancing the accuracy of reporting income through consistent improvement in tax administration.

In a long term perspective, institutional reform associated with social welfare such as public pension is required. Periodical release a long-term fiscal outlook report which takes into account low fertility rate and population aging will be helpful to get publics' consent related to increase in contributions.

## 1. Introduction

The turmoil triggered by the U.S. financial market in July 2007 spread fast around the world, plunging the global financial system into chaos. All nations, consequently, have been experiencing devastating panic due to following economic recessions and rising unemployment rates, though in different degrees.

The "flight to quality" triggered by the downfall of financial markets in developed economies detonated the drastic credit crunch in developing countries especially centering on foreign exchange. These, combined with gloomy economic outlook, caused stifling exchange and interest rate hikes as well as sudden stock market crashes. This was the economic calamity faced by developing countries regardless of their extent to exposure to direct financial losses. The next round came from the trade side, where exports of most countries (if not all) dropped rapidly as recessions in developed countries became materialized and prolonged. Therefore, it was inevitable for most of the world economies to suffer recession as well as to adjust employment.

In response to enormous political pressure, governments around the world after experiencing, first-handedly, the detriments of the recent crisis on their economies, have announced and launched massive fiscal stimulus packages in addition to monetary easing with an aim to put their economies back on track. Like other countries, Korea also announced several fiscal stimulus packages after the crisis.

This paper is purposed to examine whether these unusually expansionary (from a long history of fiscal conservatism in Korea) fiscal policy contributed to the quick recovery from the crisis. Next, it evaluates so called "the exit plan" of Korean

government from a fiscal side and forecast whether the plan will retrieve fiscal balance effectively. Then, the paper identifies potential risk factors on various fiscal areas and suggests long-term measures for them.

## 2. Assessment of Fiscal Position: Before and After the GFC

Like other Asian countries, Korean economy was distant from the very sources of the GFC. Thus, the need for injection of liquidity into the economy was not imminent. Instead usual combination of fiscal expansion and monetary easing was executed in response to the crisis. Looking back to the past three decades of fiscal records, the magnitude of fiscal expansion is unprecedented. Of course monetary easing represented by the low policy rate (call rate in Korea) was responsive and substantial<sup>2</sup>. In this study, however, we narrow down our focus on the expansionary fiscal measures taken during the crisis and evaluate how effective they were and what will be their long-term consequences on fiscal sustainability.

### 2.1. Size and Composition of Fiscal Stimulus

The estimated size of Fiscal Stimulus Package in Korea varies from a source to another. An official report from Ministry Of Strategy and Finance (MOSF, 2010a) confirmed that the size of fiscal stimulus package was 38.8 Tril. Won (3.6% of GDP) in 2009. It also announced that additional 17.1 Tril. Won (1.5%) would be used in 2010. These figures are very close to Table 1 (reminded that the current GDP of Korea approximately amounts to 1,000 Tril. Won)<sup>3</sup>.

<sup>&</sup>lt;sup>2</sup> See Figure A1 in Appendix A.

<sup>&</sup>lt;sup>3</sup> It is another issue whether these fiscal stimulus packages were executed as announced. To make it worse, it is not easily feasible to track down all the fiscal items and check whether certain items increased exactly as planned. Hence, in the following analyses, instead we use either the fiscal record (for empirical analysis) or assume that the fiscal stimulus packages were executed as Korean government announced (for simulations).

	2009	2010
Revenue measures	-1.0	-1.2
Permanent tax cuts	-0.7	-1.0
Temporary measures	-0.3	-0.2
Expenditure measures	2.6	
2009 revised budget	1.0	
- SOC expansion in regional areas	0.4	
- Support for SMEs and self-employed	0.3	
- Support for low-income households	0.1	
- Local government support	0.1	
- Other	0.1	
2009 supplementary budget	1.7	
- Support for low-income households	0.4	
- Support for SMEs and self-employed	0.4	
- Support for employment	0.3	
- Local government support	0.3	
- Green growth and other investment spending	0.2	
Total	3.6	1.2

 Table 1. Fiscal Stimulus Packages (% of GDP)

Source: Leif Lybecker Eskesen, "Countering the Cycle – The Effectiveness of Fiscal Policy in Korea", WP/09/249, IMF, 2009.11.

In terms of composition, the fiscal stimulus package consists of various fiscal items but seems to concentrate more on tax cut, SOC building and support for SMEs and selfemployed. These are the items known to have bigger or more persistent multiplier effects according to various literatures. S. Kim (1997) reports that the government investment tends to boost private economic activities whereas the government consumption is likely to crowd out them. Also, W. Kim (2006) and Hur (2007) claim that tax cut tends to have more persistent boosting effect than spending increase. In this context, the composition of fiscal stimulus package of Korea was appropriate.

### 2.2. Size of "Discretionary" Fiscal Stimulus

The announced fiscal stimulus package includes increments both by automatic stabilizer and by discretionary policy. Governments tend to exaggerate the magnitudes of fiscal expansion at an occasion like this. Of course, Korean government is not an exception. Though conceptually clear, it is a very intriguing task to decompose changes in fiscal variables into the two parts empirically. Thus, here we use the following two alternatives. The first one includes FI and FIS, which are commonly used as proxies for "discretionary" fiscal stimulus for their simplicity.

Following the IMF method (refer to Heller *et al.* (1986) and Lee (2006), we first find a point of time, at which real GDP is closest to potential GDP or GDP gap is almost zero. At the point of time, the ratios of government revenue to GDP and expenditure to GDP are denoted to be  $t_0 \equiv T_0/y_0$  and  $g_0 \equiv G_0/y_0$  respectively. Then, we define the cyclically neutral balance by  $B_n \equiv t_0 y - g_0 y^*$ , where *y* is a real GDP and  $y^*$  potential GDP. Such a definition of the cyclically neutral balance accepts that fiscal stance is regarded neither expansionary nor contractionary when revenue grows at the speed of real GDP while expenditure at the speed of potential GDP. Thus, by taking the difference between the cyclically neutral balance ( $B_n$ ) and the current fiscal balance (*B*), IMF comes up with a measure of fiscal stance called *FIS* in abbreviation.

$$FIS \equiv B_n - B$$

Precisely speaking, the negative sign of FIS implies that the current fiscal stance is contractionary compared with the reference point of time 0 while the positive sign implies expansionary fiscal stance.

On the second thought, however, sometimes it would be more useful if there is a measure comparing the current fiscal stance with the previous one. Hence, for the purpose, Fiscal Impulse (*FI*) indicator is suggested in the ratio of *FIS* change to potential GDP. Of course, the signs of *FI* are interpreted similar to those of *FIS*, but in this case they indicate the change of fiscal stance from that in the previous period.

$$FI \equiv \Delta(FIS/y^*)$$



Figure 1. Fiscal Stance (FIS), Fiscal Impulse (FI), and Real GDP Deviation

Note: (1) Authors' own calculation

(2) ln(rGDP\_det)=ln(real GDP)-ln(real GDP\*)

(3) Real GDP\* is seasonally adjusted and HP-filtered.

Applying the above definitions to the macro and fiscal data of Korea, we calculate FIS and FI, and compare them with the deviation of real GDP from the long-run trend as shown in Figure 1. The figure is drawn with the consolidated fiscal data including both the central and the local governments since 2005<sup>4</sup>. It shows that FIS and especially FI increased sharply in response to the negative real GDP deviation following the GFC. Such an aggressive fiscal reaction had not been observed before then. Of course, even before the GFC, it is known that fiscal policy of Korea responds (slightly) in a counter-cyclical way<sup>5</sup>. In terms of both magnitude and responsiveness, however,

<sup>&</sup>lt;sup>4</sup> Before 2005, the consolidated budget data only covers the central government activities.

<sup>&</sup>lt;sup>5</sup> For example, Lee (2006) measures how responsive the Korean fiscal framework to a business cycle. He, using a longer series of the central budget data (the fiscal data available in Monthly Statistical Bulletin published by Bank of Korea), calculates FI and FIS, regress them on the past GDP gaps, and reports that overall fiscal policy, especially expenditure side, properly responded to economic conditions. On the other hand, based on the observations that average FIs do not show the significant difference between expansionary and recessionary periods, he doubts whether the fiscal policy timing has been proper.

the fiscal stimulus package executed after the GFC is somewhat unprecedented in the fiscal history of Korea with an exception of the 1997 currency crisis<sup>6</sup>. Anyway, these above two measures of fiscal stance unanimously confirm that fiscal stimulus package of Korea concentrated on the period between 2009 Q1~2009 Q2.

For comparisons with *FI* and *FIS*, we also estimate a three-variable Structural VAR following Blanchard and Perotti (2002) with three different identification strategies<sup>7</sup>. The three key variables real GDP( $Y_t$ ), government expenditure( $G_t$ ), and tax revenue( $T_t$ ). All of them are logarized after being divided by population size and are seasonally adjusted and detrended by HP-filter. A reason for detrending all the variables is because we would like to focus on business cycles not on long-term non-stationary movements. Anyway, a VAR system of  $X_t$  is represented as:

$$X_{t} = A(L)X_{t-1} + U_{t}, X_{t} \equiv \begin{pmatrix} T_{t} \\ G_{t} \\ Y_{t} \end{pmatrix}, U_{t} \equiv \begin{pmatrix} t_{t} \\ g_{t} \\ y_{t} \end{pmatrix}$$

The above VAR system is not complete in that detailed assumptions on the disturbance term  $U_t$  are needed for specifications.

The first identification strategy is simple Cholesky Decomposition, which restricts  $U_t$  in the following way.

$$\begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} \equiv \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} + \begin{pmatrix} 1 & 0 & 0 \\ b_1 & 1 & 0 \\ c_1 & c_2 & 1 \end{pmatrix} \begin{pmatrix} e^t_t \\ e^g_t \\ e^y_t \end{pmatrix}$$

Second, as a typical example of institutional identification strategies, we adopt Blanchard and Perotti (2002), whose shock identification is represented as

<sup>&</sup>lt;sup>6</sup> In the 1997 currency crisis, financial institutions including several major domestic banks were directly hit and most of fiscal resources flew into the restructuring or the resolution process of those distressed ones. In contrast, this time was different and most of fiscal stimulus package was allocated to sustain domestic demand.

<sup>&</sup>lt;sup>7</sup> For the details on the identification strategies mentioned briefly here, refer to Hur (2007).

$$\begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} \equiv \begin{pmatrix} 0 & 0 & \alpha_3 \\ 0 & 0 & \beta_3 \\ \gamma_1 & \gamma_2 & 0 \end{pmatrix} \begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} + \begin{pmatrix} 1 & a_2 & 0 \\ b_1 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} e^t_t \\ e^g_t \\ e^y_t \end{pmatrix}$$

The third identification strategy borrows the restrictions on  $\beta_1$  and  $\beta_3$  (=0) from the budget data in addition to  $\alpha_3$ , based on the almost common perception that the government of Korea has kept the principle of "Expenditure within Revenue" since 1980s<sup>8</sup> (Koh, 2002). Due to the long tradition of fiscal consolidation or maintaining the balanced budget, the level of expenditure still tends to be determined within the revenue forecasts. Exploiting such a tendency of fiscal conservatism, we assign a restriction on  $\beta_1$  by running a regression of expenditure increment on tax revenue increase and borrowing the coefficient thereof. Compared with other identification strategies, this one highlights the contemporaneous relation in the disturbance term  $U_1$ .

$$\begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} \equiv \begin{pmatrix} 0 & \alpha_2 & \alpha_3 \\ \beta_1 & 0 & \beta_3 \\ \gamma_1 & \gamma_2 & 0 \end{pmatrix} \begin{pmatrix} t_t \\ g_t \\ y_t \end{pmatrix} + \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} e^t_t \\ e^g_t \\ e^y_t \end{pmatrix}$$

Based on the estimates from the above SVARs<sup>9</sup>, I calculate orthogonal shocks in tax revenue and expenditure and define them to be the second measures for discretionary fiscal policies. The next correlation table shows how they are correlated with FI and FIS.

According to the upper part of Table 2, regardless of identification strategies taken, FIS and FI tend to have positive correlation with contemporaneous discretionary expenditure change  $(e^{g}_{t})$  and negative correlation with contemporaneous discretionary revenue change  $(e^{t}_{t})$ . Especially, the correlations are statistically significant between FI and discretionary expenditure measures.

<sup>&</sup>lt;sup>8</sup> [Quoted from Koh (2002)] "One important principle in fiscal management was established in this period. It was the principle of "Expenditure within Revenue," or the balanced budget principle. While not formalized in a law or a regulation, it acted as self-discipline imposed on the budget authorities against imprudent management of the budget."

<sup>&</sup>lt;sup>9</sup> This study uses the consolidated budget data instead of the fiscal data from BOK's Monthly Statistical Bulletin. In this regard, this paper is differentiated from Hur (2007).

Furthermore, in the lower part of Table 2, which identifies the discretionary fiscal stimulus to be  $e_t \equiv e^{g_t} - e^{t_t}$ , the correlations of  $e_t$  with  $e^{g_t}$  and  $e^{t_t}$  turn out to be bigger and more significant.

		8					
	Identification Strategy		Identificati	on Strategy	Identification Strategy		
	]	Ι	II		II III		(#)
	Discret. Tax	Discret. Exp	Discret. Tax	Discret. Exp	Discret. Tax	Discret. Exp	
FIS	-0.25	0.32+	-0.27	0.30	-0.25	0.30	
FI	-0.08	0.43**	-0.11	0.42***	-0.08	0.42***	

Table 2.	<b>Correlations among</b>	g the Measures	s of Discret.	Fiscal Stimulus

Discret. Fiscal Stimulus	Identification Strategy I	Identification Strategy II	Identification Strategy III (#)
FIS	0.35+	0.33+	0.36***
FI	0.45**	0.44**	0.45**

Note: (1) \*, \*\*, \*\*\* and + is significant at the 5%, 10% and 15% levels or better, respectively.

(2) Identification Strategy 3(#) assumes the fiscal stance of "Expenditure within Revenue."



Figure 2.	Identification	Strategy III
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In Figure 2, the left graph indicates that automatic stabilizer  $(t_t - e^t_t)$  works slightly stronger against the discretionary part  $(e^t_t)$  in revenue side. In other words, discretionary tax policy tends to countervail the working of automatic stabilizer, which may reflect a long tradition of fiscal consolidation. Combined with so called the "Expenditure within Revenue" principle, this tendency of counteracting automatic stabilizer implies that fiscal policy of Korea was not fully responsive to economic fluctuations at least in the revenue side.

On the other hand, the right hand side graph shows co-movement of the automatic stabilizer  $(g_t - e^{g_t})$  and the discretionary spending expansion  $(e^{g_t})$  in expenditure side. This result is consistent with Lee (2006), which notes the responsiveness of expenditure side.

Summing up the results so far, we could recognize, regardless of measures to rely on, that the fiscal stimulus package executed after the GFC is quite substantial and unusual in the fiscal history of Korea. Especially it is so, considered that Korea has a long tradition of fiscal conservatism.

### 2.3. Fiscal Expenditure vs. Tax Cuts

Tax cuts are known to have more persistent effect than expenditure increase. Tax cuts tend to last at least for a few years. This pattern is also supported by empirics (Hur (2007) and W. Kim (2006)). It is inferred that most tax reductions or deductions centered around corporate investments or on the purchase of durable goods, which are likely to have longer lagging and spill-over effects. Compared with tax cuts, expenditure increment comprises various types of government consumption and investments, which are known to have different multiplier effects.

On the other hand, compared with the current expenditure, capital expenditure and tax reduction seem to have more persistent impact on the economy. According to S. Kim, 1997, the government investment tends to boost private economic activities whereas the government consumption is likely to crowd out them. Of course, the current expenditure has greater one shot impact. Appendix E exhibits simulation results of measuring the effects of expenditure increase and compare fiscal multipliers item by item<sup>10</sup>.

<sup>&</sup>lt;sup>10</sup> The simulations are obtained from the KDI forecasting model. As usual, economic models tend to show what we believe rather than what we should see.

# **3. Impact of Fiscal Stimulus Package, Exit Strategy, and Identification of Future Fiscal and Macroeconomic Risk**

#### 3.1. Evaluate the Effectiveness of Fiscal Stimulus Combating an Economic Crisis

From 2008 Q3 to 2009 Q3, each component of the national income contributed to economic growth in the order of Net Export > Consumption > Investment. Rapidly depreciating Won (Korean currency) improved trade balance dramatically<sup>11</sup>. In the meantime, substantial investment from the government sector counteracted fallen private investment.



Figure 1. Growth Contribution by Components

Source: Bank of Korea

<sup>&</sup>lt;sup>11</sup> For the movements in Korean won as well as imports and exports, refer to Figure A2 and A3 in Appendix A.



Figure 2. Growth Rates by Its Components

Since 2009 Q4, domestic components led the economic recovery of Korea replacing trade sectors. This may be a sign of lagged boosting effect from the fiscal stimulus package, considered that most of fiscal stimulus package were concentrated before 2009 Q4. On the other hand, equal or more credit could be given to the outperformed trade sector in the previous periods.

On the efficacy of fiscal policies in Korea, the existing literatures haven't reached unanimous decision. S. Kim (2007) extended Blanchard and Perotti (2002) by including price variable and interest rate. He used the consolidated fiscal data. Either side of fiscal policies is not sustained. On the other hand, W. Kim (2006) applied the method of Blanchard and Perotti (2002) to the data of Bank of Korea Monthly Bulletin. Both expenditure increase and tax cuts seem to have boosting effects. Tax cuts tend to have more persistent effects. For the older literatures, refer to Appendix D.

In contrast with empirical methods, the next table summarizes the simulation results of evaluating the effects of the fiscal stimulus package using KDI macroeconomic VAR model. According to simulation results, expansionary fiscal policy such as

Source: Bank of Korea.

supplementary budget and extended tax exemption and reduction during the GFC, contributes to boost economic growth in 2009~2010. For example, contribution of fiscal stimulus on real GDP growth in the first half of 2009 was 1.4%p and in the second half was 1.1%p. It is assessed that fiscal stimulus had an important role for Korean economy to record positive growth rate in 2009. In addition, the effects of fiscal stimulus also continued in 2010, but its magnitudes became smaller than previous year.

			0					
			2009(p)			2010(p)		
	1/4	2/4	1 <sup>st</sup> half	2 <sup>nd</sup> half	Year	1st half	2nd half	Year
Real GDP growth rate (%) (A)	-4.3	-2.2	-3.2	3.5	0.2	7.6	4.6	6.1
Contribution of Fiscal Stimulus Package (%p) (B)	1.2	1.7	1.4	1.1	1.3	0.7	0.3	0.5
Real GDP growth rate in absence of Fiscal Stimulus Package (%) (A-B)	-5.5	-3.9	-4.6	2.4	-1.1	6.9	4.3	5.6

Table 1. Contribution of Fiscal Stimulus Package to GDP Growth

*Note:* (1) (p) is preliminary.

(2) All the figures measure year-on-year changes (unit: %, % p).

The simulation results above are supported by circumstantial evidence based on the methodology of Hur *et al* (2010). They design the empirical framework to evaluate the effectiveness of countercyclical fiscal policy in developing Asia during the GFC. The empirical framework consists of two stages. The first stage involves estimation of a panel vector auto-regression (PVAR) model using historical data to generate dynamic GDP forecasts of each sample country during the global crisis from 2008 Q4 to 2009 Q3. The choice of 2008 Q3 as the breakpoint also coincides with the bankruptcy of Lehman Brothers in September 2008 which triggered the global financial crisis.<sup>12</sup>

 $<sup>^{12}</sup>$  Concentrating the analysis on 2008 Q4 – 2009 Q3 allows us to assess whether the fiscal stimulus helped support demand and output precisely when the economy faced the greatest risk of a meltdown.



Figure 3. Forecast and Actual Post-Crisis Output Growth Path

*Note:* t\* represents the time period when the crisis broke out, 2008 Q3.

The second stage involves a cross-country regression with the gap between actual GDP and forecast GDP on a number of explanatory variables. Of particular interest to us are interaction terms between fiscal variables and dummy for developing Asia that captures impact of fiscal policy for the developing Asia countries.<sup>13</sup>

Tables 4 and 5 report the results of cross-country regressions on the gap between actual output and dynamic output forecasts for the crisis period generated by 4-variable PVAR models. The only difference is that Korea is treated as Asian country in Table 2, while as non-Asian country in Table 3. For both cases, the fiscal policies in developing Asia countries are likely to be more effective than the rest of the world. More interestingly, when Korea is treated as non-Asia country, the magnitude and significance of interaction term between fiscal policy and Asia dummy becomes much

<sup>&</sup>lt;sup>13</sup> For detail empirical framework, refer to Appendix B.

weaker. This implies Korea's fiscal stimulus package was quite effective and has an important role for Korea's rapid recovery. Overall, these empirical results lend limited support to the popular belief that countercyclical fiscal policy boosted aggregate demand and output at least in Korea as well as rest of developing Asia during the GFC.

– Korea as Asian Country							
	(1)	(2)	(3)	(4)	(5)	(6)	
1 cppdet*	0.441***	0.464***	0.412***	0.437***	0.418***	0.444***	
$\ln GDP_{it-1}$	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	
In alabal CDP <sup>det</sup>	-0.005*	-0.004*	-0.005*	-0.005*	-0.005*	-0.004*	
$\ln global \_GDP_{it}^{act}$	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	
$\ln REV_{it-1}^{det^*}$	0.044	0.044	0.033	0.032	0.033	0.031	
	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)	(0.05)	
In EYP <sup>det*</sup>	-0.125***	-0.125***	-0.122**	-0.122**	-0.122**	-0.122**	
$\lim LXI_{it-1}$	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	
TS 1ur diff		-0.504		-0.580		-0.550	
$IS_1yr_{it-1}$		(0.35)		(0.36)		(0.38)	
$TS_3yr_{it-1}^{diff}$	-0.512		-0.555		-0.495		
	(0.35)		(0.36)		(0.38)		
$POLICY_{it-1}^{diff}$	<b>-0.914</b> *	-0.882*	-0.905*	-0.890*	<b>-0.898</b> *	-0.908*	
	(0.46)	(0.45)	(0.47)	(0.46)	(0.48)	(0.47)	
1 DEEDdet*	0.016	0.027	0.027	0.039	0.025	0.038	
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	
ASIA *1n REV <sup>det</sup>	-0.128***	-0.122**	-0.134**	-0.127**	-0.131*	<b>-0.119</b> *	
	(0.05)	(0.05)	(0.06)	(0.06)	(0.07)	(0.07)	
ASIA * ln FXP <sup>det</sup>	0.145**	0.146**	0.157**	0.157**	0.170***	0.168**	
$mom_i m m m_{it-1}$	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)	
open * ln REV det			0.005	0.005	0.005	0.005	
$open_{i,t-1} * \ln REV_{it-1}^{det}$			(0.01)	(0.01)	(0.01)	(0.01)	
onen * In FXP <sup>det</sup>			-0.003	-0.003	-0.003	-0.003	
$open_{i,t-1}$ III LAI $_{it-1}$			(0.01)	(0.01)	(0.01)	(0.01)	
ES * ln REV det					-0.135	-0.214	
$TS_i$ III KEV $it-1$					(0.53)	(0.54)	
FS * In FYP <sup>det</sup>					-0.405	-0.385	
$I S_i + III LAI_{it-1}$					(0.58)	(0.58)	
Constant	-0.02*	-0.02*	-0.02*	-0.02**	-0.02*	-0.02**	
Constant	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	
Observations	80	80	76	76	76	76	
R-squared	0.411	0.411	0.419	0.421	0.426	0.429	

 Table 2.
 Regression Results from De-Trended 4-Variable PVAR (~2009.3Q)

Source: Author's estimation.

Note: 1) Standard errors in parentheses.

2) \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

– Korea as Non-Asian Country								
	(1)	(2)	(3)	(4)	(5)	(6)		
1 cppdet*	0.467***	0.488***	0.442***	0.467***	0.451***	0.478***		
$\ln GDP_{it-1}$	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)		
In alobal CDP <sup>det</sup>	-0.004*	-0.004	-0.005*	-0.004	-0.005*	-0.004		
$\frac{\ln global \_GDP_{it}^{act}}{\ln BEV^{det^*}}$	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)		
$\ln REV_{it-1}^{det^*}$	0.015	0.015	-0.001	-0.003	0.015	0.014		
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)		
In EVP <sup>det*</sup>	-0.085*	-0.085*	-0.078	-0.079	-0.098*	-0.099 <sup>*</sup>		
$\ln EXP_{it-1}$	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)		
TS 1ur <sup>diff</sup>		-0.476		-0.577		-0.632		
$IS_1yr_{it-1}$		(0.36)		(0.38)		(0.39)		
$TS_3yr_{it-1}^{diff}$	-0.466		-0.531		-0.564			
	(0.36)		(0.37)		(0.38)			
$D \cap I \subset \mathcal{V}^{diff}$	-0.950**	-0.932**	-0.952*	-0.951**	-1.033**	-1.045**		
FOLIC I it-1	(0.47)	(0.46)	(0.48)	(0.47)	(0.48)	(0.47)		
1. DEEDdet*	0.010	0.021	0.018	0.030	0.030	0.044		
III KEEK <sub>it-1</sub>	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)		
A CIA *1n DEV/det	-0.102**	-0.095*	-0.090	-0.080	-0.108	-0.097		
$MSIM_{i}$ $MKL v_{it-1}$	(0.05)	(0.05)	(0.07)	(0.07)	(0.07)	(0.07)		
$\Delta SIA * \ln FXP^{det}$	0.123**	0.124**	0.126*	0.126*	0.139*	0.139*		
$MOM_i  \text{III } LM_{it-1}$	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)		
open * In REV det			0.002	0.002	0.004	0.004		
$ASIA_{i} * \ln EXP_{it-1}^{det}$ $open_{i,t-1} * \ln REV_{it-1}^{det}$			(0.01)	(0.01)	(0.01)	(0.01)		
onen * in EVPdet			-0.002	-0.002	-0.003	-0.002		
$open_{i,t-1}$ III $LXI_{it-1}$			(0.01)	(0.01)	(0.01)	(0.01)		
ES * In REV det					-0.739	-0.769		
$TS_i + III KEV_{it-1}$					(0.49)	(0.49)		
FS * In FVD det					0.350	0.367		
$I S_i + III LAI_{it-1}$					(0.56)	(0.56)		
Constant	-0.023**	-0.024**	-0.024**	-0.026**	-0.023*	-0.024**		
Constant	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)		
Observations	80	80	76	76	76	76		
R-squared	0.385	0.386	0.389	0.392	0.412	0.416		

 Table 3.
 Regression Results from De-Trended 4-Variable PVAR (~2009.3Q)

Source: Author's estimation.

Note: 1) Standard errors in parentheses.

2) \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### 3.2. Is the Exit Strategy Clearly Laid Out?

On September 28th, 2010, the Cabinet meeting passed "The Medium Term Fiscal Management Plan for 2010~2014". This plan revised the MFMP for 2009~2013 based on changes in economic environments as well as fiscal conditions. One of major changes is the faster growth than expectation in 2010. The government expected real GDP growth of 5.0% in the beginning of 2010. According to recent preliminary calculation of Bank of Korea, it is expected to record 6.1% mainly due to expansion of domestic demand and soaring of export as well as expansionary fiscal policy.

In the mean time, the fiscal stimulus in 2009 led the operational fiscal balance deficit of 4.5% to GDP, which is the highest level since economic crisis in 1997. Although the government debt currently recorded at mid 30% to GDP is more favorable compared to advanced economy, it is worth noting that government debt has grown rapidly. The government debt is projected to reach 36.1% to GDP in 2010 from 10.3% in 1997. Furthermore, its growth rate is likely to be accelerated due to the demographic structure unless proper institutional reforms on national pension and health care system are undertaken.

In addition to these changes, there still exist a number of uncertainties that Korean economy should consider. First, while the global economy is showing a moderate recovery, downward risks are growing due to Eurozone countries' tightening measures in response to the risks of public finance crisis and their sluggish performance in employment. Amid the continued concern over public finance crisis risks in Eurozone, the global financial markets appear to still be unstable at least in fiscal crisis countries such as Greece, Ireland, and Portugal. Fiscal austerity measures taken in these countries are likely to be an obstacle for Eurozone economy to get back to normalcy. Second, domestic employment is still sluggish and the effect of economic recovery is not enough propagated to low and middle-income classes. These will certainly demand more spending on social safety net for them. Third, it needs for the engine of economic growth such as green industry to be reinforced to complement a drop of the potential GDP growth during the GFC. Lastly, fiscal soundness should be consolidated for the

future external shocks as well as rapid progress of ageing demographic structure and the possibility of the reunification of North and South Korea.

Under these circumstances, Korean government announced the policy priority on fiscal consolidation as well as continued support for low-income class, SMEs, and self-employed through the MFMP for 2010~2014. The medium-term fiscal targets are to return to balance of operational budget in 2013~14 and to reach the government debt to 31.8% in 2014. According to the MFMP for 2010~2014, the government revenue will grow annually at 7.7%, while expenditure at 4.8%. The operational budget deficit will be reduced from  $\Delta 2.7\%$  to GDP in 2010 to  $\Delta 2.0\%$  in 2011 and will record 0.2% surplus in 2014. As a result, the government debt will be maintained not to exceed mid 30% of GDP and will continue to decrease until 2014.

	2010	2011	2012	2013	2014
Consolidated Public Sector Finance Balance (% of GDP)	Δ2.0 (Δ0.2)	5.0 (0.4)	18.0 (1.3)	27.4 (1.9)	37.9 (2.5)
Social Security Contribution Balance	28.1	30.3	32.3	33.7	35.2
Operational Budget Balance (% of GDP)	Δ30.1 (Δ2.7)	Δ25.3 (Δ2.0)	Δ14.3 (Δ1.1)	Δ6.2 (Δ0.4)	2.7 (0.2)

Unit: Tril. Won

## Table 4.Medium Term Fiscal Balance

Table 5.	Prospect	for National	Debt (	(2010 - 2014)	)
				(	,

2010 2011 2012 2013 2014 Budget Forecast 407.2 400.4 492.2 Public Debt 436.8 468.1 485.7 (% of GDP) (36.1)(34.7)(35.2)(35.1) (33.8)(31.8)Liabilities for Debt 196.2 200.0 221.0 236.5 242.4 238.7 Financing (50.0)(49.9)(48.2)(50.6)(50.5)(48.5)(% of Public Debt) **Financial Liabilities** 200.3 211.0 215.8 231.6 243.3 253.5 (% of Public Debt) (51.8)(50.0)(49.4)(49.5)(50.1)(51.5)

Source: MOSF (2010b).

The target areas for medium term resource allocations are R&D to enhance the future growth and social welfare spending to improve safety net. To reflect these, the budget for 2011 earmarks a high increase in expenditure on R&D, health, social welfare, and education to secure growth potential and continue to support low- and middle-income classes. In the other hand, some raise concerns over a low increase in expenditure on industry, SMEs, energy and SOCs. This restricted increase, however, is considered appropriate based on the principle of limiting government intervention in market failures.

	·····, ···					
	2010	2011	2012	2013	2014	Annual Growth
1. R&D	13.7	14.9	16.6	18.1	19.1	8.7
2. Industry, SMEs, and energy	15.1	15.2	15.5	16.0	16.0	1.4
3. SOC	25.1	24.3	22.4	22.9	23.5	-1.7
4. Agriculture, forestry, and fisheries	17.3	17.7	18.2	16.9	17.6	0.5
5. Healthcare and welfare	81.2	86.3	92.8	98.1	102.4	5.9
6. Education	38.3	41.3	44.9	48.2	52.1	8.0
7. Culture, sports, and tourism	3.9	4.1	4.2	4.2	4.3	2.7
8. Environment	5.4	5.7	5.7	5.7	6.0	2.4
9.Defense (General Account)	29.6	31.3	32.9	34.2	35.6	4.8
10.Reunification and foreign affairs	3.3	3.7	3.9	4.2	4.5	7.7
11.Public order and safety	12.9	13.6	14.2	14.3	14.7	3.2
12.General administration	48.7	53.2	57.1	59.5	62.8	6.5
Total Expenditure	292.8	309.6	324.8	337.7	353.0	4.8

#### Table 6. Resource Allocation Plan by Sectors

Unit: Tril. Won. %.

Note: R&D is the aggregate of R&D expenses across all areas.

More specifically, Korean government declared a number of exit strategies to secure fiscal sustainability through the budget for fiscal year 2011 and the MFMP for 2010~2014. First, a soft fiscal rule is temporarily introduced until operational fiscal deficit returns to balance in 2014. That is to maintain the growth of aggregate expenditure lower than that of aggregate revenue by 2~3%p. In addition, whenever a program accompanying mandatory spending is newly introduced, counter revenue plan should be proposed by reducing expenditure of other existing program or enacting new Second, the keynote of fiscal policy moves to improvement of revenue bills. efficiency of expenditure from encouragement of advance expenditure. The ratio of front loading out of aggregate expenditure was over 65% in 2009, 62% in 2010 and will be mid 50% in 2011, which is near to historical average since 2002. That is because Korean economy is near getting back to normalcy due to brisk exports and improved employment and household income. Instead, fiscal consolidation aggravated during the GFC needs to be restored so that the government should focus more on the efficiency of expenditure to reduce the squandering of the government's resources. Third, for tax exemption and reduction, the government will strictly manage the scope and level based on assessment and will confirm if initial objectives are still meaningful. Tax exemption and reduction rapidly increased in response to the GFC should be reevaluated to expand the tax-base and to consolidate fiscal soundness. Lastly, for the expenditure, along with bold actions for expenditure restructuring, there will be efforts on improving the expenditure efficiency such as establishing fiscal regulations based on strict performance evaluation on fiscal projects.

			(0111		
	2006	2007	2008	2009	
National Tax Exemption and	212 280	220 652	207 027	282.068	
Reduction(A)	215,580	229,032	207,027	285,908	
National Tax Revenues(B)	1,380,443	1,614,591	1,673,060	1,646,382	
National Tax Exemption and	12 40/	12 50/	14 70/	14 70/	
Reduction Ratio(A/(A+B))	13.4%	12.3%	14./%	14./%	

(Unit: 100 million KW)

 Table 7.
 Tax Exemption and Reduction

Source: MOSF (2009).

A number of critics on exit strategy and the MFMP for 2010~2014, however, are raised. First, the fiscal balance and the government debt to GDP ratio are based on too optimistic economic growth forecast. The forecasted growth rates are about 5.0% annually during 2011~2014, but it is widely agreed that potential growth of Korean economy is early 4% level. Anyhow, this plan is likely to be achieved at least in 2011 due to unexpectedly high growth in 2010, even if growth rate in 2011 is lower than 5.0%. In contrast, the plan from 2012 to 2014 will require extraordinary effort of Korean government. If growth rate records lower than 5.0%, tax revenue will be less than forecasted level and it will lead increase of government debt ratio. For expenditure in these periods, it is somewhat under-projected compared to historical For instance, average annual growth of social welfare expenditure in trend. 2010~2014 is only 5.9%, which is much lower than in 2004~2008, 11.8%. Second, more active policy efforts are required for success of the fiscal rule recently introduced, because the government has no incentive to obey it without any enforcement such as performance evaluation. Third, more concrete plans on expanding the revenue base and restructuring expenditure should be provided in order to secure fiscal soundness. In addition, the process of compiling and reviewing the taxation and budget plans should place a priority on the improvement of fiscal consolidation so as to create an

environment where the tax revenue and expenditure restructuring could be implemented without any failure.

## 4. Has the Fiscal Expenditure to GDP become Permanently Higher?

Looking backward plotted in Figure 5, it is too early to tell whether fiscal expenditure in terms of percentage of GDP moves along a upward trend. The recent fiscal stimulus package in response of the GFC definitely raised the level of government spending. It is also noticeable that the portion of social protection is continuously increasing. This pattern is attributable to partly support for low-income class and SMEs, and automatic increase due to change of demographic structure.

On the other hand, looking forward, the fiscal expenditure to GDP is expected to grow substantially. It is well known that Korea is one of the fastest countries in the world with respect to aging demography. Thus, the burden of the National Medical Insurance and National Public Pension will grow rapidly. The National Medical Insurance account is predicted to be deficit within years unless personal contributions and government subsidy increase. According to long term prediction of National Public Pension, it is expected to be depleted in 2050s. Under these perspectives, institutional reform plans for raising premiums and contributions are required, although it is not easy to get public approval. For detail prediction, refer fiscal sustainability in the next section.



Figure 4. Central Government Fiscal Expenditure to GDP

Source: MOSF.

Looking at the revenue side can help to see whether there exists permanent increase of fiscal expenditure. For the revenue side, tax burden ratio (ratio of aggregate tax revenue to GDP) had stayed below 20% level until the mid 2000s. While a sharp spike of tax burden ratio in the mid 2000s was mainly due to an increased taxation such as property tax, real estate tax, a decrease of it since 2008 is attributable to tax cut policy of the current ruling party. Then although tax burden ratio is expected to stay below 20% level for the medium term from 2010 to 2014, it should grow gradually to maintain government debt ratio at certain stable level since then. Public burden ratio which is the summation of tax burden ratio and social security contributions ratio such as public pension, health care contributions will also grow rapidly in accordance with increase of mandatory spending. As it is clearly shown in the Figure 6, social security contribution ratio, the gap between public and tax burden ratio have continued to rise.

In short, the fiscal expenditure to GDP will not exhibit a radical increase in the medium term, but it will grow gradually and permanently until demographic structure is stabilized.
Figure 5. Public and Tax Burden Ratio



Source: MOSF.

### 5. Is there Any Risk to Fiscal Sustainability?

Fiscal sustainability is commonly measured by IFS (Index for Fiscal Sustainability) and FS gap (Fiscal Sustainability gap). IFS developed by IMF is an index showing whether target government debt ratio is attainable. Recent calculation of Korea's IFS records 0.84, which implies fiscal sustainability given target government debt ratio of 60%. Korea's IFS is ranked at 5th out of 28 OECD countries. In addition, FS gap, difference between required and actual primary fiscal balance to stabilize government debt ratio at 60% records 1.58%p, which is second highest out of 28 OECD countries. IFS and FS gap seems to support fiscal sustainability of Korea. However, it should be cautious in interpretation of IFS and FS gap because they are quite sensitive to measure of cyclically adjusted primary budget balance. In addition, growth rate of GDP seems a bit exaggerated when considering recent decline of potential GDP growth due to the GFC and change of demographic structure. Thus, these results do not certainly guarantee future fiscal sustainability of Korean economy.

			Cyclically			IFS	
	Growth rate (avg of 2010-2011)	Interest rate (avg of 2010-2011)	adjusted primary budget balance (2010)	Gov't Debt (2010)	$\left[\frac{(1)}{(1+1)}\right]$	$\frac{(ps_t+r_t)}{(b_{t-1})} - \frac{(ps_t-r_t)}{(b_{t-1})}$	$\frac{(+ps^*)}{(+b^*)} \right]$
	g	r	ps	b	IFS	Absolute value	Ranking
Switzerland	5.9	4.0	-4.0	54.6	-0.01	0.01	1
Slovakia	4.4	4.7	-6.4	44.7	0.64	0.64	2
Australia	7.7	6.1	-1.8	23.4	0.77	0.77	3
Canada	6.2	4.2	-1.4	81.7	0.79	0.79	4
Korea	7.4	5.7	1.0	36.2	0.84	0.84	5
Czech	4.0	4.5	-3.0	48.4	0.86	0.86	6
Luxemburg	4.6	4.2	-2.2	23.6	0.87	0.87	7
New Zealand	5.8	6.2	-3.1	40.3	0.90	0.90	8
Denmark	3.6	4.1	-0.5	55.0	1.01	1.01	9
Iceland	6.3	6.2	-2.6	128.1	1.03	1.03	10
Norway	2.6	2.8	0.3	41.6	1.09	1.09	11
Sweden	5.0	3.8	1.7	54.6	1.12	1.12	12
Belgium	3.2	4.0	1.9	103.6	1.16	1.16	13
Austria	3.0	4.0	-1.1	74.0	1.32	1.32	14
Portugal	1.2	1.9	-5.0	199.2	1.32	1.32	14
U.S	4.2	4.7	-7.1	89.6	1.33	1.33	16
Finland	4.1	4.0	-0.4	61.0	1.36	1.36	17
Hungary	4.6	7.3	2.1	87.0	1.40	1.40	18
France	2.8	4.1	-3.2	93.8	1.44	1.44	19
U.K	3.7	4.7	-5.7	82.3	1.47	1.47	20
Germany	2.4	3.8	-1.2	80.9	1.48	1.48	21
Netherland	2.5	4.0	-2.0	75.1	1.55	1.55	22
Italy	2.2	4.6	1.8	132.0	1.70	1.70	23
Japan	1.9	4.9	-2.8	95.0	2.15	2.15	24
Poland	6.4	5.4	-4.8	61.9	3.34	3.34	25
Spain	0.5	4.4	-5.2	72.8	3.94	3.94	26
Greece	-2.6	7.1	1.0	129.1	-5.06	5.06	27
Ireland	0.0	5.3	-4.7	82.9	6.59	6.59	28

 Table 8. Index for Fiscal Sustainability (IFS)

Source: Park (2010).

	Required Primary Balance (ps*, %)	Actual Primary Balance (ps, %)	FS Gap (%p)	Ranking
Sweden	-0.6	1.7	2.39	1
Korea	-0.6	1.0	1.58	2
Belgium	0.9	1.9	1.04	3
Norway	0.1	0.3	0.23	4
Canada	-1.5	-1.4	0.11	5
Hungary	2.2	2.1	-0.15	6
Finland	-0.1	-0.4	-0.32	7
Denmark	0.3	-0.5	-0.84	8
Italy	3.0	1.8	-1.22	9
Australia	-0.3	-1.8	-1.46	10
Austria	0.7	-1.1	-1.81	11
Luxemburg	-0.1	-2.2	-2.13	12
Germany	1.1	-1.2	-2.35	13
Iceland	-0.1	-2.6	-2.49	14
Switzerland	-0.9	-4.0	-3.08	15
Netherland	1.1	-2.0	-3.09	16
New Zealand	0.1	-3.1	-3.22	17
Czech	0.3	-3.0	-3.22	17
Poland	-0.6	-4.8	-4.17	19
France	1.2	-3.2	-4.43	20
Japan	2.9	-2.8	-5.68	21
Portugal	1.2	-5.0	-6.25	22
U.K	0.8	-5.7	-6.50	23
Slovakia	0.1	-6.4	-6.58	24
U.S	0.4	-7.1	-7.48	25
Spain	2.8	-5.2	-7.99	26
Ireland	4.4	-4.7	-9.17	27
Greece	12.8	1.0	-11.82	28

 Table 9.
 Fiscal Sustainability Gap (FS Gap)

Source: Park (2010).

Instead, long term fiscal projection based on assumptions of current policies, stable taxes, and other key demographic and macroeconomic parameters can provide a means fiscal sustainability. Fiscal projections offer invaluable signposts to help current government to respond to known fiscal pressures and risks in a gradual manner, earlier

rather than later, and help future government avoid being forced to adopt sudden policy changes. In doing so, it can also help future government to position themselves better to manage unforeseen or less predictable fiscal pressures.

Recently Kim (2010) estimates fiscal balance and government debt of Korea from 2010 to 2050. He first forecasts macroeconomic variables such as growth rate of GDP, interest rate, total factor productivity, and real wage based upon population projection and Cobb-Douglas production function. Then given prediction of macroeconomic variables, he estimates aggregate expenditure, aggregate revenue, and government debt by assuming that government debt increases as much as fiscal deficit. In order to minimize arbitrary manipulation of expenditure and emphasize the effect of change in social welfare and health spending, it is assumed that the GDP ratio of all other sectors expenditure excluding social welfare and health spending are maintained the average in the MFMP for 2010~2014 for whole projection period. For social welfare and health expenditure projection, sub-categories are first estimated respectively by considering personal contributions, benefits based on demographic structure and current institutions. Then aggregate expenditure by summing all sectors is calculated. In aggregate revenue side, it is assumed that central government tax burden is fixed at 16.0% of GDP which is the average in MFMP for 2010~2014 and that all other revenue including local tax revenue, non-tax revenue are fixed at the average from 2007 to 2010.<sup>14</sup>

The projection results show that social welfare and health expenditure will grow gradually for the period of 2015 to 2050. In 2050, it is expected that social welfare and health expenditure will be 16.9% and 3.6% of GDP respectively. Consequently, Korea's government debt continuously rises for the projection period. It is expected to get to 140.1% of GDP in 2050. It implies that current Korea's fiscal position may not be within safety bound in the future. Instead, government debt ratio decreases under relaxed assumption of central government tax burden. When central government tax burden ratio gradually rises from 16.0% to 17.0% (scenario 1), it falls to 111.0%.

<sup>&</sup>lt;sup>14</sup> Kim (2010) uses historical average to project local tax revenue, non-tax revenue because MFMP does not provide these numbers.

Similarly when rises from 16.0% to 18.0% (scenario 2), it falls to 80.5%.

In these perspectives, it is confirmed that major risk components of future fiscal sustainability in Korea are social welfare and health expenditure. For future fiscal sustainability, institutional reform related to social safety net and/or increase of tax burdens are required. In addition, it is worth noting that if cost of reunification of North and South Korea is included, the government debt will increase faster than fiscal projection above.

Figure 6. Social Welfare and Health Expenditure Prediction



(Unit: % of GDP)

Source: Kim (2010).

				(Unit: % of GDP)
	Consolidated Public Sector Finance Balance	Social Security Contribution Balance	Operational Budget Balance	Government Debt
2010	-0.2	2.4	-2.7	36.1
2015	2.7	3.7	-1.0	31.5
2020	2.0	3.7	-1.7	30.4
2025	-0.1	2.9	-2.9	35.6
2030	-2.0	2.5	-4.5	47.3
2035	-4.2	1.6	-5.8	64.3
2040	-6.8	0.5	-7.2	85.6
2045	-9.7	-0.9	-8.8	111.3
2050	-12.7	-2.2	-10.5	141.4

### Table 10. Fiscal Balance and Government Debt Prediction

Source: Kim (2010).

### Table 11. Government Debt Based on Tax Ratio to GDP

			(Unit: % of GDP)
	<b>Basic Scenario</b>	Scenario 1	Scenario 2
2010	36.1	36.1	36.1
2015	31.5	31.5	31.5
2020	30.4	29.2	27.5
2025	35.6	30.3	25.0
2030	47.3	37.2	27.0
2035	64.3	49.3	34.3
2040	85.6	65.6	24.5
2045	111.3	86.1	61.0
2050	141.4	111.0	80.5

Source: Kim (2010).

# 6. Fiscal Transparency and Anticipating Policy for Future Crisis

### 6.1. Hidden Debt

Government guaranteed debt is not included in the reported public debt by following GFSM 2001 (Government Financial Statistics Manual 2001, IMF). However, Government guaranteed debt has increased sharply since 2008 and will amount to 41.3 Tril. Won next year (3.3% of GDP). The size of the government guaranteed debt will increase further than the previous table if Korea Development Bank (KDB) is privatized. If that happens, the burden will be heavier by approximately 22 Tril. Won.

According to the National Fiscal Act (revised last May), the government has submitted a 5-year plan for the government guaranteed debt to the National Assembly. Although it is expected that the government guaranteed debt will stay at the level of about 40.0 Tril. Won, it may soar in economic crisis period such as the global financial crisis.

Table 12.G	overnment	Guaranteed	Debt
------------	-----------	------------	------

						(Unit	: Tril. Won)
	2008	2009	2010	2011	2012	2013	2014
Guaranteed Debt	28.1	29.8	34.9	41.3	42.5	38.6	35.4

Source: MOSF.

#### 6.2. The Future of Social Security

As it is shown in the previous section, the main reason of soaring in social welfare expenditure is going to the National Pension Fund. Without raising contribution rate and lowering income replacement ratio, the National Pension Fund will be exhausted in around 2050.

Other concerns are Public Employees' Pension Fund and Teachers' Pension Fund, the first of which has been already exhausted and the second of which is about to be exhausted in the near future. In order to make up the losses of PEPF, 43.5 Tril. Won of the government support will be required in 2010~2019.



Figure 7. Forecast of Korea National Pension Fund and Balance

Source: National Pension Services (NPS) of Korea, 2008.11

### 6.3. State Owned Enterprises' (SOEs) Debt

Korean economy define State Owned Enterprises (SOEs) by following IMF's GFSM 2001. As it is shown in Figure 9, SOEs are a subset of nonfinancial public corporations. More specifically, any nonfinancial public corporations that satisfy certain conditions such as asset size and sales to production cost ratio are defined as SOEs. In this case, the debt of nonfinancial public corporations excluding SOEs in Korea is included in the government debt as well as general government debt.

Figure 8. The Public Sector



Source: Government Finance Statistics Manual 2001 (GFSM 2001), IMF.

Recently SOEs' debt is too rapidly increasing even when their sales volume and the rising pace of assets are considered. According to financial statement of 21 SOEs monitored by the central government, their aggregate debt in 2009 is 235.1 Tril. Won, which is over 60% of the government's official debt and 20% of GDP.<sup>15</sup> The average growth rate of their debt in 2004~2009 is 17.9%, which is much higher than that of government debt, 12.0%. It is also noticeable that over 90% of SOEs' debt is attributable to top 6 SOEs' one in terms of asset size, and over 50% to top SOE, which is Korea Housing and Land. In the meantime, the financial sustainability indicators of major SOEs such as the ratio of profit to net sales have been declined due to price control by the government, increase of international commodity price and partially recent GFC.

Although SOEs' debt is not included in the reported public debt, realization of

<sup>&</sup>lt;sup>15</sup> There are also hundreds of SOEs monitored by the local government. When local SOEs debt is included, aggregate debt SOEs will rise. However, local SOEs debt is relatively small compared to central SOEs so that it is not included here.

credit defaults of SMEs will have magnificent negative impact to the whole economy and will demand huge amount of government funds to stabilize them again. Under these circumstances, recent analysis of KDI on SOEs' financial status suggests that they need to increase short term liquidity and decrease debt ratio gradually. The followings are specifically recommended for SOEs' soundness: voluntary de-leveraging by focusing on proper level of profit, actualization of public fares, reform of SOEs evaluation frame, detailed disclosure of financial statements of SOEs.



Figure 9. Korea Government and SOEs' Debt

#### 6.4. Anticipating Policy for Future Crisis

As long as current level of fiscal soundness is maintained, Korea government will actively intervene in response of future economic crises. In this perspective, the governments' fiscal policy stance at present is considered appropriate in that active effort for fiscal consolidation. This year's policy stance is evaluated a bit expansionary following the previous year since operational budget balance is expected to run deficit. However, the size of deficit will decrease compared to last year.

Source: Korea Investors Service DB and MOSF.

In a short and medium term perspectives, Korea government will continue to establish fiscal foundation as well as enforcement of SOEs' debt reduction. By reviewing a fiscal project on a zero-based budget, projects that are neither essential nor urgent should be terminated. Also by improving the performance evaluation and feedback systems, the fiscal programs should be streamlined consistently to effectively adjust tax expenditures. On the tax revenue side, it is necessary to expand the tax base by diminishing tax redemption and reduction and non-refundable tax credit, while at the same time expand the tax revenue base by enhancing the accuracy of reporting income through consistent improvement in tax administration.

In a long term perspective, institutional reform associated with social welfare such as public pension is required. As confirmed from fiscal projections, government debt will grow gradually. Periodical release a long-term fiscal outlook report which takes into account low fertility rate and population aging will be helpful to get publics' consent related to increase in contributions and so on.

### 7. Concluding Remarks

This study is to measure the contributions of the fiscal stimulus package to the recovery of Korean economy from the GFC and to discuss how the fiscal stance is redirected toward the pre-crisis state of fiscal consolidation in the medium-term. In addition, it identifies several potential risk factors to fiscal sustainability of Korea, such as National Public Pension, National Health Insurance, and SOEs' debt from a long-term perspective.

Through examining the series of key macro and fiscal variables based on the existing literature, our study confirms the following facts. First, in light of the historical trend of fiscal consolidation, the fiscal stimulus package during the GFC is unusual and unprecedented both in terms of timing and magnitude. Though the past empirical works have split decisions, circumstantial evidences seem to indicate that the

massive fiscal expansion after the crisis sustained the aggregate demand after the currency depreciation lost its influence on trade balance.

Second, Korean government perceives clearly the need of returning to normalcy and has reflected already on the Medium Term Fiscal Management Plan. However, the plan is based on too optimistic economic growth forecast and needs more detailed subprograms.

Third, it is clear that social welfare and health expenditure are major risk components. For fiscal sustainability, institutional reform related to social safety net including NPS and/or increase of tax burdens are required. In addition to rapidly aging demography, it is worth noting that the cost of reunification of North and South Korea may add the fiscal burden seriously.

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# Appendix A.

# Table A1. Basic Government Debt Statistics

(Unit: Bil.Won, %)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Public Debt	60.3	80.4	93.6	111.4	122.1	133.6	165.7	203.1	248.0	282.8	298.9	309.0
(% of GDP)	12.3	16.6	18.6	18.5	18.7	18.5	21.6	24.6	28.7	31.1	30.7	30.2
- General Acc.	-	9.7	20.1	22.1	24.5	26.4	29.4	31.9	40.9	48.9	55.6	63.0
- Public Fund	-	-	-	-	-	-	14.4	29.4	42.4	53.2	52.7	49.2
- FX Stabilization Fund	4.2	9.0	10.8	13.5	14.6	20.7	33.5	51.3	67.1	78.6	89.7	94.0
- National Housing Fund	16.4	19.0	24.0	27.8	31.7	34.0	36.8	36.7	39.7	43.3	43.6	45.2
- Local Government Net Debt	9.9	9.0	8.9	10.4	9.0	7.0	6.9	7.0	9.2	9.6	9.8	10.3
-Others	29.8	33.7	29.8	37.6	42.3	45.5	44.7	46.8	48.7	49.2	47.5	47.3

Source: MOSF.

					Exp. and				Fireal
	Year	Revenue	Current	Capital	net	Current	Capital	Net	Fiscal
			rev.	rev.	lending	exp.	exp.	lending	Datatice
Total	2005	244.58	239.80	4.78	242.54	172.88	63.09	6.58	2.03
	2006	271.00	265.63	5.37	260.80	189.94	62.68	8.19	10.20
	2007	310.66	304.06	6.60	268.32	185.30	72.66	10.36	42.34
	2008	314.58	310.74	3.83	297.29	209.18	80.68	7.43	17.29
	2009	315.02	310.48	4.54	352.67	238.36	96.22	18.10	-37.65
Central	2005	188.56	187.27	1.28	127.52	108.66	14.76	4.11	61.03
Gov't	2006	206.40	204.92	1.48	139.52	118.05	14.25	7.22	66.88
	2007	240.01	238.07	1.94	137.58	107.02	22.35	8.21	102.43
	2008	246.48	244.58	1.90	149.03	117.98	24.46	6.59	97.45
	2009	246.32	243.79	2.53	174.80	138.10	19.95	16.75	71.52
Local	2005	54.80	51.43	3.37	84.73	38.81	43.44	2.48	-29.93
Gov't	2006	63.25	59.55	3.71	90.80	44.61	45.22	0.96	-27.55
	2007	67.58	63.21	4.36	98.10	48.83	47.12	2.15	-30.52
	2008	66.20	64.44	1.76	111.64	58.82	51.99	0.83	-45.44
	2009	66.84	65.13	1.71	137.89	66.13	70.44	1.32	-71.05
Local	2005	1.22	1.09	0.13	30.29	25.41	4.88		-29.07
Edu.	2006	1.35	1.16	0.18	30.48	27.28	3.20		-29.13
	2007	3.07	2.78	0.29	32.64	29.46	3.18		-29.57
	2008	1.90	1.73	0.17	36.62	32.38	4.23	0.01	-34.72
	2009	1.87	1.57	0.30	39.98	34.13	5.83	0.03	-38.12

# Table A2. Consolidated Government Finance

(Unit: Tril. Won)

Source: MOSF.

Figure A1. Yield Rates of Government Bonds (Market Interest Rate of Government Bonds)



Source: Bank of Korea.

Figure A2. Changes in Exchange Rates

(Unit: YoY % Change)



Source: Bank of Korea and KDI.

Figure A3. Real Growth Rates of Exports and Imports of Goods and Services

(Unit: YoY % Change)



Source: Bank of Korea.

# Figure A4. A Distribution of Government Bond Maturities (Outstanding Gov't Bonds by Maturities)



*Source :* Korea Financial Investment Association (KOFIA). *Note :* The fixed date is 2010.10.11.

### Appendix B.

### 1. List of Variables and Their Data Sources

The data used in the empirical analysis are from G-20 economies plus 6 developing Asian countries - Hong Kong, China; Malaysia; Philippines; Singapore; Taipei, China; and Thailand. The quarterly values of the following variables are included in the data set.

- (1) GDP and GDP deflator: IFS (mostly in local currency unit)
- (2) Interest rates: policy rate, term spread (central banks, Bloomberg)
- (3) Exchange rates: real effective exchange rate (BIS) and local currency unit per US dollar (IFS)
- (4) Trade volume: export and import between any pair of countries (IMF DOTS)
- (5) Government fiscal statistics (IFS, Bloomberg and OECD STAT): Total government revenues and expenditures
- (6) Fiscal soundness, defined as fiscal balance/ GDP
- (7) Economic openness, defined as trade volume/ GDP

### 2. Notations for Variables and their Definitions

- (1) i : country, t : time
- (2)  $X_{it}^{\text{det}} \equiv X_{it} X_{it}^{hp}$

 $X_{it}^{det}$  refers to the detrended time-series obtained by subtracting HP-filtered  $X_{it}^{hp}$ from the original time-series  $X_{it}$ 

(3) 
$$TS_{it}^{t} \equiv GOV\_BOND_{it} - POLICY_{it}^{hp}$$

Term spread refers to the yield of 1-year or 3-year government bonds minus the policy interest rate (e.g. Federal fund rate in the US).

(4) 
$$global \_GDP_{jt} = \sum_{i \neq j} GDP_{it}$$

From country j's perspective, the global GDP is the sum of GDPs of all countries in the

data set except herself.

# (5) $REV_{it}$ , $EXP_{it}$ , $BALANCE_{it} \equiv REV_{it} - EXP_{it}$

Government revenue, government expenditure and fiscal balance.

(6)  $openess_{it}$ 

Economic openness is defined as trade volume – i.e. sum of imports and exports – divided by GDP.

(7)  $FS_i$ 

Historical fiscal soundness is defined as the average of quarterly fiscal balance divided by quarterly GDP up to 2008 Q3.

(8) *Asia* 

A dummy variable which takes on the value of 1 if the observation belongs to a developing Asian country – China, Hong Kong, China, India, Indonesia, Korea, Malaysia, Philippines, Taipei, China, Singapore or Thailand – and 0 otherwise.

(9) 
$$X_{it}^{det^*} \equiv X_{it}^{det} - X_{it}^{pred}$$

For any quantity variable  $X_{it}^{det}$ ,  $X_{it}^{det*}$  is defined as the part which cannot be explained by PVAR since  $X_{it}^{pred}$  is the value of  $X_{it}$  predicted by PVAR.

$$(10) \quad X_{it}^{diff} \equiv X_{i,t} - X_{i,t-1}$$

For price variables such as interest rate, term spreads and real effective exchange rate, first order differences are noted as above.

# 3. De-trended 4 Variable PVAR model

$$\begin{bmatrix} GDP_{ii} \\ globalGDP_{ii} \\ REV_{ii} \\ EXP_{ii} \end{bmatrix} = \begin{bmatrix} a_{11} & a_{12} & a_{13} & a_{14} \\ a_{21} & a_{22} & a_{23} & a_{24} \\ a_{31} & a_{32} & a_{33} & a_{34} \\ a_{41} & a_{42} & a_{43} & a_{44} \end{bmatrix} \begin{bmatrix} GDP_{ii-1} \\ GDP_{ii-2} \\ GDP_{ii-4} \\ GDP_{ii-4} \end{bmatrix} + \begin{bmatrix} b_{11} & b_{12} & b_{13} & b_{14} \\ b_{21} & b_{22} & b_{23} & b_{24} \\ b_{31} & b_{32} & b_{33} & b_{34} \\ b_{41} & b_{42} & b_{43} & b_{44} \end{bmatrix} \begin{bmatrix} globalGDP_{ii-2} \\ globalGDP_{ii-3} \\ globalGDP_{ii-4} \end{bmatrix} + \begin{bmatrix} c_{11} & c_{12} & c_{13} & c_{14} \\ c_{21} & c_{22} & c_{23} & c_{24} \\ c_{31} & c_{32} & c_{33} & c_{34} \\ c_{41} & c_{42} & c_{43} & c_{44} \end{bmatrix} \begin{bmatrix} REV_{ii-1} \\ REV_{ii-2} \\ REV_{ii-3} \\ REV_{ii-4} \end{bmatrix} + \begin{bmatrix} d_{11} & d_{12} & d_{13} & d_{14} \\ d_{21} & d_{22} & d_{23} & d_{24} \\ d_{31} & d_{32} & d_{33} & d_{34} \\ d_{41} & d_{42} & d_{43} & d_{44} \end{bmatrix} \begin{bmatrix} EXP_{ii-1} \\ EXP_{ii-2} \\ EXP_{ii-3} \\ EXP_{ii-4} \end{bmatrix} + \begin{bmatrix} U_{ii}^{1} \\ U_{ii}^{2} \\ U_{ii}^{3} \\ U_{ii}^{4} \end{bmatrix}$$

# Appendix C.

# Table C1. Major Fiscal Stimulus Measures of Korea

(Unit: Trillion Won)

Major Stimulus Measures	Allocation
November 2008	
Spending on infrastructure and other government projects	4.6
Assistance to small businesses	3.4
Social transfers to low income households	1.0
Local government expenditures	1.1
• To tackle unemployment problems and support small business start-ups	0.3
• Tax cuts	3.0
December 2008	
• Expansion of internship system and increasing job positions for underprivileged	4.9
Increase of Social Overhead Capital (SOC) projects	24.7
Stabilization of SME's	3.9
Supporting regional finances	1.9
January 2009	
• Will invest in projects pertaining to energy conservation, recycling, carbon reduction, and waste management	
Improved information and energy infrastructure	
• Preventing floods, securing water resources, creating green spaces, and developing areas around the four rivers	
Increased investment in low carbon transportation	
Investment in environment-friendly LED lights	
March 2009	
Job creation and maintenance	3.5
• Assist SMEs and self-employed through expanded credit guarantees and increased government financing	4.5

Revitalize provincial economies	3.0
Nurturing future growth engines	2.5
Assistance to low income households	4.2
August 2009	
Tax incentives for self-employed business owners and SMEs	
• Tax incentives to be granted on money used for micro-credit loans, educational, art,	
cultural, and social welfare purposes	
• Tax deduction on R&D investment will be expanded to 20-25 percent for large	
enterprises and 30-35 percent for SMEs.	
• Tax deduction and exemption to be given to green industry-related financial	
products.	

*Source:* Ministry of Strategy and Finance, various press releases; Comprehensive policy Measures to Overcome the Ongoing Economic Difficulties, Monthly Economic Bulletin (November 2008). Both are available at www.mosf.go.kr.

Year	Times	Amount	Source of revenue	Major Projects	Gov't Submission date	National Assembly resolution date
1998	1	∆1.4(0.3)	Tax revenue reduction in 1998 and SMEs disposal income, etc.	Expenditure cuts due to lack of tax revenues and Financial restructuring support	2.9	3.25
1998	2	13.9 (2.8) (increased exp. 6.7, reduced rev. $\Delta 72$ )	Surplus from BOK (bonds issuance etc.), Stock sales and Tax reduction in 1998	SOC investment expansion and Corporate restructuring · SMEs support	7.30	9.25
1999	1	0.8 (0.1)	Surplus from BOK and IBRD Grant Assistance	Relief measure for the unemployed and fishery support	3.31	4.27
1999	2	2.7 (0.5)	Tax revenue increase in 1999 and Surplus from 1998 budget	Low middle income household aid and Countermeasures reserve funds against natural calamities	6.29	8.11
2000	1	2.3 (0.4)	Surplus from 1999 budget Surplus from BOK	Low income household aid and Relief measure for the youth unemployed	6.29	10.13
2001	1	5.1 (0.8)	Surplus from 2000 budget	Countermeasures reserve funds	6.22	9.3
2001	2	1.6 (0.3)	Expected interest accruals and disused amount	Construction investment (SOC, etc)	10.23	11.5
2002	1	4.1 (0.6)	Surplus from 2001 budget and Stock sales revenue (KT)	Countermeasures reserve funds against natural calamities	9.10	9.13
2003	1	4.5 (0.6)	Surplus from 2002 budget and Tax reassessment	Construction investment (SOC, etc) and Boosting regional economy	6.5	7.15
2003	2	3.0 (0.4)	Gov't bonds issuance	Countermeasures against natural calamities	10.2	10.24
2004	1	$\begin{array}{c} 2.5 \ (0.3) \\ (\text{increased} \\ \text{exp. } 1.8, \\ \text{reduced rev.} \\ \Delta 0.6) \end{array}$	Gov't bonds issuance and Surplus from 2004 budget	Low income household aid	7.2	7.15
2005	1	4.9 (0.6) (increased exp. 0.6 reduced rev. 4.2)	Tax revenue reduction in 2005 and Gov't bonds issuance	Medical care aid, subsistence benefit and land purchase for U.S. military base relocation	9.29	11.16
2006	1	2.2 (0.2)	Surplus from 2005 budget and Gov't bonds issuance	Natural disaster relief expenditure	8.18	8.29
2008	1	4.6 (0.4)	Surplus from 2007 budget	Oil price support for low income household and Transport network expansion	6.20	9.18
2009	1	2.8 (2.7) (increased exp. 1.7, reduced rev. $\Delta$ 1.1)	Surplus and buffer fund	Low income household aid and facilities support to SMEs	3.30	4.29

# Table C2. Supplementary Budgets since the East Asian Currency Crisis (Unit: Tril. KW, % of GDP)

Source: MOSF.

# Appendix D.

	Methodology	Results
Park, J.(1995)	<ul> <li>Single equation approaches</li> <li>(Feldstein(1982) and Kormendi (1983))</li> <li>VAR(Cholesky decomposition)</li> </ul>	<ul> <li>Ricardian Equivalence Hypothesis is not sustained by either of the single equation approaches.</li> <li>An impulse response of private consumption to the government expenditure reveals the positive effect over a long time horizon.</li> </ul>
Kim, S.(1997)	<ul> <li>VAR(Cholesky decomposition)</li> <li>The government expenditures are classified into six subgroups and their impacts on consumption, investment and income are separately estimated</li> </ul>	<ul> <li>The impact of government expenditures differs significantly item by item.</li> <li>The government investment tends to boost private economic activities whereas the government consumption is likely to crowd out them.</li> </ul>
Park, H and J. Choi(1997)	<ul> <li>VAR with seven variables (Cholesky decomposition)</li> <li>The seven variables are government expenditure, bonds, money stock, interest rate, exchange rate, consumption, and current account balance.</li> </ul>	<ul> <li>Not able to reject Ricardian Equivalence theorem</li> <li>Insignificant impact of fiscal deficit, government debt and spending increase on consumption, interest rate, exchange rate, and current account balance</li> </ul>
Choi, J.(2002)	<ul> <li>Estimation of asset demand functions with the inclusion of the government bond</li> <li>Causality analysis of a VAR system</li> </ul>	<ul> <li>The government debt doesn't seem to be perceived as net wealth by consumers.</li> <li>Insignificant impact of government debt and money stock(not hi-powered money) on real GDP, nominal GDP and GDP deflator</li> </ul>
Kim, S.(2003)	<ul> <li>Structural VAR of all the components of national income identity(private consumption, investment, net export and the remaining sectors) with dummy variables identifying a structural break (Cholesky decomposition)</li> <li>Fiscal variables, such as government consumption, investment and tax revenues are given exogenous in the VAR system.</li> </ul>	<ul> <li>After the Currency crisis, the impact of government expenditure on GDP changed signs from (-) to (+).</li> <li>During the same period, the impact of the government investment on the private investment as well as the government consumption on the private consumption changed signs from (-) to (+).</li> </ul>
Kim, S.(2005)	<ul> <li>Structural VAR of GDP, price (P) and money stock (M) with dummy variables considering a structural break (before and after the Currency Crisis)</li> <li>Fiscal variables, such as government consumption, investment and tax revenues are given exogenous in the VAR system.</li> </ul>	<ul> <li>Before the Currency crisis, an exogenous shock from the government expenditures had negative influence on price and money stock while it has positive influence on GDP.</li> <li>After the Currency crisis, the exogenous government expenditure shock had negative influence on price and GDP, while it has positive influence on the money stock.</li> </ul>

# 1. Relevant Korean Literature

# Appendix E.

# 1. Size of Fiscal Multipliers by Types

# Table E1. Multiplier Effects from 10 Tril. Won Increment of Capital Expenditure

								(Unit: % p)
Quarter	1st	2nd	3rd	4th	5th	6th	7th	8th
Real GDP	0.25	0.19	0.17	0.15	0.13	0.11	0.09	0.07
Private consumption	0.05	0.09	0.11	0.12	0.11	0.11	0.10	0.09
Equipment investment	1.78	1.39	1.09	0.84	0.64	0.46	0.31	0.18
Construction investment	1.19	1.11	1.03	0.95	0.87	0.79	0.72	0.65
СРІ	0.01	0.04	0.06	0.08	0.10	0.12	0.14	0.16
Current account/GDP	-0.15	-0.17	-0.15	-0.13	-0.11	-0.10	-0.08	-0.07
Interest rate (%)	0.03	0.05	0.07	0.09	0.11	0.13	0.14	0.15

Note: (1) y-o-y change excl. current account/ GDP and interest rate.

(2) These estimates are calculated from the KDI Forecasting Model.

# Table E2.Multiplier Effects from 10 Tril. Won Increment of CurrentExpenditure

							(	Unit: % p)
Quarter	1st	2nd	3rd	4th	5th	6th	7th	8th
Real GDP	0.76	0.01	0.07	0.05	0.02	0.00	-0.01	-0.01
Private consumption	0.18	0.17	0.13	0.09	0.06	0.04	0.02	0.01
Equipment investment	1.36	0.69	0.41	0.21	0.04	-0.09	-0.17	-0.23
Construction investment	0.25	0.21	0.19	0.17	0.15	0.12	0.09	0.07
СРІ	0.04	0.08	0.10	0.12	0.13	0.13	0.14	0.14
Current account/GDP	-0.45	-0.17	-0.06	-0.03	-0.02	-0.01	0.00	0.01
Interest rate (%)	0.08	0.10	0.11	0.12	0.13	0.13	0.13	0.14

*Note:* (1) y-o-y change excl. current account/ GDP and interest rate.

(2) These estimates are calculated from the KDI Forecasting Model.

								(Unit: %p)
Quarter	1st	2nd	3rd	4th	5th	6th	7th	8th
Real GDP	0.46	0.44	0.35	0.27	0.19	0.12	0.08	0.04
Private	1.28	1.33	1.06	0.77	0.53	0.37	0.25	0.17
consumption								
Equipment	0.80	1.19	1.22	1.04	0.76	0.46	0.10	-0.04
investment	0.80				0.70		0.19	
Construction	0.15	0.27	0.34	0.38	0.38	0.35	0.32	0.27
investment								
CPI	0.02	0.07	0.12	0.16	0.21	0.24	0.26	0.28
Current	-0.27	-0.36	-0.32	-0.24	0.17	-0.12	-0.08	-0.04
account/GDP					-0.17			
Interest rate (%)	0.05	0.10	0.15	0.19	0.22	0.24	0.25	0.26

 Table E3.
 Multiplier Effects from 10 Tril. Won Reduction of Tax Revenue

Note: (1) y-o-y change excl. current account/ GDP and interest rate. (2) These estimates are calculated from the KDI Forecasting Model.

# CHAPTER 5

# Mild Crisis, Half Hearted Fiscal Stimulus: Indonesia During the GFC

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### 1. Introduction

The Global Financial Crisis (GFC) which occurred in 2008 impacted the world's economies, not excepting Asia. After experiencing high growth for more than four years, the world economy went into steep decline starting in September 2008. World economic growth which reached 5.2% in 2007 declined to 3% in 2008, and dropped even further to -0.6% in 2009. Consistent with this, the United States experienced a sharp decrease in growth from 2.1% (2007) to 0.4% (2008) and contracted to -2.4% in 2009. Meanwhile, Europe decreased from 2.7% (2007) to 0.6% (2008) and then -4.1% in 2009. Following the global contraction and tight liquidity in the global market, global trade volume also abated. When the global trade volume decreased, exports from all countries slowed. As a result, emerging markets and developing economies also

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experienced a significant decrease, including Indonesia. Growth in emerging market economies fell from 6.1% in 2008 to 2.4% in 2009 (IMF, 2010).

The impact on economic growth in Indonesia is evident from the fourth quarter of 2008. The decrease in exports is also reflected in the decrease in Indonesia's economic growth. In the fourth quarter of 2008, economic growth slowed to 5.2% year-on-year. Still, growth in Indonesia as a whole reached 6.1%.

In the second quarter of 2009, the global economy showed signs of improving. This occurred in developed countries and emerging markets, and across the whole world. In terms of speed of recovery, the fastest economic recovery occurred in emerging markets; while developed countries experienced recovery it was relatively slow compared to emerging markets. This was primarily due to consistently slow recovery in Europe. With the improvement of global economics, Indonesian exports grew. In monetary terms, inflation was strictly controlled, and in 2009 inflation reached its lowest levels since 2000, at only 2.8%. This low inflation improved buying power and positively impacted macroeconomic stability, which in turn prompted the flow of foreign investment to Indonesia. The Rupiah strengthened. In 2009, when the global economy posted negative growth, Indonesia grew by 4.5%, and Indonesia became the third fastest growing G-20 country after China and India.

One factor which helped to limit the impact of the GFC on the Indonesian economy was support from the domestic demand. The share of total Indonesian exports on GDP is 29%. This is much lower than in countries like Singapore (234%), Taiwan (74%) or Korea (45%).<sup>1</sup> This emphasizes the importance of domestic demand. With exports hard hit plus weak investment, economic growth was practically totally dependent on household and government consumption.

Given this illustration, it is important to ask why growth in domestic demand was relatively strong during the GFC. Was it due to the fiscal stimulus enacted by the Indonesian government? Household consumption is the largest segment in Indonesia's GDP, accounting for 65%. It is therefore best if household or even government consumption acts as the motor of growth. Aaron, *et al.* (2004) indicate that government consumption can create job opportunities amounting to as much as 19% of total job

<sup>&</sup>lt;sup>1</sup> Total export of goods and services in national account as a percentage of GDP

opportunities. They also showed that government expenditure — in addition to those of the government sector itself — are also significant in creating job opportunities through the construction sector as this includes housing and retail construction. This is why fiscal stimulus has become so important. Take into account the important of fiscal stimulus during the economic crisis, this paper will elucidate the role fiscal stimulus in responding the GFC in Indonesia.

Specifically, this paper will address the following questions:

- What was the fiscal position before and after the GFC?
- How did the fiscal stimulus minimize the impact of the crisis?
- What challenges need to be anticipated in fiscal policy to face future economic crises?

This paper will attempt to answer these questions, as well as discuss lessons learned and policy implications from the current global financial crisis. The organization of this paper is as follows. Section II will address the impact of the GFC on the Indonesian economy; Section III will discuss the Indonesian government budget in a nutshell; Section IV will focus on the design of the fiscal stimulus package; Section V will discuss the impact assessment of this stimulus and Section VI will focus on the agenda for further reforms in fiscal policy.

# 2. The Impact of the Global Financial Crisis on Indonesia<sup>2</sup>

The financial crisis began with the fall of the US sub-prime mortgage market. But it did not stop there. The crisis pushed a broad global re-pricing of risk. This was worsened because the loss in the financial sector turned out to be much bigger than originally estimated. Another result of the financial crisis was that the US banking balance sheet was under a lot of pressure and required huge funds for recapitalization. The implication: liquidity became very tight. The lack of liquidity in international

<sup>&</sup>lt;sup>2</sup> This section is heavily drawn from Basri and Rahardja (2009); Basri and Rahardja (2010); Basri and Siregar (2009)

financial markets pushed investors to withdraw their money and a flight to quality to the US ensued as they looked for safer investments in US Treasury bills.

The collapse of asset prices in the US as a result of the financial crisis, led to extremely low prices in the US, and thus a relocation of funds from emerging market economies to the US. This was a real problem for emerging market countries, including Indonesia, as suddenly they were faced with a shortage of foreign exchange liquidity. In addition, the financial crisis also impacted Indonesia through a decrease in confidence. As a result, emerging markets faced difficulty in gaining access to external financing, reflected in increasing yields on international bond issuances due to loss of investor appetite for emerging market financial products generally. In Indonesia and other emerging markets, the financial crisis showed itself in currency depreciation and a decrease in stock market value.

The Indonesia stock exchange composite index hovered at 2,700 in February 2008. But the fallout from the bankruptcy of Lehman, the takeover of Merrill Lynch, and concerns over AIG significantly affected emerging markets. The turbulence in the global financial markets in September and October 2008 pushed the Indonesia Stock Market (IDX) index down by almost 50% from early September to November 2008. The massive sell-off of assets by foreign investors in the Indonesian capital market in the last quarter of 2008 put more pressure on the rupiah. The rupiah lost 28% of its value against the US dollar between October and November 2008, accompanied by a significant rise in its volatility.

Basri and Siregar (2009) demonstrate that although the impact on the financial sector was significant, the Indonesian banking sector was relatively successful in handling the pressures of the crisis. Capital Adequacy Ratio (CAR) fell from 21.6% to 16.8% and Return on Assets (ROA) decreased from 3.2% to 2.6% from January to November 2008. The exception was Bank Century, which failed. The government and the Bank of Indonesia decided to bail it out to avoid a systemic impact on the national economy.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> This decision to bail out Bank Century was highly politicized as the Indonesian Legislative Assembly (DPR) discussed whether the decision was in fact correct or if there was an element of corruption inherent to it. This issue was purely political, as from an economic standpoint the bail-out was necessary to avoid systemic economic impact (Basri, forthcoming)

Bank credit continued to grow at the end of 2008, but at a slower pace, and in 2009, a sharp decrease in credit occurred, from 32% to 10%. Basri and Siregar (2009) also show that credit actually grew in 2008, as it was more widespread than in 2004 and 2005 when it was concentrated in consumer credit.

An important point to note is confidence. Gunawan et al. (2009) demonstrate that confidence among banks declined as well, seen in the shrinking of inter-bank borrowing and lending, which fell 59.3% to Rp. 83.8 trillion in December 2008 from Rp. 206 trillion in December 2007. Sharp competition between banks resulted from the need to expand their funding base, accompanied by increases in interbank rates, which in turn pushed interest rates higher. One-month deposit rates in commercial banks reached 16% in December 2008, significantly higher than the prevailing maximum guaranteed rate of 9.75% set by the deposit insurance company (LPS). Banks enticed big clients by giving these high interest rates to keep them from withdrawing their funds. The government and Bank of Indonesia policy only guaranteed deposit insurance to Rp 2 billion. Yet at the same time, countries like Singapore and Malaysia applied full guarantees. This difference created a risk of arbitrage from deposits in Indonesia to Singapore, Malaysia and other countries offering full guarantees. In addition, there was a tendency toward flight to quality, wherein depositors moved their money to large or state banks (although not to foreign banks like in the 1997/98 crisis), thus deepening the problem of liquidity imbalance and segmentation in the banking system.

#### Trade as a channel of global crisis

The weak global economy led to a decrease in the demand for Indonesian exports. Further, this decrease in global demand also weakened the government's ability to export primary mining goods, as a result commodity and mining prices fell. The sharp decrease in price also affected agriculture and oil. Consistent with this, Indonesian exports went into sharp decline, particularly agriculture, oil, gas and minerals. Papanek, *et al.* (2010) show a sharp decrease in exports in the first quarter of 2009 compared to the same quarter one year earlier. This was mainly due to a decrease in value. Theoretically, the depreciation of the rupiah since September 2008 compensated for the collapse in the demand for exports. Yet data shows that the impact of the substitution

effect was smaller than the income effect. As a result, exports as a whole declined. Still, growth in volume of exports in several Indonesian commodities was relatively strong, perhaps due to the weak rupiah during this period.<sup>4</sup>

The sharp decrease in exports was not unique to Indonesia. The same pattern emerged in many countries, including China, Singapore, Malaysia and Thailand. Given the size of the export contraction which occurred, the impact of the global financial crisis on the Indonesian economy was relatively similar. Figure 1 shows how exports in countries like China, Malaysia and Singapore contracted by 30% in the fourth quarter of 2008 and first quarter of 2009. We should thus discuss why this relatively sharp decline in exports had a limited impact on the Indonesian economy. The authors argue that the limited impact on the Indonesian economy was due to the relatively small place of exports in the Indonesian economy compared to countries like Singapore, Thailand and Malaysia.

<sup>&</sup>lt;sup>4</sup> Indonesian exports of raw materials and semi-processed materials such as coal, crude palm oil, and minerals, to emerging markets such as China and India have increased significantly since the global financial crisis





Source: estimated from CEIC database

Furthermore, Kimura (2005) indicated that Indonesia was left behind in production networks. As a result of this being left behind, the effects of the global crisis against the Indonesian economy also became limited. In fact this was not something that had been planned. Indonesia certainly only wished for a large portion of the large exports within the economy. But several obstacles from the supply side (Soesatro and Basri (2005); Basri and Patunru (2006)) had already made Indonesia become less competitive and its growth of exports relatively limited. Ironically, Indonesia's weak distribution network helped cushion the blow of the global financial crisis on the Indonesian economy. In sum, Indonesia survived the GFC thanks to the domestic demand.

### The importance of domestic demand

The importance of domestic demand in insulating growth from global recession is not unique to Indonesia. Basri and Rahardja (2010) demonstrate that at least in Asia, countries that maintained or even increased their share of domestic demand in GDP were in a relatively better position to withstand the global economic downturn as shown by figure 2 (data in Appendix B).



Figure 2. Domestic Demand and Resilience from Global Crisis

Source: EIU, Basri and Rahardja (2009)

As we discussed earlier, the role of private consumption in Indonesia is very vital in the Indonesian economy. Interestingly even when the global crisis peaked (from 3<sup>rd</sup> quarter 2008 to 2<sup>nd</sup> quarter 2009), private consumption remained relatively strong and grew by more than 4.7% Given the important role of domestic demand especially private consumption in supporting the Indonesian economy during the GFC, an important question becomes why did private consumption remain relatively strong? Was it due to the fiscal stimulus adopted by the Indonesian government? More specifically, what was the role of the fiscal policy in minimizing the impact of the GFC? This will be discussed in section IV and V. Before we proceed to address these questions, it is important to understand the structure of Indonesia's government budget.

### 3. Indonesian Government Budget in a Nutshell

Government budget is at the central pillar of Indonesian fiscal policy. After the birth of New Order in 1966, government budget has been driving government policies to ensure macroeconomic stability, reduce dependencies to foreign aide, and to improve

income distribution. With the oil boom, the government also had the resources to enforce political authority of Suharto through development projects (Hill, 1996). Although this last element is particularly similar to the objective of government budget in Sukarno era, in general, government budget under New Older presented a significant departure from the Old Order doctrine in budget was used as a tool to achieve "nation building" through defense and other projects that contributed to hyper inflation and high debt.

Since the Asian Crisis, government budget processing in Indonesia undertook several important changes. First, the full democratization has brought significant role of the Parliament in the budgeting process. Indonesian State Budget Law introduced in 2003 solidifies the interaction between government and Parliament in the budgeting process.<sup>5</sup> Involvement of the Parliament has changed. From merely endorsing the proposed budget by central government, Parliament is actively involved in the deliberation and modification of the macroeconomic assumptions and approving or rejecting the budget, proposed by all government agencies, line by line.

The budgeting process can be quite lengthy and sometimes contribute to the delay in government spending. Except for 2008, since 2001 until 2009 central government spending has been largely lower that the revised budget projection (*APBN-P*). The APBN process requires all line ministries to perform multiple consultations with Bappenas (Ministry of Planning), Ministry of Finance, and the Parliament. Changes in budgeting assumptions, uncertainties in interpretation of new rules in government procurement, and low capacity in line ministries to develop working program minimizes iterative consultations often contribute to delays in spending (World Bank, 2009). On the other hand, the government is challenged to balance the needs to spend quickly and to have a transparent and accountable budget reporting.

Secondly, there have been fundamental changes in the format of government budget. In 2000 the government changed the fiscal year, from April 1<sup>st</sup> to March 31<sup>st</sup> in subsequent year, to January 1<sup>st</sup> through December 31<sup>st</sup>. But more importantly, Indonesian government budget adopted the international standard of the government financial statistics (GFS) for its budget report. After 34 years of implementing "balance

<sup>&</sup>lt;sup>5</sup> Undang-Undang no 17 tahun 2003 tentang Keuangan Negara

budget" doctrine of the New Order, Indonesia finally allowed its budget to reflect deficit/surplus and implemented series of rearrangement in the budget items. The current budget format also introduced financing items that clarifies sources of financing government spending, such as privatization, government debt, and foreign loans which before were all simply treated as "development revenue". Since 2001 the central government budget also included "balancing funds" item to anticipate the decentralization of authority to local governments. Following up the introduction of State Law no.17 of 2003, in 2005 the central government implemented unified budget system that collapsed routine and development expenditures and changed sectoral budget allocations to functional allocations by line agencies.<sup>6</sup>

Casual observation of figure 3 suggests that disbursement in total spending by central government has been pro-cyclical even during the global financial crisis. The path of actual spending of Indonesian central government budget almost tracked growth in real GDP with simple correlation between *growth* of real GDP and disbursement of central government spending of 0.7. Total spending realization by central government deflated by GDP deflator has risen approximately 1.2 times in the course of 2001 – 2009 period while Indonesian real GDP increased by 1.5 times.<sup>7</sup> Spending disbursement by central government also dipped during the global financial crisis. In 2009 real GDP growth was down 1.5 percentage point from growth in 2008 whilst government spending was down by 16% in real terms. The reduction in spending disbursement by central government in 2009 was due to a steep decline in energy subsidy bills because of the collapse of global commodity prices.

The figure 3 also suggests that subsidies have taken a significant part of central government spending in Indonesia. In the course of 2001 and 2009, on average subsidies has been 28.5 percent of central government spending excluding transfers to the regions. This figure is significantly higher than years before the Asian Crisis in

<sup>&</sup>lt;sup>6</sup> An example of the implication of this restructuring is that budget for "national defense" sector is no longer present and has transformed into budget to execute work program under the "Ministry of Defense". Meanwhile, activities of development expenditures, which under the old format was mainly consisted of capital expenditures, has been merged to different expenditures items including capital, material, personnel, social and other expenditures.

<sup>&</sup>lt;sup>7</sup> We chose to use GDP deflator (base year 2000) because it covers prices from more economic activities compared to CPI.
which subsidies took about 3.5 percent throughout 1990/91 and 1995/96. Around 80 percent of the total subsidy bill has been for energy subsidies in the form of payment to SOEs and that has been extremely sensitive to upward movement in the global crude price. The rest of the subsidies are aimed for fertilizers, food program (RASKIN), public housing loans, and seeds. Despite a 30 percent average increase in administered fuel prices, subsidy bills increased sharply in 2008 because of the "untouchable" electricity subsidy and government decision to roll out cash-transfer to protect the poor from rising food prices. Nevertheless, due to politically contentious subject, preventing subsidies from ballooning has not been an easy task for the central government, let alone to reduce it deliberately.

Casual observation also suggests that the only spending component that has been counter-cyclical is discretionary expenditures. Simple correlation between real GDP growth and disbursement of discretionary expenditure between 2001 and 2009 is -0.2. Although a simple correlation does not necessarily provided prove of impact of fiscal shocks to GDP growth, it is a crude indicator of how the government have made use discretionary expenditure to affect economic activities. Nevertheless, the size of discretionary spending has been much smaller than subsidies that are tied to government pre-commitment.



Figure 3. Actual Government Expenditures in Real Terms (Rp trillion) and Real GDP Growth (%)

Source: CEIC, processed from Ministry of Finance

The pattern of disbursement in capital spending and purchases of goods and services are marked with significant back-loading. This pattern certainly raises doubt on the effectiveness of stimulus through government spending. As previously mentioned, delays in budget approval and low capacity in executing work program contributed to push back in spending schedule. Figure 4 illustrates the trend that capital spending and purchase of goods and services tends to be small in the beginning of the fiscal year and suddenly accelerated towards the end. Between 2001 and 2009, about 30 percent of spending has been rammed in the month of December. Even during the global financial crisis, 32 and 29 percent of capital spending and purchase of goods of services in were done in December of 2008 and 2009, consecutively.<sup>8</sup> Although slow burn rate in the beginning of fiscal year is unusual in any given public or private institution, the pace of the disbursement of discretionary spending of Indonesian government remains a challenge for the effectiveness of fiscal policy. It also and questions the capacity of line ministries to properly execute development projects, particularly for tackling economic crisis.

# Figure 4. Capital Spending and Purchase of Goods and Services by Central Government



Source: processed from Ministry of Finance

<sup>&</sup>lt;sup>8</sup> Overall budget disbursement by line ministries in 2009 was close to the revised projection (APBN-P) as the government established a Committee consisting of DG of Treasury and representative from the Planning Agency (Bappenas) to monitor and speed up the process to develop budget allocation (DIPA)

Tax revenue has been the main driver of increase in actual revenue of the central government. Between 2001 and 2009 on average tax revenue contributed to 69% of central government domestic revenue or 12.1% of Indonesian GDP. In real term, tax revenue increased by 1.5 times between 2001 and 2009 and that was mostly due to increase in income and value added taxes after the government started reforming tax administration in 2005. Actual revenue from income and value added taxes in real terms increased by 1.5 times in the course of 2001 and 2009, which was similar to expansion in Indonesian economy.<sup>9</sup> Increase in revenue from income tax and VAT also compensates relatively stagnant revenue from international trade and other domestic taxes, while provides cushion from the volatile non-tax revenue due to swings in international commodity prices and uncertainties from SOEs profits.

Figure 5. Actual Domestic Revenues of Central Government in Real Terms (Rp trillion) and Real GDP growth (%)





The ability of Indonesian government to use counter cyclical fiscal policy seems to be limited. The size of discretionary spending is relatively small, only around 3 to 4% of GDP. Meanwhile, Indonesia still needs to enlarge its tax base, particularly business

<sup>&</sup>lt;sup>9</sup> Deflated using GDP deflator with base year 2000

and personal income tax. At this stage, automatic stabilizer has been around 10% of GDP. $^{10}$ 

Now let us turn to inspect the behavior of the series that we analyze in quarterly time frame. The two figures below indicate year on year growth of quarterly disbursement in central government spending and tax revenue. To help isolate the discretionary spending, we construct series of central government spending excluding salaries and subsidies (dashed line). The figure on the left-hand side suggests that if we exclude salaries and subsidies, growth in disbursement in government spending has been relatively stronger in episodes of economic downturn. This is particularly true in 2006 when the government introduced cash transfer to compensate for increasing price of rice and fuel. Despite weakness in disbursement during the period of global financial crisis, disbursement in discretionary spending. Meanwhile, the right figure suggests cases in which that tax revenue dropped prior to economic upturn in 2007 and during the global financial crisis. Nevertheless, looking the two figures still do not provide meaningful assessment on the relationships among those three variables.







Source: CEIC processed from Ministry of Finance

<sup>&</sup>lt;sup>10</sup> Here automatic stabilizer consists of income tax, sales tax, and tax (tariff) from international trade.

Has Indonesia demonstrated a clear fiscal stance? Previously we indicated that, from graphical inspection, pattern of government spending has been pro-cyclical towards economic growth. But there is more to it. We also find that government budget has been heavily influenced by fluctuation of global crude price. The next figure shows that changes (year on year) in primary balance has been following changes in global crude price. Co-movement between changes in primary deficit and crude price was very close in 2002 and 2003, period when Indonesia was still under the IMF program. But the co-movement between those two variables has loosened up after series of adjustment in energy subsidies in 2005. Nevertheless, changes in primary deficit still response to steep changes in crude price. In other words, the fiscal position of Indonesian government seems to be heavily influenced by fluctuations in crude price that changes the amount of energy subsidies.



Figure 8. Does this Represent Indonesia's Fiscal Stance?

Source: authors calculation from CEIC and MOF data

# 4. Fiscal Policy and Stimulus Package

#### 4.1. Fiscal Position before the GFC

Since the Asian Financial Crisis (AFC), the Indonesian government has taken various steps to improve its fiscal structure (see Section III). Because of this, Indonesia entered the GFC with better fiscal conditions than many Asian countries, or even the US and Europe. Figure 8 shows that the budget deficit/GDP continuously declined, and that there was a surplus in the primary balance since 2000. Only in 2009 did the primary balance approach 0% in line with the increase in the budget deficit as set forth in the 2009 fiscal stimulus. The government's success in maintaining the budget deficit below 3% since 2000 helped the debt/GDP ratio to consistently decline (Figure 9). Basri and Hill (forthcoming) show that one main issue faced by Indonesia after the 1998 AFC was the increase in the government debt/GDP ratio which exceeded 100% as a result of the government's decision to takeover debt from companies and banks which collapsed in the AFC. Because of this, macroeconomic stability in the early 2000s was Many studies have been conducted to examine fiscal extremely vulnerable. sustainability in Indonesia. But the government's success in maintaining a low budget deficit made Indonesia's fiscal position relatively good and even better than the Maastricht model, calling for a budget deficit not to exceed 3% and public debt of less than 60% of GDP.

There are several reasons why Indonesia was able to maintain its relatively low budget deficit.

- IMF reform in 1998. Although critics insist that the IMF recommendation to Indonesia to apply tight fiscal policy in the AFC was the wrong course to take, in the long term this requirement has led Indonesia to adopt a more cautious fiscal policy. The pay-off of this policy can be seen several years after the AFC. This allowed Indonesia to enter the GFC in a stronger fiscal position.
- This cautious stance led to the Fiscal Policy Law which limits the Indonesian budget deficit to 3% of GDP and government debt/GDP ratio of less than 60%.

- This cautious fiscal policy combined with modest sales of nationalized distressed assets has significantly reduced public debt from 2000-2010 (Basri and Hill, forthcoming)
- It is of interest to note that central government expenditure has always fallen far below government targets. In 2008, for example, the budget deficit was targeted at 2.1% of GDP, however, the turnout of the budget deficit was only 0.1%. This was due to administrative hurdles including the introduction of a new budget authorization process as well as tighter anti-corruption measures aimed at making the tendering process more transparent but which resulted in delayed spending (Basri and Patunru, 2006; Manning and Roesad, 2006). Decentralization also hindered disbursement from the government budget (this is discussed in more detail later in the paper).







Source: BPS and Ministry of Finance

#### 4.2. Counter-cyclical Fiscal Stimulus

The Minister of Finance unveiled a stimulus package for 2009, valued at Rp 73.3 trillion (US\$ 6.4 billion) (Table 1), to boost the economy amid the threat of an

economic downturn. In line with Keynes (1936), the package addressed three major areas: income tax cuts, tax and import duty waivers, and subsidies and government expenditure. Aiming to stimulate more household and corporate spending, almost 60% of the Indonesian fiscal stimulus was allocated to income tax cuts. To minimize the effects of the global financial crisis, the government cut personal income tax from 35% to 30% and corporate income tax from 30% to 28%.

In addition to the tax cut, and taking into account the high dependency of local industries (both tradable and non-tradable sectors) on imports, around Rp 2.5 trillion was allocated to finance import duty waivers for raw materials and capital goods. This was part of the Rp 12.3 trillion tax and duty package, accounting for 18% of the total stimulus package, meant to support businesses. To help reduce operational business costs, the stimulus package also included diesel and electricity subsidies. Last but not least, close to Rp 12 trillion was allocated to support infrastructure and rural sector development.

It is worth noting that the size of the budget expansion was criticized as negligible. The forecasted deficit of 2.6% of GDP was partly driven by the decline in revenue (especially tax and non-tax revenues) as earlier discussed. Only about 1.2% of GDP can be considered as the real expansionary and the rest was incremental government deficit.

Recent empirical work on East Asian show that a country's success in applying counter-cyclical fiscal policy depends on the government's fiscal capability. Bad government financial health, as reflected in a high debt/GDP ratio will hinder the ability of the government to apply counter-cyclical measures, while countries with a low debt/GDP ratio have more fiscal space in which to maneuver (see, Hur *et al.*, 2010).

Despite having a healthy fiscal position (relatively low debt/GDP), the size of the fiscal stimulus in Indonesia was modest compared to other economies including Malaysia, Thailand and Australia. Thus, an important question is why did Indonesia introduced a relatively modest fiscal stimulus compared to other countries, even though its debt/GDP ratio was relatively low.

	· · · · · · · · · · · · · · · · · · ·	1	1
Major Stimulus Measures		Allocation (Rupiah billion)	% to total
Public Purchasing Power Stimulus		25,850.0	35.3
0	Lower Personal Income Tax Rate (from 35% to 30%)	13,500.0	18.4
0	Broader Income Tax-free Band	11,000.0	15.0
0	Tax Subsidies (cooking oil & biofuels)	1,000.0	1.4
0	Nontax Subsidies (generic medicines)	350.0	0.5
Business Resilience & Export Com	petitiveness Stimulus	35,478.8	48.4
0	Lower corporate tax rate (from 30% to 28%)	18,500.0	25.3
0	Tax Subsidies (import duties for industries, value-added tax on oil & gas exploration, geothermal tax, payroll tax)	12,300.0	16.8
0	Nontax subsidies (diesel price reduced by Rp. 300/litre, discounted electricity billing rates for industrial users, interest subsidy for water utility companies)	4,172.8	5.7
0	State equity participation in the Jamkindo & Askrindo loan guarantee corporations to boost funding for grassroots business credit guarantees	500.0	0.7
Job Creation & Mitigation of job L	osses through Labor-Intensive Infrastructure Projects Stimulus	11,936.5	16.3
0	Public works infrastructure	6,601.2	9.0
0	Transport infrastructure	2,198.8	3.0
0	Energy infrastructure	500.0	0.7
0	Housing infrastructure	500.0	0.7
0	Construction & rehabilitation of roads & irrigation facilities	650.0	0.9
0	Construction of public markets	315.0	0.4
0	Improvement of vocational training & its facilities	300.0	0.4
0	Health infrastructure	150.0	0.2
0	Rehabilitation of storage facilities	120.0	0.3
0	National community empowerment program	601.5	0.8
Total		73,265.3	100

#### Table 1. Major Fiscal Stimulus Measures, Indonesia

#### Source: Adopted from Hur, et al. (2010)

There are two constraints which limited the fiscal space of Indonesian government to opt for a higher fiscal stimulus: First, State Financial Law and Government Regulation No.23/2003. This law prescribes that the consolidated national and local government budget deficits be limited to 3% of GDP in any given year, and that total central and local government debt not exceed 60% of GDP.

Second, costs of financing the deficit. This started as internal concerns in the Ministry of Finance over financing the debt, with the government worrying that a large deficit could not be financed. Emerging economies, including Indonesia were hit particularly hard by the fallout from the financial crisis. Indiscriminate re-pricing of risk occurred despite efforts by many emerging countries to implement reforms, undertake sound economic policies and to strengthen institutional structures. In September, an attempt was made, and the market responded by asking for bond rates between 13-13.5%, around 300 basis points higher than what the government was willing to pay. In January 2009, the Ministry of Finance successfully absorbed around Rp 9.25 trillion from its sale of government bonds of 1 to 10 years tenor at rates ranging

between 11.2 to 12.24%. Despite the interest rate differential in the Indonesian bonds, due to the low yield of the US Treasury bill hovering around zero percent in January 2009, there was not much interest from foreign investors in the two government bond auctions in January. Rather, domestic investors were the primary buyers.

To handle this financing issue, Indonesia approached the World Bank and requested a Deferred Draw-down Option (DDO) scheme. This enabled Indonesia to obtain financing assistance for the budget deficit if a market disruption occurred, in which the "normal" cost of financing through markets became prohibitively expensive. So there exists a threshold agreed to by Indonesia and the World Bank. This mechanism goes into effect if the market rate which must be paid by the Indonesian government exceeds this threshold (meaning that the government must pay higher rates to finance its debt), making the Indonesian government eligible for loans from the World Bank at a concession rate much lower than the market rate. With this scheme and the support of the World Bank, Indonesia was successful in securing loans from multilateral institutions (such as the Asian Development Bank and the World Bank), and major trading partner countries (such as Japan) at a concession rate amounting to more than US\$ 5 billion.

Parallel to this, Indonesia also submitted a proposal to G-20 for the establishment of a Global Expenditure Support Fund (GESF) in order for developing countries to maintain reasonable levels of economic growth and sustain development. The main function of the GESF is to support budget financing – as well as project financing, on top of regular development assistance - to be used specifically for the implementation of counter-cyclical measures aimed at ensuring sustained economic growth in the face of external shocks. This proposal was adopted at the G-20 meeting in London in which the G-20 agreed to allocate US \$100 billion through the multilateral development banks (including the World Bank and Asian Development Bank) which could be used to support budget financing for fiscal stimulus.

The concern over financing prompted the government to limit its fiscal stimulus. Another factor which influenced the government's limited fiscal stimulus was the assumption that the GFC would have a relatively small impact on Indonesia. The Ministry of Finance (MoF) estimated that the Indonesian economy would continue to grow at 4.5-5.5% (GMTN, February 2009), because the role of the domestic economy is so large and the GFC hit export and externally-linked sectors the hardest. With the estimated small impact from the GFC, the MoF decided to adopt a relatively modest fiscal stimulus.

#### **4.3.** Tax Cut versus Expenditure Expansion

The initial debate within the country was how the fiscal stimulus program should be designed. The business world (as reported in Kompas and Jakarta Post, 2009) pushed for a stimulus to support business. The government argued that the fiscal stimulus should be focused on supporting household consumption, with an emphasis on efforts to increase the income of marginal groups with a high propensity to consume. There was also concern over the impact of fiscal expansion on the current account balance. Thus, suggestions were made to the government to focus the fiscal stimulus on labor-intensive and domestic oriented projects. Equally important was the role of concerted efforts by countries around the world to pursue a collective fiscal stimulus to limit the impact on current accounts. Nevertheless, Indonesia's current account balance remained positive in part due to major declines in imports from the collapse of investment.<sup>11</sup>

One important issue considered in the design of the fiscal stimulus was the government's ability to spend money. The initial debate within the MoF was how to ensure that the fiscal stimulus would be effective, given the inability of the central government to spend money. Under these particular circumstances, we argued that it would be more effective for the fiscal stimulus to focus on income tax cuts and tax waivers. Eventually Indonesia decided to combine expenditure expansion and tax cuts with the largest proportion allocated to tax cuts (60% of the fiscal stimulus). Another factor was at play in this, as, at the same time, the government was drafting a bill on new tax laws, one of which was to reduce the tax rates on corporate and household incomes. Thus, the tax cut policy did not wholly result from the fiscal stimulus design, but actually was already being prepared and advocated in parliament in the drafting of

<sup>&</sup>lt;sup>11</sup> More than 90% of Indonesia's imports are made of capital goods and raw materials. Thus the collapse of investment will bring down imports as well.

the new tax code. The government then included this project in the fiscal stimulus package.

Our next question is will the tax cut be effective? We argue, however, that the fiscal stimulus through tax cuts can be relatively more effective in Indonesia for three reasons: First, unlike in the US, Indonesian households hold less savings and have limited access to formal bank credit. Hence, spending behavior is likely to be influenced more by *current* income, rather than *permanent* income (Modigliani and Brumberg, 1955). Second, given the stage of development, it is more likely that the marginal propensity to consume in Indonesia is higher than in the US. Third, as pointed out by Modigliani and Brumberg (1955) consumption behavior may vary by stage of life. Based on this theory, consumption may be relatively high in societies dominated by younger populations compared to aging populations.

# 5. Assessing the Potential Impact of Fiscal Stimulus on Indonesian Economy and Fiscal Position after GFC

While it was true that the tax cut might have boosted consumption, this argument has to be juxtaposed against the fact that the impact of the fiscal stimulus on the economy may not be as large as we thought because some of the tax cuts targeted individual income tax at the highest tax brackets, as well as corporate income tax. While it is true that by raising the non-taxable income threshold from Rp 13.2 million per year (Rp 1.1 million per month) to Rp 15.84 million per year (Rp 1.32 million per month) could have induced consumption for low-income people, the number of Indonesians holding tax file numbers is still relatively small. In addition, looking at the size of the fiscal stimulus and given the size of government expenditure, about 10% of Indonesian GDP in 2008, one cannot claim that the relatively high Indonesian GDP growth (compared to other countries in the region) was due to fiscal stimulus.

#### 5.1. Estimating the Impact of Fiscal Stimulus

There are several issues in estimating the impact of fiscal policies in Indonesia. First, as discussed in previous section, the decentralization in 2000 has diminished the control central government to influence spending at the regional level. Therefore, for this paper, we only estimate the effect of fiscal variable directly controlled by the central government. Because spending by central government still accounts for 66 to 70 percent of total spending, we are confident that this would capture most of the impact of fiscal policy in Indonesian economy. Secondly, because Indonesia changed its format of government statistics in 2000, it is quite impossible to come up with a consistent measure of discretionary spending. Instead, here we deliberately broaden the scope of government spending to include personnel and subsidies. Thirdly, close to 60 percent of the fiscal stimulus introduced during the global crisis was **permanent** tax-cut that had been discussed with the parliament. This complicates the effort to conduct an event study to measure the impact of fiscal stimulus to Indonesian economy during the global financial crisis.

Nevertheless, there are good reasons and long theoretical arguments that both government spending and tax affect GDP. But since those fiscal variables are not necessarily independent, the effect of one can affect the other. Therefore, we decided to estimate the potential impact of fiscal multiplier on economic growth using vector autoregressive (VAR) approach. We run a structural VAR of real GDP, central government spending, and tax revenues using identification approach suggested by Blanchard and Perotti (2002). The other advantage of the using VAR is that we can isolate the impact of contemporaneous shocks in government spending or tax to GDP from the anticipated movement of fiscal variables.

Following Blanchard and Perotti, the model used is written as the following

$$X_{t} = A(L)X_{t-1} + \mu_{t} \qquad (1)$$

Where A(L) is matrix of lag operator and  $X'_t = [Y_t, T_t, G_t]$ , with Y, T, G, as real non-oil GDP, tax revenue, and spending of central government, all in natural logarithmic term.<sup>12</sup>

 $<sup>^{12}</sup>$  We do not include quarter dependent dummy variables in A(.) as in Blanchard and Perotti because of limited degrees of freedom.

The vector ut consists of residuals with the following set-up

The first equation in (2) states that unexpected movements in real GDP in quarter t could come from unexpected movements in tax revenue, unexpected movements in government spending, or other unexpected shocks. The second equation declares that unexpected movements in tax revenue could be due to unexpected movements in GDP, unexpected movements in government spending, or other unanticipated shocks. Similar interpretation also applies in the third equation on unexpected movement in government spending.

The identification for system of residuals in system of equations 2 starts by assuming  $b_1$  equals to elasticity of tax to output under the current fiscal policy rules. The quarterly data eliminates the possibility of  $b_1$  capturing discretionary changes in tax policy because in practice it will take more than 2 quarters for the government and Parliament to learn about the GDP shock and to adjust tax. We ran an OLS between log of tax revenue against log of real GDP on quarterly data from 1995 to 2009 and came up with an estimate of 2.16.<sup>13</sup>

Meanwhile, for  $c_1$  we assume there is no immediate and automatic link between changes in government spending with changes in economic activity. It will take months for the government to prepare revised budget projection and for approval by the Parliament. Therefore, we assume  $c_1 = 0$ .

We also assume tax does not respond to unanticipated changes in government spending, i.e.,  $b_2=0$ . In other words, we assume that spending comes first in the Indonesian budget process while changes in tax policy would require separate proposal and discussion with the Parliament.

Finally, using  $b_1$  and assumptions  $b_2 = c_1 = 0$ , we construct  $r_{Tt} = u_{Tt} - b_1 Y_t$  and  $r_{Gt} = u_{Gt}$ , that are series of residuals that are free from movement in real GDP. We then use

<sup>&</sup>lt;sup>13</sup> Blanchard and Perotti construct the elasticity using information on tax base. Unfortunately this information is hard to come by. However, our result is similar to what the elasticity they got using US quarterly data which was 2.08.

those series to estimate  $a_1$  and  $a_2$  using two-stage least squares using those series as instruments.

To investigate the relationships among those variables more thoroughly, we ran a VAR as specified in (1) and (2) over quarterly data from 2<sup>nd</sup> quarter of 1995 until 4<sup>th</sup> quarter of 2009. We express all variables in real term by deflating them with GDP-deflator.<sup>14</sup> We also control for deterministic trend, dummy variable for decentralization since 2000, and dummy variable for fiscal stimulus in the 2<sup>nd</sup> and 3<sup>rd</sup> quarter of 2008. We also include a dummy variable to mark the change in government budget format and the start of decentralization period in 2000.

The path of impact multiplier over time for output is given by the following graphs of impulse responses.



Figure 11.a. and 11.b: Impact Multiplier due to 1 Standard Deviation of Unanticipated Shocks in Government Spending and Negative Tax Revenue to Real GDP

Source: authors' estimates

The result on the left interestingly suggests that unanticipated shocks in central government spending has little, or in fact, negative effect on real GDP. Both figures above suggest that impact multiplier for unanticipated tax shocks to real GDP are higher than that of unanticipated shocks in government spending. We find that one standard

<sup>&</sup>lt;sup>14</sup> We ran the quarterly data using X11 procedure for seasonal adjustment.

deviation of negative unanticipated shocks on tax revenue demonstrates stronger positive impact on real GDP of 0.1% in one quarter or 0.56% in four quarters. This result differ slightly than that of the World Bank (2010) which found a considerable positive impact of growth in central government spending on growth of Indonesian real GDP. Our results are more similar to recent findings on impact of fiscal policy in East Asian countries using structural VAR but with additional identification for the business cycle and monetary policy (Jha *et al.*, 2010).

We then use an alternative definition of central government spending which reflects more discretionary policy decisions rather than commitments. We excluded salaries, subsidies, and interest payment for domestic government bonds to dampen the impact of spending that had been pre-committed. The result from using this measure as central government spending in VAR suggest that one standard deviation in unanticipated discretionary spending by central government have 0.016% and 0.07% impact on real GDP in one quarter and four quarters, respectively.<sup>15</sup> This result might be attributed to capital and social spending which are less pre-committed. As seen above, the multiplier of an unanticipated discretionary spending on real GDP reaches its peak at the 5th quarters.

One possible explanation for the lack of impact of central government spending on Indonesian GDP is that subsidies have been more pro-cyclical to economic activity. Subsidies contributed to 29 percent of central government spending. About 80.5 of subsidy spending have been for energy through payments for the state electricity company (PLN) and state oil company (PT Pertamina). The central government disbursed subsidy payments those SOEs after they settle their expenses.

Secondly, the rigidity of subsidy commitment can, sometimes, put pressure on the government budget. Subsidies considered tied to political commitments made by central government to the Parliament. In some episodes of high global commodity prices, subsidy bills increased sharply and raised questions on the capacity of government budget to keep the subsidy while increasing social spending. This situation can often turn into episodes of macroeconomic uncertainties that increased borrowing costs.

<sup>&</sup>lt;sup>15</sup> Using disbursement of discretionary spending by central government, our estimate on the impact of central government spending on GDP is similar to that found by the World Bank (2010).

Thirdly, even disbursement of discretionary spending is marred with delays, backloading, and complicated procurement for government agencies to purchase goods and services.

Meanwhile, changes in tax code or tax policies can be internalized relatively more efficient by individuals and private companies. We believe that this is quite plausible given the fact that Indonesia introduced a permanent tax cut in 2009, which can reduce forward-looking adjustment by corporation and households given the current strong position of Indonesian government budget.

In sum, using quarterly data of realized spending and revenues by Indonesian central government, our exercise suggests that fiscal stimulus in the form of tax cut would have had a larger impact on Indonesian economy during the global financial crisis. We also find that an increase in government spending has less of an impact on economic activity. Delays in disbursements on central government spending could reduce the effectiveness of policy decision. We also thought that government spending might not necessarily drive up the economy as long as the government considers increase in subsidy as part of the spending package. Instead, we find that increase in discretionary spending, such as capital expenditure and social spending can have a desirable impact on economic activities in the subsequent periods

#### 5.2. If not Fiscal Stimulus, What else?

As previously mentioned, the role of private consumption is very important in supporting Indonesian economy during the GFC. This leads us to ask why did private consumption remain strong during the global financial crisis?

To understand more about what could potentially support the resilience in private consumption, Basri and Rahardja (2010) examine the co-movement between private consumption and other components of GDP. They found out that the relatively strong growth in consumption during the crisis period was a lag effect from strong exports in the previous two to three quarters. The co-movement between private consumption and government consumption is somewhat expected. As a response to the global economic downturn, Indonesia implemented a fiscal stimulus targeted at increasing infrastructure spending. However, as we discussed earlier the fiscal stimulus had a rather poor

disbursement record, therefore one could argue that it was less effective than it should have been in stimulating the economy as we discussed earlier. This lead us into a question of if not fiscal stimulus what else boosted the private consumption during the GFC?

Table 2 reports the correlation coefficients of innovations in private consumption with innovations in exports, government consumption, and gross fixed capital formation. Innovations from each of these variables are generated by taking the residuals of univariate ARIMA process. The interpretation of those correlations is simple. For example, a positive correlation between innovations in private consumption and innovations in government consumption indicates that unexpected movements in private consumption are associated with unexpected movements in government consumption.

Lags	Components of GDP Government consumption	Gross fixed capital formation	Exports
0	0.12	0.06	0.24
-1	-0.16	-0.04	-0.27
-2	-0.22	-0.01	-0.41
-3	0.26	-0.07	0.29
-4	0.20	-0.13	0.49

Table 2. Co-movements between Innovations in Private Consumption withInnovations of GDP Components <sup>a</sup>

Adopted from: Basri and Rahardja (2010)

<sup>a</sup> Co-movements between innovations of each component derived from original data that spans from 2000-I to 2008-IV. Here growth is expressed as annual (year-to-year) growth

This results suggest that it is likely that commodity exports played an important role in driving consumption. The effect of the commodity boom on economic activities is to be explained as follows. Economic activities outside Java increased as a result of the commodity boom that occurred several years before. This was reflected by the relatively high credit growth outside Java over the past several years (Figure 12).

Figure 12. Commodity Boom Outside Java



Source: Bank Indonesia

The growth of third party funds in commodity producing regions also slowly increased. This data strengthens the argument that the economy outside Java improved as a result of the commodity boom, and during the crisis period, residents outside Java were capable of making use of their accumulated savings to fund consumption during the global financial crisis. In addition, we also think that service exports played an important role because surprisingly strong exports in tourism, creative design, and workers' remittances are likely to have a direct link to private consumption.

#### 5.3. Fiscal Position after the GFC

What was the fiscal position after the GFC? In 2010, as the GFC started to wane, the proportion of the fiscal stimulus was mostly unchanged. The components of the fiscal stimulus like the reduction in corporate tax rates, personal income taxes and broader income tax-free bands are permanent rather than temporary. In addition, the stimulus in the form of the reduction in the price of diesel oil and electricity billing for industrial users can also be seen as 'quasi-permanent'.

Keeping in mind the high infrastructure requirements, the Indonesian government also continued to increase expenditure on infrastructure. In other words, the fiscal stimulus pattern has not undergone much change post-GFC. So, the Indonesian fiscal stimulus formed a new expenditure pattern or new 'normal'. Thus, in the case of Indonesia, it is difficult to discern a practical exit strategy from the fiscal stimulus. The important question is, thus, if the fiscal policy formed a new normal pattern, will fiscal sustainability be upset and will Indonesia have a permanent deficit? We don't believe that this will occur as thus far Indonesia – with a relatively low debt/GDP ratio – is actually underleveraged and the fiscal stimulus was relatively small, and thus does not endanger fiscal sustainability as a whole. It is true that since the GFC there are signs that the primary balance has become negative, because of this the government is planning to return the primary balance to positive by increasing tax revenue.

It is interesting to examine the budget deficit post-GFC in 2010. In 2010, Indonesia's budget deficit decreased to 0.6% lower than the government's target. Yet we can see that this is not only due to the exit strategy, but more to the inability of the government to absorb the budget or spend money. Under these conditions, the issue confronting Indonesia in the future will not be fiscal sustainability, but rather how to increase and improve the quality of government spending. We further believe that there is room to increase the deficit even further and that this is necessary to push the Indonesian economy to grow faster. This will be discussed further in Section VI.

#### 6. Agenda for Further Reform in Fiscal Policy

As previously discussed, the primary challenge in Indonesian fiscal policy is how to increase and improve the amount and quality of government spending. There are several obstacles to this.

First, improving transparency and managing fiscal risk. Improvements in government budget administration, including improvements in governance (by eliminating off-balance sheet financing) and adopting fiscal risk and contingent liabilities. Good budget planning is the key to improving the quality of spending. The government has already implemented a performance based budgeting program, in which budgeting is based on targets in each government institution based on clear priorities, rationale and evaluation of potential results of these programs. But in practice, designing a performance based budgeting system is not easy and requires time to

implement. Improvements in administration will eventually help expedite government spending.

Aside from administrative issues, off-balance sheet financing also must be minimized. In the past, the military budget has been the most sensitive area for this, particularly during the Soeharto-era. Progress has been made as more and more off-balance sheet items enter the budget. This is also not an easy process and will require long-term efforts as it is a politically sensitive area.

Other progress is evident in the adoption of fiscal risk and contingent liabilities in the design of the government budget over the last several years. With global uncertainty, the government must also pay heed to fiscal risk. In the last several years the Indonesian government has begun to adopt fiscal risk analysis in the government budget. The macroeconomic variables used in the government's budget design are economic growth, inflation, interest rates, currency exchange rates, Indonesia Crude Oil Price/ICP, and oil lifting. These indicators form the basic assumptions used as a reference to calculate income, spending and financing in the National Budget (*Anggaran Pendapatan dan Belanja Negara* or APBN). When these variables differ from their assumptions, income, spending and financing in the APBN are also adjusted. This means that variations or uncertainty in macroeconomic indicators are risk factors which influence the APBN.

As an example, the MoF (2010) stated that in fiscal year 2010, if economic growth was only 1 percent lower than the assumed figure, the deficit in the 2010 Estimated National Budget (RAPBN) would grow by Rp 4.1 to Rp 4.5 trillion. Further, depreciation in the rupiah's exchange rate against the US dollar would impact income, spending and financing in the budget. In fiscal year 2010, if the rupiah depreciated against the US dollar by an annual average of Rp 100 from the assumed rate, then an additional Rp 0.38 to Rp 0.42 trillion would be added to the deficit in the 2010 proposed APBN (RAPBN). Meanwhile, an increase in the 3-month SBI interest rate would raise the interest on financing domestic debt. In fiscal year 2010, if the 3-month SBI interest rate increased by more than 0.25% from the assumption, then an additional Rp 0.3 to Rp 0.5 trillion would be added to the 2010 RAPBN deficit.

The most important factor to examine in fiscal risk is the Indonesian Crude Oil Price (ICP). In fiscal year 2010, if the average ICP was USD1 higher per barrel than the

assumed rate, the 2010 RAPBN deficit would grow by Rp 0.1 trillion. In addition to this, a decrease in domestic oil lifting would also influence the APBN in terms of government income and spending. In fiscal year 2010, if domestic oil lifting was 10.000 barrels per day lower than the assumed rates, an additional Rp 3.0 to Rp 3.34 trillion would be added to the 2010 RAPBN deficit. Another variable influencing the deficit is the volume of domestic fuel consumption (BBM). An increase in the domestic fuel consumption of 0.5 million kiloliters would increase the 2010 RAPBN deficit by Rp 1.33 to Rp 1.46 trillion.

Outside fiscal risk, another important concern is contingent liabilities. This is an extremely important area because, like it or not, the government that will run Indonesia for the next five years must endeavor to ensure fiscal sustainability in order to guarantee macroeconomic stability. Several surveys, such as that carried out by the LPEM (2006), have indicated that macroeconomic stability is the first prerequisite to entry of investment into Indonesia. If the government cannot guarantee macroeconomic stability because of the existence of large contingent liabilities, then there is the threat that macroeconomic improvements will not continue. Eventually, this could lead to the collapse of the state's finances. In addition, problems regarding fiscal sustainability would result in an increase in Indonesia's country risk rating. This in turn could lead to an increase in the difference between domestic and international interest rates. Any rise in the country risk rating would further delay the entry of foreign investment into Indonesia, at the very time when investment is very much needed for economic recovery.

Second, the handling of principal-agent problems between the central and local governments. Decentralization has given rise to incompatibility between centralized government policy and local governments. This makes centralized government policy, including central government expenditure, less effective. We argue that the main problem is a lack of an appropriate incentive and disincentive mechanism in the new democratic era. Basri and Hill (forthcoming) argue that there is a principal-agent problem in which the agent (local government) does not obey the principal (central government) because the central government is now directly elected by their own constituencies. As a result, the central government is less able to enforce reward and penalty mechanisms on local governments. This is a big challenge which needs to be

resolved. Although sufficient funding is transferred from the central government to local governments, this does not ensure that development tied to infrastructure or poverty alleviation improves on the local level. The central government can no longer control the regions, and whatever occurs in the regions falls under local capture. Without a clear reward and penalty scheme, government policy tied to infrastructure, poverty alleviation and improving the investment climate cannot function. Because of this, it is necessary to formulate a reward and penalty mechanism to handle the principal-agent issue and ensure effective fiscal coordination between central and regional governments. We suggest that the central government increase the proportion of Special Allocation Funds (DAK), which are transfers from the central government to regional governments for projects funded by the central government. The larger the portion of DAK in regional transfers, the better able the central government to synchronize policy with regional governments. If the proportion of DAK is increased, then DAK can be used as a reward and penalty instrument, in which if regional governments implement poverty alleviation programs or build infrastructure, DAK allocation can be raised. But if the regional government does not administer these programs, the central government will reduce their portion of DAK. This will create a clear incentive and disincentive system, ensuring that fiscal policy adopted by the central government is consistent with regional implementation.

Third, maintain efforts to deal with corruption and effectiveness in applying the budget. As previously discussed, one factor which hinders and slows government expenditure is concern over the anti-corruption program. Efforts to fight corruption have also impacted the speed and ability for government institutions to spend money. Efforts aimed at improving good governance are full of good intention, namely to reduce the probability of misuse of power, but on the other hand, this also causes delays in the budget process, due to strict procedures and oversight. In addition to this, during the transition period, government officials are not yet accustomed to new rules and there exist multiple interpretations of existing rules, and thus many government institutions are not bold enough to act or spend their budgets out of fear that their actions will later fall under corruption. In several cases, government officials have chosen not to pass the tests to obtain tender certification. By not passing these tests, they are unable to be employed in the tender process for government procurement, and thus avoid any risk of

being tainted by corruption. We believe that the application of these anti-corruption regulations will have an impact similar to a J-curve, in which in the short-term the government's ability to spend will decrease, but in the long term the ability of government officials to spend the budget in line with good governance procedures will improve, and thus the portion of the budget lost to corruption will decrease. But this will require a relatively long time.

Fourth, improvement in fiscal space and quality of spending. Indonesian fiscal space is relatively limited. As discussed in Section II, only a small portion of the government budget is discretionary. For example, since 2005 85% of the government budget has been allocated to mandatory spending on specific sectors like education (20% of the budget, *etc*). The implication of this is that 91% of domestic revenue is allocated to fixed sectors, and thus only 9% of domestic revenue in the government budget can be used flexibly. Given this, it is difficult for the government to maneuver in terms of its fiscal policy. Because of this, we recommend that the government must create more fiscal space by relocating items in the government budget to productive sectors. For example by reducing the fuel subsidy and allocating this to health care, education and poverty reduction. In 2008 Indonesia decreased the fuel subsidy by raising fuel prices. This policy saved the government Rp 32.8 trillion which was then allocated to:

- ✓ Rice for the poor and food security: Rp 4.4 trillion
- ✓ Direct Cash Transfer: Rp 13.7 trillion
- ✓ Reduction in government budget deficit: Rp 11.7 trillion
- ✓ Cushion for fiscal risk: Rp 3 trillion
- ✓ In addition, the government also enacted the National Program for People's Empowerment (*Program Nasional Pemberdayaan Masyarakat*) specifically aimed at empowering poor communities susceptible to economic shock and expanding programs for women, impoverished farmers and fishermen, the disabled, sufferers of chronic disease, victims of natural disasters and social conflicts, and so forth.

In the future, we recommend that the current subsidy of goods must be reallocated as direct subsidies to people. This means that the fuel subsidy must be removed in the mid to long term and that these funds should be allocated to reducing poverty and improving public health. In addition, budget allocation must be made more flexible by reducing compulsory budget items. By making these policy changes, the government will have more fiscal space in which to maneuver and improve the quality of its spending.

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## Appendix A

(1) Data definition and sources

We use CEIC database for GDP and GDP deflator, while using data obtained from the Ministry of Finance for the quarterly budget realization. We define the fiscal variables as follows

• <u>Central government spending</u> = total spending by central government – interest rate of government debt – transfers to the region (a)

An equal expression of the above identity is: salary + purchases of goods and services + capital spending + subsidies

We also construct an <u>alternative</u> measure of government spending which is given by (a) – salary – subsidies

• <u>Tax revenue of the central government</u> = total tax revenue – interest rate of domestic government debt – profits received from SOEs

### **Results from identification strategy**

We run an OLS of log of tax revenue of the central government against log of real GDP to estimate  $b_1$  in system of equations given by (2)

Dependent Variable: LOG(TXSA/GDPDEFSA\*100) Method: Least Squares Sample (adjusted): 1995Q2 2010Q2 Included observations: 61 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
C LOG(GDPSA)	-17.42003 2.161146	7.420032.163323.1611460.167502		0.0000 0.0000
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.738321 0.733885 0.223077 2.936041 5.976009 166.4668 0.000000	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat		10.48917 0.432435 -0.130361 -0.061152 -0.103237 0.686795

As explained previously, we ran a two-stage least squares of contemporaneous movement of real GDP on contemporaneous shocks of tax revenue and government spending with  $r_{Tt} = u_{Tt} - b_1 Y_t$  and  $r_{Gt} = u_{Gt}$  as instruments.

Dependent Variable: RY Method: Two-Stage Least Squares Sample (adjusted): 1995Q4 2010Q2 Included observations: 59 after adjustments Instrument list: CRT\_RGE

	Coefficient	Std. Error	t-Statistic	Prob.
RT	-0.131949	0.030526	-4.322468	0.0001
RGE	-0.003765	0.013935	-0.270182	0.7880
R-squared	-0.010771	Mean dependent var		0.000492
Adjusted R-squared	-0.028504	S.D. dependent var		0.017222
S.E. of regression	0.017465	Sum squared resid		0.017387
Durbin-Watson stat	1.950627	Second-Stage SSR		0.010530

The results of estimating VAR using the first definition of central government spending is as follows:

Vector Autoregression Estimates Sample (adjusted): 1996Q2 2010Q2 Included observations: 57 after adjustments Standard errors in ( ) & t-statistics in [ ]

	LY	LTX	LGE
LY(-1)	1.362976	-0.216218	-3.212787
	(0.15866)	(0.78789)	(1.58383)
	[ 8.59074]	[-0.27443]	[-2.02850]
LY(-2)	-0.422463	-1.158034	3.415373
	(0.25824)	(1.28244)	(2.57798)
	[-1.63591]	[-0.90299]	[ 1.32482]
LY(-3)	-0.028217	1.302386	-1.709662
	(0.16114)	(0.80024)	(1.60866)
	[-0.17510]	[ 1.62749]	[-1.06279]
LTX(-1)	0.005559	-0 272755	-0 117695
	(0.03012)	(0.14957)	(0.30067)
	[ 0.18458]	[-1.82360]	[-0.39145]
$\mathbf{I} \mathbf{T} \mathbf{V}(2)$	0.014627	0.200074	0 404282
$L1\Lambda(-2)$	-0.014037	(0.14141)	0.404363
	[-0.51402]	[ 1.41489]	[ 1.42260]

	LY	LTX	LGE
LTX(-3)	0.009070	0.221455	0.632275
	(0.02735)	(0.13584)	(0.27307)
	[ 0.33156]	[ 1.63024]	[ 2.31541]
LGE(-1)	-0.026787	-0.117414	-0.374923
	(0.01259)	(0.06253)	(0.12570)
	[-2.12726]	[-1.87765]	[-2.98259]
LGE(-2)	0.015273	-0.152914	-0.145614
	(0.01442)	(0.07162)	(0.14398)
	[ 1.05895]	[-2.13502]	[-1.01138]
	[ 1.02070]	[	[
LGE(-3)	-0.002877	-0.131336	0.026910
	(0.01476)	(0.07328)	(0.14730)
	[-0.19497]	[-1.79232]	[ 0.18269]
С	1.235243	13.15184	24.56842
	(0.96742)	(4.80422)	(9.65752)
	[ 1.27684]	[ 2.73756]	[ 2.54397]
Т	0.001470	0.035217	0.034298
	(0.00167)	(0.00829)	(0.01666)
	[ 0.88099]	[ 4.24911]	[ 2.05859]
FS	0.001711	-0.271482	-0.089476
	(0.01683)	(0.08360)	(0.16805)
	[ 0.10166]	[-3.24751]	[-0.53244]
<b>FS</b> (-4)	0.002549	-0.310652	-0.031041
15(-4)	(0.02117)	(0.10514)	(0.21135)
	[ 0.12039]	[-2.95471]	[-0.14687]
DS	-0.003028	-0.168692	-0.395226
	(0.01684)	(0.08363)	(0.16812)
	[-0.17980]	[-2.01707]	[-2.35087]
D00	0.005484	0.279924	0.653219
	(0.01339)	(0.06650)	(0.13368)
	[ 0.40953]	[ 4.20927]	[ 4.88633]
R-squared	0 002240	0.051802	0 876785
Adi R-squared	0.992240	0.931002	0.020203
Sum sa, resids	0.016794	0.414151	1.673569
S.E. equation	0.019996	0.099301	0.199617
F-statistic	383.6120	59.24341	14.26964
Log likelihood	150.8201	59.47095	19.67114
Akaike AIC	-4.765616	-1.560384	-0.163900
Schwarz SC	-4.227971	-1.022739	0.373745
Mean dependent	12.82265	10.54330	10.53916

S.D. dependent	0.196587	0.391716	0.414772
Determinant resid covariance	(dof adj.)	1.26E-07	
Determinant resid covariance	-	5.03E-08	
Log likelihood		236.2962	
Akaike information criterion		-6.712147	
Schwarz criterion		-5.099212	

Meanwhile the results of estimating VAR using the alternative definition of central government spending is as the following

	LY	LTX	LGE
LY(-1)	1.311105	0.537707	-2.591261
	(0.16475)	(0.81963)	(2.53891)
	[ 7.95825]	[ 0.65604]	[-1.02062]
LY(-2)	-0.327436	-1.786214	4.525333
	(0.26859)	(1.33624)	(4.13919)
	[-1.21910]	[-1.33674]	[ 1.09329]
LY(-3)	-0.066195	1.731043	-1.733363
	(0.17057)	(0.84861)	(2.62868)
	[-0.38807]	[ 2.03986]	[-0.65940]
LTX(-1)	-0.012901	-0.222276	-1.229517
	(0.03216)	(0.15998)	(0.49556)
	[-0.40120]	[-1.38940]	[-2.48107]
LTX(-2)	-0.018235	0.010877	-0.270755
	(0.02883)	(0.14343)	(0.44429)
	[-0.63250]	[ 0.07583]	[-0.60941]
LTX(-3)	-0.005680	0.151880	0.969400
	(0.02721)	(0.13536)	(0.41928)
	[-0.20877]	[ 1.12207]	[ 2.31204]
LGE(-1)	-0.011019	-0.058976	0.163515
	(0.00922)	(0.04589)	(0.14216)
	[-1.19449]	[-1.28503]	[ 1.15019]
LGE(-2)	0.012821	0.019975	-0.045183
	(0.01040)	(0.05175)	(0.16030)
	[ 1.23261]	[ 0.38599]	[-0.28186]

Vector Autoregression Estimates Sample (adjusted): 1996O2 2010O2

$\begin{array}{c c c c c c c c c c c c c c c c c c c $		LY	LTX	LGE
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	LGE(-3)	0.006107	-0.084017	-0.237408
$ \begin{bmatrix} 0.64080 \\ [-1.77188 \\ [-1.61633 ] \\ [-1.61633 ] \\ C \\ 1.314809 \\ [-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.93642 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9524 \\ (-0.9251 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.92516 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.9245 \\ (-0.924 \\ (-0.9245 \\ (-0.9245 \\ (-0.924 \\ (-0.924 \\ (-0.9245 \\ (-0.924 $		(0.00953)	(0.04742)	(0.14688)
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		[ 0.64080]	[-1.77188]	[-1.61633]
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	С	1.314809	5.459639	13.06356
$ \begin{bmatrix} 1.40408 \end{bmatrix} \begin{bmatrix} 1.17192 \end{bmatrix} \begin{bmatrix} 0.90524 \end{bmatrix} \\ 0.00175 \end{bmatrix} \\ \begin{bmatrix} 0.00872 \end{bmatrix} \\ \begin{bmatrix} 0.00872 \end{bmatrix} \\ \begin{bmatrix} 0.02702 \end{bmatrix} \\ \begin{bmatrix} 1.08340 \end{bmatrix} \begin{bmatrix} 3.20398 \end{bmatrix} \\ \begin{bmatrix} 1.64593 \end{bmatrix} \end{bmatrix} \\ FS \\ -0.003260 \\ -0.323579 \\ \begin{bmatrix} -0.236182 \\ (0.01657) \\ (0.08241) \\ (0.25529) \\ \begin{bmatrix} -0.19677 \end{bmatrix} \\ \begin{bmatrix} -3.92626 \end{bmatrix} \\ \begin{bmatrix} -0.92516 \end{bmatrix} \\ FS(-4) \\ -0.007251 \\ \begin{bmatrix} -0.314210 \\ -0.314210 \\ 0.34018 \end{bmatrix} \\ \begin{bmatrix} -0.32848 \end{bmatrix} \\ \begin{bmatrix} -2.86114 \end{bmatrix} \\ \begin{bmatrix} -0.92435 \end{bmatrix} \\ 0.24018 \end{bmatrix} \\ \begin{bmatrix} -0.2207 \\ (0.09066) \\ (0.28083) \\ \begin{bmatrix} -0.15796 \end{bmatrix} \\ \begin{bmatrix} -1.93583 \end{bmatrix} \\ \begin{bmatrix} -2.60992 \end{bmatrix} \\ D00 \\ -0.001646 \\ (0.01822) \\ (0.09066) \\ (0.28083) \\ \begin{bmatrix} -1.93583 \end{bmatrix} \\ \begin{bmatrix} -2.60992 \end{bmatrix} \\ D00 \\ -0.001646 \\ (0.01530) \\ (0.01530) \\ (0.07609) \\ (0.23571) \\ \begin{bmatrix} -0.10764 \end{bmatrix} \\ \begin{bmatrix} 3.41486 \end{bmatrix} \\ \begin{bmatrix} 3.46572 \end{bmatrix} \\ \\ SLe quared \\ 0.988777 \\ 0.930036 \\ 0.473247 \\ \\ Sum sq. resids \\ 0.018217 \\ 0.450886 \\ 4.326398 \\ \\ S.E. equation \\ 0.020826 \\ 0.103612 \\ 0.320951 \\ \\ \\ F-statistic \\ 353.4068 \\ 54.17223 \\ 4.593686 \\ \\ Log likelihood \\ 148.5016 \\ 57.04889 \\ -7.397495 \\ \\ Akaike AIC \\ -4.684268 \\ -1.475400 \\ 0.785877 \\ \\ Schwarz SC \\ -4.146623 \\ -0.93775 \\ 1.323522 \\ \\ Mean dependent \\ 12.82265 \\ 10.54330 \\ 9.746478 \\ \\ S.D. dependent \\ 2.82265 \\ 10.54330 \\ 9.746478 \\ \\ S.D. dependent \\ 12.82265 \\ 10.5430 \\ 9.746478 \\ \\ S.D. dependent \\ Covariance \\ 1.57E-07 \\ \\ Log likelihood \\ 203.9470 \\ \\ Akaike information criterion \\ -5.577088 \\ \\ Schwarz criterion \\ -3.964152 \\ \end{bmatrix}$		(0.93642)	(4.65872)	(14.4310)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		[ 1.40408]	[ 1.17192]	[ 0.90524]
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Т	0.001899	0.027946	0.044470
$\begin{bmatrix} 1.08340 \end{bmatrix} \begin{bmatrix} 3.20398 \end{bmatrix} \begin{bmatrix} 1.64593 \end{bmatrix}$ FS -0.003260 -0.323579 -0.236182 (0.01657) (0.08241) (0.25529) [-0.19677] [-3.92626] [-0.92516] FS(-4) -0.007251 -0.314210 -0.314447 (0.02207) (0.10982) (0.34018) [-0.32848] [-2.86114] [-0.92435] DS -0.002878 -0.175499 -0.732934 (0.01822) (0.09066) (0.28083) [-0.15796] [-1.93583] [-2.60992] D00 -0.001646 0.259849 0.816905 (0.01530) (0.07609) (0.23571) [-0.10764] [3.41486] [3.46572] R-squared 0.991583 0.947527 0.604935 Adj. R-squared 0.991583 0.947527 0.604935 Adj. R-squared 0.991583 0.947527 0.604935 Adj. R-squared 0.988777 0.930036 0.473247 Sum sq. resids 0.018217 0.450886 4.326398 S.E. equation 0.020826 0.103612 0.320951 F-statistic 353.4068 54.17223 4.593686 Log likelihood 148.5016 57.04889 -7.397495 Akaike AIC -4.684268 -1.475400 0.785877 Schwarz SC -4.146623 -0.937755 1.323522 Mean dependent 12.82265 10.54330 9.746478 S.D. dependent 12.82265 10.54330 9.746478 S.D. dependent 12.82265 10.54330 9.746478 S.D. dependent 12.82265 10.54330 9.746478 S.D. dependent 0.196587 0.391716 0.442216 Determinant resid covariance (dof adj.) 3.91E-07 Determinant resid covariance (dof adj.) 3.91E-07 Determinant resid covariance (dof adj.) 3.91E-07 Determinant resid covariance 1.57E-07 Log likelihood 203.9470 Akaike information criterion -5.577088 Schwarz criterion -5.577088		(0.00175)	(0.00872)	(0.02702)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		[ 1.08340]	[ 3.20398]	[ 1.64593]
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FS	-0.003260	-0 323579	-0.236182
$\begin{bmatrix} (0.010517) & (0.02117) & (0.02217) \\ [-0.19677] & [-3.92626] & [-0.92516] \\ \hline FS(-4) & -0.007251 & -0.314210 & -0.314447 \\ (0.02207) & (0.10982) & (0.34018) \\ [-0.32848] & [-2.86114] & [-0.92435] \\ \hline DS & -0.002878 & -0.175499 & -0.732934 \\ (0.01822) & (0.09066) & (0.28083) \\ [-0.15796] & [-1.93583] & [-2.60992] \\ \hline D00 & -0.001646 & 0.259849 & 0.816905 \\ (0.01530) & (0.07609) & (0.23571) \\ [-0.10764] & [3.41486] & [3.46572] \\ \hline R-squared & 0.991583 & 0.947527 & 0.604935 \\ Adj. R-squared & 0.988777 & 0.930036 & 0.473247 \\ Sum sq. resids & 0.018217 & 0.450886 & 4.326398 \\ S.E. equation & 0.020826 & 0.103612 & 0.320951 \\ F-statistic & 353.4068 & 54.17223 & 4.593686 \\ Log likelihood & 148.5016 & 57.04889 & -7.397495 \\ Akaike AIC & -4.684268 & -1.475400 & 0.785877 \\ Schwarz SC & -4.146623 & -0.937755 & 1.323522 \\ Mean dependent & 12.82265 & 10.54330 & 9.746478 \\ S.D. dependent & 0.196587 & 0.391716 & 0.442216 \\ \hline Determinant resid covariance (dof adj.) & 3.91E-07 \\ Determinant resid covariance (dof adj.) & 3.91E-07 \\ Log likelihood & 203.9470 \\ Akaike information criterion & -5.577088 \\ Schwarz criterion & -3.964152 \\ \hline$	15	(0.01657)	(0.08241)	(0.25529)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		[-0.19677]	[-3.92626]	[-0.92516]
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		[	[ • • • • • • • • • ]	[
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	FS(-4)	-0.007251	-0.314210	-0.314447
$\begin{bmatrix} -0.32848 \end{bmatrix} \begin{bmatrix} -2.86114 \end{bmatrix} \begin{bmatrix} -0.92435 \end{bmatrix}$ $DS \qquad -0.002878 \qquad -0.175499 \qquad -0.732934$ $(0.01822) \qquad (0.09066) \qquad (0.28083)$ $\begin{bmatrix} -0.15796 \end{bmatrix} \begin{bmatrix} -1.93583 \end{bmatrix} \begin{bmatrix} -2.60992 \end{bmatrix}$ $D00 \qquad -0.001646 \qquad 0.259849 \qquad 0.816905$ $(0.01530) \qquad (0.07609) \qquad (0.23571)$ $\begin{bmatrix} -0.10764 \end{bmatrix} \begin{bmatrix} 3.41486 \end{bmatrix} \begin{bmatrix} 3.46572 \end{bmatrix}$ $R-squared \qquad 0.991583 \qquad 0.947527 \qquad 0.604935$ $Adj. R-squared \qquad 0.991583 \qquad 0.947527 \qquad 0.604935$ $Adj. R-squared \qquad 0.988777 \qquad 0.930036 \qquad 0.473247$ $Sum sq. resids \qquad 0.018217 \qquad 0.450886 \qquad 4.326398$ $S.E. equation \qquad 0.020826 \qquad 0.103612 \qquad 0.320951$ $F-statistic \qquad 353.4068 \qquad 54.17223 \qquad 4.593686$ $Log likelihood \qquad 148.5016 \qquad 57.04889 \qquad -7.397495$ $Akaike AIC \qquad -4.684268 \qquad -1.475400 \qquad 0.785877$ $Schwarz SC \qquad -4.146623 \qquad -0.937755 \qquad 1.323522$ $Mean dependent \qquad 12.82265 \qquad 10.54330 \qquad 9.746478$ $S.D. dependent \qquad 0.196587 \qquad 0.391716 \qquad 0.442216$ $Determinant resid covariance (dof adj.) \qquad 3.91E-07$ $Determinant r$		(0.02207)	(0.10982)	(0.34018)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		[-0.32848]	[-2.86114]	[-0.92435]
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	DS	-0.002878	-0 175499	-0 732934
$\begin{bmatrix} (0.01022) & (0.05000) & (0.25005) \\ [-0.15796] & [-1.93583] & [-2.60992] \\ D00 & -0.001646 & 0.259849 & 0.816905 \\ (0.01530) & (0.07609) & (0.23571) \\ [-0.10764] & [3.41486] & [3.46572] \\ \end{bmatrix}$ $\begin{bmatrix} R-squared & 0.991583 & 0.947527 & 0.604935 \\ Adj. R-squared & 0.988777 & 0.930036 & 0.473247 \\ Sum sq. resids & 0.018217 & 0.450886 & 4.326398 \\ S.E. equation & 0.020826 & 0.103612 & 0.320951 \\ F-statistic & 353.4068 & 54.17223 & 4.593686 \\ Log likelihood & 148.5016 & 57.04889 & -7.397495 \\ Akaike AIC & -4.684268 & -1.475400 & 0.785877 \\ Schwarz SC & -4.146623 & -0.937755 & 1.323522 \\ Mean dependent & 12.82265 & 10.54330 & 9.746478 \\ S.D. dependent & 0.196587 & 0.391716 & 0.442216 \\ \\\hline Determinant resid covariance (dof adj.) & 3.91E-07 \\ Determinant resid covariance (dof adj.) & 3.91E-07 \\ Log likelihood & 203.9470 \\ Akaike information criterion & -5.577088 \\ Schwarz criterion & -3.964152 \\ \end{bmatrix}$		(0.01822)	(0.09066)	(0.28083)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		[-0.15796]	[-1.93583]	[-2.60992]
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	Schwarz criterion		-3.964152	

	Share of Domestic Demand in GDP (%)		Real	l GDP Gi	rowth (%)	
	2000	2007	2000-07	2007	2008	2007-08
Bangladesh	105.1	104.1	-1.0	6.4	6.2	-0.2
Cambodia	108.8	104.6	-4.2	10.2	5.0	-5.2
China	97.6	91.1	-6.5	13.0	9.0	-4.0
India	100.1	102.7	2.6	9.1	6.1	-3.0
Indonesia	90.4	96.9	6.4	6.3	6.1	-0.2
Malaysia	80.8	79.7	-1.1	6.2	4.6	-1.5
Pakistan	101.2	107.2	5.9	5.7	2.0	-3.7
Philippines	103.9	94.5	-9.4	7.1	3.8	-3.2
Singapore	86.4	69.0	-17.4	7.8	1.2	-6.6
Thailand	90.3	92.5	2.2	4.9	2.6	-2.3
Turkey	103.0	105.2	2.2	4.7	1.1	-3.6
Vietnam	102.5	112.6	10.1	8.5	6.2	-2.3

# Appendix B: Change in Domestic Demand and Economic Growth

Source: EIU

# CHAPTER 6

# Assessment of the Impact of the Fiscal Stimulus, Fiscal Risk and Fiscal Transparency: The Philippines

#### **ROSARIO G. MANASAN**

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Like many countries around the world, the Philippine government put together a fiscal stimulus package in response to the economic slowdown in its major trading partners in 2009. Prior to this, the government expanded the rice price subsidy program and launched a number of programs meant to provide temporary relief to vulnerable sectors in response to the surge in the price of food and petroleum products in 2008. This study aims (i) to assess the size and composition of the fiscal stimulus applied in 2008-2009 and its effectiveness in increasing aggregate demand, (ii) to evaluate the country's exit strategy and (iii) to identify risks to fiscal sustainability.

While the evidence on the relative effectiveness of expenditure expansion versus tax cuts is mixed, the overall effectiveness of the fiscal stimulus appears to be well supported by evidence. A number of fiscal risks associated with the fiscal stimulus package was noted by the paper. First, the Philippine experience validate concerns raised in the literature that tax cuts made in response to an economic slowdown tends to be permanent or are difficult to reverse. Second, while most of the spending programs included in the fiscal stimulus package are temporary in nature, the expansion of the conditional cash transfer program is not. Third, Third, even when the a country's fiscal position appears to be benign at the start of the crisis, countries with high debt-to-GDP ratio like the Philippines have very little elbow room to do countercyclical policy without running into fiscal sustainability concerns. Fourth, while the government's fiscal stance in 1998/1999 and 2009 is appropriately countercyclical, its fiscal stance was procyclical in about half the time in the period between 1991 and 2010. Given this perspective, there is a need to guard against procyclical policy as it tends to foster smaller than warranted fiscal balances and, consequently, higher levels of government debt over time. The lesson here is simple: fiscal prudence even during good times helps enhance the government's ability to do countercyclical fiscal policy when times are bad.

## 1. Introduction

The Philippines was buffeted by external shocks in 2008 and 2009. Inflation surged to 9.3% in 2008 from 2.9% in 2007 largely due to the rapid rise in the price of food and petroleum products (Figure 1). Food prices dipped towards the end of the third quarter of 2008 (as indicated by the decline in the Consumer Price Index for food) but surged once again in January 2009. Thus, the increase in the price of food in the first quarter of 2009 is even higher than that in the first quarter of 2008 and continues to be high for most of the second quarter of 2009.



Figure 1. Quarterly (Q-o-Q) and Annual inflation, 2004-2010

On the other hand, the global financial and economic crisis that started with the implosion of the US housing market and the ensuing recession in key developed economies in the latter half of 2008 has had an adverse impact on the country's exports and remittances of overseas workers. In particular, Philippine exports (in constant prices) registered negative growth in the fourth quarter of 2008 and through all four quarters of 2009 (Figure 2). On the other hand, while the remittances of overseas workers continued to post positive growth in 2008 and 2009, its growth waned from 13.2% and 13.7%, respectively, in 2007 and 2008 to 5.6% in 2009. In line with these

developments, the growth of GDP in constant prices decelerated from a high of 7.1% in 2007 to 3.7% in 2008 and 1.1% in 2009 while the growth of GNP slowed down from 7.5% in 2007 to 6.4% in 2008 and 4.0% in 2009 (Table 1).



Figure 2. Quarterly (Q-o-Q) Annual Growth Rates of GDP and Exports, 2004-2010

On the other hand, unemployment rose from a low of 7.3% on the average in 2007 to 7.4% in 2008 and 7.5% in 2009 (Table 2). Also, while the underemployment rate dipped from 20.1% in 2007 to 19.3% in 2008 and 19.1% in 2009, the share of the visibly underemployed (i.e., those who worked less 40 hours a week) to the total number employed is higher in all rounds of the Labor Force Survey (LFS) conducted in 2008 and 2009 relative to those conducted in 2007.
	Remittances	Growth rate (%)
2003	7,578	
2004	8,550	12.8
2005	10,689	25.0
2006	12,761	19.4
2007	14,450	13.2
Q1	3,490	24.0
Q2	3,544	12.7
Q3	3,443	9.2
Q4	3,972	8.9
2008	16,427	13.7
Q1	3,950	13.2
Q2	4,291	21.1
Q3	4,032	17.1
Q4	4,154	4.6
2009	17,348	5.6
Q1	4,057	2.7
Q2	4,423	3.1
Q3	4,310	6.9
Q4	4,558	9.7
2010		
Q1	4,339	7.0
Q2	4,723	6.8
Q3	4,720	9.5

Table 1. Overseas Filipinos' Remittances (in million US dollar)

# Table 2. Unemployment and Underemployment Rate, 2005-2010

	Jan	April	July	Oct	Average
Unemployment					
2005	7.3	8.3	7.7	7.4	7.7
2006	8.1	8.2	8.0	7.3	7.9
2007	7.8	7.4	7.8	6.3	7.3
2008	7.4	8.0	7.4	6.8	7.4
2009	7.7	7.5	7.6	7.1	7.5
2010	7.3	8.0	6.9	7.1	7.3
Underemploym	ent				
2005	16.1	26.1	20.5	21.2	21.0
2006	21.3	25.4	23.5	20.4	22.7
2007	21.5	18.9	22.0	18.1	20.1
2008	18.9	19.8	21.0	17.5	19.3
2009	18.2	18.9	19.8	19.4	19.1
2010	19.7	17.8	17.9	19.6	18.8
Underemploym	ent				
2005	64.5	54.3	61.4	58.9	59.7
2006	60.7	58.3	56.6	61.6	59.3
2007	57.7	58.26687	50.9	58.5	56.3
2008	61.2	57.5	55.8	61.8	59.1
2009	60.8	62.6	54.5	59.4	59.3
2010	57	58.7	58.1	55.5	57.3

Source: Labor Force Survey, National Statistics Office

In 2009, like many countries around the world, the Philippine government put together a fiscal stimulus package in response to the economic slowdown in its major trading partners. This study aims (i) to assess the size and composition of the fiscal stimulus applied in 2008-2009 and its effectiveness in increasing aggregate demand, (ii) to evaluate the country's exit strategy, (iii) to identify risks to fiscal sustainability, and (iv) to review fiscal transparency issues that may affect the overall assessment of the country's fiscal health.

## 2. Fiscal Performance before the Crisis

The country's overall fiscal performance registered significant gains in 2003-2007. Thus, the Philippine state of public finance at the onset of the global financial crisis was fairly good, thereby giving it some elbow room to conduct countercyclical fiscal policy.

The consolidated public sector position improved from 5.7% of GDP in 2002 to small surpluses in 2006-2007 (Figure 3). This turnaround was largely driven by the concominant improvement in national government fiscal position in 2002-2007. It was furthered reinforced by the favorable movement in the fiscal position of government-owned and controlled corporations in 2004-2007. In line with this, the outstanding debt of the consolidated public sector contracted from 117.6% of GDP in 2003 to 71.1% of GDP in 2008 (Figure 4). Thus, the state of public sector finances was fairly good at the onset of the global financial crisis, giving the government some elbow room to conduct countercyclical fiscal policy.



Figure 3. Consolidated Public Sector Surplus/ (Deficit), 2000-2009





## 2.1. Monitored Government-owned and Controlled Corporations (GOCCs)

Following the government corporate sector reform that was started in the mid-1980s, the fiscal deficit of the 14 GOCCs was less 1% of GDP for most of the 1990s. However, serious problems have re-emerged starting in the late 1990s. Thus, the combined fiscal deficit of the monitored GOCCs surged to 1.2% of GDP in 2002 from its level (0.7% of GDP) in the previous year. Subsequently, the combined fiscal deficit of these corporations increased some more to 1.5% of GDP in 2003 and 2.1% of GDP in 2004 (Table 3).

Of the monitored GOCCs, the most notable in terms of their contribution to the deficit in 2000-2005 are: the National Power Corporation (NPC), the National Food Authority (NFA), the Light Rail Transit Authority (LRTA), the Metropolitan Waterworks and Sewerage System (MWSS), the National Irrigation Administration (NIA) and the Home Guaranty Corporation (HGC). The NPC accounted for some 52% of the total GOCC deficit in 2000-2005 while the NFA and the LRTA accounted for 15% and 10%, respectively. On the other hand, the MWSS accounted for 6% of the combined GOCC deficit in 2001-2004 while the NIA accounted for 9% in 2002-2005 (Table 3).

	NPC,															
	TRANSCO	PNOC	MWSS	NIA	NDC	LRTA	LWUA	NEA	NHA	PNR	РРА	NFA	PEZA	HGC	TOTAL	% of GDP
	& PSALM															
2000	(3,421)	(7,822)	(72)	(122)	(1,708)	(2,342)	(60)	(575)	(1,054)	(304)	926	(1,898)	566	(1,274)	(19,161)	(0.6)
2001	(8,294)	(7,275)	(3,047)	82	(1,207)	(2,977)	(335)	(968)	(379)	(209)	2,196	(2,274)	(361)	(213)	(25,259)	(0.7)
2002	(21,656)	633	(2,630)	(2,059)	(1,078)	(5,770)	(1,006)	163	234	(176)	1,285	(8,086)	220	(6,161)	(46,085)	(1.2)
2003	(47,622)	584	(2,087)	(9,738)	290	(625)	(1,260)	(314)	(320)	(315)	383	(3,689)	357	(958)	(65,313)	(1.5)
2004	(86,556)	1,245	(2,544)	(3,294)	213	(1,730)	(1,736)	726	(211)	(480)	(93)	(8,112)	153	(1,495)	(103,914)	(2.1)
2005	(14,618)	3,822	4,463	(3,321)	(534)	(5,020)	(1,176)	1,199	14	(192)	147	(9,978)	(88)	(92)	(25,374)	(0.5)
2006	6,871	14,416	(1,447)	(4,247)	(219)	(1,915)	363	1,592	(902)	(185)	(331)	(16,430)	498	(21)	(1,955)	(0.0)
2007	55,973	15,365	1,635	(3,757)	877	(4,430)	475	1,320	1,442	(1,263)	(3,852)	(2,652)	75	(346)	60,860	0.9
2008	28,180	7,001	786	(3,263)	914	(1,748)	1,624	879	1,061	(122)	(1,153)	(61,277)	(17)	(24)	(27,159)	(0.4)
2009	60,266	4,755	(699)	(2)	70	(1,588)	(722)	(448)	(213)	(471)	1,954	(88,612)	477	(653)	(25,885)	(0.3)
2010	(10,331)	2,508	384	(5,353)	(165)	(1,429)	(570)	566	(1,417)	(820)	1,439	(43,541)	128	395	(58,206)	(0.7)

 Table 3. Financial Position of Monitored Government-owned and Controlled Corporations, 2000-2010 (in million pesos)

Note: NPC- National Power Corporation, Transco - National Grid Corporation, PSALM - Pxx, PNOC - Philippine National Oil Corporation, NIA - National Irrigation Administration, NDC - National Development Corporation, LRTA - Light Rail Transport Authority, LWUA - Local Water Utilities Administration, NEA - National Electrification Administration, NHA - National Housing Authority, PNR - Philippine National Railroads, PPA - Philippine Ports Authority, NFA - National Food Authority, PEZA - Philippine Export Processing Zone Authority, HGC - Housing Guaranty Corporation

Source: Department of Finance

The problems ailing these GOCCs are common to many of them. Although generally viewed as entities that are akin to private enterprises in the sense that they produce private goods (as opposed to pure public goods), government ownership has been justified on the basis of some market failure like the presence of natural monopolies (e.g., power generation and transmission). Also, many of the GOCCs are assigned special developmental roles like the provision of public infrastructure services that the private sector may be reluctant to supply given their large investment costs and the associated uncertain and long gestation periods.

At the same time, many of these GOCCs suffer from poor cost recovery due to inadequate tariff adjustments. Political interference in tariff setting, often in response to populist clamor, prevents them from increasing their prices in response to rising costs (e.g., NPC and LRTA). In the case of other GOCCs, government's subvention policy itself dictates that the prices they charge would be lower than what the cost recovery principle calls for (e.g., the NFA, NIA since the time of the Estrada administration; MWSS does not charge for raw water but finances development of water source). Meanwhile, the large fiscal deficits of still other GOCCs are linked with the contingent liabilities they have earlier contracted (e.g., NPC, LRTA, HGC). In addition, because of the poor incentive structure in the public sector, some of these GOCCs are afflicted with a poor record in collecting fees while others are overstaffed. By and large, many of them are saddled with a large debt stock which further aggravates their already weak fiscal positions.

However, the privatization of the NPC and the MWSS in 2005/2006 greatly improved the combined fiscal position of monitored GOCCs. Thus, monitored GOCCs as a group posted a surplus in 2007.

#### 2.2. National Government Fiscal Position

Following the Asian financial crisis of 1997/1998, the national government fiscal position deteriorated quite rapidly and continuously from a small surplus in 1997 to deficits of 1.9% of GDP in 1998, 4.0% in 2000 and 2001 and 5.4% in 2002 essentially because of a concomitant decline in the overall revenue effort of the national government (Figure 5). However, the national government successfully managed to

turn around its fiscal position from 4.6% of GDP in 2003 to 1.1% in 2006 and 0.2% in 2007. As a result of the fiscal consolidation achieved in 2002-2007, national government outstanding debt contracted from 78.2% of GDP in 2004 to 55.8% in 2007 (Figure 6). If contingent liabilities are included, national government debt went down from 95.4% of GDP in 2004 to 63.1% in 2007.

About two-thirds of the reduction in the national government fiscal deficit in 2003-2007 was due to expenditure compression as national government expenditures went down from 20.2% of GDP in 2002 to 17.3% in 2006 and 2007 (Figure 5) and national government expenditures net of interest payments contracted from 15.5% of GDP in 2002 to 12.2% in 2006. On the other hand, the other third of the reduction in the fiscal deficit in 2002-2006 was attributable to the rise in tax effort from 13.1% of GDP in 2002 to 14.3% in 2006. The increase in tax effort was due to the enactment of new tax measures in late 2004 and in the first half of 2005. Republic Act (RA) No. 9334, which amended excise tax rates on sin products was legislated in late 2004 and took effect in January 2005. Meanwhile, Republic Act No. 9337, otherwise known as the Reformed VAT Law was legislated in the first half of 2005 and took effect in the last quarter of that year. It (i) expanded the coverage of the VAT to include power and electric cooperatives, petroleum products, medical and legal services, agricultural non-food products, and works of art, (ii) converted the Philippine VAT system from a "consumption-type" VAT<sup>1</sup> to an "income-type" VAT<sup>2</sup>, and (iii) provided for a temporary increase in the corporate tax rate from 32% to 35%<sup>3</sup> and increases in the gross receipts tax (on royalties, rentals of property, real or personal, profits from exchange and all other items treated as gross income) of banks and non-bank financial intermediaries from 5% to 7%. In addition, as provided under RA 9337, the President authorized the increase in the VAT rate from 10% to 12% in January 2006.

<sup>&</sup>lt;sup>1</sup> A consumption-type VAT allows producers to get credit for taxes paid on their inputs including their capital goods purchases.

 $<sup>^{2}</sup>$  An income-type VAT allows producers to get credit for taxes paid on all their inputs but the tax credit on capital goods purchases is limited to the depreciated part of capital only.

<sup>&</sup>lt;sup>3</sup> The reformed VAT law provides that the corporate income tax rate will subsequently be reduced to 30% starting in 2009.



Figure 5. National Government Fiscal Performance, 1996-2010

Source: Bureau of Treasury



Figure 6. NG Outstanding Debt (% to GDP), 1996-2010

However, the improvement in tax effort was very short-lived, lasting between 2004 and 2006 only. Thus, the tax-to-GDP ratio slipped from 14.3% of GDP in 2006 to 14.1% in 2008. Likewise, the total revenue effort of the national government decreased

Source: Bureau of Treasury

from 16.0% in 2006 to 15.7% in 2007 and 15.8% in 2008 when privatization proceeds are netted out. Despite this, the overall fiscal balance continued to be under control in 2007-2008 largely because of the substantial reduction in interest payments in those years following the decline in national government debt in earlier years. Also, it is noteworthy that the gains made in improving the national government fiscal position has freed enough fiscal space in 2007 to allow national government primary expenditures to rise somewhat in that year (in an attempt to unwind the tight grip on expenditures in earlier years) while maintaining the overall fiscal deficit at a creditable 0.2% of GDP.

## 3. The Fiscal Stimulus Package

In response to the surge in the price of food and petroleum products in 2008, the government expanded the rice price subsidy program and launched a number of programs meant to provide temporary relief to vulnerable sectors, including the Pantawid Kuryente and the Tulong Para Kay Lolo at Lola. The Pantawid Kuryente was meant to soften the impact of the rising cost of electricity on poor households. It consists of a one-time cash grant equal to PhP 500 to lifeline electricity consumers. The Tulong Para Kay Lolo at Lola provides a one-time cash subsidy of PhP 500 to qualified senior citizens, i.e., those (i) who are at least 70 years old, (ii) who are not be covered by the SSS, GSIS or any other government retirement benefit scheme (e.g., that for the military or police) and (iii) who do not have any regular income.

In response to projected economic downturn following the contraction of exports and remittances of overseas Filipino workers, the government formulated the Economic Resiliency Plan (ERP) and announced the same in early 2009. The Plan aims (i) to ensure sustained growth and attain the higher end of the government's economic growth targets (i.e., to pursue a countercyclical policy), (ii) to save and create as many jobs as possible, (iii) to protect the most vulnerable sectors – poorest of the poor, returning overseas Filipino workers, and workers in export industries, (iv) to ensure low and stable prices, and (v) to improve competitiveness in preparation for the global rebound.

The ERP is worth PhP 330 billion, divided into PhP 160 billion of government budget interventions, PhP 40 billion of tax cuts, and PhP 130 billion of off-budget interventions (Table 4). The programs that form part of the 2009 budget interventions include labor - intensive community level infrastructure, the expansion of some social protection programs and the comprehensive livelihood and emergency employment program. The budgeted interventions stress the implementation of small quick disbursing projects that generate jobs. As such, it involved the realignment of the budget from projects that may be difficult to implement (e.g., because of right-of-way issues) to those that are fast-moving projects. As a target, the government aimed to spend at least 60% of the productive portion of the implementing agencies' budgets in the first semester of 2009. The government has had limited success in fast tracking the implementation of government infrastructure projects and, therefore, government spending. The disbursement rate for the non-mandatory portion of the budget is higher in the first half/ first three quarters of 2009 relative to that of earlier years but not as high as programmed. To wit, it is estimated that the national government disbursed 46% of the non-mandatory portion of its budget in the first half of 2009 compared to 45%, 44% and 37% in 2006, 2007 and 2008, respectively. In like manner, the national government disbursed 71% of the non-mandatory portion of its budget the first three quarters of 2009 compared to 65% in 2006 and 2007 and 63% in 2008.

Stimulus Measures	Amount (in billion pesos)
<ul> <li>2009 Budget interventions</li> <li>quick disbursing, high impact, labor intensive community level infrastructure projects like repair of roads (e.g., asphalt overlay), farm-to-market roads, communal irrigation systems, etc.</li> </ul>	PhP 160 billion
<ul> <li>additional social protection programs <ul> <li>increased allocation for conditional cash transfer program (PhP 5 B)</li> <li>Additional national government contribution to PhilHeatlh Indigent Program (PhP 1 B)</li> <li>Additional allocation for Scholarship Program for TechVoc training (PhP 5.7 B)</li> <li>Additional allocation for primary and secondary hospitals (PhP 2.0 B)</li> <li>Accelerated Hunger Mitigation Program, incl. rice price subsidy program</li> </ul> </li> </ul>	
Employment Program (CLEEP)	
<ul> <li>* Tax cuts</li> <li>- Individual income tax &amp; corporate income tax cut</li> </ul>	PhP 40 billion
<ul> <li>* Off-budget Interventions</li> <li>- additional benefits to members of PhilHealth, GSIS and SSS to be funded by these entities</li> </ul>	PhP 30 billion
- Large infrastructure projects to be funded by GOCCs, GFIs and private sector	PhP 100 billion
TOTAL	PHP 330 billion

#### Table 4. Economic Resiliency Plan (Fiscal Stimulus Package), 2009

Source: National Economic and Development Authority

The individual income tax was effectively reduced starting in July 2008 while the corporate income tax was cut starting in 2009. Both tax cuts are permanent in nature.

Republic Act 9504 was enacted in early 2008 in order to give some (tax) relief to minimum wage earners in response to the rapid increase in the price of food and fuel. However, it did so by increasing the amount of so-called personal exemptions for all income tax payers. The revenue loss arising from this provision is estimated to be about 0.3 percentage points of GDP per year in the initial years of implementation.

The corporate income tax rate was also reduced from 35% to 30% 2009. Unlike the reduction of the effective personal income tax rate which was made in response to the

food/ fuel price surge, the diminution in the corporate income tax rate was planned well before the onset of the global crisis as this was a provision of the reformed VAT law that was legislated in the first half of 2005. It was aimed at aligning the Philippine rate with those of its neighbors with the end in view of improving the country's global competitiveness.

The off-budget interventions under the ERP are of two kinds: (i) additional temporary benefits to members of PhilHealth, GSIS and SSS, and (ii) large infrastructure projects to be funded by the private sector under public-private-partnership-type arrangements and by government-owned and controlled corporations and government financial institutions. The additional benefits to members of social security institutions are generally in the form of calamity/ emergency loans and a moratorium on loan repayments to allow qualified borrowers to address more pressing financial concerns during or after a calamity. For instance, the GSIS implemented a one year moratorium on consolidated and housing loans starting from October 2009 and September 2010 in view of the serious damage caused by Typhoons Ondoy and Pepeng.

On the other hand, the PhP 100 billion worth of large infrastructure projects that are envisioned under the ERP are expected to arise in 2010 yet as this type of projects entail complex engineering plans and approval processes and, as such, need more time to get off the ground. To date, no major PPP projects under the ERP have been started, highlighting perhaps the inappropriateness of including such a scheme as part of a fiscal stimulus package.

The size of the fiscal stimulus as announced may not necessarily reflect the actual size of discretionary fiscal policy for a number of reasons. First, there is a tendency to include in the package items that are realigned from other expenditure items that are already budgeted prior to the announcement of the fiscal stimulus, i.e., some spending included in the stimulus package may not represent "new" spending in the real sense. Second, even if all the programs included in the fiscal stimulus package represent incremental spending, the actual additional spending from the package may be less than planned because of implementation lags.

On the other hand, the actual change in fiscal aggregates (say, national government revenues, primary expenditures or primary balance) is not a good measure of discretionary fiscal policy because the actual change in fiscal aggregates is the sum of discretionary fiscal policy and their "automatic" response to other factors including cyclical changes in output. For instance, revenues from income taxes tend to weaken "automatically" when the economy slows down as profits of the business sector and income of households the of firms and revenues decline. On the expenditure side, unemployment benefits, when they are available, tend to rise when there is an economic downturn.

Following Fedelino *et al.* (2009), the actual primary balance may be decomposed into the cyclically adjusted primary balance (CAPB) and the cyclical primary balance (CPB).<sup>4</sup> That is, the CAPB is that part of the primary balance that is affected by cyclical fluctuations while the CPB is that part of the primary balance that automatically reacts to the cycle. In turn, the change in the CAPB may be used as a measure of discretionary fiscal policy.

Table 5 presents estimates of the CAPB and changes in CAPB, broken down into their revenue and expenditure component for the period 1991-2010. It indicates that discretionary fiscal policy is expansionary in 2008 (1.1% of potential GDP), 2009 (2.2% of potential GDP) and 2010 (0.4% of GDP). The size of the discretionary fiscal expansion is about 50% larger than that indicated by the actual change in the primary balance in 2008. On the other hand, it is 24% smaller than that indicated by the actual change in the primary balance in 2009. In contrast, while the change in the actual primary balance indicates a small contraction, the change in the CAPB indicates some expansion.

Table 5 also shows that the bulk of the discretionary fiscal stimulus in 2008-2010 is accounted for by incremental spending. This is very similar to the situation in 1998 and 1999. This finding may have some bearing on the effectiveness of the fiscal stimulus in

 $\varepsilon_R$  is the elasticity of revenue with respect to the output gap,  $\varepsilon_G$  is the elasticity of expenditure with respect to the output gap

 $gap = (Y - Y^P) / Y^P,$ 

<sup>&</sup>lt;sup>4</sup> The primary balance, PB, is:

PB = CAPB + CPB

On the other hand, CAPB, expressed as a proportion of potential output, *capb*, is:  $capb = r (1+gap)^{-(\varepsilon_{R}^{-1})} - g (1+gap)^{-(\varepsilon_{G}^{-1})} \approx r (1-(\varepsilon_{R}-1) gap) - g (1-(\varepsilon_{G}-1) gap)$ 

where r and g denote ratio of revenue and expenditure to GDP,

Y is actual GDP, and

 $Y^P$  is potential GDP.

influencing aggregate demand given the differences in the estimates of the tax multiplier and the spending multiplier.

# 4. Impact of the Fiscal Stimulus

In principle, the impact on aggregate demand of the fiscal stimulus measures that were put in place in response to the global financial crisis may be expressed as the weighted sum of the revenue cut and incremental government spending where the weights are the tax multiplier and the expenditure multiplier, respectively. To wit:

 $dY = M_T \, dT - M_E \, dG,$ 

where  $M_T$  is the tax multiplier, and

 $M_E$  is the expenditure multiplier.

Estimates of the fiscal multiplier may be calculated from macroeconometric model simulations. Alternatively, fiscal multipliers may be derived from structural vector autoregression models (SVAR). The estimates of fiscal multipliers for the Philippines arising from model based simulations and SVARs are all positive in sign but they differ in size.

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010 a/	
1.02	-0.29	0.44	2.37	0.42	-2.75	-2.34	-0.68	0.05	0.24	0.51	2.58	-1.98	0.72	output gap = (Y - Y <sup>P</sup> ) / Y <sup>P (</sup> in %) b/
3.31	1.86	-0.18	0.20	0.77	-0.62	0.60	1.51	2.81	4.08	3.86	2.83	-0.25	-0.22	PB as % of Y <sup>P</sup>
3.11	1.91	-0.25	-0.16	0.70	-0.21	0.95	1.60	2.81	4.04	3.77	2.41	0.04	-0.33	САРВ
-0.16	-0.88	-1.98	0.07	0.85	-0.85	1.14	0.75	1.36	1.50	0.10	-1.05	-2.18	-0.36	change in CAPB; discretionary fiscal policy
2.53	-0.12	0.42	0.81	1.72	0.74	1.37	1.15	1.92	2.68	2.32	0.58	-0.34	0.76	Change in rev component of CAPB c/
-2.69	-0.76	-2.40	-0.74	-0.87	-1.59	-0.22	-0.40	-0.56	-1.18	-2.22	-1.63	-1.84	-1.12	Change in expd component of CAPB d/
-0.14	-1.11	-1.86	0.37	0.58	-1.32	1.16	0.96	1.46	1.53	0.15	-0.71	-2.86	0.01	change in primary balance as % of Y <sup>P</sup>
2.56	-0.35	0.54	1.11	1.46	0.27	1.39	1.37	2.01	2.72	2.37	0.92	-1.02	1.13	change in actual revenue as % of Y <sup>P</sup>
-2.69	-0.76	-2.40	-0.74	-0.87	-1.59	-0.22	-0.40	-0.56	-1.18	-2.22	-1.63	-1.84	-1.12	change in actual expd as % of Y <sup>P</sup>
94.0	102.7	138.7	-78.1	91.6	34.3	157.9	106.5	99.8	99.0	97.8	85.2	-15.6	146.5	CAPB as % of PB

 Table 5. Cyclically Adjusted Primary Balance and Discretionary Fiscal Policy, 1995-2010

*Note:* a/ Author's estimate based on January-November 2010 data b/ potential output is derived by de-trending GDP data by the Hodrick Prescott filter.

c/ negative sign indicates revenue reduction

d/ negative sign indicates increased spending

Ducanes *et al.* (2006) estimated fiscal multipliers for the Philippines based on a small macroeconometric model developed by Cagas *et al.* (2006) by simulating three types of fiscal shocks.<sup>5</sup> Scenario 1a (referred to as *Expenditure 1*) involved a fiscal expansion through an increase in government spending equivalent to 1% of GDP in year 1 of the simulation period, such that the allocation of spending between current and capital spending is assumed to follow that of the most recently observed period. Scenario 2a (called *Expenditure 2*) is exactly the same as *Expenditure 1* with one exception – all of the incremental spending is assumed to go to capital expenditures. Meanwhile, under Scenario 3a (referred to as *Tax*), the fiscal expansion is made through a reduction in the tax rate equivalent to 1% of GDP in year 1 of the simulation period while keeping spending fixed at the baseline level for the shock period. Ducanes *et al.* (2006) also looked at Scenario 1a, Scenario 2b and Scenario 3b which are exactly the same at that of Scenario 1a, Scenario 2a and Scenario 3a, respectively, except that the fiscal shocks equivalent to 1% of GDP are applied all throughout the simulation period of 5 years.

Their estimates of the fiscal multipliers based on these simulations are presented in Table 6. It shows that the tax multiplier is generally larger than the expenditure multiplier. Also, the expenditure multiplier is larger when the incremental spending is allocated to capital outlays only than when the incremental spending of the same size consists of a mix of current consumption and capital outlays. Even when the fiscal shock are not permanent (i.e., they occur in year 1 of the simulation period alone), the medium term multipliers are larger than the short term multipliers under the *Expenditure 2* and *Tax* scenarios. That is, their positive impact on output persists into the medium term. In contrast, the simulations also show that the multiplier under the *Expenditure 1* scenario is zero in the medium term. This means that when the incremental spending is a mix of current and capital spending the impact on output is limited in the short term only.

<sup>&</sup>lt;sup>5</sup> This model is estimated using quarterly data from 1990-2004. It has 48 behavioral and technical equations, 17 identities and 81 variables. The model is divided into 8 blocks: private consumption, investment, government, trade, production, prices, monetary and labor sectors.

On the other hand, Jha *et al.* (2010) analyzed the dynamic effects of unexpected shocks in government spending and revenues on economic activity by applying a structural vector autoregression (SVAR) framework on Philippine quarterly data from 1985-2009. Their model includes 8 variables: real GDP, real government expenditure, real government revenue, interest rate (benchmark policy rate), real broad money, GDP deflator, real consumption, and real investment. While they do not provide estimates of the fiscal multiplier per se, their estimates of the impulse responses to fiscal shocks (either a positive spending shock or a tax increase) for the Philippines (Table 7) do provide some measure of the effectiveness of discretionary fiscal policy. They found that tax cuts have a significant positive impact on output in the Philippines in both the short run and long run with the long run impact being larger than the short run impact by a factor of three.<sup>6</sup> This result is consistent with that of Ducanes et al. (2006). On the other hand, increased government spending is shown to have a significant positive impact on output in the short term but not in the long term. Again, this result validates the finding of Ducanes *et al.* (2006) under the *Expenditure 1* scenario.

<sup>&</sup>lt;sup>6</sup> Short run is defined as four quarters while the long run response is calculated as the sum of the coefficients of the lagged variables in the VAR.

# Table 6. Fiscal Multipliers from Ducanes et al. (2006) Macroeconometric Model Simulations

Fiscal shock equivalent to 1% of GDP in year of simulation period									
Short term multiplier a/	0.27								
Expenditure 1	0.74								
Expenditure 2	0.03								
Tax									
Medium term multiplier b/									
Expenditure 1	0.00								
Expenditure 2	1.36								
Tax	0.09								

# Fiscal shock equivalent to 1% of GDP all throughout the 4-year simulation period

Short term multiplier a/	
Expenditure 1	0.27
Expenditure 2	0.74
Tax	0.03
Medium term multiplier b/	
Expenditure 1	0.55
Expenditure 2	4.47
Tax	0.27

Note: a/ multiplier applicable to first 2 years of simulation period

b/ multiplier applicable to last 3 years of simulation period *Source*: Ducanes *et al.* 2006

Positive tax revenue shock	Short run	Long run
real GDP	-0.0119 *	-0.0309 *
Govt expenditure	-0.0119	-0.0243
Govt revenue	0.0345 *	0.1081 *
Interest rate	0.0008	0.0258 *
GDP deflator	-0.0025	-0.0859 *
Real money	-0.0010	0.1164 *
Private consumption	-0.0021	-0.0088
Fixed investment	-0.0453 *	0.0682 *
Positive expenditure shock		
real GDP	0.0053 *	-0.0113
Govt expenditure	0.0709 *	0.1104*
Govt revenue	-0.0110	-0.0600
Interest rate	-0.0003	-0.0095
GDP deflator	-0.0046	-0.0727
Real money	0.0072	-0.0019
Private consumption	-0.0002	-0.0140 *
Fixed investment	0.0274 *	0.0743 *

#### **Table 7. Impulse Responses to Fiscal Shocks**

Note: \* indicates the impact being significantly different from zero (both upper 84th percentile and lower 16th percentile bands are significantly different from zero line)

The indicators of the effectiveness of discretionary fiscal policy derived from the macroeconometric model simulations and those from the SVAR analysis are different on one major point, however. The fiscal multiplier for spending calculated from the macro model is larger than that for the tax cut by a factor of 9 in line with a priori expectation based on the textbook Keynesian model. In contrast, the impulse response of output to a tax cut is larger than the impulse response to a spending increase by a factor of 2.

Recall that close to 60% of the fiscal policy response to the global financial crisis came from incremental spending. While such an allocation appears to be appropriate based on the macro model simulations, it does not appear to be so based on the SVAR results.

Setting aside for the moment, the caveats about the indicators of the effectiveness of fiscal shocks in affecting aggregate demand that are discussed above, we decomposed the growth in GDP in 2007-2010 (Table 8). Table 8 indicates that indeed the fiscal stimulus package was effective in counteracting the decline in net exports and private sector investments during the economic downturn. It also shows the major drivers of

the growth in GDP in 2009 are personal consumption expenditures, government consumption and government construction. In contrast, the major contributors to the record growth in GDP in 2010 are personal consumption, capital formation (largely attributable to private sector investment) and net exports. It, thus, appears that the tax cuts might have worked its way largely through increased household consumption in 2009 rather than through the private sector investment channel while the opposite is true in 2010.

	PCE	GC	CF	o/w: GCons	PrCons	X	М
2007	64.6	6.2	30.6	11.3	8.4	38.9	-29.9
2008	97.9	0.8	11.4	-1.2	10.6	-26.4	10.1
2009	300.0	66.2	-97.9	71.0	-12.9	-592.5	-81.4
2010	58.4	2.6	39.3	2.1	12.3	140.2	122.5

Table 8. Contribution to GDP growth, (% share), 2007-2010

PCE - personal consumption expenditures; GC- government consumption, CF - capital formation GCons - government construction, PrCons, X- exports, M- imports *Source of basic data:* National Statistical Coordination Board

## 5. The Exit Strategy, Fiscal Risks and Fiscal Sustainability

The government's exit strategy is clearly laid out in the Economic Resiliency Plan. The ERP specifically states that the budgeted interventions are included in the 2009 budget only. Table 5, however, indicates that discretionary fiscal policy continued to be expansionary in 2010 even if potential output is well above actual output, thereby indicating the appropriateness of a more restrained fiscal stance instead.

It appears that the government started to withdraw the fiscal stimulus in the third quarter of 2010. In particular, non-interest expenditures of the national government started to decline and its primary fiscal balance started to improve in the third quarter of 2010 (Table 9). On the other hand, the decline in real government consumption and real government construction is evident in the third and fourth quarter of 2010 (Figure 7). It is not clear whether the higher than programmed spending in the first two quarters of 2010 is election driven or stimulus driven. The frontloading of government spending is even more evident in 2010 than in 2009. Since the overall fiscal deficit target is even

lower than programmed in 2010, it appears that the new administration applied the brakes on government spending in the last half of 2010 to compensate for the fast tracking of government spending in the first half of the year.

	Total revenues	Tax revenues	Non-tax revenues	Primary expd	Interest payments	Primary deficit	Overall deficit
2004	14.4	12.3	2.1	12.8	5.4	1.5	-3.8
Q1	13.8	11.7	2.0	14.4	6.0	-0.6	-6.7
Q2	16.3	14.0	2.3	13.6	4.6	2.6	-2.0
Q3	14.4	12.3	2.1	13.1	6.5	1.4	-5.2
Q4	13.2	11.2	2.0	12.0	4.4	1.2	-3.2
2005	15.0	13.0	2.0	11.8	5.5	3.2	-2.3
Q1	13.9	11.6	2.3	12.1	6.9	1.8	-5.1
Q2	16.2	14.4	1.8	12.1	4.4	4.1	-0.3
Q3	15.4	12.7	2.6	11.5	6.9	3.8	-3.1
Q4	14.6	13.0	1.6	11.5	4.1	3.1	-1.1
2006	16.2	14.3	2.0	12.2	5.1	4.1	-1.1
Q1	14.8	12.9	1.8	12.2	7.5	2.6	-4.9
Q2	18.3	16.4	1.9	12.2	3.6	6.1	2.5
Q3	16.6	14.6	1.9	11.2	6.6	5.3	-1.3
Q4	15.4	13.2	2.2	13.0	3.2	2.4	-0.8
2007	17.1	14.0	3.1	13.3	4.0	3.8	-0.2
Q1	15.6	12.2	3.4	13.1	5.9	2.4	-3.4
Q2	16.9	15.2	1.6	13.7	2.5	3.2	0.7
Q3	18.8	15.6	3.2	12.9	5.8	5.8	0.1
Q4	17.1	13.2	3.9	13.2	2.4	3.8	1.5
2008	16.2	14.2	2.1	13.5	3.7	2.8	-0.9
Q1	15.3	13.1	2.1	12.4	6.0	2.9	-3.1
Q2	17.4	16.2	1.2	13.3	2.2	4.1	1.8
Q3	16.7	15.0	1.8	13.6	5.1	3.2	-1.9
Q4	15.6	12.5	3.0	14.5	1.8	1.1	-0.7
2009	14.6	12.8	1.8	14.9	3.6	-0.3	-3.9
Q1	13.6	11.6	2.0	14.3	6.1	-0.8	-6.9
Q2	16.7	15.4	1.3	16.4	2.1	0.2	-1.8
Q3	15.7	13.1	2.6	15.4	4.8	0.3	-4.5
Q4	12.8	11.3	1.5	13.6	2.0	-0.8	-2.8
2010	14.2	12.8	1.3	14.4	3.5	-0.2	-3.7
Q1	13.7	12.2	1.5	15.0	5.6	-1.3	-6.9
Q2	15.6	14.5	1.1	16.8	1.8	-1.2	-3.0
Q3	14.8	13.1	1.7	13.1	4.8	1.7	-3.1
Q4	12.9	11.8	1.1	13.1	2.0	-0.2	-2.2

 Table 9. National government fiscal aggregates (% of GDP), Q1 2004 - Q4 2010

Source of basic data: Cash Operations Report, Bureau of Treasury



# Figure 7. Quarterly (q-o-q) and Annual Growth Rates of the Sum of Government Consumption and Government Capital Expenditures, 2004-2010

#### 5.1. The national government's fiscal position in 2009 and 2010

Primary expenditures of the national government expanded from 13.3% of GDP in 2007 to 13.5% in 2008 and 14.9% of GDP in 2009 on account of the expansionary fiscal stance that government took in response to the 2008 global financial and economic crisis (Table 9). On the other hand, total revenues of the national government contracted from 17.1% of GDP in 2007 to 16.2% in 2008 and 14.6% of GDP in 2009, largely due to the decline in the tax-to-GDP ratio. Consequently, the fiscal deficit surged from 0.2% of GDP in 2007 and 0.9% in 2008 to 3.9% in 2009.

Even more worrisome, the national government incurred a small primary deficit in 2009, for the first time since 1999. As a result, outstanding debt of the national government started to rise again from 55.8% of GDP in 2007 to 57.0% in 2009 and 57.2% of GDP in 2009 (Figure 6). If contingent liabilities were included, total

outstanding debt went up from 63.1% of GDP in 2007 to 65.2% in 2009. Both these developments raise serious fiscal sustainability concerns moving forward.

Moreover, the primary deficit of the national government remained in negative territory (Table 9) as the national government's fiscal stance continued to be expansionary in 2010 (Table 5). This means that the national government has to borrow just to pay for interest on existing loans in 2009 and 2010.

#### 5.2. Fiscal risks

First, the Philippine experience validate concerns raised in the literature that tax cuts made in response to an economic slowdown tends to be permanent or are difficult to reverse. This is true of the reduction in the corporate income tax rate as well as the increase in personal exemptions under the individual income tax that were implemented as part of the Economic Resiliency Plan. These tax cuts are particularly problematic in the Philippine context where the tax-to-GDP ratio registered a well-defined downtrend for most of the period 1998-2010. Such lackluster tax performance has been attributed to poor tax administration and problems in the tax structure.

Second, while most of the spending programs included in the fiscal stimulus package are temporary in nature, the expansion of the conditional cash transfer program is not. The conditional cash transfer program has been proven to be an effective social protection program in many countries and is, thus, a desirable program from an equity perspective. However, to be effective, the implementation of the conditional cash transfer program has to be sustained on at least a medium term basis. Thus, its inclusion in the fiscal stimulus package and the timing of its expansion in 2009 appears to be out of sync with the many as yet unresolved financing issues then. More recently, however, this issue was addressed when the government decided to reduce the funding of other programs like the Food-for-School Program that overlap with the conditional cash transfer program in terms of objectives and target beneficiaries and which are apparently inferior to the latter (Manasan 2009).

Third, even when the a country's fiscal position appears to be benign at the start of the crisis, countries with high debt-to-GDP ratio like the Philippines have very little elbow room to do countercyclical policy without running into fiscal sustainability concerns. The Philippines fiscal stimulus package, modest as it is by international standards, led to a primary deficit and an increase in the debt ratio in the first year of its implementation. Thus, there is a need for the Philippines to further reduce its debt ratio so as to improve its fiscal sustainability.

Fourth, while the government's fiscal stance in 1998/ 1999 and 2009 is appropriately countercyclical, its fiscal stance was procyclical in about half the time in the period between 1991 and 2010 (**Figure 8**). As noted earlier, its fiscal stance is expansionary in 2010 despite record high GDP growth in that year. Given this perspective, there is a need to guard against procyclical policy as it tends to foster smaller than warranted fiscal balances and, consequently, higher levels of government debt over time. The lesson here is simple: fiscal prudence even during good times helps enhance the government's ability to do countercyclical fiscal policy when times are bad. **Figure 8. Change in CAPB and Output Gap (as % of GDP), 1991-2010** 



#### 5.3. Going back to basics

The last row of Table 5 indicates movements in the actual primary balance are largely driven by movements in the structural primary balance (or the cyclically adjusted primary balance). Given this perspective, it is imperative that the government sticks to unwinding the fiscal stimulus as it has started to do and to go back to the basics by addressing the structural problems in its fiscal position so that it is able to achieve fiscal consolidation on a more sustainable basis. On the one hand, the Philippine revenue effort net of privatization proceeds exhibited a clear downward trend all throughout 1997-2010 with the exception of a brief period in 2005-2008. On the other hand, although there is some slight upward movement in primary national government spending in 2007-2010, the improvement is not enough to fully reverse the persistent and worsening compression of primary national government spending is evident in 1997-2006. The contraction is particularly marked for national government spending on education, health and infrastructure is marked in 1997-2007 (Table 10).

Prospectively, such a compression of national government spending to address the fiscal imbalance does not appear to be consistent with the government's avowed commitment to achieving the Millennium Development Goals (MDGs) and inclusive growth. Underspending on basic social services and infrastructure and the concomitant service deficit in these sectors in earlier years has put at risk the country's attainment of the MDGs (Manasan 2010). On the other hand, the lack and poor quality of infrastructure, particularly in the roads/ transport and power sectors, holds back economic growth which has been found to be an important determinant of poverty reduction. The infrastructure shortage also contributes to unequal access to basic social services which then diminish their ability to benefit more fully from economic growth.

The fiscal sustainability analysis<sup>7</sup> that was undertaken as part of this study suggests that national government revenues need to increase from 14.5% of GDP in 2009-2010 to 17.4% - 17.9% in 2012-2016 if fiscal consolidation<sup>8</sup> were to be achieved while providing adequate budgetary support for the much needed basic social services and infrastructure that are necessary for inclusive growth and the achievement of the MDGs<sup>9</sup>

<sup>&</sup>lt;sup>7</sup> In the conduct of debt sustainability analysis, it is assumed that:

<sup>•</sup> GDP will grow by 5.5% in 2011, and 4.5% in 2012-2016

<sup>•</sup> Inflation will be 3.5% in 2011-2016

<sup>•</sup> Overall interest rate on national government debt is assumed to be 6.6% in 2012-2016, same as in 2010

<sup>•</sup> Peso-dollar exchange rate will rise from PhP 46.5 in 2010 to PhP 47.5 in 2016.

 $<sup>^{8}</sup>$  It is assumed that the overall fiscal deficit will go down from 3.6% of GDP in 2010 to 3.1% in 2011, 2.5% in 2012, 2.0% in 2013, 1.5% in 2014, 1.0% in 2015 and 0.5% in 2016. These figures are extrapolated from the Aquino administration's stated goal of reducing the fiscal deficit to 2.0% by 2013.

 $<sup>^{9}</sup>$  The estimates of the budgetary requirement of achieving the MDGs are from Manasan (2010). The same study also argues that even with greater private sector participation in the financing, construction and operation of various infrastructure projects through public-private partnership

– Scenario 1 (Table 11). Otherwise, if revenue effort remains lackluster and if interest rates are fixed at the low level prevailing in 2010, then the fiscal deficit will rise from 3.6% of GDP in 2010 and 3.5% in 2011 to 5.0% - 3.1% in 2012- 2016 – Scenario 2 (Table 12). As a result, outstanding debt stock of the national government will not post any reduction during the period under study but will hover around 56% of GDP.

<sup>(</sup>PPP) schemes as envisioned by the Aquino administration, the national government still needs to spend at least 2.5% of GDP on the infrastructure sectors yearly in 2012-2016. For instance, the investment requirement of the national roads sub-sector alone is estimated to be equal to 2.0% yearly (Encarnacion 2009). Moreover, the share of PPPs in the financing of investments in the national road sub-sector has been limited in the last decade.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010 prelim	2011 proposed
Total NG expenditures	19.5	19.2	20.3	20.2	19.5	20.3	19.5	19.1	19.1	17.8	17.4	17.3	17.4	17.7	18.7	18.1	17.8
Total economic services of w/c infrastructure	4.4 2.7	3.9 2.2	4.5 2.5	3.8 2.4	3.6 2.3	3.8 2.4	3.2 2.0	2.6 1.5	2.7 1.6	2.5 1.6	2.2 1.2	2.7 1.7	3.4 2.1	3.8 2.2	4.0 2.6	3.0 1.9	2.4 1.6
Social services of which:	4.4	4.9	5.4	5.5	5.2	5.0	4.5	4.4	3.9	3.5	3.2	3.2	3.4	3.4	3.6	3.9	4.2
Education of w/c DepEd	3.2 2.7	3.4 2.8	3.9 3.2	4.0 3.2	3.7 3.0	3.5 2.9	3.4 2.8	3.3 2.7	3.1 2.5	2.7 2.2	2.5 2.0	2.5 2.0	2.6 2.2	2.5 2.1	2.8 2.3	3.0 2.5	3.1 2.7
Health of w/c DOH	0.4 0.4	0.5 0.4	0.6 0.5	0.5 0.4	0.5 0.4	0.4 0.3	0.4 0.3	0.4 0.3	0.3 0.2	0.3 0.2	0.3 0.2	0.3 0.2	0.3 0.2	0.3 0.2	0.3 0.3	0.5 0.3	0.4 0.4
National defense	1.3	1.2	1.2	1.2	1.1	1.1	1.0	1.0	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2
Public administration	1.5	1.6	1.6	1.6	1.2	1.3	1.3	1.2	1.1	1.0	1.3	1.1	1.2	1.4	1.4	1.2	0.9
Peace & order	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.4
Debt service	3.8	3.5	3.2	3.7	3.6	4.2	4.8	4.8	5.2	5.4	5.5	5.1	4.0	3.7	3.6	3.2	3.9
Others	2.9	2.7	2.9	3.0	3.4	3.6	3.3	3.6	3.5	3.0	2.9	2.8	3.0	3.1	3.4	4.1	3.9
Total NG expd net of debt service	15.7	15.6	17.1	16.4	15.9	16.1	14.7	14.3	13.9	12.4	11.9	12.2	13.4	14.1	15.0	14.8	13.9

# Table 10. National Government Expenditures (Obligation Basis) as a Percent of GDP, 1995-2011

Note: Author's estimates based on data from the BESF (various years)

# Table 11. Debt Sustainability Simulation: Scenario 1

	2007 actual	2008 actual	2009 actual	2010 prelim	2011 projected	2012 projected	2013 projected	2014 projected	2015 projected	2016 projected
Assume:	uotuui	uotuui	uotuui	promit	projotica	projectou	projected	projected	projected	projectou
Non-interest expd (in million pesos) <sup>a/</sup>	891,201	998,804	1,142,877	1,237,806	1,363,933	1,670,428	1,756,031	1,872,177	1,999,114	2,134,881
% to GDP	13.4	13.5	14.9	14.5	14.7	16.6	16.1	15.9	15.7	15.5
Fiscal deficit (in million pesos)	12,441	68,117	298,532	310,400	290,000	251,347	217,481	176,416	127,205	68,791
% to GDP	0.2	0.9	3.9	3.6	3.1	2.5	2.0	1.5	1.0	0.5
Implied NG total revenues:										
NG total revenues (in million pesos)	1,136,560	1,202,905	1,123,211	1,219,000	1,410,000	1,756,698	1,893,957	2,066,742	2,255,773	2,459,596
% to GDP	17.1	16.2	14.6	14.3	15.2	17.5	17.4	17.6	17.7	17.9
NG outstanding debt (in million pesos)	3,712,487	4,220,903	4,396,640	4,784,327	5,090,585	5,358,792	5,593,649	5,787,885	5,933,266	6,020,489
% to GDP	55.8	57.0	57.3	56.2	54.8	53.3	51.4	49.2	46.6	43.8

Note: a/ assumes non-interest spending is enough to meet address the MDGs for education and health plus infrastructure outlays equal to 2% of GDP in 2012 and 2.5% in 2013-2016

# Table 12. Debt Sustainability Simulation: Scenario 2

	2007 actual	2008 actual	2009 actual	2010 prelim	2011 projected	2012 projected	2013 projected	2014 projected	2015 projected	2016 projected
Assume:				E						
NG total revenues (in million pesos)	1,136,560	1,202,905	1,123,211	1,219,000	1,378,277	1,510,818	1,655,811	1,814,406	1,987,857	2,177,533
% to GDP	17.1	16.2	14.6	14.3	14.8	15.0	15.2	15.4	15.6	15.8
Non-interest expd (in million pesos) <sup>a/</sup>	891 201	998 804	1 142 877	1 237 806	1 363 933	1 670 428	1 756 031	1 872 177	1 999 114	2 134 881
% to GDP	13.4	13.5	14.9	14.5	14.7	16.6	16.1	15.9	15.7	15.5
Implied fiscal deficit & NG outstanding	debt:									
Fiscal deficit (in million pesos)	12.441	68.117	298.532	310.400	321.723	499.331	474.181	464.371	449.909	427.156
% to GDP	0.2	0.9	3.9	3.6	3.5	5.0	4.4	3.9	3.5	3.1
NG outstanding debt (in million pesos)	3.712.487	4.220.903	4.396.640	4.784.327	5.122.308	5.638.564	6.130.697	6.613.986	7.083.754	7.531.671
% to GDP	55.8	57.0	57.3	56.2	55.1	56.1	56.4	56.2	55.7	54.7
Interest payments (in million pesos)	257,800	272,218	278,866	291,594	336,067	339,722	373,961	406,600	438,653	469,809
% to GDP	3.9	3.7	3.6	3.4	3.6	3.4	3.4	3.5	3.4	3.4

Note: a/ assumes non-interest expd enough to meet address the MDGs for education and health plus infra outlays equal to 2% of GDP in 2012 and 2.5% in 2013-2016

However, if revenue effort shows only minimal improvements yearly and if the interest rate rises to the higher level prevailing in 2003, the fiscal deficit will rise from 3.6% of GDP in 2010 to 5.7% - 4.3% in 2012-2016 while debt-to-GDP ratio will 54% of GDP in 2011 to 58% in 2016 (see last two rows of Table 12). This last point underscores another important source of fiscal risk. It should be emphasized that at present the fiscal correction is made easier by the well defined downward movement in domestic interest rates since 2008 (Table 13). Likewise, the spreads on Philippine debt paper has fallen from the peak of over 500 basis points in December 2008 to 200 basis points in December 2009 and 159 basis points in December 2010 (Figure 8).

Thus, there is an urgent need to increase national government revenues so that the fiscal imbalance is corrected while providing the fiscal space for the much needed basic social services and infrastructure that are critical for economic growth and poverty reduction. The Aquino administration has repeatedly said that the much needed revenue increases will be derived solely from improvements in tax administration rather than from the imposition of new taxes or increases in the rate of imposition of existing taxes. This emphasis on plugging the leakages in tax collection is well placed. The tax gap (or the difference between potential revenue and actual collections) from the VAT and the individual income tax on non-wage income alone is estimated to exceed 4% of GDP in 2007-2009 (Table 14).<sup>10</sup>

On the average, only 36% and 86% of potential revenues from the VAT and the individual income tax on non-wage income earners, respectively, are actually collected in 2004-2009. Moreover, Table 14 also shows that tax evasion tends to make the tax system inequitable. To wit, the average effective individual income tax rate on wage earners (4.9%) is 7 times that on non-wage income earners (0.7%) in 2009.

<sup>&</sup>lt;sup>10</sup> The tax gap is estimated as the difference between potential tax revenue and actual tax revenue. Potential tax VAT revenue is estimated using a VAT simulation model with 56 sectors that corresponds to the finer sectoral disaggregation found in the Philippine National Income Accounts. This model makes use of the most recent Input-Output Tables to derive parameters VAT-able input ratios in both VAT-able and VAT-exempt sectors. On the other hand, potential revenue from the individual income tax on non-wage income is estimated by applying the effective individual income tax rate on wage income to the net operating surplus of the household sector as measured in the National Income Accounts.

	2004	2005	2006	2007	2008	2009	2010
Reverse repurchase rate (policy rate)							
Overnight term	6.75	7.04	7.50	6.77	5.44	4.39	4.14
	6.84	7.07	7.59	7.19	5.70	4.45	4.34
Treasury bill rates							
91 - Day	7.34	6.36	5.35	3.41	5.39	4.19	4.06
182 - Day	8.32	7.67	6.15	4.18	6.19	4.40	4.26
364 - Day	9.22	8.68	6.96	4.92	6.49	4.59	4.53
All Maturities	8.13	7.53	6.20	4.21	6.36	4.46	4.35

#### Table 13. Key Interest Rates (%), 2004- 2010 a/

Note:a/ weighted averages in percent per annum

Source: Bangko Sentral ng Pilipinas

#### Table 14. Tax Gap for Selected Taxes, 2004-2009

	2004	2005	2006	2007	2008	2009
VAT (in hillion pages)				160.	192.	
VAT (in binton pesos)	63.2	93.6	125.0	8	0	199.3
% of potential revenue	31.2	37.4	32.5	37.0	39.3	39.7
% of GDP	1.3	1.7	2.1	2.4	2.6	2.6
Individual income tax from						
non ware compare (in hillion needs)				124.	133.	
non-wage earners (in binnon pesos)	87.6	91.0	103.2	4	6	108.1
% of potential revenue	87.6	83.0	84.0	87.6	88.4	85.2
% of GDP	1.8	1.7	1.7	1.9	1.8	1.4
Ave. effective tax rate (%) on wage income a/	6.0	6.0	6.1	6.3	6.0	4.9
Ave. effective tax rate %) on non-wage income a/	0.7	1.0	1.0	0.8	0.7	0.7

*Note*: a/ Average effective tax rate is estimated as the ratio of actual tax collection to the tax base *Source*: Author's estimate

The record of the BIR and BOC in increasing their revenue effort through improvements in tax administration does not inspire optimism, however. An analysis breaking down the sources of change in the tax-to-GDP ratio of the major types of taxes in 2005-2009 suggests that tax-to-GDP ratio for the VAT, the corporate income tax and the excise tax on tobacco and petroleum products would have been higher than they actually were during the period if collection efficiency had been maintained at the 2004 level (Manasan 2010).

Given this perspective, the present administration may have no recourse but to consider new tax measures in order to generate the much needed revenues to finance the MDGs and inclusive growth in the context of fiscal consolidation in the medium term because tax administration improvements do not happen overnight primarily because the installation and operationalization of system-wide changes take time. The challenge then is to identify tax measures that will generate additional revenues in the least distortionary manner. The best options in this regard include:

(i) The restructuring of excise tax on sin products,

- as a first best option, levy a uniform rate on all brands and index the specific rate to inflation automatically subsequently; initially, uniform specific rate should be set so as to yield A uniform rate of PhP 13.90 per pack (in 2010 prices) is estimated to result in a tax effort ratio equal to the 1996 level; tax rate may be set at a higher rate than this if one wishes the tax to result in a stronger deterrent effect on smoking/ drinking bearing in mind that revenues from the excise tax may decline if the specific tax rate were set above a certain level, depending on the price elasticity of demand.
- at the minimum, allow for the automatic indexation of the specific tax rates with inflation;
- alternatively, price survey of tobacco and alcoholic products should be conducted immediately to permit the reclassification of said products for excise tax purposes in accordance with their current retail prices; in addition, the specific tax rates applicable for 2011 under RA 9334 should be adjusted so that they fully reflect the change in prices between 2005 and 2011
- (ii) The rationalization of fiscal incentives,
  - abolish the ITH and replace it by a 25% corporate income tax or a 5% tax on gross income; and
  - unify the fiscal incentives provided by the various investment promotion agencies
- (iii) Reforming the road user charge.
  - increase motor vehicle registration fees especially on heavy trucks which are taxed at a rate that is disproportionately less than the cost of damage they cause on the roads introduce a variable road user charge in the form of an additional excise tax on petroleum products.

In addition, the government should also consider the simplification of tax structure by reducing the number of rates at which various taxes are levied or by reducing the number of taxpayers/ transactions/ or types of income which are exempt from any given tax. Tax simplification makes tax administration easier by minimizing the opportunities for evasion. It also improves equity.

At the same time, there is need for the institutionalization of systemic improvements in processes and procedures in the area of taxpayer registration, audit and enforcement including:

- (i) Cleaning up the existing record and broadening the tax registry;
- (ii) Greater use of third party information by establishing arrangements with the Social Security System, Bangko Sentral ng Pilipinas, Land Transportation Office, the Register of Deeds, the Land Registration Administration and LGUs, in addition to BOC and SEC; introduction of some flexibility in the Bank Secrecy Law;
- (iii) Expansion of the coverage of *e*-filing and payment so as to improve taxpayer services and voluntary compliance as well as to facilitate the audit process;
- (iv) Installation of a risk-based audit system; and
- (v) Provision of adequate IT support to the BIR and BOC.

On the other hand, the government has initiated a number of budget reform measures that enhance the quality of spending as well as the manner by which spending is carried out. These measures should be further strengthened in order to complement the reforms on the revenue side. The more important budget reforms measures are:

- (i) Application of zero-based budgeting; support initiative with the conduct of evidence-based research on the effectiveness and impact of various government programs and improvement in the availability of good quality data that will allow the evaluation of government programs;
- (ii) Timely enactment of General Appropriations Act (GAA) yearly;
- (iii) Strengthening of public expenditure management reforms; enhancement of the performance indicators that have been formulated for the major final outputs of each national government department/ agency; improvement of the processes and procedures for performance review and reporting of agencies; and most important, engaging Congress in the medium-term expenditure framework (MTEF) and performance based budgeting (OPIF) reform process soonest.

(iv) Enactment of a fiscal responsibility law anchored on the institutionalization of a rule that all new expenditure and tax measures should be deficit-neutral and a cap on the cyclically adjusted primary balance.

## 6. Fiscal Transparency

The coverage of the fiscal accounts is fairly comprehensive and information is accessible to the public. The government monitors the overall fiscal position and outstanding debt of the consolidated public sector. The consolidated public sector includes the national government, 14 monitored government-owned and controlled corporations (GOCCs), local government units, the social security institutions (Government Service Insurance System or GSIS, Social Security System or SSS, and Philippine Health Insurance Corporation or PhilHealth), the government financial institutions (GFIs), the Bangko Sentral ng Pilipinas (BSP). However, the reporting time lag for public dissemination is close to one year. For instance, the latest data that is available on the website of the Department of Finance (DOF) on the fiscal position and outstanding debt of the consolidated public sector pertains to December 2009 yet. Also, data on the fiscal position of monitored GOCCs are not widely disseminated and are less accessible than most fiscal data. In principle, the individual financial statements of the individual GOCCs are available on the Commission on Audit (COA) website but said postings are incomplete and, at best, have reporting time lags of nine months.

However, there are three items where fiscal transparency can be improved. First, tax expenditures as reported in the Cash Operations Report of the Bureau of Treasury include mostly tax and duty exemptions of government entities only. They do not include the cost of fiscal incentives granted to registered enterprises. The reporting of revenue foregone from fiscal incentives will greatly enhance their rationalization.

Second, while contingent liabilities the national government are reported by the Bureau of the Treasury, their coverage is not clear. Also, there appears to be some issue on the recognition as well as valuation of contingent liabilities.

Take the case of the National Food Authority (NFA), for instance. The provision of rice at subsidized prices by the National Food Authority form part of the fiscal stimulus package. Because the NFA is engaged in an activity that inherently entails some losses, the government supports the NFA by providing it with budgetary support in terms of both equity infusions and operational subsidies through the General Appropriations Act (GAA). For instance, the national government's direct subsidy to the NFA was PhP 4.8 billion in 2006, PhP 2.1 billion in 2007 and PhP 2.0 billion in 2008. In addition, the national government guarantees all NFA debt. Thus, the cost to the taxpayers of NFA operations does not only include budget support but also the increase in NFA debt since the latter represents an increase in future obligations of the national government. Table 15 shows that the total financial cost of NFA interventions was PhP 18.8 billion in 2007 (or 0.28% of GDP) down from PhP 21.2 billion in 2006 (or 0.35% of GDP). With the rapid rise in price of rice in 2008, the total financial cost of NFA interventions went up correspondingly to PhP 100.4 billion (or 1.36% of GDP). These figures include the tax expenditures (i.e., the implied subsidy provided by the national government to cover the tariff imposed on NFA imports of rice. The question remains: When is net loss of the NFA after subsidies from the national government recognized as a contingent liability? When it is incurred or when there is an urgent need to re-capitalize the said government corporation?

	2006	2007	2008	2010
Net loss before gov't subsidy	(21,241)	(18,772)	(100,448)	(71,204)
of w/c: operating expense	37,625	46,698	65,659	46,566
Sources of finance				
Operational subsidies from NG	4,811	16,120	39,172	27662.44
Other sources a/	16,430	2,652	61,277	43,541
Net loss before gov/t subsidy as % of GDP	0.35	0.28	1.36	0.84

 Table 15. Fiscal cost of NFA Operations, 2007-2008 (in million pesos)

Note: *a/ net external and domestic financing Source:* DOF

Third, unlike that of most government employees, the pensions of members of the military, the police and the judiciary are tax-funded and are budgeted as part of the

General Appropriations Act. At present, there are proposals to convert this scheme to a contributory program.

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### CHAPTER 7

# Fiscal Issues in Thailand: Assessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk

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Sound fundamentals, quick and forceful policy responses, including fiscal stimulus, contributed to Thailand's economic recovery in the aftermath of the crisis. As the economy is recovering, the near-term challenge is to identify, communicate and begin to implement fiscal exit strategies from policy support. Moreover, fiscal policies in the Asian economies can "simultaneously" help strengthen their future growth potential. This paper reviews the impact of the recent global financial crisis for fiscal policy and identifies lessons for designing and implementing strategies for exit from fiscal policy support in the case of Thailand.

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#### **EXECUTIVE SUMMARY**

The Thai economy was affected by the Global Financial Crisis (GFC) through shocks to value chain (trade channel) and financial channel. Contraction in global demand led to declines in export, manufacturing production and capital utilization accordingly, which then led to declining in the country's consumption and investment. On the other hand, interest rate gap between Thailand and advanced economy became widening caused massive capital inflows and Baht appreciation, which brought about the severe impact to labour intensive production sectors of the country, while the sectors with high import content benefited from this incident. Baht had appreciated by 10% against the US Dollar in 2010.

Regarding the fiscal position of the country before and after the GFC, it is obvious that the automatic stabilizer worked effectively as the government revenue declined significantly in 2009 and surged again in 2010 after the economics recovered. However, it can be seen that the fiscal position is deficit together with an upward trend of the public debt as the government have adopted various fiscal stimulus to counter impacts of global crises. The fiscal stimulus packages have included short-term expenditure measures namely Stimulus Package 1 (SP1) which amounted THB116.7 Billions aiming to reduce impact of the GFC, long-term investment plan (Stimulus Package 2 (SP2)) which amounted THB 1.43 Trillion aiming to improve the country's competitiveness, and tax measures. In 2009, the Thai government imposed -5.6% budget deficits to GDP due to these measures.

The impacts of fiscal stimulus and monetary policies have been measured. It was found that the SP1 could affect the real GDP 0.9% additional growth, while the tax measures could cause 0.06% additional growth. On the other hand, as the SP2 is a multi-year investment program, it was estimated that disbursements of the program could bring about 1.5% additional growth in 2010, 1.2% in 2011 and 1.1% in 2012. Moreover, in this paper, it is noticed that simultaneous fiscal stimulus in Asia could also contribute to additional real GDP growth of the Thai economy. It is found that the

Asian stimulus brought about 0.9% additional growth in 2009 and 0.3% additional growth in 2010.

To maintain the fiscal sustainability of the country, the Thai Ministry of Finance (MOF) and the Bureau of Budget (BOB) have signed a MOU to recover balance of budget by using fiscal policies and budget management tools within 5 years or 2015 which leads to MOF strategic plan to revise government expenditure (expenditure control) and revenues (revenue collection efficiencies and introduction of new tax measures) to respond to that obligation. Currently, due to higher revenue collection efficiencies, stable economic growth assumptions and direction to control its expenditures, it is expected that the Thai government can resume budget balance within 2015.

Regarding the fiscal transparency and management of future fiscal risk issues, from the IMF assessment, it is reported that Thailand has met the requirements of the fiscal transparency code. However, there are risks from political and fiscal management rules that might cause some delays or impossibilities of some investment expenditures and the impacts of the fiscal stimulus. On the other hand, management of future long term risk has been made. The contingent liabilities from both explicit and implicit commitment and guarantees such as the Social Security Fund and Universal Health Care Program have realized. Many risk management measures have been proposed and adopted to reduce or prevent those future liabilities.

#### 1. Introduction

It is widely recognised that 1997 was an important year in the history of Asia. The turmoil that rocked Asia's currencies in 1997 was the world's third major currency crisis of the 1990s. Its forerunners were the crisis in the European Monetary System in 1992-93 and the Mexican peso crisis in 1994-95. Even so, the Asian financial crisis can be traced to a set of interrelated problems. Thus there is not a single rescue package to resolve it.

Interestingly, while the issues have changed in the intervening 10 years, yet Asia remains no less central to the world economy now than it was then. Currently we welcome 2007 with a look back to 1997, particularly focusing on how much things have changed since 1997. Having rebounded from the 1997 crisis, we find that in most cases, crisis-hit countries have taken a 180-degree turn over the past decade. We have experienced current account surpluses replacing deficits, international foreign reserves on the rise, currencies under pressure to appreciate instead of depreciate, and foreign capital continuing to flow in rather than fluxing out.

Turning to the remarkable year of 2008 Global financial crisis, whereas advanced economies experiencing a larger—and likely long lasting—deterioration, emerging economies also Thailand experienced less severe impact of the crisis. In this light, sound fundamentals and quick and forceful policy responses, particularly fiscal stimulus, contributed to economic recovery in Thailand in the aftermath of the crisis. Figure 1 explains transmission mechanism of 2008-2009 Global financial crisis to the Thai economy, while table 1 exhibits indicators of the shocks to the mechanism.

For macroeconomic perspectives, though the Thai real GDP was sharp declined in 2008Q4 – 2009Q3, the rebound from the global financial crisis was experienced then gave way to slower growth in the second and third quarters of 2010 (see Figure 2 and 3). GDP returned to pre-crisis levels following four quarters of strong growth. Without the tailwinds of the rebound, growth turned negative (qoq), but the economy performed better than expected. In the 2010Q2, higher-than-expected domestic and foreign consumption led to growth in manufacturing—negative GDP growth (qoq) was mainly due to the political turmoil, which caused tourism to plummet. Tourists returned in the

third quarter, partly offsetting lower foreign and domestic consumption (the latter due to lower rural incomes as agriculture contracted sharply because of dry weather conditions earlier in the year). Going forward, growth is expected to pick up modestly driven by solid domestic demand supported by accommodative fiscal and monetary policies.

Figure 1. Transmission Mechanism of 2008-2009 Global Financial Crisis to the Thai Economy



Source: FPRI (2011).

# Table 1. Indicators of Value Chain Shocks (Shocks to Trade Channel) during the Global Financial Crisis

Indicators (%YoY)	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009
1. Exports of Industrial Products	13.4	16.5	9.0	-16.7	-18.8
2. Production of Industrial Products	11.6	9.4	5.9	-9.7	-25.0
3. Capital Utilization (Level)	67.5	63.7	62.7	56.5	50.0
4. Industrial Labour Utilization	2.3	-1.8	0.2	-4.4	-8.5
5. Shipment of Industrial Products	12.0	11.6	3.5	-11.2	-22.0
6. Stock of Industrial Inventories	-1.3	-3.6	9.1	12.0	9.5

Source: Fiscal Policy Office (2010).



Figure 2. Thailand's Real GDP Growth (1997-2009q1)

Source: FPO and FPRI (2010).





Source: FPO and FPRI (2011).

Focusing on the impact of global financial crisis both financial sector and real sector, these outcomes can be described as follows. As interest rate differentials with advanced economies started widening in the first half of 2010, capital flows from advanced to emerging economies have accelerated. Thailand had bucked this trend through June because of the political situation, which increased near-term risk perceptions of foreign investors (Figure 4) However, the resolution of the immediate political turmoil and Thailand's favorable growth outlook has led to a resumption of substantial foreign capital inflows.



Figure 4. Thailand's Capital Flows (1997 - 2010)

Figure 5. Thailand's Foreign Exchange Reserves an Exchange Rate (2008 - 2010)



Source: CEIC and FPRI calculation (2011).

According to the Fiscal Policy Research Institute's (FPRI) exchange rate monitoring system, the positive capital flows from the current account and particularly portfolio channels have been observed (see Figure 4). This means the baht appreciated about 10 % against the US dollar in 2010 (see Figure 5). As a result of sterilized

Source: BOT and FPRI calculation (2011).

interventions to slow down the pace of exchange rate appreciation, foreign exchange reserves rose by USD 23.6 billion between January and November, reaching a record high. Reserves are equivalent to 11 months of trailing imports, nearly five times the sum of short-term debt and principal repayments due in 2011, and amount to about three-fourths of the country's gross external liabilities. On all three metrics, reserves are the largest in developing East Asia except China.

For the impact on real sector, the global financial crisis seriously hurt consumption, investment, and employment. The financial turmoil, via the negative wealth effect, has weakened consumer demand around the world, especially in the U.S. economy. In addition to the decrease in consumer demand, U.S. is the important trading partner of many countries. As the U.S. economy went downturn, many countries have gone through export deterioration.

change in Exchange Rate	-12.00 /0			
Change in Total Cap Return	-6.37%			
		Key Ratio	Cost	
	Wage / VA	CapReturn / VA	Export / Total Revenue	Capital Return
Agri	42.83%	57.17%	7.37%	-0.9%
Mining & Quarrying	17.71%	82.29%	20.00%	-4.7%
Food Manufacturing	43.16%	56.84%	31.26%	-21.1%
Textile Industry	61.66%	38.34%	30.29%	-17.6%
Saw Mills & Wood Products	63.13%	36.87%	48.42%	-21.4%
Paper & Printing	44.07%	55.93%	21.62%	4.3%
Rubber, Chem, and Petroluem	40.81%	59.19%	40.57%	-0.8%
Non-Metallic Product	44.04%	55.96%	41.11%	-23.6%
Metal, Metal Products and Machinery	47.02%	52.98%	55.34%	-14.8%
Automobile	46.08%	53.92%	14.47%	1.7%
Other Manufacturing	58.72%	41.28%	46.92%	-20.2%
Public Utility	29.47%	70.53%	3.02%	-0.4%
Construction	47.06%	52.94%	1.47%	9.7%
Trade	51.25%	48.75%	0.94%	-0.5%
Services	55.59%	44.41%	5.86%	-1.1%
Transport & Commu	36.73%	63.27%	19.55%	-10.6%
Other Services	47.32%	52.68%	62.07%	-28.0%

 Table 2. The FPRI Estimation on Effect of Baht Appreciation on Disaggregate

 Real Sector

12.00%

Source: FPRI (2007 and 2010).

Change in Evolution Date

Moreover, the FPRI has constructed a model to assess the impact of a sharp appreciation of the baht on the real sector. It is estimated that a 12% appreciation of the baht decreases the profit (total capital return) of the real sector by about 6.4%. Upon disaggregating the real sector, results show that the labour intensive sectors (i.e., agriculture, food manufacturing, and textile, etc.) tend to be adversely affected by a change in the exchange rate (see Table 2). On the other hand, "high-import content" sectors, such as paper and printing, automobile, and construction, tend to benefit from baht appreciation. This demonstrates that the baht appreciation is a two-sided coin. It benefits exporters with a high volume of imports and a low volume of exports, e.g., electricity plants and iron industry, because most of their revenues are in local currency, while their import costs are lowered. On the other hand, exporters with high levels of exports and low levels of imports, such as textiles, agriculture, and tourism, will lose their advantages.

After the introduction of the Global financial crisis and the Thai economy, accordingly, this paper is structured as follows. Section 2 reviews the fiscal position both before and after the global financial crisis. Section 3 emphasises the impact of stimulus package, exit strategy and identification of future fiscal and macroeconomic risk. It highlights the near-term challenge of navigating the exit strategies in the case of Thailand. Finally, Section 4 provides fiscal transparency and anticipating policy for future crisis.

#### 2. Fiscal Position-Before and After the Global Financial Crisis

#### 2.1. The Conduct of Fiscal Policy during the Asian Financial Crisis 1997 - 1998

During the Asian financial crisis in 1997 – 1998, the conventional explanation laid on weak macroeconomic fundamentals that produce current account deficit, barely fits the Asian scenario. With the combination of fixed exchange rate regime and the high degree of capital liberalization, the Thai economy had become vulnerable to two major crisis-causes; current account deficit and double mismatch problems – currency and maturity mismatches. Thus, the Asian financial crisis was exemplified by massive capital inflows accumulated for years and sudden massive outflows in a short period of time, together with the lack of sufficient risk management system at the national and regional levels. The nature of Asian financial crisis is explained in Figure 6.



Figure 6. Nature of 1997 Asian Financial Crisis

Source: FPRI (2007).

To deal with the crisis, people's confidence and financial stability must be restored, along with economic sustainability. The conduct of fiscal policy was introduced to cope with the mentioned objectives. According to the International Monetary Fund (IMF), an increase in VAT rate and the reduction of current government expenditure were suggested as tightening fiscal policies. Nonetheless, Thailand's conduct of fiscal policy shifted from budget balance/ surplus towards more supportive stance through provision of temporary demand stimulus. After imposing the tight fiscal policy at the early stage of crisis management, the government refused to increase the VAT, but rather stimulated the domestic demand as well as introduced the fiscal finance policy as an alternative channel of micro credits. Thailand's fiscal policy and development phases are presented in Figure 7.





Source: FPRI (2007).

The fiscal finance was a part of the demand management of the dual tracks policy that ensured balanced growth between exports and domestic demand. In this connection, governments have attempted to strengthen different layers of the domestic economy, comprising the grass-roots economy, small and medium sized enterprises (SMEs) and large-scale business establishments<sup>3</sup>. In addition, the establishment of TAMC House for civil services and reduction of real estate transfer fee were aimed to stimulate the real estate sector. On the external front, the government intended to expand export bases via FTA. On the whole, the government restored the fiscal sustainability plan with the objective to create the country's fiscal discipline (targeted fiscal balance in 2005). Consequently, the dual-tracks policy paid off. The economy recovered quickly and the fiscal balance returned to a position in 2004. The last phase of fiscal-policy conduct then introduced the supply management concerning poverty reduction, human capital and competitiveness improvement, including the government structural reforms.

#### 2.2. Fiscal Stimulus in 2008 - 2009

In 2008, the global financial crisis started with the subprime crisis in U.S. that influenced economy-wide to the financial system. The effect has spread worldwide to other regions in the global economy through the financial securities called CDOs and CDSs. The major cause of the crisis basically came from the lack of confidence among financial institutions that led to liquidity crunch in the system. Credit lines for business sector slowed down and the interbank lending procedure became stricter. Therefore, the liquidity crisis has emerged and increasingly affected the real sectors; production and export. In sum, the direct impacts were created through financial markets while the indirect impacts hit real sector via the channel of international trade.

In the case of Thailand, the nature of the current crisis is different from the Asian financial crisis in 1997. Since Thailand's financial products and market are still in the developing phase, the effect from the crisis most likely struck the real sectors. It led to

<sup>&</sup>lt;sup>3</sup> For example, the government has established a revolving village fund and a People's Bank Programme to provide micro-credit to promote economic prosperity at the grass-roots level. For SMEs, the government introduced new tax schemes for SMEs as an incentive for their investment. The SME Development Bank was also established to provide financial and advisory services to SMEs. Large-scale enterprises are being strengthened through the Thai Asset Management Corporation (TAMC), which has facilitated the debt and corporate restructuring for large corporations.

a decrease in export, and then production, along with an increase in local unemployment. In addition, as a level of income declined, the domestic expenditure dropped as well as consumption and investment. Nonetheless, the nature of current crisis was different from the one of Asian financial crisis since Thailand's financial sector was still strong with a high ratio of fund to total assets and a low proportion of NPLs. As a result, a challenge to the government was to solve the problem in the real sector, especially the export industry, and the problem of income reduction.

The Thai government has imposed three types of policy to rebuild confidence, gain economic recovery, and stimulate new economic growth. First, two phases of stimulus package, with the combination of tax measures, are implemented at different periods of time. Second, the quasi fiscal policy is implemented as a fast-track policy to create liquidity for business sector. Lastly, the monetary policy is introduced as another tool to stimulate the economic growth. Figure 8 shows that, in 2009, the government ran 5.6% budget deficit to GDP while the Bank of Thailand has reduced policy interest rate (RP 1 day) from 3.75% to 1.25%.



Figure 8. Government Budget and Interest Rate Policy Trends

Source: Fiscal Policy Office, Ministry of Finance.

In 2009, the fiscal stimulus packages were introduced to alleviate the impact of this global financial crisis and to help Thais from the economic recession. The Thai government has imposed two phases of the stimulus packages in accordance with an implementing period. The first stimulus package (SP1) is a set of instant measures

under the purpose of economic recovery. The eighteen fiscal projects are implemented with the funding of THB 280 billions. The combination of fiscal projects is (1) Approximately THB 117 billions is funded from non-budgetary expenditures of the fiscal year 2009, (2) THB 124 billions is served for the price guarantee of agricultural products, (3) THB 40 billions is for the tax measures. Four economic engines are taken into consideration to setup the fiscal projects: consumption management, an increase in government investment and expenditures, private investment, and export and tourism supports. Table 3 demonstrates the related fiscal projects in Thailand's first stimulus package.

1. Dom	estic consumption stimulus	2. Gove	ernment investment and expenditure
•	THB 2000 cash hand-out for those earning	•	15-year free education
	< THB 15,000 per month	•	Training for unemployed workers
•	5 public service subsidies program to	•	Sufficient economy fund
	lower costs of living for 6 months (5x6	•	Irrigation project
	subsidies)	•	Dust free road
•	Special prices for consumption	•	Housing for junior police officers
	commodities (Blue flag scheme)	•	Health station improvement
•	Small reservoir construction		
•	Old-age pension at THB 500/ month		
•	Agriculture price guarantee		
3. Priva	ate investment supports	4. Expo	ort and tourism supports
•	Promotions of SMEs	•	Risk management for exporters
•	Tax reduction for property trading	•	National confidence restoration
•	Credit guarantee for SMEs	•	Tourism promotion
•	Tax reduction for SMEs and Small and	•	Exemption of visa and landing fees
	Community enterprises	•	Tax deduction for seminar expenditure
•	Tax exemption from debt restructuring		

Table 3. Fiscal Projects in the First Stimulus Package

Source: http://www.chuaichart.com

After the implementation of the SP1, the economy has continued recovering. Next step is to aim improvement of the country's competitiveness. The stimulus package 2 has a medium-to long-term goal to achieve economic growth by stimulating local employment and private investment. The target is to improve Thailand's competitiveness through fiscal liquidity, high-social-and-economic-return projects, and confidence buildup for crowding-in private investment. The detail of stimulus package 2 will be shortly described in the next section. Together with the stimulus packages, the mixture of tax measures is imposed to achieve the economic growth. Table 4 demonstrates the tax measures.

Property tax	• Tax exemption for new housing with 2009 with the equivalent of paid
	amount, but not higher than THB 300,000,
	• Maintain the right of tax deduction for loan interest, not more than
	THB100,000,
	• Decrease specific business tax rate from 3.3% to 0.11, ended in March
	2010,
	• Decrease administrative fee from 2% to 0.01%, ended in June 2010
SME tax	• Expand the minimum baseline of income for 0.5% tax calculation
	from THB 60,000 to THB 1,000,000 (or 9,700,000 companies)
Small and community enterprise	• Increase the ceiling of income base for tax exemption from THB 1.2
tax	million to THB 1.8 million in 2009-10 (or 58,000 enterprises
	nationwide)
Tourist tax	• Corporate companies or partnerships can earn the tax deduction at
	double value of real payment for a company's local seminar or
	training in the accounting year of 2009.
Venture capital tax	• Extend the period of corporate registration of venture capital until 31
	December 2011,
	• Relax the requirement for SMEs investment in the venture capital that
	must be at least 20% of the 1 <sup>st</sup> year registered capital
Tax on financial institutions	Exemption of tax relating debt restructuring
	- Income tax exemption for borrowers
	- Corporate tax exemption for lenders (financial institutions)
Tax on company limited	4 Exemption of tax relating business transfer (before 31 December
	2009) for public company and company limited i.e., VAT, specific
	business tax, stamp duty, other fees on registration and legal
	transaction

 Table 4. Tax Measure Mixture for Economic Stimulus

Source: Fiscal Policy Office, Thailand.

As stated before, to create liquidity for the business sector, the quasi fiscal policy is implemented as a fast-track policy through the government's financial institutions. Table 5 shows the amount of stimulus package through each government bank.

	Formon Credit	Inanagad Cradit	Now Credit
	rormer Crean	Increased Creuit	New Crean
	Target	Target	Target
Bank for Agriculture and	323,000	147,000	470,000
Agricultural Co-Operatives			
Savings Bank	162,600	80,000	242,600
Housing Bank	73,500	26,500	100,000
SME Bank	26,000	17,500	43,500
EXIM Bank	19,700	17,500	37,200
Islamic Bank of Thailand	20,700	13,000	33,700
Total	625,500	301,500	927,000

Unit: THB Million

Table 5. Stimulus Quasi Fiscal Package

Source: Fiscal Policy Office, Ministry of Finance.

#### 2.3. Contents of Fiscal Position

Putting together all economic stimulus plans of Thailand, the government's fiscal position must be investigated. In the past two decades, the government revenue has constantly grown, especially the revenue from corporate tax and value-added tax (VAT). This indicates a strong foundation of the Thai economy. At the same time, the revenue from the Excise Department has also increased, especially from excise fuel and automobile taxes; however, it is still at a smaller proportion of the total revenue. According to the fiscal policy office's report, the revenue collection in the third quarter of 2010 is amounting to THB 448 billion, or expanding by 15.5 % per year. This results in an increase in total government revenue throughout the third quarter of 2010 to THB 1,678.9 billion, exceeding the original revenue target by THB 328.9 billion. Comparatively to the same period of the 2009 fiscal year, it increased by 19 %. Figure 9 shows the combination of sources of government revenue.



Figure 9. Thailand's Government Revenue

Source: Fiscal Policy Office, Ministry of Finance.

Considering the Thai government expenditure, the structure of budget expenditure is set under three major accounts in the fiscal year of 2010; routine expenditure, capital budget, payment of loan principals. The routine expenditure and capital budget compose of salary budget, operation budget, investment budget, subsidy budget, and others. Otherwise, the non-budgetary public expenditure is set for supporting the Thai economy in the period of economic recovery, the so-called "Strong Thailand (TKK) Program 2009 - 2012". Figure X.5 demonstrates a proportion of government expenditure for the past twenty years while the capital budget tends to increase overtime. Nevertheless, the projection says that the capital budget of the budgetary public expenditure would shrink down in the fiscal year of 2011. Taking a look at the ratio of revenue to GDP and expenditure to GDP, it shows that the ratio of revenue to GDP has always stayed lower than the one of expenditure to GDP since the Asian financial crisis in 1997.



Figure 10. Thailand's Government Expenditure

Turning to the non-budgetary government expenditure, the so-called "Strong Thailand 2012 (TKK) Program," as stated before, the purpose of the TKK Program is to create medium and long term stimulus package for economic recovery. The main objective is to encourage and build up Thailand's economic capability and competitiveness in order to survive the global economic crisis and to achieve superior position in the world economy. Economic indicators show that, up until present, the fiscal policies continue to support the Thai economy as evidenced by an increase in public expenditures. In September 2010, the budget disbursement accounted for THB 192.7 billion, resulting in the disbursement of Fiscal Year 2010; October 2009 -September 2010, of THB 1,784.4 billion<sup>4</sup>. This amount is composed of THB 1,627.9 billion of the 2010 fiscal year budget expenditure; or equivalent of 95.8% of disbursement, and THB 156.5 billion of the carryover budget expenditure. In addition to the budgetary expenditure, the disbursement of Thailand's stimulus package 2; the Strong Thailand 2012 Program, is at THB 18.7 billion in September 2010. Therefore, the accumulative disbursement is THB 234.4 billion or 67.7 % of the approved budgetary framework of THB 350 billion. The criteria of project selection are set and

Source: Fiscal Policy Office, Ministry of Finance.

<sup>&</sup>lt;sup>4</sup> Monthly Economic Report (September and the 3<sup>rd</sup> quarter of 2010), Fiscal Policy Office, Ministry of Finance.

the TKK projects are categorized into 3 groups in accordance with the readiness of each project: (1) fast-track group, (2) medium-track group, and (3) slow-track group. The fast-track group composes of the TKK potential projects that are ready and possibly implemented since the end of 2009 and within 2010. The medium-track group includes the TKK projects that will be ready to implement in the 2010 Fiscal Year. The last group, the slow-track group, refers to the TKK projects that have the least readiness and will be ready to implement in the Fiscal Year of 2011.

Table 5 shows the list of TKK potential projects categorized by the government's objectives emphasizing on how to make the Thai economy stronger. The detailed progress of Thailand's stimulus package 2; the Strong Thailand 2012 (TKK), is also presented here. According to Table 5, the grand total amount of disbursed investment is THB 237,062 million from the total budgetary framework of THB 349,976 million, or 67.7 % of grand total disbursement. The three major objectives, determined by the amount of budget frameworks, are prioritized as (1) Create job and improve quality of life, (2) Basic public service development, and (3) Food and energy security. The funding amount of budget framework indicates that the government's policy emphasizes on their role to create job and improve quality of life during the crisis and after its hit. The rate of disbursed investment in the job creation and quality of life improvement; 78.7 %, is quite successful comparatively to other objectives. The second best rate lays on the TKK funding for creative economy, under the objective of creating new economic revenue. The disbursement rate under the objective of food and energy security is the third on the rank, which most of the amount spent on water resource management. Considering the rate of disbursement, it can be concluded that the government has tried to restore a basic foundation that directly affects people's standard of living. At the same time, it has aimed to improve both human capital and infrastructures e.g., logistics and transportation as the factors that encourage the country's efficiency and competitiveness.

			2010		Disburse	d investment
Objective/Sector	Budget Framework	Aug	Sept	Oct	Amount	Disbursed rate (%)
1. Food and energy security	59,503	3,347	3,717	894	38,218	64.23
1.1 Water resource management	59,503	3,347	3,717	894	38,218	64.23
2. Basic public service development	74,781	2,166	3,068	319	44,338	59.29
2.1 Logistics and transportation	46,587	1,632	2,036	180	38,219	82.04
2.2 Energy	174	0	0	0	0	0.00
2.3 Communication	0	0	0	0	0	0.00
2.4 Tourism infrastructure development 2.5 Public health infrastructure	3,282	2	29	0	575	17.5
development	14,692	123	374	94	851	5.8
2.6 Social welfare	9,173	358	475	44	3,851	42.0
2.7 Science and technology	185	7	28	0	178	96.4
2.8 Environment	689	45	126	1	664	96.3
3. Create tourism potential	5,394	196	250	45	1,822	33.8
3.1 Tourism development	5,394	196	250	45	1,822	33.8
4. Create new economic revenue	1,331	163	230	75	945	71.0
4.1 Creative economy	1,331	163	230	75	945	71.0
5. Develop education quality	51,981	3,881	4,700	431	26,857	51.7
5.1 Education	51,997	3,881	4,700	431	26,857	51.7
6. Develop public health quality	1,928	14	111	6	332	17.2
6.1 Public health personal development	1,928	14	111	6	332	17.2
7. Create job and improve quality of life	106,542	5,481	6,316	756	83,872	78.7
7.1 Community development	106,542	5,481	6,316	756	83,872	78.7
8. Government policies	40,000	0	157	0	39,513	98.8
8.1 Income support	40,000	0	157	0	39,513	98.8
Total	341,476	15,247	18,550	2,525	235,897	69.1
Expenditure under emergency circumstances	8,500	793	124	136	1,165	13.7
Grand total	349,976	16,040	18,675	2,661	237,062	67.7

# Table 6. Progress of the Strong Thailand 2012 Project (TKK)

Source: PDMO, Ministry of Finance (as of 2010).

The expected plan of government spendings in accordance with the stimulus packages is presented in Figure 11. The first economic stimulus package in 2009 includes spendings via supplementary budget, tax measures, and special financial institutions utilization under a purpose of increasing credit in the financial system. The disbursement of budget was expedited through three approved budgets; state budget, state of enterprise budget, and municipal investment budget. The purpose of the first stimulus package (SP1) aims to recover the economy at an immediate pace through the government expenditure for stimulating private consumption as well as to alleviate the effects of economic recession from the global financial crisis in 2008 with the reduction of unemployment.

Additionally, a longer-term stimulus package was proposed to restore the economy and to strengthen Thailand's capability by upgrading the standard of living along with competitiveness. The 2009 multiyear commitment budget was then extended for another three years from 2010-2012; the so-called stimulus package 2 (SP2). The goal of SP2 is to promote higher level of investment as another engine for economic growth. With the strong Thailand operative plan (SP2), not only the economic growth and higher employment will be stimulated, an enormous investment volume will be created. Hence, the government directly aims to make Thailand stronger on both consumer and producer sides. Together with the two stimulus packages, the government is pushing forward investment projects for Thailand's infrastructure development. The mega projects are to facilitate local business transactions, reduce transaction costs, and lift up Thais' standard of living.

Figure 11. Government Spending Plan



Source: FPRI (2009).

Refer to the above mentioned multiyear commitment on stimulus packages, Table 6 shows the government expenditure on the stimulus package as a percentage of GDP. The government budget will be increasing for the next two years as well as the ratio of state enterprise additional income. However, the additional demand for SP2 investment tends to decrease overtime, which implies that the SP2 is aimed to be a high-impact 3 years stimulus package and the need of funding will be consistently lower. Consequently, the government burden is concluded on the last row of Table 7. It indicates that the Thai government will potentially experience increasing fiscal burden for the next 3 years, especially double burden during the overlapping period of 2010 and 2011, or after a certain period of progressive disbursement.

			Jnit: % of GDP
	2009 - 2010	2011	2012
Government Budget	2.23%	4.23%	4.74%
SOE Additional Income	0.11%	0.67%	0.69%
SP2 Additional Demand for Investment	0.46%	0.44%	0.39%
Others	0.13%	1.17%	1.78%
Government Burden	1.80%	3.43%	3.61%

#### Table 7. Government's Fiscal Expenditure Plan on Stimulus Package 2 (SP2)

Source: FPRI (20010).

#### 2.4. Projection 2011 and Debt Status

The expected plan of government incomes and expenditure in fiscal year 2010 are presented in Table 7 and 8. The fiscal year 2010 fiscal deficit was much smaller than primarily feared when the budget was proposed. The budget for fiscal year 2010 was prepared at the trench of the global financial crisis in February 2009 and anticipated only 1.35 trillion baht in revenues. Thanks to Thailand's fiscal rule, on-budget expenditures were severely constrained and even including the off-budget Thai Khem Kaeng (TKK) stimulus program, the government was authorised to spend 2.06 trillion baht (or about 6 % more than in fiscal year 2009). In addition, thanks to the economic recovery and difficulties in disbursing public investment projects, revenues have come at 1.65 trillion baht or 10 % higher than the original estimates and expenditures (including TKK) at 1.98 trillion baht, resulting in a modest deficit of 1.9 % of GDP and a stable debt-to-GDP ratio (see Figure 12).

One issue need to be highlighted that the political unrest during April and May, as well as the continued deadlock over Map Ta Put in the case of PTT, led to delays in implementation of investment projects from both SOEs and central government agencies. A secondary factor accounting for lower public investment was the reduction in SOEs' investment budget for fiscal year 2010 compared to the previous year. In the second quarter of 2010, investment spending from SOEs (including PTT) declined by 31.7 % year-on-year or 16.8 % of total investment budget.

Unit: THB Milli			
Source of Revenue	Amount	%	
1. The Revenue Department	1,305,600	79.1	
1.1 Personal income tax	217,000	13.2	
1.2 Corporate income tax	430,200	26.1	
1.3 Petroleum income tax	536,800	32.5	
2. The Excise Department	387,100	23.5	
2.1 Tax on petroleum and petroleum products	152,000	9.2	
2.2 Motor-vehicle tax	66,100	4	
3. The Customs Department	88,400	5.4	
3.1 Import duties	86,000	5.2	
3.2 Export duties	100	0	
3.3 Others	2,300	0.1	
Total revenue from 3 Departments	1,781,100	107.9	
SOEs	84,400	5.1	
Others	93,000	5.6	
Total revenue (gross)	1,958,500	118.7	
Allocation of VAT to Local Administrative			
Organization	70,500	4.3	
Total revenue (net)	1,650,000	100.0	

# Table 8. Projected Government Income in Fiscal Year 2010

Source: Fiscal Policy Office, Ministry of Finance.

# Table 9. Projected Government Expenditure in Fiscal Year 2010

	Fiscal year	Fiscal year Fiscal year		Fiscal Year
Unit: million Baht	2009	3Q actual disbursement	Forecasted (e)	2011 (f)
1.Government Expenditures	1,931,629	1,503,263	1,989,985	2,100,063-
1.1Budgetary Expenditures	1,917,129	1,338,964	1,765,638	2,126,157 2,048,159
(1) Current expenditures	1,507,894	1,066,313	1,437,700	1,677,064
(2) Capital expenditures	282,969	140,705	177,300	248,036
(3) Carry-over expenditures	126,266	131,946	150,638	123,059
Current Fiscal year (1)+(2)	1,790,862	1,207,018	1,615,000	1,925,100
Disbursement to total budget (%)	91.8%	71.0%	95.0%	93.0%
(from Budgetary framework)	1,951,700	1,700,000	1,700,000	2,070,000
<b>1.2 Non-budgetary expenditures</b>	14,500	164,299	217,226	51,904 - 77,998
(TKK Project)				
2. Local Authorities Expenditures	276,269	196,123	291,110	311,850
<b>3. SOE Investment Expenditures</b>	263,829	171,997	228,376	257,418
4.Public Sector Expenditures	2,471,726	1,871,383	2,509,471	2,669,331 -
(1+2+3)				2,695,425

Source: Fiscal Policy Office, Ministry of Finance.



Figure 12. Thailand's Public Debt to GDP (1996 – 2009)

Source: Fiscal Policy Office, Ministry of Finance.

With the space provided by better-than-expected fiscal outcomes in fiscal year 2010 and persistent concerns about the sustainability of growth, fiscal policy will remain expansionary in fiscal year 2011. Some new social policy initiatives originally included as part of the stimulus package have now become permanent and others have been introduced. These include a new agricultural price insurance scheme, a pension to the elderly not covered by social security, education subsidies and a debt refinancing scheme. These programs have now been integrated in the THB 2.07 trillion (20.4 % of projected GDP) budget for fiscal year 2011 (October 2010 - September 2011). Moreover, the government is trying to boost public investments. Accordingly, the capital budget was increased, and implementation of the off-budget stimulus plan, while winding down, will continue. The capital budget will return to normal levels (as a % of the overall budget), representing 16.6 % of overall expenditures, up from 12.6 % in FY 2010 (see Table 8). The investment budget of SOEs will increase by 23 % from the previous year. As a result of the increase in on-budget expenditures and the wind-down of the off-budget expenditures, overall expenditures are expected to come at 19.8 % of GDP and the deficit is projected at 3.2 % of GDP, up from 1.9 % of GDP in fiscal year 2010.

As economic recovery resulting in improving revenue collection, TKK financing is planned to move to on-budget rather than borrowing. Source of finance to TKK program in fiscal year 2011 is largely from budget and undisbursed budget allocation under Emergency decree (THB 350 billion). Foreign borrowings from World Bank, ADB and JICA are expected to be able to disburse within fiscal year 2011 with the approved loan amounts to THB 48 billion (USD 1.6 billion).

# 3. The Impact of Stimulus Package, Exit Strategy and Identification of Future Fiscal and Macroeconomic Risk

#### **3.1.** Effectiveness of Fiscal Stimulus

Since Thailand's stimulus packages are implemented at the two different periods of time, the effects of each package will be discussed separately.

#### 3.1.1. Stimulus Package 1 (SP1)

The aim of stimulus package 1 is to alleviate effects of the global financial crisis (subprime crisis) at a sudden pace. The Thai government implemented the fiscal package consisting of government expenditure, tax, and credit from SFI measures. The transmission mechanisms are described in Figure 13, Figure 14, and Figure 15.

The first round effect of SP 1 reflects good economic recovery and stimulus through the government expenditure. Theoretically, marginal propensity to consume (MPC) is a factor that determines an effect of fiscal measure. Since the target group is the poor, who has higher MPC than the rich does, the government expenditure measure, composing of income transfer and lowering costs of living, should effectively stimulate the economy. Jobs were created through public investment. People's disposable income increased due to income transfer and reduction of living costs. Private consumption climbed up along with public consumption; therefore, the rise of national GDP.

The impact of SP trough out the economy can be summarized in Figure 13, Figure 14, and Figure 15 whereas Figure 16 presents the total effect of SP1 on GDP growth.



Figure 13. Transmission Mechanism of Stimulus Package 1 (SP1)

*Source:* Fiscal Policy Office, Ministry of Finance, Thailand. *Source:* Fiscal Policy Office, Ministry of Finance, Thailand.





Source: Fiscal Policy Office, Ministry of Finance, Thailand.



Figure 15. Transmission Mechanism of Credit Measure through SFIs

Source: Fiscal Policy Office, Ministry of Finance, Thailand.





Source: Fiscal Policy Office, Ministry of Finance, Thailand.

#### 3.1.2. Stimulus Package 2 (SP 2)



#### Figure 17. Transmission Mechanism: SP2 to GDP

Source: Fiscal Policy Office, Ministry of Finance, Thailand.

Figure 17 presents the transmission mechanism of SP2 (TKK) to Thailand's economy. In this light, FPRI has estimated the impact of SP2 to the Thai economy through various channels which summarized in Figure 18. The TKK stimulus package contributed modestly to the public investment growth in 2010, but most disbursements have been for consumption expenditures. The total approved budget for TKK was THB 350 billion, of which THB 301 billion was approved for projects under seven areas16 and the remainder was allocated to the agricultural insurance scheme and the central fund. As of September 2010, the disbursement rate stood at 67 % (234 billion baht). Actual investment spending was approximately 40 % of the total disbursement. In the first nine months (October 2009-June 2010), actual investment spending from budget, carry-over and SOEs (excluding TKK investments) contracted by 16.2 % from the same period of last year. Including TKK investments, nominal public investment increased

by 8 %, suggesting that TKK not only compensated a reduction of capital budget, but also contributed to public investment growth.

Moreover, TKK will continually expect to contribute to public investment growth in fiscal 2011. Although the capital budget and SOEs investment budget in fiscal year 2011 will return to their pre-crisis levels, TKK will also continue its role in contributing to the growth on public investment. The remainder of the TKK budget available to spend in fiscal year 2011 is THB 125 billion out of the THB 350 billion borrowing authorization under the Emergency Decree. Taking the fact that investment to consumption expenditures ratio is 60:40, the TKK budget is expected to be THB 68 billion assuming a high disbursement rate. In addition, fiscal year 2011 the capital budget will increase to THB 344 billion. Assuming a 75 % disbursement rate (consistent with historical average), the estimated actual spending from the capital budget is expected to be 258 billion baht. Thus, public investment from budget and TKK in fiscal year 2011 is expected to come in at approximately 326 billion baht, representing an 11 % increase from the previous year.



Figure 18. Estimated Impact of SP2 to GDP

Source: Fiscal Policy Office, Ministry of Finance, Thailand.

Thailand is not the only country in the region that impose fiscal stimulus package, but many countries in Asia also moving in the same direction (see Table 10). Regarding this, the FPRI has constructed a model to investigate impact of "Asia's simultaneous fiscal stimulus" to Thai economy via the FPRI World Macro Model. As a result, the model indicates that Thailand's GDP growth in 2009 and 2010 have been contributed by the "Asia's simultaneous fiscal stimulus" by 0.9 and 0.3 % respectively (see Figure 19). This means that Asia's simultaneous fiscal stimulus is important to the recovery of Asia aftermath of the 2008 Crisis.

Country	Date of Announcement	Amount (USD Billion)
China	9-Nov-08	585.7
	12-Jan-09	0.1
	21-Jan-09	0.1
Japan	1-Aug-08	
	1-Oct-08	120.0
	1-Feb-09	
	1-Apr-09	101.0
Korea	13-Dec-08	26.0
	1-Jan-09	37.0
	23-Mar-09	20.0
Thailand	1-Jan-09	3.3
	1-Jun-09	41.9
Malaysia	1-Nov-08	2.0
	1-Mar-09	16.4
Philippines	1-Jan-09	7.0
Singapore	22-Jan-09	13.8
Indonesia	1-Jan-09	6.6
	1-Aug-09	6.1
Vietnam	1-Dec-08	1.0
	1-Mar-09	17.7

Table 10. Fiscal Stimulus Packages in Selected Asia- Pacific Countries

*Source:* Global Financial Crisis: Analyst and Policy Implications, Congressional Research Service, World Bank, Reuters and FPRI's calculation.

Turning to the issue of automatic stabilizer, what would happen to Thailand unless the fiscal stimulus packages? The operation of automatic stabilizers exacerbated the fiscal impact of the crisis in Thailand, though their impact was smaller than in advanced economies. In Thailand, the fiscal impact of automatic stabilizers was about 1 % of GDP (see Table 11 and Table 12), lower than their impact in advanced economies (close to 2 % in the advanced G-20), where governments are larger, and a greater share of spending is directly linked to the economic cycle.

Table 11. Impacts of Automatic Stabilizer vs. Discretionary Fiscal Policy -Estimation of Stimulus Package I (SP1) Impact to the Thai Economy

	2009		
	Base Case	Effect to the Macroeconomics	
Real GDP Growth	-2.5%	+0.9%	
-Real Gross Consumption	3.0%	+1.5%	
-Private Sector	1.2%	+0.8%	
-Government Sector	13.0%	+5.5%	
-Real Gross Investment	-2.9%	+1.1%	
-Private Sector	-6.1%	0.1%	
-Government Sector	7.0%	2.2%	
-Real Net import	-25.2%	+0.1%	
Value of Import (USD.)	-33.2%	+0.1%	
Current Account Balance	USD 24.7 Bil	USD -0.2 Bil.	
Employment (Persons)	37,260,456	37,471,290	

Source: Fiscal Policy Research Institute Foundation, Thailand.

	2010	2011	2012
Estimation of Money to be injected in SP2 (Mil. Baht)	465,347	456,074	531,175
Base Case			
-Economic growth rate (% per annum)	2.5	4.0	4.5
-Real Private Investment Growth Rate (% per annum)	1.3	5.0	6.8
-Real Private Consumption Growth Rate (% per annum)	2.6	3.4	4.1
-Employment Creation (Mil. Persons)	0.9	1.5	1.7
-Real Import Value Growth Rate (% per annum)	12.7	10.1	7.4
-Current Account (Mil. USD.)	17.93	11.49	10.70
-Current Account to GDP Ratio (%)	7.3	4.3	3.7
SP2 Case			
-Economic growth rate (% per annum)	4.1	5.2	5.5
-Real Private Investment Growth Rate (% per annum)	3.5	7.4	10.1
-Real Private Consumption Growth Rate (% per annum)	3.6	4.0	4.6
-Employment Creation (Mil. Persons)	1.5	1.9	2.2
-Real Import Value Growth Rate (% per annum)	16.0	13.5	11.4
-Current Account (Mil. USD.)	11.99	4.43	0.20
-Current Account to GDP Ratio (%)	4.8	1.6	0.1
Change			
-Economic growth rate (% per annum)	1.5	1.2	1.1
-Real Private Investment Growth Rate (% per annum)	2.2	2.4	3.3
-Real Private Consumption Growth Rate (% per annum)	1.1	0.7	0.5
-Employment Creation (Mil. Persons)	0.6	0.5	0.5
-Real Import Value Growth Rate (% per annum)	3.2	3.4	3.9
-Current Account (Mil. USD.)	-5.9	-7.1	-10.5
-Current Account to GDP Ratio (%)	-2.5	-2.7	-3.7

# Table 12. Impacts of Automatic Stabilizer vs. Discretionary Fiscal Policy -Estimation of Stimulus Package II (SP2) Impact to the Thai Economy

Source: Fiscal Policy Research Institute Foundation, Thailand.



Figure 19. Estimated Impact of "Asia's Simultaneous Fiscal Stimulus" to Thai Economy

Source: Fiscal Policy Office, Ministry of Finance, Thailand.

#### 3.2. Fiscal Sustainability

As the economy is recovering, the near-term challenge is to identify, communicate and begin to implement fiscal exit strategies from policy support. We hence are entering an exciting new era of strong economic growth with stability. As abovementioned, fiscal policies in the Asian economies can "simultaneously" help strengthen their future growth potential. Therefore, the transformation of the economy after the Global financial crisis once we are moving towards the exit strategies in the years to come are worthy of careful study. It is important that the exit strategies aim at not only rolling back many of the fiscal stimulus measures, but also at establishing the foundations for strong, sustainable and balanced growth and at lowering public debt to create fiscal space for counter-cyclical fiscal policy responses to future shocks. It is desirable that fiscal exit strategies be transparent, comprehensive, and communicated clearly, with the goal of implementing them within a clearly-specified timeframe (IMF (2009)).

With the recovery of economic activity being more entrenched in Asia, including Thailand, many countries have already started a gradual exit from policy support in 2010, although in some cases, this may be postponed to 2011. This policy response reflects a stronger than anticipated economic rebound, but also the need to manage risks

to public debt sustainability, especially in some countries experiencing aging-related spending pressures.

Comparing to its regional peers, withdrawing policy stimulus is estimated to result in structural improvements in Malaysia and Singapore, in 2010, with small continued fiscal stimulus in Thailand. The move of TKK investment projects on budget represents the government's exit strategy from fiscal stimulus.

Concerning fiscal sustainability, The Ministry of Finance and the Bureau of Budget signed a Memorandum of Understanding agreeing which reflecting the MOF Strategic Plan (2011-2016) that agreement has been made to restore balance of budget within 5 years by using fiscal policies and budget management tools, which cover both revenue and expenditure tools. Implementation details are under discussion among concerned agencies within MOF and BOB. Briefing of Ministry of Finance's Strategic Plan can be seen in Figure 20.



Figure 20. Ministry of Finance's Strategies Towards Fiscal Balance within 5 Years

Source: Fiscal Policy Research Institute Foundation, Thailand.

Focusing on fiscal sustainability, since Thailand's long track record of fiscal prudence underpins the projection that deficits will enter a declining path in fiscal year 2012. This assumption is supported by the Thai Government's consistent pursuit of a conservative fiscal stance of low budget deficits or surpluses. Since 2002, budget deficits were no more than 2 % of GDP and the primary balance was in surplus twice between 2005 and 2008. More concretely as earlier, the government has introduced a plan to achieve a primary surplus within five years (see Figure 21).

Projection of Thai fiscal sustainability has been done to achieve the target in fiscal year 2015 under the assumptions that (1) stable economic growth 7.35- 7.5%, (2) Revenue growth of 8.1% per year and lastly (3) expenditure controlled to be not exceeding 6 % per year. Among the 3 assumption, the last one on the expenditure is rather challenging as the current expenditure is about 12% per year. This means the crucial task for Thailand as there is a clear need to create fiscal space to address developmental challenges (meeting infrastructure needs and/or reducing poverty) while undertaking fiscal adjustment.

To achieve a medium-term reduction in the deficit, the government is considering measures on both the revenue as well as the expenditure side as presented in Figure 21. On revenue side, MOF is studying the possibility to amend the Treasury Reserves Act to receive interest earning from Treasury Reserves, held at the Bank of Thailand. The Treasury Reserves Act of 1948 mandates that Treasury reserves be held in unremunerated accounts at the Bank of Thailand. Currently, the amount of reserves is around THB 400 billion. On the expenditure side, current expenditures have been growing significantly over time. The ratio of current expenditures to revenues has been increasing steadily over the past three years, and in fiscal year 2011 it is for the first time expected to exceed 100 %, suggesting that the capital budget must be entirely debtfinanced. Around 35 % of total current expenditure is allocated for civil service salaries and Civil Service Medical Benefit Plan (CSMBS). However, actual disbursement on the CSMBS always exceeds its budget allocation, on average by 27 %. Therefore, the government is looking at measures to improve the management of the CSMBS and reduce its burden on the budget. For example, it is considering allowing members to receive care in private hospitals. Finally, the government has been looking into options

to reduce the burden of interest payments on debt of the Financial Institution Development Fund (FIDF).

It is evidence that fiscal space needs to be created to help address development challenges such as meeting infrastructure needs and alleviating poverty or to allow for counter-cyclical responses to future shocks. Hence, when implementing their exit strategies, countries should thus avoid public investment cuts as a quick fix to achieve budget targets. Growth-enhancing structural reforms, which can stimulate private infrastructure investment, should also be a part of countries' fiscal exit strategies, as they could help sustain growth potential while easing the fiscal burden. Furthermore, enhancing fiscal institutions, medium-term budget frameworks and fiscal rules would be important in implementing fiscal goals. In addition, revenue-based fiscal consolidation would be important in Thailand, where governments are relatively small and the efficiency of tax collection is low. In view of these considerations, exit strategies would need to be supported by revenue enhancing measures and reorientation of spending priorities.





Source: Fiscal Policy Research Institute Foundation (2011).
Even with recent fiscal expansions, fiscal positions remain relatively sound, having benefited from years of prudence. However, under conservative assumptions of only partial fiscal consolidation, Thailand's public debt-to-GDP ratio does not exceed 46 % of GDP and ratios start to decline (albeit slowly) in 2015. After an initial spike due to the substantial financing needs that arise from the fiscal stimulus, debt ratios resume their downward trend. The debt-to-GDP ratio is expected to be approximately 45 % of GDP by 2020 following a peak of 46.6 % in 2014. The slow decline under the baseline arises from conservative assumptions on fiscal balances, which remain lower than their post-financial crisis average throughout the projection period. Debt projections are substantially lower compared to April 2009, indicating the magnitude of the recovery.

Public debt sustainability continues to be resilient to worse-than-expected outcomes in 2011-2012, but a permanent shock to growth could lead to an upward path of public debt. The contingent liability shock is the most severe, leading the debt-to-GDP ratio to peak at 55 %, but favourable debt dynamics lead to a declining debt path. The greatest risks to debt sustainability come from protracted growth slowdown and lack of fiscal consolidation following the resumption of growth. If primary deficits remain at 1.5 % of GDP—high for historical standards but almost 1 percentage point of GDP below fiscal year 2009 levels—the debt-to-GDP ratio would remain on a rising trend in the longer term and would exceed 50 % by the end of the projection period. The scenario with permanently low growth also leads to rapidly increasing debt ratios. This emphasizes the importance of taking advantage of the crisis to enhance competitiveness and ensure a return to sustainable growth.

### 4. Fiscal Transparency and Anticipating Policy for Future Crisis

#### 4.1. Fiscal Transparency

Thailand has followed IMF's Code of Good Practices on Fiscal Transparency by actively strengthening its fiscal management in 4 areas of transparency. Referring to IMF's previous assessment<sup>5</sup>, it is said that Thailand has met the requirements of the fiscal transparency code in many respects and exceeded them in a few cases. Achievements can be summarized as follows:

Fiscal Transparency Aspects	Achievements	IMF Assessment
<ol> <li>Clarity of roles and responsibilities</li> <li>The government sector should be distinguished from the rest of the public sector and from the rest of the economy</li> <li>There should be a clear and open legal, regulatory, and administrative framework for fiscal management.</li> </ol>	<ul> <li>The fiscal powers of the executive, legislative, and judicial branches of government are set out in the 2007 Constitution.</li> <li>Many attempts have been made regarding decentralization.</li> <li>The legal framework underlying public finance is broadly sound. This includes public debt management framework and state-owned enterprise management.</li> <li>A more transparent and effective performance management framework has been developed, including specification of outputs and Key Performance Indicators.</li> </ul>	<ul> <li>Thailand largely achieved in this category.</li> <li>Announced limits on debt and interest payments reflect commitment to fiscal prudence.</li> <li>However, some large state-owned financial and non-financial enterprises conduct substantial quasi- fiscal activities.</li> </ul>
<ul> <li>2. Public Availability of Information</li> <li>The public should be provided with comprehensive information on past, current, and projected fiscal activity and on major fiscal risks.</li> <li>Fiscal information should be presented in a way that facilitates policy analysis and promotes accountability.</li> <li>A commitment should be made to the timely publication of fiscal information.</li> </ul>	<ul> <li>Reports of all fiscal information are designed and transparent. Those include government revenue, expenditure, disbursement progress, public debt and debt issuance plan.</li> <li>Economic data (real sector, monetary, fiscal and debt data) and government policies are publicly reported regularly through the Internet (www.mof.go.th, www.bot.or.th, www.nesdb.go.th and www.bb.go.th ) and press releases.</li> <li>Consolidation of fiscal account is an ongoing process. The Ministry of Finance has strengthened its capacity and capability in data collection and analysis for the entire public sector using the IMF's GFS framework. Consolidated central government position is reported to the public monthly. Consolidated public sector position is reported to the public on a quarterly basis.</li> <li>Accrual accounting and the GFMIS have been introduced in most of the central government, improving quality and timeliness of data.</li> <li>Multi-year commitments are</li> </ul>	Thailand largely achieved in this category. Information on revenue is not as much as budget's. There is no information on civil service pensions published together with the overall fiscal documents. However, the information can be achieved in individual agency (Social Security Office) Balance Sheets in their Annual Reports. Not much information on local authority is provided. The only information on Local Authorities in the central government budget is transfers to them. There are no hidden deficits or debts that are not shown in the data.

<sup>&</sup>lt;sup>5</sup> International Monetary Fund, "Thailand: Report on Observance of Standards and Codes—Fiscal Transparency Module," IMF Country Report No. 09/250, August 2009.

Fiscal Transparency Aspects	Achievements	IMF Assessment	
	presented in the budget documents		
	• The budget documents report		
3. Open Budget Preparation, Execution, and Reporting	• The budget process is well specified, linked to the strategic policy priorities of government and is based on a sound macro-fiscal	Thailand largely achieved in this category. Well organized budget process More than	
follow an established timetable and be guided by policy well-defined	<ul><li>framework.</li><li>Multi-year departmental estimates are used for budget requests.</li></ul>	adequate time for Parliamentary consideration.	
<ul><li>macroeconomic and fiscal objectives.</li><li>There should be clear procedures</li></ul>	• Budget documents provide extensive fiscal information. Overall information can be retrieved from website, while detailed information	There is no fiscal sensitivity analysis in the budget documents.	
for budget execution, monitoring, and reporting	<ul> <li>can be requested from authorities.</li> <li>The 2007 Constitution requires development of a new Public Finance Act with further improvements in budget management and presentation.</li> </ul>		
4. Assurances of Integrity	• Public Service Accounts are being	Thailand largely achieved	
<ul> <li>Fiscal data should meet accepted data quality standards.</li> <li>Fiscal activities should be subject to effective internal oversight and safeguards.</li> <li>Fiscal information should be externally scrutinized.</li> </ul>	<ul> <li>introduced to record the cost of Quasi-Fiscal Activities in SOEs and SFIs</li> <li>Public sector activities including standards of behavior for public servants, employment procedures and conditions, procurement, sale and rent of public assets are opened to public through electronic systems. In the revenue departments, computerization and electronic filing have enhanced monitoring and have reduced the scope for abuse.</li> <li>The Ministry of Finance sets a consistent standard for government accounting and has been strengthening its accounting principle</li> <li>The MOF authorizes the Bank of Thailand to inspect all public financial institutions.</li> <li>The National Counter-Corruption Commission and the Office of Auditor General provide important independent checks on the integrity of public finances.</li> </ul>	in this category.	

### 4.2. Management of Future Liabilities

Future liabilities can arise from 2 sources: temporary policy; and permanent policies. Regarding the temporary policies, the risk lies in the fiscal rules that have been set to maintain fiscal sustainability namely fiscal debt management act (B.E. 2548)<sup>6</sup> and the fiscal sustainability conditions<sup>7</sup>. Even, the Thai ministry of finance has been empowered the executive decree to secure extra loans to carry out the programs; the necessity to raise loans might force the ministry of finance to violate the rules. The plan to find alternative sources of incomes; and decrease unnecessary expenditures are designed to manage this risk. However, other risk exists as fund securing under SP1 and SP2 are made through enactments of the loan acts which are needed to be approved by the parliament. Political instability might cause some delays or impossibilities in the investment plans.

Regarding future liabilities which may arise from the permanent policies such as social security and health care funds (social service policies), it has been recognized that both policies are future commitments and needed to manage to prevent any unexpected liabilities. Normally in both initiatives, threat to future liabilities comes from change in demographic trend. It can be seen from figures below that structure of Thai population is forecasted to gradually changing to old-age society due to significant improvement in health care system and decrease of mortality ratio. Hence, these lead to similar risks to both funds to face with higher expenditures for the old age benefit; and for treatments. Detailed-discussions regarding projections and risk managements of both funds are as follow.

<sup>&</sup>lt;sup>6</sup> The Ministry of Finance can raise loans only for finance the budget deficits (when expenditure is larger than revenue), economics and social development, public debt restructuring and refinance. Under the condition of financing deficits, the loan amount is set to not exceeding 20% of annual budget plus addition budget of that fiscal year; or 80% of budget set to repay the principle in that fiscal year.

<sup>&</sup>lt;sup>7</sup> Stock of public debt to GDP would not exceed 60%. Proportion of debt financing in the budget should not exceed 15%. Proportion of investment budget should be at least 25%.



Figure 22. Demographic Structures of Thailand in 2010, 2020 and 2030

Source: Fiscal Policy Research Institute Foundation (2011).

### 4.2.1 Social Security Fund (SSF)

The social security fund is comprised with 7 benefits which can be categorized into 2 groups of short term benefits (Death, Sickness, Maternity, Child cares, and Unemployment) and long term benefits (Old-age, and invalidity). Contributions of members to the fund are accounted and managed separately by type of the benefits (short-term and long-term). In FPRI 2003, it is found that both short-term and long-term benefit funds were managed and invested conservatively as the fund is under the board that invested mainly in the low risk & low return investments (such as government loans and bank deposits). The returns on investments of both funds were low. Together with threat from demographic change (lower contribution from decreasing workforce and higher expenditure from increasing of pensioners), it was forecasted in FPRI 2007 that the 2-benefit fund (old-age and invalidity) would first deficit in 2034 and the fund would completely deplete in 2045. As the fund was established by the law (Social Security Act B.E. 2533) and was explicitly guaranteed by

that law, after the fund depletes, it is expected that the Thai government has to use its budget to support the pensioners from 2045-2128. However, the contributions (receipt) and expenditure of the 4 benefit fund (Death, Sickness, Maternity, and Child cares) and unemployment funds were expected to go well as the usage is small and the service packages are well-designed to well-controlled of the expenditures.

This forecast and similar studies are well-known and the Thai government already set many measures to tackle and lessen this burden. The measures include:

- Changes of contribution rate: Increase of contribution rate from all parties (employer, employee and government) can prolong the solvency. It is also proposed that if the rate was high enough, the fund will go to sustainable state. (It was 9% each from all parties in FPRI 2007). Currently, the Social Security Office (SSO) has proposed to slightly increase the contribution rate from employer and employee.
- 2. Change of investment options: Currently the proportion between low risk and high risk investment choices of the SSO is 83:17, while the requirement by law is 60:40. Many studies includes ILO's and FPRI's suggested that if the investment option leans more to higher risk options, the solvency of the fund would be prolonged. Currently, the SSO has employed professionals to conduct its investment under the supervisors of the SSO board.

Figure 23. Projection of the Sustainability of the 2-Benefit Fund (Old Age and Invalidity) of the Social Security Office.



Source: Fiscal Policy Research Institute Foundation (2007).

### 4.2.2 Universal Health Care Program (UC)

Thailand has achieved universal healthcare coverage (UC) by October 2001. The system employs a low cost capitation model with the benefit package that is quite generous and comprehensive. It is financed by the government budget (general tax revenue). The government has adopted the capitation payment method for purchasing cares from public and private service providers<sup>8</sup>. The capitation ratio in each fiscal year was calculated based on the data sets concerning costs of care, probabilities of morbidity, and choices of care of the Thai population in the National Statistical Office's Health and Welfare Survey (HWS), and Socio-economic Survey (SES), as well as the reports from the social insurance schemes. The National Health security Office (NHSO), which is an agency appointed by the government to manage the system, will propose the capitation based on its calculation and methodology to the Bureau of Budget (BOB) for cabinet approval. However, the capitation will be altered up to

<sup>&</sup>lt;sup>8</sup> There are 3 types of service providers in this scheme: (1) The public service providers under the ministry of public health (2) The public service provider under other government agencies (the medical schools) and (3) The private service providers.

negotiation between the NHSO and the BOB, which is normally smaller than the rate that the NHSO proposed. The capitation rate has increased in each year due to increasing in treatment price and related stuffs. In Grenville and Wangcharoenrung (2003), it was evaluated that no contingent liabilities would occur to the government from the operation of the program in the future.

Even the budget under this program is expected to increase in each year due to price changes and coverage expansion, it depends on the capitation, which is up to negotiation between the NHSO and the BOB that is, in turn, the government can control the size and burden that it would bear.

### Figure 24. Forecast of Budget and Capitation of the Universal Health Care Program



Source: Fiscal Policy Research Institute Foundation (2011).

#### 4.3. Trend of Thailand Fiscal Policy

In conclusion, it is obvious that Thailand has applied counter-cyclical fiscal policy in managing its economy. Past experiences in 1997-1998 Asian crisis and 2008-2009 Global Financial Crisis (GFC) have proved it. Such trend does not change at all. On the other hand, successes in using the counter-cyclical fiscal policies to handle its economy during the crisis time have assured the government in doing so.

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### APPENDIX



### A. The FPRI Macroeconomic Model (Non-linear model)

### Aggregate Demand



## Aggregate Supply

### **Cobb Douglas Production Function**

 $Y = f (K,L) = aK^{\alpha}L^{\beta}$ Assumption: constant return to scale ( $\alpha+\beta=1$ )

# B. Assumptions for Projections of the Thai Social Security Fund (2-Benefit Fund)'s Financial Sustainability

### Labour Assumptions

- Birth rate is 1.5% in 2007 and declining to 1.27% in 2020
- · Mortality rate varies by age
- Proportion of labour in formal sector to total population increases from 12% in 2007 to 24% in 2032 due to various economics and education policies
- Labour starts to work when he ages 15
- Salary increases 5% annually

Source: FPRI (2007).

### **Investment Assumptions**

- Return on high risk investment was 6%, while return on low risk investment was 3%
- Contribution conditions remain the same through out the projection (Employer 5%, employee 5%, and government 2.5% of employee's salary, which is capped not to exceed 15,000 baht per month
- Investment proportion between high risk and low risk option changes from 17:83 to 40:60 within 15 years from 2007

### CHAPTER 8

### Fiscal Issue in Vietnam Economy: Assessment on the Impact of Stimulus, Fiscal Transparency and Fiscal Risk

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### 1. Introduction

As the global crisis unfolded in 2008 causing the world economy to slide into worst recession since the Great Depression, the contagious impacts of the crisis have been felt in all continents as well as in most nations. A decline in aggregate demand because of financial hardship and high unemployment rate was observed in nearly all countries. In response, governments of developed-countries have adopted economic stimulus packages to rescue their economies.<sup>1</sup> The 2010 witnessed the financial crisis taking its toll on Europe, with Greece and Ireland being the latest victims. The International Monetary Fund (IMF) and the European Union (EU) had to take measure to rescue both countries on the brink of financial collapse and to prevent a spillover to other European countries already mired in debt.

Like many other developing countries, Vietnam saw a fall in demand for its export and capital inflows. In particular, during the last months of 2008 and early 2009,

<sup>&</sup>lt;sup>1</sup> These packages include such measures as writing off bad assets in the banking system, cutting taxes, investing in infrastructure, and paying out more social security benefits. Central banks around the globe have adopted a lax monetary policy, drastically cutting interest rates to levels not seen in many years and even using unconventional monetary tools to expand liquidity in the banking system.

monthly export dropped successively. Industrial production in the fourth quarter of 2008 slowed down to 15.6% compared with 17.4% in 2007. Foreign direct investments declined significantly. Consumer sentiment was adversely affected and the stock market index kept falling. Finally, GDP growth rate fell from over 8% attained in 2007 to 6.28% in 2008, and deteriorated further in early 2009 when the GDP growth rate in the first quarter was only 3. 1% and for the first half 2009 it was only 3.9%.

The government of Vietnam responded by reversing its tight monetary policy stance and the fiscal austerity implemented in the early 2008 to control its own home-made mini crisis (running inflation and twin deficits). To weather the economy from the adverse impacts of the global crisis the government announced a large fiscal stimulus package (amounting to almost 10% of GDP). GDP growth rate bounced back to 7.7% in the fourth quarter of 2009, from the previous 3.1% level registered in the first quarter and the annual GDP growth rate was 5.3% for 2009 and being estimated at 6.8% for 2010. In overall assessment, Vietnam has weather the global financial crisis relatively well.

Comparing with other Asian countries that managed to accumulate large foreign reserves and maintained healthy government budget, Vietnam is not in a good position to manage an easy exit. By pursuing an expansionary policy to assist the country through the global crisis, extraordinary pressure was put on the already problem-ridden and fragile economy and until recently it is still unclear how the government would manage its exit strategy. Although to some extent the economy recovered from the global financial crisis and grew at 6.8 percent in 2010 (almost returning to the pre-crisis level), it is not restructured to achieve a high level of growth in the future and there are disturbing structural issues facing the economy even before the 2008 global financial crisis occurred. In the post-global economic crisis environment, whether Vietnam's economy continues its economic recovery and growth at a reasonably rapid and stable rate is an important question for the policy makers as. Macroeconomic uncertainty remains as trade deficit keeps rising, government budget deficits is widening, external debt rising and there are some signs of inflation coming back. To complicate the question further, the economy is highly dollarized as evidenced by the commercial bank's offering US dollar interest bearing deposits and the state is captured by its own large SOEs and the soft budget constraint by the local (prpvincial) governments.

In this paper, we set out to examine the fiscal policy that the Vietnam government used to rescue the economy out of global financial crisis and their implications on the fiscal sustainability of the government. We first give an overview of the Vietnam economy and fiscal position in section two, which also discuss the fiscal stimulus package, its impact on the economy and fiscal implication. Section four pictures some potential fiscal and macroeconomic risks in the future. Finally, we plan to show the limitation in fiscal transparency of Vietnam and policy implications for future crisis.

### 2. Country Assessment: Performance and Fiscal Position

### 2.1. Overview of Economic Performance and Fiscal Position before the Global Financial Crisis

The historical evolution of three key macroeconomic indicators for Vietnam together with important economic events/reforms taken place since 1987 is presented together in Figure 1. Since its the 1989-reforms, Vietnam has recorded remarkable achievements in GDP growth and poverty reduction. Over the period 1990-2010, Vietnam's GDP growth rate averaged at around 7% per year. High and continuous GDP growth rates and successful economic development over the period has resulted in overall improvement of people's welfare and significant poverty reduction. According to the Vietnam Household Living Standard Survey the total poverty incidence declined from 58% in 1993, to 37% in 1998, 29% in 2002, 19.5 in 2004 and 16% in 2006. Besides, there are improvements in other dimension of people's welfare such as the high percentage of literate adults (over 90%), higher life expectancy (over 70 years), lower under-five mortality rate (40 per 1000 live births in 2003). Figure 1 shows that since 2000, the economy has regained its momentum after the Asia financial crisis and grew at 7% per annum, reaching 8.5% in 2007, before dropping back to 6.2% in 2008 and 5.3% in 2009 due to the impact of the global economic recession.



Figure 1. Macroeconomic Indicators: GDP growth, Export and FDI

Source: Government Statistical Office.

The economy is depending heavily on investment for growth. Vietnam has relatively high contributions of investment growth to GDP growth (Nguyen *et al.* 2010). The total investment as ratio of GDP has increased considerably during the period after 2000 reaching its peak at 43% in 2007 and 41% in 2008 and it is the large and increasing share of investment in GDP that explains in part the high growth rate accelerated since 2000 (Nguyen *et al.* 2010, World Bank 2007).<sup>2</sup> A direct consequence of adopting an investment-based growth strategy is the rising investment-saving gap. In comparison to other Asian countries, Vietnam domestic saving rate is moderate, staying around 30% of GDP (Figure 2). Combining with a high investment rate, the gap widened and became very large in 2007 and 2008 reaching 9.8% of GDP. With domestic investment in excess of savings, current account deficit has been getting worse in the last few years. In addition to the large trade deficit, the government runs also a large fiscal deficit (i.e. twin deficits) (See Figure 3). Vietnam government budget has been in deficit for years. After the Asian financial crisis, with the implicit expansionary policy to stimulate the economy, the government budget deficit worsens. Even after the

<sup>&</sup>lt;sup>2</sup> However, the efficiency of the high level of investment has been questioned as State investment, which still occupied the massive proportion of the total investment in the country, is made either directly into public infrastructure or through loans to inefficient state-owned enterprises (SOEs), or in the form of grants to municipalities and private enterprises.

economy recovered, the government has been running on a persistent fiscal deficit. Though the fiscal deficit eased slightly from 2004 to 2006 it widened again in the following period from 2007 onwards.



Figure 2. Vietnam Investment – Saving Gap

Figure 3. Vietnam Trade and Budget Deficit



Source: IMF & GSO

Table 1 shows the public debt to GDP ratio for Vietnam and some of its neighboring countries. As the table indicates, there are diverse trends in the level of

public debt of different countries, declining in the Philippines, Indonesia, and China, standing still in Thailand and rising in the remaining countries (including Vietnam). Comparing with other neighboring countries in the table, the level of public debt of Vietnam is rising fast, reaching 49% and 48.9% of GDP in 2007 and 2008, respectively.

Countries	2005	2006	2007	2008	2009	2010
Vietnam	43.70	45.50	49.00	48.90	51.10	51.60
Thailand	48.00	42.50	38.40	37.90	45.30	48.60
Singapore	96.30	91.00	88.30	92.20	106.30	101.80
The Philippines	72.90	65.60	57.60	56.70	57.20	55.80
Malaysia	44.20	42.60	41.70	41.40	50.70	52.10
Indonesia	34.90	33.30	31.70	29.00	27.60	26.50
China	23.50	21.30	18.10	16.00	16.60	17.40

Table 1. Public Debt to GDP Ratio for Selected Countries, 2005-2010

*Source:* Economist Intelligent Unit, The Economist Global Debt Clock: <u>http://www.economist.com/content/global\_debt\_clock</u>, accessed 13<sup>th</sup> October 2010

Serious questions about the sustainability of the public debt are raised after stimulate package introduced by the government to response to the negative impact from the crisis. According to some sources, the level of public debt is expected to be higher than 52% of GDP in 2010 and the level for 2011 is projected by the Government at 57.1% of GDP.<sup>3</sup> Along with state budget deficit, which is -6.9% of GDP in 2009 and is higher than the accepted threshold of -5% of GDP, this raises concerns about the fiscal risk faced by Vietnamese government. The issue will be discussed further in the next section.

Before the crisis hit in 2008, Vietnam has already been struggling with a number of problems. In late 2007 and early 2008, Vietnam was confronted with the economic overheating resulting from huge credit expansion and massive capital inflows. After a long period of striving for high rate of economic growth in 2008, for the first time, the government publicly admitted the trade-off between economic growth and macroeconomic stability, shifting their priorities from economic growth to stabilization

<sup>&</sup>lt;sup>3</sup> See <u>http://vnexpress.net/GL/Kinh-doanh/2010/10/3BA211C5/</u>, accessed at 13<sup>th</sup> October 2010.

in 2008: a tight monetary policy and cutting back public spending on large projects. Together with a huge domestic credit expansion in 2007, and rising world energy and food prices, inappropriate attempt by the government to absorb large capital inflows (both FDI and portfolio investment) while maintaining a fixed exchange rate led to amounting inflationary pressures. As the macroeconomic situation somewhat improved by the end of 2008, the country suffered very negative impacts of global financial crisis and recession. Entering the year 2009, Vietnam is facing new difficulty and challenges additionally hit by the global financial crisis.

#### 2.2. The Effects of the Global Crisis

Up to the first half of 2008, Vietnam was relatively unaffected by the financial turmoil; but the financial and economic environment worsened in the final quarter of 2008 and first quarter of 2009 (Table 2). In the fourth quarter of 2008, Vietnam's exports fell substantially because of the direct and immediate effects of the global crisis. According to official statistics from the General Statistics Office (GSO), the year 2009 witnesses a decline of exports by minus 8.9% due to decreased aggregate demand for its exports, and substantial fall in the prices of its export commodities, especially crude oil and other primary commodities.<sup>4</sup> For a country with annual growth in export values of about 20 percent, this is a serious setback. As the year 2009 closed, exports showed some signs of recovery, due to a global demand revival, but export values amounted to just \$56.6 billion—10 percent lower than in 2008.

In 2008, the flow of registered FDI capital into Vietnam totaled \$64 billion (tripled the registered FDI capital in 2007), while flows of implementation capital reached \$11.6 billion—versus \$8 billion in 2007.<sup>5</sup> In 2009, however, FDI inflows slowed because of capital constraints and the tightening of the world credit market. For 2009, Vietnam managed to attract US \$21.48 billion, accounting for only a third of the record level in 2008 (US \$64 billion), but is higher than in 2007 (US \$20.3 billion). Actual disbursements for investment projects were about US \$10 billion, equivalent to 87%

<sup>&</sup>lt;sup>4</sup> Despite significant increases in export volume for some of Vietnam's major export products such as coffee, rice, pepper, rubber, crude oil, and coal—in 2009, their lower prices led to negative growth rate.

<sup>&</sup>lt;sup>5</sup> When investing in Vietnam, foreign investors are required to register their planned total investment capital (often referred to as registered investment capital), which in practice may differ substantially from the actual amount invested (implementation capital).

against 2008. The slowdown of FDI inflows in 2009, with the expectation of continued lower levels in the years to come, had serious consequences for Vietnam, especially in terms of its exports and investment-dependent growth stategy. According to official statistics, FDI has accounted for more than 50 percent of the country's exports over the last six years.

	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09
GDP (year-on-year %)	6.5	5.7	3.1	4.5	5.8	7.7
Industrial production (year-on-year %)	15.8	14.1	2.9	6.8	10.7	14
CPI, end of quarter (year-on-year %)	27.9	19.9	11.3	3.9	2.4	6.9
Trade balance (% of GDP)	-5.5	-5.9	8.5	-15.2	-19.7	-18.6
International reserves (US\$ billions)	24.1	24.2	23.3	19	18	16
Policy rate, end of quarter (%)	14	8.5	7	7	7	8
5-year yield, end of quarter (%)	15.9	10	9.17	9.42	10.1	11.68
Dong/U.S. dollar, end of quarter	16,600	17,483	17,797	17,798	17,841	18,479
Dong/euro, end of quarter	23,572	24,301	23,492	24,917	26,048	26,425

Table 2. Basic Quarterly Macroeconomic Data during the Crisis

Source: GSO. http://www.gso.gov.vn

It is expected that Vietnam's labor force to be highly vulnerable to the global financial crisis, given its heavy dependence on exports and relatively mobile international investment. Data on the impact of the crisis on the labor market and employment, however, are limited and not reliable, complicating the assessment of the social impact of the growth slowdown.<sup>6</sup> According to a survey conducted by VASS,<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> See also a study by UNDP (2009). Other effects include lower demand for Vietnamese workers in other countries, such as Malaysia; Taiwan, China; and Middle East countries. As the World Bank (2009) observes, available data showed a mixed picture, and the effects are heterogeneous across enterprises and provinces.

<sup>&</sup>lt;sup>7</sup> The first rapid assessment survey, in early 2009, found that job losses were widespread in industrial zones (both in the North and the South), but few took the form of open layoffs. Non-renewals of contracts and incentives for voluntary departures were more common. Job losses were frequent among seasonal workers and those on short-term contracts. Some enterprises attempted labor-hoarding measures to retain their skilled employees. Unemployed immigrants were highly vulnerable, owing to the lack of social security and **non-reversibility of** immigration (the immigrant workers largely come from areas where arable land is scarce and other opportunities are few). Another survey of the impact of the global financial crisis on labor in industrial parks was conducted by the Central Institute for Economic Management (CIEM). Evidence from this survey suggests that job losses were widespread in industrial parks in late 2008 and early 2009. Remittances to families staying in rural areas suffered as a result.

the effects have not been as bad as feared. Despite numerous job losses, frequent reductions in working hours and wages, reduced remittances, and increased reliance on informal sector jobs, major negative effects—such as rising poverty, food shortages, the need to pull children out of school or to sell land, or becoming homeless—have been relatively uncommon.

In addition to its impact on trade, FDI, industrial production, and the labor market, the global crisis has had implications for Vietnam's capital inflows, exchange rate, and stock market. Like other Asian countries, Vietnam suffered capital flight starting in the second quarter of 2008. Banks and financial institutions in the United States and the West reduced their international businesses and focused on their home markets. As a result, funds flowing into Vietnam fell sharply. In response to the booming stock and housing markets during 2006–07, short-term inflows had surged to high levels. The crisis then led to a reversal of these inflows, creating large outflows (See Figure 4). The reversal of portfolio capital flows significantly affected the stock market, with the VN-Index falling to a record low of about 300 points in 2009 from its high of over 1,000 points in early 2007.<sup>8</sup> Although the Vietnamese dong has long been pegged to the U.S. dollar, capital flows have had a major impact on the dong, with several small adjustments of the trading bands and devaluation. Generally, capital outflows depress the dong's value; indeed, since the beginning of 2009, the dong has lost up to a dozen percentage points in its value against the dollar.<sup>9</sup> Declines in exports, as well as in remittance and foreign capital inflows, have reduced the supply of foreign exchange, while expansionary monetary and fiscal policies have increased demand for it. Consequently, there has been a shortage of foreign exchange in the formal market, and the dong's exchange rate against the U.S. dollar has been transacted at the upper bound of its trading band.

<sup>&</sup>lt;sup>8</sup> The Vietnamese banking system has suffered only indirectly from the crisis. This is because the financial and banking sector was not fully integrated with the global network. Furthermore, the absence of such regulation as mark-to-market has helped the banking system in the time of crisis.

<sup>&</sup>lt;sup>9</sup> This decline in the dong's value is due mainly to the declining demand in exports and to portfolio outflows. The depreciation of the dong may help to improve Vietnam's export performance, limiting the negative impact from the global recession. However, a study by Jongwanich (2007) of a group of nine Asian countries finds a very weak link between the real exchange rate and export performance in these countries. On the contrary, world demand and production capacity play a more important role in determining exports of these groups of Asian economies.

**Figure 4.** Flows of Capitals



Source: Vietnam Military Bank

In addition to the direct effects of decreased exports and FDI inflows, the global crisis has reduced aggregate demand sharply, through the employment and income channels. The drop in domestic demand was the result of falling employment and delayed consumption and investment by domestic consumers and investors. Remittances have long been seen as important sources of capital for Vietnam, and the crisis is expected to lower the inflow of this key source of capital. Other impacts include the decline in tourism and lower income for farmers, due to lower commodity prices. <sup>10</sup> The effect of the global crisis on Vietnam's economy is summarized in Table 3 (adopted from Nguyen et al 2010).

<sup>&</sup>lt;sup>10</sup> An indirect (but critical) effect of the global crisis on Vietnam has been the government's efforts to mitigate the impact on the domestic economy and stimulate short-term growth. These efforts may take the form of delaying or canceling some structural adjustment policies (reforms of SOEs and the banking sectors, as well as improvements in the business environment). These structural adjustments, however, are critical for sustainable growth. For example, to stimulate short-term economic growth, the Vietnamese government may resort to refinancing the inefficient banking sector, subsidizing loss-making state-owned conglomerates, and reviving real estate investment. Although these measures are useful and effective for stimulating short-term economic growth, they cannot ensure long-term sustainable growth and may in fact generate new risks. Therefore, the Vietnamese government should speed up structural adjustments to help to transform the country's growth model.

	Period 1997- 2002	Period 2003- 2007	Change from 1997- 2002 to 2003- 2007	Highest 2-year average value before crisis	Expected potential value just prior to the crisis	2008	Forecast/ estimate 2009	Total loss during 2008-2009 compared to potential
GDP growth (%)	6.58	8.05	1.48	8.45	7.5-8	6.18	5.32	-2.18
TFP growth (%)	1.66	2.99	1.33	3.21	2.75	0.2	-0.33	-3.08
Exports growth (%)	17.77	12.91	-4.86	27.74	0.25	5.05	-0.1	-0.26
Exports/GDP (%)	50.73	68.98	18.25	75.25	0.65	78.21	0.62	-0.03
Investment (% GDP)	29.83	37.29	7.45	39.97	37.00	41.13	42.8	5.8
Capital inflows (% GDP)	0.054	0.048	-0.006	0.078	0.07	0.104	0.098	0.028
Fiscal deficit (% GDP)	-	0.051	-	0.055	0.05	0.041	0.07	0.02

Table 3. Summary of Effects of Global Economic Crisis on Vietnam's Economy

*Note:* The potential GDP for Vietnam is expected to be in the range of 7.5-8% per year.

Adopted from Nguyen et al. (2010)

### 2.3. Government's Responses and Stimulus Packages

The government of Vietnam quickly and decisively responded to counter the negative effects of the global crisis. It reversed the course of the monetary tightening and fiscal austerity policy implemented in 2008. The government aggressively loosens its monetary policy stance by cutting the base rate from 14% per year to 7% per year within a few months. Ceiling lending interest rate (1.5 times base rate) was lowered accordingly, from 21% to 10.5% for productive activities. Lending interest rates for credit card and consumption are negotiable and fluctuating between 12% and 15%.

In terms of fiscal policy, the stimulus package, was initially announced at \$6 billion aiming at mitigating the impact of the global financial and economic crisis on the Vietnamese economy and the population, and preventing a general slowdown of economic activities. This figure was later revised to be almost USD 8 billion.<sup>11</sup> To put into perspective, Table 4 presents the values of stimulus packages that neighboring countries committed to fight the global recession. Based on the simple budget deficit metric, the budget plan of late 2008 put the Vietnamese stimulus package in the top tier of the regional comparison (Table 4).

<sup>&</sup>lt;sup>11</sup> Since the first announcement of the stimulus package several additional stimulus polices were adopted or announced, creating some confusion and prompting understandable concern about potentially unsustainable government spending.

Country	Stimulus Package(US\$, Billion)	Proportion to GDP
China	586	12%
Singapore	13.8	10.7%
Malaysia	18.1	10%
Philippines	6.1	4%
Thailand	8.3	3.3%
Vietnam	8	10%
Indonesia	4.5	0.9%

Table 4. Proportion of Stimulus Package to GDP

Source: CIMB Research House, MPI

The package includes a number of components, such as tax breaks and public investments for infrastructure, social transfer and interest subsidy (for working capital loan). For example, the stimulus package includes one-off support of VND 200,000 per person for the poor on the last occasion of New Year Holiday; a reduction of 30 per cent of corporate income tax, an extension of nine months for the submission of 2009 tax payables and a temporarily refund of 90 per cent of VAT for exported goods with "justifiable payment documents", personal income tax exemption for the first 6 months of 2009 and 4% interest subsidy being extended to longer-term loans of up to 2 years for investment in agriculture and other productive activities.<sup>12</sup>

Details of the fiscal stimulus package breakdown in terms of measures are summarized in Table 5. As can bee seen in Table 5, the government's policy approach to maintaining economic growth comprised four broad components: supporting key sectors (primarily small and medium-sized enterprises, or SMEs); stimulating investment; reducing poverty and ensuring social stability; and adopting a flexible approach to monetary and fiscal policy. One of the key components of the stimulus programme was a 4-percentage-point interest-rate subsidy on new dong-denominated short-term bank loans to provide companies with working capital.

How the government's fiscal stimulus package is structured is presented in Table 6. The lack of transparency in Vietnam's fiscal accounting means that it is difficult to ascertain the exact size of the stimulus programme. It is unclear how much of the stimulus package worth VND 145.6 trillion (USD 8 billion) is new money and how

<sup>&</sup>lt;sup>12</sup> See WB (2009) for further details

much has actually been spent. As usual we could expect that there is likely to have been some duplication of spending plans, and some of the announced measures involved spending that had been brought forward. At face value the VND 145.6 trillion represents a stimulus package equivalent to 8.5% of GDP, but this overstates the actual boost to the economy. Examining the Table 6 reveals that out of VND 145.6 trillion announced for fiscal stimulus package, VND 22.5 trillion is actually expenditure earmarked for 2008 carried forward, VND 37.2 trillion advanced from 2010 budget, and VND 3.4 trillion deferral of payment. It is suspected that the amount of VND 37.2 trillion advanced from 2010 budget is financed by "printing money".

No	Policy measures	Amount
1	Interest subsidy	VND 17000 billion
2	State Development investment	VND 90800 billion
3	Tax holiday and exemption	VND 28000 billion
4	Other spending for social security and economic downturn prevention	VND 9800 billion
	Total	VND 145600 billion (equivalent to USD 8 billion)

Table 5. Vietnam's Fiscal Stimulus Measures

*Source:* Report by the Government to the National Assembly (2009)

#### Table 6. Components and Size of Vietnam Stimulus Package

VND trillion unless otherwise noted	Proposed stimulus package
Revenue foregone	25.4
Corporate Income Tax (CIT)	10.4
Personal Income Tax (PIT)	6.5
Value Added Tax (VAT)	7.4
Licenses and fees	1.1
Additional expenditures	117.6
Interest rate subsidy	17
Budget advanced from 2010	37.2
Government bond carried over from 2008	7.7
Investments funded by additional bond issuance	20
Expenditures carried over from 2008	22.5
Deferral of repayment of budget allowance for 2009	3.4
Social spending	9.8
Overall fiscal stimulus	143.0
In percent of GDP	8.5%

Source: Ministry of Finance, Ministry of Planning and Investment, World Bank, IMF

### 2.4. The Impact of Stimulus Package

Together with the global recession bottoming-out, signs of economic recovery for Vietnam could be seen as early as August 2009<sup>13</sup> as indicated in Table 1, with industrial production and GDP growth picking up in the third quarter of 2009. Although the economic recovery is in large part due to the revival of external demand for Vietnam's export and FDI inflow, it is commonly believed that the policy adopted by the government worked in helping the economy through the recession.<sup>14</sup> According to a report by GSO (2009), together with the recovery in other Asian countries, the prospect of Vietnam's economy was improving and some attributed such recovery to government stimulus policy.<sup>15</sup> While there has been wide spread agreement that the prompt introduction of the stimulus package provided quick protection for the economy, there remains some debate around whether or not package was able to target the most effective businesses and sectors and evaluating the effectiveness and efficiency of the government stimulus package is a daunting task in the absence of reliable data. Here we will only present patchy evidence of the effectiveness of the stimulus package.<sup>16</sup>

The most obvious impact of the stimulus package implemented by the government helped keep the credit flowing into the economy and assisting enterprises to clean up their balance sheet, replacing the high interest bearing loans incurred during the turbulent year of 2008 when the interest rate each 21% with interest rate subsidized. This reduced the financial burden by easing capital costs during a period of economic pressure and enabled businesses to maintain production and jobs.

In September 2009 the Government reported that, the stimulus component worth VND 17,000 billion used for interest rate subsidy resulted in loans (for working capital) of VND 405,000 billion, of which 16% allocated to SOEs and 84% to private sector. Spurred by the introduction of government interest rate subsidies, growth of credit and money supply accelerated in the first half of 2009. The growth of total liquidity (M2)

<sup>&</sup>lt;sup>13</sup> <u>http://www.vneconomy.vn/20090828091054122P0C10/kinh-te-8-thang-buc-tranh-dang-sang.htm</u>

<sup>&</sup>lt;sup>14</sup> The effectiveness of the fiscal stimulus packages that countries, developed and developing alike, are implementing is questioned by Foster (2009), http://www.heritage.org/Research/Economy/bg2302.cfm .

<sup>&</sup>lt;sup>15</sup> <u>http://vneconomy.vn/20090901102716178P0C5/he-mo-kha-nang-tao-buoc-dem-cho-nen-kinh-te.htm</u>

 $<sup>\</sup>frac{16}{16}$  An overall and full assessment of the stimulus package may be necessary but falls outside the scope of this paper.

increased to 35.8% in the second quarter 2009 from 20.3% in the fourth quarter of 2008 (Figure 4)<sup>17</sup>. On the other hand, there is evidence that only a limited number of enterprises could access to the subsidy program. Remaining enterprises faced difficulty in accessing capital.<sup>18</sup> In tandem with the fiscal stimulus package, the government also adopted an expansionary monetary stance to promote economic operations. Therefore, separating and assessing the effects of monetary policy and fiscal policy on the credit growth would be superficial since the monetary and fiscal policies in Vietnam are not independent from each other. The government of Vietnam adopted an unorthodox policy during the crisis time, using the fiscal approach to obtain monetary policy objective (lower interest rates by interest rate subsidy). The interest rate subsidy under the stimulus package, together with the accommodating monetary policy, helped injecting credit to the economy during the bad time. Another effect of the package was to restore business confidence, as reflected in part by a rally in the stock market in mid-2009.<sup>19</sup> Evidence of the impact of the 4% interest rate subsidized loan could be found in a recent study by Nguyen and Nguyen (2010), who use the annual survey of enterprises by the Vietnam Chamber of Commerce and Industry to investigate the impact of having access to the loan and job creation. They report positive and significant impact of such interest subsidy package on the performance and job creation by firms.

The stimulus package has also helped mitigate the impact of the financial crisis on workers. In a recent paper, Manning (2009) suggests that the impact on labor has been milder than might have been expected for a country so heavily exposed internationally. This can be partly attributed to the government's timely stimulus package and partly to other factors such as the tight labor market before the crisis, the competitive nature of

<sup>18</sup> According to a report by State Bank of Vietnam, only 20 percent of enterprises receive support from the interest rate program See

http://www.vfr.vn/index2.php?option=com\_content&do\_pdf=1&id=960

<sup>&</sup>lt;sup>17</sup> <u>http://www.adb.org/Documents/Books/ADO/2010/Update/ado2010-update-vie.pdf</u>

The government did not neglect the important role of export in economic growth performance. Although details of the export promotion allocated from the stimulus package are not available, there are some indications that the government has increased its budget for export promotion, and directly assisted companies which have to lay off workers in such sectors as textiles, shoe-making and aquaculture. As a result, the market composition of Vietnam's export shows a clear market diversification towards regions less adversely hit by the global crisis. http://www.tuoitre.com.vn/Tianyon/Index.aspx?ArticleID=302432&ChannelID=11

Vietnam's key exports, and the private sector's capacity to compete globally, despite cutbacks in demand for key export commodities (Manning 2009). In addition, the market for semiskilled and skilled workers recovered well after the Tet break (March 2009).<sup>20</sup> This is consistent with evidence from a rapid assessment survey conducted by VASS in May 2009, which found evidence of "green shoots," with enterprises receiving orders and recruiting more employees. The multiplier effect of the package may also help in the face of falling aggregate demand.

The agricultural sector, which employs more than two-thirds of the country's population and accounts for most of Vietnam's exports, has also been hit hard by the global downturn, although the impact on rural areas has been limited. In April 2009, the government introduced a series of stimulus measures targeting the rural economy. The new policies include interest-free loans for purchasing farm equipment and subsidized loans for fertilizer and other agricultural inputs. However, in the first stimulus package, farmers, who account for 70 percent of the population, were able to access only \$48 million of credit, a too small share of the total package of about \$22 billion disbursed.

In addition to the stimulus package, the resilience of the business sector appears to have been a major driver of the recent recovery. The stimulus has been seen as a "rescue remedy" to help enterprises access loans to get back on track, remain in production, and create jobs. It has been important in improving the liquidity of the banking system and maintaining debt payments. After all, it is the business sector that takes the risk in responding to the stimulus, and it is its investments that keep aggregate demand from falling too far. Another key factor in facilitating the recovery is the revival of world demand for Vietnam's exports and inflows of foreign investment.

<sup>&</sup>lt;sup>20</sup> Tet break is Vietnam traditional new year holiday.

### 3. Identification of Future Fiscal and Macroeconomic Risk

While the government's stimulus helped to support GDP growth and has enabled Vietnam to escape the worst of the global downturn, keeping GDP growth in 2009 at a relatively high estimated level of 5.3%, it has also fuelled rapid credit growth and has amplified concerns about both the country's fiscal accounts and the government's ability to keep inflation in check. Early 2010 when statistics indicated relatively strong recovery and emerging inflationary pressures, the government have been urged to normalize its macroeconomic policies. The economic outlook, however, is subject to four major risks: inflation, exchange rate, investment capital inflows and fiscal imbalances which are expected to complicate macroeconomic management and adding uncertainty to growth prospects.

### 3.1. Inflation

During the early 2000s, Vietnamese inflation rates were relatively low with one digit. However, sustained debt-financed investment by the government combined with accommodative monetary policy, inflation accelerated in 2007 and peaked at over 23 percent in 2008. In switching from a high-growth strategy to one of stabilization, the government tightened monetary policy in 2008 (in combination with nontraditional and administrative methods) to curb the accelerating inflation rate. As a result, inflation in 2009 fell back to less than 10 percent. The government's ability to control inflation in 2009 was made easier by the lower commodity prices (especially oil) associated with the crisis. To counter the effects of the global crisis, however, the government reversed the course of monetary tightening. Money supply and credit expansion, together with the large stimulus package, have put renewed pressure on inflation. The interest-rate subsidy, combined with relatively low official lending rates in 2009, also resulted in a surge in domestic credit expansion and undermined the progress in taming inflation achieved in 2008. As the economic recovery began toward the end of 2009, there were

worrying signs of accelerating inflation.<sup>21</sup> The government openly set the inflation target at about 8 percent for 2010, but as the year 2011 drew to close, inflation was higher than the target, reaching a double digit inflation rate at 11.7 percent. On the background of recent devaluation of the Dong (almost 10% in February 2010) and the huge trade and budget deficit, the risk of inflation is looming large.

### 3.2. The Chronic Current Account Deficit and the Dong's Devaluation

Some researchers (Pincus 2009) has argued that the policy options available for Vietnam's government are much more limited than those of China or other neighboring countries in dealing with the global financial crisis. While China and other Asian neighboring countries have maintained a surplus current account and sound fiscal balances, for several consecutive years Vietnam is plague with a twin deficit (a large current account deficit of 12% in 2008 and large fiscal deficit as presented in details in the next section). Vietnam's chronic current account deficit in a number of occsations led to balance of payment near-crisis in the last 2-3 years. The current account deficits have reached a level that is much higher than the commonly believed sustainable level of 5% of GDP. The continuing current account deficit was mainly driven by the growing domestic credit associated with the financing of the fiscal deficit, the increase in private consumption by households and an overvalued currency and a loss of competitiveness.

Recently, with the stimulate package against the global financial crisis and a reducing foreign reserve due to increasing current account deficit and capital outflows, the domestic currency lost its favorite position and losses its value significantly.<sup>22</sup> By late November 2009, the SBV announced that it would devalue the local currency by over 5% against the US dollar. Again, by early February 2010, the SBV devalued the

<sup>&</sup>lt;sup>21</sup> Vietnam's economy depends heavily on imports (especially intermediate goods); therefore, once the world economy recovers, higher prices for Vietnam's key imports should lead to higher passthrough of import inflation. On top of that, the depreciation of the dong would lead to further pressure on inflation.
<sup>22</sup> The rigid exchange rate policy plays an important part in the chronic trade deficit of Vietnam.

<sup>&</sup>lt;sup>22</sup> The rigid exchange rate policy plays an important part in the chronic trade deficit of Vietnam. The government of Vietnam for a long time has preferred a strong national currency and has maintained a fixed exchange rate regime, pegged into USD, with irregular adjustments. The rationale for a strong currency even though it is not supportive for the export-led growth strategy is that, the country imports machinery and most of its intermediate inputs for exporting. More importantly, strong currency maintains advantage for the government in terms of debts borrowing from abroad.

Dong by another 10% against the USD. Prior to the devaluation, the dong had been under downward pressure. Demand for US dollars had risen strongly, driven by the widening merchandise trade deficit and rising domestic inflationary expectations.

Rapid credit growth, together with an expansionary fiscal policy, has led to a sustained increase in imports and a widening trade deficit. A larger demand for foreign exchange by importers, combined with market expectations that the dong would be devalued, led to a shortage of foreign exchange that was particularly severe in May–July 2009, and again in November 2009. Figure 5 suggests that the foreign reserve is running quite low, meeting only 6 import months. In 2010, the situation is getting worse and fearing that the downward pressure on the Dong would increase further in the face of the dollarization, the government had to resort to administrative measures in early 2011.





Source: IMF

#### **3.3. Investment and Capital Inflows**

The investment ratio and GDP growth in Vietnam go hand in hand for the period under study (Figure 6). Vietnam's economic growth strategy, which relied on extensive investment, was made possible by increasing government debt and heavy inflows of foreign savings (FDI, ODA and more recently FII). FDI inflows have been an important source of funds for investment in Vietnam, accounting for over 30 percent of total investment.<sup>23</sup> Since the early days of economic reforms in the 1990s, Vietnam has enjoyed considerable transfers of resources in the form of ODA, most of which was in the form of non-refundable grants or loans on highly favorable terms (with a large grant component).<sup>24</sup> Unlike the situation in other countries, the private sector in Vietnam plays an important—but not a dominant—role in investment. Until 2006, the state sector was the most important source of investment, but its share in investment has declined from 60 percent in 2001 to 33.9 percent in 2008, before rising again to more than 40 percent because of the fiscal stimulus package.<sup>25</sup>

<sup>&</sup>lt;sup>23</sup> The current financial crisis has put Vietnam in a delicate position. On the one hand, it now would like to be more selective in attracting FDI; but on the other hand, it still needs to compete against other countries for the smaller pool of capital. The comparative advantages offered by Vietnam's abundant, cheap, skillful, and compliant labor force has largely disappeared and will become less important. Vietnam cannot rely on an unskilled-labor advantage to compete for FDI as it could in the last 20 years. Therefore, rather than seeking greater investment for its own sake, policy makers should concentrate on building a climate conducive to efficient investment. Vietnam still lags far behind other countries in the region in this respect. The supporting domestic manufacturing sector has not emerged.

<sup>&</sup>lt;sup>24</sup> ODA has facilitated the construction of important infrastructure projects, rural development, education, training, and administrative reform. In the foreseeable future, given the commitments of donors, ODA will remain available, but the terms of ODA loans are bound to become less advantageous as Vietnam grows.

<sup>&</sup>lt;sup>25</sup> State investment is made either directly into public infrastructure or through loans to SOEs, or in the form of grants to municipalities and private enterprises. The general declining trend of the state sector is irreversible and contrasts with the increasing roles of the private domestic and FDI sectors. During the crisis, the investment share of the state sector recovered, but we do not expect the state's role to rise over the long term. Our projections for the three economic sectors are for the general declining trend of the state sector to continue and for the shares of FDI and domestic private sectors to increase—with the domestic private sector becoming the most prominent.



Figure 6. GDP Growth and Investment

Source: ADB Key Indicators 2010

The question Vietnam faces now is whether it can still rely on the old strategy of investment-based development. The answer depends in part on its ability to sustain the inflows of foreign savings and on how the country uses such inflows. In the face of the government's growing need to secure additional funding, ODA takes on greater importance. This is especially true when FDI inflows and export earnings are falling. On this front, the Japanese government has resumed its ODA for Vietnam; the Asia Development Bank granted Vietnam budget support of \$500 million; and, most recently, the government has secured an unprecedented level of ODA—\$8 billion—from international donors. While we expect that such cheap ODA funding will still be available in the medium term, ODA funds will become more expensive over the long term, and Vietnam may have more difficulty competing for them as its economy develops.

There is also the issue of destabilizing capital inflows. As previous experienced in 2007, the sudden inflows capital (both long-term FDI and hot money) had not been accommodated with appropriate policy led to high inflation, overheating and bubbles. With the possibility of resurgent capital inflows once the crisis is over it is also essential to manage inflows effectively. Responses should address currency flexibility, clear and

stable monetary and fiscal policies, an appropriate regulatory and supervisory framework, and even carefully crafted temporary capital controls.

#### 3.4. Fiscal Risks Faced by the Government

Before the global financial crisis, Vietnam's fiscal position was held in check with fiscal rules approved by the National Assembly. State budget revenue from taxes and fees has been strong, increased from 25% of GDP in 2004 to 26.5% of GDP in 2008. Total government revenues also increased in the same period, from 27.7% of GDP in 2004 to 29.4% of GDP in 2008. General government expenditures however was also on the rise during this period, from 31% of GDP to 37% of GDP, respectively. General government budget deficit was kept under -5% of GDP; total public debt was less than 50% of GDP in 2008. The situation, however, has been changed during the course of the global financial crisis. Vietnam's fiscal position suffers from the external shock, reducing its revenues and grants, and from stimulate package used to remedy negative impacts from the global financial crisis. Figure 7 illustrates the evolution of the budget deficit of Vietnam during the last few years. The government's operating expenditure has been rising more sharply than its tax revenue since 2000, and the buget deficit is getting wider, especially after the global financial crisis in 2008. Despite a lack of clarity about how much of the stimulus will be incorporated into the annual budget and how much will be off-budget, the government's budget deficit widened dramatically in 2009.

Figure7. Budget Collections and Expenditure



Source: Ministry of Finance

Tables 7 and 8 show the structure of government budget and the breakdown of government source of revenues, respectively. Like any other country, in Vietnam, increasing government spending at a time of recession with contracting revenues posed complicated questions. The already-deficit national budget was being put under further strain by a marked reduction in revenue (lower revenue from lower economic activities due to global crisis, lower crude oil royalties due to falling price). Looking at Table 7, in the recent past, crude oil royalties have been an important source of revenue (and export earnings) for the government as over 20% of government revenue comes from oil export, but with global oil prices falling sharply from the highs that they reached in 2008, the government's revenue position is weak, leaving less scope for generous spending plans. As indicated in Table 7, in 2009 crude oil royalties contributed only 12% as contrasted with 24% in the 2008 in the government budget. As can be seen in Table 8, Vietnam has a narrow tax base and only a small segment of the Vietnamese working group pays income tax as the majority of the working population are low wage earners. Although revenue collection in 2009 was in access of the planned revenue it may be due to increased efficiency in tax administration rather than due to a broaden tax base.

A question may be raised next is how the Government can fund the deficit. It is planned that the Government will issue VND 64 trillion worth of bonds in of 2009, and VND 6 trillion in 2010. However, the failures of recent bond issuances has shown that this is not currently an effective way for of capital mobilization in Vietnam. In an effort to raise additional funds for its stimulus package, the government has recently attempted to sell US\$1bn of dollar-denominated domestic bonds of various tenors in 2009. However, these efforts were barely successful with investors demanding higher yields than the government is willing to offer (Nguyen *et al.* 2010).

Up to 31/12/2009, the public debt accounted for 52.6% of GDP, of which government debt was 41.9% while the limit provision of the Prime Ministry is 50%, the guaranteed debt at 9.8%, the external debt level at 38.8% of GDP and the local government debt at 0.8% of GDP. This level which is projected to reach 56.7% of GDP by 2011, including government debt at 44.5% and external debt at 42.2%, shows that the national financial sustainability is running the risk of surpassing the threshold. In the medium term, this rate is anticipated to continue to increase as the government keeps pursuing the investment-based development strategy and therefore incurring more debt.<sup>26</sup>

Medium-term sustainability of fiscal position of the country is at high risk since the worrying issue is repayment capacity which is presented through the growth rate of debt, the internal acceleration rate over capital and the investment to GDP, given investment-based development strategy followed by the government. On average, during the period 2001-2009, public debt per capita in Vietnam increased by 18% per year, nearly triple the growth rate of GDP per capita of Vietnam contemporaneously. The growth rate of Vietnam's public debt in 2010, standing at estimated 12.3%, is lower than some countries in the region. It is, however, double the growth rate of Vietnam at the present. The external debt rose in an increasing pace, from the growth of 4.18% in 2004 to 12.66% in 2005, nearly doubled in 2006 at 21,81% and specially probably making up 34% in 2010. Meanwhile, the acceleration rate from the internal economy over the total capital account continued to fall (from 87.4% in 2006 to 68% in 2009), in contrast to the upward trend in the share of investment in GDP (43% in 2009).

<sup>&</sup>lt;sup>26</sup> <u>http://vneconomy.vn/20101002083857533P0C9920/nam-2011-no-cong-co-the-o-muc-60-gdp.htm</u>
Contingent liabilities including publicly guaranteed debt is one of the main risks to fiscal sustainability. In September 2008, foreign currency debts guaranteed by the government stood at US\$4 billion<sup>27</sup>. These borrowings are mostly foreign commercial bank loans of large SOEs in the transport and power sectors. However, the probabilities of these enterprises' bankruptcy or less productivity are assessed to be higher as a guarantee can create a moral hazard whereby these enterprises have little incentive to minimise risks to ensure the debt is repaid. The second reason is because in Vietnam, guarantees are usually not part of the budget process, thus there is less careful analysis of the risks involved and as the result, this enables the government to support riskier ventures than those which fall within the budget process. The shortage of stringent exposure and reporting procedures for guarantees can contribute to inappropriate issuance or overuse of guarantees. Therefore, the ineffective use of government guaranteed debt may put a debt burden to the government's budget and the current emerging problems related to the Vinashin's 80 trillion VND debt were a strong warning.

Some analysis done by the World Bank, however, suggests that there are rooms for fiscal policy implementation in Vietnam and the fiscal position of the country remains strong (World Bank 2009). The baseline scenario of the most recent Debt Sustainability Analysis (DSA) by the World Bank and the International Monetary Fund (IMF) estimates public and publicly-guaranteed debt to increase from 44 percent of the GDP in 2007 to around 51 percent by 2016, and decline slightly thereafter. There are two important aspect of Vietnam's debt: First, Vietnam government has a long history of prudent external debt and a large component of Vietnam's external debt is highly concessional with long repayment periods and low interest rates. Therefore, although this increase is large and significant it is still considered within manageable limits. External debt, both public and private, is projected to decline somewhat: from a little over 30 percent of GDP to just under 26 percent in 2017. The ratio of external debt service payments to exports is estimated to remain about 4 percent during 2007 to 2017.

<sup>&</sup>lt;sup>27</sup> Bulletin external debt No5, Ministry of Finance, Vietnam.

The DSA concludes that Vietnam should thus remain at low risk of external debt distress.<sup>28</sup>

The analysis above conceals a important issue in Vietnam, i.e. the soft budget constraints faced by both the large SOEs and local government. Budget constraints are soft when SOEs and local governments can expect to be bailed out by the federal government in times of financial crisis (Kornai, Maskin and Roland 2003). At the moment, the government does not have a stringent and effective monitoring and control mechanism in place to monitor the borrowing of local government and SOEs. Local governments, according to the budget law, are allowed to issue international bonds so as large SOEs. According to recent report by the Economic Committee of the National Assembly, the total outstanding borrowing by the large SOEs and business groups has amounted to 49% of GDP in 2009, increased from 23.9% of GDP in 2008. The recent collapse of a large shipbuilder (Vinashin) with the total outstanding amount of debt reaching USD 4 billion is a warning for the fragility of the situation in Vietnam.

<sup>&</sup>lt;sup>28</sup> Further details of the DSA can be found here http://imf.org/external/pubs/ft/dsa/pdf/dsacr09110.pdf

		2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
		%	%	%	%	%	%	%	%	%	%	%
	GDP	6.8	7.1	7.3	7.8	8.4	8.2	8.5	6.3	5.3	6.8	
<u>A</u>	TOTAL REVENUE	100	100	100	100	100	100	100	100	100	100	100
1	Domestic revenue	50.9	49.6	44.4	46.5	42.2	50.4	51.1	50.2	57.5	63.7	64.2
2	Oil revenue	25.9	21.4	20.7	21.6	23.4	29.3	22.0	24.0	12.9	14.3	11.6
3	Customs duty revenue	20.9	25.5	19.1	15.5	13.4	15.7	18.1	22.3	22.5	20.6	23.3
4	Nonrefundable grants	2.2	1.8	1.7	1.3	1.3	1.3	1.1	1.2	1.4	1.1	0.8
5	Others		1.7	14.2	15.1	19.6	3.2	7.7	2.2	5.6	0.2	
<u>B</u>	TOTAL EXPENDITURE	100	100	100	100	100	100	100	100	100	100	100
1	Exp. on investment development	27.2	30.5	30.2	26.6	25.3	26.8	27.6	24.8	30.8	21.6	20.9
2	Principal payment			12.9	13.8	12.9	12.7	13.3	10.8	11.1	12.1	11.9
3	Current expenditure	56.7	52.7	48.4	43.4	42.2	50.6	55.9	55.4	55.2	63.7	60.9
4	Contingency		0.4	0.1	0.0	0.0					2.6	2.5
5	Others	16.1	16.5	8.5	16.2	19.6	9.9	3.2	9.0	2.9		3.7
<u>C</u>	Deficit (classified by VN)											
	Deficit/GDP (%)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.06	0.05
<u>D</u>	Total financing (classified by GFS)	100	100	100	100	100	100	100	100	100	100	100
1	Domestic financing	69.9	71.8	76.5	79.1	79.6	74.2	76.1	77.3	76.4	82.5	76.8
2	Financing abroad	30.1	28.2	23.5	20.9	20.4	25.8	23.9	22.7	23.6	17.5	23.2

 Table 7. Vietnam Budget Structure in recent Year (Billion VND)

Source: Ministry of Finance

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Total revenues and grants (Unit: Billion VND)	90749	103888	121716	158056	198614	238686	264260	315915	416783	442340	528100	595000
A. Current revenues	96.9%	97.1%	97.2%	92.3%	90.7%	91.9%	92.3%	89.4%	90.6%	90.0%	92.2%	94.0%
I. Taxes	87.6%	88.3%	87.2%	81.0%	78.3%	80.3%	87.2%	84.2%	86.2%	83.7%	87.0%	88.5%
1. Corporate income tax	31.9%	32.1%	30.3%	30.0%	28.7%	31.8%	38.2%	32.6%	32.5%	25.3%	26.6%	25.9%
2. Individual income tax	2.0%	2.0%	1.9%	1.9%	1.8%	1.8%	2.0%	2.3%	3.1%	3.2%	4.4%	4.9%
3. Value added tax	18.8%	18.6%	21.3%	21.0%	19.5%	19.2%	20.7%	22.1%	21.6%	24.1%	28.2%	30.6%
4. Special cons. tax for domestic	5.8%	6.0%	6.0%	5.6%	6.4%	6.6%	6.5%	5.5%	5.2%	6.6%	6.8%	6.7%
5. Natural resouces tax	8.3%	8.1%	7.0%	6.1%	8.8%	8.9%	7.7%	6.3%	6.4%	4.2%	4.9%	4.4%
6. Imp - Exp. tax, special cons. tax on imports	14.8%	16.8%	18.0%	14.2%	10.9%	9.9%	10.0%	12.2%	14.4%	17.4%	13.6%	13.5%
7. Other tax	6.0%	4.7%	2.7%	2.2%	2.3%	2.2%	2.3%	3.1%	3.0%	2.8%	2.5%	2.5%
II. Fees, charges and non-tax	9.3%	8.9%	10.0%	11.3%	12.4%	11.6%	5.1%	5.3%	4.4%	6.4%	5.1%	5.6%
B. Capital revenues	0.9%	0.9%	0.9%	5.9%	7.8%	6.5%	6.3%	9.2%	7.7%	8.5%	6.8%	0.8%
C. Grants	2.2%	1.9%	1.8%	1.9%	1.4%	1.6%	1.4%	1.3%	1.7%	1.5%	1.0%	1.7%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	97%

# Table 8. Vietnamese Revenue Breakdown

\* Estimate Budger for 2011 Source: Ministry of Finance. The State Budget Report

#### 3.5. Fiscal Transparency

Since 1996, the Government has begun the process of enhancing fiscal transparency, with the issuance of the budget law and its implementation. In 1997, the budget formulation process was clarified together with the reporting and processing of budgetary information. In addition, the promulgation of the Ordinance on practicing thrift and combating wastefulness in public agencies (March 1998) and the decree on implementation guidelines to legalize fiscal transparency (June 1998) also expanded the accessibility to budgetary information for government agencies, donors and the Vietnamese public.<sup>29</sup> According to the Article IV Consultations report published by the IMF in 2007, the Ministry of Finance's (MoF) State Budget Department "produces provisional monthly, quarterly, and annual data on government operations shortly after the end of the reference period; final data for the fiscal (calendar) year are published after a delay of about eighteen months" (p.15). The data represent the consolidated operations of the state budget, which covers all four levels of the government: central, provincial, district, and commune. They exclude off-budget data on nor investment expenditure or quasi-fiscal activities of SOEs and extra-budgetary funds, among which are the social Security Fund, Enterprise Restructuring Fund, Development Assistance Fund, Export Support Fund, local development funds, and the Sinking Fund (for repayment of on lent funds), for which data are not complied on a regular basis.

Starting in late 2001, the MoF began posting annual budget outturns and plans on its external website, including by major revenue and expenditure items. However, the statistics has not yet meet international standards of functional classification, and this, in turn, might hamper formulation, execution, and monitoring of fiscal policy" (p. 16). Therefore, further considerable actions must remain to be taken so as to improve the coverage of fiscal data as recommended in the 1998 Bank-Fund report on fiscal transparency, the STA multisector statistics mission of 2001, and the 2005 Public Expenditure Review.<sup>30</sup> Vietnam does not yet subscribe to the IMF's Special Data Dissemination Standard (SDDS), but has participated in the less rigorous General Data Dissemination System (GDDS) since 2003.

<sup>&</sup>lt;sup>29</sup> World Bank, Vietnam taking stock, 2000, <u>http://www-</u> wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2003/10/24/000012009\_200310241628 29/Rendered/PDF/269800VN0Taking0stock0200001public1.pdf

<sup>&</sup>lt;sup>30</sup> IMF, "Vietnam: Article IV Consultations" Country Report No. 07/387, Annex IV

Overall, Vietnam displayed a number of deficiencies in the area of fiscal transparency and its Financial Standards Index was only ranked in the very low group, i.e. 85/93 nations, with the indicators for fiscal transparency standing at the intent declared level by The Financial Standards Foundation . Nonetheless, Vietnam is recognized to make good progress in fiscal policy reforms aimed at improving transparency.<sup>31</sup>

### 4. Conclusion and Implications for Future Crisis

In 2008, as the global financial crisis unfolds, the severe impacts have been felt on all continents including Vietnam. The economy is weathering the global economic crisis quite well thanks to the decisive, timely and determined policy responses. The experience in Vietnam points to the importance of strong fiscal policy to confront the falling aggregate demand due to the global economic downturn. Experience also shows that engineering a good stimulus package that is timely, well targeted and fiscally sustainable is not an easy task as shown by the still ongoing debates on the stimulus package. In retrospect, it appears that the government of Vietnam chose an effective mix of stimulus measures. The rapid loosening of monetary policy, together with the first phase of the interest rate subsidy scheme acted as a "mass bail-out" for the frozen banking and credit sector; meanwhile exemptions and deferrals of tax payments succeeded in preventing a more severe economic downturn. The interest rate subsidy has kept credit flowing into the economy, at a time when banks could have preferred to sit on their liquidity and avoid taking risks. It also allowed the refinancing of enterprise debts contracted at very high interest rates, which could have led to numerous defaults in the context of rapid disinflation. In addition, it boosted the profits of commercial banks, at a time when the deterioration in the quality of their portfolios and thin interest rate margins could have made them vulnerable.

Unlike other countries, Vietnam does not have modern social insurance mechanisms yet, thus lacking an important automatic stabilizer in the economic turbulent time. Instead, Vietnam had to rely on other mechanism such as cash transfers which is fraught problems.

While striking the right balance between stimulus and stability becomes more pressing, the macroeconomic debate should not relegate other key policy reform agendas to the

<sup>&</sup>lt;sup>31</sup> <u>http://www.estandardsforum.org/vietnam/standards/code-of-good-practices-on-transparency-in-fiscal-policy</u>

backburner. There is a need to support economic activity and to preserve stability, and the government should strike the right balance between them. However, there are also key structural reforms which are required to sustain long-term growth. The crisis highlights the necessity and offers the opportunity to execute these reforms as well as tackle structural problems. From our point of view, the most important issues are boosting competitiveness and improving the environment for investment.

Despite all these short-term challenges, though, Vietnam's positive medium-term growth outlook still rests on a sound footing. This includes its young and relatively well-trained population which promises to yield a positive demographic dividend. Although there are some concerns about budget deficit and the debt sustainability, overall the fiscal sustainability of Vietnam is still within the manageable range if the government exercises restraints in its fiscal expenditure (budget advancement).

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# Appendix. Investment in Vietnam

# Table. Investment in Vietnam

		Investment by Sector			State Investm and local g	ent by central overnment	State Investment Composition		
Year	Total investment	Non-State Sector	FDI Sector	State Sector	Central Government	Local government	State Budgeted	Loans	Equity of SOE and others
1995	100	27.6	30.4	42.0	54.3	45.7	44.6	19.9	35.5
1996	100	24.9	26.0	49.1	57.8	42.2	45.6	19.3	35.1
1997	100	22.6	28.0	49.4	56.1	43.9	44.0	23.7	32.3
1998	100	23.7	20.8	55.5	56.5	43.5	40.4	28.3	31.3
1999	100	24.0	17.3	58.7	56.9	43.1	41.3	32.1	26.6
2000	100	22.9	18.0	59.1	59.8	40.2	43.6	31.1	25.3
2001	100	22.6	17.6	59.8	55.6	44.4	44.7	28.2	27.1
2002	100	25.3	17.4	57.3	49.7	50.3	43.8	30.4	25.8
2003	100	31.1	16.0	52.9	50.5	49.5	45.0	30.8	24.2
2004	100	37.7	14.2	48.1	50.5	49.5	49.5	25.5	25.0
2005	100	38.0	14.9	47.1	51.1	48.9	54.4	22.3	23.3
2006	100	38.1	16.2	45.7	50.7	49.3	54.1	14.5	31.4
2007	100	38.5	24.3	37.2	48.2	51.8	54.2	15.4	30.4
2008	100	35.2	30.9	33.9	49.4	50.6	61.8	13.5	24.7
2009	100	33.9	25.5	40.6	49.8	50.2	64.3	14.1	21.6
2010	100	38.1	36.1	25.8					

Source: Vietnam Statistical Office

# Table A1: Sector of State Enterprise

	Total	Under 0.5 billion VND	From 0,5 to under 1	From 1 to under 5	From 5 to under 10	From 10 to under 50	From 50 to under 200	From 200 to under 500	From 500 and above
				In	absolute num	ıber			
2000	5759	133	167	1272	924	2047	968	165	83
2001	5355	113	100	1009	818	1948	1061	204	102
2002	5363	73	86	856	748	2001	1194	284	121
2003	4845	64	50	630	602	1815	1217	328	139
2004	4597	35	31	509	516	1663	1238	402	203
2005	4086	27	27	397	423	1405	1121	429	257
2006	3706	31	25	319	365	1195	1064	407	300
2007	3494	26	21	270	324	1085	992	438	338
2008	3287	27	16	226	266	968	966	425	393
					Percentage				
2000	5759	2%	3%	22%	16%	36%	17%	3%	1%
2001	5355	2%	2%	19%	15%	36%	20%	4%	2%
2002	5363	1%	2%	16%	14%	37%	22%	5%	2%
2003	4845	1%	1%	13%	12%	37%	25%	7%	3%
2004	4597	1%	1%	11%	11%	36%	27%	9%	4%
2005	4086	1%	1%	10%	10%	34%	27%	10%	6%
2006	3706	1%	1%	9%	10%	32%	29%	11%	8%
2007	3494	1%	1%	8%	9%	31%	28%	13%	10%
2008	3287	1%	0%	7%	8%	29%	29%	13%	12%

Source: GSO

# **CHAPTER 9**

# Assessment of the Impact of Stimulus, Fiscal Transparency and Fiscal Risk: Evidences from India

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# 1. Introduction

The Indian economy has undergone a remarkable transformation over the past two decades. After a long spell of growth at an average annual rate close to 9 per cent (2003-08), GDP growth slowed down to 6.7 per cent in 2008-09 in the wake of the global crisis. The growth rate picked up to 7.4 per cent in 2009-10. Undoubtedly, both fiscal and monetary stimuli contributed significantly to prevent a sharper decline in 2008-09 and promoted recovery in 2009-10. Fortuitously, large fiscal stimulus was provided ahead of the Lehman crisis in April 2008 when the budget for 2008-09 included significant allocations for social sector and transfer payments in preparation for the forthcoming elections. Some more fiscal stimulus was provided also after the crisis broke out and together with the earlier increase contributed to generating huge fiscal deficits for India, which may have adverse effects on growth due to the concerns over fiscal sustainability and macroeconomic stability.

Given India's long history of running huge fiscal deficits, the sharp increase in fiscal deficit in the last two years is a major concern for both academicians and policy makers in India (Govinda Rao 2009, Rangarajan 2009). The level of combined (central

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plus state governments) fiscal deficit in 2009-10 at 10.1 per cent of GDP exceeded the previous record of 9.9 per cent of GDP in 2001-02 and was considered unsustainable. This follows a sharp rise in the fiscal deficit from 4.2 per cent of GDP in 2007-08 to 8.5 per cent in 2008-09. In consequence, the debt to GDP ratio rose to 72.4 per cent for the year 2009-10, up from 71.6 per cent in 2008-09. This rise seems to have reversed all the fiscal gains made since 2003-04. The fiscal situation was reversed sharply as the government undertook a number of measures to stimulate the economy in the run up to the elections and subsequently in the wake of the global crisis. According to budget estimates for the year 2010-11, the ratio of fiscal deficit to GDP (for both the centre and states but excluding off-budget bonds) is expected to be 8.5 per cent. It will be about 10 percent with the off-budget bonds (mainly oil bonds). Thus, the need for fiscal consolidation and the achievement of fiscal sustainability continue to be the key macroeconomic issues confronting Indian policy makers.

This paper attempts to understand India's current fiscal situation, its likely future evolution, and its impact on the economy in the context of a weak global recovery from the current crisis. This paper is divided into five sections. Section 2 provides an overview and some insights from economic literature into the relationship between fiscal deficit/public debt and growth. Section 3 presents trends and patterns of the Indian fiscal situation over the past decades (1980-81 to 2010-11), discusses the major fiscal reforms that have been undertaken in recent years and examines the structural/cyclical behaviour of fiscal variables in detail. Section 4 discusses the impact of the current global crisis on fiscal balances in India. Finally, Section 5 includes the contours of a feasible exit strategy for restoring fiscal balance.

# 2. The Nexus of Fiscal Deficit and Economic Growth – The Oretical Perspective

The impact of fiscal deficit on economic growth is a highly debated issue in economics. Apparently, there is no consensus among economists on this issue. One argument, following Keynes, is that high fiscal deficits are not unusual to developing economies as governments use fiscal deficits to keep aggregate domestic demand at high levels in an effort to generate growth and employment. High fiscal deficits accelerate capital accumulation and growth (Krishnamurty 1984, Krishnamurty 2001, Chandrasekhar 2000, Shetty 2001, Chelliah and Kavita Rao 2001, Murty and Soumya 2007). Those supporting the Keynesian approach argue that an increase in fiscal deficit due to public sector investment, especially in infrastructure (which consists of highways, airports, mass transit, etc.) stimulates growth in the private sector. Increasing public investment in an appropriate policy framework, therefore, gives the private sector adequate incentives to invest on a massive scale leading to overall economic growth. This is generally referred to as the positive 'crowding in' impact of fiscal deficit.

Classical/neo classical theory, on the other hand, postulates that high fiscal deficit created through higher public investment may displace private investment, or more generally private expenditure-the so called crowding out effect. Public investmentdriven fiscal deficit crowds out private investment through an increase in the interest rate, especially if government borrowing is used to finance revenue deficit. It may also work through movements in the price level depending on how such investment is financed and the extent of capacity utilisation in the economy. Public expenditure in general increases aggregate consumption in the economy, which leads to a reduction in aggregate savings, resulting in higher interest rates, which in turn discourages private investment and overall economic activity in a closed economy. In an open economy, higher public investment leads to higher capital inflows and a real appreciation of the currency, which results in lower net exports and again a reduction in economic activity. In either case, higher public expenditure appears to result in a reduction in overall economic activity. Two implicit assumptions in the above approach are that the economy is already at near full capacity level and the efficiency of private expenditure is higher than of public expenditure.

The efficacy of fiscal expansion has been questioned given the large fiscal deficits and the accumulation of a high debt-GDP ratio (Sundararajan and Thakur 1980, Easterly 2004). It has been argued that, apart from the problem of crowding out private investment, public spending, even if such spending is on investment, is less efficient than the crowded-out private investment. Therefore, controlling fiscal deficits spurs growth in the long-run (Shankar Acharya 2001, Rangarajan 2009). The Reserve Bank of India has done significant research on the role of fiscal policy in reviving the Indian economy (RBI 2001). RBI's research shows that an attempt to raise public consumption to revive aggregate demand crowds out both private consumption and private investment with no long-run positive impact on output growth. Further, public investment in manufacturing appears to adversely affect private investment. However, government expenditure on infrastructure crowds in private investment. In addition, the level of fiscal deficit is also seen to be important because the positive impact of public sector infrastructure investment on private investment is predicated on the deficit remaining at the same or lower level. While differing in their views about crowding out, analysts mostly agree that excessive government consumption expenditure (especially on salaries, debt waivers and subsidies) has a negative impact on growth. This is an issue of the political economy of government spending and the quality of fiscal adjustment, to which we return in later sections.

Another view that differs from both the classical/neo classical and Keynesian approaches is the neo-Ricardian approach. This argues that the impact of an increase in public investment on the economy is neutral. Rational economic agents in the economy try to adjust their expenditure in relation to movements in public expenditure. Hence, there is no effect on the economy with overall savings remaining unchanged. The empirical support in favour of the Ricardian view seems to be weak (Ball and Mankiw, 1995; Elmendorf and Mankiw, 1998). However, given that empirical studies support both the neo-classical and Keynesian views for India, no firm a-priori policy conclusion can be advanced.

Other concerns have been voiced about controlling public spending and fiscal deficit. On the one hand, the government has to raise public spending to boost the economy; on the other, the fiscal deficit has to be controlled to avoid its ill effects. The expansionary fiscal stance of the last two years, it has been argued, cannot continue and an exit strategy will have to be put in place in the forthcoming budget to ensure fiscal sustainability and greater flexibility in monetary policy operation, enhance the productivity of public spending and avoid pressure on interest rates. (Govinda Rao 2009, Rangarajan 2009, Rajiv Kumar 2009).

Another argument is that focusing only on budget deficits can be misleading, because the problem of off-budget and contingent liabilities is also serious. Shifting

liabilities off budget without reducing systemic risk does not improve matters. To achieve fiscal stability, attention needs to be given to optimal paths of public consumption, investment, taxes and borrowing rather than emphasising only on primary balances (Nirvikar singh, Srinivasan 2004).

## 3. Trends and Patterns in Fiscal Variables in India

As in other developing economies fiscal policy plays an important role for macroeconomic stabilization In India. The large share of public (government) investment, production, and consumption in the economy confers on fiscal tools a considerable direct influence on the economy. Fiscal imbalances have remained a cause for concern in India in recent years. Despite impressive increases in the revenue buoyancy from direct taxes, there is a real fear that fiscal imbalances will accentuate, causing interest rates to harden and crowd out private investment. A higher fiscal deficit essentially means government taking more loans from banks pre-empting other borrowers and driving up the interest rates at the cost of industry and individual borrowers. With a deficit of over 10 per cent and the household sector's financial savings at just about 11 per cent of GDP, borrowing of this magnitude leaves very little savings available for the corporate sector. This exerts significant pressure on interest rates. The excess demand created by large deficits could spill over to imports and create balance of payments problems as well.

At this juncture, a detailed analysis of trends and patterns over the last three decades (1980-2011) that cover both the pre and post reform period would help us understand the relationship between fiscal expansion and growth in the Indian economy. The first surge in India's economic growth rate came in the early 1980s, when it increased to above 5 per cent from the average 'Hindu' growth rate<sup>3</sup> of 3.5 per cent in earlier decades. Unfortunately, this spurt was achieved by unsustainable fiscal expansion financed by domestic credit and external borrowing. Growth accelerated to 5.8 per cent during the 1980s, but in the second half of the decade, fiscal and current account deficits

<sup>&</sup>lt;sup>3</sup> The 'Hindu' rate of growth is a controversial expression coined by Raj Krishna used to hide the disastrous socialist policies followed by successive 'Indian National Congress' governments. India's low annual growth rate of economy before 1991, which stagnated around 3.5 per cent from the 1950s to the 1980s is called the 'Hindu' growth rate.

widened significantly causing serious macroeconomic imbalances, culminating in the balance of payment (BOP) crisis of 1991. These triggered the series of economic reforms introduced since 1991, which also aimed to bring about macroeconomic stabilisation and implement structural measures<sup>4</sup> to push up growth.

In the following section, we analyse fiscal trends in detail. The analysis is based on annual time series corresponding to the fiscal year (1 April to 31 March). The data is drawn mostly from the Reserve Bank of India's Handbook of Statistics on Indian Economy and Annual Reports and National Accounts Statistics published by the Central Statistical Organisation (CSO).

#### **3.1. Deficit Indicators**

The 1980s saw a sharp rise in the combined fiscal deficit of centre and states to eight per cent on the average. (see Table 1). Along with high external borrowings, a sustained increase in the combined revenue expenditure to stimulate demand, particularly in the services sector, caused the fiscal deficit to rise during the 1980s. As a result, the combined public debt<sup>5</sup> became 56 per cent of GDP on the average, with interest payments at 14.6 per cent of revenue expenditure (3 per cent of GDP on the average) accounting for a large proportion of government revenue expenditure and posing a debt trap in the 1980s. During the first half of the 1980s, these revenue expenditures averaged 18.5 per cent of GDP. In the second half, they rose to an average of 22.4 per cent with the bulk of the expansion coming under the heads of defence, interest payments, higher salaries (Fourth Pay Commission) and subsidies.

Studies by Srinivasan and Tendulkar (2003), Joshi and Little (1994) and others attribute the spurt in economic growth during the decade to these demand side factors. The flip side, however, was the spilling over of this into external balances. By 1990, the current account and fiscal deficits had risen to 3.5 per cent and 9.4 per cent of GDP respectively, leading to the BOP crisis of 1991 (Arvind Panagariya 2004, Balakrishnan, P. 2004, Nirvikar Singh and T.N.Srinivasan 2004). Containing this deficit was one of the key structural adjustments undertaken by the Indian government at the time, largely

<sup>&</sup>lt;sup>4</sup> Structural measures initially emphasised accelerating the process of industrial and import delicensing simultaneously with a switch to a flexible exchange rate regime, and then shifted to further trade liberalisation, financial sector reforms and tax reforms.

<sup>&</sup>lt;sup>5</sup> Outstanding Liabilities.

as part of an IMF structural program that was adopted when India borrowed \$ 4 billion from the Fund to thwart the external payments crisis. Economic reforms helped reduce the fiscal deficit and the combined deficit of the central and state governments came down to 6.3 per cent of GDP in 1996-97. A sharp rise in government salaries and pensions in the next year put a brake on the process of fiscal improvement until 2003-04 when the government introduced the Fiscal Responsibility and Budget Management Act<sup>6</sup> (FRBM) to try and statutorily control the fiscal deficit.

The FRBM Act enabled India, which had a long periods of high fiscal deficits, to make break from this structural trend in 2003-04. The Act required the Government of India (GOI) to bring down its revenue deficit by 0.5 per cent of GDP each year until it touched zero and its fiscal deficit by 0.3 per cent each year to a level of three per cent of GDP. The targets were to be achieved by 2008-09. These limits were to be applicable for state government as well. Further, it set an annual limit of nine per cent in the union government's total liabilities while simultaneously capping union government guarantees for public sector units and state government loans at 0.5 per cent of GDP. FRBM targets were achieved in 2007-08, a year ahead of schedule, except for the centre's revenue deficit target. The combined fiscal deficit came down to 4.2 per cent of GDP in 2007-08 (well below the prescribed 6 per cent) and the primary deficit (fiscal deficit net of interest payments) turned into a surplus of 1.3 per cent in the same year. It seemed that India had put its structural fiscal deficit behind it specially as the positive impact of implementing the FRBM Act provisions were amply evident in higher growth rates during the 2003-2009 period that saw also a change in the government.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> The FRBM Act was enacted by Parliament in 2003; later, Mr. Chidambaram, the finance minister in the UPA government, notified the act on July 2, 2004.

<sup>&</sup>lt;sup>7</sup> However, there is a lot of disagreement among policy makers about targeting zero revenue deficit in India. The argument is the following. It sounds quite unrealistic to target a zero revenue deficit and a three per cent fiscal deficit because this implicitly assumes that revenue expenditure does not contribute to growth. For a developing country, it may be argued that it is desirable to target a small revenue surplus to finance fiscal deficit because this implicitly assumes that revenue expenditure does not contribute to growth. For a developing country, it may be argued that it is desirable to target a small revenue surplus to finance capital formation rather than target a zero revenue deficit. It means the government would be saving and contributing to capital formation (Raja. J. Chellaih, 2000). Public finance experts like Dr. Chelliah have also questioned the wisdom of setting a three per cent fiscal deficit target. He says, "....three per cent is too low for a developing country as the government still has to spend large amounts of money on infrastructure investment, including social infrastructure such as hospitals and schools".

Fig. 1 provides a synoptic view of fiscal trends from 1990-91, the year in which India faced its economic crisis. There was a steady improvement in central and state finances since 2001-02, when the fiscal and revenue deficits of the combined central and state governments had peaked at 9.9 per cent and 7.0 per cent of GDP respectively.

		Centre			States			Combined	
Year	GFD	GPD	RD	GFD	GPD	RD	GFD	GPD	RD
1980-89	6.7	4.1	1.7	2.8	1.7	-0.1	7.9	4.9	1.6
1990-99	5.9	1.6	3.0	3.1	1.2	1.2	7.7	2.7	4.2
2000-01	5.7	0.9	4.1	4.2	1.8	2.6	9.5	3.6	6.6
2001-02	6.2	1.5	4.4	4.1	1.4	2.6	9.9	3.7	7.0
2002-03	5.9	1.1	4.4	4.1	1.2	2.3	9.6	3.1	6.6
2003-04	4.5	-0.03	3.6	4.4	1.5	2.3	8.5	2.1	5.8
2004-05	4.0	-0.04	2.5	3.4	0.7	1.2	7.5	1.3	3.6
2005-06	4.1	0.4	2.6	2.5	0.2	0.2	6.7	1.0	2.8
2006-07	3.5	-0.2	1.9	1.9	-0.4	-0.6	5.6	-0.01	1.3
2007-08	2.7	-0.9	1.1	1.5	-0.6	-0.9	4.2	-1.3	0.2
2008-09	6.0	2.6	4.5	2.6	0.7	-0.2	8.5	3.4	4.4
2009-10 RE	6.6	3.1	5.3	3.2	1.3	0.5	9.6	4.3	5.1
2010-11 BE	5.5	1.9	4.0	3.0	1.2	0.6	8.5	3.2	4.6

Table 1. Finances of the centre and states: selected indicators (As per cent of GDP)

GFD: Gross Fiscal Deficit, GPD: Gross Primary Deficit, RD: Revenue Deficit RE: Revised Estimates, BE: Budget Estimates

Source: Reserve Bank of India (RBI)



Figure 1. Fiscal Indicators of the Combined Centre and States (As a per cent of GDP)

Source: Reserve Bank of India (RBI)

#### **3.2.** Debt Sustainability

The trends in fiscal deficit were mirrored in the rising public debt levels. The combined debt of the centre and states, which averaged 56 per cent of GDP in the 1980s, rose to an average of slightly over 63 per cent in the 1990s and climbed further to touch a peak of 81.4 per cent in 2003-04 (see Table 2 and Fig. 2). A notable feature was the drastic reduction in the share of the external liabilities to GDP from 6.7 per cent (on the average) in 1980s to 1.7 per cent in 2003-04<sup>8</sup>. After the introduction of the FRBM Act, public debt showed a steady decline until 2008-09 when it stood at 74.7 per cent. The concern now is that the high fiscal deficits of the past two years may see a long-term reversal of this trend. Revised estimates for 2009-10 indicate a rise in the

<sup>&</sup>lt;sup>8</sup> Reinhart *et al.*, (2003) found *inter alia* that countries with a higher aggregate public debt to GDP ratio and higher share of external debt in the total public debt were more likely to default on their debt servicing (IMF, 2003). In this respect, India has a major advantage of having a very low share of external debt in total public debt with external debt being only 5 per cent of GDP.

public debt to about 70 per cent. It could be higher for the year 2010-11 if the GDP growth slows down.

With the fall in the GDP growth rate because of the global financial crisis, concerns regarding the sustainability of such high levels of public debt have become stronger. Should economic growth slow down because of the crisis, debt servicing could pose a problem as interest rates decline only with a lag, which would result in a further deterioration in government finances. This may also point towards the need to adopt an early exit from the high fiscal deficit regime. These trends also point to one of the main deficiencies in the FRBM Act, namely the failure to set a cap on public debt. There is little doubt that the FRBM Act put the country on a higher growth trajectory by reducing the fiscal and primary deficits but a sound fiscal system also needs to have in place measures to control the debt/GDP ratio. We hope the next set of FRBM targets include policies towards reducing public debt. Moreover, it may be essential to make the FRBM caps statutory and unbreachable so as not to shield fiscal management from the vagaries of the political cycles. A way forward would be to make it mandatory to secure a three quarters majority of the lower house of the Parliament to breach FRBM limits in response to any severe external or internal shock that threatens to derail economic growth and requires extraordinary fiscal measures.

There is little consensus on what the ideal debt-GDP ratio for an economy should be. Internationally, the Maastricht Treaty has set the tolerable debt level at around 60 per cent of GDP for the European Union countries. The Thirteenth Finance Commission had recommended a little higher target of 68 per cent of GDP by 2014-15 for India. If one goes by the budget estimates for 2010-11 of the central government, the government is quite clearly not going to be able to meet the Finance Commission's target.

	Internal	Internal	External	Outstanding	Outstanding	Combined
Year	Debt-	liabilities-	Debt/Liabilities-	Liabilities9-	Liabilities-	Outstanding
	Centre	Centre	Centre	Centre	State	Liabilities
1980-89	24.7	41.2	6.7	47.9	20.7	56.0
1990-99	27.4	48.0	4.5	52.5	22.4	63.2
2000-01	38.2	52.4	3.1	55.6	28.3	70.6
2001-02	40.0	56.8	3.1	59.9	30.3	76.0
2002-03	41.5	61.0	2.4	63.4	32.0	80.2
2003-04	41.4	61.4	1.7	63.0	32.8	81.4
2004-05	40.5	61.4	1.9	61.6	31.3	78.6
2005-06	38.7	60.4	2.6	61.0	31.0	77.2
2006-07	37.4	59.0	2.5	59.3	29.0	74.3
2007-08	38.3	57.7	2.4	57.4	26.9	72.0
2008-09	37.8	56.6	2.3	56.3	26.2	71.6
2009-10 BE	40.2	57.2	2.3	59.9	27.6	76.5
2009-10 RE	-	-	-	56.3	26.3	72.4
2010-11 BE	-	-	-	56.9	-	-

 Table 2. Debt Components of the Centre and States (As per cent of GDP)

Source: Reserve Bank of India (RBI)



Figure 2. Debt of the Centre and the States (As per cent of GDP)

<sup>&</sup>lt;sup>9</sup> Outstanding liabilities (public debt) comprise of the internal (market borrowings, RBI treasury bills, small savings and deposits, provident fund, reserve fund) and external liabilities.

#### **3.3. Receipts and Disbursement of the Government**

#### 3.3.1 Central and State Governments' Expenditure

At the central level, average government expenditure<sup>10</sup> stood at 17.6 per cent of GDP in the 1980s (see Appendix-I). The share fell by 1.6 percentage points immediately after the reforms, mainly because of the macroeconomic stabilisation programme that followed the balance of payments crisis in 1991. However, a sharp rise in salaries and pensions following the acceptance of the Fifth Pay Commission report<sup>11</sup> in 1996-97 pushed the expenditure level back to the 16-17 per cent level in the following year – a level at which it stayed until the FRBM Act in 2004-05. After the FRBM was passed, central government's total expenditure fell from approximately 16 per cent to 14 per cent of GDP over the next two years. However, this expenditure control was achieved by cutting down capital expenditure sharply while revenue expenditure, which has always been a matter of concern, remains so with revenue expenditure accounting for about 80 per cent of total expenditures.<sup>12</sup>

Public capital expenditure as a percentage of GDP declined from an average of 6.2 per cent in the 1980s to 3.6 in 2004-05 and further to 1.6 per cent in 2008-09. By contrast, revenue expenditure, which was 11.4 per cent of GDP during the 1980s, rose to 12.2 per cent in 2004-05 and to 14.2 per cent in 2008-09. As in the mid-1990s, the reason for the sharp rise in revenue expenditure in 2008-09 has been the implementation of the recommendations of the Sixth Pay Commission Report and measures such as the debt waiver on farm loans and subsidies. Interest payments, which account for over 30 per cent of revenue expenditure, stood at about 4 per cent of GDP until 2004-05. However, these came down to 3.6 per cent in 2005-06 and continued at the same level until 2008-09. This, however, was less the result of a reduction in borrowings; much of

<sup>&</sup>lt;sup>10</sup> Government expenditure consists of revenue and capital expenditures (mostly public investment). The major components of government revenue expenditure are interest payments on debt and subsidies.

subsidies. <sup>11</sup> Acharya (2001) describes the effects of the Fifth Pay Commission for government employees as 'the single largest adverse shock' to public finances in the 1990s. His estimates indicate that compensation to employees (including pension) by central and state governments accounted for about half of the fiscal deficit increase of three percentage points of GDP during 1997-1999.

<sup>&</sup>lt;sup>12</sup> Remaining 20 per cent is the capital expenditure.

the credit for this achievement goes to a softening of interest rates. These are likely to rise in the coming years as the RBI tries to rein in inflation.

The other major item of revenue expenditure has been subsidies (See table-3.3). Budget data do not indicate the actual expenditure on subsidies because several subsidies are hidden in the production of intermediate goods and services and the quantum of subsidy at the stage of final consumption of goods or services is not clearly known (Radhakrishna and Panda 2006)<sup>13</sup>. Explicit government budgetary subsidies like those on food, fertilisers and petroleum products are only a small portion of the total subsidy.

Food subsidy as a percentage of GDP rose from 0.4 in 1990-91 to 0.9 in 2003-04. This has decreased since 2003-04 and reached 0.6 per cent in 2006-07. However it started rising again from 2007-08 (see Table 3.3)<sup>14</sup>, partly due to enhanced food security measures with a higher subsidy for the poor. A part of this rise in subsidy is due to the high minimum support price for food grain procurement and the inefficient operation of the Food Corporation of India. This indicates scope for reducing subsidy without hurting the poor (Radhakrishna. R, Manoj Panda 2006). The government has recently taken some measures to make the food subsidy better targeted to actual beneficiaries by revamping the public distribution system and introducing differential prices for the poor and non-poor groups. Nonetheless, food subsidy has increased further and reached 0.9 per cent of GDP in 2009-10. Fertiliser subsidies have gradually increased to 0.7 per cent of GDP in 2007-08 and further shot up to 1.4 per cent of GDP in 2008-09, the highest ever. On the other hand, petroleum subsidies have remained constant at 0.1 per cent of GDP until 2009-10.

<sup>&</sup>lt;sup>13</sup> Several studies have attempted to make a comprehensive estimate of implicit and explicit subsidies by central and state governments. All these studies pertain to the late 1980s and 1990s. The estimated figures are high at about 12-13.5 per cent of GDP during the period (e.g., Mundel and Rao, 1992 and NIPFP, 1997).

<sup>&</sup>lt;sup>14</sup> The figures given in the table 3.3 are the subsidies that are included in the budget. There are off budget subsidies given on food, fertilizer and petroleum.

	2003-	2004-	2005-06	2006-	2007-	2008-	2009-	2010-11
	04	05		07	08	09	10	BE
Subsidies	1.6	1.4	1.3	1.4	1.5	2.3	2.1	1.9
i) Food	0.9	0.8	0.6	0.6	0.7	0.8	0.9	-
ii) Fertiliser	0.4	0.5	0.5	0.6	0.7	1.4	0.8	-
iii) Petroleum	0.2	0.1	0.1	0.1	0.1	0.1	0.2	-

Table 3. Subsidies (As a per cent of GDP)

Source: Reserve Bank of India (RBI)

More importantly, the growing practice of issuing special bonds to oil and fertiliser companies to support low consumer prices means that at least part of the subsidy burden is off the budget. While these subsidies do not appear in the budget, they do result in additional costs and risks for the government.<sup>15</sup> Oil subsides, which are included in off-budget bonds, not only affect the liquidity position but also change the fiscal position of the government itself. The off-budget expenditure incurred by the government has almost doubled to 1.8 per cent of the GDP (Rs.970.19 billion) in 2008-09 from 0.98 per cent (Rs.403.61 billion) in 2006-07. However, the government has decided to include these bonds into the budget from 2010-11, which is a good sign.

Expenditures at the state level exhibit a trend similar to that at the central level. From an average of roughly 15.5 per cent of GDP in the 1980s and 1990s, the total expenditure of states rose to nearly 18 per cent in 2004-05 (see Appendix-II). While expenditures fell steadily for the next three years to 15.5 per cent in 2007-08 on account of the 12<sup>th</sup> Finance Commission measures, they rose again to 17.3 per cent in 2008-09. Revised estimates indicate that the level for 2009-10 will climb back to the level in 2004-05.

The rise in States' expenditure too has been because of a rise in revenue expenditure. Between 2004 and 05, there was some reduction in revenue expenditure but the trend was reversed in 2008-09 and it is expected to touch a high of 14 per cent in 2009-10. Capital expenditure has shown a more fluctuating trend. In the immediate post-reform period, there was a sharp drop in states' capital expenditures. This was an unhealthy development, because by reducing capital expenditure to achieve fiscal

<sup>&</sup>lt;sup>15</sup> If heavy bond payments are made given the economic slowdown, budget deficits will rise significantly.

balance, they had effectively compromised on building the infrastructure capacity needed to promote growth. There was a moderate increase in states' capital expenditure in the three year period from 2002-04 but it slipped again thereafter. However, it has again increased from 3.5 per cent in 2007-08 to 3.9 per cent in 2008-09.

#### 3.3.2. Central and State Governments' Receipts

The persistent fiscal expenditures reveal that total receipts of both the central and state governments have remained consistently below total expenditures. Tax receipts, which contribute the bulk of the central government revenues, fell sharply in the period following the introduction of the reforms in 1992. This was the result of the rationalisation of the tax structure. Total tax revenue as a proportion of GDP declined from 10.3 per cent in 1990-91 to the lowest level of 8.2 per cent in 1998-99. It was only in 2005-06 that tax revenue touched the level it was at in 1990-91 (see Appendix-I). Tax receipts rose to 12.6 per cent in 2007-08 but again declined to 9.7 per cent in 2008-09.

The tax reforms<sup>16</sup> initiated since 1991 were part of the structural reform process after the 1991 economic crisis. The Tax Reforms Committee (TRC), headed by Professor Raja K Chelliah, concentrated on finding a suitable framework to reform both the direct and indirect tax structure. The committee recommended two major reforms on direct taxes – one was the simplification and rationalisation of the direct tax structure (Chelliah committee report 1992); the other was to introduce a service tax to widen the tax base (Chelliah committee, 1994).

The Chelliah committee (1992: 4) had, in its interim report, recommended that as a first step towards the rationalisation of the personal income tax structure, a three-rate slab structure should be introduced and later replaced by a two-rate structure. Further, the committee suggested reducing corporate income taxes. Both the recommendations were accepted and implemented in 1992. The maximum marginal rate of personal income tax was reduced to 40 per cent from 56 per cent in June 1991. Further, rates of corporate income tax, which were 51.75 per cent for a publicly listed company and 57.5

<sup>&</sup>lt;sup>16</sup> List of fiscal reforms mainly on taxation is given in Appendix-III

per cent for a closely held company, were unified and reduced to 46 per cent in 1992. These rates were inclusive of a 15 per cent surcharge.

The 1992 reforms radically altered the composition of tax revenue at the central level<sup>17</sup>. Direct taxes as a percentage of GDP rose from 2 per cent in the 1980s to 6.5 per cent in 2008-09. However, this rise in the proportion of direct taxes was offset by a reduction in central indirect tax revenues as a percentage of GDP from 7.9 per cent to 5.3 per cent over the same period. The share of non-tax revenue<sup>18</sup> in GDP at the central level fluctuated between two and three per cent during 1980-2009 with the highest three per cent recorded in 2001-02 and lowest 1.7 per cent observed in 2008-09.

The government also introduced a service tax in 1994 in line with the recommendations of the Chelliah Committee<sup>19</sup>. Until then, the service sector had been totally left out of the tax net though the sector's contribution to GDP had risen to 36 per cent by 1993-94. Starting with three services, viz., telephone, stock broking and insurance services, the coverage has progressively widened over the years with about 80 services having been brought within the ambit of taxation so far. A few important services brought under the service tax net are banking and other financial services, management consultants, credit rating agencies, market research agencies etc. Some important services that are still out of the tax net are legal consultancy services, transport of goods by waterways, cosmetic or plastic surgery etc. The rate imposed originally was a moderate 5 per cent of turnover. This was, however, progressively increased to 12 per cent and an additional education cess of 2 per cent on service tax was imposed in 2006-07. The 2008 crisis, however, forced a rollback in the service tax rate to 10 per cent in February 2009. Collections from service tax have shown a steady rise from 1994-95 (0.2 per cent of GDP) to 2008-09 (1.1 per cent of GDP). However, in 2008-09, they accounted for only 10.4 per cent of the total tax receipts of the centre

<sup>&</sup>lt;sup>17</sup> Direct taxes contribute a negligible amount to state revenues.

<sup>&</sup>lt;sup>18</sup> Non-tax revenue includes interest receipts, income from property etc.

<sup>&</sup>lt;sup>19</sup>The objectives of levying a service tax are: (i) shrinking of the tax base as the share of industry in GDP decreases while that of services expands; (ii) failure to tax services distorts consumer choices and encourages spending on services at the expense of goods; (iii) untaxed service traders are unable to claim VAT on service inputs, which encourages businesses to develop in-house services, creating further distortions; and (iv) most of the services that are likely to become taxable are positively correlated with expenditure of high-income households and, therefore, service tax improves equity (Annual Report, RBI 2003-04).

while the share of services in total GDP has gone up to 57 per cent. This anomaly of the services sector contributing only 10% of the total tax revenues while accounting for more than half of economic activities needs to be rectified.

Major changes on the indirect tax side included a sharp reduction in import duties from extremely high levels to a range of 15 to 30 per cent for manufacturers, reduction of multiple excise tax rates to three in the range of 10 to 20 per cent and extension of the then existing MODVAT<sup>20</sup> credit to all inputs. In 2000-2001, the government converted the three excise duties into a single central value added tax (CENVAT), levied at the rate of 16 per cent. Subsequently, state-level value added tax (VAT) replaced CENVAT in 2005-06. While only 20 states agreed to shift to the VAT regime when it was first brought in, the numbers have gone up to 28 by the end of 2010. Four slabs of VAT have been uniformly applied across all states that adopted it – zero per cent on necessities and primary goods, one per cent on bullion and precious stones, four per cent on all other items. Necessities and primary products were left out of the ambit of VAT.

The government now intends to move to a goods and services tax (GST) regime, which will replace state-level VAT and CENVAT. As proposed, the tax will be imposed on final goods and services with a two rate structure. The GST which is being steered by an empowered committee of state finance ministers was supposed to be launched in April 2010, but has been delayed by a year already and could see further postponement due to political reasons. This will be unfortunate. When introduced, GST will mark a major step in unifying the tax regime across the country and do away with tax arbitrage that currently distorts investment decisions. It will also contribute significantly to the creation of an integrated domestic market in India and facilitate inter-state movement of goods and services thereby encouraging firms to put up larger integrated capacities to take advantage of economies of scale offered by a large unified and growing domestic market. Its beneficial effects on reducing transactions costs and generating scale economies could be expected to be substantial.

<sup>&</sup>lt;sup>20</sup> Under the MODVAT (modified Excise Rule, a manufacturer can obtain credit for excise tax paid on capital goods and on inputs used in the manufacture of final products.



Figure 3. Direct and Indirect Taxes and non-Tax Revenues of the Centre (As a percent of GDP)

*DT:* Direct Taxes, IDT: Indirect Taxes, NTX: Non-Tax Revenues *Source:* Reserve Bank of India (RBI)

At the state level, fiscal health depends both on revenues from state taxes as well as constitutional and other transfers from the central government. There is a three-tier fiscal transfer mechanism in India. First, the Indian Constitution provides for mandatory transfer of revenue from central taxes on the basis of the recommendation of the constitutionally mandated Finance Commission that the central government is required to set up every five years. Each Finance Commission recommends a criterion to transfer funds from the Center to the states from the pool of centrally collected tax revenues which the Centre collects on behalf of the state governments. These transfers, mandated by the Finance Commission (and currently the recommendations of the 13th Finance Commission are being implemented) are the largest source of revenues for state governments. Second, there are budgetary transfers made through the Planning Commission to implement plan projects<sup>21</sup>. Third, there are optional transfers through

<sup>&</sup>lt;sup>21</sup> The Planning Commission transfers resources on the basis of population, per capita income, tax effort, fiscal management, literacy, land reform etc. The planning commission uses a formula where 30 percent of the transfers are in the form of grants and 70 percent as loans. States cannot accept only grants without taking loans. Thus grants and loans are tied together.

various union ministries and agencies for funding Central Government sponsored schemes.<sup>22</sup>

A look at the revenue receipts of states shows that there has been a steady improvement in the tax ratio over the years. The revenue from state's tax receipts (including their share in the central pool) as a ratio of GDP was virtually stagnant throughout the 1980s and 1990s at around 7.7 per cent (see Appendix-II). There was some decline from 1994-95 and the low point of 7.2 per cent was reached in 1998-99, the year in which the states had to revise their pay scales in line with the Fifth Pay Commission, and the combined effect of lower revenues and higher mandatory expenditures exacerbated their fiscal problems. The fiscal stress for state governments is revealed by the rise in their revenue deficit from 0.9 per cent of GDP in 1990-91 to 2.6 per cent in 2000-01. The extent of the stress on state budgets can be gauged from the fact that, since the mid-1990s, salaries and pensions account for 80-90 per cent of revenue receipts in most states. However, the tax ratio of the states combined has steadily improved from 7.8 per cent in 2000-01 and reached 9.6 per cent in 2008-09.

A major development at the state level is the adoption of value added tax (VAT) from 2005-06. The VAT would help to remove the cascading tax burden. Tax revenue<sup>23</sup> is expected to rise as compliance improves under VAT. The state VAT has evidently helped tax revenues to increase from 8.6 per cent in 2005-06 to 9.6 per cent in 2008-09.

#### 3.3.3. Combined Receipts and Disbursement

Taking the budgetary position of the centre and states together, one finds that the combined expenditure as a percentage of GDP rose from 26.8 per cent in the 1990s to 27.4 per cent in 2007-08 (see Table 3.4). The subsequent two years show a sharp rise in expenditures, with the revised estimates for 2009-10 showing expenditure at about 30 per cent of GDP. As discussed above, this has been a consequence of a sharp increase in public expenditure in the run up to the general elections of 2009-10.

 $<sup>^{22}</sup>$  There are several issues related to transparency of central government transfers and accounting problems. The discussion about these problems is beyond the scope of this paper.

<sup>&</sup>lt;sup>23</sup> The states receive about 30 per cent of total tax collection from the centre from the shareable common pool according to the norms prescribed by the Finance Commission.

Total receipts have also shown a similar increase from around 26 per cent to roughly 31 per cent from the 1990's to 2008-09 (see Table 3.4). Over 60 per cent of receipts are accounted for by revenue receipts (both tax and non-tax). The rest has come from capital receipts in which disinvestment is a major component. The share of the central government's capital receipts<sup>24</sup> in GDP was just above six per cent until 2000-01 and thereafter increased until 2003-04. Since then, it declined reaching 3.6 per cent in 2007-08. As the table 3.4 indicates, the contribution from disinvestment has been about 1 to 2 per cent of capital receipts in the post-reform period. Disinvestment was the highest in 2003-04, amounting to Rs.169.53 billion (0.6 per cent of GDP). However, it did not pick up momentum till 2007-08 where the disinvestment receipts were Rs.457.50 billion (about one per cent of GDP)<sup>25</sup>.

<sup>&</sup>lt;sup>24</sup> Capital receipts consists of debt and non-debt capital receipts of the central government. Disinvestment receipts are considered to be the important non-debt capital receipts from 1991-92.

<sup>&</sup>lt;sup>25</sup> With the setting up of National Investment Fund (NIF), all proceeds from disinvestment of Central Public Sector Enterprises (CPSEs) are required to be routed to it, which is maintained outside the Consolidated Fund of India. (Annual Reports, RBI).

	1980- 89	1990-99	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11 BE
I) Total Expenditure	28.8	26.8	28.3	28.6	28.7	28.9	27.6	26.8	26.9	27.4	28.4	30.4	29.6
A) Revenue Expenditure	20.7	22.3	24.6	24.5	25.1	24.6	23.2	22.5	22.6	22.4	24.2	25.9	25.0
i)Interest Payments	3.1	5.0	5.9	6.2	6.5	6.4	6.1	5.7	5.6	5.5	5.4	5.6	-
B) Capital Expenditure	8.1	4.5	3.7	4.1	3.6	4.3	4.4	4.3	4.3	5.0	4.3	4.5	4.6
i) Capital Outlay	-	-	-	2.6	2.7	3.1	3.6	3.7	3.8	4.7	4.4	4.5	-
ii)Loans and Advances	-	-	-	1.2	0.9	1.2	0.8	0.6	0.5	0.4	0.4	0.3	-
II) Total Receipts	27.1	26.0	28.5	28.5	28.8	29.0	28.2	28.3	27.3	27.8	30.9	31.4	-
A) Revenue Receipts	18.9	18.1	18.0	17.5	18.5	18.8	19.5	19.7	21.2	22.2	19.8	19.7	20.5
i) Tax Revenues	15.0	14.6	14.5	13.8	14.6	15.1	15.7	16.3	17.5	18.5	16.6	15.9	16.7
(a)Direct Taxes	2.5	3.2	3.8	3.6	4.1	4.6	5.0	5.4	6.5	7.5	7.4	7.4	-
(b) Indirect Taxes	12.5	11.4	10.7	10.2	10.5	10.5	10.7	10.9	11.0	11.0	10.7	10.1	-
ii) Non-Tax Revenues	3.9	3.5	3.5	3.8	3.9	3.7	3.9	3.3	3.7	3.7	3.2	3.8	3.8
B) Capital receipts	8.2	7.9	10.5	11.0	10.3	10.2	8.7	8.6	6.0	5.6	9.0	9.8	-
i) Debt Capital Receipts	-	-	-	10.2	9.7	8.6	8.0	8.2	6.0	4.5	8.6	9.6	-
ii) Non-Debt Capital Receipts	-	-	-	0.80	0.65	1.57	0.62	0.37	0.04	1.07	0.40	0.17	-
(a) Disinvestment Proceeds	-	0.2	0.1	0.2	0.1	0.6	0.1	0.0	0.0	0.96	0.2	0.0	-
III) Revenue deficit	1.8	4.2	6.6	7.0	6.6	5.8	3.6	2.8	1.3	0.2	4.4	6.2	4.6
IV) Gross Fiscal Deficit	8.0	7.7	9.5	9.9	9.6	8.5	7.5	6.7	5.6	4.2	8.5	10.1	8.5
V) Gross Primary Deficit	4.9	2.7	3.6	3.7	3.1	2.1	1.3	1.0	0.0	-1.3	3.4	4.9	3.2

Table 4. Combined Receipts and Disbursement of Centre and States (As a per cent of GDP)

Source: Reserve Bank of India (RBI)

# 3.4. Public Sector Savings and Investment<sup>26</sup>

The deterioration in the fiscal position of the central and state governments has impacted public sector savings and investment. The share of nominal public sector savings in nominal output<sup>27</sup> averaged just above 3.5 per cent in the 1980s (see Table 3.5). This had reduced to an average of 1.5 per cent in the 1990s. Public sector savings deteriorated further in the period after reforms were initiated, turning negative (-1.8 per cent) in 2000-01. Though there was some improvement in 2002-03, public sector savings turned positive again only in 2003-04, a trend that was maintained until 2008-09. They peaked in 2007-08 reaching 4.5 per cent of GDP. There was a sharp deterioration in 2008-09 when public sector savings turned negative at -1.8 per cent. Budget estimates for 2009-10 indicate a further deterioration.

The period (1980-2009) also saw a rapid decline in public sector investment, especially in the infrastructure and agriculture sectors. The fall was particularly sharp after the 1991 reforms. Since both agriculture and infrastructure are mainly dealt with by state governments, declining public sector investment reflects in part the deterioration in the fiscal position of state governments. What is of concern is that high fiscal deficits would crowd out private investment by keeping interest rates high in the short-term. In the long term, the lack of critically needed investments in expanding infrastructure capacities and improving social sector services deliveries would prevent the crowding in effect from becoming operative. A growing fiscal deficit will, therefore, adversely impact both the long and short-term growth prospects of the economy.

<sup>&</sup>lt;sup>26</sup> Public sector includes administrative departments, department enterprises, non-departmental enterprises and quasi government bodies. The data is available for quasi govt. bodies from 1993-94 only.

<sup>&</sup>lt;sup>27</sup> The percentage share of public sector output in the total GDP was fluctuating between 20-30 per cent in 1980's and 1990's. It has been stagnant just above 20 per cent from 2005-06.

Year	Public Investment	Public Savings
1980-89	10.6	3.7
1990-99	8.5	1.5
2000-01	6.9	-1.8
2001-02	6.9	-2.0
2002-03	6.1	-0.6
2003-04	6.3	1.1
2004-05	6.9	2.2
2005-06	7.6	2.4
2006-07	8.0	3.3
2007-08	9.1	4.5
2008-09 RE	6.9	-1.8
2009-10 BE	6.9	-2.0

Table 5. Public sector savings and investment<sup>28</sup> (As per cent of GDP)

Source: Central Statistical Organisation (CSO)

#### 3.5. Structural/Cyclical Behaviour of Major Fiscal Variables

We now turn to an empirical analysis of the impact of fiscal deficits on growth.

#### 3.5.1. Relationship Between Gross Fiscal Deficit and Growth

The relationship between the fiscal deficit and output growth has been of enduring interest for the Indian economy. In Figure 3.4 below, the annual data of the combined gross fiscal deficit (GFD) of both the centre and states is plotted against GDP at market prices from 1980-81 to 2009-10 (BE). There seems to be considerable long-run co-movement between these two series till 2002-03. This indicates that the relationship is structural rather than cyclical though for a short period, 2006-07 and 2007-08, fiscal deficit decreased as the output increased. This negative relationship could be attributed to the implementation and realisation of FRBM targets. There is a sudden jump in fiscal deficit in 2008-09 and 2009-10 (BE) though output has grown at a slower pace<sup>29</sup>, making the association between GFD and GDP horizontal in 2008-09 and 2009-10.

<sup>&</sup>lt;sup>28</sup> The difference between public investment and public savings does not equal to fiscal deficit as the definition of public sector also includes non-departmental enterprises. Savings and investment of administrative departments and departmental enterprises are more directly related to fiscal deficit, and its impact on growth.

<sup>&</sup>lt;sup>29</sup> The slower growth in output is due to current global crisis and the sudden rise in fiscal deficit is due to salary hike and debt waiver schemes, fiscal stimulus packages etc.

Nonetheless, there is an upward linear trend exhibited throughout the study period implying a positive relation between fiscal deficit and output growth.

Interestingly, we find different results altogether when we plotted growth rates of fiscal deficit and GDP against each other. The trend shows a downward moment (see Fig 3.5). Similar trend was observed when gross fiscal deficit as a share of GDP is plotted. Fig. 3.6 shows the gross fiscal deficit as a share of GDP. The relative growth of GFD to GDP exhibits cyclical behaviour through the study period. The cycle does not seem to coincide with the electoral cycle but the peaks coincide exactly with the pay commission recommendations<sup>30</sup> and the troughs coincide with fiscal reforms<sup>31</sup>.



Figure 4. Scatter Plot of Combined Gross Fiscal Deficit and GDP

Source: Reserve Bank of India (RBI)

 $<sup>^{30}</sup>$   $4^{th}$  Pay Commission in 1986-87,  $5^{th}$  Pay Commission in 1997-98 and,  $6^{th}$  Pay Commission in 2008-09.

<sup>&</sup>lt;sup>31</sup> Economic reforms in 1991-92, tax reforms in 1992-93 and FRBM Act in 2004-05.



Figure 5. Scatter Plot of Combined Gross Fiscal Deficit and GDP

Source: Reserve Bank of India (RBI)



Figure 6. Combined Gross Fiscal Deficit as a Share of GDP (percentage)

Source: Reserve Bank of India (RBI)

As discussed earlier in the paper, the relationship between the size of fiscal deficit and GDP growth has been an intensely debated one. There are those who believe in its 'crowding-in' effect in a developing economy. Their view is contrasted by others who see a high fiscal deficit as pre-empting domestic savings and discouraging private investment resulting in a 'crowding out' phenomenon. We have tried to test the validity of these arguments, by trying to quantify the relationship between GDP growth and fiscal deficit taken as a percentage of GDP. We estimated the simple equation given below.

1. Gr GDP = 8.63 + 0.07 Gr GCF - 0.41 GFD/GDPM<sup>32</sup> (3.8) (1.8) (-1.5)

$$\overline{R}^2 = 0.17$$
 DW = 1.92

Equation 1 yields a negative correlation, though a weak one, between GDP growth and fiscal deficit as a percentage of GDP. This substantiates the argument made by several Indian economists (Govinda Rao 2009, Rangarajan 2009).

But the long run relationship between GDP and fiscal deficit, using the logarithm of both to avoid non-stationarity problem, is surprisingly a positive one as given by equation-2.

2. Log GDP = 
$$1.28 + 0.64$$
 Log GCF +  $0.19$  Log GFDR +  $0.39$  AR (1)  
(2.6) (15.9) (3.4) (2.0)

$$\overline{R}^2 = 0.99$$
 DW = 2.1

Apparently in conditions of unemployed resources and rising demand, an expansion in public expenditure, even when it increases the fiscal deficit, results in the positive impact of 'crowding in' swamping the negative effect.<sup>33</sup>

 $<sup>^{32}</sup>$  GDP = Gross domestic product at constant factor prices, GDPM = Gross domestic product at current market prices, GCF = Real gross capital formation, GFD = Gross fiscal deficit, GFDR= Gross fiscal deficit in constant prices, Gr indicates growth rate.

<sup>&</sup>lt;sup>33</sup> However, there appears to be a relatively high correlation between GCF and GFDR which dilutes the validity of the long run equation.
#### 3.5.2. Relationship Between Public Debt and Growth

Annual data on the combined outstanding liabilities and GDP at current market prices from 1980-81 to 2009-10 (BE) is plotted in Figure 3.7. The scatter graph below depicts trends that are similar to that in the case of the fiscal deficit throughout the study period, confirming the structural behaviour of public debt over decades. It shows that there is a positive relation between GDP and public debt from 1980s. However, there seems to be a marginal downturn from 2007-08 to 2009-10, implying rising public debt has had a negative impact in recent years. The results are opposite when we plot growth rates (see Fig 3.8). The scatter plot shows a downward trend.



Figure 7. Scatter Plot of Combined Outstanding Liabilities and GDP

Source: Reserve Bank of India (RBI)



Figure 8. Scatter Plot of Combined Outstanding Liabilities and GDP

### 4. Global Crisis and India Fiscal Deficit

The deviations seen in the structural relationship between the GDP and GFD in 2008-09 and 2009-10 can be attributed to the impact of the global economic crisis.

#### 4.1. Global Financial Crisis

The sub-prime crisis that emanated from the US has led to liquidity crunch and solvency problems all around the world. Even though India, like other developing countries, did not have direct exposure to the crisis, the effects have been felt through credit, exports and exchange rate channels. India's engagement with the global economy has deepened since the 1990s, making it vulnerable to global financial and economic crises. The impact of the current global crisis has been transmitted to the Indian economy through three distinct channels, viz., the financial sector, exports, and exchange rates (Rajiv Kumar, 2009). However, four factors helped India to cope with the crisis and soften its impact. They are: (1) the robust, well-capitalised and well-

regulated financial sector; (2) gradual and cautious opening up of the capital account; (3) the large stock of foreign reserves and (4) greater dependence on domestic consumption as a driver of GDP growth. Consumption accounted for more than 70 per cent of India's GDP and GDP growth was 7.3 per cent during 2000-2007. India's GDP growth declined to 5.8 per cent (year-on-year) in the second half of 2008-09 from 7.8 per cent in the first half. The growth improved to 7.4 per cent in 2009-10. Undoubtedly, the massive fiscal and monetary stimulus measures helped to prevent a sharper downturn in 2008-09 and promote recovery in 2009-10. The global economic recovery from second quarter of 2009 also helped.

The contagion from the global financial crisis warranted appropriate monetary and fiscal policy responses to ensure enough liquidity in the economy, the orderly functioning of markets and financial stability. Given the role of fiscal measures to fight the economic slowdown, the government's ability to raise resources for spending and the economy's existing fiscal health, there is need to study the viability of fiscal stimulus in India. In this section, we discuss the impact of current crisis, Indian fiscal response and recovery in detail.

#### 4.2. Impact on the Indian Economy and Recovery

Indian economy was affected negatively by the global phenomenon in two phases. In the first phase that could be said to have started in January 2008, with the withdrawal of foreign portfolio equity flows in the wake of the demise of Kleinwort, which saw portfolio flows reversing to advanced economies both to strengthen parent company's balance sheets and also find a safety in developed economy investments. At the same time the economy was hit by sharply rising global commodity specially fuel and food prices that forced domestic prices upwards with the inflation rising in a sustained manner and peaking at above 12 % in July 2008. This period therefore witnessed the RBI raising interest rates successively right until August 2008 and tightening liquidity in the market. As a result of massive withdrawal of FII investments from India, the consequent crash of the equity market and a massive slowdown in external commercial borrowing by India's companies the rupee fell by about 20 per cent from May to November 2008. The Reserve Bank of India intervened heavily to support the rupee by selling dollars, which eventually lead to some depletion of the stock of reserves. By

mid-September 2008, India's money markets were already showing signs of severe strain and overnight rates had started to rise unmistakably. An unintended fortunate outcome of this phase was that the RBI having significantly tightened the monetary policy had sufficient space to respond to the second phase of the crisis which began with the collapse of Lehman brothers on 23rd September 2008.

The Lehman crisis did not affect the financial or the banking sector due to the minimal exposure of Indian commercial banks to sub-prime securities and the massive infusion of liquidity undertaken by the RBI starting in October 2008 along with a sharp reduction in repo and reverse-repo rates which fell from 9% and 6% in August to 7.5% and 5% in November 2008 respectively. However, this happened only after overnight money market rates had spiked to 22% in mid October sending a scare in the Indian banking sector. The real impact of the Lehman crisis was in the second round effects on the real economy. From September 2008, the trade sector collapsed. In the second half of 2008-09, merchandise exports declined by 18 per cent against a growth of 35 per cent. In the next stage, the crisis spread to the domestic credit market. The real economy deteriorated from September 2008, shown first by the sharp fall in export growth to 10 per cent in that month from about 35 per cent during April-August 2008, and negative growth thereafter; virtually negligible or negative growth in industrial output from October 2008; and negative growth in central tax revenue collection, also from October 2008.

Following the global crisis India's growth rate of GDP at factor cost (year-on-year) declined from 7.7 per cent in the first half of 2008-09 to 6.0 per cent in the second half of 2008-09. The trend continued to the first quarter of 2009-10, but growth rate picked up to an average 8.1 per cent in the next three quarters of 2009-10. The GDP growth rate has been steady at 8.9 per cent in the first half of 2010-11. Both the downturn and the recovery have been steeper if we consider GDP at market prices (Fig. 9). The slight divergence between GDP at factor cost and market prices is because of the shortfall in indirect taxes and rise in subsidies during the crisis period.



Figure 9. Quarterly Growth Rate of Real GDP (YoY)

Source: Central Statistical Organisation (CSO)

#### 4.2.1. Demand Side Factors

The slowdown in growth during the crisis is attributed to a steep decline in investment and private consumption growth. Fixed investment growth declined from about 15 per cent in the pre-crisis period to near zero levels during the second half of 2008-09 (Fig.10). Private consumption growth dropped to below 5 per cent from about 10 per cent in the pre-crisis period. However, the rise in government consumption compensated for the fall in private consumption and investment, and contributed to the quick recovery. External demand also contracted with a steeper decline in exports than imports during the crisis period (Fig.11). The strong recovery in GDP growth is driven by the steep recovery in investment and exports. Fixed investment grew by about 9 per cent and 18 per cent respectively in Q3 and Q4 2009-10. Exports of goods and services rose by 14 per cent against a decline in imports of goods and services in Q4 2009-10. The trend continues in the first quarter of 2010-11. This rise in exports followed the industrial recovery. However both exports and imports seem to have decreased in Q2 2010-11. All the demand side variables as shares of GDP are given in Table 4.1.



Figure 10. Quarterly Growth Rates (YoY)

Source: Central Statistical Organisation (CSO)



Figure 11. Quarterly Growth Rates (YoY)

Source: Central Statistical Organisation (CSO)

	•			200	8-09		2009-10 RE				2010-11BE		
Relative	2008-	2009 -	01	02	03	04	01	02	03	04	01	02	
Shares	09	10 RE	IJ	Q2	Ų3	۳Y	IJ	Q2	Ų3	۳y	IJ	Q2	
Total													
Consumption	70.9	69.4	71.8	69.4	75.2	67.5	73.0	72.6	73.4	62.3	71.6	71.8	
Expenditure													
i) Private	59.5	57.6	61.3	60.1	61.5	55.4	61.6	61.3	60.4	51.1	60.3	60.6	
ii) Government	11.5	11.8	10.5	9.2	13.7	12.2	11.4	11.3	13.1	11.2	11.3	11.2	
Gross Fixed Capital Formation	32.9	32.8	33	34.8	31.5	32.7	32.4	34.3	31.9	34.6	35	34.4	
Change in Stocks	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	
Net Exports	-6.1	-5.1	-5.2	-8.8	-7.3	-3.5	-6.5	-8.7	-6.7	0.4	-5.8	-6.8	

 Table 6. Expenditure Side of GDP (As a Per cent of GDP)

Source: Central Statistical Organisation (CSO)

#### 4.2.2. Trends in Fiscal Indicators from 2007-08 to 2010-11

As discussed in the seciont-2, India's fiscal situation improved significantly after the adoption of FRBM targets by successive governments since 2003-04 until the global crisis hit the Indian economy in early 2008-09. The high rate of GDP growth, which averaged 8.7 per cent between 2003-04 and 2008-09, also contributed to revenue buoyancy and helped bring down both revenue and fiscal deficits.

The combined fiscal deficit in 2007-08 was just about 4 per cent and revenue deficit was very close to zero along with a primary surplus. However, the situation changed drastically in 2008-09. The central budget, 2008-09, announced in February 2008, seemed to continue the progress towards FRBM targets by showing a low fiscal deficit of 2.5 per cent of GDP. However, the 2008-09 budget quite clearly made inadequate allowances for rural schemes like the farm loan waiver and the expansion of social security schemes under the National Rural Employment Guarantee Act (NREGA), the Sixth Pay Commission award and subsidies for food, fertiliser and petroleum. These together pushed up the fiscal deficit to sharply higher levels. There were also off-budget items like the issue of oil and fertiliser bonds, which should be added to give a true picture of fiscal deficit in 2008-09. The fiscal deficit shot up to 8.5 per cent of

GDP (10.3 per cent including off-budget bonds) against five per cent in 2007-08 and the primary surplus turned into a deficit of 3.4 per cent of GDP (see Table 7). The combined public debt, however, declined marginally to 71.6 per cent of GDP because of a nominal growth in GDP of 12.7 per cent. The revenue deficit increased substantially to 4.4 per cent in 2008-09.

The huge increase in public expenditure in 2008-09 of 28.4 per cent that followed a 27.4 per cent in 2007-08 was driven by the electoral cycle with parliamentary elections scheduled within a year of the announcement of the budget. The budget's fiscal expansion helped compensate the effect of monetary tightening and push up domestic demand, especially in the rural sector. This prevented a collapse in domestic demand when Indian exports suffered a huge collapse starting November 2008 in the wake of the global crisis. Therefore, it is important to include fiscal expansion undertaken by the Indian government in February 2008 as a part of the fiscal stimulus undertaken in response to the post-Lehman crisis.

Budget estimates for 2009-10 indicate a further worsening with the fiscal and primary deficits rising in the current year. According to the revised estimates of 2009-10, fiscal and primary deficits were increased to 10.1 per cent and 4.9 per cent of GDP respectively. This has raised the issue of India's fiscal stability and debt sustainability afresh. However the debt<sup>34</sup> ratio has slightly improved to 72.4 per cent of the GDP due to the high nominal rate of growth of the GDP.

The measures taken by the government to counter the effects of the global meltdown on the Indian economy have resulted in a shortfall in revenues and substantial increases in government expenditures, leading to a temporary deviation in 2008-09 and 2009-10 from the fiscal consolidation path mandated under the FRBM Act. The revenue deficit and fiscal deficit in 2009-2010 are, as a result, higher than the targets set under the FRBM Act and Rules. The combined government expenditure was 28.4 per cent of GDP in 2008-09 and it is increased significantly to 30.4 per cent in 2009-10 (Table 6). The combined revenue expenditure has increased from 24.2 per cent in 2008-09 to 25.9 per cent in 2009-10. Owing to policy interventions for inflation management

<sup>&</sup>lt;sup>34</sup> The total outstanding liabilities of the centre as per 2009-10 (BE) is about Rs.3400 billion (59.6 per cent of the GDP) of which internal debt accounts for 67 per cent. Adding the state governments' outstanding liabilities of about Rs.1600 billion (27.6 per cent of the GDP), the combined outstanding liabilities accounts for 76.6 per cent of the GDP, i.e., about Rs.4400 billion in 2009-10 (BE).

and subsequently for providing a stimulus to growth, the government had to forego substantial revenues from excise and customs duties. Consequently, despite the buoyancy of direct tax revenues and service tax collections, the fiscal consolidation process has received a setback. The combined tax revenue of both the centre and states has come down by 0.5 percentage points in 2009-10 due to a further reduction in indirect taxes.

The fiscal situation is expected to improve in 2010-11. The government seems committed to return to the higher growth trajectory of 9% a more inclusive growth. The grounds laid down by the 13<sup>th</sup> finance commission for fiscal consolidation have been improved upon by the fiscal deficit targets announced in the budget. The budget has moved one step towards a selective roll-back of fiscal stimulus in favour of exports and agriculture, which is likely to be positive for the broad economic recovery. The target for fiscal deficit has been set at 5.5% in 2010-11. On the expenditure front, thrust on rural development and infrastructure is in line with expectations. The partial roll back of indirect taxes is expected to further improve revenues.

	Combined				Cer	ntre		States				
	2007 -08	2008 -09	2009- 10 RE	2010- 11 BE	2007- 08	2008- 09	2009- 10 RE	2010- 11 BE	2007- 08	2008- 09	2009- 10 RE	2010- 11 BE
I) Total Expenditur e	27.4	28.4	30.4	29.6	15.1	15.9	16.4	16.0	15.5	17.3	-	-
A) Revenue Expenditur e	22.4	24.2	25.9	25.0	12.6	14.2	14.5	13.8	12.0	13.4	-	-
B) Capital Expenditur e	5.0	4.3	4.5	4.6	2.5	1.6	1.8	2.2	3.5	3.9	-	-
II) Total Receipts	27.8	30.9	31.4	-	18.3	20.0	-	-	15.8	17.0	-	-
A) Revenue Receipts	22.2	19.8	19.7	20.5	14.7	9.7	9.3	9.8	12.9	13.6	-	-
i)Tax Revenues	18.5	16.6	15.9	16.7	12.6	8.0	7.5	7.7	9.3	9.6	-	-
ii)Non-Tax Revenues	3.7	3.2	3.8	3.8	2.2	1.7	1.8	2.1	4.0	3.9	-	-
B) Capital Receipts	5.6	9.0	9.8	-	3.6	6.4	-	-	2.9	3.4	-	_

 Table 7. Receipts and Disbursement of Centre and States (As a Per cent of GDP)

		Combined				Cei	ntre		States			
	2007 -08	2008 -09	2009- 10 RE	2010- 11 BE	2007- 08	2008- 09	2009- 10 RE	2010- 11 BE	2007- 08	2008- 09	2009- 10 RE	2010- 11 BE
III) Revenue Deficit	0.2	4.4	6.2	4.6	1.1	4.5	5.3	4.0	-0.9	-0.1	1.0	0.6
IV) Gross Fiscal Deficit	4.2	8.5	10.1	8.5	2.7	6.0	6.6	5.5	1.4	2.7	3.6	3.0
V) Gross Primary Deficit	-1.3	3.4	4.9	3.2	-0.9	2.6	3.1	1.9	-0.6	0.7	1.7	1.2

Source: Reserve Bank of India (RBI)

#### 4.3. Fiscal Stimulus Packages

In their response to the global crisis, governments of different countries have resorted to an unprecedented, globally co-ordinated fiscal stimulus package. Consequently, in India also, three fiscal stimulus packages were unveiled since December 2008 to help economic recovery. These have been largely in the form of a reduction in taxes and duties and, to some extent, incentives to the export sector. As we discussed above, the government had already allowed the fiscal deficit to expand beyond the originally targeted levels both in 2008-09 and in early 2009-10. Thus, luckily for India, its electoral cycle that pushed up public expenditure, coincided with the global recession and helped India overcome its negative impact.

The first fiscal stimulus package was introduced on December 7, 2008, the second on January 2, 2009 and the third one on February 24, 2009. These included an across-the-board central excise duty reduction by 4 percentage points, additional plan spending of Rs.200 billion, additional borrowing by state governments of Rs.300 billion for planned expenditure; assistance to certain export industries in the form of interest subsidy on export finance, refund of excise duties/central sales tax, other export incentives and a 2 percentage point reduction in central excise duties. The total fiscal burden for these packages amounted to 1.8 per cent of GDP in 2008-09. Along with the expansion undertaken in the two budgets, the total fiscal stimulus over the last two years can be estimated at 3 per cent of the GDP. (Soumya please check this as the fiscal

expansion in the previous two budgets would most likely be more than 1.2% of the GDP as implied here).

### 5. Towards a Feasible Fiscal Exit Strategy – Restoring FRBM Targets

Stimulus packages announced in India were discretionary in nature. Temporary changes, to tax and expenditure rules, triggered for crossing short-term macroeconomic thresholds may not help achieving fiscal sustainability in the long run. Further the discretionary stabilizers may suffer from mobilization of political support and lags in implementation. This kind of discretionary fiscal policy is not automatically reversed when the economy improves. The India's fiscal balances require immediate attention in order to have sound and sustainable fiscal and macroeconomic situation. A policy stance that relies exclusively on high growth and the continuation of a low interest rate regime may be inadequate to ensure long term debt sustainability. Therefore, as discussed above, the government needs to concentrate on automatic stabilizers pertaining to permanent expenditure and tax rules to attain fiscal sustainability and macroeconomic stability.

At present, the focus around the world, as also in India, has shifted from managing the crisis to managing the recovery. The key challenge relates to the feasible fiscal exit strategy that needs to be designed and implemented. As a response to the current global crisis, the Indian government has adopted significant discretionary fiscal stimulus packages to promote investment and sustain aggregate demand. It is time now to exit from the stimulus packages and concentrate on long-term policy scenarios to control the fiscal situation as well as improve GDP growth. The magnitude of fiscal adjustment needed in the next couple of decades is almost unprecedented, especially for countries like India with relative high debt.<sup>35</sup> However, the situation is manageable because of

<sup>&</sup>lt;sup>35</sup> A study by the IMF's Fiscal Affairs Department suggests that the countries those expected to have debt in excess of 60 per cent of GDP by 2014 would have to maintain an average primary surplus (revenue less expenditure before interest payments) of 4 and 0.5 percent beginning in 2014 to reduce the debt to 60 per cent of GDP by 2030 (Horton, Kumar, and Mauro, 2009).

the high potential growth rates that may see nominal GDP growth of over 13-14 per cent in coming years.

There is not much room for further fiscal policy action in terms of stimuli as the consolidated fiscal deficit of the central and state governments in 2008-09 is already 8.5 per cent of GDP. This may even rise further as revised estimates for 2009-10 suggest the budget deficit is likely to be about 10 per cent of GDP. It could be nearer to 12 per cent if all the off-budget items are taken into account. This implies a significant increase in government borrowing, which has risen from Rs.1269.12 billion (\$25.3 billion<sup>36</sup>) in 2007–2008 to Rs.3265.15 billion (\$65.3 billion) in 2008–2009 and is likely to be Rs.4009.96 billion (\$80.1 billion) in 2009–2010. This also implies a further rise in the debt to GDP ratio, which is expected to go up to 75 per cent.

We attempt to calculate best growth rate, primary deficit and interest rate that stabilises public debt for six to seven years down the line. The basic rule in debt dynamics is that the debt ratio will rise if there is a primary deficit and if the interest rate of debt exceeds the growth rate of GDP. Therefore, to reduce the ratio of debt to GDP, there must either be a primary surplus or the economy should grow faster than the rate of interest, or both. If one condition holds, it must be large enough to outweigh the adverse effect of the other<sup>37</sup>. We have estimated<sup>38</sup> various scenarios for India's debt-GDP ratios from 2009-10 to 2015-16 on three alternative assumptions of nominal GDP growth rate (12 per cent, 13 per cent and 14 per cent), interest rate on debt (7 per cent, 8 per cent and 9 per cent) and primary deficit as per cent of GDP (3 per cent, 4 per cent and 5 per cent). These are shown in Tables 5.1-5.3. Here g = nominal growth rate, i = nominal interest rate, p = primary deficit.

<sup>&</sup>lt;sup>36</sup> All \$ figures are in US dollars.

<sup>&</sup>lt;sup>37</sup> See Mason (1985), Hamilton and Flavin (1986), Spaventa (1987), Bispham (1987), Blanchard (1990),

Feldstein (2004), Rangarajan and Srivastava (2005).

<sup>&</sup>lt;sup>38</sup> The estimation is done by using the basic equation for debt ratio  $d_t = p_t + d_{t-1}(i-g_t) / (1+g_t) + d_{t-1}$ where  $d_t = debt$ -GDP ratio in time t,  $p_t = primary$  deficit-GDP ratio,  $d_{t-1} = debt$ -GDP ratio in time t-1, i = interest rate on debt, gt = GDP growth rate in nominal terms in time t.

	<b>g</b> =	g = 12%, i = 7%,			12%, i =	8%,	<b>g</b> =	g = 12%, i = 9%,			
Year/D <sub>t</sub> (%)	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%		
2009-10	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4		
2010-11	72.2	73.2	74.2	72.8	73.8	74.8	73.5	74.5	75.5		
2011-12	71.9	73.9	75.9	73.2	75.2	77.1	74.5	76.5	78.4		
2012-13	71.7	74.6	77.5	73.6	76.5	79.4	75.5	78.4	81.3		
2013-14	71.5	75.3	79.0	74.0	77.8	81.6	76.5	80.3	84.2		
2014-15	71.3	75.9	80.5	74.3	79.0	83.6	77.4	82.2	86.9		
2015-16	71.2	76.5	81.9	74.7	80.2	85.7	78.4	84.0	89.6		

 Table 8. Debt Ratios with GDP Growth at 12 % and Alternative Interest Rates and Primary Deficits

 Table 9. Debt Ratios with GDP Growth at 13 % and Alternative Interest Rates and Primary Deficits

	g = 1	3%, i = 7	%,	g =	= 13%, i =	8%,	g = 13%, i = 9%,			
Year/d <sub>t</sub> (%)	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%	
2009-10	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	
2010-11	71.6	72.6	73.6	72.2	73.2	74.2	72.8	73.8	74.8	
2011-12	70.8	72.7	74.7	72.0	74.0	75.9	73.3	75.2	77.2	
2012-13	70.0	72.8	75.7	71.8	74.7	77.6	73.7	76.6	79.5	
2013-14	69.3	73.0	76.7	71.6	75.4	79.1	74.1	77.9	81.6	
2014-15	68.6	73.1	77.6	71.5	76.0	80.6	74.4	79.1	83.8	
2015-16	68.0	73.2	78.5	71.3	76.7	82.1	74.8	80.3	85.8	

 Table 10. Debt Ratios with GDP Growth at 14 % and Alternative Interest Rates and Primary Deficits

	g = 14%, i = 7%,			g	= 14%, i = 8	8%,	g = 14%, i = 9%,			
Year/d <sub>t</sub> (%)	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%	p = 3%	p = 4%	p = 5%	
2009-10	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	
2010-11	71.0	72.0	73.0	71.6	72.6	73.6	72.2	73.2	74.2	
2011-12	69.6	71.5	73.5	70.8	72.8	74.7	72.1	74.0	76.0	
2012-13	68.3	71.1	74.0	70.1	72.9	75.8	71.9	74.8	77.6	
2013-14	67.1	70.8	74.4	69.4	73.1	76.8	71.7	75.5	79.2	
2014-15	66.0	70.4	74.9	68.8	73.3	77.8	71.6	76.2	80.8	
2015-16	65.0	70.1	75.3	68.1	73.4	78.7	71.5	76.8	82.2	

From the above alternative scenarios, the best case scenario is when GDP is growing at 14 per cent, primary deficit is 3 per cent of GDP and interest rate on debt is 7

per cent. In this case, the debt ratio will decline to 65 per cent in 2015-16 from 72.4 per cent in 2009-10. The worst case scenario is when GDP is growing at 12 per cent, primary deficit is 5 per cent of GDP and interest rate on debt is 9 per cent. In that case, the debt ratio will rise to 89.6 per cent by 2015-16.

For the current year, with a nominal growth rate below 12 per cent, a primary deficit of 3.2 per cent and an interest rate of about 7.5 per cent, the emerging debt position is not a sustainable one. The policy implication is that we should strive to reduce primary deficit or achieve a primary surplus, raise the growth rate and reduce the interest rate. The growth is in nominal terms and there is surely the option of inflating our way out of debt. However, this is not feasible given political sensitivity regarding inflation. If, however, the stimulus is withdrawn and GDP grows faster than the underlying rate that has been assumed, then primary deficit may return to the path prescribed by FRBM targets in the near future. The share of public debt in GDP will decrease at a significant pace. What these figures indicate is that the fiscal situation might deteriorate further if appropriate measures are not taken to control the public debt.

#### 5.1. Long-term Policy Measures

The key challenge involves balancing between public interventions and maintaining market confidence in the sustainability of public finances. This will require focusing policy attention on removing some of the structural bottlenecks on raising the potential GDP growth rate. Essentially, this will imply efforts to improve the investment climate for both domestic and foreign investors; remove entry barriers to corporate investment in education and vocational training; improve the delivery of public goods and services; and expand physical infrastructure capacities, including a major effort to improve connectivity in the rural regions. Infrastructure is a key binding constraint on India's growth and the government should take up long-term projects to improve infrastructure facilities. One of the weaknesses of the FRBM Act was that it did not have any provisions for protecting a decline in public investment. Consequently, in order to reach FRBM targets, productive expenditure was cut so that current expenditures could be continued at high levels. The former would have improved human, social, and physical capital, and therefore the economy's supply response capabilities. Now the

government needs to step up investment in human capital development through increased spending on primary, vocational and higher education and, primary health that will also help achieve inclusive growth. Further, such expenditures on improving human capital should be considered as part of capital expenditure rather than as revenue expenditure (which is how they are categorised now) since they yield a return in the long-term by way of inter-generational equity and economic growth. These measures will constitute one of the major components of the package of second-generation structural reforms and will enable the Indian economy to climb out of the downward cyclical phase and then extend the upward phase for a longer period than was achieved in the last cycle. The other important component of second generation reforms required to generate sustained rapid and inclusive growth is improvement in governance with a focus on minimising rent seeking and improving the delivery of public services.

Fiscal policies should be formulated within medium-term fiscal frameworks (and supportive institutional arrangements) that envisage a gradual fiscal correction once economic conditions improve. Reforms in the these areas will play a key role by directly improving prospects for the primary balance, thereby helping to contain the debt-to-GDP ratio and bolstering confidence in fiscal sustainability. But at the same time more fundamental adjustments in the tax system, the structure and efficiency of public expenditure and the financial sector must be on the agenda for reforms. The FRBM legislation brought down only reported deficits. But the global shock exposed the inadequate attention paid to incentives and escape clauses in formulating the Act. Targets were mechanically achieved, compressing essential expenditure on infrastructure, health and education, while maintaining subsidies and loan waivers. A new path of fiscal consolidation proposed by the 13<sup>th</sup> Finance Commission draws heavily on and seeks to maintain India's growth prospects. There is only a gentle attempt to prevent reduction in capital expenditure. Stricter constraints on the revenue deficit, protecting capital expenditures and more concentration on the medium term fiscal plan are needed.

On the revenue side, one way to exit is to increase or restore excise duties, which were reduced during the economic slowdown, to previous levels.<sup>39</sup> The consequent revenue gains can be used to generate employment in public infrastructure projects. However, given the uncertainty about the robustness of the recovery, completely reversing the tax cuts could affect the growth prospects and cause concern on public debt sustainability. Partial reversing may help strengthening the revenues of the government without disrupting the growth prospects.

Another possible option is to broaden the tax base. This will require changes to the tax structure, which is likely to become more important than before. An important step in this direction is the expected introduction of the Goods and Services Tax (GST) in October 2010. GST is going to replace CENVAT, state VAT and service tax. The proposed GST will be a comprehensive indirect tax levy on the manufacture, sale and consumption of goods as well as services at a national level. It will allow a single price for each product across the country. The GST is likely to reduce indirect taxes paid on most of the goods and services as it would avoid the cascading effect. Product prices, therefore, can be expected to fall and ensure growth in demand. In addition, the integration of goods and services taxes will improve tax collections and thereby help increase economic growth. It will also end the long-standing differential treatment of the manufacturing and services sectors. Apart from eliminating cascading effects, double taxation etc., the introduction of GST will facilitate credit on uniform terms across the entire supply chain and across all states. The consensus GST rates may emerge to be 14 per cent. Even this will sharply bring down the incidence of indirect taxes in the economy and release new growth impulses.

Another tax reform that is likely to be become effective in near future is the Direct Tax Code (DTC)<sup>40</sup>, which is designed to greatly simplify the direct tax structure. DTC

<sup>&</sup>lt;sup>39</sup> Since the growth in industrial production and exports is picking up and rise in the inflation rate is now seen as alarming, the government may find itself under pressure to contain the fiscal deficit and hence, to reverse the tax cuts. Also, politically this is an opportune moment to reverse tax. With no major elections due in 2010, the government has little to fear by way of an adverse political fallout if tax cuts are reversed.

<sup>&</sup>lt;sup>40</sup> The major proposals contained in the DTC are cutting corporate profit tax from 34 per cent (including surcharge and cess) to 25 per cent (all inclusive) and changing the basis of the minimum alternate tax (MAT). Instead of 15 per cent of book profits, it will be 2 per cent of gross assets for non-banking companies and 0.25 per cent of gross assets for banking companies.

will achieve this by eliminating distortions in the tax structure, minimizing exemptions, expanding the tax base, and improving tax compliance by introducing moderate levels of taxation. Initial analysis shows that most of these objectives are achievable.

#### 5.2. Conclusion

The Indian economy was on a cyclical slowdown after a five-year record boom and there are reasonable expectations that the economy will go for another strong growth phase after this brief slowdown. The impact of the post Lehman global crisis on India were evident only in the second round which saw a sharp decline in exports, a temporary lowering of GDP growth rates and a significant worsening of fiscal balances. India did not suffer the direct negative impacts of the crisis as its banking sector was not exposed to sub-prime assets. The policy response so far has been prompt in the form of monetary easing and fiscal expansion. However, this has sharply reversed the steady fiscal improvement over the past five years and weakened public finances considerably. This phase of fiscal expansion has to be wound down to ensure that macroeconomic stability is not threatened and the economy does not suffer from entrenched inflationary expectations and high capital costs, both of which will adversely impact the potential growth rate. Thus, an exit strategy will have to be carefully designed.

The objective of economic policy must be to maximise gains from global integration while ensuring a reduction in poverty and inequity. Therefore, a better way of responding to the crisis is to start the 'second round of reforms' that are now overdue. The focus must now shift to promoting private investment, which can alone sustain rapid growth. It is hoped that the the recommendations of the 13th Finance Commission will be implemented to restore fiscal health and the forthcoming budget will lay down a road map for bringing the fiscal balance back on the track laid down by the FRBM Act. At the same time immediate and concerted attention has to be given to implement governance reforms and measures for more sustained improvements in human resource development for the economy to remain on the trajectory of rapid and inclusive growth.

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# **APPENDIX-I**

**Receipts and Disbursement of Central Government (As a Per cent of GDP)** 

	1980-	1990-	2000-	2001-	2002-	2003-	2004-	2005-	2006-	2007-	2008-	2009-10	2009-10	2010-11
	89	99	01	02	03	04	05	06	07	08	09	BE	RE	BE
I) Total Expenditure	17.6	16.0	15.5	15.9	16.8	17.1	15.8	14.1	14.1	15.1	15.9	17.4	16.4	16.0
A) Revenue Expenditure	11.4	12.2	13.2	13.2	13.8	13.1	12.2	12.2	12.5	12.6	14.2	15.3	14.5	13.8
i)Interest Payments	2.6	4.2	4.7	4.7	4.8	4.5	4.0	3.7	3.6	3.6	3.6	3.8	-	
ii) Subsidies	1.6	1.4	1.3	1.4	1.8	1.6	1.5	1.3	1.4	1.5	2.4	1.9	-	
B) Capital Expenditure	6.2	3.7	2.3	2.7	3.0	4.0	3.6	1.9	1.7	2.5	1.6	2.1	1.8	2.2
i) Capital Outlay	3.7	2.3	1.1	1.5	1.3	1.0	0.9	0.3	0.2	0.2	0.3	0.2	-	
ii)Loans & Advances	2.5	1.4	1.2	1.2	1.2	1.2	1.7	1.5	1.5	2.3	1.6	1.9	-	
II) Total Receipts	18.7	17.8	18.0	18.3	19.0	19.7	18.7	17.4	17.1	18.3	20.0	20.2	-	
A) Revenue Receipts	12.3	11.8	11.6	11.2	11.7	12.0	12.3	12.4	13.5	14.7	9.7	13.3	9.3	9.8
i) Tax Revenues	9.9	9.3	9.0	8.2	8.8	9.2	9.7	10.2	11.5	12.6	8.0	10.9	7.5	7.7
(a)Direct Taxes	2.0	2.6	3.2	3.0	3.4	3.8	4.2	4.6	5.6	6.6	6.5	6.3	-	
Personal Income tax	-	1.2	1.5	1.4	1.5	1.5	1.6	1.6	1.8	2.2	2.0	1.8	-	
Corporate Tax	-	1.3	1.7	1.6	1.9	2.3	2.6	2.8	3.5	4.1	4.2	4.4	-	
(b) Indirect Taxes	7.9	6.7	5.7	5.2	5.4	5.4	5.5	5.6	5.9	5.9	5.3	4.6	-	
Excise Duties	-	3.6	3.3	3.2	3.3	3.3	3.2	3.1	2.8	2.6	2.0	1.7	-	
Custom Duties	-	2.9	2.3	1.8	1.8	1.8	1.8	1.8	2.1	2.2	2.0	1.8	-	
Service Tax	-	-	-	-	0.3	0.3	0.5	0.6	0.9	1.1	1.2	1.1	-	
ii))Non-Tax Revenues	2.4	2.5	2.7	3.0	2.9	2.8	2.6	2.1	2.0	2.2	1.7	2.4	1.8	2.1
B) Capital receipts	6.4	6.0	6.4	7.1	7.3	7.7	6.4	5.0	3.6	3.6	6.4	6.9	-	
i) Disinvestment Receipts		0.2	0.1	0.2	0.1	0.6	0.1	0.0	0.0	0.8	0.2	0.0	-	
III) Revenue deficit	1.7	3.0	4.1	4.4	4.4	3.6	2.5	2.6	1.9	1.1	4.5	4.8	5.3	4.0
IV) Gross Fiscal Deficit	6.7	5.9	5.7	6.2	5.9	4.5	4.0	4.1	3.5	2.7	6.0	6.8	6.6	5.5
V) Gross Primary Deficit	4.1	1.6	0.9	1.5	1.1	0.0	0.0	0.4	-0.2	-0.9	2.6	3.0	3.1	1.9

Source: Reserve Bank of India (RBI)

# **APPENDIX-II**

	1980- 89	1990- 99	2000- 01	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06	2006- 07	2007- 08	2008- 09	2009-10 BE	2009-10 RE	2010-11 BE
I) Total Expenditure	15.7	15.4	16.2	16.2	16.7	18.7	17.6	15.7	15.9	15.5	17.3	17.7	-	-
A) Revenue Expenditure	11.4	12.5	13.7	13.6	13.5	13.5	12.8	12.2	12.2	12.0	13.4	14.0	-	-
i)Interest Payments	1.1	1.9	2.4	2.7	2.8	2.9	2.7	2.3	2.3	2.1	2.0	2.0	-	-
B) Capital Expenditure	4.3	2.9	2.5	2.6	3.2	5.1	4.8	3.4	3.7	3.5	3.9	3.6	-	-
i) Capital Outlay	1.9	1.4	1.4	1.4	1.5	1.9	1.9	2.2	2.4	2.4	2.8	2.6	-	-
ii)Loans & Advances	1.3	0.8	0.4	0.4	0.4	0.8	0.5	0.4	0.3	0.4	0.3	-	_	-
II) Total Receipts	15.5	15.4	16.3	16.0	16.9	18.7	17.9	16.6	16.3	15.8	17.0	17.1	_	-
A) Revenue Receipts	11.5	11.3	11.1	10.9	11.1	11.2	11.5	12.0	12.8	12.9	13.6	13.4	-	_
i) Tax Revenues (including share in central pool)	7.6	7.7	7.8	7.7	7.9	8.0	8.3	8.5	9.0	9.3	9.6	-	-	-
ii))Non-Tax Revenues	3.9	3.6	3.2	3.2	3.3	3.2	3.3	3.5	3.8	4.0	3.9	-	-	-
B) Capital receipts	4.0	4.1	5.2	5.1	5.7	7.5	6.4	4.6	3.5	2.9	3.4	3.7	-	-
III) Revenue deficit	-0.1	1.2	2.6	2.7	2.3	2.3	1.2	0.2	-0.6	-0.9	-0.2	0.6	1.0	0.6
IV) Gross Fiscal Deficit	2.8	3.1	4.2	4.1	4.1	4.4	3.4	2.5	1.9	1.4	2.6	3.4	3.6	3.0
V) Gross Primary Deficit	1.7	1.2	1.8	1.4	1.3	1.5	0.7	0.2	-0.4	-0.6	0.6	1.4	1.7	1.2

# **Receipts and Disbursement of State Governments (As a Per cent of GDP)**

Source: Reserve Bank of India (RBI)

# **APPENDIX-III**

# Chronology of Fiscal Reforms in India

Effective	Reform	Objective	Changes
Year			
1954-55	The Taxation	Raising tax revenue	82.5% slab over Rs. 2.5 lakh with the surcharge
	Enquiry	through higher taxes and	of 10%.
	Commission	greater progressivity of	
1050 51		direct taxes	
1970-71,	Budget Report	Increasing income tax and	93.5% slab over Rs. 2 lakh with the surcharge of
February	presented by Ms.	wealth tax to achieve	10%.
28	Indira Gandhi	greater equality of income	
1071 72	Dealast Dealast		Lucreación en la constante de 150/ luc din esta in encorre
19/1-72,	Budget Report	Raising surcharge and	Increase in surcharge to 15% leading to increase
May 28	Chavan	capital gain tax	in top marginal income tax rate to 97.75%
1971-72	The Wanchoo	Revision of income tax	Suggestions: Reduction of the effective top
	Direct Taxes	rates	marginal rate to 70%
	Enquiry		
	Committee		
	(WDTEC)		
1974-75,	Budget Report	Decreasing income tax	Decrease in surcharge to 10% and top marginal
February	presented by Mr.	rates following WDTEC	income tax rate to 70%
28 <sup>m</sup>	Y.B. Chavan	report recommendations	
		and increasing the wealth	
1076 77	Deadlanet Devrauet	De les incluses terrestes	Desman in ten marinel income ten mts to
$19/0-77$ , Marah $15^{th}$	Budget Report	further and decreasing	Decrease in top marginal income tax rate to $66\%$ (60% plus 10% surpharge)
March 15	C Subramanium	wealth tax rate	00% (00% plus 10% suicharge)
1978-79	L K Iha	Reviewing the structure of	Recommendations:
1970 79	Committee on	indirect taxes, examining	i) Rationalisation of the duty structure on final
	Indirect Taxes	the role of indirect taxation	products and raw materials
		in promoting growth and	ii) Taking major steps within a time-bound
		examining the feasibility of	programme of action to avoid cascading
		adopting Value Added Tax	iii) Moving over to VAT at the manufacturers
		(VAT) etc.	stage
			iv) Sales taxation by a state should be
			essentially imposed on its residents without
			impinging on cost of production and without
			significantly affecting the residents of other
			States
			v) Principle of a unified market within the
			country should be preserved
			vi) There should be uniformity in procedures
			and broad structure of taxation in different states
			etc.

List of Fiscal Reforms

1979-80	Budget Report	Increasing income tay	i) Increase in effective ton marginal income tax
February	presented by Mr	surcharge and wealth tax	rate to 72%
$28^{\text{th}}$	Charan Singh	again	ii) Increase in top wealth tay rate to 5% for net
20		again	wealth over Rs. 15 lakh
1020 21	Pudget Deport	Departing to the top	Decrease in ten marginal income tay rate to
1980-81,	Budget Report	effective income to not	Decrease in top marginal income tax rate to $66\%$ (60% rbs 10% surphares)
June 18	presented by Mr.	effective income tax rate	66% (60% plus 10% surcharge)
	K.	and giving relief on wealth	
1002.04	Venkataramanan	tax	1 1 1 2 50/
1983-84,	Budget Report		Increase in surcharge to 12.5%
February	presented by Mr.		
28**	Pranab Mukheree		
1984-85,	Budget Report		Decrease in top effective rate to 62% by cutting
February	presented by Mr.		the top marginal rate to 55%
29 <sup>th</sup>	Pranab Mukheree		
1985-86,	Budget Report	Comprehensive direct tax	i) Decrease in top marginal income tax rate to
March 16 <sup>th</sup>	presented by Mr.	reforms following the	50% and wealth tax to 2%.
	V.P.Singh	Economic Administration	ii) Estate duty was abolished.
		Reforms Commission	iii) Reduced number of income tax slabs to four
		recommendations (1983-	from eight
		84)	iv) Decrease in company tax to 50%
			v) Unifying the tax rate to 55% for closely held
			companies
1985-86,	Mr. V.P.Singh		Recommendations:
December	placed Long-Term		i) Bringing out a medium term fiscal policy as a
	Fiscal policy in the		public document
	Parliament		i) Embedding tax policy intentions within an
			explicit macro fiscal framework
			iii) Sweeping reforms of central excise and
			customs duties
			iv) Phased introduction of VAT in excise
			tavation and conferred the name Modified VAT
			(MODVAT)
1096 97	Dudget Demont		(MODVAT)
1980-87, Eshmesme	Budget Report		Implementation of MODVAI - It enabled
Pebruary	presented by Mr.		manufacturers to deduct the excise paid on
28	v.P.Singn		domestically produced inputs and countervalling
			duties paid on imported inputs from their excise
			duty on output. By 1990 MODVAT covered all
			sub-sectors of manufacturing except petroleum
th			products, textiles and tobacco
1992, 4 <sup>th</sup>	Chelliah	Simplification and	i) Introduction of three-tier personal income tax
quarter	committee	rationalisation of direct tax	structure with an entry rate of 20% and a top
(Interim		structure.	rate of 40% (The maximum marginal rate of
report			personal income tax has been reduced to 40%
presented in			from 56 per cent in June 1991).
Dec 91,			ii) The rates of corporate income tax for both
followed by			publicly listed companies and closely held
a two part			companies have been unified and reduced to 46
final report			per cent from 51.75 per cent 57.5 per cent

in August			respectively.
1992 and			iii) Abolition of wealth tax
Ianuary			iv) Reduction of the extraordinarily high import
1993)			duties to a range of 15% to 30% for
1775)			manufacturers reduction of multiple tax rates to
			three in the range of 10% to 20% and extension
			of MODVAT credit to all inputs including
			machinery etc
1002.02	Pudgat Dapart	Decreasing import duties	Paduation in import duties to:
1992-95, Eshmismi	Budget Report	Decreasing import duties	Reduction in import duties to: $110\%$ in $1002.02$
Pedruary	presented by Mr.		110% in 1992-93
28;	Manmonan Singn		85% in 1993-94
1993-94,			65% in 1994-95
February			50% in 1995-96
27ª;			
1994-95,			
February			
28 <sup>m</sup> ;			
1995-96,			
March 15th			
1994, July	Chelliah	Widening the tax base by	Services brought under the tax net in 1994-95
$1^{st}$	committee	including the service tax	are Telephone, Stockbroker and General
		and extending its coverage	Insurance at the tax rate of 5%
		gradually.	
1991-92 to			i) New taxes such as Securities Transaction Tax
1996-97,			(STT), and Dividend Distribution Tax (DDT)
February			have partly reversed the move towards a simpler
			system
			ii) India has entered into Double Taxation
			Avoidance Agreement (DTAA) with 65
			countries including countries like U.S.A., U.K.,
			Japan, France, Germany, etc. These agreements
			provide relief from double taxation in respect of
			incomes by providing exemption and also by
			providing credits for taxes paid in one of the
			countries
1996-97.	Finance Act		Advertising agencies, Courier agencies and
July 22 <sup>nd</sup>			Radio pager services were added to Service Tax
			Net
1997-98			Minimum Alternative Tax (MAT) was
			introduced in 1997-98
1997-98	Budget Report		i) Reduction in excise duty rates
February	presented by Mr		i) Reduction in custom duties to 40%
28 <sup>th</sup>	P Chidambaram		iii) Reduction in triple rate structure of personal
20			income tax to 10-20-30%
			iv) Decrease in company tay rate to 35%
			v) Abolition of dividend tavation in the
			recipients' hands and replacing it with a 100/
			tay at company store
			tax at company stage

1997-98,	Annual Budgets		Eight more services were added to Service Tax
February	0		Net
$28^{\text{th}}$ and			
1998-99.			
June 1 <sup>st</sup>			
1999-2000	Budget Report		i) Excise duties ranging from 5% to 40% were
February	presented by Mr.		clubbed into three rates: 8%, 16% and 24%
$27^{\text{th}}$	Yashwant Sinha		ii) Two non-MODVAT, additional special
_,			excise rates (6% and 16%) were levied on
			luxury consumer goods
2000-01,	Budget Report		Converting the three excise duties into a single
February	presented by Mr.		CENVAT rate of 16% buttressed by a few
29 <sup>th</sup>	Yashwant Sinha		selective excises on luxury consumer goods
2001-02	'Govinda Rao'		Recommendations: Introduction of credit for
	Expert group on		taxes paid on inputs in services activities
	Taxation of		
	Services		
2002-03,	The Kelkar	Taxation reforms to be	Recommendations: The task force had given its
December	Committee -	introduced for the smooth	recommendations on the aspects relating to
	(Kelkar reports of	and proper administration	direct and indirect taxes such as :
	Task Forces on	of the tax law, and also	i) Doubling the exemption limit for personal
	Direct and Indirect	improve the tax collections.	income tax
	taxes (2002a and	1	ii) Abolishing taxes on equity capital gains and
	2002b)		dividends received by individuals
	,		iii) Moving to dual rate structure in excise and
			custom duties
			(These recommendations were severely
			criticised by economists like Bagchi, Chelliah,
			Acharya, Mukhopadhya et al.)
			iv) Abolition of minimum alternate tax is one of
			the major suggestions made by the task force.
			This was implemented in 2003-04
2004-05,	Budget Report		i) Abolition of taxation on long-term capital
July 8 <sup>th</sup>	presented by Mr.		gains on all securities transactions
2	P. Chidambaram		ii) Reduction in the rate on short-term capital
			gains to a flat 10%
			iii) Introduction of New Securities Transaction
			Tax (New STT), Fringe Benefit Tax (FBT).
			commodities transaction tax (CTT)
2004-05.			Tax Information Network (TIN) and Online Tax
June			Accounting System (OLTAS) were
			operationalised
July 2004	Fiscal		Targets:
-	Responsibility and		i) Bringing down the revenue deficit by 0.5% of
	Budget		GDP each year until it becomes zero
	Management		ii) Reducing fiscal deficit by 0.3% each year to
	(FRBM) Act that		a total of 3% of GDP by 2008-2009
	had been approved		iii) Total liabilities of the Union Government

	by the Parliament		should not rise by more than 9% a year
	under the NDA		iv) Union Government shall not give guarantee
	government was		to loans raised by PSUs and State Governments
	notified by the		beyond 0.5% of GDP in the aggregate
	successor UPA		
	government		
2000-01 to	0		Reduction in customs duties from 35% to 15%
2005-06.			
February			
$28^{\text{th}}$			
2005-06	Introduction of	VAT is designed to make	Rates:
	Value Added Tax	accounting more	i) 0% on necessities and some primary products
	(VAT)	transparent, cut trade	i) 1% on bullion and precious stones
		barriers and boost tax	ii) 4% on industrial inputs and capital goods and
		revenues.	items of mass consumption
			iii) 12.5% on all other items
2003-04 to	Changes in Service		Rates levied:
2009-10.	Tax		2003-04: 8%
February			2004-05: 10% and 2% Education Cess was
			introduced.
			2006-07: 12%
			2009-10 February : 10%
			Current: 10.2% along with 2% Education Cess
			Current. 10.276 along with 276 Education Cess
			About 80 services covered under Service Tax
			Net till date
2008-09.	Budget Report		i) Changes in income tax slab: slab threshold of
February	presented by Mr.		exemption for all Income Tax
2.9 <sup>th</sup>	P Chidambaram		assesses raised from from Rs 1 10 lakh to
27	1. Childuniourum		Rs 1 50 lakh without any change in surcharge -
			Every income tay assessee to get relief of
			minimum of Rs 4 000
			New tax slabs are: 10 per cent for Rs 150 000
			to 300,000, 20 per cent for 300,000 to 500,000
			and 30 per cent above 500 000
			ii) 2 percentage point reduction in central avaira
			duties and service tax
			ii) A commodities transaction tax (CTT) was
			introduced on the same lines as STT on options
			and futures traded in commodity exchanges
			iii) Plan expenditure fixed at Rs 2.43.000 grore
			which is 32.4% in total expenditure and non
			plan expenditure at 5 74 000 crore
		First fiscal stimulus	i) Across-the-board central excise duty
		nackage was announced on	reduction by 4 percentage points
		7 <sup>th</sup> December 2008 to fight	i) Rs 20,000 crora increase in plan expanditure
		against global arisis	n) Ks. 20,000 crore increase in pran expenditure
	1	against global crisis	

2009-10,	Budget Report		i) 34% increase in plan expenditure and 37%
July 6 <sup>th</sup>	presented by Mr.		increase in non-plan expenditure (due to $6^{th}$ pay
	Pranab Mukheree		commission, subsidies etc.) – Total expenditure
			increased by 36% over 2008-09 budget
			ii) Exemption limit in personal income tax
			raised by Rs. 10.000 from Rs. 1.50 lakh to
			Rs.1.60 lakh
			iii) Minimum Alternate Tax (MAT) to be
			increased to 15% of book profits from
			10%.
			iv) Abolition of FBT, CTT.
			ii) Fiscal deficit and revenue deficit of the
			Central government are projected as 6.8% and
			4.8% of GDP respectively
		Second and third fiscal	i) Service tax cut from 12% to 10%
		Stimulus packages on 2 <sup>nd</sup>	ii) 2 percentage-point reduction in both central
		January 2009 and 24 <sup>th</sup>	excise duties and service tax
		February 2009	iii) Additional borrowing by state governments
			of Rs.300,000 crore for planned expenditure
			iv) Assistance to certain export industries in the
			form of interest subsidy on export finance
			v) Refund of excise duties/central sales tax, and
			other export incentives
			vi) Along with the expansion undertaken in the
			two budgets, the total fiscal stimulus in the last
			two years can be estimated as 3% of the GDP
2010-11,	Introduction of the		Salient features:
October	Goods and		i) A dual GST model with two separate
	Services Tax		components namely, Central GST (CGST) and
	(GST)		State GST (SGST) will be introduced
			ii) Both the centre and states have to levy GST
			concurrently on all goods and services other
			than a small list of exemptions
			iii) Cross-utilisation of input tax credit between
			CGST and SGST will not be allowed except in
			case of inter-state transactions (IGST)
			iv) GST to have a two-rate structure: a standard
			rate for most of the goods and a lower rate for
			necessities
2011-12,	Possible		Major proposals:
April	introduction of the		i) To cut corporate profit tax from 34%
	Direct Tax Code		(including surcharge and cess) to 25% (all
	(DTC)		inclusive)
			ii) To change the basis of Minimum Alternate
			Tax (MAT). Instead of 15% of book profits, it
			will be 2% of gross assets from non-banking
			companies and 0.25% of gross assets for
			banking companies