นโยบายเศรษฐกิจมหภาคของไทยในระยะปานกลาง: ความท้าทายหลังวิกฤตและแนวทางที่เหมาะสม

กฤษฎ์ เดชารักษ์
ชญาวดี ชัยอนันต์
ณชา อนันต์โชติกุล
มานพ อุดมเกิดมงคล

สัมมนาวิชาการธนาคารแห่งประเทศไทย ประจำปี 2552
ณ ห้อง Bangkok Convention โรงแรม Centara Grand at Central World
15 - 16 กันยายน 2552

สัมมนาวิชาการประจำปี 2552

นโยบายเศรษฐกิจมหภาคของไทยในระยะปานกลาง: ความท้าทายหลังวิกฤตและแนวทางที่เหมาะสม

กฤษฎิ์ เดชารักษ์ ชญาวดี ชัยอนันต์
ณชา อนันต์โชติกุล มานพ อุดมเกิดมงคล*
สายนโยบายการเงิน
ธนาคารแห่งประเทศไทย
กันยายน 2552

ข้อคิดเห็นที่ปรากฏในบทความนี้เป็นความคิดเห็นของผู้เขียน
ซึ่งไม่จำเป็นต้องสอดคล้องกับความเห็นของธนาคารแห่งประเทศไทย

บทคัดย่อ

บทความนี้ต้องการชี้ให้เห็นถึงความเสี่ยงทางเศรษฐกิจที่สำคัญในระยะ 3 – 5 ปีข้างหน้าที่เป็นผลพวงจากวิกฤติการเงินครั้งล่าสุดและจากการดำเนินนโยบายภาครัฐภายใต้วิกฤตในช่วงที่ผ่านมา รวมทั้งนำเสนอทางเลือกในการดำเนินนโยบายเศรษฐกิจมหภาคที่เหมาะสมในการดูแลความเสี่ยงที่จะเกิดขึ้น โดยในระยะ 3-5 ปีข้างหน้า ความท้าทายสำคัญของการฟื้นตัวของเศรษฐกิจไทยจะขึ้นอยู่กับศักยภาพการผลิตของประเทศที่อาจลดต่ำลงต่อเนื่องจากการลงทุนและความเชื่อมั่นที่ยังซบเซา รวมทั้งการบริหารจัดการนโยบายการคลังที่อาจเผชิญกับข้อจำกัดภายใต้กรอบความยั่งยืน ตลอดจนสภาพคล่องส่วนเกินในตลาดเงินโลกที่อาจก่อให้เกิดภาวะเงินทุนไหลเข้าเฉียบพลันและเพิ่มความเสี่ยงต่อราคาสินทรัพย์และเงินเฟ้อให้กับระบบเศรษฐกิจในระยะต่อไป โดยการดำเนินนโยบายการคลังที่เหมาะสมจะต้องรักษาสมดุลระหว่างการมุ่งกระตุ้นเศรษฐกิจในระยะสั้น (Demand side policy) และการเพิ่มประสิทธิภาพการผลิตของเศรษฐกิจ (Supply side policy) เพื่อกระตุ้นการฟื้นตัวที่ยั่งยืนและขยายศักยภาพของประเทศในระยะยาว โดยเลือกใช้มาตรการที่เหมาะสมและเบิกจ่ายอย่างมีประสิทธิภาพ รวมทั้งเร่งเพิ่มบทบาทของกลไกอัตโนมัติด้านรายจ่ายเพื่อให้นโยบายการคลังมีความคล่องตัวในการดูแลเศรษฐกิจได้ดีขึ้นพร้อมกับคำนึงถึงการปรับตัวทางการคลังเพื่อรักษาความยั่งยืนทางการคลังในระยะต่อไป ในขณะเดียวกัน นโยบายการเงินอาจต้องเผชิญกับข้อจำกัดในการกระตุ้นเศรษฐกิจจากแรงกดดันเงินเฟ้อที่อาจค่อยๆ ปรับสูงขึ้นตามเศรษฐกิจที่ฟื้นตัว อย่างไรก็ตาม การรักษาวินัยทางการเงินและเสถียรภาพราคาในระยะข้างหน้าจะเอื้อต่อการขยายตัวทางเศรษฐกิจในระยะยาวรวมทั้งศักยภาพการผลิตได้เช่นกัน นอกจากนี้ ธนาคารกลางจะต้องเพิ่มบทบาทในการดูแลเสถียรภาพการเงิน (Financial stability) ผ่านการใช้นโยบาย Macro-prudential ที่เป็นมาตรการเฉพาะควบคู่ไปกับนโยบายอัตราดอกเบี้ย โดยจะต้องไม่ขัดแย้งกับเป้าหมายหลักอื่นๆ ของนโยบายการเงินเพื่อป้องกันการเกิดความไม่สมดุลในระบบการเงินอันจะเป็นความเสี่ยงสำคัญต่อระบบเศรษฐกิจการเงินโดยรวมได้

* ผู้เขียนขอขอบคุณผู้บริหารและเจ้าหน้าที่สายนโยบายการเงินทุกท่าน สำหรับการสนับสนุนด้านข้อมูลและความคิดเห็นที่ช่วยให้บทความมีความสมบูรณ์ โดยเฉพาะอย่างยิ่ง ดร. ทิตนันท์ มัลลิกะมาส ดร. พิชิต ภัทรวิมลพร ดร. อัมพร แสงมณี และ ดร. ทรงธรรม ปิ่นโต สำหรับข้อชี้แนะและคำแนะนำที่เป็นประโยชน์ รวมทั้ง ดร. สุรัช แทนบุญ สำหรับข้อมูลศักยภาพการผลิตที่เป็นหลักในการวิเคราะห์ของบทความนี้

บทสรุปผู้บริหาร

วิกฤติการเงินโลกในครั้งนี้ ส่งผลกระทบต่อระบบเศรษฐกิจของประเทศต่างๆ ทั่วโลก รวมทั้งไทยที่ได้รับผลผ่านการส่งออกที่หดตัวรุนแรง ทำให้ภาคการผลิตและอุปสงค์ในประเทศอ่อนตัวลงมาก ภาครัฐจึงจำเป็นต้องดำเนินมาตรการกระตุ้นเศรษฐกิจที่รุนแรงกว่าในภาวะปกติ คำถามที่สำคัญก็คือ ในระยะต่อไป เมื่อภาวะวิกฤตเริ่มผ่อนคลายลงและเศรษฐกิจโลกเริ่มเข้าสู่การฟื้นตัว เศรษฐกิจไทยจะต้องเผชิญกับความท้าทายอะไรบ้าง และกลยุทธ์นโยบายเศรษฐกิจมหภาคที่เหมาะสมควรเป็นไปในทิศทางใด เพื่อเอื้อให้เศรษฐกิจเติบโตได้อย่างมีเสถียรภาพและยั่งยืน

บทความนี้จึงวิเคราะห์ปัจจัยที่อาจเป็นความเสี่ยงที่สำคัญสำหรับเศรษฐกิจไทยในระยะ 3 – 5 ปีข้างหน้า ทั้งที่เป็นผลพวงจากวิกฤตและจากการดำเนินนโยบายของภาครัฐภายใต้วิกฤต รวมทั้งนำเสนอทางเลือกในการดำเนินนโยบายเศรษฐกิจมหภาคที่เหมาะสมในการดูแลความเสี่ยงดังกล่าว ซึ่งพบว่าในระยะ 3-5 ปีข้างหน้า **ความเสี่ยงที่สำคัญ**คือ ศักยภาพการผลิตของประเทศที่อาจลดต่ำลงต่อเนื่องจากการลงทุนและความเชื่อมั่นที่ยังซบเซา ซึ่งจะส่งผลให้เกิดความไม่แน่นอนในการประเมินขนาดของช่องว่างการผลิต (Output gap) และการตัดสินนโยบายในระยะต่อไป นอกจากนี้ การดำเนินนโยบายการคลังที่เป็นเสาหลักในการกระตุ้นเศรษฐกิจในช่วงวิกฤต อาจต้องเผชิญกับข้อจำกัดภายใต้ความยั่งยืนทางการคลังซึ่งจะมีผลต่อการฟื้นตัวของเศรษฐกิจ อีกทั้งปัญหาสภาพคล่องส่วนเกินในตลาดเงินโลก จากความเสี่ยงของการปรับตัวเข้าสู่ภาวะปกติของนโยบายที่ผ่อนคลายในหลายๆ ประเทศในช่วงที่ผ่านมา ซึ่งอาจชักนำให้มีเงินทุนไหลเข้าสู่กลุ่มประเทศตลาดเกิดใหม่อย่างรุนแรง จนอาจส่งผลต่อราคาสินทรัพย์และเสถียรภาพทางการเงิน รวมทั้งอาจเพิ่มความเสี่ยงด้านเงินเฟ้อให้กับระบบเศรษฐกิจในระยะต่อไป

ทั้งนี้ แม้เศรษฐกิจไทยในปัจจุบันยังอยู่ในภาวะที่การกระตุ้นเศรษฐกิจยังไม่ส่งแรงกดดันต่อเงินเฟ้อเป็นผลให้นโยบายการเงินและการคลังยังสามารถผ่อนคลายต่อเนื่องได้ แต่ในระยะต่อไป จากความเสี่ยงดังกล่าวข้างต้น **นโยบายการคลัง**จะมีข้อจำกัดด้านฐานะการคลังจากรายรับที่ลดลงตามภาวะเศรษฐกิจและหนี้สาธารณะที่เพิ่มขึ้น จึงจำเป็นต้องพิจารณาเลือกใช้มาตรการด้านภาษีและรายจ่ายที่เหมาะสม มีประสิทธิภาพและเร่งรัดการเบิกจ่ายให้ได้ตามเป้าโดยเร็ว เพื่อกระตุ้นเศรษฐกิจในระยะสั้น (Demand side policy) ควบคู่ไปกับการลงทุนและปรับโครงสร้างทางเศรษฐกิจให้เอื้อต่อการเพิ่มประสิทธิภาพการผลิตในระยะยาว (Supply side policy) ทั้งนี้ ผลการศึกษาพบว่า ที่ผ่านมากลไกด้านการคลังในการรักษาเสถียรภาพโดยอัตโนมัติ (Automatic stabilizers) ของไทยทำงานได้ค่อนข้างดีในการช่วยลดผลกระทบจากวิกฤตต่อเศรษฐกิจโดยรวม แต่ส่วนใหญ่จะมาจากกลไกด้านภาษี ในขณะที่กลไกด้านการใช้จ่ายโดยอัตโนมัติของรัฐบาล เช่น การใช้จ่ายที่เกี่ยวเนื่องกับการว่างงาน ยังอยู่ในระดับต่ำมาก ซึ่งโดยทั่วไปแล้วมาตรการด้านรายจ่ายจะมีตัวทวีคูณทางเศรษฐกิจ (Multiplier effect) สูงกว่ามาตรการด้านภาษี รัฐบาลจึงควรหาแนวทางในการเพิ่มบทบาทของกลไกอัตโนมัติด้านรายจ่าย เพื่อลดความจำเป็นในการใช้มาตรการแบบใช้ดุลยพินิจ (Discretionary measures) ซึ่งต้องใช้ระยะเวลาในการเบิกจ่ายและอาจเป็นการช่วยเหลือที่ไม่ตรงกลุ่มเป้าหมายเท่าใดนัก

ขณะเดียวกัน รัฐบาลจำเป็นต้องคำนึงถึงกลยุทธ์ในการปรับตัวทางการคลัง (Fiscal adjustments) ที่เหมาะสม เพื่อเตรียมพร้อมสำหรับระยะต่อไปที่เศรษฐกิจจะเริ่มฟื้นตัว เช่น การตัดรายจ่ายที่ไม่จำเป็น และการปรับโครงสร้างภาษี เพื่อให้มีรายได้เหลือ (Fiscal space) เพียงพอในการลงทุนเพื่อเพิ่มศักยภาพของเศรษฐกิจ และลดระดับหนี้สาธารณะเพื่อรักษาความยั่งยืนทางการคลัง (Fiscal sustainability) รวมทั้งเพื่อสร้างความเชื่อมั่นด้านวินัยทางการคลังต่อสาธารณชน อันจะส่งผลให้การใช้มาตรการต่างๆ มีประสิทธิผลมากขึ้น

ด้าน**นโยบายการเงิน**ที่ต้องเผชิญกับข้อจำกัดของกลไกการส่งผ่านภายใต้ความเสี่ยงที่ยังอยู่ในระดับสูง แรงกดดันด้านเงินเฟ้อที่อาจเพิ่มขึ้นตามเศรษฐกิจที่เริ่มฟื้นตัวในระยะต่อไปอาจทำให้มีข้อจำกัดมากขึ้นในการดำเนินนโยบายที่ผ่อนคลายเพื่อกระตุ้นเศรษฐกิจ ทั้งนี้ ขนาดของช่องว่างการผลิต (Output gap) ที่จะส่งผลต่อแรงกดดันเงินเฟ้อจะเป็นตัวแปรสำคัญที่กำหนดระยะเวลาและความเร็ว (Speed) ในการปรับอัตราดอกเบี้ยนโยบายเพื่อดูแลความเสี่ยงด้านเงินเฟ้อในระยะต่อไป ทั้งนี้ แม้ว่านโยบายการเงินอาจมีข้อจำกัดในการเพิ่มศักยภาพการผลิต แต่ระดับราคาที่มีเสถียรภาพจะเอื้อต่อการขยายตัวทางเศรษฐกิจในระยะยาวรวมทั้งศักยภาพการผลิตที่ได้รับแรงกระตุ้นจากนโยบายการคลัง ซึ่งจะช่วยให้นโยบายการเงินสามารถผ่อนคลายเพื่อสนับสนุนการฟื้นตัวทางเศรษฐกิจได้ต่อเนื่อง อีกทางหนึ่ง นอกจากนี้ วิกฤตที่เกิดขึ้น สะท้อนว่าธนาคารกลางควรมีบทบาทในการดูแลเสถียรภาพการเงิน (Financial stability) ให้มากขึ้น โดยใช้นโยบาย Macro-prudential ที่เป็นมาตรการเฉพาะในการเข้าดูแลความไม่สมดุลทางการเงินต่างๆ ซึ่งเป็นการดูแลที่ตรงจุดควบคู่ไปกับการใช้นโยบายอัตราดอกเบี้ยตราบเท่าที่ไม่ขัดแย้งกับเป้าหมายหลักอื่นๆ ของนโยบายการเงินเพื่อดูแลไม่ให้เกิดความไม่สมดุลในระบบการเงินอันจะเป็นความเสี่ยงสำคัญต่อระบบเศรษฐกิจการเงินโดยรวมได้

BOT Symposium 2009

Thailand's Medium-term Macroeconomic Policies: Major Challenges and Appropriate Responses

Nasha Ananchotikul
Chayawadee Chai-anant
Krist Dacharux
Manop Udomkerdmongkol*

Monetary Policy Group
Bank of Thailand

September 2009

The views expressed in this paper are those of the authors and do not necessarily represent those of the Bank of Thailand.

Abstract

This paper aims to identify major medium-term challenges facing the Thai economy as a result of the Sub-prime financial crisis as well as the public policy reactions following the crisis before providing appropriate recommendations. Over the medium term, Thailand's economic recovery may be subject to its ability to lift the level of potential output that has been lowered during the crisis from subdued investment and confidence; concerns over fiscal sustainability; as well as increased risks to asset prices and inflation, possibly through large capital inflows into the region induced by world excess liquidity. Appropriate fiscal policy calls for the balancing between the short-run growth stimulus and the long-run potential output elevation for a sustainable recovery. Fiscal measures must be carefully designed and budget effectively disbursed. The role of expenditure automatic stabilizer should be enhanced to lend greater flexibility in support of the economy during possible future challenges, while also formulate a clear plan for fiscal consolidation to preserve sustainability. On the other hand, monetary policy likely encounters limitation on continued easing stance due to rising inflationary pressure as economic recovery solidifies. Nonetheless, monetary discipline and price stability will foster as the potential economic growth over the long run. In addition, the role of central bank in preserving financial stability needs to be fortified by macro-prudential measures which are more targeted and flexible in conjunction with the option in interest rate policy, only when there are no conflicts to monetary policy objectives, to contain the financial imbalances as a detrimental risk factor to the overall economic stability.

*The authors are very grateful to all Monetary Policy Group executives and staffs for their support in terms of data and opinions, particularly for insightful comments from Dr. Titanun Mallikamas, Dr. Pichit Patrawimolpon, Dr. Amporn Sangmanee, Dr. Songtum Pinto as well as the potential output growth data from Dr. Surach Tanboon, which enabled us to carry out a complete analysis on the topic.

Executive Summary

The global economy was indisputably distressed by the Subprime financial crisis. For Thailand, notable export contractions and subsequent softening of production and domestic demand had prompted the public sector to provide substantial stimulus to help shore up the economy. With strain of the crisis ameliorated and signs of recovery gradually observed, the prudent and important questions then ask what challenges will face us going forward and how the macroeconomic policies can appropriately meet them to ensure sustainable economic growth and stability.

The aim of this paper is thus to identify major challenges to the Thai economy from both the Subprime financial crisis and the public policy reactions to the crisis, before providing policy recommendations on how to accommodate these challenges. Over the medium term, we find that Thailand's economic recovery is subject to, first, heightened uncertainty on the further decline in potential output, owing to subdued investment and confidence. This adds greater uncertainty in assessing output gap and has significant implications on policy decisions going forward. Second, fiscal policy, the spearhead of economic stimulus during crisis, could be restricted by sustainability limitations, which would in turn affect the recovery path. Moreover, with unprecedented fiscal and monetary easing on the global level, world excess liquidity could induce large capital inflows into emerging market countries and increase risks to asset prices and financial stability. This could add greater inflationary pressure to the economy.

Even though current economic conditions allow growth stimulation without incurring excessive inflationary pressure, this is not a cause for complacency. Going forward, **fiscal policy**, with lower revenues from weak economic conditions and high public debt level, must exert great care in the design and selection of its stimulus. Both revenue and expenditure measures should be highlighted on their effectiveness and disbursement acceleration to boost economic growth in the short run (demand-side policy), while also inducing investment realization and structural reforms to encourage an increase in productivity (supply-side policy) over the long run. Our study finds that Thailand's automatic stabilizers have been performing relatively well, mostly from taxes while expenditures such as unemployment benefits still remains fairly less active. In general, expenditure measures have larger multiplier effect than tax measures, therefore, expenditure-wise automatic stabilizer should play a greater role down the road in order to trim down the need for discretionary measures which are subject to implementation uncertainty as well as leakage.

At the same time, the government needs to formulate a clear strategy for fiscal consolidation, ready for implementation once the recover process sets in. This includes, for instances, the cuts in avoidable, low-multiplier expenditures and tax base reforms such that there is sufficient fiscal space to finance further investment spending in potential output and repay public debts down to a sustainable level. This will promote credibility towards fiscal discipline to the general public, which will in turn enhance the measures' overall effectiveness.

For **monetary policy**, transmission mechanism likely faces a limitation in the high-uncertainty environment. As economic recovery solidifies, rising inflationary pressure will also restrain its ability to remain easing stance. The timing and speed of policy rate adjustment will be determined primarily by the measure of output gap. Even though monetary policy may have limited influence over potential output, its impacts on price

stability provide essential incubation for long-run economic development, while additional room for expansionary monetary policy would be provided through the potential output lifted by fiscal policy. In addition, the role of central bank in preserving financial stability needs to be fortified, with the use of macro-prudential measures which can target on specific areas of financial weakness. Only when compliant with the key objectives of monetary policy, interest rate policy could also be employed as a complement in taking care of financial imbalances, proven by the crisis as a detrimental risk factor to the overall economy.

TABLE OF CONTENTS

Chapter I
Introduction

World economic landscape has been changed drastically by the sub-prime crisis. The financial meltdown and wealth collapse in most advanced economies required unprecedented governments' interventions, though the timing and impacts of their exit strategies remained mostly uncertain. For Thailand, the immediate impact of the crisis was through trade channel, with significant contraction in exports, then domestic production, income, and demand followed suit down the plunge. To counteract these large concerted negative repercussions, both fiscal and monetary policies have provided substantial support to the economy. Presently, some signs of economic recovery have gradually emerged both on the global and national levels.

The aim of this paper is thus to identify how this backdrop possibly transform into major challenges facing the economy going forward and provide navigation for appropriate macroeconomic policies to best preserve Thailand's economic growth, stability and sustainability over the medium term. A wealth of literature focuses on the conduct of macroeconomic policies with particular emphasis on crisis period, but the policies tend to be separately assessed and on a cross-country basis (For instances, Fiscal Policy: IMF (2009), Ardagna (2002), Alesina and Perotti (1997); Monetary Policy: Issing (2009), Gerlach et Al. (2009), White (2009)). Although this allows for a deep vertical analysis with respect to individual policy, macroeconomists and practitioners would stand to benefit from a more complete picture. This paper provides a more horizontal, country-specific analysis of both fiscal and monetary policies as well as their coordination. Analytical framework focuses on availability of tools in conjunction with their limitations and effectiveness.

To begin, we first scan the future environment and extract what would be the economy's major challenges. Apparently, the sub-prime crisis impacts are of important implications, especially in the medium term. First, the export and domestic demand slump increased the risk that Thai potential output growth would be on a further decline. The economy's potential has already been on a declining trend due to both the scars from 1997 Asian financial crisis and prolonged political uncertainty. However, because the extent of the decline is unobservable and also subject to the recovery process and policy responses, while potential growth itself is an important signal of future economic activities, there is heightened uncertainty in both fiscal and monetary policy decisions going forward. **On the other hand, because of the possibly dimmer outlook of economic growth, there is increased pressure on fiscal position and sustainability.** With both domestic demand and exports plunging, the Thai government faced with lower expected revenues while expenditures were simultaneously elevated by stimulus packages obligations. Large public debts buildup also raises concerns over fiscal sustainability over the medium term. Fiscal adjustments and mindful debt management would be key to a successful recovery. Delicacy is required in designing the fiscal consolidation to least interrupt the economic recovery process. Success in fiscal adjustments will hinge also on a firm fiscal discipline, to achieve both effectiveness and sustainability desired.

In addition, world financial imbalances are subject to risks and could be intensified from the mishandling of exit strategies in the economies where the governments had previously introduced massive interventions. Sooner or later, earlier stimuli must be withdrawn, particularly as signs of stabilization were to be

increasingly and broadly observed. In the worst case scenario where exit strategy was delayed or not smoothly carried out, risks of inflation and financial imbalances would globally increase, implicating the task of policymakers even further. Asian economies, less affected by the crisis, would be an attractive choice for global investors. Influx of world liquidity would simply raise the inflationary pressure in the region, including Thailand. **Given these development, monetary policy, against its own limitations, would face a difficult balancing act.** During the crisis, transmission mechanism performed relatively less effective given the high uncertainty and overall subdued sentiment. On the other hand, in the early economic recovery, monetary policy needs to continue easing stance to provide sufficient demand accommodation, while may also observe growing concerns towards price stability. Neither premature nor delayed withdrawal of monetary stimulus seems appealing.

These caveats come into play in that the strategies of medium-term macroeconomic policies need to meet the challenges in growth, stability, and sustainability, all at once. Though considered at a "sweet spot" with high demand for growth but low inflationary pressure, macroeconomic policies cannot provide too much stimuli for too long under the consideration of sustainability and economic stability. Both fiscal and monetary policies face its own individual limitation in sustaining growth stimulation. **Therefore, this founds the basis for policy coordination, which lessens the issues of policy limitations while also enhancing overall effectiveness.** The key is to achieve the mutual goal that is the growth recovery. Fiscal policy in particular needs to put efforts in raising the economy's potential, which not only reduces pressure on fiscal position but also giving more room for monetary easing, as the higher potential output likely leaves a larger negative output gap. Monetary policy, able to promote growth without hurting price stability, can better anchor inflation expectation. This, together with the overall improvement in economic conditions, will in turn enhance fiscal position and sustainability going forward.

Chapter II
Important medium-term challenges

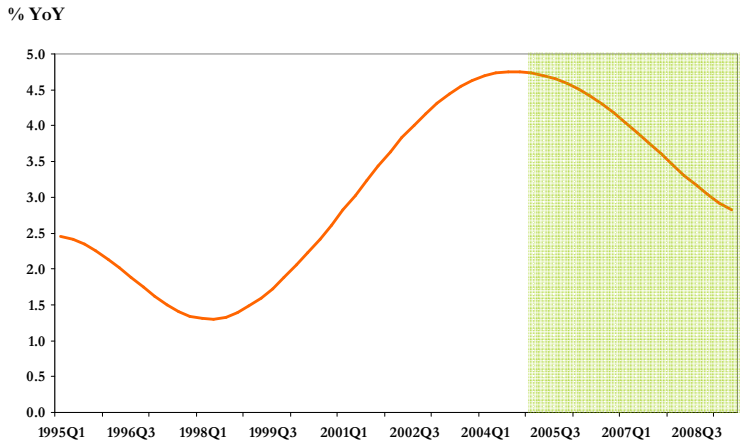
The remaining uncertainties in the global economic environment will likely pass on adverse impacts to the Thai economy in the medium term. Together with the existing structural and institutional problems of the economy, these risks may be amplified and become a threat to the recovery process going forward. Macroeconomic policy toolkits, as a result, will have to weather through these major challenges while also providing cushion as well as sufficient boost for the economy to resume the pre-crisis growth path. In order to search for such appropriate policy solutions, the future challenges shall be identified and thoroughly examined. This chapter lists the possible major challenges that will lay foundation for the process of policy formulation in the following chapters.

I. Uncertainty in the potential output

The major concern, not only for Thailand but in the global scale, is how much the crisis has damaged the potential output. Not only does it represent the overall productivity and wealth of the economy, potential output also has important implications on macroeconomic policy decisions (both fiscal and monetary policies) via the output gap—the difference between actual and potential output. Under the inflation targeting regime, output gap is considered to be a key indicator of future domestic inflation and a link to the production side of the economy which signals a call for an appropriate response from the monetary policy. In order to stabilize the economy's output and inflation, a negative output gap will signal the needs for expansionary policies and vice versa.

A measurement in output gap is not simple because the potential output is not directly observable as it represents the level of output that is consistent with no inflation pressures in the economy. In other words, it is 'the level of activity that the economy can sustain, given its productive capacity' (Claus et. al., 2000). Researchers have attempted various approaches to come up with the most appropriate measures but the results seem to vary. (Chuenchoksan et. al., 2008) Therefore, the level of potential output is already uncertain by its measurement to some extent, leading to uncertainty in output gap that feeds into the policy formulation.

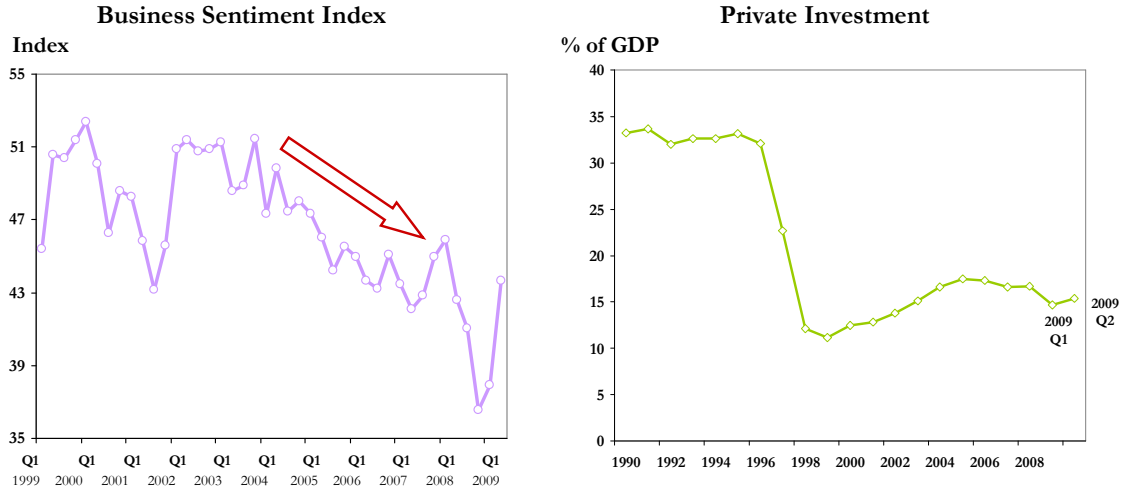
Figure 2.1 Declining Potential Growth



Source: BOT's calculation based on the Unobserved Component Model (Chuenchoksan et. al., 2008)

Before this current crisis, studies have found that potential output growth for Thailand has already been in a declining trend as shown in **Figure 2.1**. The deteriorating potential output growth was due mainly to the low level of investment from low business confidence as a result of the country's political conflict during the past years. **Figure 2.2** shows that the prolonged subdued business confidence has suppressed the country's private investment from returning to the pre-Asian-crisis level at around 30 – 35 per cent of GDP.

Figure 2.2 Business Sentiment Index and Private Investment Ratio



Source: Bank of Thailand and NESDB

The current crisis that apparently caused a sharp fall in output worldwide was fed into the Thai economy through its high degree of openness. This was reflected in a severe export contraction, leading the country's production and output to fall sharply. Under the assumption that the potential output remains idle, this should put the economy below its potential, or in other words, producing a negative output gap. If only this is the case, then it simply calls for lax macro-policies in order to shore up the demand and narrow the gap.

To worsen, the current crisis could also exacerbate Thailand's potential output as well as the actual output. Furceri and Mourougane (2009) suggest that the current financial crisis may impact on a country's potential output in both direct and indirect channels. The direct impact should be visible on the production-function components as follows;

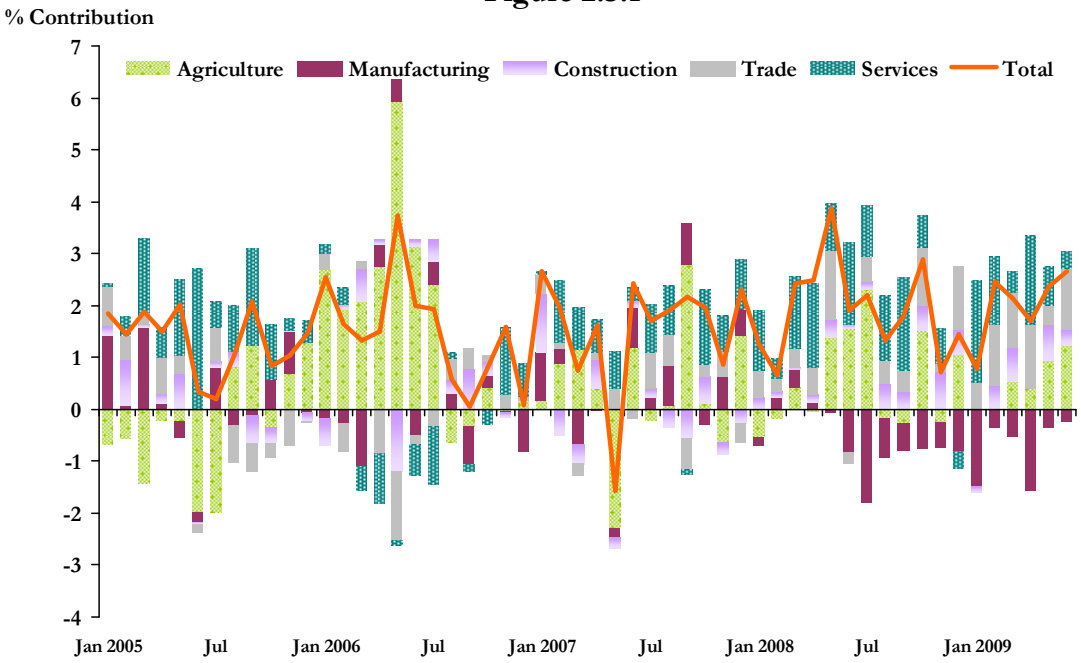
- Weakening labor market conditions by an increase in structural unemployment especially if the labor market is rigid
- Decline in total factor productivity
- Decline in investment in capital due to low incentive or confidence

The indirect impact can also materialize from government policies or measures that cause detrimental defects to long-term growth, especially when they introduce distortions to the economy.

Under the current circumstance for Thailand, there have been no obvious signs of an increase in structural unemployment. This could partly result from the relatively flexible labor market as reflected in (1) labor absorption among sectors, especially those from export-related sectors as shown in **Figure 2.3.1** where an employment reduction in manufacturing sectors was evidently absorbed by an increase in the increase in employment in services and agricultural sectors and (2) the business reluctance to lay off workers especially skilled workers and tendency to only reduce the hours worked. As a

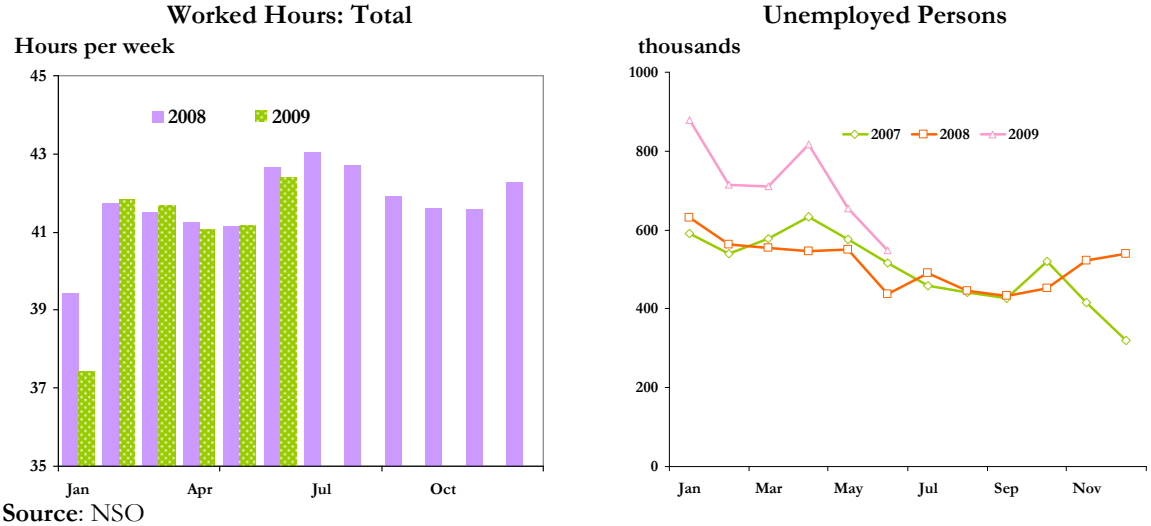
result, despite a slight decline in hours worked**, Figure 2.3.2** indicates unemployment rate gradually returning towards the pre-crisis level.

Selected Labor Market Condition Indicators
Figure 2.3.1



Source: NSO

Figure 2.3.2



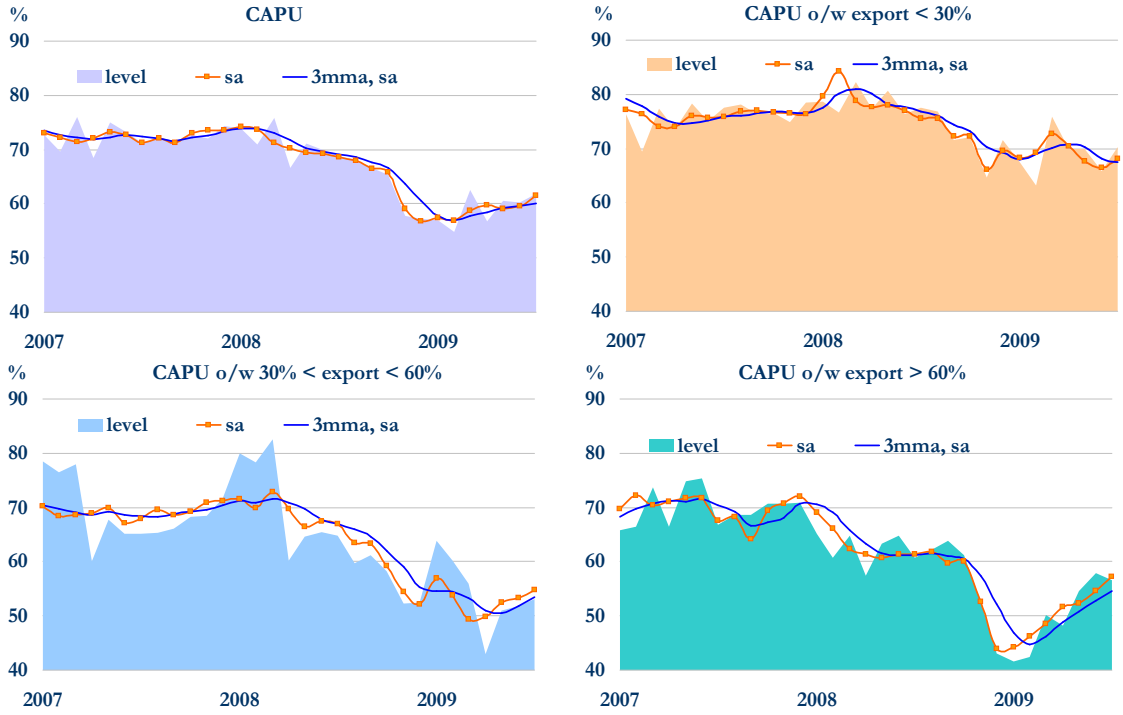
Source: NSO

The impact of the crisis on total factor productivity or technological innovation often occurs via the abrupt change in the financial development progress or credit constraints on investment in R&D. In the case of Thailand, however due to the resilient banking system and relatively moderate share of R&D in total investment, the impact through this channel should not be significant.

However, a decline in investment seems to cast the most prominent impact on potential output for Thailand. Excess capacity due to the production slump as shown in **Figure 2.4**, especially in the export sector, has discouraged domestic investment. **Figure 2.5** presents a sharp decline in investment indicators after the wake of the crisis, consistently with a reduction in the country's import of capital goods and private investment figure.

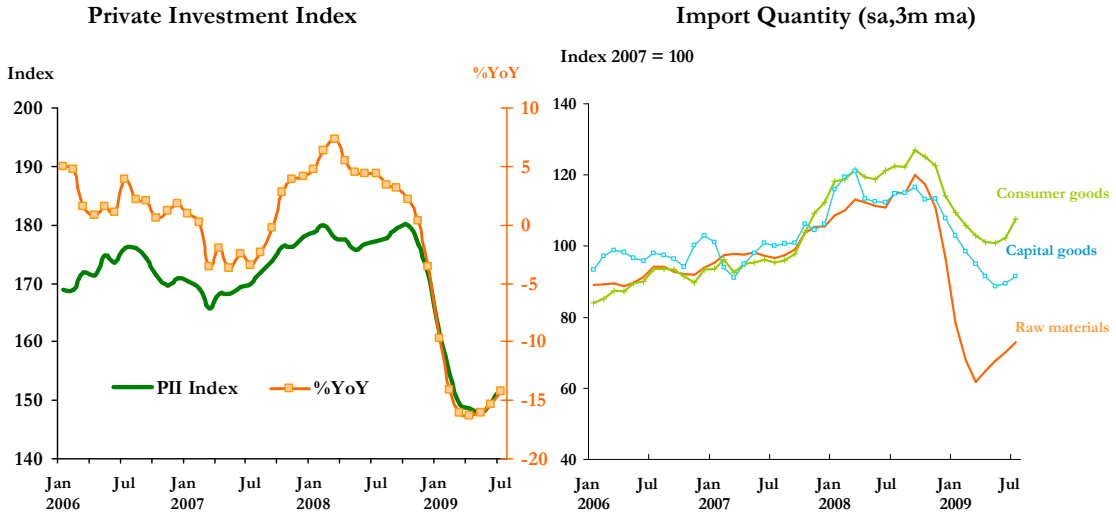
Together with weak business and consumer confidence caused by persistent political problems, the crisis should further deteriorate the country's capital accumulation and exacerbate the decline in potential output in the medium-term.

Figure 2.4 Capacity Utilization and Manufacturing Production Index



Source: Bank of Thailand

Figure 2.5 Private Investment Index and Imports of Capital Goods



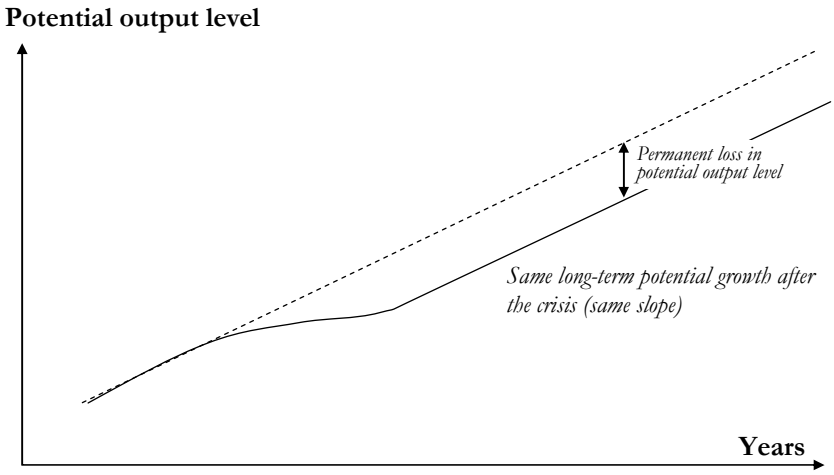
Note: PII series are rebased according to MOC import prices index. Hence, data from 2000 onwards are disseminated.

Source: Bank of Thailand

However, as mentioned previously, the impact of the crisis on potential growth can not be directly quantified and it could also be partly affected by the macroeconomic policies which aimed to support the economy. With fiscal packages being put in place, potential output in the medium-term may somewhat improve. Moreover, the assessment of the crisis impact on potential output above has been made upon the assumption that the world economy has already passed the bottom of the recession. In the medium-term

span, should there be another financial market slump during the recovery (W-shape rather than V-shape recovery) or the possible detrimental effect from some short-run policies on the long-term output trend (such as a shift of investment spending towards the short-term consumption to boost the economy), the potential output may fall even further.

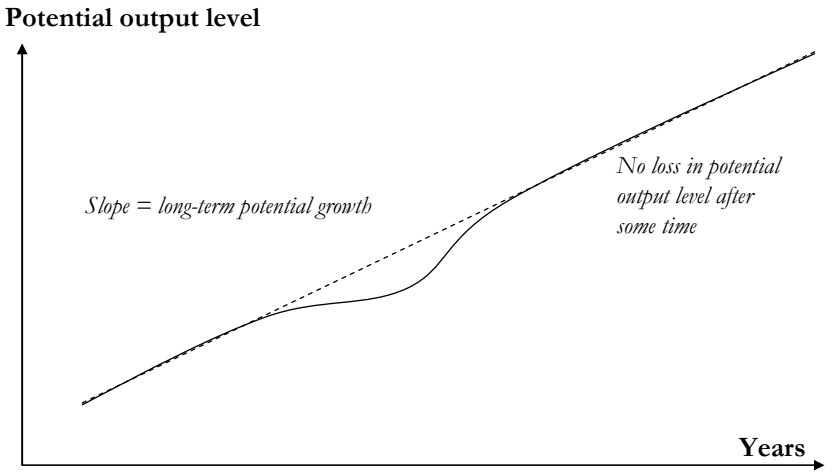
Figure 2.6.1 Permanent Loss in Potential Output Level



Source: Koopman and Szekely, 2009

The current crisis is likely to cause a one-time deviation of potential output away from its path. However, the development of medium-term potential output path may vary under three different characteristics. First, potential output growth returns to the same rate as that of its pre-crisis path (**Figure 2.6.1**) which implies there will only be a permanent effect on the level of potential output. However, the returning to the pre-crisis growth path will likely depend on the size of loss during the immediate crisis.

Figure 2.6.2 Full Recovery Scenario

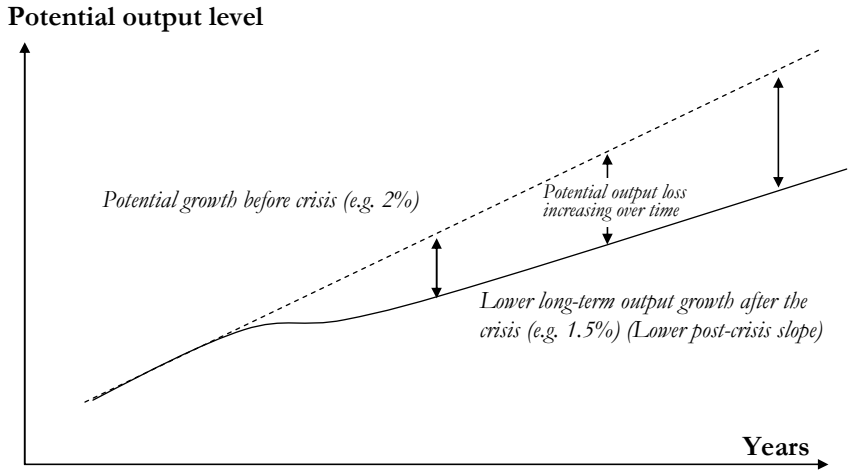


Source: Koopman and Szekely, 2009

The second possible case is the more optimistic ones that the full recovery will take place some time in the future periods, reflecting a 'temporary drop in potential output level'. The timing and speed of the recovery will depend on the effectiveness of supply-side policy measures and the recovery of the confidence and investment following the economic upturn in the future periods for Thailand (**Figure 2.6.2**). However, this case seems unlikely for major economies as that the pre-crisis growth was likely to be debt-driven and it is unlikely to return to the same growth path in the medium term after the structural shift from the current crisis.

The last case represents in **Figure 2.6.3** for a possible risk that there will be the 'continuous widening loss' of potential output in the case of delayed global recovery together with the recurrence of financial problems in the world financial markets. This case appears unlikely for Thailand due to the country's resilient financial sector that should not cause the downward spiral of the credit cycle and the real sector's productivity in the medium-term. Recently, there have been signs of recovery in various sectors as well as business confidence, which should prevent the widening loss of potential output going forward.

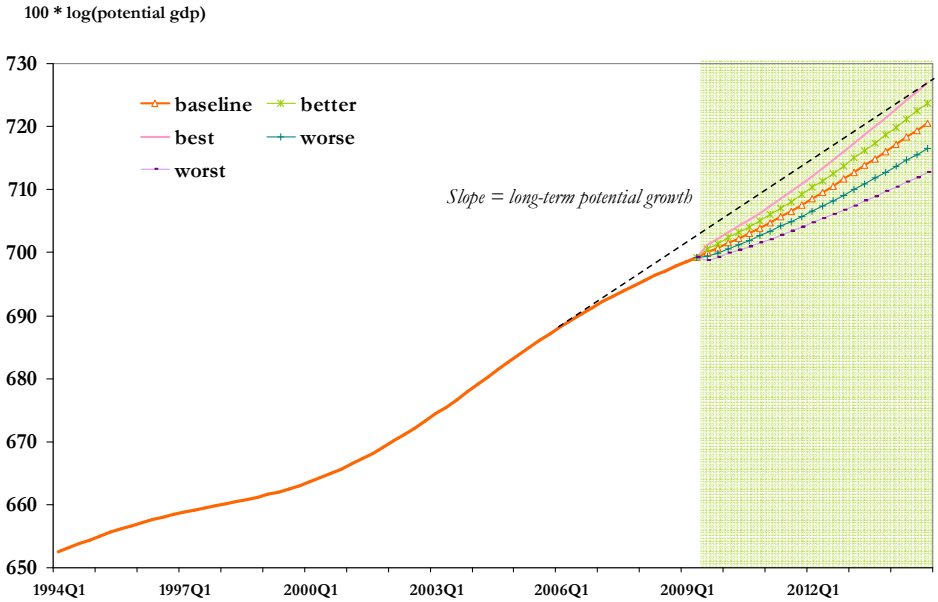
Figure 2.6.3 Continuous Widening Loss



Source: Koopman and Szekely, 2009

Despite the fact that some of these cases are more likely than the others, these possibilities will add more uncertainty to the already declining path of Thailand's potential output growth. The appropriate responses to temporary versus permanent output loss definitely vary. As a result of uncertainty in its measurement and the extent of impacts from the crisis, the potential output will be the important challenges for policy formulation going forward.

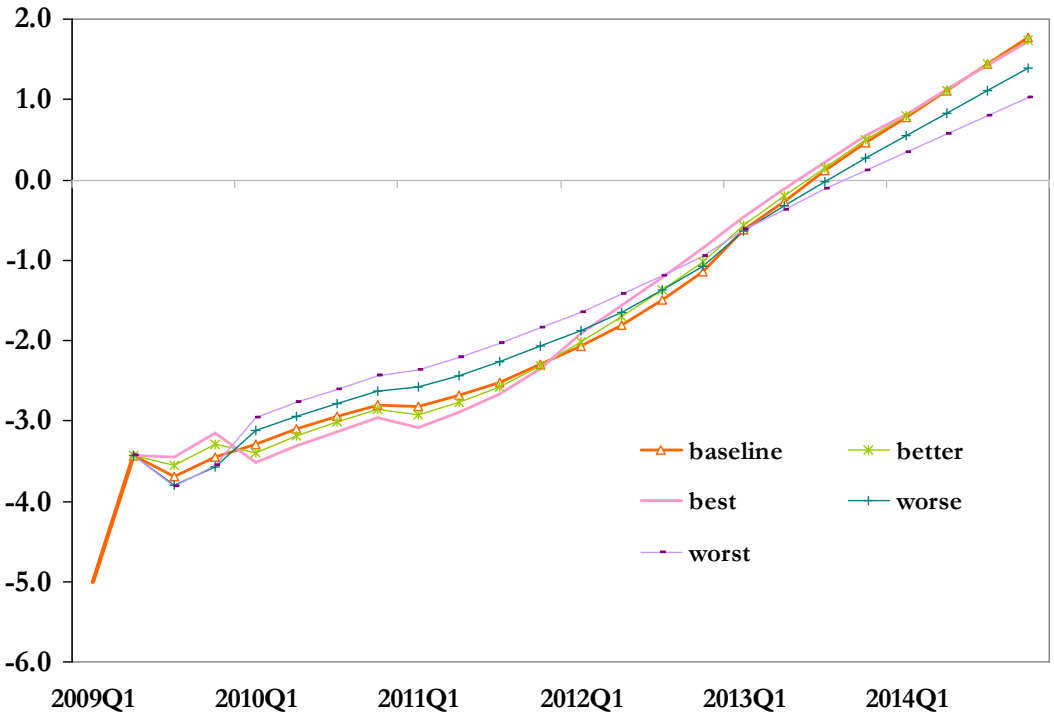
Figure 2.7 Level of Potential Output under Different Scenarios in the Medium Term



Source: BOT's calculation

Under the medium-term outlook, one can also attempt to derive the potential output path under different medium-term scenarios as presented in **Figure 2.7**. The first 8 quarters of baseline assumption is obtained from the BOTMM forecasts and the medium-term trend is taken from the latest World Economic Outlook by the IMF. The different scenarios are based on the possible risks to the domestic growth and inflation driven by investment, consumption as well as trading partner's GDP and world inflation in the medium-term. The assumption used is listed in the Appendix I. As can be seen, the crisis has caused the level of potential output to decline from its long-term path. However, the world economic recovery path, the effectiveness of domestic government policies to revive the economy as well as private sector confidence will likely be important factors to the medium-term development of potential output. These varying possibilities of potential outputs reflect the uncertainties policymakers are facing via the levels of output gap.

% **Figure 2.8** Paths of the Output Gap under Different Medium-term Scenarios



Source: BOT's calculation
Note: The output gap represented the percent deviation of the actual output relative to potential output

The variation in the output gap under different scenarios is not only driven by the potential output uncertainty but also the actual output that varies under the different assumptions. **Figure 2.8** illustrates the paths of output gap in different scenarios that may induce different policy formulation. The output gap under the best case scenario appears to perform best in terms of moving from negative towards closing the gap as the actual growth improves relatively more than the potential in the assumption. However, this development can be inflation-induced going forward and thus highlights the fact that the stimulation in the potential output will be the essential policy feature going forward.

In sum, the unobserved potential output has already been a challenging task for policymakers whilst the consequences of the current crisis and the policy responses would increase the uncertainty in potential growth path. Regardless, one can see that continued efforts should be put into boosting potential growth as an overruling solution for long-term policy formulation. This is not only because it increases the economy's wealth and

productivity but also implies that the negative gap will allow expansionary policies to boost the actual output without inducing much inflationary pressure. In other words, an increase in the potential growth will let the economy remain at the 'sweet spot' longer.

II. Fiscal management under sustainability

Fiscal policy will have a major role in supporting efforts taken by the central bank to counter economic slowdown and in stimulating the economy especially during the time of export-sector decline. However, there may not be much room left under the fiscal sustainability.

The Thai government undertakes expansionary fiscal policy to promote domestic demand in fiscal year 2009. Due to an additional mid-year supplementary budget worth around 120 billion baht, the government expenditure is expected to rise from 1,582.6 billion baht in fiscal year 2008 to 1,838.6 billion baht in fiscal year 2009. Meanwhile, the government revenue is projected to be shortfall by 200 billion baht approximately caused by the economic downturn. Hence, there would appear fiscal deficit in this fiscal year by 448.5 billion baht or 5.2 percent of GDP (Table 2.1).

Table 2.1 Fiscal position

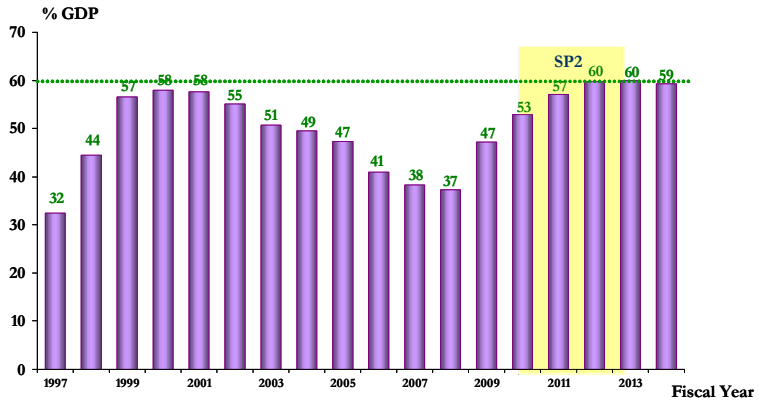
Billion Baht

	FY 2007[P]	FY 2008[P]	FY 2009[E]	FY 2010[E]
Government revenue	1,432.8	1,545.8	1,404.6	1,350.0
Government expenditure	1,520.5	1,582.6	1,838.6	1,697.2
Non-budgetary balance	-7.2	12.7	-14.5	11.9
Fiscal balance	-94.8	-24.0	-448.5	-335.3
% of GDP	-1.1	-0.3	-5.2	-3.6

Source: Bank of Thailand's calculation[1]

In the fiscal year 2010, the fiscal balance would deteriorate further as the government plans to undertake fiscal stimulus to continue strengthening the domestic economy. As a result, the fiscal balance is targeted to weaken by 3.6 percent of GDP in the fiscal year.

Figure 2.10 Forecasts of public debt in the medium term



Source: Bank of Thailand's estimation[2]

[1] In fiscal years 2009 and 2010, the government expenditure is estimated by using assumptions that the disbursement rate is 93% and 94%.

[2] We forecast the public debt in the medium term under the assumptions that real potential GDP growth is 5.5% and inflation rate is 3.5%.

To bring Thai economy back on its sustainable growth path, the government also has a plan to invest in three-year infrastructure projects, so-called the Stimulus Package II, including the mass transit system, the water management and the alternative energy projects. Nonetheless, with the current revenue-expenditure constraints, the government needs to inevitably finance the Stimulus Package II principally by the government borrowing. Consequently, the public debt to GDP ratios will continue to grow over the medium term (Figure 2.10) and eventually exceed the fiscal sustainability framework announced by the government (50 percent of GDP).

This oppressive government's balance sheet outlook raises issues of fiscal solvency. In particular, it could trigger adverse market reactions since the greater public debt burden could do damage to economic growth and government's creditworthiness. Moreover, with limited fiscal space of Thailand, there is little room remaining for the cushion in the medium term should the economic recovery is slower than expected. If this is the case, more burdens may have passed on to monetary policy should inflationary pressure picks up, there will be substantial tradeoffs.

Nevertheless, this can be avoided by the fiscal management under sustainability: fiscal stimulus packages should not have permanent effects on deficits; medium-term frameworks should provide a commitment to fiscal correction once economic conditions improve; structural reforms should be implemented to enhance growth (IMF, 2009). Whilst these prescriptions are not unconventional, the weaker state of public finances has dramatically raised the cost of inaction.

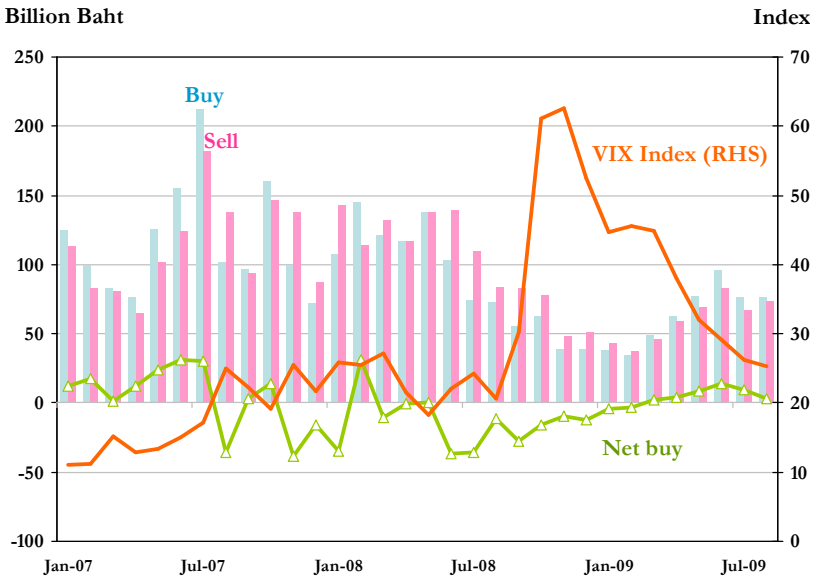
III. Excess liquidity, capital flow and asset price volatilities

The current crisis has led many economies, especially the major ones, to turn to unconventional measures and abnormally large fiscal packages, given the urgent need to cope with problems in the financial and real sectors. As the impact of the current crisis starting to unwind, concerns have been shifted towards the best 'exit strategies' out of these sizable interventions that have produced the flood of liquidity on a global scale. The 3rd paper in this symposium series by Nakornthub et. Al. 2009 has performed a thorough analysis on the issue and suggested that the poorly designed unwinding strategies of the major economies may create the spillover of excess liquidity over other parts of the world as risk appetite fluctuates along the recovery path of the global economy. This paper will investigate on the consequences of the global as well as domestic excess liquidity that are likely to pose another important challenge to the Thai economy in the medium-term.

The global excess liquidity is not completely new issue, especially on its implication to the international capital flows. During the past years, one of the obvious consequences of excess liquidity, other than being the root of this crisis, has been the large and increasing volume of 'carry trade' activities. Since 2003, this large sum of return-seeking behavior has led to larger fluctuations of capital flows amongst the financial markets around the globe, until the crisis resulted in a disruption of the global liquidity in 2008.

The aftermath of this crisis is believed to have structurally altered the patterns and drivers of capital flows of the emerging markets, at least in a temporary fashion. Since the wake of the crisis in late 2008, capital flows in the Asian economies have been extremely sensitive to changes in international investors' risk perception, resulting in moderate fluctuation in rates of returns. The empirical evidence also supports this case for Thailand.

Figure 2.11 Non-resident Flows in the Thai Stock Market and VIX Index



Source: Stock Exchange of Thailand and Bloomberg

Figure 2.11 plots the size of capital flows, with non-resident flows in the Thai stock market as a proxy, against the VIX index[3] as the risk indicator. To find the reactions between flows and risk appetite, we can simply use the GARCH-type model to correct for the volatility clustering of flows to test on the relationship between different flow types and risk indicator before and after crisis.[4] The coefficient as well as significance of the estimates suggests that risk indicator plays more role in flow behaviors after the current crisis in some cases. This implies that risk-return profile of cross-border investment may not be the same. The fluctuation in risk appetite, rather than the pull (domestic) factors, could become an influential driver for capital flows in Thailand, causing flows to be less persistent or more 'choppy' than the pre-crisis era.[5] Higher volatility of capital flows could also transfer to volatility in asset prices and higher risk to financial stability.

In terms of size, the swell of global liquidity during the aftermath of crisis may induce a larger movement of global capital, raising capital flow volatility and heightening risks to financial stability. In addition, after a sharp drop in 2009, capital flows to emerging markets are projected to regain momentum (WEO, April 2009), which will add to the increasing flow sizes from the global liquidity. However, the tightening regulations on cross-border borrowings after the crisis may partially mitigate the effect from excess liquidity. Moreover, the country's structural limitations such as the prolonged political conflicts as well as inefficient market structure could somewhat dampen the size of such

[3] VIX is the ticker symbol for the Chicago Board Options Exchange (CBOE) Volatility Index which reflects the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options. This volatility is meant to be forward looking and is calculated from both calls and puts.

[4] The GARCH model was performed on three different types of daily foreign flows in the Thai stock market; equity purchase, sales and net purchases. The sample starts from 3 Jan 2007 to 30 September 2008 before crisis and from 1 October 2008 to 28 August 2009 for the after-crisis-estimation.

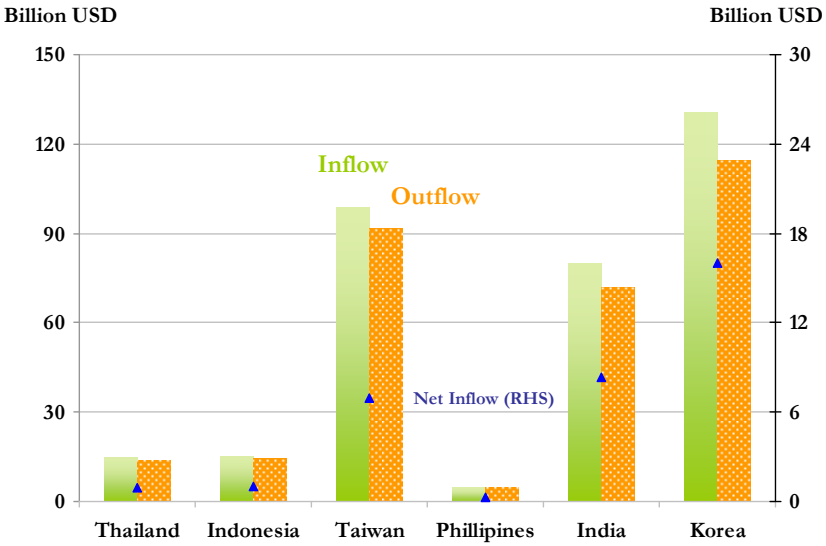
$$\text{Log (flows)}_t = a_0 + a_1 \text{Log(VIX)}_t + a_2 \text{return}_{t-1} + \varepsilon_t$$

$$\sigma_t^2 = b_0 + b_1\varepsilon_{t-1}^2 + b_2\sigma_{t-1}^2 + \nu_t$$

[5] The empirical evidence from the VAR system with flows, returns and the VIX index at a daily frequency reveals the fall in flow persistence after the crisis.

flows in the case of Thailand especially during the next few years. **Figure 2.12** reveals the relatively small size of portfolio flows to Thailand compared to the neighboring countries since the crisis which helps confirm such facts.

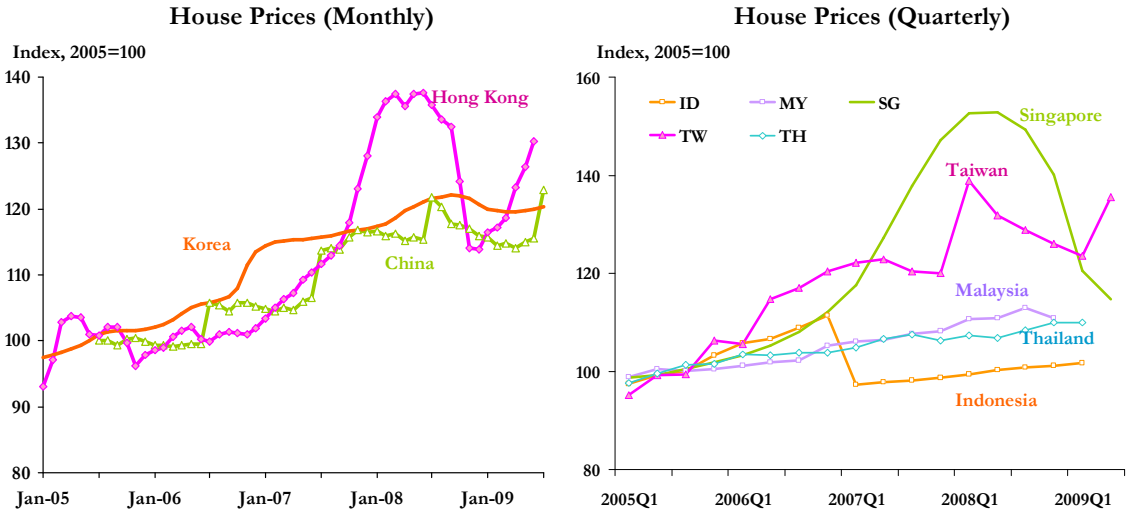
Figure 2.12 Portfolio Flows to Emerging Asia



Source: Bloomberg

Regarding the impact of capital flows to the country's asset prices, changes in short-term investment flows is found to have an impact on the stock market valuation (Chai-anant and Ho, 2008) but the house and land prices in Thailand seem to be less volatile compared to stock prices and other cases in the region (**Figure 2.13**). This implies that the wealth effect from stock valuation may not transfer well to prices of the less-liquid assets. Even so, stock market valuation of Thailand has been relatively moderate thus far. The lesson from the Asian crisis has encrypted the conservative investment behaviors to the investors in the market. Together with the higher risk sensitivity of investors, the moderate changes in sizes of capital flows may not be a potential threat in creating bubbles in the asset market, at least in the medium-term.

Figure 2.13 Development of House Prices in Selected Economies



Source: Bloomberg and author's calculation

Moreover, the uncertainty in direction of capital flows could also dampen the expectedly large change in their sizes. On one hand, the global excess liquidity may push more capital into the region. On the other hand, aggregate net flows to emerging Asia are expected to be close to zero or negative to counterbalance the current account surpluses. The net effect will depend mostly on the design of exit strategies in the major economies and how well such unwinding process can absorb the flooded liquidity, and how fast the current account surpluses dwindle as the Asian economy including Thailand is moving into a faster-than-world recovery phase. Regardless of the net impact on direction of flows, the aforementioned factors will result in higher capital flow volatility. As a result, higher fluctuation in asset prices and risks to financial stability due to the increasing risk sensitivity of investors remains.

Despite the moderate probability of asset price bubble formation in Thailand, the global excess liquidity could potentially stoke new asset price bubble elsewhere. This could also be a major threat to the global financial stability and Thailand as well, given the interconnectedness of world markets we have seen from this crisis. This again will call for a carefully designed post-crisis strategy as well as more systematic international cooperation on the close monitoring of financial stability going forward.

The impact of domestic excess liquidity on the asset prices are likely to be minimal as the liquidity has been caused by the unwillingness of the banks to lend and private sectors to borrow. The risk aversion seems to be a decent warrant that these excess funds will not be transferred to any of the asset markets, leaving the asset price fluctuation only subject to the external liquidity.

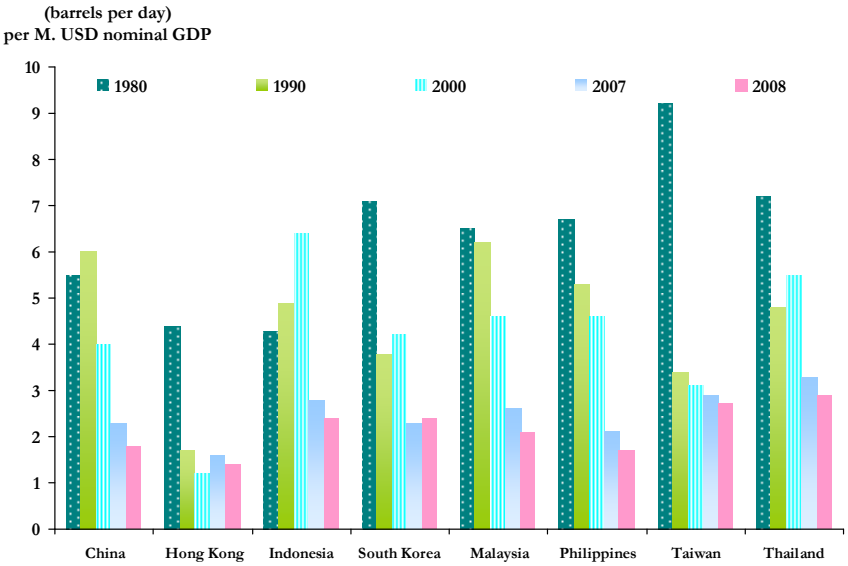
IV. Inflation risks

Inflation risk has been one of the major concerns in this analysis due to its important implications on monetary policy implementations. In the medium-term, monetary policy, as well as fiscal policy, is expected to stay lax in order to support the sustained growth recovery. At this 'sweet spot', macroeconomic policy can fully be accommodative under low inflation[6]. The inflationary pressure would, as a result, put more limitation on monetary policy in fostering such growth path.

There are two major sources of inflation; domestic demand and global factors. Due to the projected soft domestic demand and gradual recovery of the Thai economy going forward, domestic demand driven inflation should be relatively moderate. However, many uncertainties remain and could pose potential risks to the domestic inflation. Firstly, uncertainty in development of potential output over the medium term could produce some implication on inflationary pressure if potential growth continued to decline, especially to a lower rate than the actual output growth. The second domestic factor lies in the production structure of the country. Thailand's inefficient usage of energy has often put the country under intense inflationary pressure during the commodity especially oil price surge. **Figure 2.14** exhibits the relatively high energy intensity of Thailand in comparison with others.

[6] In 2009, Thai inflation was expected to remain at low level. Apart from the soft domestic and external demand, this also resulted from the government measures to alleviate the costs of living which covered, for examples, free public transportations such as buses and trains, free water supply and electricity under a capped limit, and free public education. The measures are scheduled to expire at the end of 2009, therefore an expected pickup in inflation during 2010 is expected. Interpretation of 2010 inflation needs to take into account the low base effect.

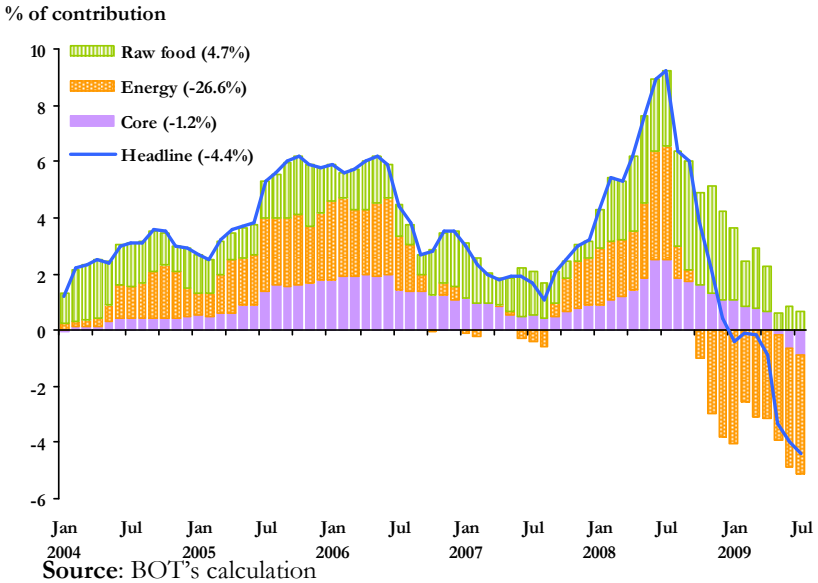
Figure 2.14 Energy Intensities of Selected Economies



Source: Author's calculation (WEO, April 2009 and BP)

Figure 2.15 also highlights the fact that most of the abrupt movement in Thailand's headline inflation has been due to the movement in energy prices. This country-specific weakness may put Thailand under higher risk of inflation than others should oil and commodity prices speed up in the future periods.

Figure 2.15 Contributions of Thailand's Headline Inflation

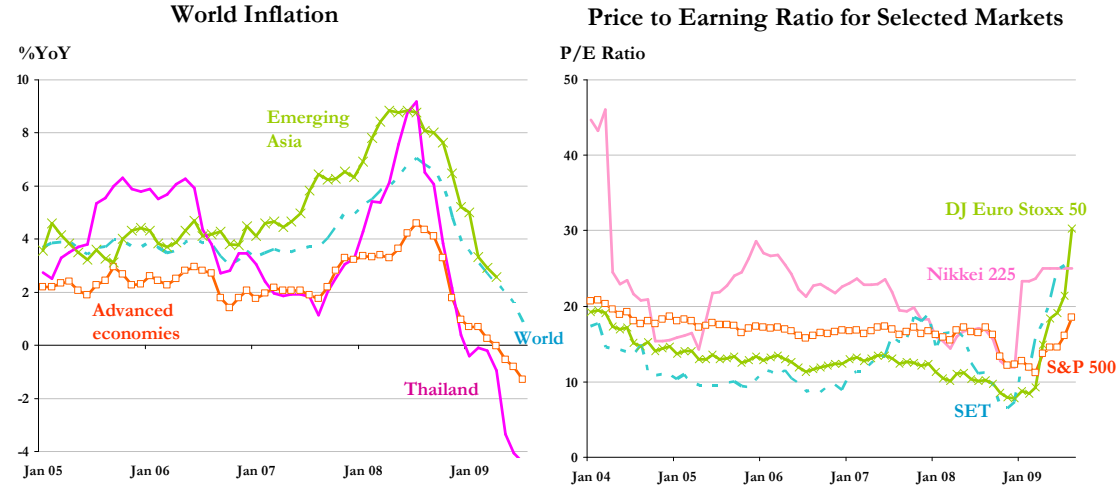


Source: BOT's calculation

Other potential factors influencing inflation are external, i.e. world inflation. The global factors have been increasingly important to inflation dynamics worldwide. Borio and Filardo (2007) argues that inflation dynamic is increasingly influenced by global factors for a large number of countries. For Thailand, Khemangkorn et. Al. (2008) also found that inflation is less responsive to domestic resource utilization but more towards global

factors regardless of the moderate share of imported goods in the inflation basket. As a result, despite the low inflationary pressure from the domestic sources, global inflation could be transferred to domestic inflation, especially via inflation expectation.

Figure 2.16 Developments in World Inflation and Asset Prices

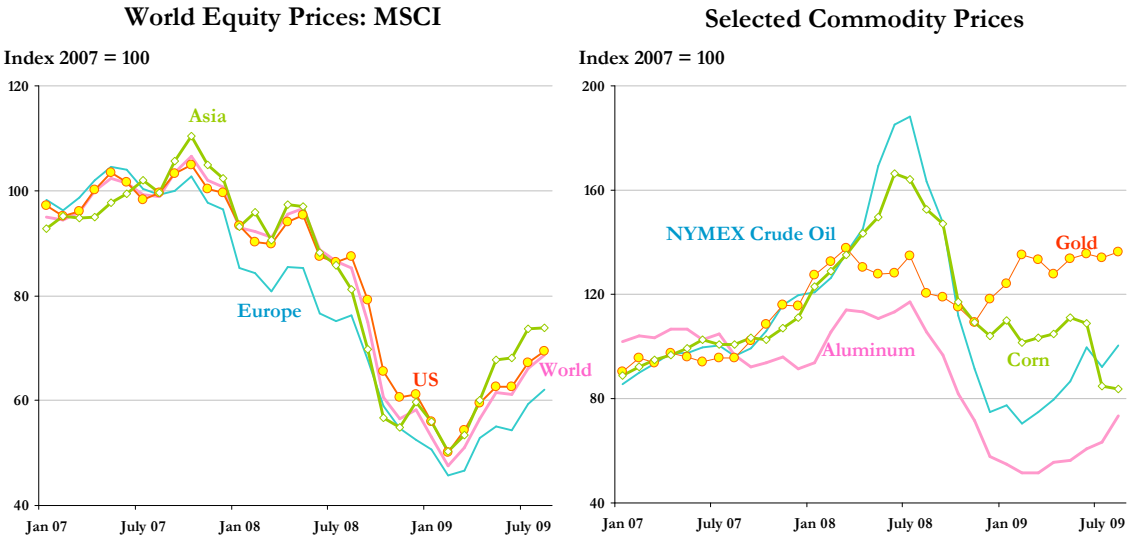


Source: Bloomberg and IFS

Source: CEIC

One of probable causes for world inflation risk is the sizeable excess liquidity in the global financial market going forward especially if the exit strategies in advanced countries fail to be executed smoothly by the respective governments and central banks. At the current state, the swell liquidity from government policies and measures to tackle the economic and financial downturn has not produced a significant threat to the asset prices and world inflation due to the high degree of risk aversion and uncertainty in economic recovery. **Figure 2.16** confirms the moderate development in world inflation and asset prices in major economies. However, in the future periods when there are clearer signs of recovery in major economies and the steady improvement in investors' risk appetite, world inflationary pressure could intensify from the left-over excess liquidity should the mop-up or 'exit strategy' measures are poorly designed or ineffectively implemented.

Figure 2.17 World Equity and Commodity Prices



Source: CEIC and author's calculation

The other source of inflation possibly stems from the commodity price pressure. The liquidity that has currently flooded the world financial system may have shifted to commodity trading and asset market. World equity and commodity prices have started to rally but not at a very high rate (**Figure 2.17**). However, given uncertainty in the world recovery, government measures to smooth the transition and investors' risk perception could influence pressure on inflation going forward. In the medium-term, the spilled liquidity from poor unwinding process from the accommodative policy stance together with the growing demand from sooner-than-expected world recovery could speed up these prices and heighten inflation risks of the Thai economy.

Due to the various economic uncertainties, inflation remains our significant risk factor not only to the economy as a whole but also to the policy formulation to foster sustained growth recovery going forward. International factors have become more important to the country's inflation dynamics and hence also suggest that coordination of close monitoring on overall stability have to be taken more seriously than what has been done in the past.

In the medium term, these potential challenges, especially the uncertainty in potential output development, may delay the country's economic recovery and become a threat to the overall stability. As a result, the appropriate policy responses are called for. However, macroeconomic policies always come with limitations, both on their implementation and effectiveness. The next chapter will discuss the existing macroeconomic policy tools in terms of their ability to stabilize the economy as well as the limitation which will lead to the policy options in the later chapters.

Chapter III
Macroeconomic Policy Tools

The medium-term challenges have raised concerns on whether the existing policy tools will be sufficient to cushion the economy from potential medium-term challenges and what should be the appropriate practice in order to perform such difficult tasks.

It is apparent that the priority in the medium-term horizon for the policymakers is to effectively boost the potential output as well as to foster the economic recovery process. Policymakers therefore have to keep in mind that they must avoid the introduction of policies in the midst of the crisis that would risk reducing potential output even further. The question is what are the choices and what are the features of each policy option that we have? The policy options seem to differ in effectiveness and limitations to counteract with the imminent challenges. This section will discuss the policy features and their limitations to set course on how to effectively design the appropriate actions and coordination going forward.

I. Monetary Policy

The mandate of monetary policy is to safeguard price stability that would help foster the long-term economic growth. However, to be more specific, the monetary policy in Thailand is characterized as "**Flexible Inflation Targeting +**" with implication on policy tools attached to each word. The simplest and most familiar among us all, **Inflation Targeting**, is the framework that attempts to maintain low and stable inflation under some specific target or target range. Under this framework, policy interest rate is a major tool that works through various channels of the economy to impact private decision on domestic spending. Changes in aggregate demand, as a result, are transferred to the economy's rate of inflation and short-term economic activities. However, the ability of the monetary policy to directly stimulate long-term production and potential growth is very limited and the policy seems to only have the 'demand management' feature, unlike fiscal policy in which its investment spending can be used to boost the long-term economic growth and productivity.

The '**flexible**' feature allows the current monetary policy framework to;

(1) Temporarily deviate from the main target (i.e., inflation) should the economic growth need to be stabilized. However, the central bank has to assess the potential tradeoffs between the two goals when the decision is made. In the short-run, the theory suggests that there are conceptual tradeoffs between inflation and output through the Phillips curves. The higher growth promoted through domestic demand above the potential output growth (which is supply-driven) will put pressure on inflation and the attempts to lower inflation will also result in the output loss[7]. However, such relationship does not exist in the long-run as output only converges to its potential regardless of price levels. Recently, literatures (Khemangkorn et Al, 2008, IMF…….) find that the slope of the Phillips curves has been diminishing, implying the larger output cost of disinflation and the lower burden on inflationary pressure to stimulate growth.

(2) Utilize other tools such as other unconventional measures and exchange rates (under the managed floating regime) to complement interest rate policy, when facing limitations,

[7] The types of shocks may influence the costs incurred by the output-inflation tradeoff. The disinflation during supply shock could exacerbate the output contraction while the same action during the demand shocks may be viewed as tampering the overheating economy.

in stabilizing growth and inflation. A recent example from the crisis is the near zero lower bound policy rate during the time that stimulus is much needed. In this case, the central banks may turn to unconventional (non-interest rate) measures to help ease the monetary condition further, similar to what have been done in the major economies with liquidity shortage in financial market. In some rare case like Sweden, the central bank introduced the negative interest rate on bank deposits, meaning that the commercial banks have to pay for saving their money at the central bank. (Oakley and Ward, 2009) Under this condition, the Riksbank hopes that the negative rate will encourage banks to increase their lending or divert the money into other assets. However, for a country like Thailand with the resilient financial sector and ample liquidity, these measures are not necessarily required during this current crisis.

In addition to the unconventional measures, at near-zero interest rate it can also utilize supplementary tools based on expectation to help manage short-term real economic activities. Walsh (2009) shows that central banks can also rely on other expectation-related tools such as inflation expectation, expectation of future policy rate and change the inflation target via the appropriate communication scheme to stabilize the real economy.

Another complementary tool of interest rate policy is the exchange rate management. Under the managed floating regime, the exchange rate is being monitored so that its movement properly reflects changes in economic fundamentals (the short-run deviation may stem from news and speculations). By letting exchange rate adjust flexibly, the policymakers are making a full use of its automatic stabilizer property in the medium-term. However, the intervention may be called for in curbing short-term volatility as well as to maintain price competitiveness of the country in the short term. The exchange rate intervention, however, has preconditions and limitations. The degree of exchange rate controllability plays an important part in determining the efficacy of the exchange rate policy. With regards to the volatile nature of exchange rate, the ability of authorities to manage exchange rate is only effective in the short-run. Using the intervention data for Thailand, Chai-anant et. Al., (2008) find empirically that intervention in the foreign exchange market is effective only when used for curbing volatility and not for the case of maintaining exchange rate at a particular level.

Lastly, the '**+**' feature of Thailand's monetary policy regime represents the use of macro-prudential measures in monitoring the objective of financial stability by the Monetary Policy Committee (MPC). The aftermath of the Asian financial crisis has raised concerns on the issue of financial imbalances to the Bank of Thailand. After the adoption of the inflation targeting framework in 2000, as a result, the MPC has been monitoring the financial stability on 7 areas alongside the other main objectives. These areas of financial stability include (1) credit conditions and performance of banking sector, (2) household debts, (3) corporate performance, (4) stock and bond market volatility, (5) exchange rate volatility and external position, (6) fiscal sustainability and (7) real estate sector, which, individually or collectively, are the potential sources of instability. So far, in addition to close monitoring, macro-prudential measures as well as the supervisory regulation, such as the requirement on the credit card payment and the gradual adjustment process towards Basel II, has been designed to tackle as well as provide the pre-emptive cushion for any potential imbalances. These measures have advantages as they can be targeted to the particular problem, like patches, and hence may be less contradicting to other major objectives of monetary policy. However, the current financial crisis has highlighted even larger importance of this '**+**' feature and may call for dynamic improvement of the monitoring as the financial market continues to evolve going forward.

In terms of policy implementation, monetary policy action can be taken with less time relative to fiscal policy, i.e. the time-to-implement is more flexible. The MPC meeting is schedule every 6 – 8 weeks to assess the economic conditions and forecasts to decide on the policy rate changes at a size and speed the MPC deems appropriate. Nevertheless, the policy actions seem to require a considerable amount of time to take effect on the economy, except for the impact via expectation channel that could be simultaneous if unexpected. Empirical findings from the Bank of Thailand Macroeconomic Model and other dynamic models (Disyatat et. Al, 2002) suggest that the lag effect of monetary policy on the real economy ranges from around 4 to 6 quarters. As a result, the policy decisions are usually made based on the forward looking information in order the take the full effect in stabilizing the economy.

As the policy impact faces the time-lag, the effect therefore seems to spread out over the horizon via different channels and at different degrees. As a result, it is considerably challenging to assess the policy impact on to the inflation and economic growth, especially when economic variables themselves have their own dynamics and are also affected by other factors. (Ahuja et. Al., 2008) In this light, literatures have attempted the Vector Autoregressive type model in assessing the dynamic relationship between changes in policy rates on inflation and output growth via different channels. The results reveal significant effectiveness of the policy but the magnitude and time period varies, depending on the model set-up and sample periods. However, these results are based on historical development and may require a significant consideration to be used in the effective policy formulation under different economic environment.

II. Fiscal policy

Fiscal policy has multiple goals: to stabilize the economy in the short run by changing fiscal stance, to enhance long-term economic growth by influencing incentives to work, to invest, and to save, and to ensure fairness through income redistribution. Two main instruments of fiscal policy to achieve these goals are government spending and taxes. Changes in the level of taxes and spending can be sorted into those arising from changes in the cyclical stance of the economy under given tax and spending rules that work in a way to stabilize output, dubbed "automatic stabilizers," and those due to deliberate changes of fiscal stance, or "discretionary fiscal policy." Automatic stabilizers in Thailand on the revenue side include various types of taxes and social security contribution that are proportional (with differing rates and degrees of progressivity) to individuals' income, corporate profits, and consumption that normally fluctuate in accordance with the business cycle. The only automatic stabilizer on the spending side is unemployment insurance, introduced in 2004, under the social security system, while discretionary spending ranges from government consumption, public investment, as well as transfers. Aside from spending and taxes, government may also attempt to achieve the stated goals through quasi-fiscal activities such as soft loan extension, credit guarantees, and cost financing programs by state-owned financial institutions.

In theory, fiscal policy can influence both demand and price pressure in the short run through changes in government consumption and investment, changes in private disposable income and benefit system, and possibly indirectly through expectations about future policy. In the medium and long run, fiscal policy can act on the level of supply, and hence potential output, as well through its influences on saving and capital accumulation. Regarding the impact on financial stability, some taxes and subsidies that create excessive distortions in the financial and asset markets may also be the underlying sources of financial imbalances.

Apart from automatic stabilizers, fiscal policy action is generally subject to time delay because a change in fiscal policy has to undergo a legislative process which usually takes long time. Moreover, compared to monetary policy, implementation lags of fiscal policy are usually much longer and uncertain. For Thailand, this is evidenced in the always-below-target disbursement ratio and substantial carry-overs to the next budgeting year, especially for the budget under capital expenditure category (normally at 65-75 percent disbursement rate). The long legislation process and the slow speed of disbursement together render most fiscal policy actions ill-timed in responding to output shocks.

Notwithstanding the implementation lags, once implemented, fiscal policy takes shorter time-to-effect relative to monetary policy because of the direct, first-round effects of government consumption and investment on the level of aggregate demand. Beyond the first-round effects, however, effectiveness of fiscal policy (fiscal multipliers) is vastly uncertain, partly owing to offsetting effects of the multiple channels through which fiscal policy influences the level of output. Estimates of multiplier effects of a change in discretionary policy can also vary dramatically depending on the definition of the multiplier,[8] methodology employed, the composition of fiscal policy considered, the sample of countries, and the time period examined.[9] Beside the issue of heterogeneity across the estimates, one important complication in determining the size of the fiscal multiplier arises from the dynamic adjustment process following fiscal or output shocks, and the problem of endogeneity between policy actions and economic activity, which makes it extremely difficult to isolate the casual effect of fiscal stimulus on output.

Aside from these complications, effectiveness of fiscal policy also varies across instruments, depending importantly on the degree of "targeted-ness" of the measure which will induce private consumption and investment to different extent. Generally, discretionary increases in government expenditure are found to have larger multiplier effects than tax cuts, as the first round effect of government spending on demand is immediate and more certain, while individuals may save part of a tax cut.

Among government spending programs, targeted transfers have a tendency to generate the largest multipliers because they are aimed at increasing purchasing power of those facing liquidity or credit constraints. For the same reason, automatic stabilizers on the expenditure side (unemployment-related spending) also tend to have larger near-term multipliers than those on the revenue side (automatic reduction in taxes). While short-run effects of tax changes may be smaller than those from transfers, this is not necessarily the case over the medium and long term, since efficient tax reforms could induce greater incentives to work and to invest, fueling future output growth. Government investment is another area where immediate effects on output may be small relative to transfers, but it often fosters larger multiplier over the longer term through an increase in productivity in labor and capital. Above all, the effect of each form of fiscal policy ultimately hinges on economic and financial conditions as well as institutional aspects of the country at the time of consideration.

In sum, this chapter provides the delineation of toolkits available to the macroeconomic policymakers in Thailand. For convenient review, Table 3.1 presents these policy tools in

---

[8] Variations of multipliers, depending on the time frame considered, include the *impact multiplier*, the *peak multiplier*, the *cumulative multiplier*, and the multiplier at some specific horizon (Spilimbergo, et al. 2009).

[9] Hemming, et al. (2002) and Spilimbergo, et al. (2009) provide a comprehensive survey of literature on fiscal multipliers. There, it can be seen that the size of estimated multipliers varies considerably across different studies.

conjunction with the assessments of their respective capability to generate direct impacts on key economic variables or areas of concerns, for instances, inflation, output growth, and financial stability. Even though the assessment is subjective and probably debatable, the tabulate chart still provides useful conceptual comparison for the selection of appropriate policy response to specific problem in the key variable. The solution may comprise the individual policy by itself and the possibilities of policy combinations which aim toward the same goal.

Table 3.1: Comparison of Policy Tools with respect to Direct Impacts on Key Economic Variables/Areas of Concern

Direct Impact on / Tool	Inflation	Output growth	Potential output	Financial Stability	Income Distribution	Speed of action	Time lag	Effectiveness
Monetary Policy								
Interest rate	✓	✓	×	✓	n.a.	Fast	4 – 6 quarters	Gradual and accumulative
Exchange rate[10]	✓	✓	×	×	n.a.	Fast	Immediate	Uncertain
Macro-prudential	×	×	×	✓	n.a.	Fast	Immediate	Uncertain
Fiscal Policy								
1. Automatic Stabilizer								
Spending	×	✓	×	×	✓	Fast	Immediate	Most effective
Tax	×	✓	×	×	✓	Fast	Immediate	Somewhat effective
2. Discretion								
Tax								
Spending	Δ	✓	×	Δ	✓	Slow	Delayed	Uncertain
Short-term	Δ	✓	✓	×	✓	Slow	Very delayed	Long-term
Long-term	×	✓	✓	Δ	✓	Slow	Delayed	Uncertain

Δ denotes potential direct impact

[10] Subject to controllability

Chapter IV
Implications of the Crisis on Fiscal Policy and Policy Recommendations

The current recession in Thailand stemming from the global crisis calls for aggressive measures to increase aggregate demand and to restore confidence. With the global downturn originated from the sub-prime crisis, Thailand's engines of economic growth notably slowed down, if not suddenly halted or wheeled backward. Given the collapse of private demand and the limited room for monetary policy under the current circumstances (discussed extensively in Chapter V), it became an imperative for a large fiscal expansion to stabilize the output growth. However, as the recession has drained tax revenues and the government will have to spend a sizeable sum to get the economy going, large budget deficits and rising debt are unavoidable consequences. The evidence of deteriorating fiscal position shows that the government, an integral part of the economy, has to face with costs as well as constraints when attempting to deal with the crisis repercussions; and the cost would be especially large if the set of policy measures employed led to an unsustainable fiscal deficit.

To consider appropriate fiscal policy in the medium term, in this chapter we will first examine drawbacks of the current framework fiscal policy in Thailand that limit its role as a counter-cyclical tool. Then we will explore the impact of crisis on fiscal balance before proceeding to discussing debt and fiscal sustainability issues. Importance of a well-designed and credible fiscal consolidation during and after the economic recovery is emphasized. Finally, recommendations regarding appropriate direction of fiscal policy in the medium and longer term in order to strengthen fiscal position along with achieving long-term sustainable growth are provided in the end of this chapter.

I. The role of counter-cyclical fiscal policy in Thailand

As aforementioned, fiscal policy can work in two general ways to stabilize the business cycle; through automatic stabilizers which arise from parts of the fiscal system that naturally vary with changes in economic activity, and b) through discretionary fiscal policy which involves active changes in policies. Because automatic stabilizers are often limited in scope, the active use of discretionary policy is usually promotedas a counter-cyclical tool in downturns. This is especially the case in light of heightened uncertainty about the depth and duration of the slump in the current crisis, in which economies lack other engines to return to full potential. However, the use of discretionary fiscal actions is often subject to critics on their effectiveness and their implications on debt sustainability.

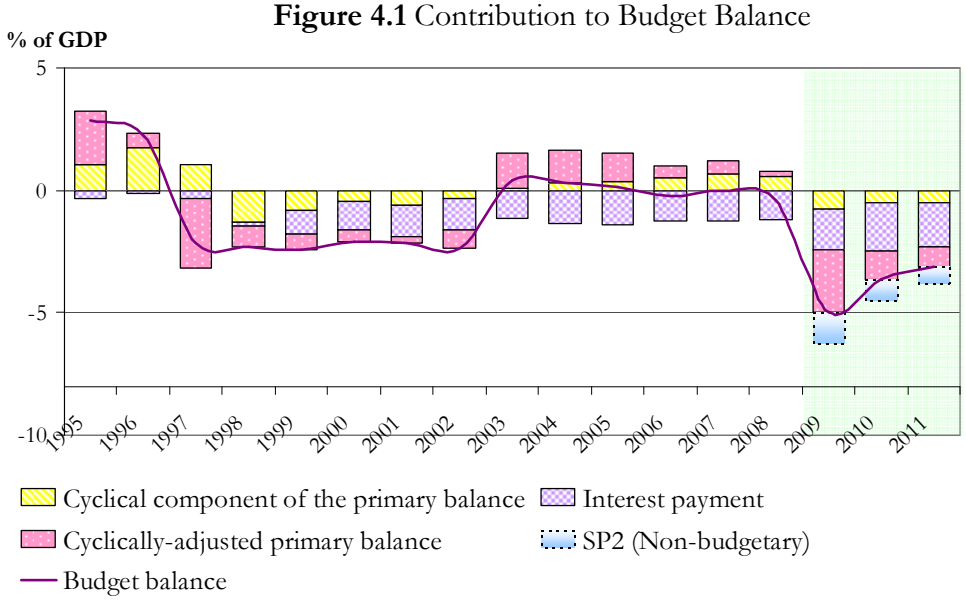
Put forward by the IMF, the optimal fiscal stimulus package should be *timely* (to deliver immediate effects), *targeted* (to help the neediest and to ensure maximum effectiveness), and *temporary* (not to raise concerns about the long-term budget outlook). Of these two main types of fiscal stabilization tools, by design, automatic stabilizers are more timely and more targeted than discretionary policy measures, and they are temporary in nature. Discretionary policy measures, on the other hand, are generally ill-timed, not well-targeted, subject to political inference, and they could create permanent damage to the budget balance as they are not likely to be withdrawn quickly enough to preserve fiscal sustainability. More importantly, fiscal policy in developing countries, even after adjusted for the cyclical component, is found to establish strong procyclicality which exacerbates the business cycle, possibly due to limited fiscal space and high indebtedness of most developing countries. And for these reasons, discretionary measures are perceived to be inferior to automatic stabilizers in their ability to counter economic downturns. However, country- and time-specific conditions can make a difference to these conclusions.

To abstract from the generalization, we next examine the fiscal policy in Thailand, with a focus on the structure of the policy framework and of the Thai economy that may hamper the effectiveness of the fiscal policy as a stabilizing tool.

Suboptimal automatic stabilizers

Automatic stabilizers in Thailand operate through both the revenue (income and consumption taxes) and expenditure (unemployment benefits) channels, with a considerably larger portion of the automatic stabilizers derived from the change in government revenue. As shown in **Figure 4.1**, **automatic stabilizers in Thailand**—though proven to actively help cushion for a sharp swing in the business cycle such that before and after the 1997 crisis—**are on average relatively small compared to the discretionary policy.** Their currently limited scope and strength imply that they could potentially be improved to deliver stronger counter-cyclical effects.

Figure 4.1 Contribution to Budget Balance



Source: Bank of Thailand, Government Finance Statistics, and authors' calculation.
Note: GDP in 2009 through 2011 based on baseline assumptions (see Appendix)

Generally, the strength of automatic stabilizers depends on the progressivity of the tax system, the size of transfer, and the effects of taxes and transfers on labor participation and demand for workers and capital. On the tax system, the more progressive the tax code, the increasingly larger will be the automatic adjustment in tax revenue in response to a deeper economic slump. Unfortunately, since the Thai economy relies heavily on consumption taxes which accounts for greater than 60 percent of total government revenue (Pinto, et Al., 2007), the non-progressive feature of consumption taxes (i.e. constant tax rates) implies that the overall automatic stabilizing effect through the revenue channel is not as powerful as it could be.

As for the spending channel, the fact that the unemployment insurance scheme (established in 2004), or even the Thai social security system as a whole, has been in an infancy stage compared to a more mature system in advanced countries especially in Europe, its scope to be a significant source of automatic stabilization is vastly limited. Table 4.1 below shows that the coverage of the social security program in Thailand at present remains incredibly low, at about 25 percent of labor force. Likewise, the ratio of unemployment claims to the number of

unemployed—though has been steadily increasing—remains at merely 12-14 percent in recent years. Thus, the size of unemployment-related spending as a share in the government budget will be sympathetically small.

Table 4.1 Coverage of Social Security Insurance and Unemployment Claims

Ratio of headcounts	2004	2005	2006	2007	2008	2009Q1
Unemp claims/Unemployed	2.1	4.2	7.2	11.1	13.8	11.9
SSO Insured/Labor force	22.0	22.9	23.9	24.6	24.6	24.5
SSO Insured/population	12.7	13.3	13.9	14.4	14.6	13.8
GDP growth	6.3	4.6	5.2	4.9	2.6	-7.1
Unemployment rate	2.1	1.8	1.5	1.4	1.4	2.1

Source: Social Security Office, National Statistical Office, and NESDB

Procyclical government spending

A large empirical literature claims that, while fiscal policy in industrial countries is either acyclical or countercyclical, procyclical fiscal policy seems to be the rule in developing countries.[11] Ilzetzki and Vegh (2008) find that even after controlling for endogeneity between fiscal policy and output growth,[12] there is still ample evidence of a strong positive response of government spending to an exogenous expansionary business cycle shock. If procyclical fiscal policy amplifies the underlying business cycle—which the study indeed finds it to be the case, then this feature of fiscal policy should be a serious cause of concern for policymakers.

Thailand is not an exception. **Figure 4.2** demonstrates that the increase in government expenditure during good times in Thailand is more than twice the average increase during bad times.[13] What explains this phenomenon? Literature offers two main strands of explanations. First, supported by Gavin and Perotti (1997), Mendoza and Oviedo (2006), among others, imperfections in international credit markets prevent developing countries from borrowing in bad times, squeezing the room for the governments to play a counter-cyclical role. The second explanation adheres to the political economy theory and argues that good times encourage fiscal profligacy and rent-seeking activities (Talvi and Vegh (2005), Ilzetzki (2007) for instance). The first explanation is less relevant to Thailand, since—regardless of the high debt ratio in some periods in the recent history—Thailand has not been fitted in the highly indebted country category. Alas, **political pressure to spend more during good times, together with the framework of the Thai budgetary process, seems to be responsible for the**

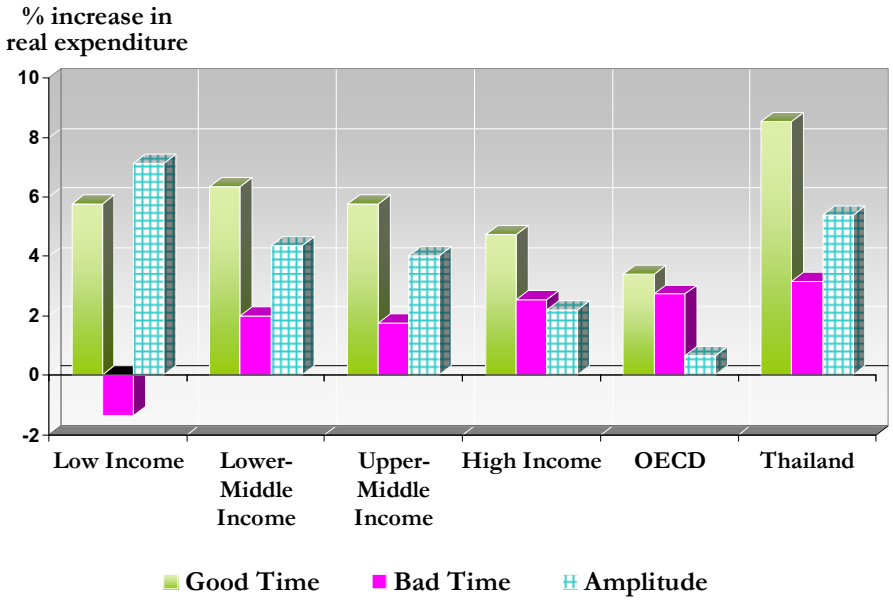
[11] Gavin and Perotti (1997), Talvi and Vegh (2005), Ilzetzki and Vegh (2008), among others.

[12] The endogeneity argument against procyclicality of fiscal policy is on the ground that the observed positive correlation between government spending and output growth could be theoretically caused by the fact that fiscal policy is expansionary according to Keynesian or neoclassical models. Thus, an increase in government spending can lead to high output growth—the reverse causality as opposed to the procyclical fiscal policy argument.

[13] "Good times" ("Bad times") are defined as the years in which real output growth is above the period average. "Amplitude" is the difference between the average of the increases in government expenditure in the good times and bad times.

procyclicality in fiscal policy in Thailand. As pointed out in Pinto, et Al. (2007), the "(projected) revenue determines expenditure" principle and the tendency to adhere to the balanced-budget rule cause investment spending to increase substantially during good times and to be first to spare during bad times. **Table 4.2** provides supporting evidence that **investment spending is indeed the main source of procyclicality** in the Thai government expenditure.[14,15]

Figure 4.2 Procyclicality of Government Spending



Source: IFS (1981 – 2008), calculation by authors

Table 4.2 Cyclicality of Components of Government Spending

OLS regressions

Dependent variable: Change in log of government spending variable

Independent variable: Change in log of real GDP

	Thailand	Developing countries	High-income countries
Government spending	0.94***	0.93***	0.08
	(0.28)	(0.05)	(0.11)
Govt. consumption	0.54***	0.31***	0.51***
	(0.19)	(0.14)	(0.07)
Govt. investment	1.89***	1.31***	1.22***
	(0.43)	(0.14)	(0.37)
Interest payment	-3.39**	-0.07	-0.09
	(1.74)	(0.28)	(0.30)

Note: t-statistics in parentheses

Source: Ilzetzki and Vegh (2008) and authors' calculation

Interestingly, while there is evidence of the acyclicality of interest payments in both groups of developing and high-come countries, for Thailand debt service seems to establish a strong

[14] In this Table, government spending is broken down into 1) government consumption 2) public investment 3) transfers and 4) debt services.

[15] Although both government consumptions and investment are procyclical for high-income countries, the authors conjecture that the overall government spending in high-income countries is not procyclical largely because of sizeable transfers (automatic stabilizers) in these countries.

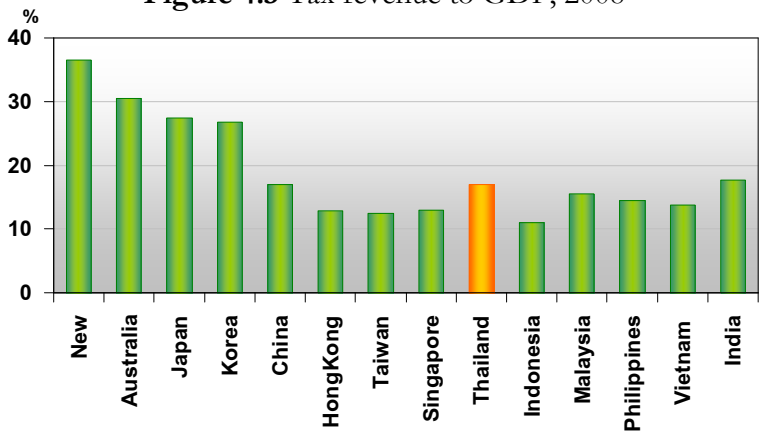
counter-cyclical role in total government spending (**Table 4.2**). This point will be discussed more in details in the discussion of public debt below.

Limited fiscal space

Fiscal space, defined as "the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of the government's financial position" (Heller, 2005), is an important indication of the capacity of a government to respond to future output shocks and other fiscal challenges. It is also a positive determinant of medium- and long-term growth, which will in turn raise future revenues and lift the bar for longer-term fiscal sustainability, since larger fiscal space (i.e. net revenue in excess of mandatory current spending) implies larger room for productive investment spending. Fiscal space can be created either through tax reforms, expenditure cuts, or borrowing.[16] Assessment of fiscal space of a country is thus boiled down to asking the following three questions: 1) is there a scope for increases in tax rates or coverage? 2) is there room for reprioritization of expenditure?, and 3) how much additional spending can be financed by domestic or external borrowing?

For Thailand, **room to raise tax revenue remains ample judged from tax revenue to GDP at 18 percent** (**Figure 4.3**) and the relatively low effective income tax rates at present—5 percent for personal income tax (PIT), 12-14 percent for corporate income taxes (CIT). This is due to low coverage of tax bases (20 percent for PIT and 30 percent for CIT), several tax measures that result in higher tax deductibility, and pervasive tax invasion. On the other hand, revenue from value added taxes (VAT) does not have much room to increase at the current VAT rate of 7 percent with its effective rate already approaches its marginal level. Also, international trade tax which was used to be an important source of tax revenues faces certain constraints due to increased trade openness under Free-trade agreements (FTA). Whether or not fiscal space can be created through tax measures is thus the matter of a difficult political choice. It depends largely on the government's determination, against opposing political pressure, to carry out tax reforms that will enhance efficiency to the economic system, and higher future government revenues as a result.

Figure 4.3 Tax revenue to GDP, 2008



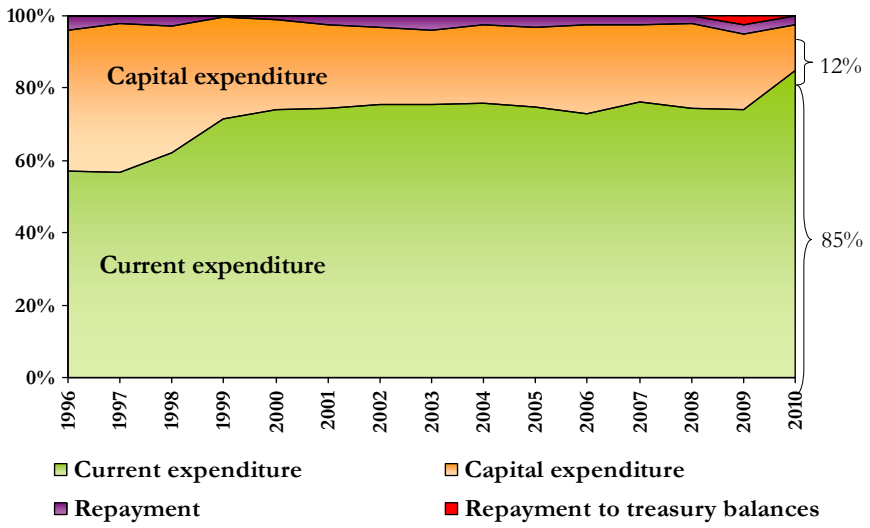
Source: Government Finance Statistics (GFS), based on 2008 data.

Even more challenging is to create fiscal space through expenditure reduction. In the short term, **the room for spending cut or reprioritization may be limited due to increasingly**

[16] Seignorage is another channel through which fiscal space can be created. But in the case of Thailand this channel of raising fiscal resources is not an option by law.

large share of current expenditure in total spending, projected to take roughly 85 percent of the budgetary space (**Figure 4.4**). The absolute amount of current spending in real term has also doubled during the past decade. Since most items in the current expenditure are mandatory—such as government wage bills and subsidies to support social programs—this points to adverse rigidity in the Thai government's budget which limits the discretionary scope to adjust spending in line with shifting policy priorities towards more productive spending or in response to changing macroeconomic circumstances. Based on the coefficients of variation, spending items under the current expenditure category exhibit much less variance than capital investment spending in the most recent decade (**Table 4.3**). This, together with the much larger share of current spending in total budget, highlights increasing budget rigidities that might constrain policy makers in adjusting spending in the near future.

Figure 4.4 Share of Current and Capital Expenditure in Total Spending



Source: Fiscal Policy Office

Table 4.3 Variation in Key Expenditure Items, 1979-2008

	Coefficient of variation		
	1979-1989	1989-1998	1999-2008
Total spending	26.9	42.8	28.3
Current expenditure	28.9	30.5	25.9
Wage and salary	35.2	36.5	21.5
Purchase of G &S	21.4	31.8	29.9
Subsidies	16.4	44.7	33.7
Capital expenditure	17.3	67.1	45.5
Capital investment	19.9	61.5	34.0
Capital transfers	19.8	107.4	61.5
Interest payment	49.3	55.7	27.3

Source: Government Finance Statistics (GFS), and authors' calculation

Note: Coefficient of variation is calculated as the ratio of standard deviation to the mean (in percent)

Lastly, the scope for additional fiscal space created by further borrowing, either domestic or external, will also be small in Thailand in the medium term given a rapid accumulation of

public debt in the years to come as a result of the recent fiscal stimulus packages. Debt situations and fiscal sustainability in Thailand's context will be discussed in more details in the next section.

In summary, **there is currently not much room for the Thai government to create further fiscal space in the medium term provided that there is no material change in the current policy**. With extra expenditure commitments in the future, the risk of creating "negative" fiscal space could be real.

Uncertain effects of fiscal policy

The effectiveness of fiscal policy in smoothing the business cycle is a topic of long debate in the academic literature, both theoretical and empirical, as well as among policymakers. In the standard Keynesian model, which assumes price rigidity and excess capacity, fiscal expansion has a positive multiplier effect on aggregate demand and output. On the contrary, under the Ricardian equivalence proposition, fiscal multiplier is zero because the model assumes that consumers are forward-looking—a larger deficit resulting from a tax cut is fully offset by an equal increase in private saving, thus fiscal policy has no effect on demand and on output.

We have discussed in Chapter III the empirical heterogeneity in the effectiveness of fiscal policy across definitions of the multipliers and across different instruments. Multiplier effects even under the same definition and for the same instrument are also by and large country-specific. IMF (2009) suggests that discretionary fiscal policy has a moderately positive effect on output growth in advanced economies, while the effects appear to be constrained in emerging economies possibly due to credibility issues concerning fiscal sustainability. In fact, discretionary fiscal stimulus may do more harm than good if it raises serious debt concerns, which would lead to higher risk premium as well as a crowding out effect. Another country-specific factor influencing the size of fiscal multipliers is the degree of trade openness and/or the propensity to import—the more open the economy, the smaller will be the multipliers due to leakages to imports.

As regards to the time period, literature suggests that discretionary fiscal stimulus is more effective during recessions than expansions, because in recessions economic agents face tighter liquidity constraints (Bernanke and Gertler, 1989). Thus, targeting tax cuts or transfers towards those consumers who are most likely to be credit constrained may enhance the fiscal multipliers; measures along these lines include the greater provision of unemployment benefits and increased in earned income tax credits. Existing excess capacity during recessions also enhances policy effectiveness, especially if there is an accompanying monetary expansion with limited inflation consequences. On the other hand, if a crisis or a recession brings about heightened uncertainty, precautionary saving behavior on the part of households and firms can also reduce fiscal multipliers and possibly turn them negative.

Taken together, these heterogeneity and uncertainty in fiscal multipliers imply that the stabilization role of fiscal policy depends very much on country- and time-specific conditions and the instruments used. For Thailand in the current circumstances, given the excess capacity, accommodative monetary policy, and no history of default on debt, these should help enhance the effectiveness of fiscal stimulus. Nevertheless, the choice of the fiscal instruments may be more crucial. It is suggested that **for maximum short-term multipliers, measures need to be well-targeted to those who are liquidity or credit constrained**, which will deliver

immediate demand effects.[17] Alas, **policies that promote supply-side responses such as public investment and tax reforms, although their impact is primarily longer term, are not to be neglected as they can tackle capacity constraints that cannot be addressed by demand-side policy.**

In the case of Thailand, delayed implementation of policy measures and outright leakages of the budget through corruptions can potentially reduce the effectiveness of any fiscal policy measure. More crucially, **the prolonged political instability can possibly cancel out any positive fiscal multipliers** through lack of confidence and pessimistic expectation about the growth prospects of the country.

II. Thailand's fiscal costs from the crisis

In response to the crisis, the governments around the world, as implementing intervention measures, have incurred an array of fiscal costs, both directly and indirectly from the crisis. With the epicenter of this current global meltdown lied in the financial sector, direct costs of the crisis borne by the government refer to all fiscal support aiming at shoring up the failing financial system, covering capital injections, acquirement of illiquid assets, liquidity provision, as well as guarantees for financial sector liabilities. At the same time, with the deteriorating economy and downward adjustments of commodity and asset prices, the government is also subject to the indirect costs or the "costs of recession" in that revenues lowered while expenditures simultaneously drove up to support domestic demand. (IMF, 2009)

For Thailand, the government incurred virtually no direct costs of the crisis thanks to the strong financial sector with limited exposure to the Subprime market. Thai banking system was exposed to those toxic assets only 0.3 percent of its total assets, and all of them were quickly wrote-off without any fiscal intervention. Lessons from the previous 1997 Asian Financial Crisis and subsequently stringent regulations have paid off.

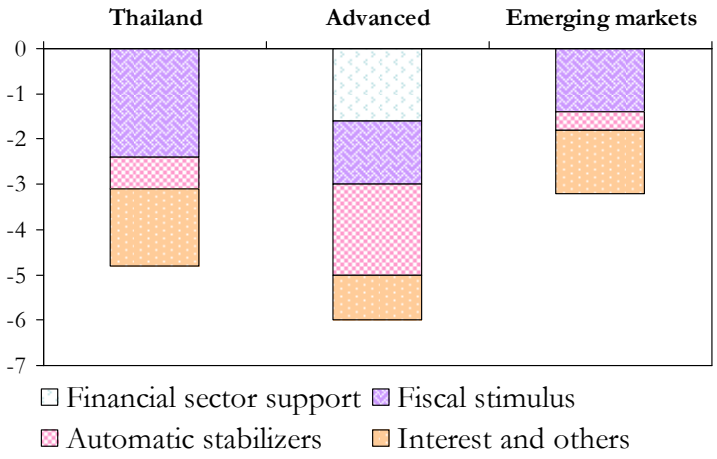
On the contrary, indirect fiscal costs amounted to a more substantial level. The most visible indirect cost on the government is instigated by the use of fiscal stimulus, may it be revenue or spending measure. Revenue losses due to natural narrowing of tax base and plummeting consumption during recessions are another form of indirect fiscal costs.

Formally, the indirect fiscal costs can be grouped into two categories according to the channels through which the fiscal policy responds to the recession: automatic stabilizer and discretionary measures. Costs from automatic stabilizers on the government stem from the fact that when the economy was in slump, there is lower taxable income and more payable unemployment claims, resulting in an increase in budget deficit. The role of automatic stabilizers, as the name suggests, tends to move in accordance with the economic cycle and is increasing rapidly with the weakening of economic conditions. Discretionary policy measures, on the other hand, reflect a discretionary change in the government budget balance in response to the crisis, commonly termed "fiscal impulse." Apart from the automatic stabilization, the Thai government also purposely run primary deficit to counteract the crisis contraction. Particularly in the wake of Subprime crisis, a number of discretionary measures have been launched such as the Stimulus Packages 1 and 2 (SP1 and SP2) which targeted both the short-term and long-term growth and were set to impose costs of 116.7 and 1,430 billion baht, respectively, to the public finance.

[17] According to staff calculation using the BOT Macroeconomic Model (BOTMM), expenditure multipliers are indeed larger than tax multipliers, confirming the conventional wisdom.

Figure 4.5 displays the magnitudes of automatic stabilizers and discretionary policy measures in 2009 in Thailand compared to the averages of advanced and emerging markets in the G-20. For Thailand, discretionary measures inflict the largest cost on the budget deficit, contributing more than 2 percent of GDP. However, because a major part of SP2 investment projects will be off-budget, not reflecting in the fiscal balance, the overall discretionary stimulus is actually greater than shown in the figure. Their contribution is expected to tail off after the next two years as the stimulus package will be completed by 2011 according to plans. From the figure, it is apparent that the role of automatic stabilizer is relatively small both compared to the other contributing factors and compared to other country groups. Notice that automatic stabilizers work extremely well in the advanced economies, in line with the stylized fact that the size of automatic stabilizers is highly correlated with the size of the government (IMF, 2009).

Figure 4.5 Impact of the Crisis on Public Finances: Contributing Factors
(in percent of GDP)



Source: IMF (2009) and authors' calculations, 2009 est.
Note: Advanced and emerging markets included in the sample are G-20 members, PPP GDP-weighted average

III. The current fiscal position and the outlook

As a result of the fiscal costs set off by automatic stabilizers and discretionary stimulus measures discussed above, together with weaker growth outlook and higher debt burden, Thailand's fiscal trajectories in the near term is expected to weaken significantly. In the fiscal year 2009, government revenue declines by 9.1 percent while government spending increases by 16.2 percent (**Table 4.4**). The large drop in government revenue is due to the fact that the Thai government relies heavily on consumption and corporate tax revenues which, relative to personal income taxes, fluctuate more with the business cycle (Pinto, et Al. 2007). On the expenditure, current expenditure is responsible for most of the increase in the budget as a consequence of the new policy measures, leaving little room for capital expenditure in the budget as discussed in the previous section. Several investment projects under SP2 will have to be carried out as off-budget spending financed by domestic and external borrowing.

Table 4.4 Fiscal balances and Outlook [18]

FY / Billions of Baht	2008	2009 E	2010 E	2011 E
Treasury Account				
Revenues	1545.8	1404.6	1350.0	1445.5
(%yoy)	*(7.9)*	*(-9.1)*	*(-3.9)*	*(7.1)*
Expenditures	1582.6	1838.6	1697.2	1714.4
(%yoy)	*(10.3)*	*(16.2)*	*(-7.7)*	*(1.0)*
Budgetary Balance.....(A)	**-36.8**	**-434.0**	**-347.2**	**-268.9**
Non-budgetary Balance.....(B)	**12.7**	**-14.5**	**11.9**	**11.9**
Cash Balance.....(C) = (A) + (B)	**-24.1**	**-448.5**	**-335.3**	**-257.0**
(% GDP)	*(-0.26)*	*(-5.13)*	*(-3.54)*	*(-2.52)*
Extra-budgetary Balance .....(D)	**47.8**	**40.4**	**-140.4**	**-175.3**
(% GDP)	*(0.52)*	*(0.46)*	*(-1.48)*	*(-1.72)*
Consolidated Central Government .... (E) = (C) + (D)	**23.8**	**-408.1**	**-475.7**	**-432.4**
(% of GDP)	*(0.26)*	*(-4.67)*	*(-5.02)*	*(-4.23)*

Source: Bank of Thailand's estimates

Fiscal deficits will inevitably remain wide in 2010 as fiscal support continues to be provided to sustain still-fragile economic conditions. Nonetheless, in a baseline medium-term scenario, fiscal balances will begin to show signs of improvement as most of the stimulus measures will be completed by 2012 and as the effects of the automatic stabilizers will be gradually reversed with improving cyclical conditions. But, **how quickly or how much fiscal position will be brought back to health depends on the pace and strength of the economic recovery—both domestic and abroad—and the effort of the government to rein in inefficient spending.** A return to more self-sustaining economic growth thereafter would provide the basis for a deliberate withdrawal of stimulus.

This sanguine disposition of the baseline projection, though helps restore confidence, should not be a cause for complacency for policymakers, given plausible downside risks that may materialize. It is thus worth stress-testing the fiscal position for more pessimistic assumptions. Downside risks for Thailand considered here include a prolonged global recession, below-target disbursement of government budget, a case of no crowding in, and a greater need to finance losses of state-owned enterprises (SOEs) and specialized financial institutions (SFIs):

i) Risk of prolonged global recession

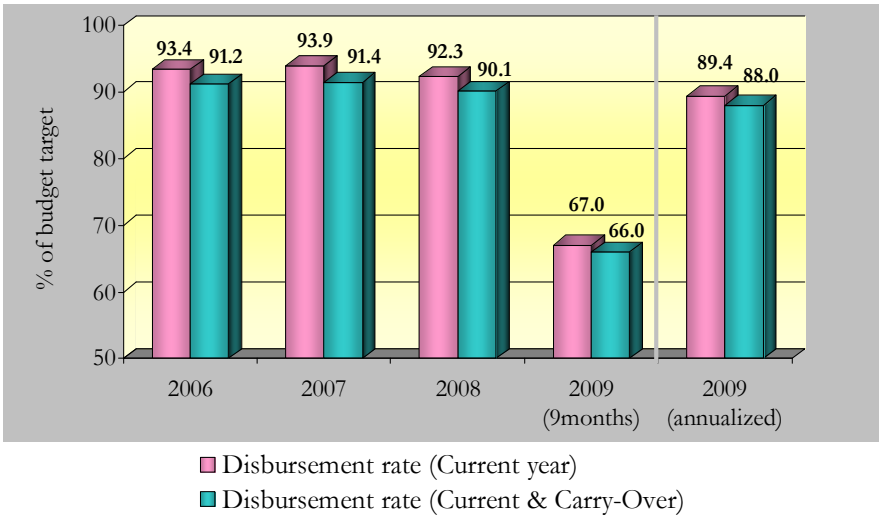
If the global economy proved to take longer than expected to fully emerge from the crisis, the Thai export sector would remain weakened and it would require more government resources to boost domestic demand in stimulating domestic growth.

ii) Risk of below-target budget disbursement

[18] In fiscal years 2009-2011, the government expenditure is estimated by assuming that the disbursement rate is 93%, 94%, and 94%, respectively, whilst GDP growth are from the baseline projection as described in the Appendix.

Although SP2 would be fully disbursed starting in 2010 and should give a significant boost to the economy, the effectiveness of the disbursement remains questionable. Over the past several years, during the political instability, actual disbursement, both the original fiscal budget and versions that include the remaining budget carried over from the year earlier, was usually below the government's target (**Figure 4.6**). If the stimulus packages cannot be fully carried out as planned, this will result in lower than expected growth in the medium term. Ill-timed implementations of government projects may also turn out to be more costly for the government and have lower multiplier effects on output.

Figure 4.6 Disbursement Rate of Government Budget



Source: Fiscal Policy Office

iii) Risk of no crowding-in effects

If the stimulus measures, both fiscal and monetary, fail to set going the private consumption and investment, sustainable growth cannot be expected since both fiscal and monetary policy will eventually run out of ammunition to fight the downturn. Growth outlook will weaken more than expected as a result, especially if coupled with a slow global recovery.

iv) Fiscal risks stemmed from the use of quasi-fiscal measures

The intensified use of the off-budget, quasi-fiscal measures in the recession, such as credit expansion by SFIs and subsidies to SOE and local government investments, instigates important source of fiscal risk in terms of contingent liabilities for the government. In most cases, losses and damages of the SFIs and SOEs from pursuing the stimulus policy are to be expected, implying additional burden on the future budget and putting more pressure on fiscal deficits.

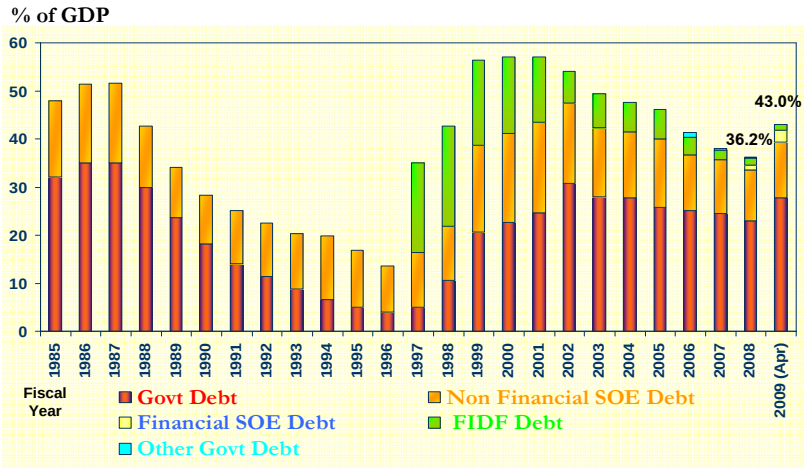
IV. Public debt and fiscal sustainability

The level and dynamics of public debt in Thailand

Owing to decelerating growth and a widening fiscal deficit, public debt in Thailand is projected to rise to nearly 60 percent over the next two years, from 38 percent of GDP in 2008, as the government plans to run sizable fiscal deficits partly financed by borrowing (**Figure 4.7**).

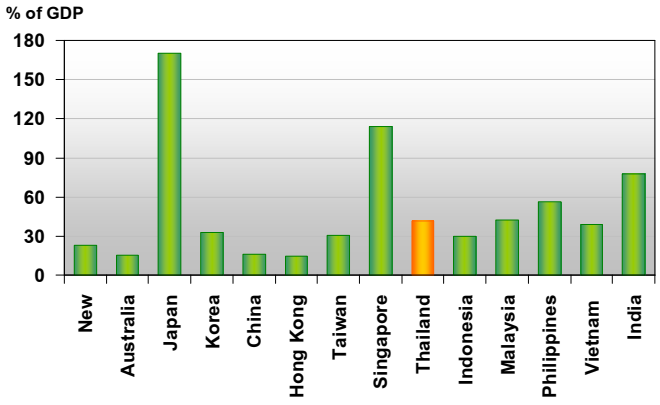
Public debt in Thailand has been at a moderate level relative to other countries in the region at least until the end of 2008 (**Figure 4.8**). Also, the Thai public debt figures may somewhat overstate the resources required for debt service for two reasons. First, the definition of public debt in Thailand embraces SOE debt, which accounts for about 12 percent of gross public debt in 2008.[19] But SOE debt obligations will become part of the fiscal burden only if the SOE defaults. Second, payments of the principal on the bonds issued for losses incurred by the financial sector restructuring (under the operation of the Financial Institutions Development Fund (FIDF)) in the aftermath of the 1997 Asian Crisis will mostly come from the Bank of Thailand's proceeds from operation, while the government is only responsible for the interest payments of this FIDF debt (Rattakul, 2003). On the other hand, however, the contemporaneous public debt level may understate future fiscal burden that may unexpectedly burgeon as a result of materialization of contingent liabilities, fiscalization of losses from quasi-fiscal measures, a sudden increase in country risk premium, for instance. **Figure 4.7** provides an example of a case where public debt could sharply rise when the country faced with a severe crisis such as that in 1997.

Figure 4.7 Evolution of Public Debt in Thailand, 1985-2009



Source: Public Debt Management Office (PDMO)

Figure 4.8 Comparison of the debt level in various countries

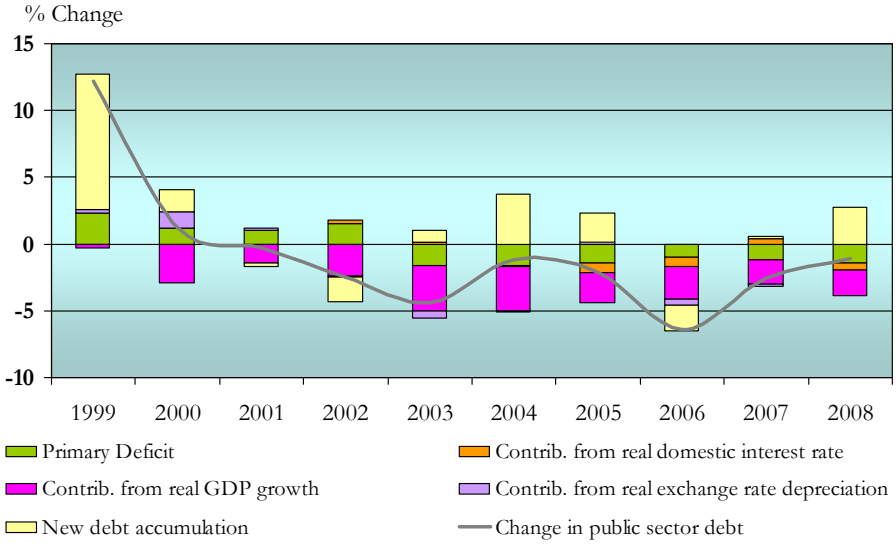


Source: Government Finance Statistics (GFS), 2008 figures

[19] Public sector debt in Thailand consists of three components: government debt, non-financial state-owned enterprise debt, and Financial Institution Development Fund (FIDF) debt (the cost of financial sector restructuring inflicted by the 1997 financial crisis).

It is worth exploring how debt to GDP levels have evolved in the past, aside from new debt accumulation, as this will provide a useful perspective on the future. **Figure 4.9** illustrates debt dynamics in Thailand during the past decade. Debt to GDP level is decomposed into key contributing factors as displayed in the chart. Evidently, the steady decline of debt level since its peak in 2001 has been largely attributable to both booming economic growth and government effort to rein in the primary deficits.

Figure 4.9 Thailand's Debt Dynamics, 1999-2008



Source: BOT, PDMO, FPO, and authors' calculation.

Debt as a countercyclical policy instrument

Despite its unpleasant notoriety, debt is not always a dreadful creation as long as it is to be wisely utilized and prudently managed. In fact, it can be a useful instrument to enhance the countercyclical role of fiscal policy by providing more flexibility in government budgeting when needed. **Allowing for debt accumulation during bad times and running it down by generating primary surpluses during good times will help correct for the procyclical nature of the government expenditure resulted either from financing constraints or the balanced-budget framework**. **Table 4.5** indicates that Thailand, purposefully or not, has been following this strategy to some extent. And with the announced stimulus package (of about 2.5 percent of GDP in fiscal year 2009) that will result in a hefty increase in public debt, the government is implicitly exploiting this concept of resorting to new debt as a cushion for the impact of the current crisis.

There is, however, a need to avoid the perception that all one-off shifts in debt ratios would be automatically accommodated by anticipated economic booms in subsequent years. A valid concern that arises as regards to countercyclical fiscal activism is that policymakers' discretion is often subject to "debt bias" associated with an asymmetric response in downturns and upturns, with more easing in downturns and not tightening enough in upturns resulting in a permanent increase in the public debt ratio. In order to allow public debt to act as a shock absorber in bad years, it is necessary that the government actively respond to the higher level of debt ratio and bring it back to a decent target level as soon as possible once the economy emerges from the recession

Table 4.5 Change in selected budget and debt variables in good times and bad times

	Number of obs	Change in cyclically-adj primary surplus	Change in cyclical component	Change in primary expenditures	Change in revenues	Change in public debt
All periods (1980-2008)	**29**	**0.06**	**-0.01**	**0.06**	**0.11**	**0.20**
		(1.43)	(0.63)	(1.20)	(0.85)	(6.26)
Good times	**12**	**0.04**	**0.35**	**0.05**	**0.51**	**-3.73**
		(1.59)	(0.43)	(1.20)	(1.10)	(2.89)
Bad times	**17**	**0.06**	**-0.26**	**0.06**	**-0.18**	**2.98**
		(1.35)	(0.64)	(1.24)	(0.85)	(6.55)
Crisis years (1998-99)	**2**	**1.10**	**-0.93**	**-1.45**	**-1.30**	**12.05**

Sources: BOT, GFS, PDMO, and authors' calculation
Note: Changes of the variables from the preceding year.
Good times (Bad times) are defined as the years in which GDP growth is above (below) the average.

Debt and fiscal sustainability

Although debt could be a useful tool to loosen up government budget constraint in downturns, excessive amount of debt is clearly counter-productive as it raises concerns about fiscal sustainability. The concept of fiscal sustainability is closely related to debt solvency. Burnside (2003) defines fiscal sustainability as related to the government's ability to indefinitely maintain a set of policies while remaining solvent, i.e. being able to service its debt obligations without defaulting on them.

It is important to recognize that **the perception of unsustainable fiscal policy in the long run could straight away induce macroeconomic weakening (through weak private demand due to precautionary savings and lack of confidence in government policy), financing problem (through increase in risk premium)**, and external vulnerability (through deteriorating sovereign credit risk that may trigger a sudden stop in capital flows). An implication for the current situation is that fiscal stimulus should not call into questions medium-term fiscal sustainability, as this would undercut the near term effectiveness of policy through adverse effects on consumer spending, private investment, and sovereign credit rating.[20] An analysis of fiscal sustainability is thus essential as to determine whether the current set of policies is unsustainable and to suggest what needs to change to avoid eventual default.

For Thailand, a set of fiscal rules has been established under the "fiscal sustainability framework" to provide as a guideline to achieve fiscal discipline.[21] One of the rules stipulates the public debt to be no higher than 50 percent of GDP.[22] The projection in the most likely scenario that in the next few years Thailand's public debt will grow to almost 60 percent of GDP—much beyond the ceiling recommended by the self-imposed "fiscal sustainability framework"—could do much harm to the government policy by causing an unnerve on public confidence, even without a genuine risk of default.

[20] IMF (2009) finds that the degree of public indebtedness strongly reduces the effectiveness of fiscal policy. Specifically, the fiscal multiplier turns negative for debt levels that exceed about 60 percent of GDP.
[21] The four indicators under the current fiscal sustainability framework are as follows: (1) public debt to GDP ratio shall be below 50 percent (2) debt service to budget no greater than 15 percent (3) balanced-budget by a specified year (4) government investment to budget ratio greater than 25 percent.
[22] This rule is apparently relatively stringent provided that the EU's Growth and Stability Pact only requires its members to maintain debt ratio below 60 percent.

Debt solvency is forward-looking concept as debt dynamics are driven not only by current but also future deficits. The crisis has led to not just contemporaneous shocks, but also an escalation of future deficits and a dwindling of future revenue flows. For this reason, the debt to GDP figure alone is by and large not sufficient in determining sustainability because it does not provide information about the ability of the government to generate adequate revenue and about country-specific fiscal risks in future.[23] One way to examine the sustainability of the current fiscal policy is to ask: how much deficit reduction is required in the medium term in order to prevent debt to be on an explosive path (with or without realization of contingent liabilities and/or other shocks)? Then weigh up whether this required size of deficit is feasible based on projections of medium-term government revenues. A more demanding question would be to ask: how much deficit reduction is required to achieve a certain (lower) debt target within a specified timeframe? **Table 4.6** below displays required deficit reductions for Thailand at the present situation to stabilize the debt ratio, and to meet the pre-crisis debt level within 5 years, under different growth and interest rate scenarios. As one can observe, the lower the actual output growth turning out to be and/or the higher the interest rate, the larger the reduction in deficit is needed in order to conform to debt sustainability.[24] Downside risks such as materialization of contingent liabilities could be added to the analysis for a more pessimistic projection.

Table 4.6 Required primary surplus to achieve the debt target (percent of GDP)

Real GDP growth (%)	Real interest rate (%)			
	1	2	3	4
1	3.99	4.50	5.00	5.51
2	3.48	3.98	4.48	4.98
3	2.98	3.48	3.97	4.47
4	2.50	2.98	3.47	3.96

Source: Authors' calculation using the intertemporal budget constraint approach.
Note: This table displays required average annual primary surplus in percent of GDP in order to lower the public debt from 60 percent of GDP to 40 percent over 5 years, under hypothetical scenarios of steady-state growth and interest rate as specified.

Overall, the rise in public debt levels in Thailand caused by the current crisis does not in itself cause significant threat to solvency, thanks to the favorable initial debt condition. Going forward, prudence and discipline on the part of the policymakers will be key to maintaining or even improving fiscal sustainability.

V. Issues on post-crisis fiscal adjustment

The need for fiscal adjustment after the economic recovery

Given the large fiscal deficits and rising government debt resulting from policy response to the economic recession, fiscal adjustment—that is, a deliberate effort to reduce the government

[23] And this is one of the reasons why we observe a wide range of public debt to GDP levels across different countries with rare cases of explicit default, at least not yet in the current episode.
[24] In the intertemporal budget constraint model, sustainability condition requires that discounted value of current and future income plus initial wealth should at least be equal to the discounted value of all current and future non-interest expenditure. The model implies that to accomplish sustainability, the debt should ultimately not grow faster than the rate of interest, to guarantee non-explosive debt path.

primary budget deficit–is inevitable in order to move towards healthier fiscal positions. **Medium-term fiscal and debt targets buttressed by a clear adjustment strategy and strong institutional setup would help maintain confidence in the public finance and, hence, foster effectiveness of the stimulus measures in the short-run.** Recognizing this, several countries in the OECD have already announced medium-term plans to consolidate budget balances, including an increase in tax rates on capital gains and dividends in the United States, lower growth in current spending and higher top income tax rate in the United Kingdom, and an increase in taxes on pollution and energy consumption in Denmark, for instance.

Although budget balance in Thailand is expected to improve with the economic recovery, but unless tightening measures are introduced later, fiscal position would remain weaker in the medium term than before the crisis, leaving the public sector vulnerable to future shocks particularly given the increasingly limited fiscal space under a no-change-in-policy setting. Thus, fiscal adjustment beyond removal of the stimulus measures is the first and foremost step toward macroeconomic stability after the revival of output growth.

Timing and composition of fiscal adjustments

Deficit reduction has to be a balancing act between the achievement of government financial goals and the containment of the plausible negative effects on the real economy. **Timing and composition of fiscal consolidation must be carefully designed so as not to let the corrective fiscal adjustment disrupt the fragile recovery process**. Implementing fiscal consolidation too soon could reverse the positive effects of the previous fiscal stimulus, while delaying it would result in further deterioration of fiscal position to the point at which it would be even more costly to bring it back to the sustainable path. Another difficulty is associated with the assortment of adjustment measures. According to the conventional Keynesian-type economics textbook view, government deficit reducing policies have dampening effects on private consumption, employment, and output. However, against this conventional wisdom is what is dubbed the "*expansionary fiscal contraction*" hypothesis. This hypothesis contends that a credible, permanent program of government spending or tax reductions will stimulate a large increase in private demand, working through the expectations of permanently lower tax liabilities. Private spending may increase sufficiently to offset the direct effects of the fiscal contraction. Thus, in fact, the main impact of deficit reduction can be positive rather than negative. This process of expansionary fiscal contraction is later claimed to also work through the labor market channel. We briefly describe these *non-Keynesian effects* that explain a possible positive impact of fiscal contraction on output below (Giavazzi and Pagano (1996) and Alesina and Perotti (1997)):

i. Expectation effect: a fiscal contraction that is perceived to imply a permanent reduction in government spending as a share of GDP will fuel expectations of lower taxes in the future, resulting in a concurrent increase in private consumption and investment (crowding in effects).

ii. Further credibility effect: if the sustainability of public finances is credible, inflation expectations as well as the risk premium will be reduced, contributing to higher growth through an increase in investment.

iii. Labor market effect: Adjustments that result from cutting public spending, especially transfers and government wage bills rather than increasing taxes, are more likely to be expansionary because they induce downward pressure on wages in the private sector, stimulating employment, capital accumulation and growth.

A number of studies find evidence supporting this expansionary fiscal contraction. Barry and Devereux (2003), among others, conduct a theoretical exploration in a DSGE model and find empirical relevance of this hypothesis. In addition, they find that the positive effect of deficit reduction on output is highly non-linear; the higher the initial spending to GDP ratio, the greater is the positive impact of spending cuts on output. Empirical evidence found in Alesina and Perotti (1997) and Argagna (2004) also support the positive effect of fiscal contraction on growth. But they emphasize that this positive effect largely depends on the composition of the fiscal maneuver. In particular, adjustment that consists primarily of public spending cuts especially on government wage bills, rather than tax increases, lead to higher GDP growth rates.

Thailand' experience with fiscal adjustment, 1998-2002

Table 4.7 summarizes the experience of fiscal adjustment in Thailand after the financial crisis triggered in July 1997. Several interesting observations emerge from this Table, reflecting fundamental features inherent in the structure of the fiscal policy and economic system in Thailand. First, negative growth of cyclically-adjusted primary surplus (i.e. growing deficits) during the pre-crisis boom period substantiates the procyclicality in the discretionary expenditure discussed earlier. Second, the large positive change in this discretionary component during the crisis (2.1 percent of GDP) reflected the massive tightening of the government budget under the IMF rescue package, against the impact of the automatic stabilizers on the budget balance. The IMF program, however, has been widely criticized on several counts, particularly for forcing a premature fiscal adjustment upon the country, resulting in painful rather than constructive consequences. This brings us to the third observation that, regarding the fiscal adjustment in light of this particular crisis (the last column two columns of Table 4.5.1), automatic stabilizers seem to work better as a countercyclical fiscal tool as they are better-timed, and their size of adjustment was more or less comparable to a potential change in discretionary policy.

Table 4.7 Fiscal adjustment in Thailand: Size and Composition (in percent of GDP)

Annual average	Before crisis FY1995-97 (1)	During crisis FY1998-99 (2)	After crisis FY2000-02 (3)	(2) - (1)	(3) - (2)
Real GDP growth	5.8	-4.5	4.1	-10.30	8.60
Change in cyclically-adj primary surplus	-1.87	2.10	0.10	3.97	-2.00
Change in cyclical component	0.33	-1.70	0.13	-2.03	1.83
Primary expenditures	17.9	17.3	16.4	-0.60	-0.90
Wages and salary	5.4	6.2	6.1	0.80	-0.10
Purchase of goods and services	3.9	3.4	3.2	-0.50	-0.20
Subsidies	1.3	2.0	3.1	0.70	1.10
Public investment	7.3	5.8	4.0	-1.50	-1.80
Revenues	19.7	17.5	17.4	-2.20	-0.10
Personal income taxes	2.3	2.5	2.0	0.20	-0.53
Corporate taxes	3.7	2.3	3.0	-1.40	0.70
Indirect taxes	11.4	10.2	9.9	-1.20	-0.30
Social security contributions	0.2	0.3	0.5	0.10	0.20
Non-tax revenue	2.1	2.2	2.0	0.10	-0.20

Source: Bank of Thailand, Government Finance Statistics, and authors' calculations.

Forth, while government employee compensation as a percentage of GDP increased during the crisis (as GDP declined), public investment was reduced substantially throughout the crisis and recovery, once again reflecting the vulnerability of public investment to discretionary spending cuts. Fifth, the swings of corporate income taxes (in percent of GDP) were in accordance with the business cycle, suggesting high sensitivity of corporate profits to economic booms and busts. This renders corporate taxes an unstable source of income for the government, relative to more stable personal income taxes. Finally, the reduction in indirect taxes (mostly consumption taxes) even after the economy recovered from the crisis possibly signifies "post-cautionary" saving on the part of households as the agonizing experience of the crisis remained a vivid memory.

Policy implications on fiscal adjustment after the crisis

On the whole, fiscal adjustment after the 1997 crisis seems to be a successful one as it was followed by successively lower debt level (from peak in 58 percent of GDP in 2000 to 37 percent in 2008) and apparently conducive (or at least not obstructive) to higher growth in subsequent periods. What contributed to this accomplishment? Will the history repeat itself this time around, under a different institutional setup and global environment? If not, what should be an appropriate government action to simultaneously improve fiscal position and ensure uninterrupted growth?

Policy measures and other factors that seemed to contribute to a successful fiscal adjustment and strong economic recovery in the previous crisis episode include (but are not limited to): accelerating export growth and FDI inflows, improvement in fiscal position due to the automatic stabilizers, substantial reduction in public investment spending, and reforms in tax administration. Will these factors play the same role this time? Clearly, export-led growth can be relied on only to a limited extent in this crisis episode in which the troubles stemmed from and directly affected countries among the largest world consumers, including major destinations for Thai exports. Global demand will be slow to recover, so as the export sectors in emerging economies, unless there is a substantial structural change in the individual country's export sector. FDI inflows might also slow down due to on-going distresses in the financial and corporate sectors in advanced economies and, more importantly, due to Thailand's domestic political instability that may deter foreign investment.

The role of automatic stabilizers will also be played down this time relative to the last crisis because of the various tax measures introduced since March 2008 that reduce the effective tax rates for both personal income taxes and real estate taxes.[25] In addition, increased FTA arrangements in recent years will further limit the size of automatic stabilizers coming from import duties. This is not to mention a possible outturn that private demand will not pick up as quickly as expected due mainly to policy and political uncertainty, causing government tax revenues to fall short of projections. As regards to discretionary deficit reducing policies, the Thai government implemented measures to expand the tax base and enhance the efficiency of tax collection in 2001. Government revenue increased considerably partly as a result of more effective tax administration. Nonetheless, given 1) tax revenue currently at only 17 percent of GDP, 2) effective personal income tax rates at 5 percent on average, 3) coverage of tax bases at lower than 20 percent of working population and 30

[25] According to Chuchurd and Jitapankul (2008), the tax measures implemented on March 4, 2008 result in lower effective tax rates on personal income for all income groups—ranging from 1 to 4 percentage point reduction depending on the income group and whether (tax deductible) LTF/RMF is purchased. For more information, see Chuchurd and Jitapankul (2008).

percent of registered companies, and 4) VAT at 7 percent, **there remains room to further enhance the government's ability to generate revenue by streamlining tax collection, expanding tax base, and introducing new tax systems that would improve overall efficiency as well as fairness in the economy.**

In the aftermath of the previous crisis, public investment expenditures were cut substantially, which contributed to improved budget balance. But this form of deficit reduction may come at a cost later as **putting off supply-side stimulus will weaken potential growth outlook in the medium and long run**. Thus, even though it helps strengthen fiscal position today, cutting public investment—though easiest to do due to the relative flexibility and no-commitment aspect of this spending category—should not the first thing on the budget expenditures to be forfeited, for the sake of long-term sustainable growth which will in turn foster stronger public finances into the future. On the other hand, **elimination of inefficient government spending in the current expenditure, especially those unproductive items that bring upon the government long-term liabilities, should be brought under serious reviews in order to reduce budget rigidity.** Restructuring of government wage bills, which has not been done much in the past, is another reform to be considered since it is a form of deficit reduction proven to produce expansionary effect on the output.

VI. Summary and Policy recommendations

The Thai government's fiscal response to the impact of the crisis has been, in principle, in the right direction so far, with SP1 aimed at stimulating short-term growth and SP2 aimed at strengthening economic fundamentals conducive for long-term potential growth. SP2, if implemented effectively, could raise the profile of public investment to another level and there is a possible that the public investment growth will stay above the GDP growth, which has been a rare phenomenon in the past. Taken all of the observations and considerations in the analysis in the previous sections, appropriate fiscal policy in dealing with the new challenges stemmed from the crisis should focus on the following three areas:

1. Improving fiscal policy effectiveness

Since policy effectiveness depends crucially on timeliness of implementation, in the short run the government should strive to make sure that the current stimulus plans are effectively disbursed as planned, with high-quality implementation. Transparency in budgetary operations should be maximized, while leakages due to corruption and other inefficiencies minimized. In the longer run, to reduce the need for discretionary policy measures (which are subject to long delays) in countering economic downturns the role of existing or new automatic stabilizers, especially on the spending side, that are well-targeted should be enhanced to take advantage of their innate timeliness and their temporary nature.

As regard to improving the targeted-ness of both automatic stabilizers and discretionary measures, improvement in the data collecting systems on individuals and corporations should be carried out in order to correctly identify the target groups consisting of those neediest of support for government, to maximize the multiplier effects. Tax reforms should focus not only on broadening the tax base and reducing rates, but also on simplifying administration and compliance, enhancing the transparency of tax code, as well as improving incentives to work and to invest, so as to minimize distortions and maximize effectiveness of any changes in the tax policy.

2. Maintaining fiscal sustainability while supporting growth

Structural reforms to boost potential growth, by removing distortions, including those arising from discretionary policy and other public interventions, can help in strengthening medium-term sustainability. Higher potential output in the future—which, in most cases, comes with a sacrifice of spending binges today for short-term purposes—will automatically help reduce the public debt burden through growth. The government should seek to reduce unproductive spending while preserving expenditures that are likely to yield high-quality growth and a high social rate of return such as basic transportation infrastructure, education, preventive health care. To lighten government burden arising from sizeable public investment projects, more public-private partnership (PPP) investments should be encouraged with adequate risk management and high- standard governance framework.

A credible commitment to address the longer-term issues—the prospects of potential output growth and the outlook of fiscal position—can go a long way in reassuring markets about fiscal sustainability. The government must pre-commit to unwinding stimulus and quasi-fiscal measures that only yield short-term effect, so as not to create expectations of permanent budget deficits. In addition to withdrawal of the stimulus measures, a clear, credible plan for future corrective fiscal adjustment to restore fiscal balance is also essential. To this end, well-structured tax reforms and efficiency-oriented expenditure reprioritization to improve the government's revenue generating ability as well as to create more fiscal space should be among the top priorities of the government' medium-run endeavors.

3. Enhancing the ability of fiscal policy to deal with future shocks

Larger fiscal space from the above recommended government endeavors will in turn improve flexibility of the government budget in responding to any future fiscal shocks. This greater budget flexibility will correct for the procyclical nature of the fiscal policy and increase the ability of fiscal policy to respond to exceptional circumstances. However, there is always a tradeoff between sticking to the rule and allowing for more discretion. Whether or not formal rules are introduced, governments should be committed to tighten fiscal policy in good times, now that fiscal policy has been relaxed during bad times.

In addition, fiscal policy's effectiveness, sustainability, and ability to stabilize growth are likely further enhanced if interacted with an improvement in confidence. This thus requires the government to deal with its credibility with regards to fiscal discipline while also needs to enhance political stability to preserve disbursement schedule and overall confidence.

Chapter V
Monetary Policy under the Crisis and Medium-term Recommendations

The current crisis has changed the way monetary policy-makers worldwide view their existing tools and objectives. It has highlighted strengths and weaknesses of the monetary mechanism as well as brought about potential challenges that would pose difficulties for the economic recovery and policy formulation in the medium-terms ahead. In order to appropriately engineer monetary policy actions in response to those medium-term challenges, this section will first carefully investigate the impact of the current crisis on the conduct of monetary policy and later provide policy suggestions to cope with such challenges.

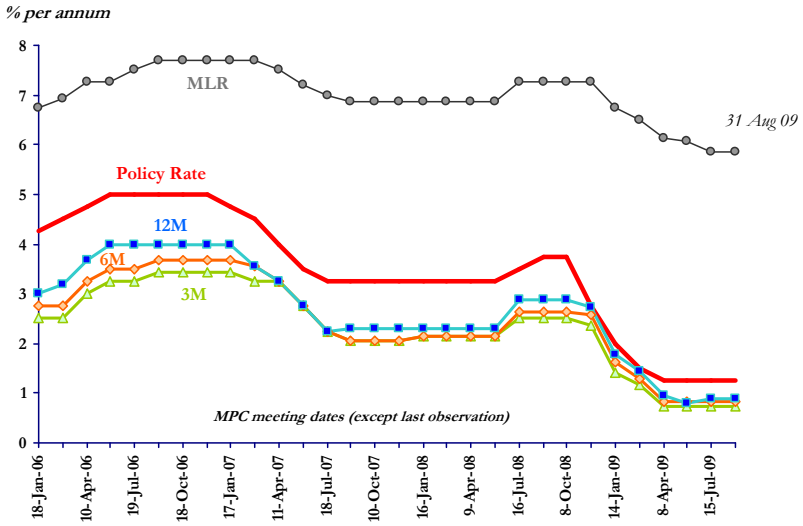
I. Impact of the crisis on the monetary policy

Transmission mechanism

In a prompt response to this financial crisis, monetary policy in Thailand has been greatly eased. The unprecedented rate cuts, in total of 250 basis points within 5 months, were intended to help cushion the economic slump while fiscal policy needed some time to be fully implemented. This has put the policy rate at 1.25 per cent which has been the lowest level for Thailand. However, during time of the crisis, the heightening uncertainty has posed significant impact on the transmission of such unprecedented cuts, both in terms of its ability to pass on policy action to boost the economy via different channels as well as its ability to affect expectation.

As for Thailand, the most obvious impact has been in the bank lending channel in connection with the interest rate channel. This transmission path has been the most important to monetary policy implementation as the Thai financial system is considered mostly bank-based. In the normal time, under such venue, change in policy rate is passed on to market interest rates which in turn affect credit flows through the change in banks' funding cost as well as the borrowers' collateral value. These changes in credit activities allow monetary policy to have effects on inflation and economic growth.

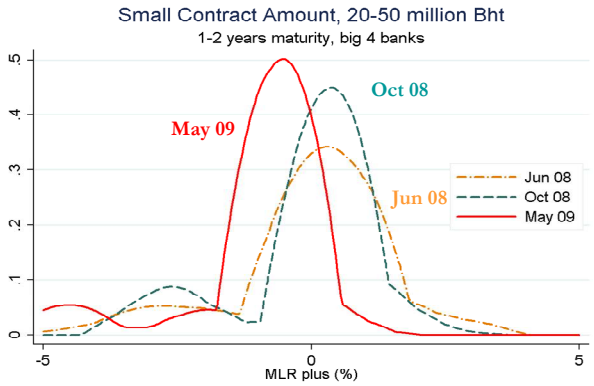
Figure 5.1 Commercial Banks' Interest Rate* Adjustment



Source: Bank of Thailand
*Average rates of 4 largest banks, since 3 Dec 08 CBs' Interest rates are calculated from averages of minimum and maximum rates.

However, under the higher risks induced by the crisis, though the policy rate cuts have been transferred to the short-term market rates but the transmission has been less effective in case of interest rates in the banking sector. **Figure 5.1** reveals the adjustment in the short-term market rates as well as the sluggish adjustment in banks' lending rate relative to the deposit rate in response to the policy rate slashes. Moreover, there is evidence that the actual interest rates charged on the new loan contracts have not been declining in accordance with the MLR as shown in **Figure 5.2**. Due to the reluctance of the commercial banks to lower their lending rates, the interest rate spreads have been widened and this can be seen as compensation to the higher credit risks. This has also been due to the fact that the policy rate has been at a very low level that the commercial banks cannot lower their deposit rates further. If the banks lower their lending rates alongside with the policy rate cuts, interest margins and hence profits will decline which would, consequently, lower their incentive to increase credits. The other case is that the commercial banks would decide not to lower their lending rate at all.

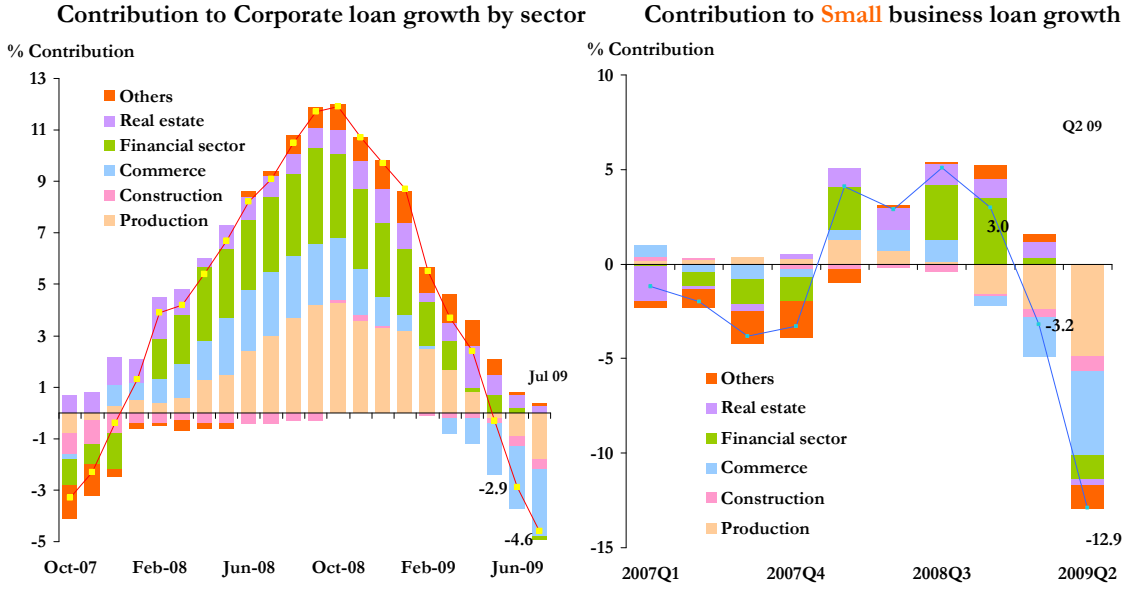
Figure 5.2 Actual Loan Rates for New Contracts



	Jun 08	Oct 08	May 09
Obs	94	116	78
Med	0.25	0.25	-0.60
Mod	0.25	0.25	-0.60

Source: Bank of Thailand

Figure 5.3 Credit Growth



Source: Bank of Thailand

Not only the sluggish impact on banks' rates (price of credits), high uncertainty has also discouraged activities in the credit market as reflected in the declining loan growth (quantity of credits) in **Figure 5.3**. The deteriorating economic prospect due to high uncertainty has

affected the private demand for loans while heightened the credit risks that spurred the commercial banks' reluctance to provide credits especially in the case of small-sized businesses. These phenomena have reflected the clog in the transmission of policy changes to the real economic activities.

Other transmission channels have also been impacted by the high level of uncertainty in the economy. For example, the more risk-sensitive capital flows have complicated the already-unstable relationship between interest rate differentials and exchange rate movements[26] and hence may produce the lower transmission effect of exchange rate channel to some extent. Regarding the expectation channel which has become increasingly important along with the financial market development, the high-risk environment may have caused the agents to be more adversely sensitive to policy actions or raised the degree of heterogeneity in agents' information taking. For example, the interest rate cut, rather than producing the positive expectation on the future growth of the economy, may induce the adverse expectation that negative factors may be imminent in the view of the central bank and hence cause them to react otherwise.

It can be seen that the crisis has called for cushion and boost in growth. However, it seems ironic that although the economy is at the 'sweet spot' where inflation is relatively tamed due to the soft world demand and macro-policies face no obstacle to stimulate growth; monetary policy does not seem to work to its full capacity[27].

Issues on financial stability and changes in rules and regulations after the crisis

The crisis has highlighted the importance of financial stability as asset prices and credit bubble were the major root causes of the incidence. As a result, there have been debates on the role of monetary policy in maintaining the financial stability; how much the central bank should react to asset prices and credit booms while maintaining the major objective corresponding to macroeconomic situation[28]. The tradeoffs between financial stability and price stability will therefore become a challenge for the central bank especially during the unwinding process of the crisis where volatility could easily arise. This also implies the increasing link between macroeconomic situation and the regulatory and supervisory policies to ensure the overall stability of financial system. In this light, with the increasing macro-financial linkages, macro-prudential policies were suggested as complementary tools to provide more degree of freedom to central banks to tackle this challenge.

Moreover, the level of financial product sophistication that increases with financial sector evolution will complicate risk assessment process of the regulators as well as market participants. The structured products that were contributing to this crisis have set a good example in the core crisis countries. This, as a result, has raised concerns on the lax existing regulations and supervisory policies worldwide, which tending to gear the imminent policy design towards a more transparent and risk-based assessment. One of the major changes for

---

[26] Chai-anant et. Al., 2008

[27] The core crisis countries also encounter the argument concerning the limited effectiveness of monetary policy. However, in the case of U.S., Mishkin (2009) counter-argued that the crisis would have been more severe under policy inaction.

[28] Gerlach et. Al., (2009) has illustrated the relevant example during the latter half of 2008 when there was a combination of cost-push inflation that required the tightening monetary policy to anchor inflation expectation and the stress in the financial markets that called for lower interest rates.

Thailand is the tightening capital requirement for commercial banks as the banking system is moving towards Basel II standards. This capital cushioning scheme seems to shield financial institutions from changes in policy interest rate and hence soften the monetary policy effectiveness. (Borio and Zhu, 2008)

The crisis, as discussed above, has not only left us with medium-term potential difficulties in attaining sustained recovery but also posed challenges to monetary policy operation and effectiveness. The appropriate policy design in the next 3 – 5 years therefore has to be geared to cope with the challenges under the given policy limitations. Under these conditions, the flexible inflation targeting '+' framework should still uphold but some detailed adjustment will be needed to enhance the policy coverage and effectiveness.

II. Policy Recommendations

First and foremost, **monetary policy has to maintain its major mandate in price stability in the medium-run.** Even though monetary policy has limitations to stimulate the supply-driven potential output, the price stability will help foster the long-term potential growth going forward.

At this onset of recession, the policy stance may have to be accommodative in the short-run to boost the domestic spending. However, for monetary policy to take a more accommodative action will be difficult due to the limitation of policy transmission under the very low rate. In addition, this currently low level of the policy rate should be sufficient to cushion the economic downturn and allow for the relatively healthy recovery. Thus far, we have seen the slight recovery of various economic indicators. Nevertheless, to secure this sustained upturn of the Thai economy during the time of political uncertainty and soft confidence, monetary policy may have to remain as relaxed as possible in the future periods.

There are possible factors that may allow monetary policy to continue its accommodative stance in the next years. The domestic inflationary pressure in the near future should mostly be supply-driven, especially oil prices, as demand recovery at home is expected to be gradual. However, the forecasted weak global economic recovery should also fail to keep the oil and commodity prices sustained at a high level. As a result, the risk of emerging inflationary pressure that would require the monetary policy to tighten could be relatively moderate. Additionally, many countries may maintain their low policy rates to support the economic recovery and fiscal spending plans. Consequently, this location of the economy at the 'sweet spot' should allow such policy stance.

However, **policy-makers have yet to be watchful on the uncertainty in the global recovery and inflation as well as the effect of government policies and measures on potential output which, if turning out to be better than expected, might spur inflationary pressure going forward.** In that case, monetary policy has to return to its main discipline and focus to maintain the price stability. Despite some tradeoffs with economic growth in the short-run, "*the focus on price stability should provide a stronger anchoring of inflation expectations, thus limiting the transmission of shocks in economic activity to inflation*". (Gerlach et. Al., 2008) By securing the price stability, monetary policy can also help ensure and encourage long-term potential growth which is also an aim of the fiscal investment spending. Moreover, one of the determinants on the success of monetary policy-makers is the central banks' credibility, and under any circumstances, should not be compromised.

Nevertheless, the speed and degree of tightening varies depending on the factors mentioned previously. Uncertainty in the output gap is also the key factor and this depends mostly on the effectiveness of fiscal investment spending in the beginning of this medium-term window. The inflation targeting framework is useful in this case for appropriate policy formulation as the level of core inflation could, to some extent, reflect the size of the unobserved output gap of the economy. The ideal policy move in the next year or two where much uncertainty remains is to **'cautiously accommodative' and if the inflationary pressure prevails, the stance may shift towards 'accommodative tightening'**, i.e. the policy remains as accommodative as possible. The possibility to stay accommodative is high as the policy rate is at a very low level and risk of inflation going forward is relatively moderate. In this light, **the appropriate communication scheme along with the tightening action is extraordinarily necessary in order to effectively curb inflation expectation**. The better inflation expectation is contained, the smaller rate hike is needed and hence policy stance can remain relatively lax.

Under the framework of 'Flexible Inflation Targeting +', the above recommendations suggest that 'inflation targeting' principle should remain the appropriate policy framework to face with potential challenges. However, complementary scheme such as communication will also be crucial in order for monetary policy to remain as relaxed as possible during the time of sustained recovery. Nonetheless, the relatively lax policy could also encourage the buildup of debt and asset price bubbles. This, as a result, leads the policy-makers to the next feature of the policy framework which is the flexibility of the objectives; whether financial stability should be incorporated as another objective of the traditional interest rate policy.

The debate on this issue has been initiated long before this crisis. Some has identified the importance of asset prices on the macroeconomic stability. Cecchetti (2006) suggests that the housing boom may lower the growth prospect and create higher opportunity of bad outcomes. Bautista (2008) also complements the work of Cecchetti that, for Asian economies, although changes in asset prices may not dampen the mean of economic growth, they could add more risks of the worst outcome. As a result, the lower interest rates may stimulate growth of the economy on average but they could also fuel the asset prices, increasing probability of the crisis. Bernanke and Gertler (1999) also suggest that stock price movement may signal inflation expectation and in that case, central bank may need to react in order to contain future inflation. The classic Poole (1970) arguments are that the asset price booms that are originated in the financial market will adversely influence real sectors and hence the central bank should respond to such upswing while the asset price movements that originate in the real sector should be allowed to change for the proper adjustment.

Despite the implications asset prices have on the economy, some have suggested that central banks should not 'lean' against the upswing of the credit cycles or the asset prices and should only lower interest rate to help clean up the crisis afterwards. This is what has been done during many periods of financial disturbances by the Federal Reserves as well. The arguments for these actions are that interest rate movement may not be enough to dampen the upswing of asset price and leverage, and it may create costs to other objectives of the central bank. (Bernanke and Gertler, 2001) Moreover, not only it is difficult to identify and quantify how much the asset prices deviate from their fundamentals, there are always the options of which asset prices the central banks should react to.

Nonetheless, the responses to the previous view of 'not leaning against the wind' listed by White (2009) are that monetary policy should not target the asset prices but should focus on the underlying cause of the price movements. Moreover, the preemptive movement to tighten

the credit cycle might be sufficient to prevent the imbalances. Alongside, the appropriate and credible statement should be able to steer public expectation towards the more stabilizing direction. The more fundamental argument is that interest rate already has a role in curbing asset price as it is one major transmission channel of monetary policy. Changes in interest rate can help curb sharp movement in asset prices through changes in perspective of future growth and hence the investors' valuation of assets. As the usual case is that the asset price and credit booms are associated with the demand-driven inflation. As a result, the tightening policy should be appropriate in curbing such booms as well as inflation. Under this circumstance, the interest rate policy should be more effective to curb excessive price movements than macro-prudential policy. However, in the case that potential distress arises with inflationary pressure, the policy choices become more difficult. Macro-prudential policies, implemented along side with monetary policy, might be useful in mopping up such distress.

Another view in dealing with asset prices and credit booms takes into account possible circumstances that such movements may suggest fragility in the financial market. Those circumstances are often coincided with or resulted from speculation, excessive liquidity and lax regulations and supervisions. In this light, Gerlach et. Al. (2009) suggests that **central bank should not target the specific asset price level but inflation in the price of goods and services. However, the central bank should closely monitor the movement in asset prices as they could be leading indicators of vulnerability in financial market and may use interest rate to react to any imbalances relating to indebtedness and the building up of external deficits**. Nevertheless, interest rate policy alone may not be enough to dampen the upswings of asset prices and leverage, and it could create costs for central bank's other objectives. **Financial regulation and supervision with macro-prudential measures that can be tailored to target specific imbalances should be used in conjunction with interest rate policy.**

Due to the nexus of the two sets of policies, the policy designs should be formulated in a consistent fashion to produce more effective results. One relating perspective is that the crisis has altered the risk assessment behavior of investors, i.e. they have become more risk sensitive. As a result, monetary policy decision has to incorporate the impact of this risk taking channel (Borio and Zhu, 2008) as well as probability of the financial imbalances into the policy formulation. One systematic approach is to incorporate risks endogenously into the economic model rather than treating them as exogenous shocks as risks should be allowed to evolve as a result of movement in other variables and policy decisions.

It is also important that the framework of financial regulation and supervision has to catch up with the development in the financial market, especially in terms of risk-pricing scheme that has been one of the complications causing this current crisis. During the medium term, the adjustment and innovation in macro-prudential measures as well as the tightening financial regulations have to be geared towards a more risk-based and less pro-cyclical, such as the countercyclical capital ratios and Spanish-styled forward-looking provision[29], for the effective preemption for the future possible imbalances. The probability of financial imbalances in the next few years may remain low and should allow these adjustments to take place. Nonetheless, the transformation has to be well planned and gradual to guarantee minimal risks to the financial sectors and private confidence.

[29] The concept of forward looking provisions is embodied in a Spanish proposal for a "statistical provision" based on estimates of probable future loss for different types of loans.

In the medium-term, the risk of potential imbalances will be moderate and the major threat may only stem from the more choppy movement in the asset prices rather than the fluctuation at a high magnitude, which the regulatory and supervisory measures might be more appropriate to deal with. Concerns are that the accommodative monetary policy may also help fueling the asset prices and credit sprees. However, with relatively high degree of risk aversion in the credit market and this trend remains as the economic recovery is expected to be gradual, the asset bubbles especially the ones stemmed from the credit market should not materialized. This might also be the 'sweeter spot' for monetary policy to stay accommodative as long as inflationary pressure remains subdued.

In terms of the '+' feature, the coverage of macro-surveillance should be extended. One lesson learnt from the current crisis is that financial instability could very well be stemmed from external factors regardless of the well-maintained internal stability. This has alarmed the central banks of the increasing importance of the monitoring of potential imbalances outside the economies. The best practice should focus on raising the importance of international coordination on surveillance of asset prices and potential instability outside the economy to (1) be ready to provide the domestic cushioning to cope with potential threat, and (2) provide any assistance or cooperation needed to curb any potential imbalances before spilling over to the other economies.

Chapter VI
Conclusion: Strategies for Policy Coordination

The sub-prime financial meltdown led the world into the worst recession since the Great Depression of 1930s. In earlier chapters, we have shown that this caused Thai potential growth to decline further and complicated the tasks of macroeconomic policymakers. Fiscal policy is under pressure from deteriorating fiscal position and growing concerns over the debt sustainability over the medium term. Monetary policy, on the other hand, while urged to provide easing monetary and financial conditions, also needs to maintain price stability, which is vulnerable to the threats of the world excess liquidity influx as well as the gradually solidified economic recovery.

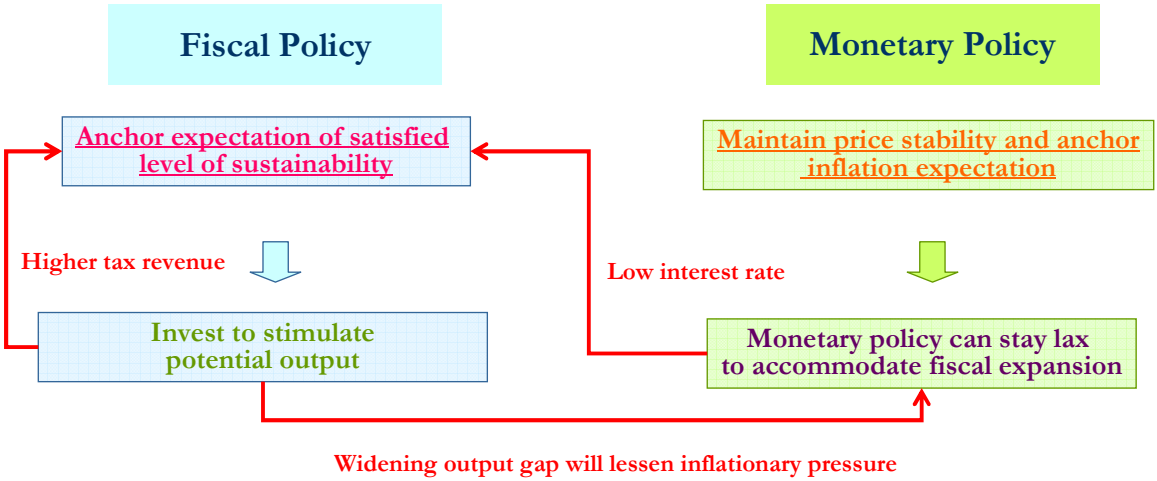
From Chapter III, it is apparent that the current framework of macroeconomic policies could withstand the crisis, particularly in the short-run, however, over the medium-term there is always room for policy improvement and strengthening, both individually and in coordination. Chapter IV and V analyze fiscal and monetary policies, respectively. This accentuates the fact that when on its own, neither fiscal nor monetary policy can meet all three challenges in growth, stability, and sustainability. It is beyond a capacity of one policy, though not so if given the synergy in the combination of both.

This forms the argument for greater coordination in macroeconomic policy platform both over the medium term and in general. During this crisis and a few years beyond, each macroeconomic policy must take care of its own concerns while orchestrated efforts must also be put towards the mutual goal in providing maximum support for growth recovery. Despite concerted actions, a good start rests within the fiscal policy given its ability to put forward more public investment spending and boost economic potentials. The elevated potential output would allow monetary policy to continue its easing stance longer while also preserving price stability. Besides, to comprehensively harness over price stability, monetary policy could not afford an inaction, when also faces concerns of possible threats to Thai financial stability such as world excess liquidity influx and following imbalances. Given the macro-financial linkage as evidenced by the US sub-prime crisis as well as empirically by Tanboon et Al. (2009) for Thailand case, a failure to preserve financial stability could have an amplified impact on the economy. To tackle this, macro-prudential measures could be employed for its targeted effects in conjunction with active communication and even signal from policy interest rate. This complete overseeing effort on both price and financial stability would help monetary policy solidify public inflation expectation. This firm anchoring together with the improved economic conditions due to both fiscal and monetary stimuli will, in turn, help enhance fiscal position as well as lessen pressure on fiscal sustainability. Fiscal adjustments could be more gradual and less detrimental to the fragile economic recovery.

Apart from coordination in terms of goal, the macroeconomic policy coordination strategy could also have another dimension on the timing of actions. Given the different time requirements for implementing each policy as well as different lag time before each policy takes effects delineated in Chapter III, there is also a possibility of coordination, especially from the onset any crisis. Monetary policy should take a lead in rescuing the fallen confidence and economy, given its ability to react with greater flexibility as its key instrument, the policy interest rate, can be effectively manipulated with the resources available to the central bank. On the other hand, though facing both legal and implementation constraints in delivering timely actions, fiscal policy, when it is ready, can have considerable and concrete impacts on

the economy. Despite the time setback, fiscal firm commitment to support the economy is still key to economic recovery. Late is better than none.

Figure 5.1 Policy Coordination



In general, meaning during a more benign time, coordination remains a good strategy for the whole economy to reach a sustainable development with stability. In terms of coordination toward the same goal, the effects of this positive feedback loop likely multiply, given the overall healthier economic conditions and more vigorous confidence compared to during the crisis. Also, potential output is still an effective bridging between the fiscal and monetary policy. If fiscal policy can induce higher potential growth in a continued succession, the supply-side of the economy would always temporarily exceed demand, thus leaving more room for monetary policy to provide constant demand stimulus to catch up with the increase in production capacity. Given the boosts on both supply and demand sides, the economy would likely progress on a more balanced growth path, thereby leaving inflation pressure in check. If this could be sustained over an extended period, public inflation expectation will be firmly anchored, most likely at a low level. Low long-term interest rates and risk premiums will help improve fiscal position and sustainability, giving it more space in initiating the next round of this positive feedback loop.

Therefore, it is evident that no matter what the state of the economy is, during a crisis or a more usual time, increasing public investment is still the prevailing solution. However, this dominant strategy is subject to an array of uncertainties. All macroeconomic policy efforts, both individual and orchestrated, could be mostly compromised or even futile if the general public sentiments worsen. Psychological factors affect human behaviors, including economic decisions. Prolonged political uncertainty has probably been the most aggravating non-economic factor which directly delaying governments' disbursement schedules and indirectly depressing the whole economy as reflected in subdued Consumer Confidence Index and Business Sentiment Index since 2005. Perhaps, the prescription of coordination strategy may not limit only on the macroeconomic policy arena but also on the national level.

Appendix I:
Medium-term Assumptions on Actual Output Growth and Headline Inflation

The medium-term assumptions on actual output growth and headline inflation are important in the derivation of potential output path presented in Chapter II and used throughout our analysis on both fiscal and monetary policies. Table A1 lists the different scenarios of both actual output growth and the inflation from 2008 to 2014, measured in percentage change from the previous year. The figures for 2008 are from actual data. The baseline assumptions represent the most likely case of both variables, while the other four scenarios reflect the possibilities of deviations, which could be both positive (better and best cases) and negative (worse and worst cases).

Table A1: Medium-term Assumptions on Actual Output Growth and Headline Inflation

Scenario	%YoY	2008	2009	2010	2011	2012	2013	2014
Worst	Real GDP	2.6	-4.5	3.0	3.0	3.5	4.0	4.0
	CPI	5.5	-1.5	3.5	3.0	3.3	3.4	3.5
Worse	Real GDP	2.6	-4.2	3.5	3.5	4.2	5.0	5.0
	CPI	5.5	-1.2	4.0	3.4	3.7	3.8	3.8
Baseline	Real GDP	2.6	-3.8	4.0	4.0	5.0	6.0	6.0
	CPI	5.5	-0.8	4.5	3.8	4.0	4.2	4.1
Better	Real GDP	2.6	-3.4	4.5	4.5	5.7	6.5	6.5
	CPI	5.5	-0.5	5.0	4.4	4.7	4.8	4.8
Best	Real GDP	2.6	-3.0	5.0	5.0	6.5	7.0	7.0
	CPI	5.5	0.0	5.5	5.0	5.3	5.4	5.5

For the baseline assumptions, both actual output and inflation are based on 1) Bank of Thailand Macroeconomic Model (BOTMM) for the year 2009 and 2010 and 2) the IMF's World Economic Outlook (WEO) April 2009 projections for the trends of actual output and inflation from 2011 onwards. For the other four scenarios, the actual growth assumptions reflect the possible risks going forward both on the up- and down-sides, particularly the worst and the best scenarios mirrored the lowest and highest bounds of the BOTMM projections. Meanwhile the headline inflation assumptions are assigned to each case based partly on the actual growth assumptions to maintain consistency.

Appendix II:
Cyclical Adjustment of Primary Balance

To distinguish between structural/discretionary and cyclical components (*automatic stabilizers*) of the primary budget balance, we follow the OECD method described in Girouard and Andre (2005), with some modifications to compromise data unavailability. The cyclically-adjusted balance (ratio to GDP), *b**, is defined as:

$$b^* = [\sum_{i=1}^{4} T_i^* - G^* + X]/Y^*$$

where: G* = cyclically-adjusted current primary expenditures

T* = cyclically-adjusted component of the four types of revenues: personal income tax (PIT), corporate income tax (CIT), indirect tax (INT), and social security contribution (SSC)

X = non-tax revenues minus capital and net interest spending

Y* = potential output

The cyclically-adjusted components are calculated as follows:

$$\frac{T_i^*}{T_i} = \left(\frac{Y^*}{Y}\right)^{\varepsilon_y^{Ti}}$$

where Ti = actual tax revenues for the i-th category of tax

G = actual current primary expenditures

Y = actual output

ε_y^{Ti} = elasticity of the i-th tax category with respect to output gap

The elasticity of PIT with respect to output gap is calculated as the elasticity of PIT with respect to earnings multiplied by the elasticity of earnings (wage bills) with respect to output gap, where the former is measured by:

$$\varepsilon_{earning}^{PIT} = \frac{\left(\sum_{j=1}^{n} \gamma_i \cdot MA_i\right)}{\left(\sum_{j=1}^{n} \gamma_i \cdot AV_i\right)}$$

where γ_i =weight of income-level *i* in total personal income earnings, MAi = marginal income tax rate for income group *i* in the income distribution, and AV_i = average or effective income tax rate for income group *i*. The elasticity of wage bills with respect to output gap is estimated as β_1 in a simple regression as follows (using annual 1993-2008 data):

$$\ln(wagebills_t) = \beta_0 + \beta_1 \cdot Ygap_t + \beta_2 \cdot timetrend + \omega_t$$

Then, the elasticity of PIT is computed as:

$$\varepsilon_y^{PIT} = \varepsilon_{earning}^{PIT} \times \varepsilon_y^{WageBills}$$

The elasticity of SSC is calculated similarly to the elasticity of PIT, with the elasticity of SSC wrt earnings is estimated by regressing social security contributions on wage bills. Then multiply this with the elasticity of wage bills wrt output gap.

The elasticity of CIT with respect to output gap is computed as follows:

$$\varepsilon_y^{CIT} = \frac{\left[1-(1-P)\varepsilon_y^{Wagebills}\right]}{P}$$

where P = profit share in GDP. Implicit in this formula is the assumption that the elasticity of corporate taxes with respect to profits is unity.

Finally, **the elasticity of INT** is calculated as:

$$\varepsilon_y^{INT} = \varepsilon_C^{INT} \times \varepsilon_y^C$$

where C = consumer expenditure. The elasticity of consumer expenditure with respect to output gap is estimated by a respective regression, while we assume the elasticity of income taxes with respect to consumer expenditure to be equal to unity.

Summary of Elasticities

	PIT	CIT	Indirect	SSC	Current expenditure
Thailand	1.34	1.87	1.14	0.74	-0.02
OECD average	1.26	1.50	1.00	0.71	-0.10

Source: Girouard and Andre (2005) and authors' calculation.

The only cyclical component of public spending here is unemployment benefits which, according to the OECD methodology, depend on the ratio of structural to actual unemployment. Since these structural unemployment data are not readily available, we calculate (cyclical) unemployment spending with respect to output gap instead and assume the elasticity to be equal to the lower bound of the OECD countries (-0.021).

The cyclically-adjusted components then can be computed based on the equation above. And the cyclical components are the difference between actual values and the cyclically-adjusted values.

References

Ahuja, Ashvin, Suchot Piamchol, Bunnaree Punnarach, and Tientip Subhanij (2008), "Globalization and Monetary Effectiveness", *Bank of Thailand Symposium*, September 2008.

Alesina and Perotti (1997), "Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects", *IMF staff papers* Vol. 44, No. 2, pp.210-248, June.

Ardagna (2004), "Fiscal Stabilizations: When Do They Work and Why", *European Economic Review 48*, pp. 1047-1074.

Barry, Frank and Michael Devereux (2003), "Expansionary Fiscal Contraction: A Theoretical Exploration", *Journal of Macroeconomics*, No. 25, pp. 1-23.

Bernanke, Ben S. and Mark Gertler (1989), "Agency Costs, Net Worth, and Business Fluctuations," *American Economic Review*, vol. 79 (March), pp. 14-31.

Bernanke Ben S. and Mark Gertler (2001), "Should Central Banks Respond to Movements in Asset Prices?," American Economic Review, American Economic Association

Budina, Nina and van Wijnbergen, Sweder (2007), "Quantitative Approaches to Fiscal Sustainability Analysis A New World Bank Tool Applied to Turkey", *World Bank Policy Research Working Paper*, No.4169, March.

Burnside, Craig (2003), "Theoretical Prerequisites for Fiscal Sustainability Analysis"

Borio, Claudio and Andrew Filardo (2007), "Globalization and Inflation: New Cross-country Evidence on the Global Determinants of Domestic Inflation", *Bank for International Settlements Working Paper*, No 227, May.

Carlstrom, Charles and Timothy Fuerst (2008), "Explaining Apparent Changes in the Phillips Curve: Trend Inflation Isn't Constant", Economic Commentary Federal Reserve Bank of Cleveland, February.

Chai-anant, Chayawadee and Corrinne Ho (2008), "Understanding Asian Equity Flows, Market Returns and Exchange Rate", BIS Working Paper 245, February.

Chai-anant, Chayawadee, Runchana Pongsaparn and Kessarin Tansuwannarat (2008), "Role of Exchange Rate in Monetary Policy under Inflation Targeting: A Case Study for Thailand", *Bank of Thailand Symposium*, September 2008.

Chuenchoksan, Sra, Don Nakornthab and Surach Tanboon (2008), "Uncertainty in the Estimation of Potential Output and Implications for the Conduct of Monetary Policy", *The Bank of Thailand Symposium*, September.

Claus, Iris, Paul Conway and Alasdair Scott (2000), "The Output Gap: Measurement, Comparisons and Assessment", Research Paper No. 44, Reserve Bank of New Zealand, June.

Disayatat, Piti and Sukpinnarat Wongsinsirikul (2002), "Monetary Policy and the Transmission Mechanism in Thailand", Bank of Thailand Symposium, August.

Fuceri, Davide and Annabelle Mourougane (2009), "The Effect of Financial Crises on Potential Output", *OECD Working Papers*, No. 699

Gavin and Perotti (1997), Fiscal Policy in Latin America. *NBER Macroeconomics Annual.*

Girouard, Nathalie and Christophe Andre (2005), "Measuring Cyclically-Adjusted Budget Balances For OECD Countries", *OECD Economics Department Working Papers*, No. 434.

Khemangkkorn, Vararat, Roong Poshyananda Mallikamas and Pranee Sutthasri (2008), "Inflation Dynamics and Implications on Monetary Policy", *Bank of Thailand Symposium*, September.

Gavin and Perotti (1997), "Fiscal Policy in Latin America", *NBER Macroeconomics Annual.*

Gerlach, Stefan, Alberto Giovannini, Cedric Tille, and Jose Vinals (2009), "Are the Golden Years of Central Banking Over? The Crisis and the Challenges", Centre for Economic Policy Research, 17 July.

Giavazzi, Francesco and Marco Pagano (1996), "Can Severe Fiscal Adjustments Be Expansionary?", *NBER Macroeconomics Annual 1990*, pp. 75-111.

Heller, Peter S. (2005), "Understanding Fiscal Space", *IMF Policy Discussion Paper* No. 05/4 (March).

Hemming, Kell, and Mahfouz (2002), "The Effectiveness of Fiscal Policy in Stimulating Economic Activity—A Review of the Literature", *IMF Working Paper* No. 02/208.

Ilzetzki, Ethan and Carlos A. Vegh (2008), "Procyclical Fiscal Policy in Developing Countries: Truth or Fiction?", *NBER Working Paper* No. 14191.

Ilzetzki, Ethan (2007), "Rent-Seeking Distortions and Fiscal Procyclicality", Mimeo University of Maryland.

International Monetary Fund (2009), "The State of Public Finances: Outlook and Medium-Term Policies After the 2008 Crisis", Prepared by the Fiscal Affairs Department and approved by Carlo Cottarelli, March 6th.

International Monetary Fund (2009), "From Recession to Recovery: How Soon and How Strong", Chapter 3 in *World Economic Outlook* (April), pp. 103-138.

International Monetary Fund (2008), "Fiscal Policy as a Countercyclical Tool", Chapter 5 in *World Economic Outlook* (October), pp. 159-96.

Issing, Otmar (2009), "In Search of Monetary Stability: the Evolution of Monetary Policy", *Bank of International Settlements Working Papers* No. 273, March.

Koopman, Gert Jan and Istvan P. Szekely (2009), "The Financial Crisis and Potential Growth: Policy Challenges for Europe", *European Commission Economic Brief*, Issue 3, June.

Mendoza, Enrique G. and Marcelo Oviedo (2006), "Fiscal Policy and Macroeconomic Uncertainty in Developing Countries: The Tale of the Tormented Insurer", Mimeo University of Maryland and Iowa State University.

Frederic S. Mishkin, 2009. "Is Monetary Policy Effective During Financial Crises?," NBER Working Papers 14678, National Bureau of Economic Research

Nakornthab, Don, Prachuabmoh, Jittapa, Subhanij, Tientip and Kessarin Tansuwanarat (2009), "Challenges in the New Global Macroeconomic and Financial Environment", *Bank of Thailand Symposium*, September.

Nier, Erland (2009), "Financial Stability Frameworks and the Role of Central Banks: Lessons from the Crisis", *IMF Working Paper*, No. 09/70, April.

Oakley, David and Andrew Ward (2009), "Bankers Watch as Sweden Goes Negative", *Financial Times*, August 27, 2009

Premsin, Jariya and Jarupaan Vanichthanankul (2009), "Appropriateness of Fiscal Role in Stabilizing Economy", *Wide-angled Economics-Monetary Policy Group (WE-MPG)*, Bank of Thailand, August.

Pinto, Chucherd, and Manuichachai (2007), "Assessing Fiscal Vulnerability in Thailand: Fiscal Risks and Policy Implication", *BOT Discussion Paper* (in Thai).

Rattakul, Yuwawan (2003), "Thailand's Recent Public Debt Issues", *Bank of International Settlements Papers*, No. 20.

Raun, Morten and Martin Sola (2004), "Asymmetric Effects of Monetary Policy in the United States", Federal Reserve Bank of St. Louis, September/October.

Spilimbergo, Symansky, and Schindler (2009), "Fiscal Multipliers", IMF Staff Position Note No. 09/11 (May 20, 2009).

Talvi, Ernesto and Carlos A. Vegh (2005), "Tax Base Variability and Procyclical Fiscal Policy in Developing Countries", *Journal of Development Economics* 78, pp. 156-190.

Walsh, Carl (2009), "Using Monetary Policy to Stabilize Economic Activity", Jackson Hole Symposium on *Financial Stability and Macroeconomic Policy*, August 22nd.

White, William R. (2009), 'Should Monetary Policy "Lean or Clean"?", Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 34, August 2009.