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Final Report

Contributing to Efforts for Greater Financial Markets Stability in APEC Economies

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Executive Summary

One of APEC's key areas of cooperation is to provide supporting for the ongoing development of financial markets among economies in the region. The APEC Finance Ministers' Process (FMP) for example, has through capacity building, applied research and policy dialogues focused on strengthening institutions, regulatory frameworks, government policies and market conditions has contributed substantially to the creation of stronger financial systems within the region. To that end, the objectives of this project are set to directly respond to APEC priorities on contributing to the development and longer-term integration of the financial sector in the region.

The purpose of this project is to contribute to ongoing efforts tailored toward promoting greater financial markets stability and integration in APEC economies, achieved by: 1) undertaking research to determine the conditions that foster financial market stability to enhance integration of financial markets across the region; and 2) drawing on the findings of the research to generate policy recommendations that are intended to address the impediments to financial markets stability and integration.

To help in focusing the research effort, the project used four APEC economies (Australia; Indonesia; Mexico; and United States) as case studies. Data collected from the sample economies served as sample indicators which were used in determining the degree of financial markets stability and integration in the region. Two of the four economies represented developed economies (Australia and the United States), while the other two (Indonesia and Mexico), represented developing economies. The selection of the samples was aimed at providing a balanced representation of APEC member economies by geographical location which is Asia, Australia, and America.

Secondary data analysis and field studies conducted on the four APEC economies have generated interesting findings. The findings are classified into five general aspects: 1) the impact of the global financial crisis; 2) important policies implemented to deal with the global financial crisis; 3) sources of financial market vulnerability; 4) factors supporting financial market stability; and 5) policies that should be implemented to ensure financial market stability

We find some common features of the impact of the global financial crisis on the four sample economies, which are: slower economic growth that reached its bottom in 2009; an upsurge in unemployment (except for Indonesia); depreciation in of the local currency; a decrease in capital market composite index; decline in exports and imports; an increase in interest spread and volatility in the financial market; and decline in bank asset quality.

Although there were differences in policies tailored toward overcoming the global financial crisis in general, the four economies studied implemented policies such as: fiscal stimulus program, ease monetary policies, and increasing deposit insurance guarantee (Indonesia and United States). Australia has no deposit guarantee scheme prior to the crisis, while amount of deposit guaranteed in Mexico was not different before and after the crisis.

The source of financial market vulnerability differs among the four economies. United States sources are indebted household sector that needs more deleveraging, large budget deficit and high government debt, and large current account deficit. Australia still faces financial vulnerability which is attributable to source of funds for banks that is highly dominated by

offshore funds, high household debt, and high housing prices. Large short term capital inflows as well as narrow and shallow financial market have been potential financial market vulnerability in Indonesia, while sources of Mexico's financial vulnerability, among other things, are attributable to high concentration of share issuers, counterparty risks, and derivative transactions between non-financial institutions and financial institutions abroad, of which domestic authorities had no record.

The financial markets in Australia, Indonesia and Mexico were not as severely affected by the recent global financial crisis. Several factors which underlie the resilience of a financial market in facing turbulences in the three economies are: successful major financial reforms which had been implemented laid the strong foundation for a resilient financial market that withstood shocks; good coordination among regulators; simple and conservative financial market; and the economies benefited from high commodities price.

For the fifth aspect, we find that, in general, maintaining financial stability requires the existence of strong regulatory authorities and regulations in financial markets which follow developments in financial markets. Nonetheless, each economy is unique, which means that policies that are needed to ensure financial stability may vary and differ from one economy to the other.

There is little doubt that lessons learned from the four APEC economies can be replicated to other APEC economies. On level of openness, based on the analysis of the level of financial openness, it is not easy to reach the conclusion that developing APEC economies are more open that developed ones. However, on intra-APEC trade, study findings indicate an increasing trend of intra-regional trade among APEC member economies compared with non APEC member economies. There is also a rising trend of portfolio investments among APEC member economies. On the determinants of financial market instability within the four sample economies, analysis findings point to high financial market integration in APEC region. This implies that a shock triggered in the stock market composite index in one economy can influence stock market indices in the other economies.

The findings in this study attest to the fact that the increasingly complex, dynamic, and integrated financial markets of APEC region are making the task of maintaining financial markets stability ever more difficult. However, lessons learned from experiences of causes, and management of financial crises, a number of policy actions can be taken in an economy capacity or regional framework to strengthen financial market stability in APEC. Such measures are: 1) reforming financial markets to foster the emergence of a healthy, strong, and efficient markets; 2) applying better management of the development of financial markets to ensure that regulators have the necessary capacity to supervise them; 3) obliging the regulatory framework to follow market developments; 4) regulating and supervising short-term capital flows properly a measure that should minimize financial markets volatility; 5) considering the establishment of a macro prudential supervision institution; 6) reducing financial markets volatility through enhancing investor protection or deposit insurance; 7) applying international standards for best practices; 8) establishing a trans boundary agreement on maintaining financial market stability across economies to minimize the volatility of the region's financial markets; 9) establishing an early warning system in every financial market in the APEC region; and 10) applying prudent fiscal policies and maintaining strong international reserves.

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I. Background

I.1 Introduction

High financial instability tends to trigger financial crises which often culminate in economic crises. When a financial crisis occurs, an economy often suffers not only great financial loss but also struggles to recover from the crisis. When the Asian Financial Crisis struck, several economies including APEC members embarked on reforming their banking sectors and financial markets. They also initiated many efforts such as increasing deregulation of the financial system, opening financial services to foreign institutions, and liberalizing capital accounts.

Furthermore, following the collapse of Lehman Brothers in the United States, a global financial crisis spread all over the world. Consequently, many APEC economies experienced a sudden reversal of capital flow, which put substantial pressure on their currencies and stock markets. As capital flow was disrupted, cross border trade activity was also disrupted significantly.

Even though the global financial crisis is to a large under now under control, the experience of the financial meltdown constituted a stark reminder to most APEC economies of the vital importance of having a regional collaboration. There is an urgent need for APEC economies to strengthen their financial markets as strong and healthy financial markets are essential to economic stability and resilience. Supporting the ongoing development on financial market has been one of APEC's key areas of cooperation. Among other things, through capacity building the Finance Ministers' Process (FMP) has applied research and policy dialogues focused on strengthening institutions, regulatory frameworks, government policies and market conditions that contribute to creating stronger financial systems within the region.

Besides, it is also crucial for APEC economies to promote further financial integration within the region in order to reduce their vulnerability to financial contagion. Greater financial integration within APEC economies is more likely to help create more stable financial market and also help rebalance the global economy, thus benefit both the region and the world.

The research undertaken in this project is expected to identify options and strategies on how investment rules that hamper investors' participation in financial markets can be removed, how regulatory frameworks can further be strengthened, and how enforcement processes to encourage better corporate governance and transparency in financial markets can be more effectively implemented.

In doing so, it was deemed necessary to carry out an analysis of the latest situation and trajectory of financial market stability among APEC economies. Four APEC member economies (Australia; Indonesia; Mexico; and United States) are chosen to illustrate APEC financial market in general. The four economies represent developed economies (Australia and United States) and developing economies (Indonesia and Mexico). The selection of the samples is also based on their geographical location which is Asia, Australia, and America. In addition, the United States is chosen because it has one of the most deregulated and liberalized financial markets within APEC region; whereas Australia is included because of its resilient capital market and financial system. Moreover, Indonesia's experience drawn from the devastating Asian economic crisis in 1997,which crumpled its financial market and banking industry, has given the economy some lessons. Hence, Indonesia is one of the

economies within APEC that suffered least from the global crisis occurred in 2008. Mexico is included because its proximity to the United States and a developing economy in America. The research provides recommendations for relevant economies authorities, as well as makes a significant contribution toward strengthen financial market stability within APEC region.

The data gathered from these economies were as sample indicators which were used in determining the degree of financial markets stability and integration in the region. The primary data from the sample economies took the form of first-hand information on financial markets stability, expert and practitioners' opinion on the determinants, degree of financial markets stability, and impact on economic activities in each economy visited, best practices of financial markets.

A report of the general findings will be made and disseminated to the beneficiaries including various APEC groups relevant to financial stability. The final report will be in the form of hard publication as well as soft publication in CDs and file posting in Center for Asia Pacific Studies (CAPS) website and also file posting in APEC website is expected. Meanwhile a report summary will be published and disseminated to associations of bankers, stock market operators, financial markets regulators, and entrepreneurs associations.

This research has been conducted over an eight-month period commencing in April 2010 and is culminated into a two-day workshop in Yogyakarta on 22-23 May 2011 which serves the propose of disseminating research findings and the drafting of recommendations to Senior Finance Officials Meeting (SFOM).

I.2 Theories on Financial Market Stability

Financial markets are mechanisms, which allow people to sell and buy financial securities and other fungible items of value at low transaction costs. To that end, financial markets serve several functions, which include but not limited to facilitate the raising of capital, transfer and sharing of risk, liquidity, efficiency by bridging surplus spending units (savers) to deficit spending units (individuals, companies, governments) who need more funds in excess of their incomes), thereby reducing transaction cost), information collection and analysis which market participants use in valuing financial instruments, and price determination of financial instruments, and facilitate international trade (Besley and Brigham 2009).

In their paper, Gadanecz and Jayaram (2008) cites a definition of financial market stability from European Central Bank (2007) which is "*a condition in which the financial system – comprising financial intermediaries, markets and market infrastructure – is capable of withstanding shocks and the unraveling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities*"

Financial markets comprise stock markets, which provide financing through the issuance of shares or common stock, and enable the subsequent trading thereof.; bond markets, which provide financing through the issuance of bonds, and enable the subsequent trading thereof; money markets, which provide short term debt financing and investment; derivatives markets, which provide instruments for the management of financial risk; futures markets, which provide standardized forward contracts for trading products at some future date;

insurance markets, which facilitate the redistribution of various risks; and foreign exchange markets, which facilitate the trading of foreign exchange.

I.2.1 Importance of Financial Stability

Financial stability, according to Weber (2008:1) "describes a financial system's ability to efficiently allocate resources, reliably assess and tackle risks, and securely settlements and securities transactions," features which stable financial system have. Financial stability ensures that financial systems are able to reduce uncertainty, contribute to the growth and development of the real economy, which in turn fosters higher economic prosperity. Financial stability characterizes a condition under which a financial system is "robust in facing a wide range of adverse circumstances." Meanwhile, Schinasi (2004) defines the existence of financial stability as conditions whereby "a financial system is in a range of stability whenever it is capable of facilitating (rather than impeding) the performance of an economy, and of dissipating financial imbalances that arise endogenously or as a result of significant adverse and unanticipated events." In other words, condition of financial stability engenders the ability of the financial system to allocate resources efficiently, over time and space, and engender the effective performance of other economic sectors; assessment, pricing, allocation and management of financial risk; has the ability to carry out such functions even during conditions of economic distress, owing to the existence of self-corrective mechanisms.

Crocket (2000), without giving an explicit definition of financial stability, looks at what it achieves, hence considers what it does. Financial stability has two dimensions, which are macro prudence and micro-prudence. While the former reduces the cost of financial distress on the economy, in other words systemic risk, which affects the entire economy, the latter has to do with limiting the likelihood of failure of individual financial institutions. Based on the three perspectives of financial stability, it becomes evident that financial stability exists when the financial system is resilient in allocating resources efficiently, and ensures effective assessment, pricing, and tackling financial risks, during normal conditions as well as times of financial distress.

In the wake of the 2008 financial crisis, which among other things provided compelling evidence of strong interdependence among global financial markets, existing mechanisms, which had hitherto been considered sufficient to foster financial stability having proved incapable of preventing one of the most severe financial crises in several decades, came under serious review. The review was aimed at strengthening and widening the reach and scope of the mandate of the financial stability forum, to enhance its ability to foster international financial stability. In light of that the financial stability forum, formed in 1999 was transformed into the financial stability board by G 20 members, which has since 2009 become responsible for fostering global financial stability through encouraging the tackling of "vulnerabilities and developing and implementing strong regulatory, supervisory and other policies in the interest of financial stability (Bank for International Settlements and International Monetary Fund 1997)." This is achieved by among other ways, requiring members to conduct assessment of their financial system to identify potential vulnerabilities in order to induce taking remedial measures as soon as possible, enhance openness and transparency in their respective financial sectors, improve micro prudence as well as macro prudence, promote cooperation, coordination and exchange of information among regulatory and supervisory authorities at both the national and cross trans boundary level, provide monitoring and reporting services of developments in financial markets and accord advise on regulatory implications to national authorities, assisting in benchmarking best

practices in regulatory standards, liaise with international standard setting bodies in making policy reviews, setting required standards in accordance with priorities as well as addressing data and information gaps which if not resolved would lead to regulatory arbitrage. Growing interdependency of financial institutions within an economy on one hand and with other financial institutions in other economies in one region as well as beyond, has increased the importance of exploring ways joint action should be made by national authorities in collaboration with FSB. This is because in an interdependent financial markets setting, ensuring financial stability in one economy is no longer enough.

Collaboration in the formulation of guidelines on information disclosure and transparency requirements, which financial institutions must fulfill; risk management practices that are robust enough to deal with any potential financial and economic risk; the development of regulatory and supervisory regimes that stringent enough but at the same time do promote responsible risk taking; , and in developing early warning systems to make the process of identifying financial risk vulnerabilities at the micro and macro level easier and quicker, which in turn if executed would trigger remedial actions soon enough to avert costly bailouts. Financial sector assessment programs (FSAPs), which constitute a peer review of the financial sector of an FSB member economy, is one vital early warning system, which helps in identifying the state of financial sector stability, potential sources of vulnerability, and best way forward to address them. Moreover, comparison of FSAPs over time, and with those produced for other economies, can generate vital information on the direction of financial sector stability, whether or not one financial sector is deviating from the general trajectory and if so the need to establish the underlying factors of such behavior, sharing and exchange of best practices in fostering financial stability.

I.2.2 Sources of Financial Market Instability

Financial market stability was hampered by microeconomic and institutional failings, which included lax management in financial institutions manifested in the laxity in internal controls, insider dealing, lending policy, and outright fraud (BIS and IMF 1997). High moral hazard as investors lacked incentives to act prudently in supervising managers, leading the latter to execute policies that are not commensurate with sound financial practices. Weak legal framework fostered supervisory forbearance, and ended up creating investor uncertainty.

Equally important was inadequate oversight over management investment and financing decisions by investors, shareholders and supervisors, promoted excess risk taking by managers, which was compounded by compensation arrangements that were linked to short term firm performance rather than to the level of management contribution to long term firm value. Doubtless, such contractual arrangements enhanced benefits managers derived from entrenching their positions, which was promoted investment and financing decisions that deviated from interests of shareholders and investors, to those that are self-serving to management. Lack of sufficient information disclosure on the performance of firms, increased the gap between information management knew and utilized in decision making, from that investors and shareholders had. Based on inadequate information and data on firm performance, decisions made by investors, shareholders, and financial markets were did not reflect fair value of firms and the level of inherent and counterparty risk embodied in its financing and investment programs.

Laxity in regulatory and supervisory regimes was compounded by insufficiently trained, poorly numbered, poorly equipped with information and technology compared with financial

institutions under their jurisdictions. Thus, under such conditions, there is little doubt that functions of regulators and supervisors were undermined. The lack of coordination among regulators and supervisors of different financial institutions in a single economy and across economies mean that despite the interrelationships and interdependence of business operations, financing and investments, different financial institutions were fell under different regimes. In other words, the regulatory and supervisory regime failed to develop needed coordination and collaboration in dealing with an increasingly complex interconnected financial sector and non-financial sector.

In any case, significant distortions in the real economy under conditions of inadequately diversified financial markets and real economy led to highly unstable macroeconomic environment which aggravated the susceptibility of economies to sudden asset price corrections. At the trans boundary level, regulatory arbitrage fostered risk taking activities, which national authorities found hard to determine either because the regulatory regime fell short or simply differences in regulations that applied among economies were to the benefit of risk taking companies at the expense of regulatory and supervisory regimes.

Lack of a system-wide regulatory and supervisory regime that failed to take account of interactions between the financial system and the macro economy meant that macroeconomic policies implemented ended up triggering the beginning or even aggravating financial instability in the financial sector.

Gadanecz and Jayaram (2008) compile the measures of financial market stability commonly used in extant literature to include, among others:

1. The *real sector:* GDP growth, the fiscal position of the government and inflation. The ability of the economy to create wealth and its risk of overheating GDP growth is reflected on GDP growth. The fiscal position of the government represents its ability to find financing for its expenses above its revenue (and the associated vulnerability of the economy to the unavailability of financing). Inflation may indicate structural problems in the economy, and public dissatisfaction with it may in turn lead to political instability.
2. The *corporate sector's* riskiness: its leverage and expense ratios, its net foreign exchange exposure to equity and the number of applications for protection against creditors.
3. The *household sector*'s health can be measured through its net assets (assets minus liabilities) and net disposable income (earnings minus consumption minus debt service and principal payments). Net assets and net disposable earnings can measure households' ability to weather (unexpected) downturns.
4. The *external sector:* real exchange rates, foreign exchange reserves, the current account, capital flows and maturity/currency mismatches.
5. The *financial sector:* monetary aggregates, real interest rates, risk measures for the banking sector, banks' capital and liquidity ratios, the quality of their loan book, standalone credit ratings and the concentration/systemic focus of their lending activities. All these proxies can be reflective of problems in the banking or financial sector and, if a crisis occurs, they can gauge the cost of such a crisis to the real economy.
6. Equity indices, corporate spread, liquidity premia and volatility. High levels of risk spreads can indicate a loss of investors' risk desire and possibly financing problems for the rest of the economy. Liquidity disruptions may be a materialization of the market's ability to efficiently allocate surplus funds to investment opportunities within the economy.

I.2.3 Enhancing Financial Market Stability

Several key elements underpin a robust financial system which is characterized by an institutional setting and financial infrastructure that complies with prudential principles of sound risk based capital. Capital buffers should be in place to ensure that financial institutions have sufficient capital to fall back on in the event of a major financial crisis that forces them to make huge charge offs, without affecting the operations of other financial institutions (Financial Stability Board 2011). The key elements, among others include:

I.2.3.1 Sound, Comprehensive Regulatory and Supervisory Regime

A robust financial system requires a strong, sound, comprehensive regulatory and supervisory regime, which if in place supports and complements market discipline. Equally important, the regulatory and supervisory authorities should be entrusted with powers to issue and withdraw operating licenses to financial institutions, apply prudential regulations, effect consolidated supervision, seek and obtain information, which they verify based on objective criteria, and have the ability and capacity to make corrective action. Having powers to execute their functions is not enough if regulatory and supervisory authorities lack sufficient resources to cooperate and exchange information with other authorities, both in the domestic economy and abroad. Thus, there is need for sufficient financial, manpower and other relevant resources to ensure consolidated supervision of financial institutions thereby averting the danger of regulatory.

I.2.3.2 Sound, Complementary Fiscal, Monetary, and Prudential Policies

Macroeconomic policies should foster firm financial stability by being countercyclical (during the boom measures should be taken to induce financial institutions build up capital buffers, which are then drawn down during crisis times). That way, macroeconomic policies (Fiscal and monetary policies) will be in line with not only short term prudential policies but also support long term financial stability. This is because the synchronization of fiscal, monetary, and prudential policies will reduce the tendency of financial institutions to generate excess risk through excess risk taking in financing and investment, which only become evident during the bust (Hannoun 2010).

I.2.3.3 Sound Risk Management Programs

Risk management programs that reflect the level and nature and financial risk inherent in a firm's financing and investment, improving financial reporting standards through better information disclosure of both on balance and off balance sheet items, adopting internationally accepted accounting practices, putting in place management compensation schemes that reward management when firm performance is high but also punish management (share the loss) during times of poor firm performance. Legal certainty should ensurethat the contents of contracts are fully respected by all parties at all time, leading to high confidence in the financial system. Meanwhile, the existence of a robust payments system and sound settlement arrangements backed by certain legal environment and corporate governance regime, by reducing moral hazard, contributes to the creation of a sufficiently competitive and diversified financial market characterized by the development and using of a full range of financial instruments, which promote financial markets resilience.

I.2.3.4 Openness, Transparency and Legal Certainty

Equally important for financial stability is the existence of functioning markets which enable company stakeholders to conduct requisite oversight over actions of financial institutions. This calls for the existence of high openness and transparency of investment, operations, financing arrangements, including potential contingent claims. This the more so in financial systems such as the US which had a large shadow banking system and OTC derivatives market. To avert recurrence of the 2008 financial crisis, there is need to increase the transparency and disclosure of OTC derivatives markets through increasing the reach of regulation and supervision of the transactions, oblige regular reporting of positions, establishing central clearance and repository, which will increase the ease for fair value determination, risk assessment, and identification of financial abuse and fraud.

I.2.3.5 Strengthening Risk Management Programs

The presence of a risk management regime, which fosters stringent internal management and risk control, and demands the accountability of all stakeholders and management is considered important for financial stability. Sustaining financial stability also calls for the development of a diversified financial sector in terms of the financial institutions that comprise it, financial products that meet the diverse demands of consumers of financial products, conducting activities in accordance with internationally acceptable principles and standards, competitive, and managed by professional and highly skilled management.

In light with the foregoing, FSB in its capacity as the global body charged with coordinating at the internationallevel the work of national financial authorities and international standard setting bodies (SSBs) in developing and promoting the implementation of effectiveregulatory, supervisory and other financial sector policies has identified various priority areas needed to achieve sustainable financial stability. Such priority areas encompass i)implementing of reforms to bank capital and liquidity standards; ii)reforming compensation practices; iii) improving over the counter derivative markets; iv) addressing systematically important financial institutions; v) convergence of international standards; v) strengthening adherence to accounting standards; vi) developing macro prudential policy frameworks and tools; vii) addressing data gap problem; viii) hedge funds regulations; ix) enhanced regulatory oversight over credit rating agencies and reducing reliance on their services; x) supervisory colleges; xi) enhancing market integrity issues; xii) revitalization of securitization on sound basis; xiii) improving consumer protection (Financial Stability Board 2010a; 2011).

I.2.4 World Financial Market Stability Outlook

The International Monetary Fund reported in the October 2009 Global Financial Stability Report (GFSR) stated that emerging economies performed much better than expected during the global financial turmoil. Learned from their experiences, emerging economies have improved their policy frameworks. Consequently, financial market sentiment and risk appetite have rebounded, banks have raised capital and wholesale funding markets have reopened, emerging market risks have also eased, triggered by strong public policies. Central banks responded to the crisis so quickly with exceptionally large interest rate cuts as well as unconventional measures to inject liquidity and sustain credit. Besides, governments have deliberately initiated fiscal stimulus programs, while assessing their banks with stress tests and supporting them with guarantees and capital injections (International Monetary Fund 2009a).

Even though financial market has rebounded, vulnerabilities still remain high especially in parts of emerging Europe. The October 2009 GFSR showed that "Western European banks appear able to absorb deteriorating credit conditions in emerging Europe, but may lack sufficient capital to support a recovery in the region." The GFSR also stated that Asia and Latin America have benefited most from the stabilization of core markets and a recovery in portfolio inflows, and the risks in those emerging markets have declined because of strong policy measures implemented. Although international flows into emerging market of Asia and Latin America debt have recovered, emerging Europe have been distorted toward higher quality borrowers, causing many corporate facing rollover risks.

Therefore, the October 2009 GFSR suggested that financial policies has to continue fostering an organized bank's adjustments, corporate and household balance sheets as well as extending agreements to maintain sustainable cross border bank funding channel. Additionally, the GFSR also stated that a better governed and more transparent regulation is essential in order to bolster confidence in financial system. An understandable approach also needs to be formulated so that the private sector can plan appropriately. Regulatory environment reformed is necessary so that the probability of a recurrence of a systemic crisis can be reduced significantly. Establishing a comprehensive macro prudential framework to global policymaking is also essential to restore market discipline and ensure that the benefits of financial integration are protected. The GFSR also stated that cooperation and consistency in the policy field must extend across borders. Such framework is important to ensure that financial institution that is global in life do not become national death.

In 2010, the global financial market showed some progresses. The global financial market had been stable. However, the Global Financial Stability Report April 2010reported that there were still some sources of financial vulnerabilities. Investors concerned over the sustainability of governments' balance sheets emanated from the deterioration of fiscal balances and the rapid accumulation of public debt. Investors would require higher yields to compensate for potential future risks. This might lead to short-term strains in funding markets and might have negative implications for a recovery of private credit.

Banking system health had been improving. However, banks still faced challenges: they had to refinance a large amount of short-term funding in 2010 and 2011; they had to provide more and higher-quality capital to satisfy investors in anticipation of upcoming more strict regulation; and not all losses have been written down to date. Under the environment, credit demand was weak and credit supply was constrained. As a result, households and corporate needed to lessen their debt levels. Despite the fact of low demand, sovereign financing might increase which could contribute to upward pressure on interest rates and increase funding pressures for banks. Small and medium-sized enterprises might be forced to reduce their credit. Thus, in some economies, policy measures to address supply constraints might still be needed.

In contrast, there was resurgence of capital flows in some emerging market economies. Some major advanced economies experienced strong recoveries, expectations of appreciating currencies, plentiful liquidity, and low interest rates. This led to capital inflows to Asia (excluding Japan) and Latin America. However, vulnerabilities were increasing emanated from concerns over the potential for inflationary pressures and asset price bubbles. Thus, in response to the surge in flows, policymakers in receiving economies are encouraged to use a wide range of policy options, namely macroeconomic policies and prudential regulations. If

these policy measures are not enough and the capital flows are likely to be temporary, they can consider the use of capital controls.

The financial vulnerabilities need to be addressed well by the authority. Some policies need to be implemented such as:

- Applying credible medium-term fiscal consolidation plans that command public support to address sovereign risks. A transparent consolidation plans should be made and emergency measures should be in place if the degradation of public finances is greater than expected. Public confidence will rise if they are confident that the fiscal consolidation process is consistent with long-term growth.
- Policymakers to ensure fair competition consistent with a well-functioning and safe banking system to address a number of weak banks to ensure a smooth exit from the extraordinary central bank support of funding and liquidity.
- Regulators to apply additional tools explicitly tied to their mandate to monitor systemic risks. Such tools could include systemic-risk-based capital surcharges, levies on institutions in ways directly related to their contribution to systemic risk, or perhaps even limiting the size of certain business activities.
- Policymakers to deal with the capacity of too-important-to-fail institutions, so that the institutions not to harm the financial system and to generate costs for the public sector and its taxpayers. There will be a need for some combination of ex ante preventive measures as well as improved ex post resolution mechanisms. Resolving the present regulatory uncertainty will help financial institutions better plan and adapt their business strategies.
- There is a need of a unified regulator, one that oversees liquidity and solvency issues. This will remove some of the conflicting incentives that result from the separation of these powers, but nonetheless if it is mandated to oversee systemic risks it would still be softer on systemically important institutions than on those that are not.
- A need to beef up the infrastructure underling financial markets to make them more resilient to the distress of individual financial institutions. One of the major initiatives is to move over-the-counter (OTC) derivatives contracts to central counterparties (CCPs) for clearing.

The IMF Global Financial Stability Report October 2010 noted that some economies were still facing vulnerabilities even though many policies had been taken by the governments. The level of vulnerabilities was different among economies.

- European Union
  Crisis in some euro areas triggered by existing sovereign debt sustainability challenges, combined with concentrated short-term debt rollovers and an undiversified investor base which spilled over to the banking sector and then caused shrinking credit, slower growth, and weakening balance sheets. The governments have put in place national and supranational backstops to ensure that markets remain open. Some policies taken: (1) provisioning detailed information on bank balance sheets; (2) coordinated support programs; and (3) the announcement of ambitious fiscal reforms in economies facing the greatest funding difficulties
- The United States
  Financial stability had been improving, but there were vulnerabilities remain in the banking system. Despite banks' substantial amount of capital and manageable demands, they might need some rising of additional capital to reverse recent

deleveraging trends and possibly to comply with US regulatory reforms. Additional challenges emanated from weakness in the real estate sector.

- Japan
  Japan had a stable domestic savings base and healthy current account surplus that reduced the need to attract external funding sources. However, over time, the factors presently supporting the Japanese bond market, namely high private savings, home bias, and the lack of alternatives to yen-denominated assets, were expected to erode as the population ages and the workforce declines.
- Emerging market economies
  Emerging economies have proven could withstand the sovereign and banking strains in advanced economies. Most of the economies had continued to enjoy access to international capital markets. Cross-border spillover effects were mostly confined to regions with significant economic and financial links to the Euro area. Under the situation of current slowdown in growth in advanced economies, the economies, in general, had become increasingly attractive to investors because of their relatively sound fundamentals and stronger growth potential. This shift in global asset allocation was likely to increase as long as this relative difference persists. However, a potential buildup of macro-financial risks emanating from strong capital inflows, including from excess demand in local markets and possible increased volatility, remained a concern for the economies.

The October 2010 GFSR also noted that, in general, policymakers in many advanced economies would need to confront the interactions created by slow growth, rising sovereign indebtedness, and still-fragile financial institutions. Moreover, the foundations supporting the new financial regulatory regime need to be put into place. The policy makers should: 1) address legacy problems in the banking system; 2) strengthen the fundamentals of sovereign balance sheets; and 3) clarify and specify regulatory reforms. A special note for the emerging markets was to supplement traditional macroeconomic policies with macro-prudential measures, in some cases, as they might not be fully adequate to meet the inflation pressures or asset bubbles. Moreover, in order to have the capacity to absorb and safely and efficiently intermediate higher volumes of capital flows, emerging markets should continue to pursue policies aimed at encouraging the development of local financial systems.

I.3 Objectives

The research project aims at:

1. explaining the current situation of macroeconomic and financial market in Australia, Indonesia, Mexico and the US,
2. determining the conditions that encourage financial market stability in Australia, Indonesia, Mexico and the US,
3. determining factors that support market integration across APEC region,
4. formulating policy recommendation to overcome the obstacle in realizing financial market stability and integration within APEC region.

I.4 The Significance and Policy Relevance of the Research

The research findings are going to have a strong relevance to promoting Australia, Indonesia, Mexico and the US financial market stability as well as integration in APEC economies. The expectation of the research output is to acquire a better understanding of financial market stability and the need of financial integration.

I.5 Outputs of the Research

Based on the analyses, outputs of this project are:

- finding the degree of financial integration among APEC economies and factors which support the financial stability;
- recommendation of best practices in maintaining financial market stability;
- a workshop to form recommendation draft to SFOM by discussing project results and accommodating inputs from all related stakeholders.

II. Economic and Financial Market Stability in APEC Economies

II.1 Economic and Financial Market Condition

II.1.1 Economic Cooperation among APEC Member Economies

APEC was established in 1989, in response to the growing interdependence among the Asia Pacific economies. Beginning as an informal dialogue group with limited participations, APEC has since become the premier forum for promoting trade and investment liberalization in the Asia Pacific region. Its goal is to advance the Asia Pacific economic dynamism and sense of community as reflected in Bogor Goals.

Economic cooperation in APEC region is becoming more important. Even though economic crises come and go, the intensity of goods, services, and capital flows in APEC region is increasing. These flows are predicted to increase considering that the global crisis has been overcome.

The APEC member economies are very diverse with respect to among other factors, the size of their population, GDPs, and levels of economic development. With 2.735 billion people, the twenty-one APEC member economies represented 40 percent of the world's population of 6.9 billion in 210. However, the size of population varies starkly from over 1.3 billion people in PRC to 0.4 million people in Brunei Darussalam. PRC's population itself makes up 49 percent of the total population of APEC's region (Table 2.1).

Table 2.1: Total Population, GDP, and GDP per Capita of APEC Members in 2010

Member Economy	Population (Million)	GDP at current prices (US$ Billions)	GDP per capita at current prices (US$)
Australia	22.4	1,236	55,160
Brunei Darussalam	0.4	13	31,239
Canada	34.1	1,574.1	46,215
Chile	17.2	203.3	11,828
People's Republic of China	1,341.4	5,878.3	4,382
Hong Kong, China	7.1	225	31,591
Indonesia	234.4	706.7	3,015
Japan	127.5	5,458.9	42,820
Republic of Korea	48.9	1,007.1	20,591
Malaysia	28.3	238	8,423
Mexico	108.6	1,039.1	9,566
New Zealand	4.4	140.4	32,145
Papua New Guinea	6.5	9.7	1,488
Peru	29.6	152.8	5,172
Philippines	94	188.7	2,007
The Russian Federation	140.4	1,465.1	10,437
Singapore	5.2	222.7	43,117
Chinese Taipei	23.3	430.6	18,458
Thailand	63.9	318.9	4,992
The United States	310	14,657.8	47,284
Viet Nam	88.3	103.6	1,174

Source: Australian Government Department of Foreign Affairs and Trade 2011a

High diversity also exists in terms of GDP. The combined GDP of the APEC member economies was over US$ 30 trillion in 2010, approximately 56 percent of total world's income. With US$ 14.7 trillion, the GDP of the United States is the largest one among other economies, accounted for 42% of APEC GDP in 2010; followed by PRC and Japan, recorded

at US$ 5.9 trillion and US$ 5.5 trillion respectively. On the contrary, Papua New Guinea's GDP was recorded at US$ 9.7 billion in 2010, the lowest among other economies.

Besides, the level of economic development also varied considerably among APEC economies. In 2009, the highest per capita GDP, measured in market exchange rates, was the Australia's, recorded at US$ 55,160, and whereas the lowest per capita GDP was Viet Nam's, recorded at US$ 1,174. Generally, between 2005 and 2007, APEC members experienced robust economic growth supported by strong domestic and external demands. However, the subprime mortgage debacle which erupted in the US in 2007 has decelerated the APEC members' economy.

With respect to economic growth, US economic growth showed a downward trend from 3.1 percent in 2005 to – 2.6 percent in 2009. Besides, Mexico also experienced the worst recession, as it suffered an economic contraction of the magnitude of -6.1 percent in 2009. The Mexican economy shows high susceptibility to developments that affect the economy of the US in part due to its dependence on the United States as its market. Similarly, Australia's and Indonesia's economy growth also registered slower but still positive growth. The Australian economy shrunk to 1.4 percent in 2009 because of a significant decrease in demand for mining resources and global economic crisis. Meanwhile, the Indonesian economic growth slowed down to 4.6 percent in 2009 as the global slowdown severely affected export and manufacturing (Asian Development Bank 2009).

Furthermore, prior to the crisis, PRC, Peru, and Viet Nam recorded the highest average economic growth rates of 10.6 percent, 7.8 percent and 7.3 percent, respectively. However, as a consequence of the financial crisis, the PRC's growth decreased from 14.2 percent in 2007 to 9.2 percent in 2009; whereas Viet Nam's economy shrunk to 5.3 percent in 2009, the slowest since 1999. A continued decline in oil production contributed to the slowdown of Viet Nam's growth (Asian Development Bank 2009). Similarly, Peru's economy growth also slowed down sharply as a result of the impact of global recession, registering 0.9 percent in 2009[1].

APEC economies had a turbulent year in 2008, as the impact of the global recession intensified. Some economies such as Papua New Guinea, the Russian Federation, and Viet Nam, experienced high inflation in 2008, which was attributable to the steep rise in world commodity prices. According to the Asian Development Bank, economic growth forecasts showed moderate growth in 2010 and inflation is projected to be relatively low during the year[2].

The combined merchandise exports of APEC members reached US$ 7.06 trillion in 2008, which accounted for more than 43 percent of world exports. Indeed, 14 of APEC's 21 members rank among the top 40 exporting economies in the world, and since APEC was established the member economies' total trade with the world has grown six fold (Australian Government Department of Foreign Affairs and Trade 2011a). However, as global economy weakened, APEC exports declined in 2009, registering US$ 5.6 trillion in that year. Over the past several years, PRC's trade has grown enormously. Even though the global crisis threatens to slow PRC's economy, it is still able to surpass the US in becoming the largest exporter to the APEC market in 2009. The major drivers of PRC's manufactured exports

[1] See appendix 2 for complete table of real GDP growth in APEC member economies
[2] See appendix 3 for complete table of inflation in APEC member economies

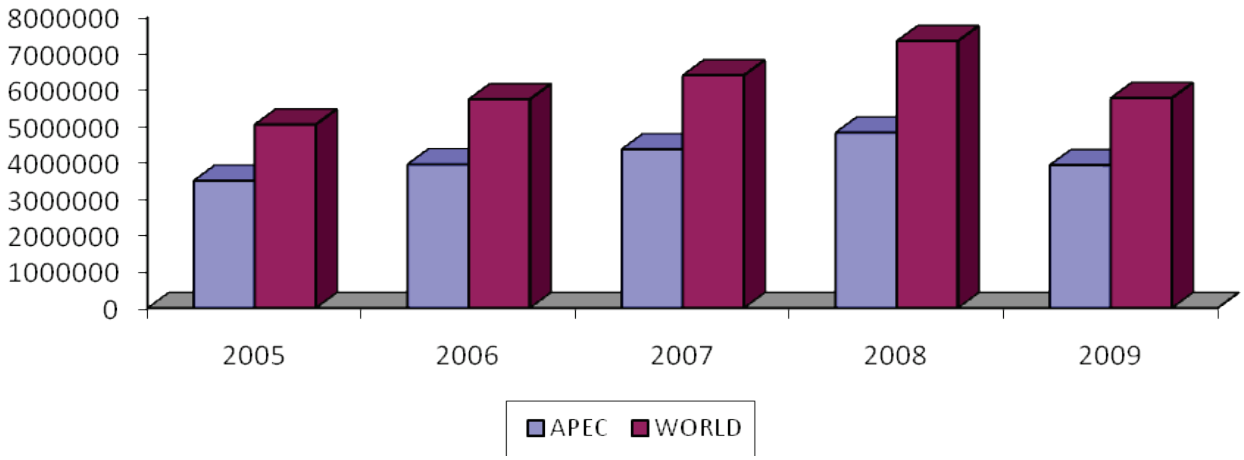
include textiles, garments, and electronics. Meanwhile, the US is still the major source of technological innovations in computing and telecommunications for the APEC region. Generally, APEC member economies' major industrial products and natural resources are also their main exports. Since APEC economies are three times more likely to export to other member economies and two times more when compared to trade with non-member economies, it is evident that exports of some APEC economies are also imports of other APEC members (APEC 2009).

Figure 2.1: APEC Exports to APEC Market and the World, 2005 – 2009 (US$ Million)

Source: International Monetary Fund 2010b

Even though merchandise trade amongst APEC economies has been robust, growing at 13.7 percent from 2005 to 2009, it experienced a significant decline compared to the year 2008. In 2005, APEC exports to the region increased from US$ 3.3 trillion to US$ 3.8 trillion in 2009, and dramatically declined from US$ 4.6 trillion in 2008. Moreover, although non-APEC exports tend to grow more than intra-APEC exports, it only accounted for about 34,79 percent of members' total merchandise exports in 2009; whereas the intra APEC merchandise export was above 65 percent of APEC total merchandise export during the same period. In 2005, the US was APEC's largest exporter; however, its share of APEC's intra merchandise export fell from 17.08percent in 2005 to 16.17 percent in 2009. Hence, PRC replaced the US to become the top exporter within the region as PRC's export increased significantly by 41.5 percent between 2005 and 2009. Despite People's Republic of China's achievement in becoming the major exporter to APEC markets, the economies that gained most advantages from intra merchandise exports are the Russian Federation, Australia, and Viet Nam as from 2005 to 2009 their intra exports grew sharply, recorded at 44 percent, 49 percent, and 55percent, respectively. The largest exporters of merchandise goods within APEC in 2009 for both intra and extra markets were PRC and the US. Even so, PRC's market share was reported to be greater than the US, about 19.37 percent and 22.66 percent on intra APEC and non APEC exports, respectively.

Figure 2.2: APEC Imports from APEC Market and the World, 2005 – 2009 (US$ Million)



Source: International Monetary Fund 2010b

Merchandise imports within the APEC region increased from US$ 3.5 trillion in 2005 to US$ 3.9 trillion in 2009, which represented 68 percent of APEC's total merchandise imports. People's Republic of China has increasingly become a major source for APEC members, accounting for 15.4 percent of APEC's intra merchandise imports, and showed an increase from 12.86 percent in 2005. In general, merchandise imports amongst APEC economies also showed robust increase, albeit lower than export growth.

In brief, APEC members trade more with each other than with other non-APEC trading partners. APEC members are three times more likely to export to another economy than to a non-member economy and two times more likely to import from another member economy than from a non-member (APEC 2009). The larger intra-regional share of export and import within APEC demonstrates the high level of dependency among APEC economies.

II.1.2 Financial Institutions Developments in APEC Economies

As an organization which is committed to fostering regional economic integration, free and open markets, and security of peoples in 21 member economies, APEC puts a lot of emphasis on efforts toward strengthening the efficiency of markets, which among others is achieved through liberalization, regulatory reforms, and harmonization of trade and investment regimes. Thus, besides reducing barriers to trade and investment through free trade agreements and regional trading arrangements, and facilitating integration of transportation, telecommunications, mining and energy, increasing economic efficiency and regional business environment, capital markets inclusive is considered vital to enhancing economic integration among APEC economies.

It is hoped that such efforts will go a long way to reduce business risks and costs, thereby enhancing competitiveness[3]. Financial institutional development initiatives under APEC regional framework fall under the Finance Minister's process[4], which is an annual forum for Finance Ministers in which exchange of views and information on 'macroeconomic and financial developments and on national and regional policy priorities, the strategic goals,

[3] APEC 2007.
[4] APEC 2010a.

among which include ensuring stable and efficient capital markets, macroeconomic stability in the APEC region, prudent finance management, good corporate governance, sustainable and broad based development with equity, and facilitation of economic and technical cooperation among APEC member economies are made.'

Pursuant to APEC goals, member economies emphasize the importance of a good business environment in each member economy in serving as drivers of economic growth. Such factors include free and open markets, productivity, competitiveness and efficiency by taking measures to improve efficiency of domestic markets and undertake structural reforms, which are tailored toward increasing economic growth, resiliency and sustainability of APEC member economies. The members also support domestic institutions that support structural reforms, adopt APEC Trade Facilitation Action Plan which is aimed at reducing transaction costs by an additional 5 percent by 2010.They also increase the liberalization of investment regimes, foster and support investment and domestic reforms tailored toward financial institutions and markets. The members have over time increased and deepened their financial markets development and liquidity through the promotion of financial instruments and broadening institutional capacity, which factors are considered vital for high and stable economic growth, better risk management, and higher economic integration.

Exchange of technical expertise, which is vital for institutional development, is also considered an important ingredient in the drive to improving financial markets performance, soundness, and integration. Among policy initiatives in the area of financial development and integration, include:

1. The policy dialogue on savings and capital market development, which is a voluntary action program tailored towards promoting free and more stable capital flows which was sponsored in 1997 by Chile, New Zealand, and Viet Nam and endorsed by APEC ministers in 2000;
2. APEC finance development program, which involves efforts by Asia Pacific and Finance Development Center (AFDC) to build capacity in finance and development with the support of APEC member economies and international development institutions through workshops some of which covered themes such as bank risk management, corporate bond markets, innovation for development;
3. Program on deepening prudential regulatory in non-life insurance endorsed in 2005, which is public-private partnership arrangement to provide training for non-life insurance regulators;
4. APEC Economic leaders' future think tank, launched in 2000 which has so far covered such themes as "Securing International Capital Flows", and "Financial Sector Reform to Attract Capital Flows";
5. APEC Financial Regulators training initiative (FRTI), which has the objectives of 'strengthening content and management of the national training programs and developing regional programs for junior and mid-level banking supervisors and securities regulators;
6. APEC financial institutions dealing with SMEs, launched in 2005 with the objective of strengthening cooperation in SME financing and increasing access to APEC SMEs.

Other initiatives in finance and development include:

1. The Insolvency Reform Initiative. It was endorsed in 2004 and implemented in Forum in Asia Insolvency Imitative in 2006. The initiative covers such wide-ranging areas concerning general assessment of Asian reforms in the last decade and specific topic discussions on re-organization, informal workouts, courts and regulatory institutions,

priority claims, creditor participation, corporate groups, and cross-border insolvency. The phase two of the initiative has the objective of establishing a regional network to monitor and ultimately provides a source of information on and advice about, improvements to insolvency systems in Asia on an on-going basis;

2. Reform of financial sector initiative, which was sponsored by Australia, Indonesia, Japan, PRC, and Viet Nam, was endorsed in 2005. The initiative has the objective of discussing the development and implementation of financial sector reforms and strategies, developments in financial frameworks, with the date for final report of the initiative set for 2007.
3. The APEC Response policy to the aging issue, sponsored by Korea and motivated by concerns that an aging population will have on fiscal management, economic development and capital markets, has several objectives which among others include: (i) finding a commonality amongst the domestic reforms conducted by each APEC economy and derive an effective policy guideline on a voluntary basis and (ii) calling for a comprehensive group, including experts from member economies as well as from IFIs.

Nonetheless, some of the long term initiatives had to be deferred in order to deal with the threats posed by the 2008 financial crisis on APEC economies. Some of the emergency measures taken to prevent and mitigate the impact of the financial crisis, included: a pledge of US$100 billion by Japan through International Monetary Fund to emerging member economies to deal with the crisis, individual economy fiscal stimulus packages with People's Republic of China injecting US$586 billion to spur domestic demand, while United States injected US$787 billion to promote sagging domestic consumption amid rising unemployment figures. Similar packages were implemented by other member economies, to varying degrees. Injections in capital markets, money markets, banking institutions were also made to provide both much needed liquidity and capital to mitigate the adverse effects of capital draw-downs necessitated by high levels of write downs and write offs sparked by high doubtful debts and non-performing loans[5], caused by the 2008 world economic recession.

Other activities in that regard encompass capacity building workshops on institutional investor development, regulatory reforms for banking and securities supervisors and regulators, and on promoting SMEs. Other measures include:

1. Efforts to identify priority areas for structural reforms, as well as developing modalities to share best practices and expertise and linking need for reform and APEC member economy resources, under the APEC study group on structural reforms;
2. Developing common approaches to improving private investment among APEC economies, under APEC Infrastructure pathfinder initiative;
3. Investigating how best financial institutions such as banks, capital markets and other market based instruments, and subsidies and tax policies can contribute to green growth; and
4. Assisting targeted economies in improving strategies to maintain long term fiscal sustainability policies without forsaking measures to restore economic growth and confidence during economic recovery under the improving strategies for fiscal sustainability and economic recovery arrangement. It is interesting to note that despite being driven by short term objective of mitigating the impact on 2008 financial crisis on APEC economies, the packages had a long term objective of strengthening long

[5] Agencia Peruana de Noticias 2009.

term financial stability, economic development and prosperity in region. This is why, fiscal and monetary stimulus packages and financial market reforms, were implemented covering supervision, regulations, information disclosure arrangements, risk management, scope of business operations, among others.

The banking industry is a vitally important institution in APEC economies both developed and emerging members, both as a provider of financial intermediation services within an economy as well as in international trade and investment activities, which are vital for APEC in achieving its cherished goals of promoting economic growth and development through increased trade in goods and services among its members. The size of the banking industry in the US, the World's largest economy, is underscored by the value of assets, loans, deposits, and liabilities, with Australia; Canada; Hong Kong, China; and Japan being the other key major providers of banking services in the economic region (Table 2.2, Table 2.3, Table 2.4, Table 2.5).

Table 2.2: Bank Assets of APEC Economies (million US$)

	2007	2008	2009
Australia	2,451,565	3,857,679	2,880,143
Canada	2,414,569	2,985,204	2,502,802
Hong Kong, China	1,326,588	1,387,442	1,371,244
Indonesia	210,904	211,010	243,697
Japan	6,742,123	8,961,855	8,693,182
Malaysia	346,534	369,317	388,935
New Zealand	428,069	717,786	526,026
Papua New Guinea	30,485	34,176	41,982
Philippines	124,009	119,524	133,580
The Russian Federation	819,888	953,776	973,080
Singapore	404,426	464,354	502,893
Chinese Taipei	860,145	937,418	948,150
Thailand	267,072	287,910	302,399
The United States	10,817,640	12,197,357	11,598,845

Source: Central Bank of Each Economy[6] 2007-2010

However, there is little doubt that the 2008 financial crisis had more severe impact on the US banking industry than on other APEC economies. This is attested by the decrease in bank assets and liabilities, also a plummet in bank loans, worsening both domestic and international liquidity (Table 2.2, Table 2.3, Table 2.4).

Table 2.3: Bank Liabilities in APEC Economies (million US$)

	2007	2008	2009
Australia	2,313,179	3,634,864	2,680,952
Canada	912,168	1,252,343	833,771
Indonesia	184,020	182,949	209,734
Malaysia	320,878	339,568	353,753
New Zealand	400,273	676,933	496,354
Papua New Guinea	30,485	30,040	36,629
Philippines	109,474	106,910	118,739
The Russian Federation	680,445	812,762	780,391
Singapore	375,675	428,698	463,733
Chinese Taipei	804,926	880,055	888,914

[6] The central banks include: Reserve Bank of Australia, Bank of Canada, Central Bank of the Republic of China (Chinese Taipei), Hong Kong Monetary Authority, Bank Indonesia, Bank of Japan, Bank Negara Malaysia, Reserve Bank of New Zealand, Bank of Papua New Guinea, Bangko Sentral Ng Pilipinas, Central Bank of Russia, Monetary Authority of Singapore, Bank of Thailand, and Federal Reserve

Thailand	240,228	258,545	268,591
The United States	9,672,208	11,103,607	10,349,864

Source: Central Bank of Each Economy 2007-2010

Table 2.4: Bank Loans in APEC Economies (million US$)

	2007	2008	2009
Australia	1,535,938	2,257,471	1,883,643
Canada	993,553	1,036,970	563,222
Hong Kong, China	379,605	423,899	423,992
Indonesia	106,382	119,424	138,281
Japan	3,625,690	4,770,876	4,627,206
Malaysia	191,108	207,478	222,197
New Zealand	342,714	528,294	409,211
Papua New Guinea	8,990	11,979	14,364
Philippines	62,841	61,586	68,598
The Russian Federation	580,895	676,804	656,229
Singapore	161,944	189,116	200,420
Chinese Taipei	545,492	590,170	566,556
Thailand	179,198	192,834	192,775
The United States	6,825,078	7,149,326	6,654,585

Source: Central Bank of Each Economy 2007-2010

It is also worth noting that though the US banks faced the full wrath of the 2008 financial crisis, recovery seems to be better than in other APEC economies that ironically didn't suffer that much. This is attested by an emergent recovery of bank deposits in 2009, which is not shown in other APEC economies with large banking sector such as Australia and Canada. That said it is evident that the banking industry in Hong Kong, China; Japan; and Singapore, among others do come out of the financial crisis unscathed, attested by rising deposits in 2008 and 2009 (Table 2.5).

Table 2.5: Bank Deposits in APEC Economies (million US$)

	2007	2008	2009
Australia	1,308,626	1,904,973	1,559,453
Canada	967,711	1,051,780	1,016,861
Hong Kong, China	752,230	781,575	822,723
Indonesia	160,403	160,118	187,594
Japan	4,758,842	6,101,242	6,161,179
Malaysia	248,284	270,250	293,812
New Zealand	365,974	574,952	442,298
Papua New Guinea	22,681	22,228	27,867
Philippines	88,521	88,344	100,781
The Russian Federation	353,587	369,376	428,233
Singapore	218,558	241,459	278,892
Chinese Taipei	643,584	722,036	754,283
Thailand	192,176	201,651	204,204
The United States	6,666,178	7,247,796	7,656,856

Source: Central Bank of Each Economy 2007-2010

With the exception of a few economies, capital adequacy requirements have been rising to meet international standards. However, the onset of 2008 financial crisis , which had adverse effects on both asset quality as a result of high risk of default which implied the need for higher levels of capital to asset levels. This explains why strengthening bank capital and asset quality is one of the policy priorities effected on financial institutions in response to the financial crisis not only to mitigate the effects on the financial system, but also equally

important, the entire economy. This explains why bank capital to asset ratios in most APEC economies increased in 2009. Strengthening bank capital to asset levels is expected to enhance bank soundness, which is vital to sustainable financial stability (Table 2.6).

Table 2.6: Bank Capital to Assets in Selected APEC Economies (percent)

	2003	2004	2005	2006	2007	2008	2009
Australia	5.2	5.1	5.2	5.4	4.9	4.4	5
Canada	4.7	4.4	5.6	5.2	5	4.7	5.7
Chile	7.3	7	6.9	6.6	6.7	6.9	7.4
Hong Kong, China	10.6	10.8	13.3	13	10.4	11	12.7
Indonesia	10.4	10	9.8	10.2	10.1	9.2	10.3
Japan	3.9	4.2	4.9	5.3	4.5	3.6	4.7
Malaysia	8.5	8.2	7.7	7.6	7.4	8.1	9
Mexico	11.4	11.2	12.5	13.6	13.8	9.6	9.7
People's Republic of China	3.8	4	4.4	5.1	5.8	6.1	5.6
Philippines	13.1	12.6	12	11.7	11.7	10.6	11.1
Peru	9.3	9.8	7.7	9.5	8.8	8.3	9.9
Republic of Korea	7	8	9.3	9.2	9	8.8	10.9
Russia	14.6	13.3	12.8	12.1	13.3	13.6	15.7
Singapore	10.7	9.6	9.6	9.6	9.2	8.3	10.5
Thailand	7.4	8	8.9	8.9	9.5	9.2	9.8
United States	9.2	10.3	10.3	10.5	10.3	9.3	11

Source: International Monetary Fund 2009a; International Monetary Fund 2010d

Yet hindsight shows that warning signs were abound prior to the 2008 financial crisis that banks in some APEC economies had become lax on loan provisioning requirements (Table 2.7) as economic stability boosted over confidence in economic performance, which often leads to discounting potential default risk. This is attributable to relative uninterrupted economic stability for almost a decade.

Table 2.7: Bank Provision for Non Performing Loans in Selected APEC Economies (percent)

	2003	2004	2005	2006	2007	2008	2009
Australia	131.8	182.9	203	202.5	181.8	74.8	68.7
Canada	43.5	47.7	49.3	55.3	42.1	34.7	71.2
Chile	130.9	165.5	177.6	198.5	210.2	179.9	81.3
Hong Kong, China	n.a	n.a	64.8	67.6	78.4	71.5	58.3
Indonesia	112.4	110.8	38.1	49.1	59.8	58.5	62
Japan	29.9	31.2	79.3	79.5	78.3	83.2	83.7
Malaysia	53.1	55	59.1	64.6	77.3	89	95.3
Mexico	167.1	201.4	241.3	210	168.9	161.2	173.9
People's Republic of China	19.7	14.2	24.8	34.3	39.2	116.4	155
Philippines	51.5	55	72.9	79	81.5	86	93
Peru	67.1	68.7	80.3	100.3	131.4	151.4	139.3
Republic of Korea	84	104.5	131.4	175.2	205.2	146.3	139.9
Russia	118.1	149.9	174.9	171.9	143.1	117.8	95.2
Singapore	64.9	73.6	78.7	89.5	115.6	109.1	91
Thailand	72.8	79.8	83.7	82.7	86.5	97.9	99.4
United States	140.4	168.1	154.8	134.8	91.7	75.3	58.1

Source: International Monetary Fund 2009a; International Monetary Fund 2010d

Bank credit quality in APEC economies gauged by the percentage of non-performing loans to total loans disbursed shows a downward trend until 2007, which is prior to the 2008 financial crisis (Table 2.8). High interdependence among global financial institutions markets implied

that the decline in bank asset quality in major economies fed their way into other economies, including those in APEC, which induced a rise in non-performing loans. This hit some APEC economies hard given the fact that prior to the 2008 crisis, relative economic stability and growth, had induced laxity in loan provisioning requirements.

Table 2.8: Non Performing Loan Levels in APEC Economies (percent)

	2003	2004	2005	2006	2007	2008	2009
Australia	0.3	0.2	0.2	0.2	0.2	0.8	1.2
Canada	1.2	0.7	0.5	0.4	0.7	1.1	1.3
Chile	1.6	1.2	0.9	0.7	0.8	1	3
Hong Kong, China	3.9	2.3	1.4	1.1	0.8	1.2	1.1
Indonesia	6.8	4.5	7.4	6	4.1	3.2	3.3
Japan	5.2	2.9	1.8	1.5	1.4	1.6	1.7
Malaysia	13.9	11.7	9.6	8.5	6.5	4.8	3.7
Mexico	3.2	2.5	1.8	2	2.7	3.2	3.1
People's Republic of China	20.4	13.2	8.6	7.1	6.2	2.4	1.6
Philippines	16.1	14.1	10	7.5	5.8	4.5	4.1
Peru	14.8	9.5	6.3	4.1	2.7	2.2	2.7
Republic of Korea	2.6	1.9	1.2	0.8	0.7	1.1	1.2
Russia	5	3.3	2.6	2.4	2.5	3.8	9.5
Singapore	6.7	5	3.8	2.8	1.5	1.7	2.3
Thailand	13.5	11.9	9.1	8.1	7.9	5.7	5.3
United States	1.1	0.8	0.7	0.8	1.4	2.9	5.4

Source: International Monetary Fund 2009a; International Monetary Fund 2010d

In general, commercial banks in APEC economies face higher bank regulatory capital to risk weighted asset ratios in the wake of the 2008 financial crisis (Table 2.9). With the exception of PRC, which registers a decrease from 12 percent (2008) to 11.4 percent (2009), commercial banks in other APEC economies both developed and developing have increased the risk weighted capital to asset ratios. This is a consequence of applying higher capital requirements to commercial banks in general and international commercial banks in particular (mostly in developed economies), as well as individual efforts by commercial banks themselves to strengthen their capital levels in an attempt to improve their credit rating hence borrowing costs. It is important to note that developed economies (Canada; Hong Kong, China; Japan; Republic of Korea; Singapore; and United States;) have taken a tougher stand in demanding higher CAR than developing economies (Indonesia; Philippines; PRC; and Malaysia) with the exception of Russian Federation. However, for some developing economies such as Mexico, a dramatic increase in regulatory capital to risk weighted assets was felt unnecessary as the ratio was already high.

Table 2.9: Bank Risk Regulatory Capital to Risk Weighted Assets in Selected APEC Developing Economies (percent)

	2003	2004	2005	2006	2007	2008	2009
Australia	10	10.4	10.4	10.4	10.2	11.4	12
Canada	13.4	13.3	12.9	12.5	12.1	12.2	14.7
Chile	14.1	13.6	13	12.5	12.2	12.5	14.3
Hong Kong, China	15.3	15.4	14.8	14.9	13.4	14.8	16.9
Indonesia	22.3	19.4	19.9	20.6	19.2	17	17.6
Japan	11.1	11.6	12.2	13.1	12.3	12.4	14.4
Malaysia	13.8	14.4	13.7	13.5	13.2	12.6	15.4
Mexico	14.2	14.1	14.3	16.1	15.9	15.3	15.9
People's Republic of China	-5.9	-4.7	2.5	4.9	8.4	12	11.4
Philippines	17.4	18.4	17.6	18.1	15.7	15.5	15.8

Peru	13.3	14	12	12.5	12.1	11.9	13.5
Republic of Korea	11.1	12.1	19.9	20.6	19.2	17	17.6
Russia	19.1	17	16	14.9	15.5	16.8	20.9
Singapore	17.9	16.2	15.8	15.4	13.5	14.7	16.5
Thailand	13.4	12.4	13.2	13.6	14.8	13.9	15.8
United States	13	13.2	12.9	13	12.8	12.8	14.3

Source: International Monetary Fund 2009a; International Monetary Fund 2010d

It is apparent from Table 2.10 that with the exception of Peru, commercial banks in other APEC economies indicated above suffered a decrease in return on equity. The severity of the impact of the 2008 financial crisis on US financial institutions comes light when it is revealed that return of equity plummeted from 12.3 percent in 2006 to 7.8 percent in 2007 and 0.4 percent in 2008. Modest recovery occurs in 2009. That said, there is no denying the fact that 2008 financial crisis resonated in all APEC economies, developing as well as developed, with commercial banks in the United States and Japan performing poorly which Australia and Singapore, and Canada, showing that their financial systems had in place risk management mechanisms that withstood shocks set off by US subprime crisis which culminated in the dramatic bankruptcy of Lehman Brothers in September 2008. Meanwhile, in some developing economies (Indonesia, Malaysia, Philippines, Peru), and developed economies (Australia and Hong Kong, China) the impact of the financial crisis occurs later in 2008 than in some developed economies (2007) (Canada; Japan; Singapore; United States) and some other developing economies (Chile; Mexico), set off by fears of widespread default in developed financial institutions caused by the dramatic collapse of Lehman brothers in late 2008. Proximity factor is also seen to play here as contagion of the financial crisis spread. Commercial banks in Chile; Mexico (developing economies), and Canada (a developed economy), experienced the impact of the financial crisis earlier in 2007 than other economies, developed and developing alike. That said, there is need to take a closer look at Indonesia and Japan, as regards recovery from the worst of the financial crisis (in terms of return on equity of commercial banks). Return on equity of Indonesian commercial banks, decreased from 23.2 percent (2007) to 15.5 percent (2008) but rebounded to 18.4 percent (2009). Meanwhile, return on equity of Japanese commercial banks decreased from 8.5 percent in 2006 to 6.1 percent (2007) hitting the bottom -6.9 percent (2008) but rebounded to 4.9 percent in 2009.

Table 2.10: Rate of Return on Equity in Commercial Banks in Selected Developed APEC Economies (percent)

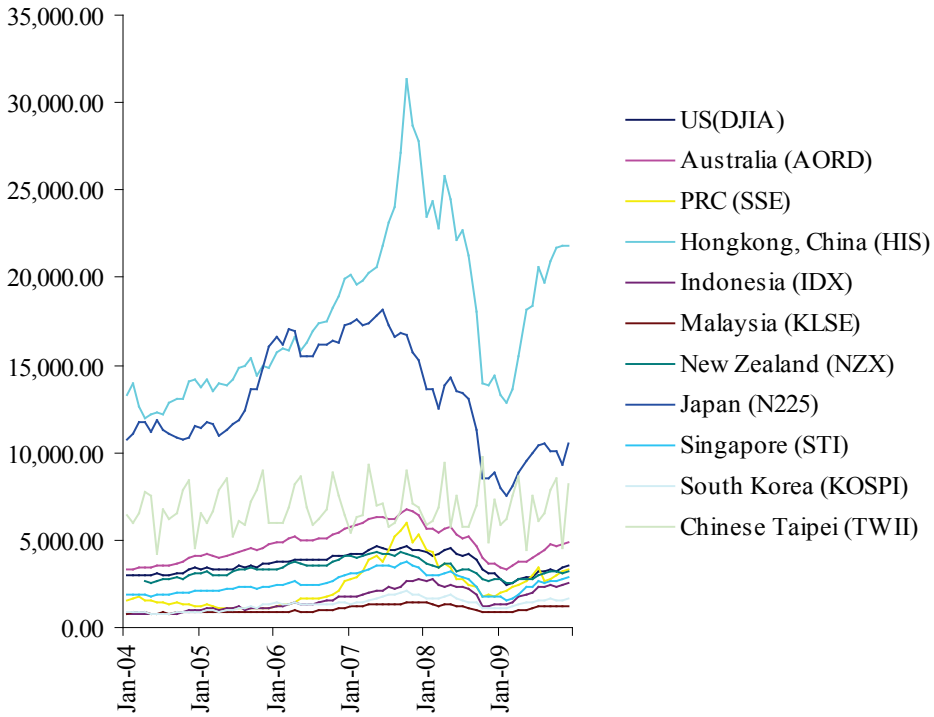
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Australia	24.2	16	14.7	16.7	17.4	13.7	10.4
Canada	14.7	16.7	17.1	21.8	20.1	9.8	9.9
Chile	16.7	16.7	17.9	18.6	16.2	15.2	18
Hong Kong, China	17.8	20.3	19.1	19.8	25.1	13.9	14.4
Indonesia	26.6	34.5	21.4	22.4	23.2	15.5	18.4
Japan	-2.7	4.1	11.3	8.5	6.1	-6.9	4.7
Malaysia	15.6	16.3	16.8	16.2	19.7	18.5	16.1
Mexico	17.7	19	25.4	25.9	19.9	15.5	12.8
People's Republic of China	n.a	13.7	15.1	14.9	16.7	17.1	15.1
Philippines	8.5	7.1	8.6	3.2	8.7	6.9	10.8
Peru	10.9	11.3	22.2	23.9	27.9	31.1	24.5
Republic of Korea	3.4	15.2	18.4	14.6	14.6	7.2	5.8
Russia	17.8	20.3	24.2	26.3	22.7	13.3	4.9
Singapore	8.7	11.6	11.2	13.7	12.9	10.7	11
Thailand	10.3	16.8	14.2	8.5	1.2	10.3	9.5
United States	15	13.2	12.4	12.3	7.8	0.4	0.9

Source: International Monetary Fund 2009a; International Monetary Fund 2010d

II.1.3 Capital Market Developments in APEC Economies

There is little doubt that capital markets in APEC economies are increasingly becoming interdependent and integrated. This has been underpinned by increasing merchandise trade as well as rising volumes of trade in services, capital flows, which is growing over time. The rise in interdependence means shocks that there stock markets move in the same direction (positive market signals in one key market drives others upwards while negative market signs does the opposite. There is no better evidence of that than the impact of the 2008 financial crisis, which had its origins in US housing market, but ended up hitting other APEC economy markets (Figure 2.3). The interdependence of APEC capital markets has over time been made possible and intensified by rising merchandize trade, which induces financial transactions, capital flows (both in the forms of direct and portfolio investment), free trade commitments within the framework of regional cooperation arrangements protocols within APEC 21 economies, both of sub regional nature such as ASEAN and NAFTA. That means that any shocks registered in one APEC economy, through contagion quickly and easily spreads to other economies.

Figure 2.3: Stock Market Prices in Selected APEC Economies, Monthly, 2004-2010

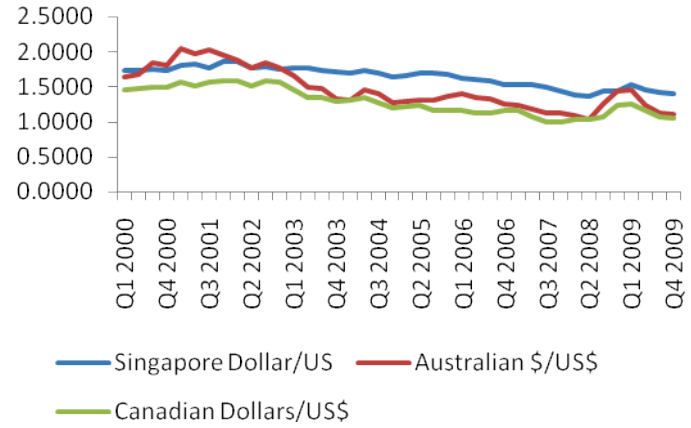


Source: Central Bank and Related Stock Market Websites

The performance of most currencies in APEC is shown to be relatively stable with the exception of Indonesian Rupiah (Figure 2.4-2.7). The financial crisis in 2008 which induced a flight to safety of portfolio investments including investments in currencies from emerging economies to industrialized economies hit the worst performing currencies hard. Since 1997/1998 economic crisis, for example, the value of Rupiah which in early 1997 was hovering at IDR 2500 per US$, depreciated heavily reaching IDR 18,000 at the height of the crisis before it appreciated slightly to where it is still which around IDR 8700 to IDR 10,000 per US$. Nonetheless, the poor performance of the US $ dollar during the financial crisis,

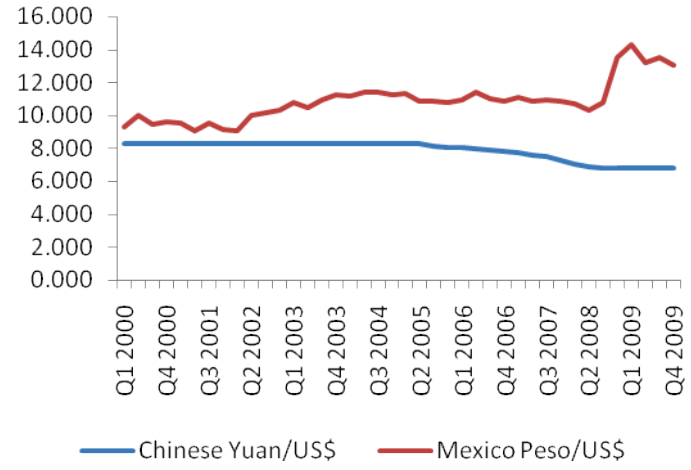
caused by very low interest rate regime, rising deficit and debt to GDP ratio, helped in strengthening other APEC economy currencies including the Rupiah.

Figure 2.4: Singaporean Dollar, Australian $, and Canadian $ per US$



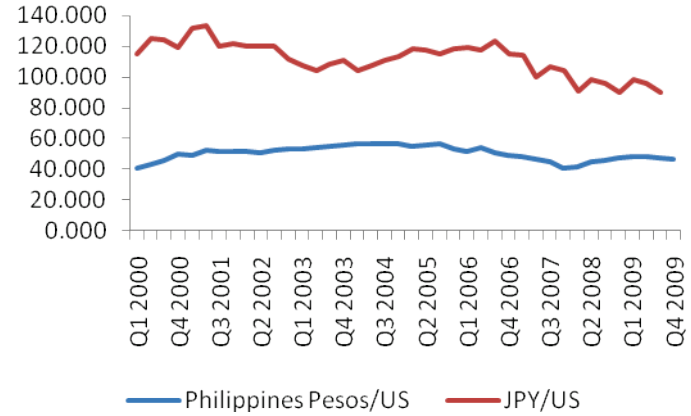
Source: International Monetary Fund 2010e

Figure 2.5: Chinese Yuan and Mexican Peso per US$



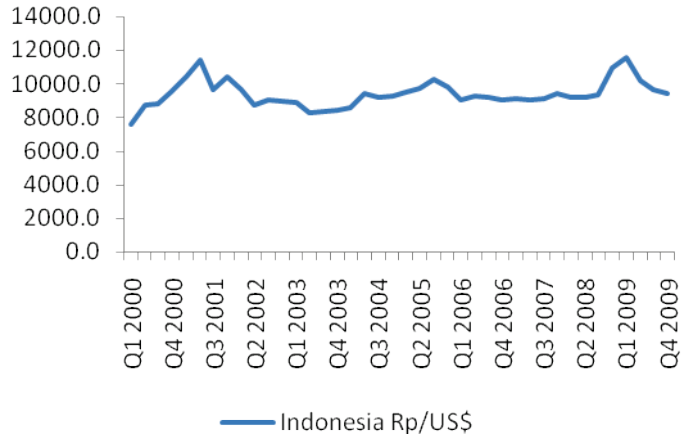
Source: International Monetary Fund 2010e

Figure 2.6: Philippines Peso and Japanese Yen per US$



Source: International Monetary Fund 2010e

Figure 2.7: Indonesian Rupiah per US$

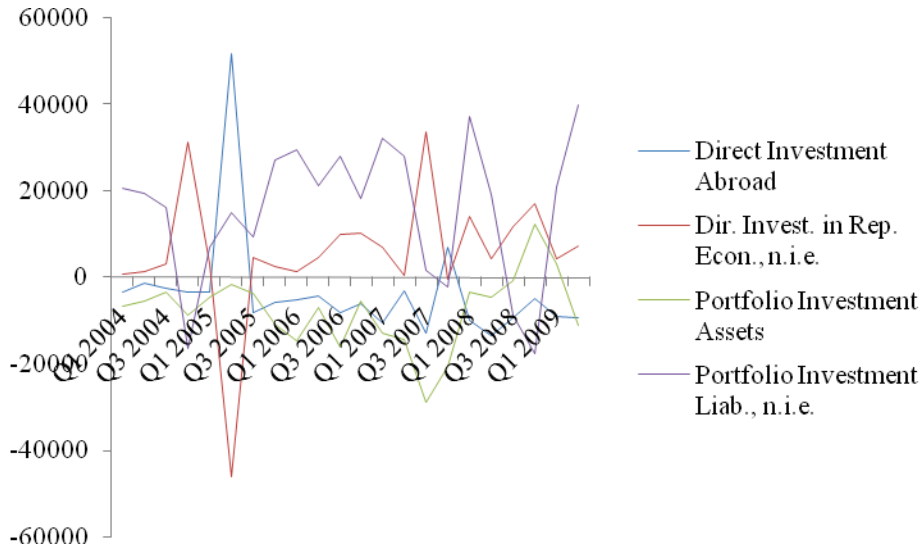


Source: International Monetary Fund 2010e

II.1.4 Developments in FDI and Portfolio Investments in Selected APEC Economies

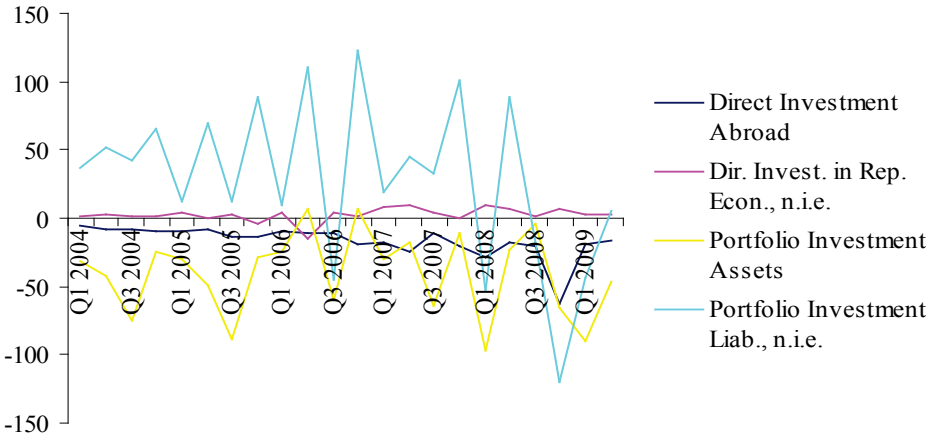
Developments in direct foreign investment and portfolio investment show the increasing importance of portfolio investment as an importance source of capital flow in all selected economies compared to direct foreign direct investment. Consequently, as is often the case any change in macroeconomic indicators induces as a drastic increase in an inflow of portfolio investment (high interest regime, favorable exchange rate, better investment climate indicated by for example low economy risk) as a drastic outflow once conditions deteriorate. The inflow of portfolio investment decreased drastically during 2008 global financial crisis for all economies, and shows signs of rebounding in the second quarter of 2009. Thus, portfolio foreign investment though it is an important source of capital, it has also become increasingly a source of financial instability hence requires effective management to reduce the potentially disruptive effects it may have on APEC economies, especially developing ones (see following figures). The following figures show the FDI and portfolio investments in selected APEC Economies which are chosen by the data availability.

Figure 2.8: FDI and Portfolio Investments in Australia (million US$)



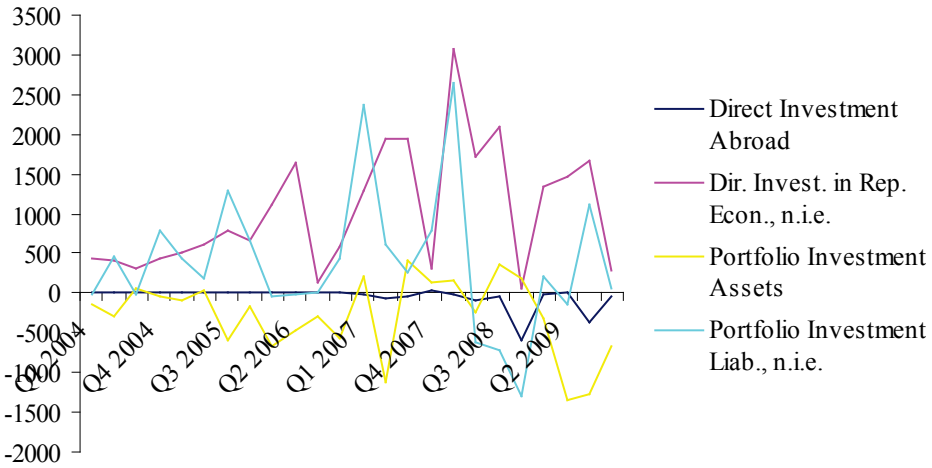
Source: International Monetary Fund 2010e

Figure 2.9: FDI and Portfolio investments in Peru (million US$)



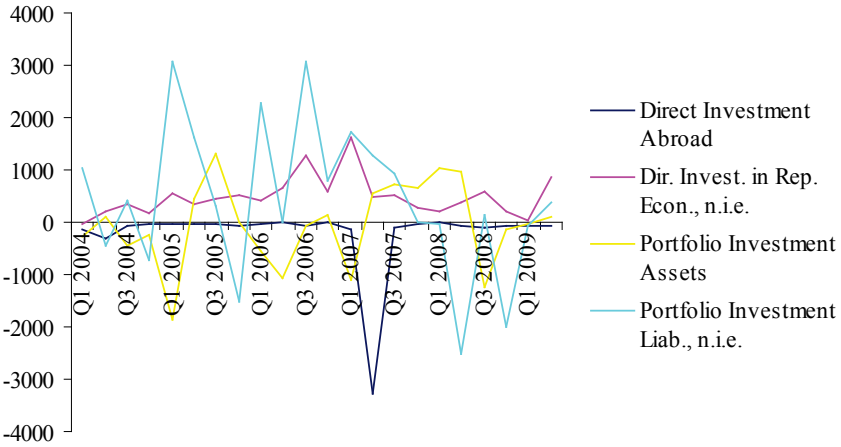
Source: International Monetary Fund 2010e

Figure 2.10: FDI and Portfolio Investments in Japan (billion US$)



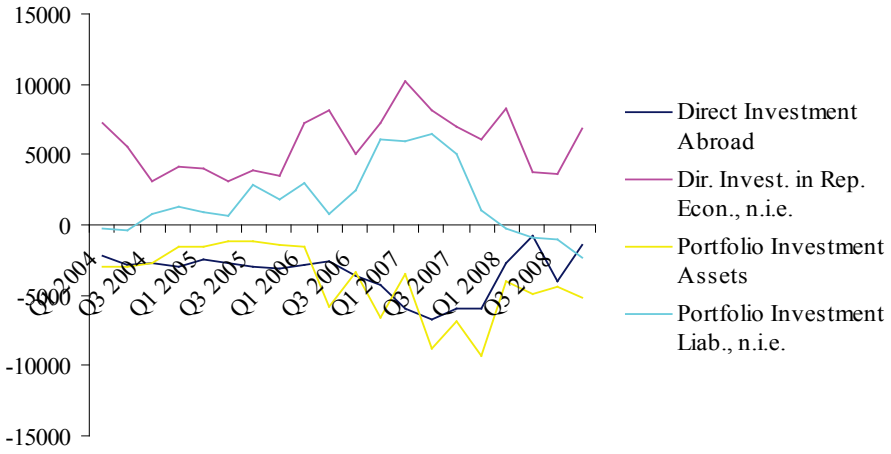
Source: International Monetary Fund 2010e

Figure 2.11: FDI and Portfolio Investments in the Philippines (million US$)



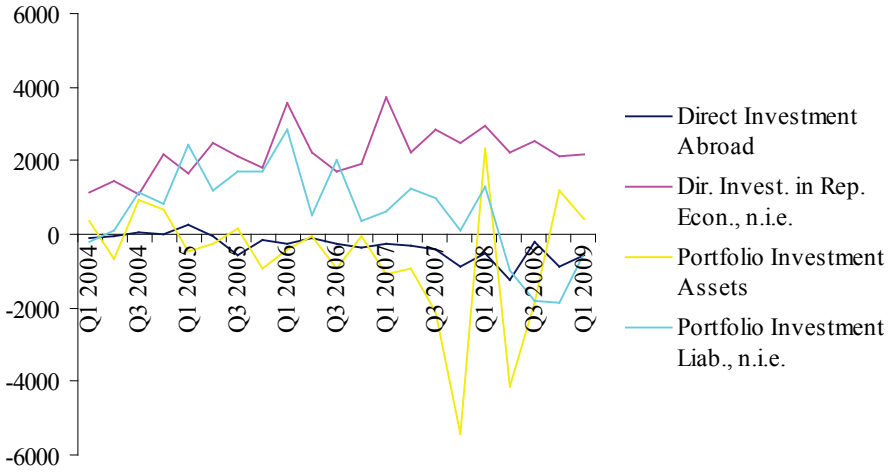
Source: International Monetary Fund 2010e

Figure 2.12: FDI and Portfolio Investments in Singapore (million US$)



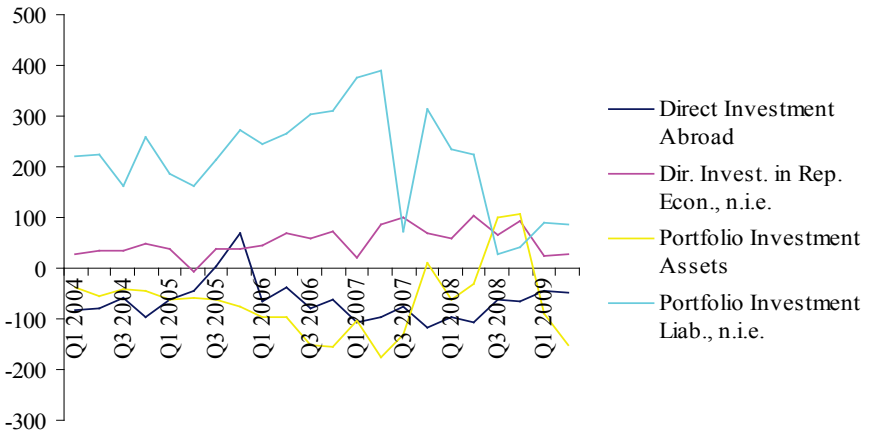
Source: International Monetary Fund 2010e

Figure 2.13: FDI and Portfolio Investments in Thailand (million US$)



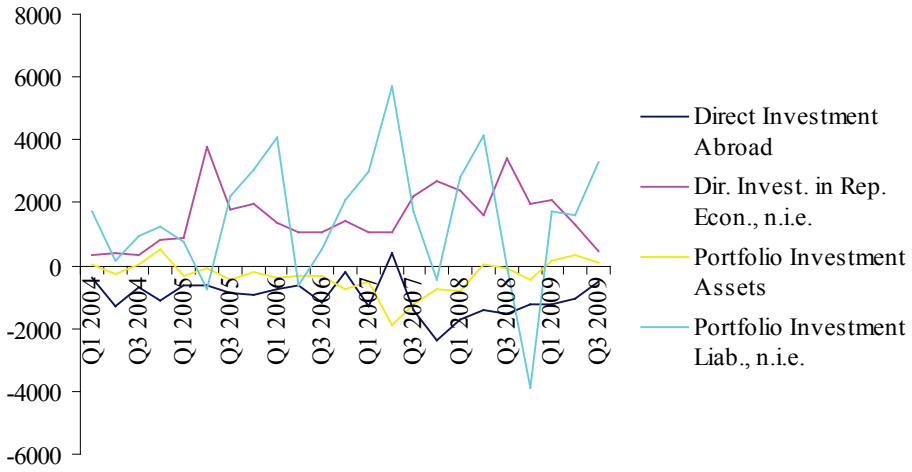
Source: International Monetary Fund 2010e

Figure 2.14: FDI and Portfolio Investments in US (billion US$)



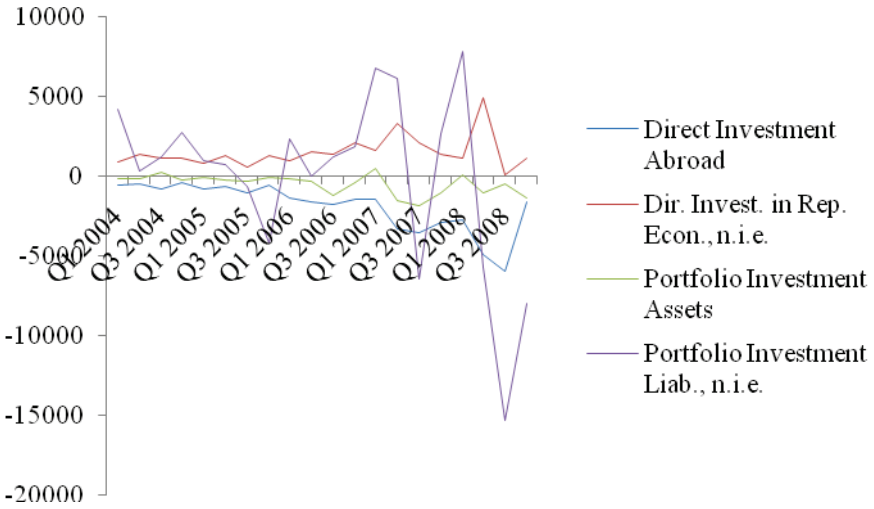
Source: International Monetary Fund 2010e

Figure 2.15: FDI and Portfolio Investments in Indonesia (million US$)



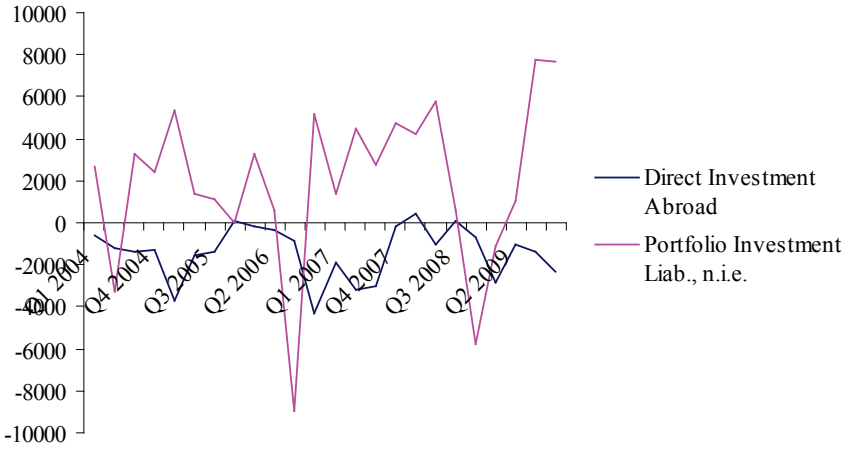
Source: International Monetary Fund 2010e

Figure 2.16: FDI and Portfolio Investments in Malaysia (million US$)



Source: International Monetary Fund 2010e

Figure 2.17: FDI and Portfolio Investments in Mexico (million US$)



Source: International Monetary Fund 2010e

II.2 Financial Openness and Integration in APEC Economies

II.2.1 Financial Openness in APEC Economies

To determine the financial market openness in APEC economies, this research analyzed data on foreign direct investment (FDI) and external debt of the economies. Results of the analysis on FDI and external debt data[7] in APEC economies show that Hong Kong, China and Singapore have the highest FDI index (FDI/GDP) among APEC member economies. Their index exceeds 100 percent, meaning that both economies rely heavily on foreign direct investment to grow their economy. The 2008 global financial crisis seems having no impact on attracting foreign investors to their economies as their FDI stock rises during 2005 to 2009. In line with their FDI index, the two economies also have higher external debt per GDP, which also value more than 100 percent, than other APEC economies. The high FDI index of the two economies is highly correlated with their rank in Global Competitiveness Index; in that Hong Kong China ranks 11 and Singapore ranks 3 for period of 2009-2010.

Although Hong Kong, China and Singapore have high FDI index, a conclusion cannot drawn to the effect that developed economies have higher FDI index than developing economies. The FDI index of Chile; Mexico; Papua New Guinea; Thailand; and Viet Nam even exceeds those for Japan; Republic of Korea (ROK); and United States. Nonetheless, with respect to the debt index, developed economies tend to have higher index than the developing ones. Developed economies usually have more advanced financial markets, which enable them to attract foreign investors, which make their external debt higher.

Among ASEAN economies, Indonesia has the lowest FDI index, which less than 15 percent, followed by Philippines. According to Doing Business Ranking Indicators published by International Finance Cooperation, Indonesia achieved rank155 while Philippines obtained rank 156 in "starting business" in 2010 among 183 economies surveyed. On average, ASEAN countries, excluding Brunei and Singapore, have debt index of 30 percent. The Debt index of Indonesia, Malaysia, and Philippines in 2009 is lower than the index of 2005.

Japan, which is today the World's third largest economy, has the lowest FDI index, followed by PRC, an emerging economy. Japan is more likely to invest abroad and PRC's growth is increasingly being driven by the use of its own resources rather than FDI, recently. However, Japan has a higher debt index than PRC's. Other East Asia economies, ROK and Chinese Taipei, have less than 15 percent FDI index and more than 20 percent debt index. The 2008 global financial, in general, have raised external debt of East Asia economies.

United States' debt index rises sharply from 70 percent in 2005 to 97 percent in 2009. In the same period, its FDI index drops 0.4 percent. On the contrary, in the same period, the FDI index of Canada, Chile, Mexico, and Peru shows signs of increasing, while their debt indices are decreasing. Australia's FDI index drops slightly from 35.89 percent in 2005 to 35.48 percent in 2009. Papua New Guinea's index also drops slightly. Conversely, New Zealand's index rises significantly in the same period. But, the debt index of Australia and New Zealand rises significantly in 2005-2009.

The two indexes can show the level of openness in APEC economies. Hong Kong China and Singapore is the most open economies in APEC. Based on FDI and external debt data, Brunei has zero debt, an indication that it is not an open financial market. Japan can be classified as the least open economy in terms of allowing foreign investors to invest in Japan. However,

[7] A complete table on FDI and external debt index are shown in appendix 4

most APEC economies are shown to be open economies. Nonetheless, the results on the two indexes on their own, cannot lead to the conclusion that that developing economies are more open than developed ones.

II.2.2 Financial Integration in APEC Economies

To determine the level of economic integration among APEC economies, this research evaluates data on intra APEC –non APEC export-import and intra APEC and non- APEC a portfolio investments. Data analysis on APEC trade (2005-2009) and APEC investment (2001-2009) shows that APEC members trade with each other more than they do with other trading partners. On the contrary, APEC member economies purchase more securities from non APEC members and sell the same to non APEC member economies.

Based on the share of export of each individual economy in APEC, United States has the biggest share in 2005 followed by PRC, but declines to the second position in 2009, as PRC assumes the number one position. However, in terms of growth, Viet Nam assumes the number one position with 13.93 percent average growth during period of 2005-2009, while Chile is ranked second, with exports that grew by 13.55 percent on average during the same period. The contribution of Japanese exports to APEC member economies is also above 10 percent in 2005 and 2009, but registers contraction during the period[8].

PRC and the United States also have the biggest contribution to non APEC exports. With respect to intra APEC and non APEC exports, it can be concluded that the three largest exporters in the APEC region in 2005 are the United States, PRC, and Japan. In 2009, PRC takes over United States' position, pushing it down to the second position, while Japan continues to be in the third position among top three APEC exporters.

Intra APEC export increases from 2005 to 2009 by 14.24 percent which is lower than 37.75 percent of non-APEC exports growth in the same period. Total intra APEC exports is US$ 3622.96 billion in 2009, while total export of exports to Non-APEC economies was s US$ 1835.082 billion. This shows that around two thirds (2/3) of APEC's export is with other APEC members. Although intra APEC trade is considered an important destination of APEC member exports, its growth still falls far behind the growth of APEC member economies to Non APEC members. It is evident other regions such as the European Union, Latin America, and Middle East also have high demand for goods and services of APEC member economies, not to mention individual economy demand.

The three largest exporters in APEC are also the also the three largest importers. United States holds the first position in terms of intra APEC import share in 2005 and 2009, followed by PRC and Japan. However, in terms of import growth, United States registers contraction during 2005-2009 periods. Indonesia has the highest import growth during the period, which values reaches 123.54 percent, followed by Viet Nam with 108.16 percent growth and Philippines with 94.84 percent growth.

Likewise, as is the case with intra APEC imports, United States ranks number one in contributing to APEC imports from non APEC member economies in 2005 and 2009. PRC and Japan follow in second and third positions, respectively. Viet Nam registers the highest growth in non APEC imports share, with a staggering 247.79 percent growth during 2005-

[8] Complete table is shown in appendix 5

2009. Peru is in the second position with 159.7 percent, followed by PRC with 79.2 percent growth.

APEC economies depend more on intra APEC imports, which reached US$ 3768 billion in 2009, during the same period, non APEC imports were put at US$ 1875.8 billion. This means that around two thirds (2/3) of import in the region is among APEC member economies. However, intra APEC imports only registered growth of 13.17 percent during 2005-2009; lower than 19.5 percent for Non APEC imports in the same period.

Thus, with respect to trade, there is increasing interdependency among APEC member economies. However, comparing the growth of trade among APEC members trade and trade between APEC and non APEC members, the conclusion that can be drawn is that trade between APEC members with non APEC members has grown faster than that among APEC members during 2005-2009 period. Moreover, considering the fact that APEC members consist of developed and developing economies, the level of interdependency can be increased even further. Developing economies such as Chile; Indonesia; Mexico; and Viet Nam are usually rich in natural resources which they can export to developed economies with advanced industries. Conversely, developing economies can be potential market destinations for skilled labors and industrial goods from developed economies.

Contrary to APEC's trade flow, Table 2.11 – 2.14 show that APEC member economies purchase more securities from non APEC members and sell the same to non APEC member economies.

Data depicted in Tables 2.11 – 2.14 were compiled from International Monetary Fund's Coordinated Portfolio Investment Survey (CPIS). The CPIS provides information on economies' cross-border holdings of portfolio investment securities in equity securities and long and short-term debt securities which are not part of the balance of payments data categories of direct investment, reserve assets, or financial derivatives.

Table 2.11: Intra APEC Portfolio Investments Assets, 2001 and 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2001**	**2009**	**2001**	**2009**	**2001 - 2009**	**AVG.**
Australia	54,542.8	218,782.61	3.34	4.96	301.12	33.46
Canada	180,96	402,18	11.08	9.12	122.25	13.58
Chile	2,976.61	36,47	0.18	0.83	1125.05	125.01
Hong Kong, China	94,914	350,565	5.81	7.95	269.35	29.93
Indonesia	456	1,395	0.03	0.03	205.67	22.85
Japan	558,183	1,158,038	34.18	26.27	107.47	11.94
Republic of Korea	5,652	6,2705	0.35	1.42	1009.42	112.16
Malaysia	1,193	1,713	0.07	0.40	1385.20	153.91
Mexico	no data	1,1357	-	0.26	-	-
New Zealand	7,889	23,403	0.48	0.53	196.65	21.85
Philippines	2,000	2,848	0.12	0.06	42.35	4.71
Russian Federation	218	4,820	0.01	0.11	2111.01	234.56
Singapore	62,839	204,794	3.85	4.65	225.90	25.10
Thailand	557	19,498	0.03	0.44	3400.49	377.83
The United States	660,520	1,893,608	40.45	42.96	186.68	20.74
T O T A L	1,632,905.4	4,408,174.48	100	100	169.96	18.88

Source: International Monetary Fund 2010f

Table 2.11 shows the portfolio assets that belong to the 15 APEC member economies. The table illustrates securities from other APEC members, which are in the possession of the 15 members listed. The US dominates intra APEC investments, which is reflected by its share of 40.45 percent and 42.96 percent in 2001 and 2009, respectively. Japan is in the second position with its share of 34.18 percent and 26.27 percent in 2001 and 2009, respectively. It turns out that there is a strong linkage between trade and financial market in the region given the fact that United States and Japan turned out to be two largest intra APEC exporters and importers. However, in terms of growth, Thailand experienced the highest growth in portfolio investment assets during 2001 – 2009 periods, followed by the Russian Federation and Malaysia. Portfolio investments assets in the APEC region grew by 18.88 percent annually during 2001-2009 periods, which was slightly higher than overall worldwide growth of 18 percent. In terms of share, APEC economies contributed 38 percent and 39 percent to the world's portfolio investments assets in 2001 and 2009, respectively.

Table 2.12 shows securities from non APEC members which are owned by 15 APEC members. Among APEC members, the United States had the largest number of non-APEC securities, followed by Japan. The contribution of the other 13 member economies to non APEC portfolio investments was not significant with only less than 10 percent in 2001 and 2009.

In terms of growth, annual growth of portfolio investments assets among APEC during 2001-2009 periods was larger than the figure for APEC member economies. However, total portfolio investments assets of intra APEC was US$ 4,408 billion in 2009, while total portfolio investments assets for non APEC economies was US$. 6,889 billion. The figures underline the fact that although interdependency among financial markets among APEC members has been increasing, APEC members still invest more in securities issued by non APEC member economies than those of other APEC members.

Table 2.12: Extra APEC Portfolio Investments Assets, 2001 and 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2001**	**2009**	**2001**	**2009**	**2001 - 2009**	**AVG.**
Australia	24,810	166,982	0.94	2.42	573.06	63.67
Canada	80,276	206,435	3.03	3.00	157.16	17.46
Chile	3,781	53,936	0.14	0.78	1326.63	147.40
Hong Kong, China	110,686	460,216	4.18	6.68	315.78	35.09
Indonesia	261	3,301	0.01	0.05	1166.11	129.57
Japan	731,571	1,687,856	27.64	24.50	130.72	14.52
Republic of Korea	2,382	39,667	0.09	0.58	1565.05	173.89
Malaysia	1,087	9,341	0.04	0.14	759.49	84.39
Mexico	no data	6,067	-	0.09	-	-
New Zealand	4,533	14,451	0.17	0.21	218.83	24.31
Philippines	135	2,147	0.01	0.03	1494.99	166.11
Russian Federation	1,097	33,294	0.04	0.48	2935.00	326.11
Singapore	42,403	142,231	1.60	2.06	235.43	26.16
Thailand	268	3,913	0.01	0.06	1359.90	151.10
The United States	1,643,083	4,059,259	62.09	58.92	147.05	16.34
T O T A L	2,646,371	6,889,096	100	100	152.32	16.92

Source: International Monetary Fund 2010f

Table 2.13 shows figures on intra APEC portfolio investments liabilities, which are securities that are in the possession of other APEC members. The data are "derived data", meaning that they are derived from the creditors. Securities issued by the United States were the most purchased by other APEC members in 2001 and 2009. Securities issued in Japan and Canada was in the second position and third position, respectively. It can be inferred from Table 2.11 and Table 2.13 that the United States was the largest source and destination economy for securities investments in the APEC region. The rapid growth of the economies of Peoples Republic of China (PRC) and Viet Nam during 2001-2009 attracted other APEC members to buy their securities, attested by more than 200 percent growth of portfolio investment liabilities. Indonesia's securities were attractive investments for other APEC members, which drove their value to grow by 121 percent annually during 2001-2009 periods. It is also worth noting that the annual growth in intra APEC portfolio investment liabilities was larger than the World figure. In 2001, APEC contributed 35.4 percent to World value of portfolio investment liabilities, a figure that increased to 37 percent in 2009.

Table 2.13: Intra APEC Portfolio Investments Liabilities, 2001 and 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2001**	**2009**	**2001**	**2009**	**2001 - 2009**	**AVG.**
Australia	104,885.41	474,388.98	6.42	10.76	352.29	39.14
Brunei Darussalam	0	0	0	0	0	0
Canada	240,816	612,810	14.74	13.90	154.47	17.16
Chile	6,042	16,143	0.37	0.37	167.17	18.57
People's Republic of China	14,823	300,375	0.91	6.81	1926.41	214.05
Hong Kong, China	49,209	148,505	3.01	3.37	201.78	22.42
Indonesia	3,157	37,617	0.19	0.37	1091.54	121.28
Japan	238,052	509,916	14.58	11.57	114.20	12.69
Republic of Korea	51,233	187,104	3.14	4.24	265.20	29.47
Malaysia	16,741	40,471	1.03	0.92	141.75	15.75
Mexico	54,407	99,560	3.33	2.26	82.99	9.22
New Zealand	10,815	27,584	0.66	0.63	155.05	17.23
Peru	1,834	6,824	0.11	0.15	272.08	30.23
Philippines	8,388	14,700	0.51	0.33	75.26	8.36
Papua New Guinea	268	3,017	0.02	0.07	1025.75	113.97
The Russian Federation	10,535	59,359	0.65	1.35	463.47	51.50
Singapore	30,608	81,090	1.87	1.84	164.93	18.33
Chinese Taipei	24,637	94,072	1.51	2.13	281.83	31.31
Thailand	7,590	23,230	0.46	0.53	206.05	22.89
United States	759,058	1,668,973	46.48	37.86	119.87	13.32
Viet Nam	112	2,469	0.01	0.06	2104.46	233.83
T O T A L	1,633,208.9	4,408,206.69	100	100	169.91	18.88

Source: International Monetary Fund 2010f

Table 2.14 shows that non APEC economies invested more in securities issued in the United States than other APEC members. Japan became second to the United States. Papua New Guinea had the largest annual growth during 2001-2009, which was 482.93 percent. European economies, such as United Kingdom and Ireland contributed strongly to the growth in portfolio investments issued by Papua New Guinea. Securities from Indonesia; PRC; and

Viet Nam were also attractive to non APEC economies, registering more than 100 percent annual growth during the 2001-2009 periods.

Table 2.13 and Table 2.14 show that total portfolio investments liabilities of intra APEC was US$ 4,408 billion in 2009, while the value for non APEC reached US$ 7,646 billion. This indicates that the economies outside APEC region purchased more APEC securities than APEC members. However, it should be noted that intra APEC portfolio investments liabilities experienced higher growth than those issued by non APEC economies. This means that APEC financial market has become increasingly interconnected.

Table 2.14: Extra APEC Portfolio Investments Liabilities, 2001 and 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2001**	**2009**	**2001**	**2009**	**2001 - 2009**	**AVG.**
Australia	65,088	337,629	2.18	4.42	418.73	46.53
Brunei Darussalam	2	15	0.00	0.00	650.00	72.22
Canada	78,658	276,829	2.64	3.62	251.94	27.99
Chile	2,344	6,765	0.08	0.09	188.65	20.96
People's Republic of China	5,436	106,613	0.18	1.39	1861.24	206.80
Hong Kong, China	47,469	106,177	1.59	1.39	123.68	13.74
Indonesia	2,391	3,3905	0.08	0.44	1318.03	146.45
Japan	304,239	687,645	10.21	8.99	126.02	14.00
Republic of Korea	25,557	121,924	0.86	1.59	377.08	41.90
Malaysia	5,847	29,061	0.20	0.38	397.07	44.12
Mexico	31,224	47,889	1.05	0.63	53.37	5.93
New Zealand	7,523	11,499	0.25	0.15	52.86	5.87
Peru	1,237	6,092	0.04	0.08	392.48	43.61
Philippines	4,364	14,283	0.15	0.19	227.27	25.25
Papua New Guinea	41	1,823	0.00	0.02	4346.34	482.93
Russian Federation	15,720	77,134	0.53	1.01	390.69	43.41
Singapore	20,086	51,753	0.67	0.68	157.66	17.52
Chinese Taipei	16,460	62,282	0.55	0.81	278.38	30.93
Thailand	4,418	26,013	0.15	0.34	488.85	54.32
United States	2,341,822	5,638,924	78.58	73.75	140.79	15.64
Viet Nam	79	1,756	0.003	0.02	2122.78	235.86
T O T A L	2,980,002	7,646,013	100	100	156.58	17.40

Source: International Monetary Fund 2010f

APEC region has open and integrated economic and financial markets. The financial market integration in this study is proxied by using stock market composite index (SMCI). The results show that a dominant economy's SMCI influence SMCI of one economy. APEC financial markets stability is highly depended on the stability of dominant economies' financial markets, such as Japan and United States[9].

This means to maintain APEC financial markets stability, the region has to maintain each member's financial market stability. This general conclusion will be dug deeper by analyzing four APEC economies in term of their macroeconomic condition, financial market condition,

[9] Basic model and data exercised is shown in appendix 6

their financial market dependency to other markets in the region, and their efforts in maintaining financial market stability. A regression of SMCI for four sample economies (Australia; Indonesia; Mexico; and United States) is also employed to deliver a comprehensive study on the economies[10]. The results show that each economy' SMCI is also significantly influenced by other economy's SMCI which are Japanese SMCI and US SMCI

[10] Basic model derived is shown in appendix 7

III. Analyses of Four APEC Economies

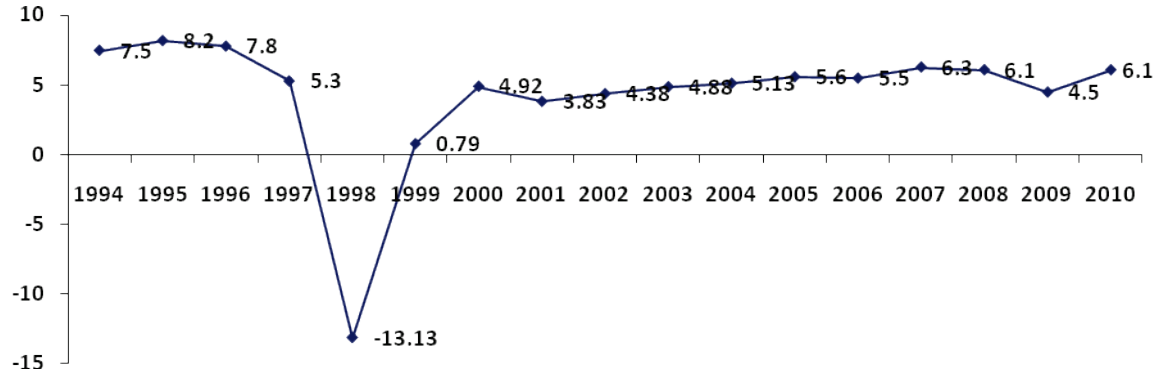
III.1 Indonesia

In general, Indonesia has performed well in improving macroeconomics and financial stability since the Asian economic crisis hit the economy. As a result, the financial system did not suffer much from the contagion effect that derived from the global financial crisis making Indonesia one of the best performing economies in 2009. This fact is supported by Financial Sector Assessment Program findings, which underscored the fact that the Indonesia financial system had made remarkable progress over the last decade, which helped it to withstand the contagion effect of the global financial crisis. The economy has strong fundamentals, with most Indonesian banks reporting high capital, comfortable levels of liquidity and solid profitability. Banking supervision was also regarded as having been significantly enhanced, but more room for improvement was needed in dealing with problem banks. Other areas for improvement included the need to foster the development of a viable capital market which was expected to contribute to the reduction in reliance on banking sector funding; strengthening contract enforcement which was considered fundamental to improving the efficiency of the financial sector; and other issues that go well beyond the financial sector (Zavadjil 2010). In brief, Indonesia's financial sector has become a powerful system and it is a positive signal for both domestic and foreign investors.

III.1.1 Macroeconomic Condition

Indonesia is a small open economy and the largest one in Southeast Asia, with a population of 235 million and nominal GDP worth US$ 695 billion in 2010.

Figure 3.1: Indonesia GDP Growth, Nominal Value (%)

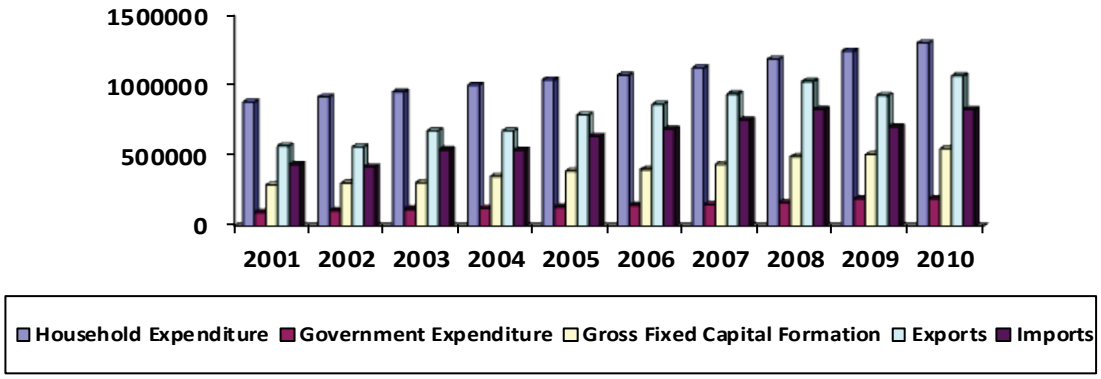


Source: Bank Indonesia 2005-2010

As a small open economy, Indonesia is often vulnerable to international crises. When the Asian crisis struck in 1997, Indonesia was one of the Asian economies hit hard by the crisis. The crisis led to the fall of GDP growth. At the time of the crisis, Indonesia registered negative growth of 13.13 percent, significantly below the 7.8 percent recorded in 1996 (Figure 3.1). Since then, Indonesia's economy has registered sluggish growth, albeit strong performance in several sectors. When the global financial crisis spread worldwide, Indonesia was obviously in no position to isolate itself from the fallout of the slowing global economy. Even though the impact was not as bad as that unleashed by the Asian crisis, the 2007-2008

economic slow-down was still clearly evident. During 2008, economic growth reached 6.1 percent, slightly below the 6.3 percent level recorded in the previous year. However, the global turmoil sluggish world economic growth pulled down Indonesia's economic growth to just 4.5 percent in 2009. Nevertheless, Indonesia was among the world's top performing economies throughout the crisis as most economies slipped into recession. In 2010, Indonesia's gross domestic product grew 6.1 percent.

Figure 3.2: Indonesia GDP by Expenditure at 2000 Constant Prices, Nominal Value (IDR Billion)

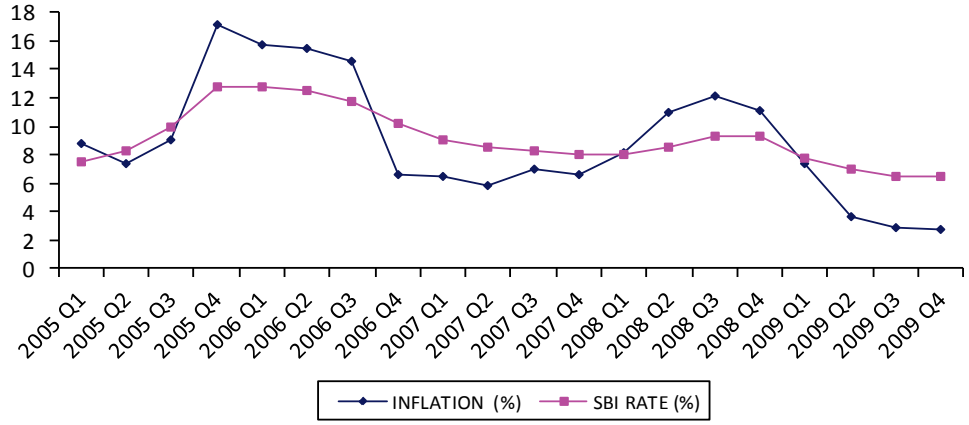


Source: Bank Indonesia 2005-2010

Indonesia's GDP growth was largely driven by household expenditure, which contributed most to GDP, accounting for more than 50 percent between 2001 and 2010. Besides, exports were the second largest contributor to GDP hence played a significant role in supporting the economic growth. From 2001 to 2009, growth of exports was about 62 percent to 7.8 percent average growth in a year.

Even though the crisis has slowed down Indonesia's economic growth, the government stimulus packages helped in increasing job absorption. The rate of unemployment in Indonesia fell from 10.26 percent in February 2005 to 8.39 percent in August 2008 and continued to decrease to 7.87 percent in August 2009.

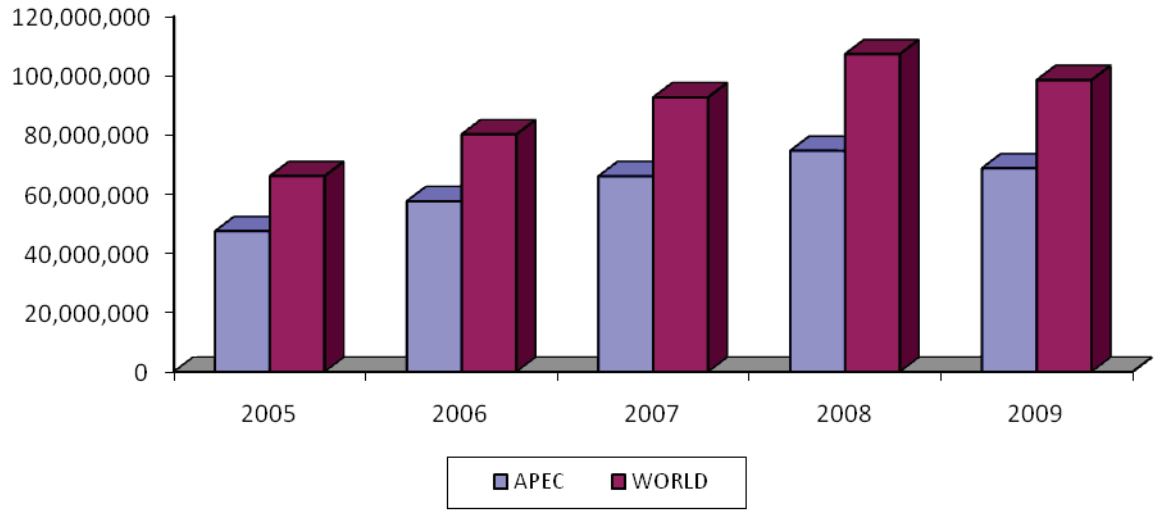
Figure 3.3: Inflation and Interest Rate of Indonesia



Source: Bank Indonesia 2005-2009

In the 3rd quarter of 2008, Indonesian government raised its benchmark rate to 9.25 percent amid inflationary pressures and global economy concerns. The key rate was increased to mitigate high inflationary pressures as well as an effort in anticipation of the global financial crisis. The economy's year-on-year inflation spiked to its highest level in September 2008, rising by 12.14 percent compared to the previous year. During the last quarter of 2009, Indonesia posted year-on-year inflation of 2.8 percent, which was due to a decrease in administered prices of 3.26 percent throughout the year. The prices of imports were quiet low during 2009 due to low demand as a result of the global economic crisis. Import prices plummeted further as the rupiah appreciated against the American dollar. Indonesian government kept its benchmark interest rate unchanged at a record as low as 6.5 percent since the 3rd quarter of 2009.

Figure 3.4: Indonesia's Non-Oil and Gas Export to APEC Region and to the World (US$ Thousands)



Source: Bank Indonesia 2005-2009

The strategic location of sea lanes of Indonesian archipelago had traditionally is an important facilitator of inter-island and international trades. The APEC region is still the largest export destination for Indonesian non-oil and gas sectors, contributing 66.6 percent to the Indonesia's export market in 2009, a slight decrease from 68.6 percent recorded in 2005.

For individual economies, Japan is the major destination for Indonesia's exports, accounting for 12.45 percent in 2009. Besides, PRC has gradually become an important trading partner and contributed to 11.09 percent of Indonesia's exports during 2009, followed by the United States which was recorded a contribution of 10.56 percent (Table 3.1). PRC's; Japan's; and the United States' contribution have made APEC region the major export destination for Indonesian commodities, which accounted for 34.11 percent of total world's share in 2009 (Table 3.1).

Even though Japan and the United States are the main Indonesian export markets, their shares to total worlds have decreased. In fact, in 2009 Indonesia's` exports to Japan and the United States contracted by 8.09 percent and 15.97 percent, respectively. Conversely, in 2009 Indonesia's exports to the Republic of Korea and Indian markets have increased sharply, accounting for 13.78 percent and 10.08 percent, respectively compared to the previous year (Table 3.1).

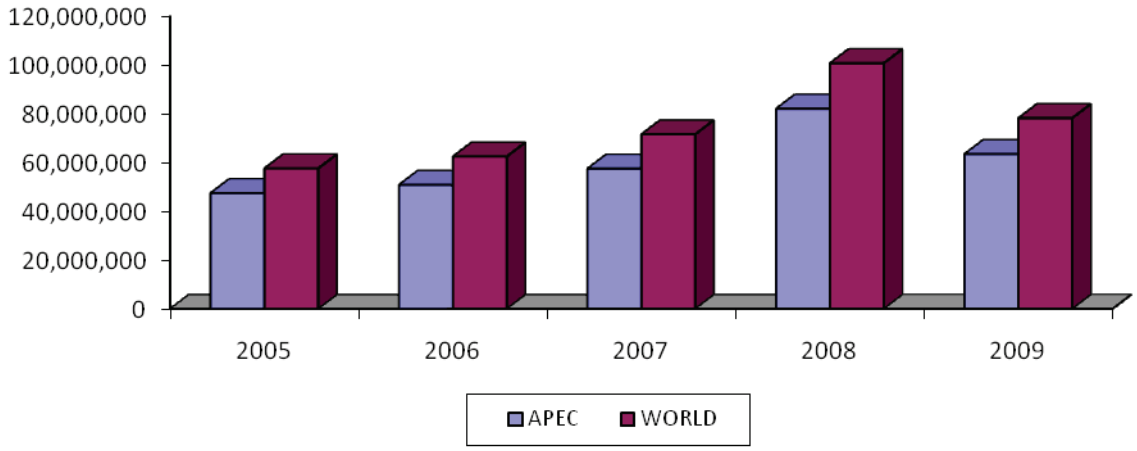
Table 3.1: Non-Oil and Gas Export of Indonesia based on Major Economies of Origin, 2009

TOP10 Destinations For Exports	Percent Share	Percent Growth
Japan	12.451	-8.09
People's Republic of China	11.091	14.03
The United States	10.564	-15.97
Singapore	8.995	-15.65
India	7.592	10.08
Malaysia	5.708	-9.01
Republic of Korea	5.190	13.78
Netherland	2.997	-23.12
Chinese Taipei	2.906	0.82
Thailand	2.629	-20.46
Total Exports	100.0	-8.13

Source: Bank Indonesia 2005-2009

For Indonesia, non-oil and gas have always been important. During 2009, of the economy's total exports, Indonesian non-oil and gas export, accounted for 82.88 percent, surpassing its oil and gas exports, which accounted for 17.12 percent. The major commodities of Indonesia's non-oil export consist of mineral products, machinery and equipment, and fat, oil, and waxes, contributing 24.44 percent, 15.84 percent, and 14.62 percent, respectively to the Indonesia's total export in 2009. This means that oil and gas and mineral products accounted for 41.56 percent of Indonesia's total exports. This will make the volatility of the commodities' prices influence Indonesia's export significantly.

Figure 3.5: Indonesia's Non-Oil and Gas Import from APEC Region and the World, 2009 (US$ Thousands)



Source: Bank Indonesia 2005-2009

The APEC region is the main source of Indonesian non-oil and gas imports, contributing 78.42 percent of the total imports in 2009, a slight decrease from 80.69 percent recorded in 2005. PRC is the largest source of Indonesia's non-oil and gas imports in 2009, followed by Japan; Singapore; the United States; and Thailand. By comparison, between 2005 and 2009, the quantity of Indonesia's non-oil and gas export is still higher than its imports. Consequently, Indonesia has been able to achieve a surplus in international trade within APEC region.

Table 3.2: Non-Oil and Gas Import of Indonesia based on Major Economies of Origin, 2009

TOP10 Origin for Imports	Percent Share	Percent Growth
People's Republic of China	18.915	-15.90
Japan	12.413	-35.12

Singapore	12.241	-18.64
The United States	9.005	-10.42
Thailand	5.770	-28.58
Australia	5.235	-16.76
Republic of Korea	4.793	-24.84
Malaysia	4.164	-18.36
Germany	2.98	-26.74
India	2.67	-17.89
TOTAL IMPORT	100.00	-22.34

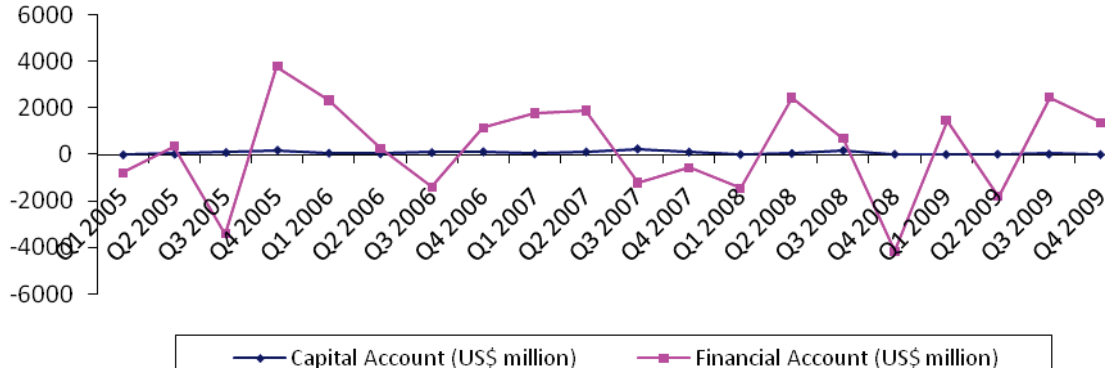
Source: Bank Indonesia 2005-2009

Based on category of commodities, the major commodity of Indonesian non-oil imports constituted machinery and equipment, and accounted for 27.86 percent of the Indonesia's total imports in 2009; followed by vehicles, base metal and articles of base metals, and product of chemical, accounted for 10.99 percent, 10.40 percent, and 10.20 percent respectively.

In order to achieve APEC's free trade goals known as Bogor Goals, the long term goals of free and open trade and investment in the Asia Pacific that should be achieved by 2010 by industrialized economies and 2020 by developing economies, Indonesia has reduced its tariffs and enhanced the transparency of the tariff regimes. As a result, in 2009 Indonesia's tariff ranging from 0% to 10% increased from 56.09 percent of Indonesia's total tariff lines in 1996 to 82.78 percent in 2009.

Besides, Indonesia's tariffs are higher than 35 percent, constituted only about 1.94 percent of the total tariff lines in 2009. With respect to simplifying procedure of export and import facilitation, Indonesia has been implementing Tariff Harmonization Program for all its products (APEC 2010b). Therefore, Indonesia is more likely to be able to boost its foreign trade and meet the Bogor Goals.

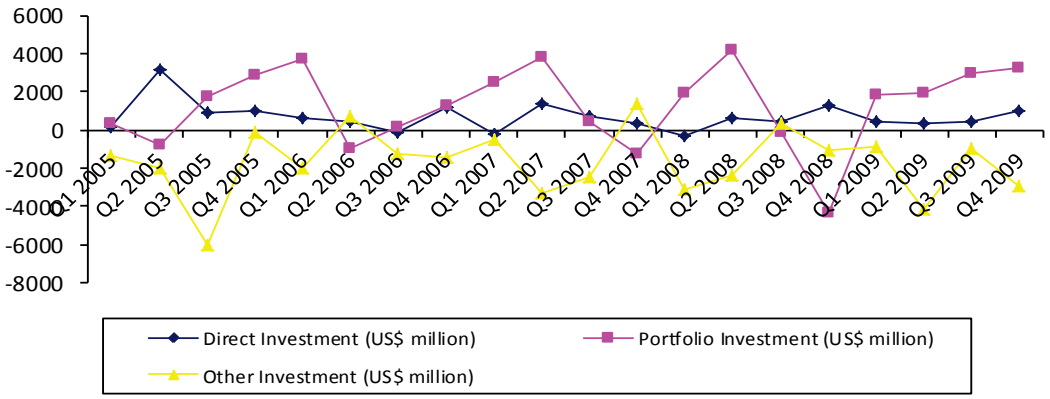
Figure 3.6: Capital and Financial Account (2005 – 2009)



Source: Bank Indonesia 2005-2009

From 2005 to 2009, the financial account has fluctuated significantly, whereas capital account has experienced a surplus since 2005 under a relatively stable amount. During the last quarter of 2008, the financial account deficit reached US$ 4,144 million as an impact of the global turmoil.

Figure 3.7: Direct, Portfolio and Other Investment (2005 – 2009)



Source: Bank Indonesia 2005-2009

In general, direct investment is more stable than portfolio and other investments. When the global financial crisis hit, portfolio and other investments experienced higher fluctuation than direct investments. The highest value for direct investments in 2008 was US$ 1,281 million, whereas the lowest one was recorded at US$ -271 million. As regards, portfolio investment, the highest and lowest value recorded at US$ 1984 million and US$ -4,377 million respectively, whereas for other investments the highest value reached US$ - 1,051 million and the lowest value was US$ -3,160 million. This indicates that portfolio and other investments are more vulnerable to shocks than direct investments, particularly because Indonesia is now more likely to rely on debt securities and equities.

However, the portfolio investment is still attractive and takes up a huge number of foreign investment flows to the economy. The ownership of government securities (SBN) was increasingly diversified, reflected from the reduction of bank ownership, whereas ownership by non-bank, including foreign investors has increased significantly. The increase of foreign ownership shows that market participants consider SBN as an attractive investment that gives high returns. Between 2004 and 2010, total foreign ownership of funds in government securities market (SBN) increased significantly. It is recorded at IDR 10.74 trillion in 2004 to IDR 108 trillion in 2009. During 2010, the total foreign ownership of funds in SBN reached IDR 195.76 trillion. The increase of foreign funds was also accompanied by a rise in the total outstanding from SBN to IDR 581.75 trillion as of December 2009. In 2010, it continued increasing, recorded at IDR 641.21 trillion.

Table 3.3: Ownership of Government Securities (2004 – 2010)

Ownership of Government Securities	2004	2005	2006	2007	2008	2009	2010
Bank (% of total)	72.02	72.44	64.27	56.23	49.22	43.72	33.88
Non Bank (% of total)	27.98	24.93	33.93	40.66	46.40	52.41	63.40
Foreign (% of total)	2.69	7.78	13.12	16.36	16.66	18.56	30.53

Source: Debt Management Office 2010a; Debt Management Office 2011a

Table 3.4: Foreign Ownership of SBIs (2005 – 2010)

	2005	2006	2007	2008	2009	2010
BI Certificates (IDR trillion)	74,632	209,756	247,926	280,128	259,864	203,110
Foreign Ownership (%)	19.80	8.61	11.29	4.69	17.00	27.04

Source: Bank Indonesia 2010a; Bank Indonesia 2011a; Debt Management Office 2010b; Debt Management Office 2011b

Bank Indonesia's certificates (SBIs) were more severely affected by the global financial crisis than government securities. The foreign ownership of SBIs has dropped significantly from about IDR 27,983.85 trillion (US$ 2,971 million) or 11 percent of total outstanding in 2007 to approximately IDR 8,453.4 trillion (US$ 722 million) or less than 5 percent of total outstanding in 2008. However, it increased significantly during 2009, accounted for IDR 44,180 trillion (US$ 4,700 million) at the end of the year. In 2010, it rose again to IDR 54,926 trillion (US$ 6,190 million).

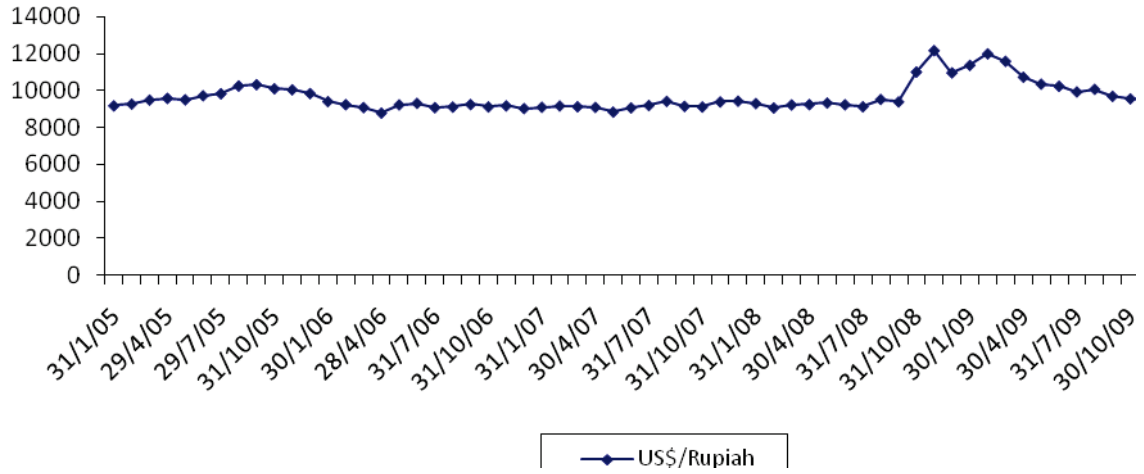
Table 3.5: Net Equity Foreign Purchase (2006 – 2010)

	21/12/06	28/12/07	30/12/08	30/12/09	28/12/10
Stock Exchange :					
- Local Investors (IDR Trillion)	187.54	400.94	210.23	378.78	695,25
- Foreign Investors (IDR trillion)	515.82	790.39	436.30	772.57	1,174.68
Corporate Bond :					
- Local Investors (IDR Trillion)	60.44	76.02	67.49	86.40	110.71
- Foreign Investors (IDR Trillion)	3.29	3.65	2.71	2.69	4.81

Source: Indonesian Central Securities Depository 2006-2010

As of 28 December 2009, foreign ownership of equity on Indonesia Stock Exchange (IDX) was recorded at IDR 772.57 trillion (67 percent of total equity market capitalization), a significant increase from IDR 515.82 trillion in 2006. It continued increasing in 2010, grew by 38 percent compared to the previous year. The foreign ownership was much higher than local investors and it can be indicated that foreign investors become an important market player in Indonesia. Conversely, within the corporate bond market, local investors were more dominant. Up to 2009, the local investors controlled the ownership of equity on corporate bond, about 97 percent of total corporate bond capitalization (IDR 80.84 trillion); whereas foreign investors had approximately 3 percent (IDR 2.7 trillion). Recent data on 2010 also shows similar situation, in which local investors' ownership still dominated the corporate bond.

Figure 3.8: Exchange Rate of Indonesia

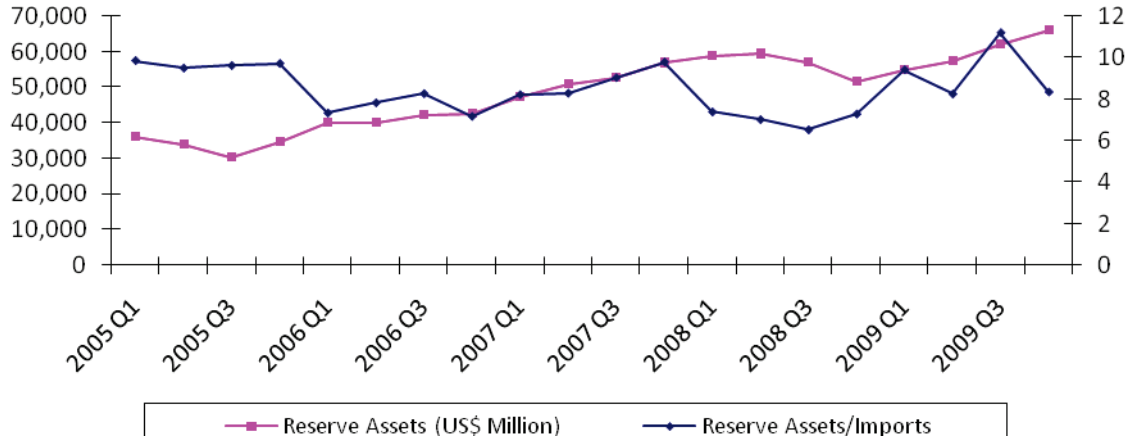


Source: Bank Indonesia 2005-2009
Note: US$/Rupiah = average exchange rate

The global crisis in 2008 also affected the IDR exchange rate against the US Dollar which depreciated to the level of IDR 12,151 in November 2008. Hence, the central bank has

intervened in the foreign exchange market, seeking to stabilize the currency. Nevertheless, after measures were taken, the rupiah strengthened to IDR 9400 per US$ by the end of 2009.

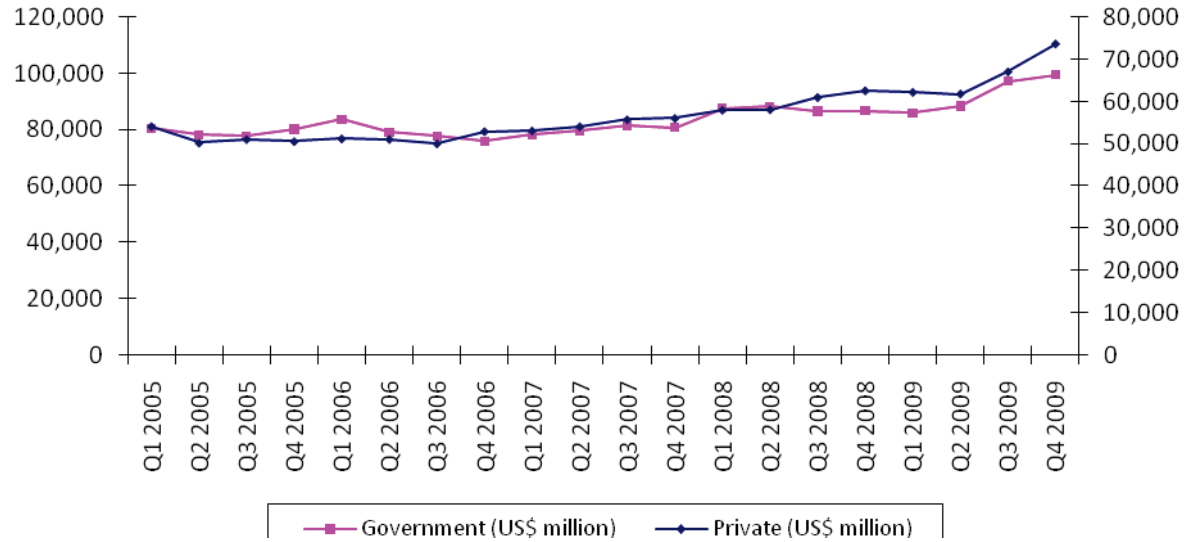
Figure 3.9: Indonesia's Reserves Assets



Source: Bank Indonesia 2005-2009

International reserves had been in the increasing trend but were halted as the crisis broke out. Eventually it started to recover again as exports picked up. At the end of 2009, Indonesia's reserves assets reached US$ 66.1 billion (equal to 6.6 import months and government foreign loan repayment), a significant increase compared to the beginning of 2009 amounted for US$ 55.8 billion.

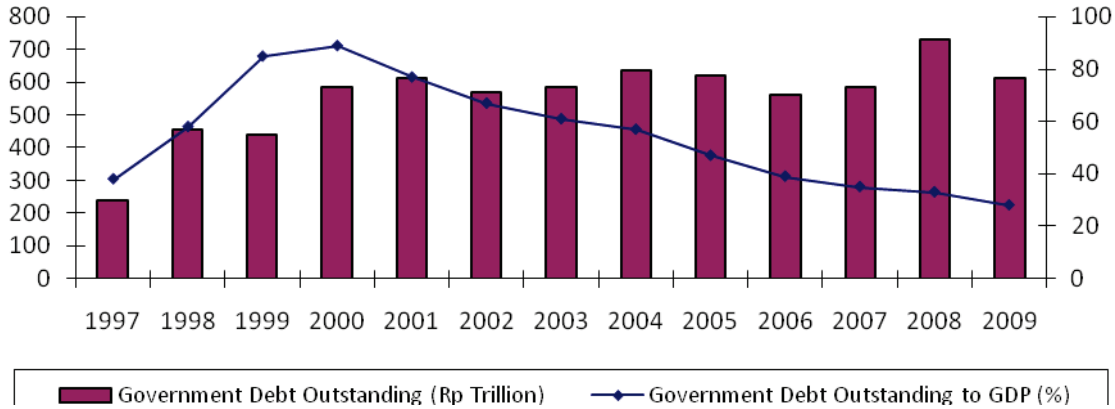
Figure 3.10: External Debt Outstanding of Government and Private



Source: Bank Indonesia 2005-2009

Indonesia's government debt is higher than private debt. Both government and private debt increased in early 2008. Indonesia's total external outstanding debt at the end of 2009 was US$172,871 million, increased from US$ 130,652 million at the end of 2005. The total amount of government outstanding external debt at the same time amounted to US$ 99.27 billion and outstanding private debt was recorded at US$ 73.61 billion.

Figure 3.11: Government Debt Outstanding (1997 – 2009)



Source: Debt Management Office 2010b

Even though government outstanding debt had increased due to deficit of national budget, it was still far below GDP growth rate. Therefore, the ratio of government outstanding debt to GDP continued to fall, accounted for 57 percent in 2004 and to 32 percent in 2009, a better performance compared to 1997 that was recorded at 3 percent (Debt Management Office 2010b).

III.1.2 Financial Market Condition

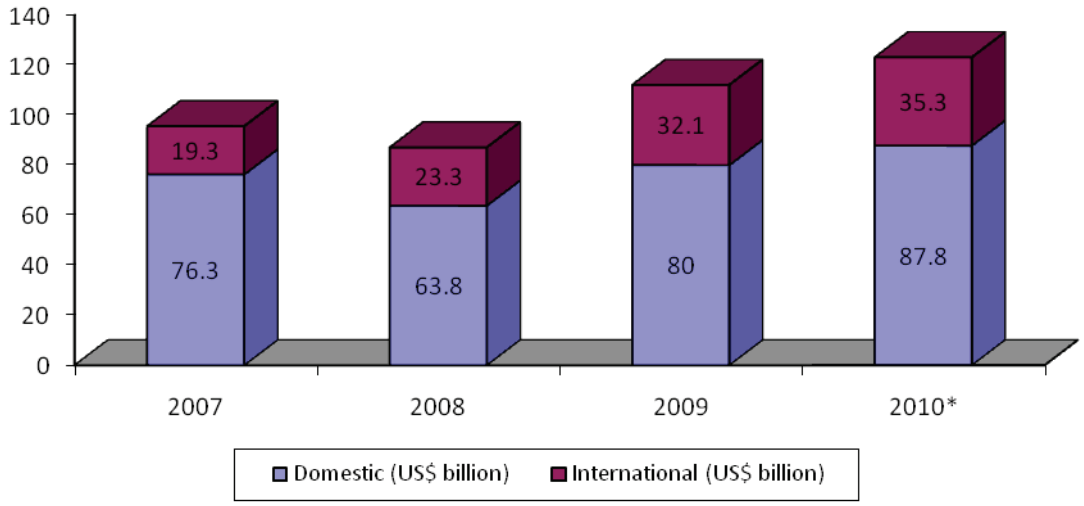
Indonesia cannot isolate itself from market integration. The Indonesian economy embarked on financial openness as early as late 1960s. Afterward, the government launched a series of deregulation policies and measures designed to improve the performance of the economy. State-owned enterprise divestment, application of floating exchange rate instead of previous managed floating, and tax reform are examples of policies implemented which were aimed at creating a more competitive and efficient market in order to attract new investment into the economy. Nowadays, Goldman Sachs has categorized Indonesia into the Next Eleven (N-11), emerging markets that are most likely to enter the ranks of the world's largest economies in the 21th century (Rossi, 2010).

However, globalization does not come without risks. Like other economies, Indonesia has faced various problems in its economy especially in relation to the impact of openness. Economic openness was the cause of the fall of Indonesian economy because of the Asian crisis in 1997/1998. At the time, the Indonesian economy witnessed the most rigorous pressures. The pressures, precipitated by the exchange rate crisis in 1997, adversely affected the performance of the economy and became a prolonged economic crisis. The crisis impacted swiftly thanks to the openness of the economy and its reliance on the external sector, and was further exacerbated by the existing structural weaknesses in the economy, most notably and particularly in the financial sector and banking. However, with respect to the recent recession, Indonesia was one of the strongest performing economies during the global crisis in 2008.

Economies, which are more open to trade and have internationally integrated financial systems, are likely to be more vulnerable to global shocks although financial integration should also offer risk sharing opportunities and help smooth output and consumption.

A comparison between domestic and international outstanding debt securities is one of the indicators used in identifying the degree of financial openness of an economy. A higher amount of financing drawn from the international markets is indicative of greater financial openness. Indonesia's international debt security was significantly lower than domestic ones. However, it had increased significantly from US$ 19.3 billion in 2007 to US$ 35.3 in March 2010 (Figure 3.12). The majority of Indonesia's International debt securities are dominated by financial institutions' securities, followed by government and corporate issuers respectively.

Figure 3.12: Indonesia Debt Securities Outstanding

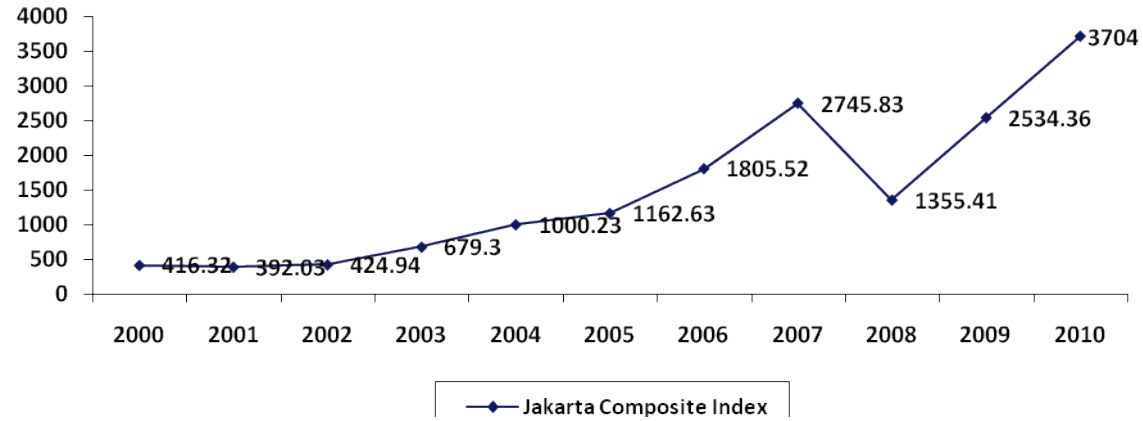


Source: Bank for International Settlement 2010
Note *: March 2010

Indonesia Stock Exchange is the only bourse in Indonesia. Formerly, there were two main bourses in Indonesia namely Surabaya Stock Exchange (SSX) and Jakarta Stock Exchange (JSX). By the end of 2007, SSX was merged with JSX, which later became IDX. Since then, IDX has been acting as the only bourse that facilitates equities, fixed incomes, and derivatives instruments trading. The existence of IDX has strengthened Indonesia's capital market enabling it to attract more people to invest in the economy as it would allow them to trade stocks and derivatives in a one-stop shop.

IDX has been dominated by foreign ownership, who by 28 December 2009 accounted for 67 percent of total equity market capitalization, as mentioned earlier. The interest of foreign investors to invest in Indonesia attests to the fact that IDX is considered as an attractive and profitable market due to a low price valuation and strengthened fundamentals of macro economy. Therefore, foreign investors have shown their interest to raise their portfolio share within Indonesia's stock market. Besides, as a consequence of the Indonesia's financial market integration with the global financial market, the financial asset issued by Indonesian companies and traded in stock and bond markets are considered attractive, particularly because there was an excess liquidity within global financial market.

Figure 3.13: Indonesian Stock Market Index /Jakarta Composite Index (2000 – 2010)



Source: Bank Indonesia 2000-2010

The deteriorating global economy had an impact on Indonesian Stock Market. During 2008, the stock exchange index dropped by 50.64 percent compared to the previous year. Afterward, it had increased significantly so that at by end of 2009, the index was recorded at 2,534.36. Similarly, equity market capitalization also fell from IDR 1,988.33 trillion in 2007 to IDR 1,076.49 trillion in 2008. After going through the slowdown performance due to the global crisis, by the end of 2009, equity market capitalization increased by 87.59 percent compared to the previous year. In 2010, the equity market capitalization keep increasing, reached IDR 3,247.10 trillion. The 10 biggest market capitalizations are dominated by telecommunications companies (Telekomunikasi Indonesia), mining companies (Adaro Energy and PGN), banking (Bank Central Asia, Bank Rakyat Indonesia and Bank Mandiri), trade, service and investment (United Tractors), chemicals (Indocement Tunggal Prakarsa) and miscellaneous industry (Unilever Indonesia and Astra International). The trade, service, and investment industry was less affected by the crisis as it was able to increase its market capitalization significantly, whereas plantation and chemicals were more severely affected (Indonesia Stock Exchange 2010a).

Between 2005 and 2009, the equity market capitalization's roles relative to GDP showed a significant increase. In 2008, due to the global crisis the contribution somewhat declined to 21.74 percent compared to the previous year which was recorded at 50.33 percent. However, in 2009 the IDX market capitalization's recovery has developed, resulting in a higher ratio than previous period, accounted for 35.97 percent of Indonesia's GDP respectively.

Table 3.6: Share of Financial Institution Asset to GDP

Financial Institution	2005	2006	2007	2008	2009	2010
Commercial Banks to GDP (%)	52.98	50.73	50.28	46.67	45.14	46.85
Rural Banks to GDP (%)	0.74	0.69	0.70	0.66	0.67	0.71
Insurance to GDP (%)	5.03	5.24	5.79	4.92	5.62	6.22
Finance Companies to GDP (%)	3.48	3.26	3.22	3.40	3.11	3.59
Pension Fund to GDP (%)	2.33	2.38	2.36	1.82	2.00	2.02
Equity Market Capitalization to GDP (%)	28.88	37.41	50.33	21.74	35.97	50.55

Source: Bank Indonesia 2010b; Indonesia Capital Market and Financial Institutions Supervisory Agency 2010; Indonesia Capital Market and Financial Institution Supervisory Agency 2011; Indonesia Stock Exchange 2010b; Indonesia Stock Exchange 2011

The Table 3.6 shows that between 2005 and 2009, financial market was still dominated by banks even though the role of capital market had become very important. Meanwhile, insurance had experienced rapid development in Indonesia. It can be seen from its share asset to GDP between 2005 and 2009.

Furthermore, there were no significant changes in the structure of the Indonesian financial system between 2005 and 2010. According to Bank Indonesia (2010b), the banking industry, consisting of commercial banks and rural banks continued to dominate the sector but with a shrinking share, accounted for about 79.5 percent share of the total financial sector assets in 2009. It indicated that banks played an important role in the operation of the Indonesian economy. In addition to banks, finance companies also experienced a declining share, amounting for 5.3 percent in 2005 to 4.4 percent in 2009. Meanwhile, the share of securities companies had increased significantly, followed by insurance companies, recorded at 2.7 percent and 8.8 percent, respectively in 2009.

III.1.3 Development of Financial Institution

As described above, financial institutions in Indonesia can be classified into: Depository Financial Institution and Non Depository Financial Institution/Non-Banking Financial Institution. Depository Financial Institution comprises commercial banks and rural banks/people's credit banks; whereas Non-Banking Financial Institution consists of insurance companies, pension funds, finance companies, securities, and pawnshops.

1. Depository Financial Institution
According to the Banking Act No 7/1992 as amended by the Act No 10/1998, Indonesian banking institutions are typically classified into commercial and rural banks.

Commercial Banks
Commercial banks represent the largest industry in financial sector. Various performance indicators for commercial banks were relatively sound, along with expansive credit growth that reasonably supported high domestic economic growth. The capital ratio of banks was well maintained but declined slightly in 2008 due to a strong credit expansion (Table 3.7). Other performance indicators for commercial banks, such as profitability and liquidity, were good despite mounting global risk. Credit expansion in 2009 far exceeded 2005, with investment credit experiencing the highest growth.

Table 3.7: Indicators of Commercial Banks

	2005	2006	2007	2008	2009	2010
Number of commercial banks	131	130	130	124	121	122
Total Assets (billion of Rp)	1,469,827	1,693,850	1,986,501	2,310,557	2,534,106	3,008,853
LDR (%)	59.66	61.56	66.32	74.58	72.88	75.21
ROA (%)	2.55	2.64	2.78	2.33	2.60	2.86
NPL (%)	7.56	6.07	4.07	3.20	3.31	2.56
CAR (%)	19.30	21.27	19.30	16.76	17.42	18.29

Source: Bank Indonesia 2010b; Bank Indonesia 2011b

Rural Banks/People's Credit Banks (Bank Perkreditan Rakyat)
Furthermore, rural banks maintained relatively sound resilience against the global financial crisis. Performance indicators were sustained and improved, particularly with reference to the intermediation function that underpinned real sector financing. In 2009, the rural banks'

financial assets reached IDR 37,554 billion, a significant increased from IDR 17,161 billion in 2005 (Table 3.8). It continued rising in 2010, grew by 21.8 percent compare to the previous year. The increase in rural bank intermediation helped finance economic sectors, especially the micro, small, and medium enterprises.

Table 3.8: Rural Banks Indicators

	2005	2006	2007	2008	2009	2010
Number of rural banks	2,009	1,880	1,817	1,772	1,733	1,706
Total Assets (billions of Rp)	20,393	23,045	27,741	32,533	37,554	45,742
Credits (billions of Rp)	14,654	16,953	20,684	25,480	28,012	33,878
Deposits (billions of Rp)	15,345	17,879	21,696	25,944	24,496	36,420
Core Capital (billions of Rp)	2,525	1,525	4,149	4,926	5,691	6,450
LDR (%)	82.00	87.37	80.03	82.54	79.61	79.02
NPL (%)	7.97	9.73	7.98	9.88	6.90	6.12
ROA (%)	2.96	2.21	2.39	2.61	3.08	3.16
ROE (%)	25.23	19.25	20.98	22.67	25.08	26.71

Source: Bank Indonesia 2010b; Bank Indonesia 2011b

The accumulation of deposits and credit extension by rural banks improved in spite of a contraction in the total number of rural banks by 276 between 2005 and 2009. It continued decreasing in 2010. The number of rural banks declined because of internal consolidations and mergers. From 2005 to 2009, credit increased by IDR 13,358 billion (91.15 percent), while deposits grew by IDR 9,151 billion (59.64 percent), which resulted in a Loan to Deposit Ratio (LDR) of 79.61 percent. There was a slight deterioration in LDR during 2009 compared to the previous year as the deposits also declined.

2. Non Depository Financial Institution/Non-Bank Financial Institution (NFBI)
Non Depository Financial Institution in Indonesia can be divided into: market, insurance, finance companies, pension fund, and the financial institution in a capital market.

Insurance Companies

Between 2005 and 2010 the insurance indicators performed well. The total assets of insurance companies and reinsurance companies, either commercial or non-commercial, have grown from IDR 139,414.6 billion in 2005 to IDR 315,615.2 billion in 2009. It keeps increasing in 2010, recorded for about IDR 399,600 billion. Even though the global finance crisis that occurred in 2008 had influenced the industry, the recovery developed during 2009, especially in terms of investment. In 2008, the total investment of insurance industry grew only 4.5 percent, while total investment in 2009 recorded an increase by 34 percent.

Table 3.9: Insurance

Description	2005	2006	2007	2008	2009	2010
Number of insurance companies (Unit)	157	157	149	144	140	142
Total Asset (billion Rp)	139,414.6	174,934.2	228,928.6	243,579.37	321,092.4	399,600
Total Investments (billion Rp)	119,597.10	152,938.6	202,227.6	211,466.87	283,219.7	356,300

Source: Indonesia Capital Market and Financial Institutions Supervisory Agency 2005-2011

Finance Companies

The year 2009 was a challenging year for finance companies industry. Compared to 2008, the total number of companies decreased from 212 companies in 2008 to 198 in 2009, a decrease by 6.6 percent. However, it did not automatically reduce the growth of the industry assets. As shown in table 3.10, the total assets of finance companies industry increased by 3.5 percent from IDR 168.5 trillion in 2008 to IDR 174.4 trillion in 2009. The industry assets

continued increasing, reached IDR 230.3 trillion in 2010. Likewise, the total receivables went up by 3.9 percent or increased from IDR 137.2 trillion in 2008 to IDR 142.5 trillion in 2009. Net profit of finance companies industry also experienced an increase in 2009 by 21.9 percent from IDR 6.4 trillion in 2008 to IDR 7.8 trillion in 2009. These indicate that the role of finance companies in providing funding sources for public obviously had increased.

Table 3.10: Finance Companies Activities

Description	2005	2006	2007	2008	2009	2010
Number of Finance Companies (Unit)	236	214	217	212	198	192
Total Assets (trillion of Rp)	96.5	108.9	127.3	168.5	174.4	230.3
Financing Activities (trillion of Rp)	102.5	92.8	107.7	137.2	142.5	186
Total Loan/Borrowing (trillion of Rp)	61.1	65.4	76.8	109.9	102	n.a
Profit and Losses (trillion of Rp)	3.5	3.1	4.4	6.4	7.8	n.a

Source: Indonesia Capital Market and Financial Institutions Supervisory Agency 2010; Indonesia Capital Market and Financial Institutions Supervisory Agency 2011

Pension Fund

The Government promotes pension funds as it believes they will play an important role in mobilizing long-term funds.

Table 3.11: Pension Fund

Description	2005	2006	2007	2008	2009	2010
Number of Pension Fund (Unit)	312	297	288	281	276	271
Total Net Assets (trillion of Rp)	64.77	79.45	93.20	90.35	112.5	130.06
Total Investment (trillion of Rp)	60.89	74.97	87.90	86.55	108	125.43

Source: Indonesia Capital Market and Financial Institutions Supervisory Agency 2010; Indonesia Capital Market and Financial Institutions Supervisory Agency 2011

The performance of pension funds also continued to impress despite the decline in the number of pension fund companies. The asset value of pension fund has increased up to IDR 22.15 trillion (24.5 percent) in 2009. Within the last five years, the growth of pension funds' assets was shown very volatile. The global financial crisis occurred in 2008 had an adverse effect on the pension fund industry. However, in 2009, pension fund industry experienced recovery and asset valued increased to IDR 112.5 trillion. The industry continued recover in 2010, the industry asset rose by 15.58 percent, reached IDR 1130.06 trillion.

Pawnshop

Based on the Indonesia Capital Market and Financial Institutions Supervisory Agency/BAPEPAM-LK (2010), the growth of pawnshop credit turn over in the last five years has always risen significantly, amounting of IDR 10.4 trillion in 2004 to IDR 4.5 trillion in 2008. This indicated that pawnshop service provides a large potential market and is welcomed by Indonesians. This credit turnover would be higher when data from other pawnshops was included. However, the lack of legal support made the growth of pawnshop was difficult to assess. Therefore, it is required to develop a legal framework for pawnshop service supervision, business licensing, and sanctions.

III.1.4 Indonesia Regulatory Framework

The financial market in Indonesia underwent a drastic reform after the Asian economic crisis in 1997/1998. Some of the major changes in the financial market were the redeployment of actors and institutions as well as the issuance of new Act. The monetary authority which controls banking sectors is Bank Indonesia; whereas capital market supervisory is Capital

Market Supervisory Agency/Badan Pengawas Pasar Modal (BAPEPAM) that has merged with Directorate General of Finance Institutions (Ditjen Lembaga Keuangan).

1. Bank Indonesia (BI)

Formerly, the role of Bank Indonesia was regulated by the Act No.13/1968 where Bank Indonesia is the institution with the task to assist the government in carrying out duties under the coordination of the Monetary Board. Monetary Board was the highest financial authority in making policies related to monetary and banking arrangements.

Furthermore, Indonesian financial system has changed as the Monetary Board that was chaired ex officio by Ministry of Finance was abolished. This occurred due to the fact that the role of BI has become an independent institution that serves as the sole authority in monetary and banking matters. As an independent state institution, Bank Indonesia is fully autonomous in formulating and implementing each of its task and authority. This is confirmed in the Act No.23/1999 that is renewed with the Act No 3/2004 and the Act No.6/2009 concerning Bank Indonesia.

Bank Indonesia has the responsibilities of a monetary authority, the regulatory, and supervisory authority for the banking and payment system. As such, Bank Indonesia's most important task is not only to safeguard monetary stability, but also financial system stability. It administers Indonesia's monetary policies and prescribes financial reporting requirements for all banks operating in the economy.

2. Indonesia Deposit Insurance Corporation (IDIC)/Lembaga Penjamin Simpanan (LPS)

The Act No.10/1998 on banking mandates that the IDIC should be established to protect depositor's funds. Eventually, on 22 September 2004, the President of the Republic of Indonesia enacted the Act No.24/2004 concerning IDIC. With regards to the law, IDIC was established as an independent institution whose functions is to insure depositors' funds and actively participates in maintaining stability in the banking system in accordance with its authorized mandate. The Law was effectively in effect on 22 September 2005 and IDIC officially began its operations as of that date.

3. Ministry of Finance (MoF) and Capital Market and Financial Institutions Supervisory (BAPEPAM-LK)

Under the Ministry of Finance (MoF), the BAPEPAM-LK is responsible for granting licenses, setting rules and regulations, supervising market participants, and establishing capital market accounting standards. Bapepam-LK has duties to supervise the daily activities of capital market and execute policies and technical standards in financial institutions area, as stipulated in the Act No.8/1995 concerning Capital Market and other Act in the area of financial market.

BAPEPAM-LK also collects reports from non-bank financial institutions and market participants, including those of both issuers and securities companies. Reporting requirements vary between issuers and securities companies, but in general both include daily and monthly activity reports, and six-monthly and annual financial reports. Securities companies must also report their daily-adjusted working capital. BAPEPAM-LK is responsible for the registration of corporate debt instruments.

Regulation

The Indonesian government has enacted a number of laws and regulations related to capital markets in order to implement orderly, fairly, and efficiently capital market activities and protect the interests of investors and public. These laws are as the followings:

- Act No.13/1968 concerning Central Bank which has an amendment to the Act No.23/1999 that is renewed with the Act No 3/2004 and finally confirmed with the Act No.6/2009 concerning Bank Indonesia. The amendment to Bank Indonesia regulation occurs due to the changing of BI's role as an independent institution that serves as the sole authority in monetary and banking matters. As an independent state institution, Bank Indonesia is fully autonomous in formulating and implementing each of its task and authority
- Act No 7/1992 as amended by the Act No 10/1998, concerning Banking. Based on the regulation, Indonesian banking institutions are typically classified into commercial and rural banks. Commercial banks differ from rural banks in the sense that the latter do not involve directly in payment system and have restricted operational areas.
- Act No 8/1995 concerning Capital Market which:
  - provides the Indonesian capital market with legal foundation
  - extends BAPEPAM-LK authority in the fields of regulation, development, supervision, and law enforcement.
  - clarifies the authority and responsibilities of SROs, capital market institutions and professionals, and firms in doing business in the capital market

III.1.5 Financial Stability

Regarding the global financial crisis, the Indonesian government has adopted several measures s to offset the impact of the global financial crisis as shown below:

- Monetary Policy:
  - Bank Indonesia progressively increased its benchmark rates. The BI rate previously came down to 8 percent in December 2007. It then rose in stages beginning in May 2008 until it reached 9.5 percent in October and November 2008. Afterward, the BI rate was lowered gradually from 8.75 percent at the beginning of semester I 2009 to 7 percent at the end of semester II 2009. Then BI stopped cutting interest rate, maintaining the interest at 6.5 percent since August 2009.
  - Bank Indonesia, which is authorized to maintain exchange rate stability, has conducted policy to intervene foreign exchange market. It is aimed to maintain exchange rate stability, particularly at times when there is factors that impact negatively on the Indonesian currency. However, foreign exchange intervention is only undertaken when moral suasion is ineffective in influencing market participants.
- Liquidity Support:
  - In order to provide more liquidity to the banking sector, Bank Indonesia agreed to reduce the minimum limit of bank reserve requirement at the central bank from 9.08 percent to 7.5 percent on the average as stipulated in PBI No.10/19/PBI/2008 dated October 14th, 2008, regarding the Reserve Requirement for Commercial Banks.

    - Bank Indonesia requires state-owned enterprises to place their funds in domestic banks to increase liquidity in the banking system.
    - Bank Indonesia has free banks of mark to market obligations on their bond holding.
- Deposit Guarantees: Ministry of Finance and Bank Indonesia issued two government regulations in-lieu-of-law (PERPU) on collateral and banks deposit guarantee that effectively increased the amount of deposits guaranteed from Rp 100 million to RP 2 billion.
- Fiscal Stimulus: in coping with the global financial crisis, the government provided total stimulus packages for about IDR 71.3 trillion in 2009.
- Structural Policy to support real sector: the Indonesian government has developed financing facilities such as infrastructure guarantee fund and infrastructure fund. The government has established infrastructure guarantee fund under the name PT. Penjaminan Infrastruktur Indonesia (PII) on December 2009 and allocated US$ 105 million as the company's initial capital. Meanwhile, the infrastructure fund is implemented through the establishment of PT. Sarana Multi Infrastructure in 2009 and PT. Indonesia Infrastructure Finance in 2010. Recently, the Indonesian government has approved of the issuance of infrastructure bonds aimed at absorbing the foreign capital inflow into Indonesia. The government allows state-owned enterprises and other infrastructure enterprises to issue infrastructure securities (bonds) with yields as compensation.
- Financial Regulation:
    - In 2008, BAPEPAM-LK issued a new regulation regarding share buyback during the crisis. The regulation was expected to minimize composite stock price index downturn at stock exchange as the impact of the global financial crisis that influenced capital markets worldwide. By such regulation, during the crisis Issuer or Public Company can perform share buyback under certain flexible provisions such as being exempted from the obligation to obtain General Shareholders Meeting approval, reducing the maximum limit of paid-up capital to only 20 percent, being exempted from the limitation of share buyback volume in one day.
    - In December 2008, Ministry of Finance issued a regulation (Nr 238/2008) making listed companies eligible for a 5 percent cut income tax to help them reduce their costs (certain conditions applied e.g. at least 4 percent of their shares are owned by the public).
    - As part of the efforts to improve good corporate governance and to be in line with G-20 mandate, particularly regarding to regulation of credit rating agencies and how credit rating are used, BAPEPAM-LK has issued relevant regulations regarding securities credit rating in June 2009. With the issuance of those regulations, it was expected that management and monitoring activities toward credit rating companies could be improved.

Generally, Indonesia showed better preparedness in responding to another global financial crisis than it did in the Asian financial crisis in 1997/1998. Indonesia's experience with the Asian crisis made the Indonesian government build a series of actions to safeguard financial stability, including strengthening banking system and financial institutions. Therefore, the economy has prepared better in dealing with a global crisis.

Bearing in mind that prevention is better than a cure; the Indonesia's government has built various tools and test to monitor the vulnerability in financial sector. In South East Asia, Indonesia was the first economy to concern with the financial stability, started in 2003. At the time, Indonesia had a macro prudential supervision that was handled by Financial Stability System Bureau (FSSB) in Bank Indonesia. FSSB has developed Early Warning System (EWS), known as Financial Stability Index (FSI) in order to detect vulnerability in banking sectors. Thus, when a global financial crisis spread worldwide, the Indonesian government will be able to respond quickly as the financial stability index per-November 2008 recorded at 2.43, which was above the indicative maximum of 2.0 (Bank Indonesia 2009). This shows that the Indonesia banking system and domestic financial system were in critical situation. One of the policies is that Bank Indonesia finally agreed to reduce the minimum limit of bank reserve requirement at the central bank from 9.08% to 7.5% on the average as stipulated in PBI No. 10/19/PBI/2008 dated October 14, 2008, regarding the Reserve Requirement for Commercial Banks. It is the government's anticipation. If the government has to wait until banks have been affected by the impact of the crisis, then the government's action will be too late. Besides, Ministry of Finance has also developed EWS that monitors several key performance indicators, such as Indonesia Composite Index, the IDR exchange rate, GDP economic growth, net selling of shares and bonds within the Indonesia Stock Exchange, and exports and imports values. These indicators provide simulations so that the impact on the states revenue and expenditure budget can be recognized. Similarly, Danareksa has also developed EWS (comprises of the leading economic index, consumer confidence, and business sentiment surveys) that helps stakeholders in detecting financial vulnerabilities.

To foster financial stability, the coordination of financial authorities is needed. Recently, Ministry of Finance, Bank Indonesia, and Indonesia Deposit Insurance Corporation has just signed a coordination agreement whose purpose is to create more solid ground in safeguarding the economy's financial system stability as well as protecting the economy from possible future crises. Under the MoU, those financial authorities agree to share information on financial sector conditions that can cause financial instability. They also agreed to establish a crisis management protocol. Therefore, the drafting law on financial safety net (JPSK) is necessary to be accelerated. Besides, in order to reform the financial sector, Indonesia has planned to set up financial service authority (OJK). It is supposed to be an independent supervision body monitoring for not only bank but also non-bank financial institutions. According to the BI law, the OJK should be established at the latest at the end of 2010. Regarding a consumer and investor protection for financial market products buyers, the Indonesian government may need to support the development and establishment of an investor protection fund. Indonesia does not have an investor protection fund to protect investors whenever they become at risk for reasons other than market mechanisms, such as fraud.

In maintaining the financial stability, BI adopted Basel II standards and improved operations of its credit bureau to centralize data on borrowers in 2009. Another important banking sector reform was the decision to eliminate the blanket guarantee with a deposit insurance scheme run by the independent IDIC in 2007. As a part of the efforts to improve good corporate governance and to be in line with G-20 mandate, BAPEPAM-LK issued six relevant regulations regarding securities credit rating in June 2009. Through these regulations, it was expected that management and monitoring activities toward credit rating companies could be improved.

In the efforts to strengthen its financial stability, Indonesia has joined various international organizations such as the BIS, G20, EMEAP (Executives Meeting of East Asia and Pacific Central Banks), World Federation of Exchange (WFE), Asian Oceania Stock Exchange Federation (AOSEF), and IOSCO (International Organization of Securities Commissions). The purpose is to respond to the various international issues in monetary and banking sectors as well as to promote the strengthening international financial system. Indonesia is the only Southeast Asian economy in the influential G20 group. Recently, Indonesia has proposed the establishment of global financial safety mechanism in a G20 summit. The safety net is needed not only to resolve problems related to the balance of payment but also to address challenges within a state budget hampered by a crisis. Since developing economies are more likely to be most affected by a global financial instability as they lacked of a strong safety net, attention from the G20 in accelerating development for better prosperity for developing economies is really needed. Besides, As a G20 member, Indonesia has commit to continue the global financial reform agenda, including developing macro prudential policy frameworks and tool. A credible macro prudential policy is required to safeguard the stability of financial system.

Furthermore, as Indonesia has committed to continue the global financial reform agenda, in case of improving consumer protection, hence Indonesia Banking Architecture has been renewed to adjust consumer protection issue to strengthen financial inclusion effort.

Additionally, it has been argued that rather than imposing policies after a crisis, the international financial system architecture needs to be reformed to avoid some risks. Regarding the establishment of APEC's financial market stability, it is recommended that each economy start to develop an Early Warning System (EWS) to accurately predict future economic growth trends. Through this tool, the economies will be able to examine their economy position within a business cycle and to monitor their financial systems. Besides, policymakers can make use of the EWS to mitigate and even avoid potential losses during times of crisis.

Table 3.12: Summary of Indonesia's Response to the Global Financial Crisis

The impact of the global financial crisis for Indonesia:	• Growth of GDP decreased to 4.5% in 2009.
	• Export and import declined.
	• The IDR exchange rate against US Dollar weakened.
	• The foreign ownership of SBIs has dropped significantly in 2008.
	  • Between 2005 and 2009, the financial account deficit reached the lowest level in the last quarter of 2008.
	  • Portfolio and other investment fluctuated greater during the crisis.
	  • International reserves fell in Q3 2008.
	• During 2008, the stock exchange index dropped by 50.64% compared to the previous year.
	• Capital ratio of banks declined slightly in 2008.
	• In 2008, the total investment of insurance industry grew only 4.5%, whereas it had grown for more than 30% in 2007.
	• Equity market capitalization fell in 2008.

The policies of Indonesia's government in dealing with the global financial crisis:	• Monetary Policy: The BI rate was lowered gradually from 8.75% at the beginning of semester

I 2009 to 7% at the end of semester II 2009 then maintained at low and stable at 6.5% since August 2009. Besides, the central bank has also taken policy for managing exchange rate stability through foreign exchange intervention, in order to prevent major damage to the Indonesia's economy.

- Liquidity Support :
  - In order to provide more liquidity to bank sector, Bank Indonesia agreed to reduce the minimum limit of bank reserve requirement at the central bank from 9.08% to 7.5% on the average as stipulated in PBI No.10/19/PBI/2008 dated October 14th, 2008 regarding the Reserve Requirement for Commercial Banks.
  - Bank Indonesia requiring state-owned enterprises to place their fund in domestic banks to increase liquidity in the banking system.
  - Bank Indonesia has free banks of mark to market obligations on their bond holding.
- Deposit Guarantees: Ministry of Finance and Bank Indonesia issued two government regulation in-lieu-of-laws (PERPU) on collateral and banks deposit guarantee that effectively increases amount of deposits guaranteed from Rp 100 million to Rp 2 billion.
- Fiscal Stimulus: in coping with the global financial crisis, the government provided total stimulus packages for about IDR 71.3 trillion in 2009.
- Structural policy to support real sector: developing financing facilities such as infrastructure guarantee fund and infrastructure fund. Recently, The Indonesian government has also approved of the issuance of infrastructure bonds aimed at absorbing the foreign capital inflow into Indonesia
- Financial Regulation :
  - In 2008, BAPEPAM-LK issued new regulation regarding share buyback during the crisis. The regulation was expected to minimize composite stock price index downturn at stock exchange as the impact of global financial crisis that influenced capital markets worldwide. By such regulation, during crisis Issuer or Public Company can perform share buyback under certain flexible provisions such as being exempted from the obligation to obtain General Shareholders Meeting approval, reducing the maximum limit of paid-up capital to only 20%, being exempted from the limitation of share buyback volume in one day.
  - In December 2008, Ministry of Finance issued a regulation (Nr 238/2008) making listed companies eligible for a 5% cut income tax to help them reduce their costs (certain conditions applied e.g. at least 40% of their shares are owned by the public).

	– As part of the effort to improve good corporate governance and to be in line with G-20 mandate, BAPEPAM-LK has issued relevant regulations regarding securities credit rating in June 2009. The issuance of those regulations was expected that management and monitoring activities toward credit rating companies could be improved.
Sources of financial market vulnerability:	• As a small open economy, Indonesia is often sensitive and vulnerable to shocks and disturbances to the world economy. • High short term capital inflow. • Financial market is narrow and shallow, consequently it susceptible to shocks.
Factors supporting financial market stability:	• Financial market reform performed at 1997/1998 crisis had strengthened Indonesia financial market. • Indonesia financial market is still simple, dominated by healthy and strong banking industry. • Good coordination among Indonesia financial market authority has a great contribution in stabilizing the market.
Policies needed to be implemented in order to foster financial market stability:	• The drafting law on financial safety net (JPSK) is necessary. • Better coordination among financial regulators or setting up financial service authority (OJK), it is supposed to be an independent supervision body monitoring for not only bank but also non-bank financial institutions. According to the BI law, the OJK should be established at the latest at the end of 2010. • Boosting domestic investors' participation within financial market by providing secure and convenient market. • Develop deeper and more liquid capital market as a part of ongoing financial reforms in order to strengthen the economy.

III.2 Mexico

III.2.1 Macroeconomic Condition

Mexico is an open economy which has stable macroeconomic conditions, attested by low inflation and interest rates, which have made possible an increase in per capita income. The Mexican economy has rapidly developing modern industrial and service sectors, characterized by rising private ownership. As an export-oriented economy, more than 90 percent of Mexican trade occurs within free trade agreements (FTAs) with more than 40 economies, the USA in particular.

Table 3.13: Selected Mexican Economic Indicators, 2002 - 2010

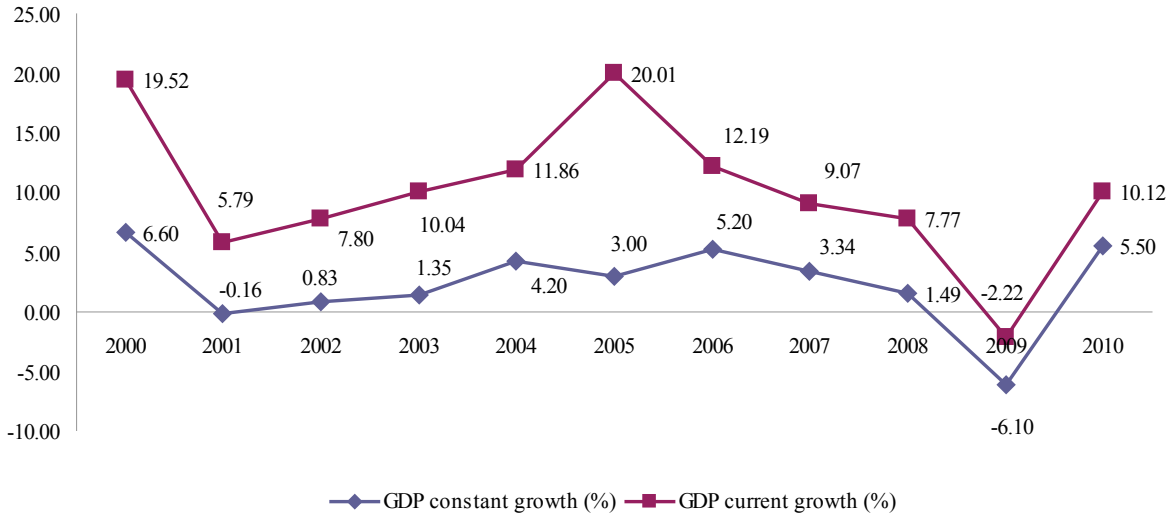
	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP (real annual %-change)	0.83	1.35	4.05	3.21	4.93	3.34	1.49	-6.54	5.50
Inflation (CPI, annual variation in %)	5.70	3.98	5.19	3.33	4.05	3.76	6.53	3.57	4.40

Exchange Rate (Pesos/US$)	10.44	11.24	11.15	10.63	10.81	10.92	13.83	13.07	12.35
Current Account (US$ m)	-14,155.31	-7,161.33	-5,237.37	-5,079.69	-4,487.41	-8,850.75	-16,339.26	-6,351.78	-5,626.27

Sources: Banco de Mexico 2011a

Mexican real GDP experienced robust annual growth from 2002 to 2006, reaching 4.93 percent in 2006 before slowing in 2007 (3.34 percent). The global financial crisis and subsequent global recession saw growth in the economy drop sharply in 2008 (1.49 percent) and contract in 2009 (-6.54 percent). During 2009 the Mexican economy experienced two distinct halves: during the first half of the year, economic activity fell substantially as a response to the contraction of external demand and other factors, whilst during the second half of the year, manufactured exports rebounded as external conditions gradually improved.

Figure 3.14: Gross Domestic Product Growth 2000-2010



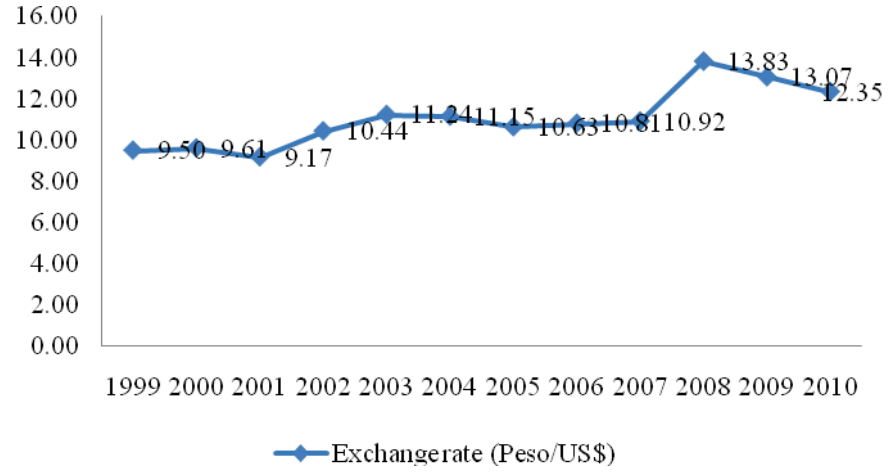
Source: Banco de Mexico 2011b

As was experienced in many other economies, the rapid deterioration in growth of the Mexican economy in 2008-2009 was due to: (i) a sharp reduction in external demand for Mexican products, (ii) a reduction in the remittances sent by Mexicans working in the USA, hitting domestic demand, and (iii) extremely tight liquidity in international financial markets (Banco de Mexico, 2008 and 2010). Mexico's terms of trade also deteriorated.

As the economy recovered and Mexico's economic conditions improved, real economic growth rebounded to 5.50 percent in 2010. In nominal terms, 2010 growth was the strongest since 2007, at 10.12 per cent.

The Mexican exchange rate remained quite stable from 2002 until 2008, when the financial crisis resulted in a considerable depreciation of the peso, which closed 2008 at 13.83 Pesos/US$. Since then, the Mexican Peso has appreciated to 13.07 per US$ in 2009 and 12.35 per US$ in 2010, remaining elevated relative to the pre-crisis period (Figure 3.15).

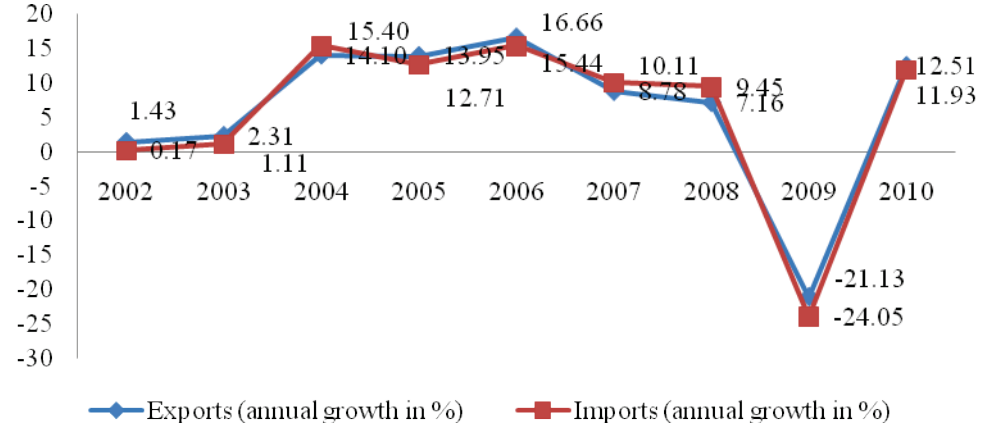
Figure 3.15: Exchange Rate Mexican Peso vs. US$, 1999- 2010



Source: Banco de Mexico 2011b

Exchange rate depreciation can be beneficial to the economy as exports become more competitive and higher import prices assist import-competing sectors. Both forces can act to boost GDP. However in 2008-2009, this effect was overwhelmed by a significant drop in both export and import volumes as global trade shrunk (Figure 3.16). In 2010 both exports and imports increased (by 12.51 percent and 11.93 percent respectively), reflecting improved economic conditions.

Figure 3.16: Growth of Export and Import, 2002-2010



Source: Banco de Mexico 2010a; Organization for Economic Co-operation and Development 2011

Data in Table 3.14 shows that Mexico experienced a current account deficit between 2002 and 2010. The performance of the current account is mirrored in the trade balance, with Mexico experiencing a trade deficit during 2002-2010 period, with 2008 figure (US$ 17,260.66 million) being the largest.

Mexican international reserves have increased significantly over the last decade from US$ 47,984.00 million in 2002 to US$ 120,587.48 million in 2010. Mexican foreign debt remained manageable but increased in value terms over the decade, decreasing relative to GDP from 25.00 percent in 2002 to 18.70 in 2009.

Table 3.14: Economic Indicators External Sector, 2002 – 2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Current Account (US$ m)	-14,133.00	-7,190.00	-5,177.00	-4,385.00	-4,378.00	-8,390.00	-15,888.00	-5,721.00	-5,690.03
Current Account (% of GDP)	-2.18	-1.03	-0.68	-0.52	-0.46	-0.82	-1.46	-0.65	-0.65
Trade Balance (US$ m)	-7,632.91	-5,779.41	-8,811.10	-7,586.57	-6,133.21	-10,073.73	-17,260.66	-4,601.95	-3,832.02
Exports (US$ m)	161,045.98	164,766.44	187,998.56	214,232.96	249,925.14	271,875.31	291,342.59	229,783.02	258,526.80
Imports (US$ m)	168,678.89	170,545.84	196,809.65	221,819.53	256,058.35	281,949.05	308,603.25	234,384.97	262,358.82
Exports (annual growth in %)	1.43	2.31	14.10	13.95	16.66	8.78	7.16	-21.13	12.51
Imports (annual growth in %)	0.17	1.11	15.40	12.71	15.44	10.11	9.45	-24.05	11.93
Int. Reserves (US$ m)	47,984.00	57,435.00	61,496.00	68,669.00	67,680.00	77,991.00	85,274.00	90,671.00	120,587.48
Int. Reserves (months of imports)	3.40	4.00	3.70	3.70	3.20	3.30	3.30	3.80	NA
External Debt (US$ m)	162,009.00	162,415.00	166,238.00	173,124.00	169,005.00	193,143.00	200,365.00	208,034.14	NA
External Debt (% of GDP)	25.00	23.20	21.90	20.50	17.80	18.80	18.50	18.70	NA

Source: Banco de Mexico 2010a; Organization for Economic Co-operation and Development 2011

Inflation and interest rates remained relatively stable over the first half of last decade, reflecting relatively stable macroeconomic conditions in Mexico. Inflation pressures then began to build from 2006 to 2008, largely attributable to an upsurge in world commodity prices and inflation (Table 3.15). These increases in world commodity prices also began to affect Mexico's supply structures. Inflation then eased in 2009 and 2010 as the global financial crisis lowered commodity prices and demand. Periods of moderate inflation in Mexico translated into moderate interest rates over the same period.

Table 3.15: Economic Indicators Monetary Sector, 2002 – 2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Inflation (based on CPI, yoy, in %)	5.70	3.98	5.19	3.33	4.05	3.76	6.53	3.57	4.40
Interest Rate (CETES, 28 days in %)	6.98	6.04	8.61	8.02	7.02	7.44	7.97	4.51	4.45

Source: Organization for Economic Co-operation and Development 2009 and Banco de Mexico 2011b

Mexico also maintained relatively low levels of government debt over the past decade, and government debt as a percentage of total external debt gradually reduced, from 59.65 percent in 2000 to 30.63 percent in 2008. Mexican government debt issued domestically increased modestly in 2008 and 2009, reaching 11.41 percent in 2009 (Table 3.16). These fiscal settings helped the Mexican Government and Mexico's financial markets to withstand the crisis.

Table 3.16: Growth and Ratio of Debt (Percent)

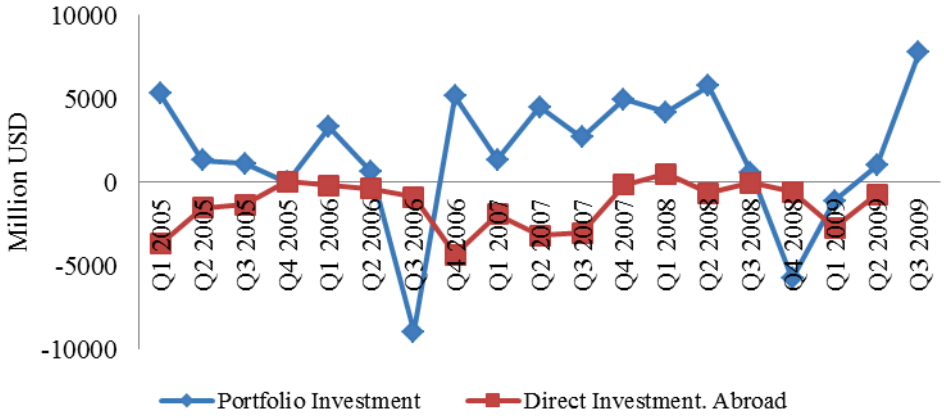
	Public External Debt to Total External Debt	Private External Debt to Total External Debt	Domestic Public Debt/GDP	Total External Public Debt/GDP	Growth of Domestic Public Debt	Growth of External Public Debt
2000	59.65	40.35	4.62	12.76		
2001	56.96	43.04	5.13	12.76	13.64	2.37
2002	57.09	42.91	5.84	12.32	18.23	0.25
2003	57.52	42.48	5.99	11.73	8.48	0.69
2004	58.70	41.30	5.86	10.96	4.58	-0.01
2005	48.30	51.70	6.08	7.91	13.33	-21.27
2006	46.36	53.64	7.73	7.48	37.75	2.44
2007	35.23	64.77	8.06	6.61	10.45	-6.43
2008	30.63	69.37	8.55	6.15	9.82	-3.59

2009	NA	NA	11.41	NA	30.09	NA
2010	NA	NA	NA	NA	NA	NA

Source: Banco de Mexico 2010a

With regard to portfolio investment, Figure 3.17 shows that during the period of 2005-2009, the investment showed higher volatility than FDI. Portfolio investment experienced reversals in direction in 2006 and 2008. High volatility of portfolio investment might induce higher financial market instability.

Figure 3.17: Net Portfolio and Direct Investment



Source: World Bank 2010

III.2.2 Financial Market Conditions

Mexican Banking

Mexican financial institutions fall into the following groups: banking sector (commercial and development banks, and public trusts) and non-banking institutions. The process of institution building in the financial sector in Mexico has corresponded to gradual financial liberalization. The Mexican financial system is still mainly bank-based but has over time diversified and now other financial institutions are making significant contributions to financial intermediation.

The banking sector is dominated by commercial banks (*Instituciones de Banca Múltiple*), which are privately owned; development banks (*Instituciones de Banca de Desarrollo*), which are controlled and have the full support and loans from the federal government; and public development trusts.

Several Mexican financial authorities participate in the oversight of the Mexican banking system (see section III.2.3 Authorities of Financial Market). Banking institutions in Mexico are covered by a wide spectrum of regulations covering among others:

- regulatory capital;
- connected lending;
- large exposures;
- integral risk management;

- credit procedures;
- loan provisioning;
- corporate governance;
- accounting principles; and
- disclosure.

For banking institutions, current provisions for regulatory capital are consistent with Basel II and work has begun to implement Basel III. In order to calculate their regulatory capital, banks must take into account risk weighted assets for credit, market and operational risks. The minimum overall level of capital required is 8 percent. There is also a minimum level in absolute terms for the capital of each institution. That level varies according to the activities performed by the institutions, to take riskiness into account.

In 2004, the Credit Institutions Law was amended in order to establish a "prompt corrective actions" (PCA) scheme or 'early warning system' for banking institutions. Under this framework, there are minimum and special corrective measures applicable to banks, according to its Capital Adequacy Ratio (CAR), depending on which category they fall into:

- Category I: banking institutions with a CAR greater than or equal to 10 percent;
- Category II: banking institutions whose CAR is less than 10 percent and greater than or equal to 8 percent;
- Category III: banking institutions with a CAR less than 8 percent and greater than or equal to 7 percent;
- Category IV: banking institutions with a CAR greater than or equal to 4 percent and less than 7 percent; and
- Category V: banking institutions with a CAR less than or equal to 4 percent.

A series of prudential measures have been established, triggered as the CAR of a bank deteriorates. Some of the actions that authorities may undertake are: suspension of dividends and any transfer of equity benefits by banking institutions; bans on bonus payments, related-party loans or any other activity which could negatively impact its CAR.

According to the IMF, the Mexican banking system is strong, characterized by profitable and well-capitalized private banks. The banking sector is dominated by subsidiaries of foreign banks. Around 70 percent of the banking activity in Mexico is carried out by prominent foreign groups, especially from Canada, the United States, Spain and the UK. BBVA Bancomer, the subsidiary of Spain's BBVA, and Banamex, the subsidiary of the United States' Citigroup, are the two largest banks in Mexico, together accounting for 45 percent of the sector assets.

Mexican Securities Market

Mexico has one securities exchange, Bolsa Mexicana de Valores, S.A.B. de C.V. It is Latin America's second largest exchange, after Brazil's. Still, the Bolsa remains relatively small compared to other North American exchanges. The Bolsa trades stocks, warrants and fixed-income securities. The exchange has two sections: the main section and a section for trading securities issued in overseas markets (the International Quotations System). The International Quotations System was opened in July 1997.

As is the case elsewhere, the Mexican stock market is closely linked to developments in the

USA. Volatility in the New York and NASDAQ stock exchanges and changes in interest-rates and economic expectations in the US can influence the performance of Mexican equities. This is because of both Mexican economic integration with the US and the high volume of trading in Mexican equities through American Depositary Receipts (ADRs). Currently, the decline in the value of the US dollar and differences in relative growth prospects is making non-US markets including Mexico's more attractive. Foreign investment also plays an important role in Mexican securities market. Foreign investors can freely invest in government securities and purchase non-voting shares through mutual funds, trusts, offshore funds, and ADRs. Foreign investment is also allowed directly in voting shares of companies that have no restrictions for foreigners.

The Indice de Precios y Cotizaciones (IPC, the general equities index) is the benchmark stock index on the Bolsa. In 2005 the IPC surged by 37.8 percent to 17,802.71, backed by a stronger Mexican economy and lower interest rates. It continued its steep rise through the beginning of 2006, reaching 19,272.63 points at end-March 2006. 136 firms were listed in Mexican Stock market by the end of 2008.

In 2008, the Mexican capital market suffered from the effects of the global financial crisis, the IPC falling 28.3 percent during the fourth quarter of the year (Banco de Mexico, 2008). By the end of 2008 the capitalization value of Mexican Stock Market accounted for 21.34 percent of GDP. Two initial public offerings took place that year.

Table 3.17: Market Capitalization

	Market Capitalization of Listed Companies/GDP (%)	Market Capitalization of Listed Companies (Million USD)
2000	21.53	125,203.85
2001	20.30	126,258.43
2002	15.89	103,136.57
2003	17.50	122,531.87
2004	22.63	171,940.26
2005	28.17	239,127.95
2006	36.57	348,345.13
2007	38.78	397,724.64
2008	21.34	232,581.15
2009	38.93	340,564.59
2010	NA	454,345.26

Source: Banco de Mexico 2011b

Mexican Money Market Operation

Money market operations dominate the securities market, comprising over 90 percent of trading activity. The principal money market instrument is the Mexican Treasury Bill, Cetes (Certificado de la Tesoreria de la Fedeacion). Cetes are auctioned weekly by the Bank of Mexico and majority of Cetes are purchased by institutional investors such as banks, brokerage houses and pension funds. Cetes are sold in the secondary market directly or via repurchase operations. The most important private money market instruments are certificates of deposit and banking notes with yield payable at maturity, bankers' acceptances, and commercial paper.

Financial Market Institution Building Process

The Mexican financial market institution building process can be divided into several phases, outlined in Table 3.18.

Table 3.18: Phases of Mexican Financial Market Institution Process

Year (Phase)	Condition
1970-1988 (The era of protected Financial Markets)	• Stagnation of financial savings. The ration of M4 to GDP declined from 34% to 30.9% • Distortion of price signals. Real interest rates were negative and fluctuated widely • Very low financing to private sector, fiscal deficits. • Government-determined interest rates • High reserve requirements • Tight credit controls • Securities had short-term maturities • The securities Market Act is established (1975) • A single reserve requirement ratio for domestic currency liabilities was adopted (1977) • Commercial banks were nationalized and exchange controls were introduced (1982)
1988-1994 (Fortifying Financial Institutions)	• Comprehensive process of structural change. Structural and stabilization reform • Opening to international trade and foreign investment • Deregulation and Internationalization of the financial sector • Privatization of commercial banks • Autonomy of the Central bank • NAFTA signed
1995-2000 (Revamping the Financial Sector in the Aftermath of the crisis)	• **Macroeconomic stabilization**. Comprehensive stabilization program included cuts in public expenditure, tight monetary policy, flexible exchange rate arrangement, priority in Institutional reform of the financial system (efficiencies in management, transparency, information disclosure, market discipline, effective judicial systems and bankruptcy laws) to cope the systemic banking crisis. • **Monetary policy**. a) Floating exchange rate regime to face the balance of payments crisis in 1994-1995. b) Gradual disinflation policy (since 1995) • **Fiscal policy**. a) The tightening of fiscal policy (1994-1995). b) Prudent and efficient fiscal policy management. c) Limiting the financing of current expenditures with public debt. d) A budgetary reform and administrative efficiency (1998). • **Strengthening the financial system** through safeguarding the integrity of the financial system and setting the policies to ensure adequate function
2001-2003 (Institutional reforms)	• Monetary policy o Inflation targeting was introduced in 2001.4. o The Banco de Mexico established a medium-term inflation objective • Financial reform through: a) promoting domestic (long term) savings, b) accelerating the modernization of financial system, c) facilitating the reactivation of bank credit, d) deepening domestic stock and debt markets • Congress has amended laws since 2001. The amendments were: a) Commercial banking through The Credit Institutions Law and the Financial Group law, Rules of Capitalization requirements for Multiple Banking Institutions, The Miscellany on Credit Collateral and The Credit Information Institutions Law, b) Development banks through The organic Law of The Federal Mortgage Association, The Popular Saving and Credit Law, The Organic Law of the Bank of National Savings and Financial Services, The Organic Law of the Financial Rural c) Stock and Debt Markets via Securities Market Law and Mutual Funds Law

Year (Phase)	Condition
	d) Insurance Sector using the General Law of Mutual Insurance Institutions and Associations, e) The Pension System by The Amendments and Additions to the Retirement Saving System Law, and f) The Payments System

Sources: Globalization: The Role of Institution Building in the Financial Sector the Case of Mexico, G-20 Finance Minister and Central Bank Governor Meeting 2006

III.2.3 Financial Market Authorities[11]

The main regulatory bodies and financial authorities in Mexico are:

- The Ministry of Finance and Public Credit (Secretaria de Hacienda y Credito Publico-SHCP);
- The Central Bank (Banco de Mexico - Banxico);
- The National Banking and Securities Commission (Comision Nacional Bancaria y de Valores - CNBV)[12];
- The National Retirement Fund System Commission (Comision Nacional del Sistema del Ahorro para el Retiro - CONSAR)[13];
- The National Commission for the Protection and Defence of Financial Services Users (Comision Nacional para la Proteccion y Defensa de los Usuarios de Servicios Financieros - CONDUSEF);
- The National Insurance and Surety Commission (Comision Nacional de Seguros y Fianzas -CNSF)[14]; and
- The Institute for the Protection of Bank Savings (Instituto para la Proteccion del Ahorro Bancario - IPAB).

These authorities play important and complementary roles in connection with the supervision and regulation of financial services in Mexico, with different authorities and responsibilities. The Ministry of Finance and Public Credit (SHCP) is in charge of the overall gearing of Mexican financial system and the elaboration of Mexican fiscal policy. It defines the structure of the financial system and sets overall policy guidelines. Mexico's Central Bank (Banxico) is in charge of: (i) the formulation and implementation of monetary policy, (ii) operation as a reserve bank, (iii) acting as clearing house for Mexican banks, and (iv) the regulation of the foreign exchange market and banking credit operations. Banxico is autonomous in its decision about the determination of the Monetary Regulation Deposits, currently the only form of reseserve requirements.

CNBV is responsible for chartering, regulating and supervising a wide array of financial institutions in Mexico, including banks and brokerage houses. The CNBV legal mandate is to supervise and regulate, within its competence, the financial entities component of the Mexican financial system, in order to ensure their stability and adequate operation, as well as to maintain and foster a sound and balanced develompment of the entire financial system while protecting the interests of the public. The supervision of the CNBV covers the following entities (amongst others): holding companies of financial groups, banking

[11] Based on articles of Franck and Visoso 2001; Cuellar, Creel, and Muggenburg 2003.

[12] It is the bank and securities regulator.

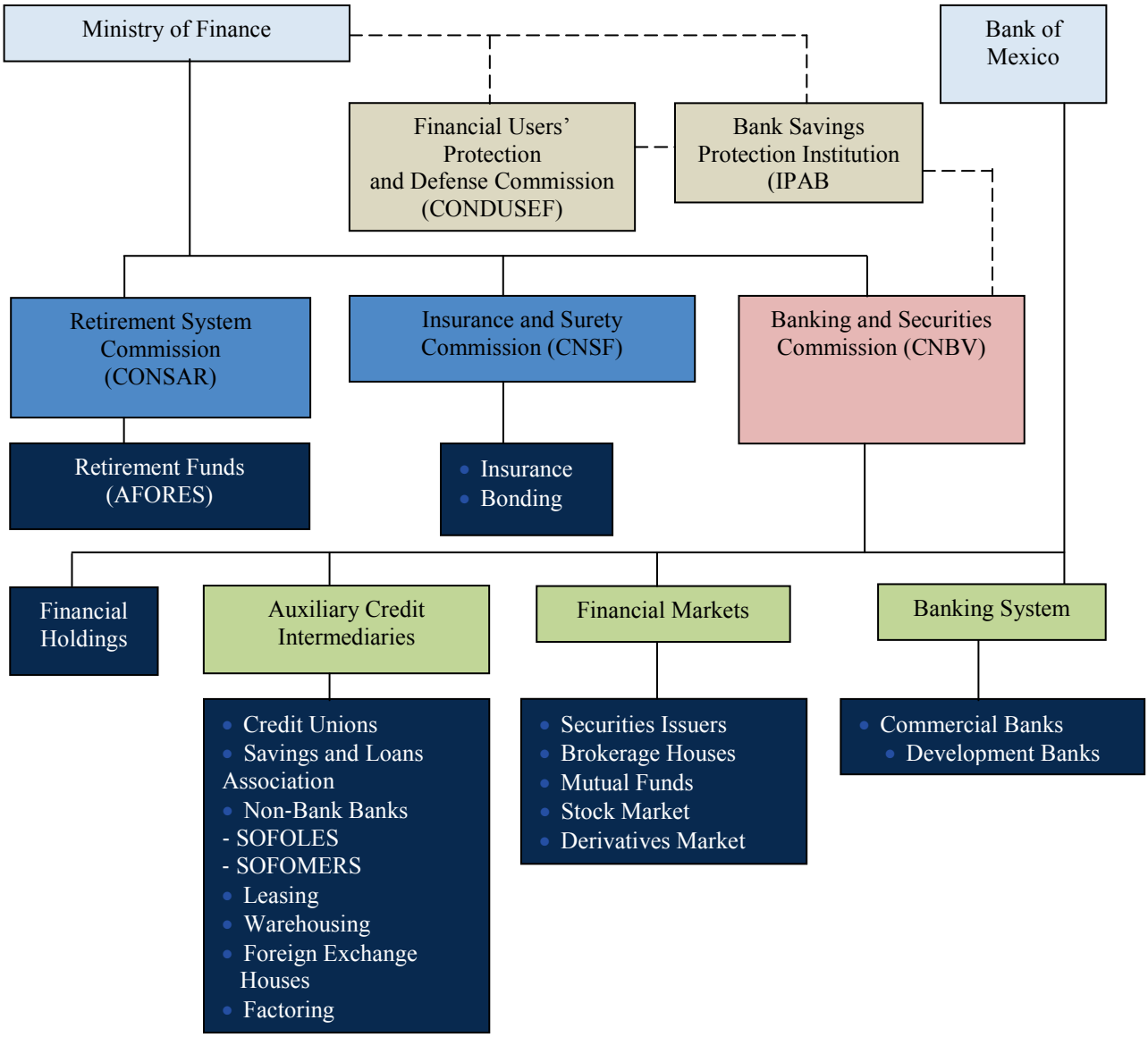
[13] Oversees retirement savings. It is relevant to some of the commercial banks mentioned in this report which operate asset management companies.

[14] Oversees insurance companies, trust companies and certain other institutions. It is relevant to some of the larger commercial banks mentioned in this report which operate insurance services.

institutions, brokerage firms, stock exchanges, mutual funds, operating companies of mutual funds, mutual funds distributors, general deposit warehouses, credit unions, financial leasing companies, financial factoring companies, savings and loans firms, foreign exchange firms, financial companies with limited object, regulated financial companies with multiple object, popular financial companies, depository institutions, clearing houses, rating agencies, financial record companies, communal financial companies under the supervision of the Commission and rural integration organisms, as well as some other institutions and public trusts engaged in financial activities.

The fourth body is CONDUSEF. CONDUSEF's main purpose is to promote, advise, protect, and defend the rights and interests of users of financial products or services offered by financial institutions operating in Mexico. This Commission acts as an arbitrator in disputes between clients and financial entities. The Institute for the Protection of Bank Savings (IPAB) is the deposit insurance agency and is in charge of resolving troubled banking institutions, it acts as a liquidator or receiver in their liquidation and bankruptcy process.

Figure 3.18: Mexican Financial Authorities



Source: Comision Nacional Bancaria y De Valores 2010

Mexico, like other economies has adopted a systemic approach in fostering financial stability. This is reflected in the establishment of a financial stability council, which is an inter-agency body charged with monitoring, assessing, and addressing potential systemic risks within the financial system (FSB 2010b).

The Financial System Stability Council (FSSC) was constituted on July 2010 by means of a Presidential decree. The Council comprises 9 voting members:

- SHCP: the Minister of Finance (Chair) and one Deputy Minister;
- BANXICO: the Governor of the Central Bank and two Deputy Governors;
- CNBV, CONSAR, CNSF: the Heads of these three supervisory agencies (banking and securities, pension funds and insurance);
- IPAB: the Head of the Deposit Insurance Agency.

The FSSC was established as a forum for evaluation, analysis, and coordination of authorities on financial system issues, in order to contribute to maintaining financial stability. The pertaining activities of the Council are identifying and analyzing risks that could disrupt or disturb substantially the functioning of the financial system, and recommending policies to mitigate them if they occur.

CNBV Supervisory Activities

CNBV is responsible for supervising the large majority of financial institutions in Mexico. The objective of the supervision of financial entities is to evaluate the risks they incur, their control systems and their management quality, in order to assure that the financial entities maintain adequate liquidity levels, prove to be solvent and stable and that, in general, they comply with the provisions that govern them and with sound financial market practices. Likewise, through supervision, the Commission evaluates in a consolidated fashion the risks of financial entities part of financial group, or those with ownership ties as well as, in general, the adequate operation of the financial system.

Under this framework, the CNBV regulatory and supervisory strategy deals with issuing prudential regulations, the carrying out of on-site inspections and off-site surveillance activities, enforcing laws and regulations, and implementing the necessary prudential and corrective measures with regard to supervised entities, from a consolidated, risk-based approach. But in addition, CNBV activity also deals with:

- Achieving a high degree of coordiantion with other financial authorities in Mexico (i.e. the Ministry of Finance, Banxico, IPAB and the other Commissions);
- Developing a platform of international cooperation with its foreign counterparts and through the participation in international forums, international organizations and the like, for instance, through:
    - Memorandum of Understanding for the exchange of information (public and confidential), the paying of cross-border inspection visits; mutual assistance during the authorization, supervision and revocation process; among others.
    - Participation in colleges of supervisors and crisis management colleges;
    - Bilateral and multilateral coordination for implementation of international standards and best practices coordinating efforts in issues of common interest.
    - Developing sound and strong Home-Host Supervisors relationships.

- Participating in working groups of international standard-setters (i.e. BCBS, IOSCO, etc.).
- Keeping abreast of developments in G-20, FSB and other international efforts.

Price Vendors and Depository Institutions

Price Vendors ("Proveedores de Precios") are the legal persons whose only purpose is to provide (in a routinely and professional way) the service of calculating, determining and the providing or offering current or updated prices for the valuation of securities, documents and financial instruments. Price vendors emerged in 2000, within a stable financial environment.

Currently, there are two Price vendors in Mexico (Proveedor Integral de Precios, S.A. de C.V., and Valuacion Operativa y Referencias de Mercado, S.A. de C.V.). The price vendors have no relationship with settlement of securities, nor with estimating Operational Risk (although price vendors may provide the service of Risk Management (market risk), this is not their main activity).

Meanwhile, the institution authorized according to the Securities Market Law to operate as a Central Securities Depository is Indeval. Indeval is important in ensuring an efficient payment system among financial market participants that are involved in transactions of various securities both OTC and market-based in Mexican financial markets. The agency provides safe keeping services for securities and gives interest and dividends on securities. In a single day the Securities Central Counterparty (CCV) carries out securities transactions that are equivalent to higher than 70 percent of all transactions carried out in Mexico.

The merits of the services provided by the central securities depository to the financial system include:

- Providing investors with the impetus to invest in Mexican financial market.
- Guaranteeing certainties of transactions in securities.
- Making transactions in financial securities efficient.
- Developing standards of transactions that involve securities in Mexico.
- Fostering the establishment of financial infrastructure.
- Measuring the risk of listed trades in bonds, equity and debts as well as settling them.
- Bringing to the financial market best practices in central depository services and settlement.
- Reducing risk in trading securities.
- Ensuring legal and operational efficiency of the financial system.
- Reducing transactions costs.

III.2.4 Financial Market Regulations

Among the main laws regulating the Mexican financial system are:

- The Financial Groups Law (Ley para Regular las Agrupaciones Financieras - FGL),
- The Securities Market Law (Ley del Mercado de Valores - SML),
- The Investment Fund Law (Ley de Sociedades de Inversion - IFL),
- The Law of Credit Institutions (Ley de Instituciones de Credito - LIC),

- The Credit Ancillary Organizations and Activities Law (Ley General de Organizaciones y Actividades Auxiliares de Credito - CAOAL),
- The National Banking and Securities Commission Law (Ley de la Comision Nacional Bancaria y de Valores),
- The Bonding Companies Law (Ley Federal de Instituciones de Fianzas - BCL), and
- The Insurance Companies Law (Ley General de Instituciones y Sociedades Mutualistas de Seguros - ICL).

The development of the Mexican Banking System (Mujica, et al. 2003) and securities regulations are below (Cuellar, Creel, Muggenburg 2003; Franck, Miaja, Galicia 2001; Tilly and Balderas 2006; Franck 2007):

Table 3.19: Mexican Banking System and Securities Regulation

Year		Regulations
1982	:	The Mexican banking system was nationalized
1992	:	The Mexican banking system was privatized
1994	:	1. Foreign investment was permitted 2. Banking regulations : • Central Bank. (1) Mexico's Central Bank has been an autonomous public agency. (2) The Central Bank was the lender of last resort and the exclusive underwriter of federal government debt in the local markets. (3) The Central Bank was autonomous in monetary policy without foreign exchange policy. (4) The Central Bank could not be forced to grant credit to the government and its financing cannot exceed 1.5% of the expenditures contemplated in the budget, excluding debt payments. (5) Central bank consisted of a governor and four deputy governors who might not be removed by the President. (6) Central bank's budget did not require Congressional approval. • The National Banking and Securities Commission was a decentralized agency of the Ministry of Finance and Public Credit, responsible for the supervision of banks and other financial institutions. Its powers include: inspections of financial intermediaries; the issuance of general accounting principles and prudential regulation like credit and risk management procedures; intervention, imposition of sanctions, removal of officers and board members.
1996	:	December 1996, The current rules governing the operation of the MexDer were published (Reglas a las que habran de sujetarse las Sociedades y Fideicomisos que intervengan en el establecimiento y operación de un Mercado de Futuros y Opciones cotizados en Bolsa).
1997	:	May 1997, the Mexican National Banking and Securities Commission published additional rules regarding "prudent measures" applicable to the futures and options markets (Disposiciones de caracter prudencial a las que se sujetan en sus operaciones los participantes en el Mercado de Futuros y Opciones cotizados en Bolsa).
1998	:	1. April 1998, the trading in the futures and options market of the index of the Mexican Stock Exchange (Indice de Precios y Cotizaciones) was approved. 2. May 1998, trading of 91-days Mexican treasuries known as Cetes (Certificados de la Tesoreria) and the 28 days commercial bankers lending rate known as TIIE was approved. 3. December 1998, Trading of the stocks of Banacci O, Cemex CPO, Femsa UBD, Gcarso At, GFB O and Telmex L was approved in July 1998, and trading of the US dollar was approved.
1999	:	1. The Institute for the Protection of Bank Savings (IPAB) was created as a response to the 1994 banking crisis. Its role was to provide a safety net for banking depositors. 2. The Consumer Protection Commission was created. Its main purpose was to protect the interest of consumers.
2001	:	1. June 1st 2001, the Securities Market Law (LMV) and the National Banking and Securities Commission Law were amended in the Official Gazette of the Federation, as a result of the bill submitted by Mexico's President to the Senate on April 2001. The LMV provides a number of minority rights that must be incorporated into the by-laws of publicly traded companies, include: composed the board of directors, an audit committee composed and other. Points of amendments • Promotion and publicity. Information for the purposes of promotion or publicity must be

Year	Regulations
	clear, objective and truthful. • Filling requirements. (1) The protection of investors and the efficiency of the securities market. (2) The prospectus must address issues regarding the financial, administrative, economic, accounting and legal situation of the issuer and the securities. (3) The Commission retains broad authority to issue dispositions. (4) The Commission's administrative practice will be consistent with these objectives and that the issuers prepare quality information. • Independent directors. (1) The board of directors is integrated by a minimum of five and a maximum of 20 directors, of which at least 25% must be independent. (2) Family relations are limited. (3) Independent directors have relevance regarding audit committees. (4) Each issuer conducts an analysis, keeps evidence of this analysis, and reviews it from time to time. • Non-offer listings. (1) Securities are distributed in the secondary market without an initial public or secondary offering of shares. (2) Issuers must register their securities in the Securities section of the National Securities Registry. • Repurchase. The disposition that allows corporations to repurchase their shares through the stock exchange is amended. • Non-ordinary shares. (1) "One share one vote" principle. (2) Structures that allow the control of any issuer by a group of shareholders that do not hold more than 50% plus one of all the outstanding shares. ("controlling rent"). 2. June 4th, 2001, amendments to various other laws related to the financial sector, such as the Credit Institution Law, the Law to Regulate Financial Groups and the Investment Companies Law, among others, were enacted.
2002 :	1. April 26th, 2002, Certain Acquisitions of Securities and Tender Offers became effective. The Rules governed purchase tender offers for securities issued and establish enhanced disclosure obligations applicable to persons acquiring a significant interest in a Mexican issuer. 2. October 2002, the Mexican authorities issued new rules that allow Mexican institutional investors (Afores and mutual funds) to participate in markets. It is therefore expected that the size of these markets and the number of transactions may increase significantly over the next five years. In addition, Mexican institutional investors were also authorized to operate in the Chicago Mercantile Exchange and the Chicago Board Options Exchange by using International Swaps and Derivatives Association or International Securities Market Association forms of agreement.
2003 :	March 2003, the CNBV issued new regulations, applicable to issuers of publicly-traded-securities, the approval of public offers, and buy-backs, also enhance the reporting and disclosure requirements of issuers, and impose greater responsibilities on officers, external auditors, and external counsel.
2004 :	Amendments to the Credit Institutions Law in order to incorporate the Prompt Corrective Actions system.
2005 :	1. January 1st, 2005, banks had to pay ordinary quotas considering all of their liabilities and not only the ones protected by the IPAB. The IPAB has its own capacity hence does not have to abide by directives of the Mexican Government. The IPAB may enter the support programmes with commercial banks, whose share must secure support and whose by-laws must include this provison. Failure by any bank to comply with the support program, leads to IPAB to take it over by capitalizing its credits. The IPAB can also intervene with banks in case there is a default in the support program. 2. December 30th, 2005. A new Securities Market Law (*Ley del Mercado de Valores*) (the "New LMV") was published, and became effective on June 28, 2006. L.M.V has introduced a new legal structure with the purpose of encouraging investment and growth of the Mexican securities market. • The main purposes of New LMV are: **(i)** promoting the access of medium size businesses to the securities market; **(ii)** consolidating the regime currently applicable to Publicly Held Companies ("PHCs"), in order to improve its corporate governance system; **(iii)** updating and giving flexibility to the legal framework applicable to Broker-Dealer Firms, Stock Exchanges, Securities Depository Institutions, Clearing Agencies, and Rating Agencies, among others; **(iv)** improving provisions related to violations and sanctions; and **(v)** redefining the functions and faculties of the financial authorities. • The New LMV creates a legal framework for new corporations called s*ociedades anónimas promotoras de inversion* ("SAPIs"). The new legal framework exempts SAPIs from certain

Year	Regulations
	obligations under the General Law of Business Corporations (*Ley General de Sociedades Mercantiles*) (the "LGSM") that have limited the ability to give certain corporate and economical rights to investors/shareholders of Mexican *sociedades anónimas*. SAPIs are Mexican corporations organized as *sociedades anónimas* under the LGSM that voluntarily submit themselves to the legal regime of SAPIs set forth under the New LMV. The LGSM provides that any agreement that limits the rights of the shareholders to freely vote their shares is null and void. An interesting innovation is the SAPI is a regular *Sociedad Anonima* (limited liability corporation) with a diverse list of exceptions to the provisions of the General Law of Commercial Companies (L.G.S.M.). The SAPI is intended to create a new culture of investment in Mexico by adopting clear and workable corporate governance. • The New LMV permits shareholders of PHCs to enter into Shareholders' Agreements that include the following matters: **(i)** non-compete provisions; **(ii)** option rights (*e.g.*, right of first refusal, tag-along rights, call option and put option); **(iii)** sale and transfer of shares; **(iv)** exercises of preemptive rights; and **(v)** pooling vote provisions. Shareholders' Agreements must be disclosed to the PHC within 5 (five) business days following their execution and they will become effective upon its disclosure to the market through the BMV and in its annual report filed with the CNBV and the BMV. • The New LMV permits that the By-laws of PHCs include takeover defenses provisions, as long as **(i)** such provisions have been approved in an Extraordinary Shareholders' Meeting by at least 96% of the voting shares of the PHC, **(ii)** the shareholders of the PHC, except for the bidder, are not excluded from the economic benefits obtained, **(iii)** the possibility of a takeover is not eliminated at all. Any takeover defenses provisions adopted in violation of the requirement set forth herein will be deemed as null and void.

Source: Mujica, et al., 2003; Cuellar, Creel, and Muggenburg 2003; Franck, Miaja, and Galicia 2001; Tilly and Balderas 2006; Franck 2007

Mexico has an early warning system that serves as a trigger for banks to add more capital or face additional regulation when a bank's CAR drops below 10 percent. Moreover, banks are given incentives to increase their equity capital through a number of ways, reducing the potential for firm stress. The banking system has in place a deposit insurance corporation which covers a portion of savings, creating some certainty for depositors, especially with relatively small amounts. The existence of various microfinance institutions, which also fall under the supervision of CNBV serve as a sound alternative source of financing for millions of Mexicans who often find it hard to obtain credit from banks and other financial institutions due to stringent credit requirements and high interest rates on credit.

It is not surprising therefore that Mexico has a strong banking system, which is characterized by (i) high capital ratios (16 percent), (ii) low average leverage ratios (under 10 percent), (iii) strong provisioning practices, (iv) prudent accounting standards, (v) sound capitalization rules, (vi) regulations on foreign currency operations net exposures in liquidity, (vii) supervisory process, and (viii) limited bank operations with affiliates. In Mexico, foreign banks are only allowed to operate as subsidiaries (rather than branches) which reduces the impact of parent company policies on local bank performance and enhances the authority of Mexican regulators and supervisors over their activities. As regards human resources capacity, Mexican financial institutions have highly competent and skilled employees.

Potential risk from money laundering is tackled through strong regulations on foreign currency account requirements, imposing limits on cash transactions involving foreign currency, becoming a member of the international task force on money laundering, monitoring financial transactions, imposing limits on the amounts of dollars that can be exchanged for pesos as well as frequency of withdrawals per month.

In the stock market, the Government has acted to ensure appropriate information disclosure. Financial information disclosure is strong and measures are underway to encourage delisted banks to list their stocks on the Mexican stock exchange to increase their information disclosure.

III.2.5 Financial Stability

As discussed above, the turmoil in international financial markets significantly affected the performance of Mexican economy in 2008. During the first three months of 2008, the economy slowed in response to the gradual deterioration of external demand (Banco de Mexico 2008), dampening tradable goods output and the labor market. Other effects included (Banco de Mexico 2008 and discussions with staff from Banco de México):

1. Some Mexican commercial firms bet on an appreciation of the local currency using foreign exchange derivatives. The depreciation of the peso triggered considerable losses which put additional pressure on the exchange rate.
2. High risks spread between banking rate and market rate
3. A drop in bank lending
4. A drop in external financing for financial institutions. This saw increasing pressure on banks for funding from domestic corporations as the crisis intensified
5. Depreciation of the Mexican peso
6. Government expenditure increased during the crisis.
7. A run on mutual funds
8. An Increase in delinquency rates in credit card loans and the corporate sector

Mexico had many policies for dealing with the global financial crisis, but much had been done pre-crisis to ensure policy settings were appropriate and able to handle shocks. Policies adopted during the crisis are outlined below (Banco de Mexico 2008, Moreno-Brid 2009).

A. Fiscal Policy

The Mexican government applied sound budgetary discipline during the financial crisis, working actively against the economy suffering a significant drop in aggregate demand but with due regard to fiscal sustainability. For example, the Government drew upon Mexico's relatively well developed debt markets to implement economic stimulus programs tailored toward job creation; gave tax incentives; reformed the Social Security Act to increase the amount of retirement savings that could be withdrawn by the unemployed; and provided temporary social security coverage for those suffering from job loss.

The Government also increased public spending on infrastructure to support productive activities and improve the supply capacity of the economy, issuing additional debt with Udibonos (federal government development bonds). The Government also established the National Infrastructure Fund, Standing out Program to Promote Growth and Employment (PICE), and Protecting families' economy and employment by National Agreement in January 2009.

B. Monetary policy and other measures

Mexico has adopted an explicit inflation targeting regime since the late 1990s. It was formally implemented in 2001. A stationary annual inflation target of 3 percent was set out in 2003. Starting January 21, 2008, Banco de Mexico adopted an operating interest rate target (overnight interbank rate) to implement its monetary policy stance.

As discussed above, Mexico had succeeded in keeping inflation at manageable levels prior to the crisis. During the crisis the focus necessarily changed to supporting financial markets. In foreign exchange markets for example, the Government ensured continued liquidity through extraordinary dollar auctions, foreign currency swaps with US Federal Reserve, and dollar auctions without set minimum price against the highly convertible Mexican peso. The Government also responded by:

- Supplying US dollar liquidity to the foreign exchange market to reduce volatility.
- Providing liquidity in domestic currency for commercial banks.
- Modifying the programs for government securities issuing in favor of short-term financial instruments.
- Implementing a program to repurchase IPAB bonds.
- Giving mutual funds greater flexibility to rebalance portfolios.
- Developing bank's program of guarantees on short-term private debt issuing.

Effect of Macroeconomic and Financial Stability Policies

With regards to the degree of financial stability in Mexico, it was telling that although Mexico experienced an economic contraction close to seven percent of GDP in 2009, Mexico did not experience a financial crisis.

Mexican banking institutions suffered only modestly from the global financial crisis. This was shown by a decrease in profits in 2008 arising from falling asset quality and a rise in loan provisioning expenses since June 2008 to December 2009, which created a serious drain on shareholder equity as well as net income as allowance for loan losses surged. Interest income experienced a light decline. Furthermore, by June 2010 allowance for loan losses had decreased, making way for an improvement in core business net income, net interest income, and net fees and commissions. Bank restrained from credit disbursement due to fear of high loan delinquency.

Factors considered vital for Mexican financial stability include:

- Sound and strong capitalized firms
- Low leverage ratio of Mexican firms
- Attractive risk return relationship
- An independent central bank
- Low national debt and deficit (low sovereign risk)
- Long term nature of the largest percentage of Mexican national debt
- No defaults by listed companies
- Orderly price mechanisms (since fluctuations of 15 percent leads to automatically suspension of trading of shares)
- Cooperative relationships between regulators such as Central bank, Ministry of Finance, CNBV

- Strong development of mutual funds
- No capital gains for individuals for selling shares on stock exchange induced interest from domestic and foreign investors, adding market liquidity
- Indiscriminate treatment of shareholders on the stock exchange (no capital gains for individuals but corporations must pay)
- Stock market regulation on OTC derivatives has central depository for them as well as clearing market for them.
- The existence of consumer protection agency which also caters for shareholders and securities holders induces confidence in investment in securities
- Integrated stock exchange supervision.

The State of Bank Health and Stock Market Stability

Although most of the largest banking groups in Mexico are foreign owned, Mexican banks are present in all sectors and activities and their number has increased over time. Banks in Mexico have strong capital foundation. The CAR stood at 17. 5 percent in June 2010 compared with 16.5 percent in December 2010 and June 2009. Indicators of bank performance such as the CAR, profitability (ROE), non-performing loan ratios, loan to deposit ratios, net interest margin are sound. Provisioning for losses, which increased at the outset of the financial crisis as non-performing loans increased, has slowly decreased as economic conditions have improved. Strengthened supervision over all types of financial institutions regardless of ownership – state, private, domestic or foreign owned alike – ensured prudence that guaranteed high capital adequacy ratios, low leverage, and low non-performing loans ratios. Interest on credit is still very high, creating a very high net interest margin. While this harms consumers, it adds to bank profitability.

The Mexican stock market is generally a stable and liquid market and has considerable growth potential, since most banks, Mexican oil companies, utilities companies (such as electricity), are not listed. The stock market also has strong domestic firm presence and liquid national debt securities. Strong, consistent, and neutral regulation on listing and information disclosure requirements for both Mexican and foreign incorporated companies have ensured confidence in their stock market as a source of finance for domestic and foreign companies (135 firms are listed on the stock exchange, as June 2011, whose shares operate locally, and more than 600 listed firms through International Quotations System).

III.3 The United States

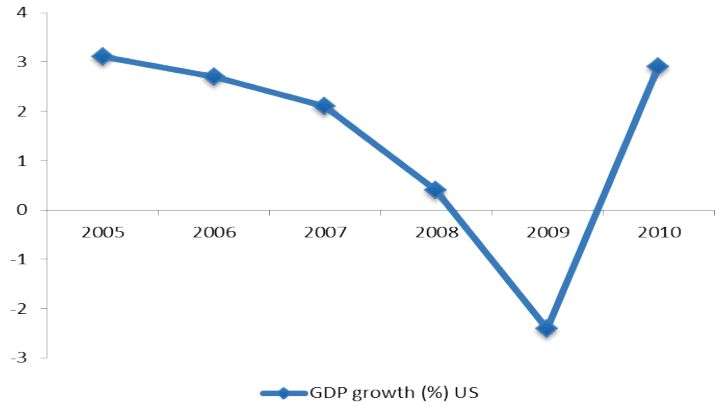
III.3.1 Macroeconomic Condition

United States economy, the World's largestUS$14.44 trillion (GDP) in 2008 is according to the Global Competitive Index, the number one most competitive and innovative economy in the World (World Economic Forum 2009b). Services contribute 79.6 percent to the economy (2008), industry 19.2 percent, and agriculture 1.2 percent. United States is thus a services dominated economy. The largest percentage of American labor force works in professional, managerial and technical services (35.5 percent), sales and office (24.8 percent), manufacturing, extraction, transportation, and crafts (22.6 percent), other services (16.5 percent), farming, forestry, and fishing (0.6 percent). United States remains the most favorite destination of foreign investment, both direct and portfolio. In 2007, the United States

attracted US$237.5 billion in FDI, US$1,145.1 billion in portfolio investment, and US$675.6 billion (other investments) bringing the figure for 2007 at US$2,057.7 billion, lower than the previous year's figure of US$2,061.1billion (International Monetary Fund2009b). Nonetheless, during the same period, the United States invested outside their economy, US$1289.9 billion, higher than the figure for 2006 (US$1251.7 billion). The long term trajectory of US GDP which in 1990 was about US$6 trillion ,had by 2007 reached US$14 trillion, a position that has been undermined slightly by economic recession in 2008, with attendant high open unemployment, low consumer and business confidence, which impacted negatively on private investment, consumption, and overall aggregate demand.

The United States economic growth, which reached its height in 2004, show positive but falling rates through 2009 when it hits the lowest level of -2.4 percent before rebound into modest growth sparked off by emerging economic recovery in 2010 as the impact of economic and financial stimulus packages start to revitalize sluggish economic activities. That said, the impact of the financial crisis is very apparent in the contraction in GDP, which starts in 2008 and bottoms out in 2009 (Figure 3.21). The United States economy fell into recession in December 2008 which bottomed out in 2009. Economic growth is predicted to reach 2.7 percent in 2010 but will slow somewhat, in 2011 (2.4 percent), according to International Monetary Fund's World economic outlook, January, 2010. Nonetheless, United States economic growth will for some time remain lower than World economic growth predictions (International Monetary Fund 2010a). The 2008 recession halted United States economic growth by as much as 0.4 (from 2.1 in 2007), and even lower in 2009 registering -2.7. Economic growth seems to be underway in 2010 and is projected to continue as recovery gathers momentum.

Figure 3.19: Developments in Economic growth, US, 2005-2010



Source: International Monetary Fund 2011

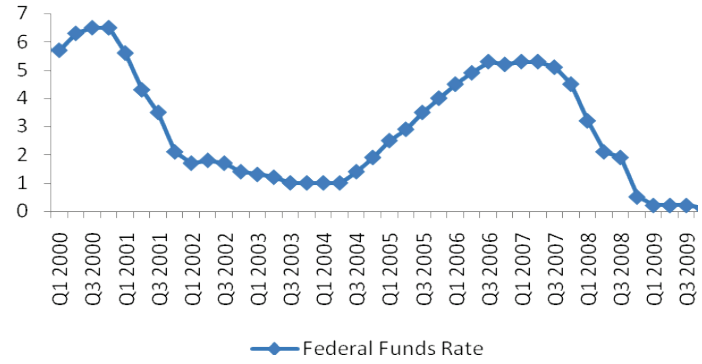
Nonetheless, as economic recovery which has been underpinned by heavy government borrowing and spending, through the economic stimulus, the United States economy like other largely developed economies that suffered much from the 2008 financial crisis, face the challenge of reducing and finally phasing out economic stimulus packages, without sparking on jitters in the still volatile economy which may have adverse effects on the pace of economic recovery. In fact some fears are abound among economics circles that the rebound in economic growth being based on huge government fiscal stimulus, rebates and other incentives which spurred business and private consumption expenditure, may not be sustainable implying that growth in the second half of 2010 may fall far short of expectations slowing economic recovery in the process. Signs of such fears include the still

high unemployment rate 9.6 percent, and show no indications of decreasing as job created continue to fall far short of projections. In other words, the current rate of economic growth is not high enough to spur the economy to sustainable economic recovery, which though not that bad to send the economy into double dip recession, may end up prolonging high unemployment, put on a check on improving consumer confidence, business confidence as well as overall confidence. In short, the pump priming policies adopted during the financial crisis, which have led to drastic increase in budget deficit as well as higher debt to GDP ratio, though restored liquidity and financial stability are only effective as a stop-gap measure. In other words, government sponsored economic stimulus programs much as they were pivotal during the recession to stave off an even deeper meltdown, should merely serve to restore a conducive investment and business environment for the revitalization of private investment, which is the source of sustainable economic recovery for the United States economy.

Developments in Interest Rate

Low inflation combined with low interest regime (nearing zero), keeps interest rate in United States very low (Figure 3.22 and Figure 3.23). The low interest regime continues to be an important component of the Federal Reserve expansionary monetary policy characterized by low cost of lending and high liquidity. However, sluggish employment growth attributable to low private sector demand means that consumer confidence remains low as consumers prefer precautionary saving to spending the little they have. In any case by increasing saving the little that is earned, increases the chance of improving creditworthiness which is vital in reducing debt burdens they face in future through lower refinancing at lower cost (Figure 3.20)

Figure 3.20: Interest Rate, 2000-2009



Source: International Monetary Fund 2010e

The federal reserve efforts to mitigate the effects of the financial crisis on the economy maintained a very low interest rate regime (Figure 3.20), which ensured not only cheap funds needed to finance the economic stimulus and bailout packages, but also was aimed at stimulating domestic demand to avert an even deeper and protracted recession.

Figure 3.21: Inflation and Indicators of Cost of Financing in US

Source: International Monetary Fund 2010e

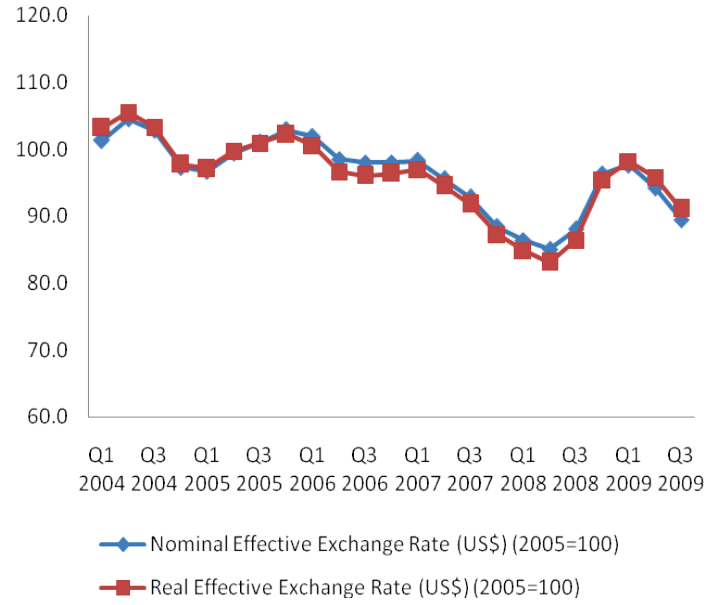
Lower funds rate achieved by drastic interest cuts in 2008 reaching 0.25 percent has induced a reduction in discount rate (which is available for commercial banks facing liquidity constraints but available at a cost to dissuade irresponsible liquidity management), the treasury bill rate, and commercial bank rate (cost of fund mobilization for companies through the sale of their debt securities). The low interest rate regime is meant to ensure high liquidity at low cost for consumers, financial and non-financial sector alike, as well as federal and state governments in mobilizing funds aimed at stimulating the economy to sustainable recovery (Figure 3.21).

Subprime mortgage crisis has been identified as the spark that leads to the great recession since great recession of 1930s. The protracted low interest regime, led to low borrowing costs, investment expansion and excessive risk taking as business confidence surged. An increase in the mortgage rate which is in response to subprime mortgage crisis, sparked off by the inability of many home owners who were not creditworthy to begin with but had been induced to obtain mortgages by the low mortgage loan rates relative to the prime lending rate prior to 2008, on mortgage rate readjustment became unable to service their mortgage loans due to the high of doing so.

The Depreciation US Dollar

The US dollar has experienced persistent depreciation over time, which is attributable to the economy's rising current account deficit, and low interest regime. However, during the financial crisis the regime of extremely low interest rates (which today hovers between 0.0-0.25 percent) combined with falling private consumption expenditure, cutback in production capacity as inventories increased, which increased excess capacity, led to very low inflation bordering on due in part to high indebtedness in the household sector which borders on deflation.

Figure 3.22: Developments in Nominal and Real Effective Exchange Rate of the US Dollar Indices



Source: International Monetary Fund 2010e

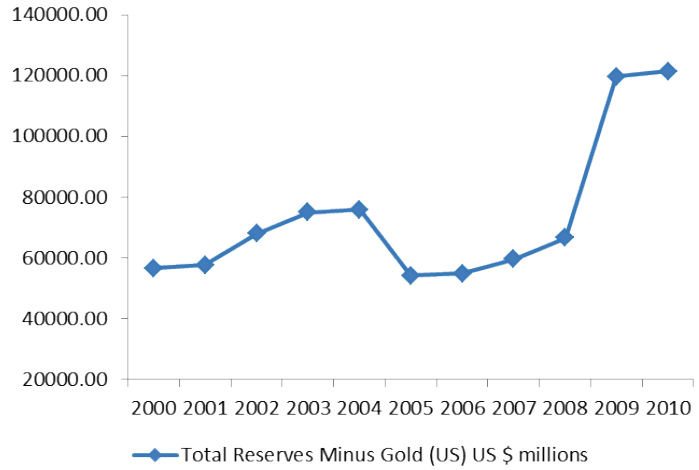
Low interest rate coupled with very low inflation , and similar downward pressures on currencies of United States trading partners as they also embarked on measures to stave of recession, as well as efforts of major financial corporation's headquartered in industrialized economies (including the United States) to support their parent companies in tackling huge debt overhangs and toxic asset charge offs and general 'flight to safety effect' which often occurs during episodes of economic downturns as financial assets are transferred from emerging to developed financial markets, helped in some way to stave off further losses, meant that the real effective exchange of the US dollar in terms of its major trading partners in 2008 increased, albeit temporarily. However business as usual starts to take hold, risk taking picks up, and financial assets resume flowing from low return economies (developed financial markets) to high return emerging markets. Moreover, the effects of quantitative easing in United States economy implemented in 2008 started to have effect, which coupled with the injection of additional liquidity through various components of the economic stimulus program in the first quarter and second quarter of 2009 sent the real effective exchange rate to downward trend once again. Under such conditions, the dollar will continue to follow its long run trajectory vis a vis other hard currencies owing to its huge trade deficit, debt, and currently very low interest rate regime s (Figure 3.22).

United States International Reserve Position

A strong international reserve position is vital for economic and financial stability not only for United States economy but also the World economy. This is because reserve position affects the exchange rate of the US dollar, which is used in most international transactions which range from financial services, commodity prices to minerals. United States also lends reserves to other central banks on demand, making its position very vital for the World economic and financial stability (Figure 3.23). Monthly figures indicate an increase in international reserves which is evident in 2006, suffers deep contraction in 2008 but recovers in the third quarter of 2009. That said, monthly figures since then do not show marked differences until February 2010. Nonetheless, there is no denying the fact that despite slight fluctuation in monthly figures, the worst dent in international reserve position, appears for the

time being, is long past (Figure 3.23). Overall, there are no indications that United States international reserve position was significantly affected by the 2008 financial crisis. In any case, 2009 shows a drastic surge in United States international reserves.

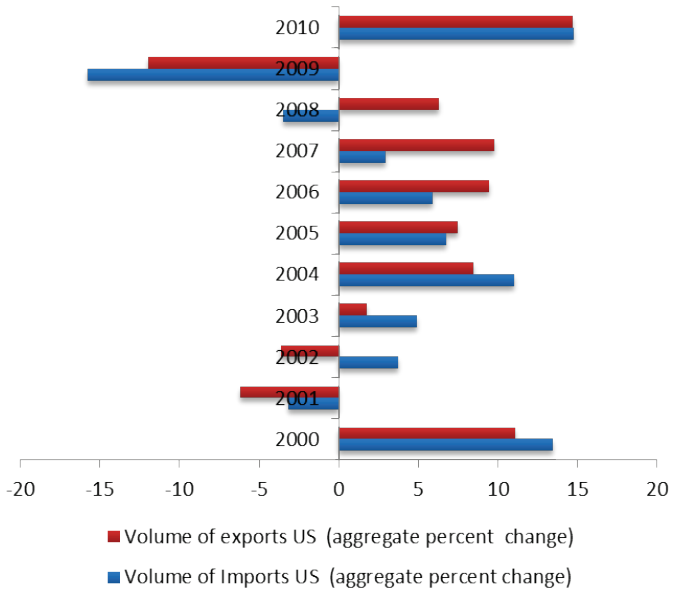
Figure 3.23: Developments in United States International Reserves



Source: US Federal Reserve, June 2011 release

Sluggish economic activities had adverse impact on the ability of United States economy to import as well as export goods and services, a fact that is attested by a drastic drop in figures on exports of goods and services as well as imports of goods and services in 2008. However, recovery as far as exports of goods and services seems to be underway, in 2009 which strengthens in 2010 (Figure 3.24). However, the level of imports continues to outstrip exports, which has contributed in part to the widening trade deficit, current account imbalance, and depreciating US dollar against major currencies of its key trading partners.

Figure 3.24: Exports and Imports of Goods and Services, the United States (Percent)

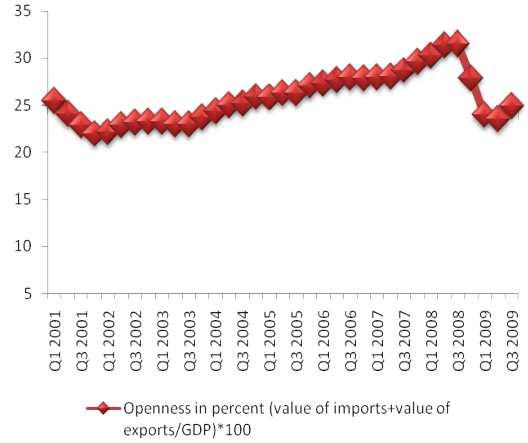


Source: International Monetary Fund 2011e

As one of the proponents of free trade, the United States economy, at least prior to 2008 financial crisis, showed vivid signs of increasing openness, which is an indication that in its

trading relations with other economies, the United States seems to gradually living to its commitment of opening up its economy for imports from other nations as well as exports of goods and services to other economies (Figure 3.25). Nonetheless, given the still high debt level, high federal deficit (US$14.3 trillion in July 2011), high open unemployment rate of above 9.6 percent, and the slow recovery from the 'great' recession, calls for the United States to increase its share of foreign markets and efforts to protect local economy will be hard to resist. Efforts to rebalance international trade and development, calls for surplus current account economies to boost their domestic demand by reducing their ratio exports to GDP while at the same time increase imports from other economies, and deficit current account economies whilst deficit economies to increase exports whilst making reductions on imports, is expected to improve prospects for a balanced world economy.

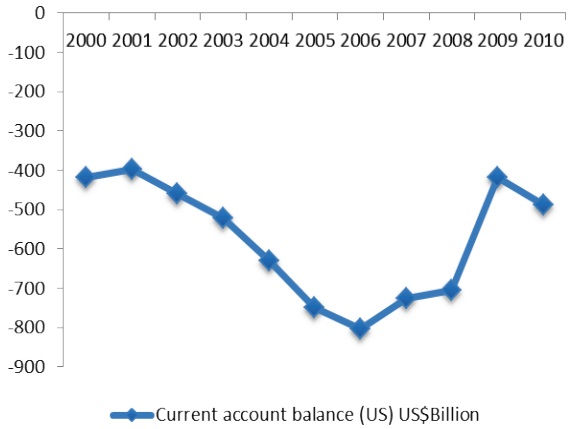
Figure 3.25: Developments in International Openness



Source: International Monetary Fund 2010e

Such a development affects the balance on trade and services, which shows signs of improvements in 2009 compared to the previous year. However, 2010 shows an increase in the current account deficit as imports surpass exports once again. Thus, United States continues to be a net importer of goods and services, which is why it experiences a trade and current account deficit with the rest of the World in general, with the main accusing finger being pointed at PRC and economies with surplus trade balances (Figure 3.26 and Figure 3.27).

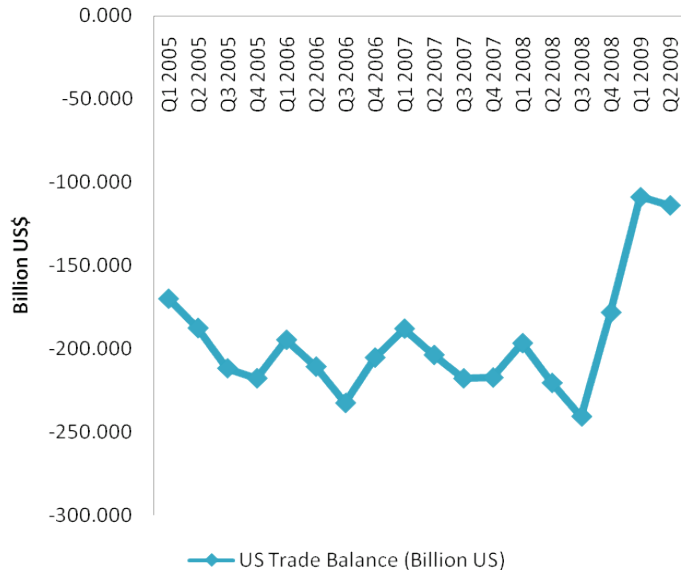
Figure 3.26: The United States Current Account Balance



Source: International Monetary Fund 2010e

Moreover, to overcome this imbalance, the United States administration along with G20 members have ushered in an initiative that calls for balanced sustainable economic growth in the world economy, which promotes domestic consumption in economies that have current account surpluses, thereby reducing exports to current account deficit economies such as the United States (Figure 3.27). The challenge is to pursue balanced growth without falling into the trap of protectionism, which persistent calls for local consumers to use local products is liked to unleash.

Figure 3.27: Developments in the United States Current Account Balance



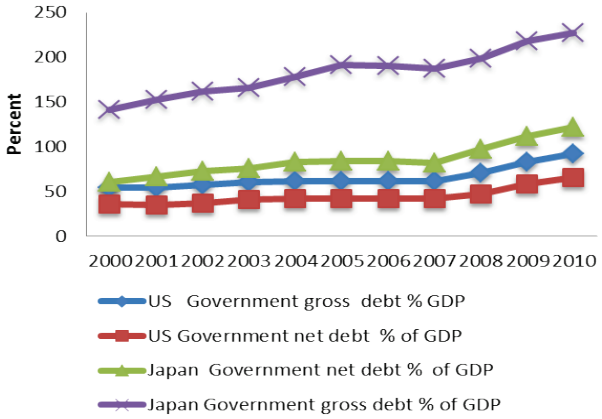
Source: International Monetary Fund 2010a

It is worth noting though with deleveraging process underway in United States household sector, private consumption in the United States continues to be lower than under normal conditions. Imports of goods and services have decreased while exports of goods and services show an upward trend. The consequence of this is an improvement in both the trade balance and current account balance.

The Rising National Debt

The perennial problem that continues to affect United States economy is the ballooning federal deficit. Low saving rates in United States economy have to be supported by heavy public and private sector borrowing from both domestic and foreign courses to provide needed investment resources. Consequently, the United States economy faces a very high national debt which in 2009 reached 84 percent and 2010 close to 100 percent of its gross domestic product. Rising government spending on economic stimulus and national health care program will continue to raise the deficit for the foreseeable future. That said United States public debt level pales into insignificance if compared with figures for Japan.

Figure 3.28: The United States' National Debt, 2000-2010



Source: International Monetary Fund 2011

Debt Reduction Plans

The current state of federal deficit is attributable to economic stimulus programs (Boulton 2011), which include

- US$850 billion spending and tax cuts embodied in the 2008 Recovery Act 2009;
- the FMAP extension of 2010 which entails $30 billion for states and teachers;
- The December 2010 tax agreement ($110 billion payroll tax cut, $80 billion unemployment benefit extension, extension of refundable Recovery Act tax credits);

Meanwhile, expected tax increases and expenditure reduction in the medium term will emanate from:

- Economic recovery which will induce deficit reduction to the magnitude of 4.5 percent by 2013;
- Affordable Care Act:
  - Slowing Health Care Cost Growth expected to arise from productivity adjustments in provider payments, Independent Payment Advisory Board, excise tax on Cadillac Plans
  - Revenue Increases expected to generate an additional 0.9 percentage point payroll tax and a new 3.8 percent tax on unearned income for high income earners, fees on insurers and drug manufacturers
  - Fiscal Gap Improvements with the Affordable Care Act expected to contribute to saving more than $100 billion over the first 10 years and more than $1 trillion over the second 10 years.
  - Thanks to the the ACA, the long-term fiscal imbalance is projected to be less than 2 percent of GDP under the Administration's 2012 Budget

In the long term, deficit reduction plan embraced by US government entails:

- Budget process debt caps
  - Setting the debt /GDP ratio to decline over the second half of the decade, which implies deficit cuts to the tune of 2.8 percent of GDP;
  - Expectations are that even if the debt/GDP ratio fails to follow downward path, automatic spending cuts and revenue increases across-the-board are expected to bring down the deficit and put debt/GDP back on the target path;

- Turning off debt caps during recessions.
  - Debt caps will be turned off during a recession. However, after a a recession, in which the debt/GDP ratio will increase, the debt caps will serve as mechanism that will force faster consolidation in order to regain the lost fiscal space
  - Republicans propose a global debt cap of 20.6 percent of GDP
- Revenue increase: CBO projects revenues will increase to 19.3 percent of GDP in the long-run, reflecting cyclical recovery (up from 14.5 percent during the recession) and some assumed revenue increases;
- Discretionary Spending: Discretionary spending will decline as a share of GDP;
- Social Security: Social Security lacks sufficient dedicated revenues to cover benefits over the next 75 years. Actuarial balance is approximately -2 percent of taxable payroll.
- Health Care: Affordable Care Act holds down long-run growth, and requires commitment from Congress

The US government has put forward proposals that aim to reduce the budget deficit by US$4 trillion in 12 years:

- Spending cuts to the tune of US$ 2 trillion:
  - from US$400 in security discretionary cuts and US$770 in non-security discretionary spending cuts;
  - US$480 in ACA savings and Medicare and Medicaid reforms ; US$360 from cuts in agricultural subsidies and exaction of aviation fees;
- One US$ trillion from comprehensive tax reforms that are expected to lower tax expenditures for the wealthy and reduce deficit; and
- US$ 990 expected to arise from interest savings

Federal deficit reduction through productivity enhancements

In addition, the US government has taken measures in US federal budget 2012 to reduce federal deficit by increasing productivity and output in US economy are also being proposed. For instance in the long term, US governments plans to invest in innovation, which should increase the competitiveness of the American economy, and help in creating many new jobs, new incomes, and tax revenues. Such initiatives include new American Wireless initiative that will facilitate access to high speed wireless of 98 percent of Americans and create a nationwide interoperable public safety network in five years to cover 98 percent of American; patent reform agenda aimed at accelerating patent applications at US Patent & Trademark Office; improving K-12 education aimed at graduating every high school and ready for career; acceleration of clean energy by adopting a clean energy standard, funding start up Advanced Research Projects Agency-Energy (ARPA-E) program, and effecting clean energy manufacturing tax; and launching the startup America Initiative which is aimed at facilitating entrepreneurship in United States, as well as increase high growth and quality jobs generating startups in the US (Ernst 2011). Nonetheless, such measures need approval from Congress.

Nonetheless, , measures put on the table so far have little likelihood of consolidating United States fiscal condition based on IMF (2011) remarks. This is because effective measures should entail dealing with the principal causes of rising government deficit: mandatory spending programs such as social security, Medicare, and Medicaid (reforms needed which should lead to substantial savings), tax cuts for the wealthy (need for dealing with this

contentious issue through restructuring US tax rate structure and creating new tax revenues (new taxes such as value added, carbon tax, among others). Deficit and debt reduction proposals have not gone far enough to address fully the above factors.

Additionally, current federal debt level is unsustainable in the long term, which is why United States should take measures that encourage domestic saving, which should reduce the reliance on borrowing both from domestic and foreign sources to fund private and public investment. Additionally, efforts should be tailored towards productive activities, which should increase productivity in the United States economy and support higher export performance. Nonetheless, in the short run, in the event of a failure to resolve deficit reduction and raising the US government debt ceiling, will have implications for the United States economy as it will in effect mean that US will have to default on its debt obligations, a scenario that is likely to spark off loss of credibility in US government debt securities, a plummet in their prices, an increase in interest premiums on future US securities (factoring in increased risk). Under such a scenario, the downgrade in sovereign rating of US securities will be unavoidable, which will have very serious repercussions for United States and World economy (IMF 2011). There is little doubt that in the event of a failure of talks on reducing federal deficit and raising the debt ceiling, though to many this is still an unlikely scenario, may plunge the global financial markets in general and sovereign debt market in particular, into the doldrums as flight to safety from sovereign debt gather pace, with dire consequences for efforts currently underway to consolidate fiscal discipline while at the same time ensuring that gains made on recovery are not undermined. As one of the leading borrowers, many private and sovereign investors are anxiously monitoring the deficit reduction and debt ceiling talks as failure to reach an agreement poses the danger of directly undermining the value of US government securities they hold as well as indirectly the value of securities of US corporations as a result of high country risk.

This is the more so given the fact that some of the largest financial institutions in United States and the some of the European nations are still dependent on capital injections that have kept them afloat since the onset of the financial crisis, makes the likelihood of sovereign default in United States to continue to affect investor and consumer sentiments as long as it remains unresolved, with attendant possibility of reverting to risk averse behavior. Low investor and consumer confidence, if materializes, will delay, if not reverse gains made in economic recovery. This is at a time when investor concerns have already been aggravated by troubles arising from the four troubled Euro zone members (Greece, Spain, Portugal, Ireland, Italy) who like the United States have high debt to GDP ratios as well as large budget deficits.

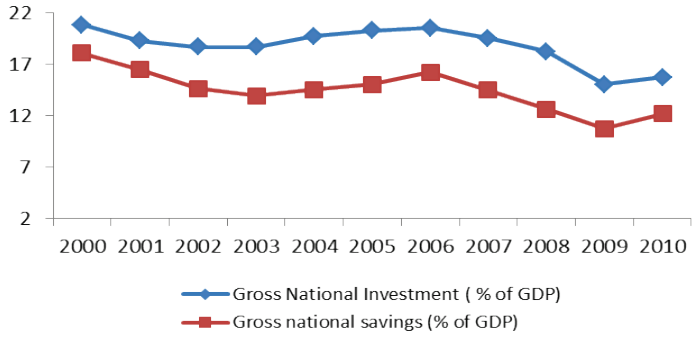
In any case, given the still high unemployment (9.6 percent in 2010 and is projected to drop slightly to 8.9 percent in 2011 (based on IMF estimates), high leveraged housing sector, anemic economic growth which is projected to hover around 2.75 percent in 2011, makes the possibility of United States default however slim, on its debt obligations, via contagion, is likely to aggravate not only woes of the United States economy woes but also other economies large and small, as well. This underscores the need for a realistic debt reduction plan in the short term and long term which should be based on realistic macroeconomic assumptions if market fears of potential US default and the repercussions thereof are to be laid to rest now and in future (IMF 2011). Such measures should include the implementation of the proposed formulation of a failsafe mechanism in the debt ratio dynamics as it will help in averting the recurrence of the current situation that has created the possibility of United

States default and attendant serious repercussions on United States and other APEC and world economies as well (IMF 2011). That said, there is need to avoid drastic reduction in federal deficit at a time the United States economy continues to struggle to sustain recovery, a process that is now being compounded by sovereign debt concerns affecting some of the Eurozone economies.

Large Investment –Savings Gap

There is little doubt that the currently high and for the foreseeable future widening investment-savings gap continue to be the major obstacle for United States economy to reduce its reliance on foreign financing sources of its public expenditure (Figure 3.29). US experience a decline in both the savings and investment rate as percent of GDP since 2007. It is a trend that continues until 2009. An increase in investment and savings rates shows an upward trend once again since 2006, with savings rate growing higher than the investment rate which leads to the narrowing of the Investment rate to savings rate gap in 2010. That said, the investment rate –savings rate gap, albeit slightly narrower in 2010 than in during 2003-2009 period, it is still wide and needs addressing through increased efforts to stimulate domestic saving in US economy.

Figure 3.29: Investment and Savings Gap of the United States, 2003-2010



Source: International Monetary Fund 2011a

Developments in United States Capital Flows

United States continues to be one of the favorite destinations for portfolio investments, other investments, and direct investments. At the same time, United States invests its capital outside its borders taking a similar pattern as capital inflows with the addition of reserve assets. US does not receive reserve assets from other nations (Table 3.20). United stated continues to be a net importer of capital during 1997-2008 period, implying that the World's number one economy is considered by investors , institutional, individual, corporate, and states, as a safe place for their investments. Most capital flow in the United States takes the form of portfolio investments; followed by other investments, and then foreign direct investments.

Table 3.20: Developments and Components of United States Capital flows

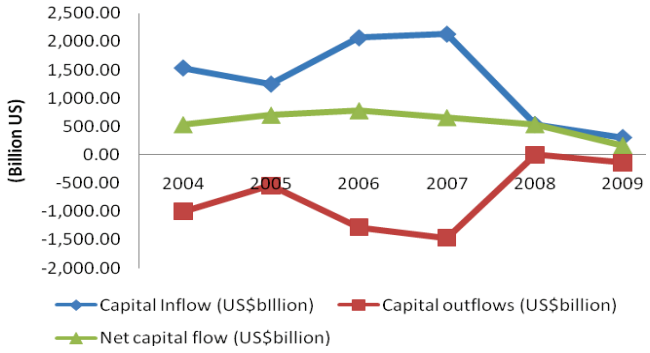
	Capital Inflows (Billion US)					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**
Direct investment	146	112.6	243.2	275.8	328.3	134.7
Portfolio investment	867.3	832	1,126.70	1,154.70	520.1	366.7
Other investment	519.9	302.7	695.3	699	-393.7	-195.7

Total capital flows	1,533.20	1,247.30	2,065.20	2,129.50	544.7	305.60
			Capital Outflows (Billion US)			
Direct investment	-316.2	-36.2	-244.9	-398.6	-351.1	-268.7
Portfolio investment	-177.4	-257.5	-498.9	-396	285.9	-393.5
Other investment	-510.1	-267	-544.3	-677.4	226.2	573.9
Reserve assets	2.8	14.1	2.4	-0.1	-4.8	-52.2
Total capital flows	-1,000.90	-546.6	-1,285.70	-1,472.10	156.1	-140.40
			Net capital flows (Billion US)			
Capital Inflow (US$bIllion)	1,533.20	1,247.30	2,065.20	2,129.50	534.1	305.60
Capital outflows (US$billion)	-1,000.90	-546.6	-1,285.70	-1,472.10	-0.1	-140.40
Net capital flow (US$billion)	532.3	700.7	779.5	657.4	534	165.20

Source: International Monetary Fund 2010e

The impact of the 2008 financial crisis is very apparent in the reduction of both capital inflow and outflow (Figure 3.30).

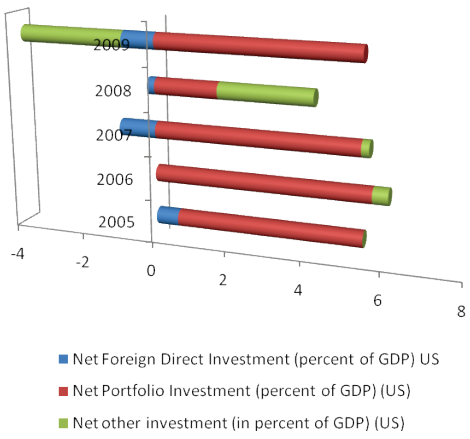
Figure 3.30: Net Capital Flow, US Billions, 2004-2009



Source: International Monetary Fund 2010e

The impact of the financial crisis on investment climate was to reduce investor confidence in the US economy as long term destination for investment. This meant that Net FDI to GDP decreased, while the percentage of net portfolio investment to GDP increased drastically. The change in Net other investments to GPD plummeted in 2009 reversing an upward trend that is apparent since 2005 (Figure 3.31).

Figure 3.31: Changes in Net FDI, Net Portfolio Investment, and Net Other Investments (percent of GDP)



Source: International Monetary Fund 2010g

III.3.2 The United States Financial System

The US's financial system comprises banking system, non-bank financial institutions, and financial markets. Banking system comprises the Federal Reserve System, commercial banks, foreign banks, offshore banks, saving institutions and credit unions. Non-bank financial institutions comprise asset-based finance companies, insurance companies and commercial lending companies. Financial markets comprise equities markets, debt and money markets and futures and options.

Commercial banks are either federally or state chartered. Federally-chartered banks (i.e. national banks) are regulated by the Office of the Comptroller of the Currency (OCC) and must be members of the Federal Reserve System and the Federal Deposit Insurance Corporation (FDIC). Bank holding companies, foreign banks and offshore banks are regulated by the Federal Reserve. State-chartered banks are regulated by the FDIC and banking authorities in the specific state in which they are incorporated. Meanwhile, savings institutions refer to savings banks and savings and loan associations (S&Ls) and are generally known as thrifts. Thrifts accept deposits from and extend credit primarily to individuals. Thrifts are regulated by the Office of Thrift Supervision (OTS) and deposits are insured with the FDIC. The Office of Thrift Supervision (OTS) is a bureau of the Department of the Treasury and is the primary regulator of all federally-chartered and many state chartered thrift institutions. OTS is headed by a Director who is appointed by the US President with the Senate's confirmation. OTS is responsible for chartering, examining, supervising, and regulating federal savings associations, federal savings banks and state-chartered saving associations belonging to the SAIF.OTS is funded by assessments and fees levied on the institutions it regulates. Credit Unions are non-profit, co-operative financial institutions owned and run by its members. They are exempted from reserve requirements, FDIC membership and certain other rules that apply to other banking institutions. Federally-chartered credit unions are under the supervision of the National Credit Union Administration (NCUA). Deposit insurance (up to US$100,000 per account) is provided to members by the National Credit Union Share Insurance Fund (NCUSIF). Meanwhile, state-chartered credit unions are supervised by the respective state supervisory authorities. Deposit insurance for state-chartered credit unions is available in some states under private or state-administered insurance programs. State credit unions may also be federally-insured by the NCUSIF.

As regards, the US capital markets, by value, United States stock markets had market capitalization of US$15,077.3 billion, 32 percent, of World's US$ 47,188.9 billion in 2009; and had US$31,665.0billion of debt securities, which is 34.4 percent of total value of World debt securities of US$92,082.4 billion during the same period. This underscores the vital importance of United States financial markets in the World financial system (Table 3.21).

Table 3.21: Size of Capital Markets in Billion US$, 2009

	GDP	Total Reserves Minus Gold	Stock Market Capitalization	Debt Securities		
				Public	Private	Total
World	57,843.4	8,543.8	47,188.9	36,403.4	55,679.0	92,082.4
United States	14,119.1	119.7	15,077.3	9,478.2	22,173.8	31,665.0

Source: International Monetary Fund 2010c

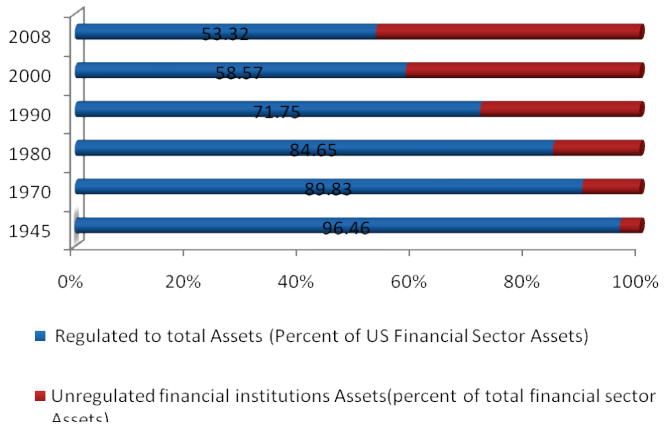
Table 3.22: Holders of Financial System Debt , 1945-2008

	1945		1970		1980		1990		2000		2Q08	
	$ Bil	%	$ Bil	%	$ Bil	%	$ Bil	%	$ Bil	%	$ Bil	%
Monetary Authority	24	11%	62	5%	128	4%	241	2%	512	2%	538	1%
Commercial Banking	118	52%	455	38%	1,290	36%	2,773	28%	5,006	24%	8,950	24%
Savings Institutions	24	11%	237	20%	723	20%	1,177	12%	1,089	5%	1,607	4%
Credit Unions	0		15	1%	53	1%	167	2%	380	2%	686	2%
P&C Insurance	4	2%	31	3%	124	3%	344	3%	509	2%	835	2%
Life Insurance	41	18%	175	15%	385	11%	1,135	11%	1,944	9%	2,937	8%
Private Pension	4	2%	37	3%	151	4%	464	5%	622	3%	757	2%
Government Retirement Funds	3	1%	50	4%	147	4%	409	4%	778	4%	920	2%
Mutual Funds & ETFs	0	0%	8	1%	20	1%	397	4%	1,208	6%	2,518	7%
Total with Significant Regulation	218	96%	1,069	90%	3,021	85%	7,106	72%	12,049	59%	19,748	53%
MMKT	-		-		42	1%	371	4%	1,318	6%	2,233	6%
GSEs	2	1%	44	4%	185	5%	374	4%	1,794	9%	2,995	8%
Agency & GSE Mortgage Pools	-		5	0%	114	3%	1,020	10%	2,493	12%	4,762	13%
ABS	-		-		-		250	3%	1,414	7%	4,257	11%
Finance Companies	4	2%	62	5%	196	5%	520	5%	929	5%	1,639	4%
REITs	-		4	0%	3	0%	24	0%	39	0%	232	1%
Brokers and Dealers	3	1%	6	1%	7	0%	107	1%	224	1%	694	2%
Funding Corporations	-		1	0%	3	0%	133	1%	313	2%	480	1%
Total with Less Regulation / More Leverage	8	4%	122	10%	549	15%	2,800	28%	8,523	41%	17,291	47%
Total Financial Sector	226	100%	1,190	100%	3,569	100%	9,905	100%	20,572	100%	37,039	100%

Source: FBR Capital Market 2008

In 2008, banks, thrifts and credit unions, controlled US$11 trillion of US $37 trillion securities in United States Financial system, other regulated financial institutions controlled US$7 trillion(Mutual funds and insurance), and non-regulated financial institutions controlled US$17 trillion (FBR Capital Market 2008). This means that 50 percent of financial system's debts prior to recent efforts to bring non-regulated financial institutions under regulation were barely regulated. While non-regulated financial institutions controlled 15 percent of financial system debt in 1990, by 2008, the figure had increased to 47 percent, mostly by Agency and Mortgage pools, GSEs, and Money market practitioners (Table 3.23). One of the key features of United States financial system since early 1980s is the rise in the percentage of financial assets under the control of unregulated financial institutions as compared to those under the control of regulated financial institutions, which showed an upward trend along with financial deregulation since early 1980s, creates conditions that led to the 2008 financial crisis (Figure 3.32).

Figure 3.32: Financial Assets Controlled by Regulated and Un-regulated Financial Institutions in US since 1945

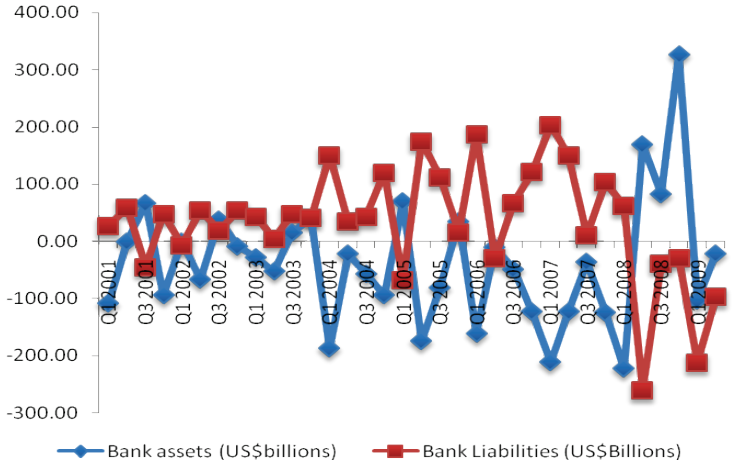


Source: FBR Capital Market 2008

Developments in Bank Indicators

United States' banks depict an ever increasing bank leverage which reaches its peak prior to the financial crisis as the level of charge offs rises, reducing bank capital in the process. Capital injection made in 2008, though improve asset position, being provided by the US government, must be repaid, leading to rising liabilities. It is a problem that is not limited to banks also is very apparent in thrifts which show falling deposit to liability ratios.

Figure 3.33: Developments in Banks Assets and Liabilities in the United States Banks



Source: International Monetary Fund 2010e

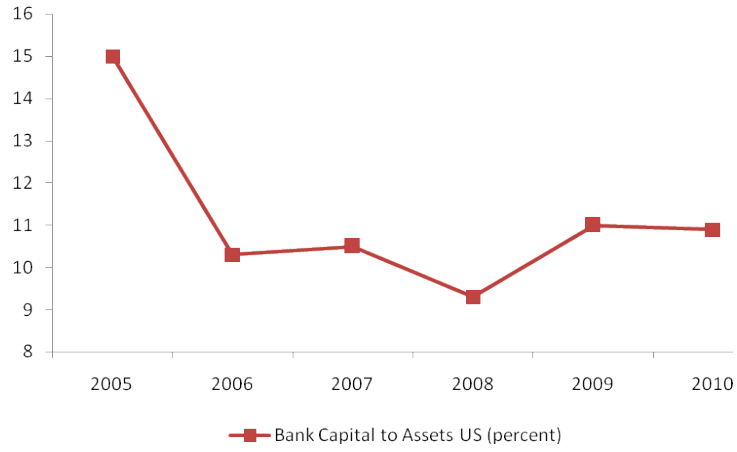
A closer observation of statistics of other depository corporations shows that while a steady increase in foreign assets, shares and equity, and loans is apparent prior to the financial crisis, the last two quarters of 2007 were already showing signs of stress as raising funds to finance assets started to tighten. Thus, there is no doubt that the financial crisis, which hit after somewhat long period of economic stability, had adverse effects on bank assets, liabilities, capital and profitability (Figure 3.33). As the quality of credit deteriorated during the course of the crisis, banks had to use their capital and productive assets to fund write offs and write downs, thereby undermining asset positions, capital adequacy positions and profitability which deteriorated in the process. Despite injections of huge re-capitalization, fiscal stimulus, tax rebates and other incentives both at the micro and macro level which were aimed at

staving off a deeper recession, continuing bleak economic prospects still hamper full economic recovery. There is no better indicator of that than loan disbursements which continued to underperform investments in net foreign assets and shares and other equity. Slow loan growth is partly due to tighter loan disbursement requirements which financial institutions have to comply with, which include among others higher risk weighted capital asset ratios, requirement to maintain high liquidity capacity, still sluggish growth in employment, private consumption, among others. The turnaround in net foreign assets shows that other depository corporations consider the worst is over, reducing their risk averseness by investing their funds in investments that earn higher risk weighted returns than those on offer in the United States The effect of the financial crisis on assets and liabilities of other financial corporations was also very vivid from the trajectory of assets and liabilities. While the decrease in assets for other financial corporations is attributable to falling assets values, high write downs and charge offs, induced by high default on investments made, the deep drop in liabilities may also indicate difficulties in obtaining new financing caused by rising lack of confidence in borrowers, corporate and individual alike, to meet their obligations during times of economic adversity. It is thus apparent that one of the key factors that will influence the pace of United States economic recovery is the extent to which financial institutions consider the state of economic conditions to have changed from high default prone to less so, enabling them, to relax credit requirements for all categories of borrowers, including mortgages for which foreclosures are still on the rise.

Volatility Indicators

There is shadow of doubt that declining return on banks assets and bank equity, which was in part caused by stiffening competition for funds from non-depository financial institutions made possible by financial deregulation which commenced in late 1980s, deepened in 1990s and early 2000s, increased their vulnerability to future financial crises. The deterioration of bank capital , both risk weighted and otherwise, for United States depository corporations caused by drastic decrease in asset values while demand for capital to meet write downs and charge offs surged plunged US banks headlong into the 2008 crisis unprepared. A reversal gets underway in 2009, and is sustained in 2010 (Figure 3.36). This is mainly attributable to the implementation of more stringent measures which among other measures involved conditional injection on federal funds into some of the troubled major banks, adoption of higher risk weighted capital adequacy requirements, and higher provisioning requirements,

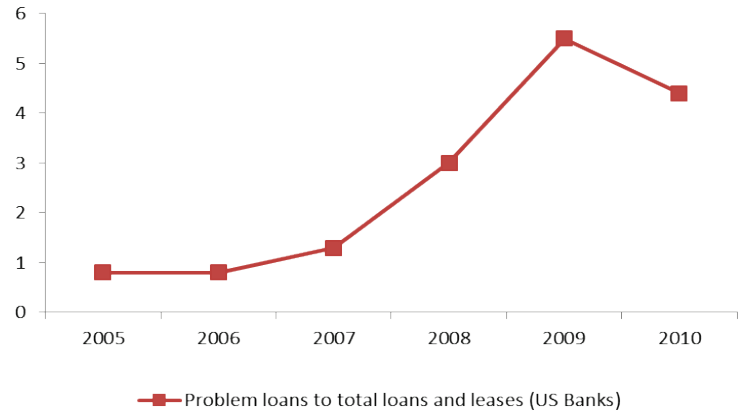
Figure 3.34: Developments in Bank Capital to Assets, United States Banks, 2005-2010



Source: International Monetary Fund 2010g

The United States banks were accumulating assets without making adequate provisioning for contingent liabilities would require more capital. The capital to assets ratio for US banks plummeted in 2006 rose slightly in 2007 before decreasing drastically in 2008 as the financial crisis unfolded. An increase in bank capital takes hold in 2009 reaching 11 percent but slightly drops in 2010 (Figure 3.34). In light of that, there is little doubt that capital of US banks still falls short of what is required to enable them face another financial crisis likely to call for such large charge offs as occurred during 2008-2009 period. This constitutes on of the major hurdles that US Banks must address in order to strengthen their capacity to face another financial crisis in future.

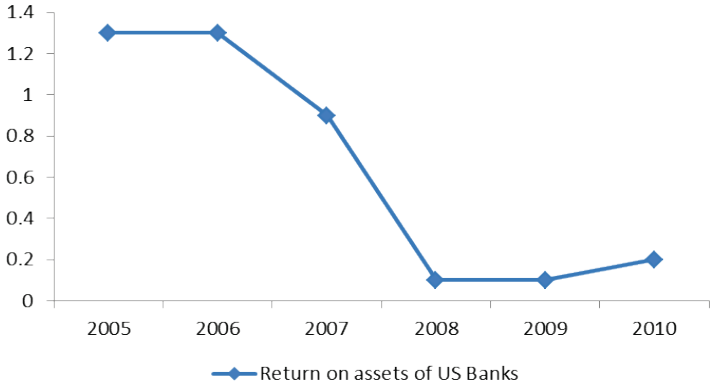
Figure 3.35: Problem Loans to Total Loans, and Leases (percent), 2005-2010



Source: Source: International Monetary Fund 2010g

This is very apparent from problem loans to assets and problem loans to total loans and leases which show an upward trend since 2006 reaching 'cataclysmic' proportions in 2009 (Figure 3.35). As the problem loans spread through the financial and non-financial systems via counter party risk, financial risk begun to have its toll on the capacity of financial corporations to provide intermediation function (dis-intermediation), thereby undermining the conduct of financial and non-financial transactions in the United States economy. Consequently, both the financial and non-financial sectors were adversely affected in the process, making efforts at stemming the tide even harder. Lower loan and lease disbursements sparked off by tighter loan requirements, coupled with rising risk aversion among lenders and borrowers alike, have contributed to high loan quality, which has translated into lower non-performing loans in 2010.

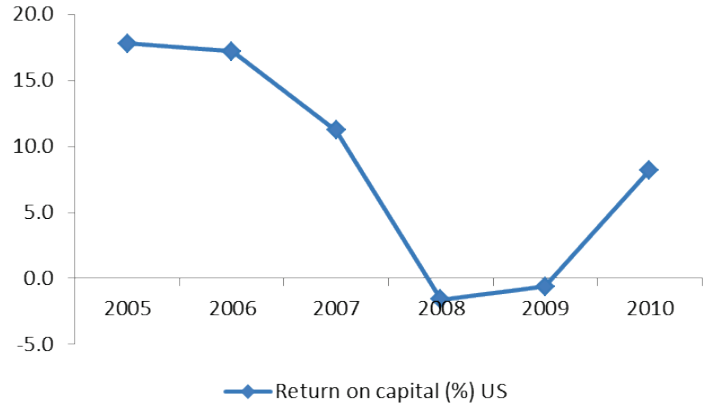
Figure 3.36: Return on Assets of United States Banks 2005 – 2010



Source: International Monetary Fund 2010g

Rising leverage and risk meant that the return on assets and equity have been showing a downward trend since 2006 reaching the bottom in 2008 before measures effected during and in the aftermath of the financial crisis in part stemmed the decline in 2009 and in 2010 (Figure 3.36 and Figure 3.37). Nonetheless, US Banks still experience relatively low return on assets which is attributable to the legacy of excessive risk taking that resulted into large volume of risky liabilities and assets.

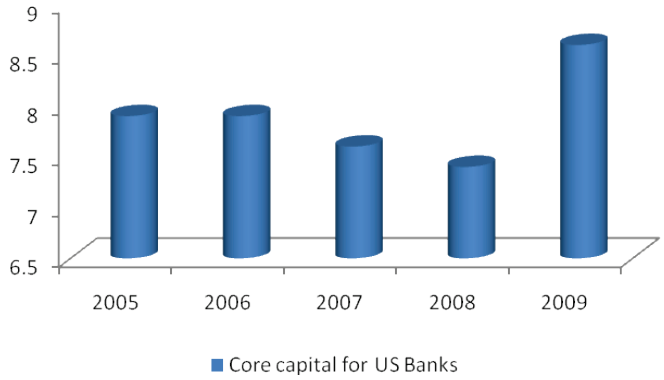
Figure 3.37: Return on Equity of United States Banks 2005 – 2010



Source: International Monetary Fund 2011g

The ratio of capital to risk weighted asset ratio, capital to assets ratio, and core capital ratios, have increased significantly since 2009, with the main aim being to strengthen United States banks capacity and ability to deal with problem loans and other attendant demands on capital that are likely to ensue in the event of another financial crisis. That said, United States Banks still to need to increase their capital levels, if they are to comply with either Basel II or Basel III strengthened capital and liquidity requirements.

Figure 3.38: Core Capital for United States Banks, 2005-2009 (percent)



Source: International Monetary Fund 2010g

If laxity in capital requirements induced a reduction of core capital from 7.8 percent (2007) to 7.4 percent (2008), measures effected since 2008 have forced banks to increase core capital to 8.6 percent (2009) (Figure 3.38).

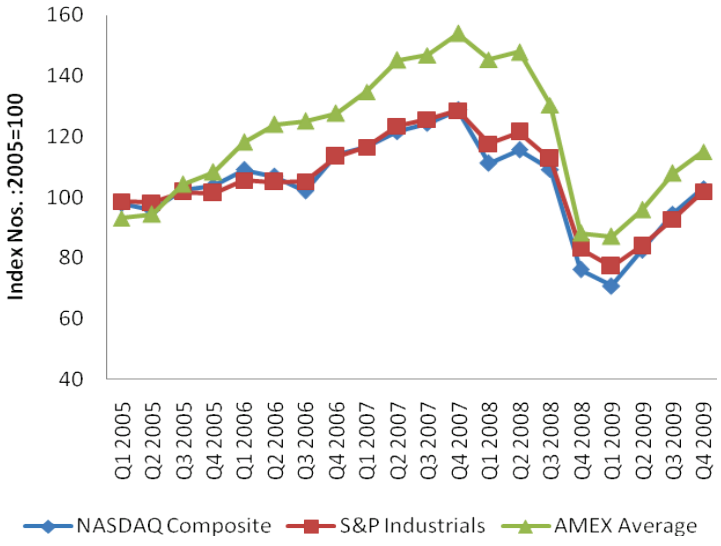
Figure 3.39: United States Regulatory Capital to Risk Weighted Assets (%)

Source: International Monetary Fund 2011

The same can be said to apply to regulatory capital to risk weighted assets requirements (Figure 3.39). United States banks have increased the amount of capital commensurate with risky investments they hold, which augurs well for dealing with another financial crisis that requires charge offs without requiring bailouts from external parties including the federal government. Regulatory capital to risk weighted assets for US banks has risen from 12.2 percent (2007) to 14.3 percent (2009) and 15.3 (2010).

Economic turbulence caused by financial distress, which financial institutions experienced affected their readiness and capacity to undertake financial intermediation with the consequence that it is not only share prices of distressed financial institutions that tumbled, but those of non-financial institutions that faced financing difficulties as perception about future economic and financial risk increased. Doubtless, stock market indices tumbled (Figure 3.40).

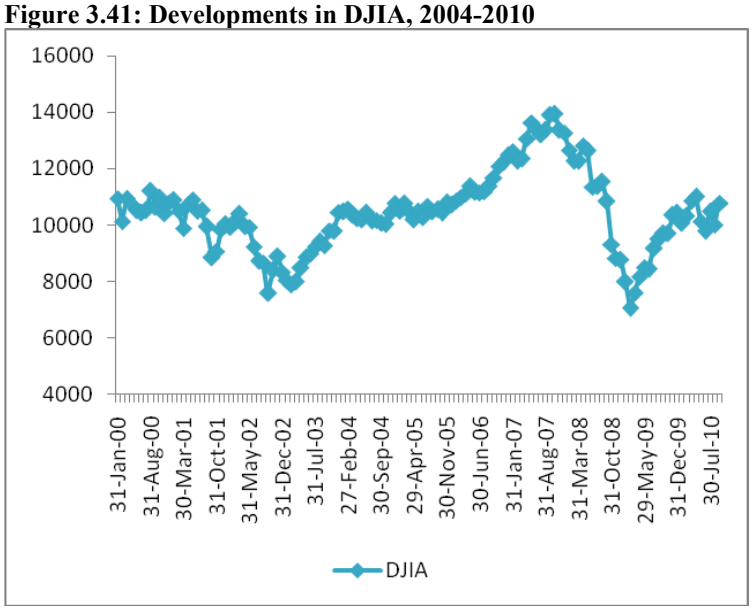
Figure 3.40: Developments in S & P, NASDAQ and AMEX Average, 2005-2009



Source: International Monetary Fund 2010e

United States stock market stability which has been on course since 2005 experiences a drastic drop in mid-2007 and worsens the entire 2008 reaching its lowest point in first quarter of 2009, before it rebounds in the second and third quarter of 2009

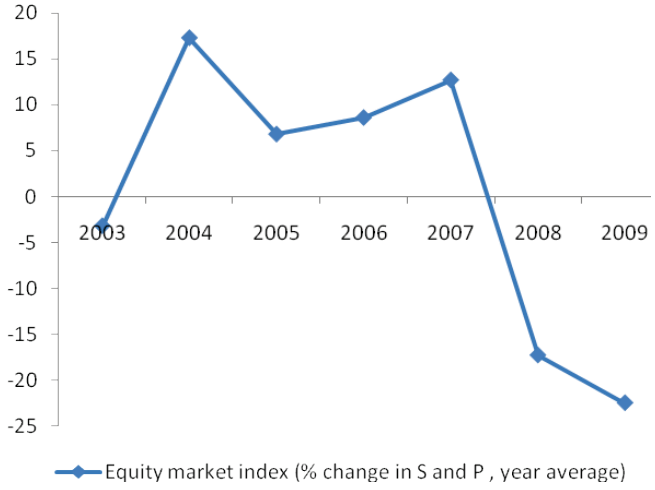
Figure 3.41: Developments in DJIA, 2004-2010



Source: Dow Jones Indexes 2010

A similar trend is shown by Dow Jones Industrial average (DJIA), which dropped successively since December 2007 through October 2008. Recovery gets underway since March 2009, a trend that continues throughout 2009. However, sluggish United States economic recovery compounded by fears of contagion risk from EU sovereign risk, weigh in on the DJIA index, leading to corrections in performance.

Figure 3.42: Developments in Changes in S& P 500 Market Index, 2005-2009



Source: International Monetary Fund 2010g

Bailout and economic stimulus packages rolled out in 2008 mitigated the impact of the financial crisis, and eventually show signs of spearheading economic recovery since second half of 2009. However, continued high unemployment rate (9.6 percent), high house foreclosures, high indebtedness of the household sector compounded by fears of sovereign

default coming from Greece, Spain and Portugal, members of the European Union, have stoked fears of recurrence of financial risk, this time arising from high sovereign default risk.

III.3.3 Financial Institution Regulation

The evolution of the United States financial system regulation regime over the years has been characterized by response to financial Crises and developments in financial markets crisis[15] rather than by design, which have made it complex and fragmented (comprise dozen federal banking, securities, futures, and other regulatory agencies, numerous self-regulatory organizations, and hundreds of state financial regulatory agencies). In all, seven regulator organizations (including the Federal Housing Finance Agency) regulate financial institutions in the United States.The Security and exchange commission regulates securities markets, Federal Reserve System regulates bank holding companies, and Fed Member state chartered banks, the Federal Deposit Insurance Corporation regulates state chartered banks that are not members of the Federal Reserve, and backup supervisor of all insured depository institutions. Meanwhile, Office of Comptroller of Currency (OCC) regulates all national banks and supervises federal branches and agencies of foreign banks in US, Office of Thrift Supervision (OTS) regulates state chartered savings associations and their holding companies, the Commodity Futures Trading Commission (CFTC) regulates commodity futures and option markets, and States regulate Insurance companies, banks and credit unions. The newly established Federal Housing Finance Agency regulates Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

Table 3.23: The Prevailing Financial Institution Regulations in the US

No.	Regulator	Date Established	Function
1.	Securities and Exchange Commission (SEC)	1934	Regulates securities markets
2.	Federal Reserve System	1913	Regulates bank holding companies, and Fed Member state chartered banks, become the systemic coordinating agency
3.	Federal Deposit Insurance Corporation	1933	Regulates state chartered banks that are not members of the Federal reserve, and backup supervisor of all insured depository institutions
4.	Office of Comptroller of Currency (OCC)	1863	Regulates all national banks and supervises federal branches and agencies of foreign banks in US
5.	Office of Thrift Supervision	1989	Regulates state chartered savings associations and their holding companies,
6.	National Credit Union Administration	1970	Regulates Federally chartered credit unions
7.	Commodity Futures Trading Commission	1974	Regulates commodity futures and option markets
8.	Federal Housing Finance Agency	2008	Regulates Fannie Mae, Freddie Mac, and the Federal Home Loan Banks
9.	Consumer protection Bureau		Regulate the protection of financial services /products consumers: Prohibit unfair, deceptive, or abusive acts or practices, call for information disclosures, protect consumer rights to access

[15] The federal reserve bank was created in 1913 in response to financial panics and instability that occurred toward the end of 1900, while response to great depression underpinned the establish and institutional framework of other financial regulatory bodies. Initially banks were prohibited from engaging in investment banking under the Glass-Steagall provisions of the Banking Act of 1933, a provision that was rescinded in 1999 under the Gramm-Leach-Bliley Act of 1999 (GLBA)

		information, respond to consumer complaints and inquiries, facilitate private education loan ombudsman (Dodd-Frank Act, 2010).
10.	Financial stability Oversight council	With authority to supervise and regulate certain non-bank financial Companies, register non-bank financial companies supervised by the Board of Governors, enhance supervision and prudential standards for non-bank financial companies supervised by the Board of Governors and certain bank holding companies, handle certain companies that cease to be bank holding companies, deal with the resolution of supervisory jurisdictional disputes among member agencies, apply additional standards applicable to activities or practices for financial stability purposes, mitigate risks to financial stability, study of the effects of size and complexity of financial institutions on capital market efficiency and economic growth.
	States	Insurance companies, banks and credit unions

Source: Pellerin, Walter and Westcott 2009; Committee on Financial Services2010

III.3.4 An In-depth Account of United States Financial Regulation Agencies

United States Department of Treasury

United States Department of treasury, which has the mission of 'managing the United States Government's finances effectively, promoting economic growth and stability, and ensuring the safety, soundness, and security of the United States and international financial system. Thus, the department of treasury is the United States federal body responsible for guiding United States economy and financial system. The United States department of treasury consists of Departmental offices and the operating bureaus, with the former responsible for policy formulation and management of the Department, and the latter entrusted with carrying out the specific operations assigned to the Department. The domestic finance advises and assists in areas of domestic finance, banking, and other related economic matters. It develops policies and guidance for Treasury Department activities in the areas of financial institutions, federal debt finance, financial regulation, and capital markets. Economic Policy reports on current and prospective economic developments and assists in the determination of appropriate economic policies. The office is responsible for the review and analysis of both domestic and international economic issues and developments in the financial markets. Functions of the department of Treasury, include managing Federal finances, collecting taxes, duties and monies paid to and due to the United States. and paying all bills of the United States, currency and coinage, managing Government accounts and the public debt, supervising national banks and thrift institutions, advising on domestic and international financial, monetary, economic, trade and tax policy, enforcing Federal finance and tax laws, investigating and prosecuting tax evaders, counterfeiters, and forgers. As regards its activities, the depart of treasury, carries out a number of activities that include advising the President on economic and financial issues, encouraging sustainable economic growth, and fostering improved governance in financial institutions.

The Securities and Exchange Commission (SEC)

SEC was established in 1934 to restore publish confidence in stock markets which had been shattered during great depression of 1929, is the primary overseer and regulator of United States securities markets. SEC therefore oversees all key participants in the securities world, who include but not limited to securities exchanges, securities brokers and dealers, investment advisors, and mutual funds. SEC has five divisions, corporate finance division, trading and markets division, Investment management division, Enforcement division, and Division of Risk, Strategy, and Financial Innovation.

The SEC Legal Framework

SEC was established in 1934, in aftermath of investigations which the Congress called for to identify causes, effects and solutions to the 1929 stock market crash which had left many securities holders in poverty.

- In 1933, the Securities Act was passed, which was followed by
- 1934 Act that established SEC, had the primary purpose of 'restoring investor confidence in capital markets by providing investors and the markets with more reliable information and clear rules of honest dealing.' The two acts, restored public trust in securities markets in two ways, which were: companies publicly offering securities were obliged to tell the public the truth about their businesses, the securities they are selling, and the risks involved in investing; and people who sell and trade securities (brokers, dealers, and exchanges) are obliged to treat investors fairly and honestly, putting investors' interests first. Other legislation that provides the legal framework of SEC functions are:
- The Investment Company Act of 1940 regulates the organization of companies, including mutual funds, that engage primarily in investing, reinvesting, and trading in securities, and whose own securities are offered to the investing public. The regulation requires companies to disclose their financial condition and investment policies to investors when stock is initially sold and, subsequently, on a regular basis which is aimed at minimizing conflicts of interest that arise in these complex operations.
- The 1939 Trust indenture Act, which ' applies to debt securities such as bonds, debentures, and notes that are offered for public sale',
- Investment advisors Act, 1940, which regulates investment advisers. The Act requires that firms or sole practitioners compensated for advising others about securities investments must register with the SEC and conform to regulations designed to protect investors However, in 1996, the Act was amended and currently only advisers who have at least $25 million of assets under management or advise a registered investment company must register with the Commission.
- The Sarbanes-Oxley Act, 2002, mandates a number of reforms to enhance corporate responsibility, enhance financial disclosures and combat corporate and accounting fraud, and created the "Public Company Accounting Oversight Board," also known as the PCAOB, to oversee the activities of the auditing profession
- Rulemaking: The SEC like other federal agencies implements Acts through rulemaking which is a three stage process that involves concept release meant for public input into an issue that of concern to the SEC, the rule proposal, in which the SEC publishes a rule proposal for public comment, and rule adoption, in which the SEC uses inputs from the public determines the specifics of the rule it adopts.

The Federal Reserve System

The Federal Reserve system is the central bank of the United States, responsible for conducting US monetary policy, by influencing the availability and cost of money and credit, which ensure economic growth , high employment and commercial transaction are achieved with stable prices; provides services to depository institutions by transferring funds, providing cash, and accepting and safeguarding deposits of Reserve Banks, manages payment system services; check collection, which involve the collection of interbank through the Federal Reserve Banks' check collection system. Providing High-speed, computer-controlled machines at Reserve Banks sort checks, total the amounts, credit the depositing institution, and charge the institution on which they are drawn. The checks are then sent, either in paper or electronic form, to the latter depository institution. Another function is carrying out electronic payments and funds transfers, which involve reserve banks providing nationwide processing of automated clearinghouse (ACH) electronic payments in paying insurance premiums, mortgages, loans, and other bills. The Federal Reserve System is also carries out cash services. Keeps storage of coins and notes sent by the treasury, meets orders of depository institutions for coins and notes; keeps coins and notes deposited by depository institutions in excess of their needs. Worn out notes and destroyed which good ones are verified and stored until demand for them is received supervising and regulating commercial banks, and providing protection to credit rights of consumers. The Fed fosters the soundness and safety of United States financial system. One of the principal functions of the Federal Reserve is to maintain financial system stability. The Fed has 12 regional reserve banks, each of which is charged with a number of functions in its jurisdiction, which include operating a nationwide payments system, distributing the nation's currency and coin, supervising and regulating member banks and bank holding companies, serving as banker for the United States Treasury; and acting as depository for the banks in its own District.

Office of the Comptroller of the Currency

The Office of the Comptroller of the Currency (OCC) is a bureau of the treasury Department. The main function is to regulate the national banking system and agencies of foreign banks in United States. OCC has powers that encompass examining banks, approving or denying applications for new charters, branches, capital, or other changes in corporate or banking structure, taking supervisory actions against banks that do not comply with laws and regulations or that otherwise engage in unsound banking practices. The agency can remove officers and directors, negotiate agreements to change banking practices and issue cease and desist orders as well as civil money penalties; and issuing rules and regulations governing bank investments, lending and other practices. Funding for OCC operation comes from payments made by national banks for OCC assessments National banks pay OCC for their examinations and corporate applications, and revenue from its investment income. OCC does not receive funding from Congress. The services of OCC are augmented by the office of Ombudsman, who is charged with administering the national bank appeals process which resolves disputes between banks and customers as well as holding the responsibility of administering customer assistance function.

Federal Deposit Insurance Corporation (FDIC)

The Federal Deposit Insurance Corporation (FDIC) is a federal government agency that provides insurance protection for depositors at most commercial banks and mutual savings banks. The FDIC is managed by a five-member board of directors appointed by the United States President and confirmed by the Senate, with responsibilities which include insures deposits up to US$100,000 in all the US banks and savings institutions, arranges a

resolution[16] for each failing institution, promotes the safety and soundness of insured depository institutions and the United States financial system by identifying, monitoring and addressing risks to the deposit insurance funds, and regulates about 6000 state-chartered "nonmember" banks. Funding for FDIC comes from deposit insurance premiums paid by banks and savings institutions as well as earnings on investments in US Treasury securities (its investments), rather than Senate appropriations. FDIC administers two federal deposit insurance funds, namely, the Bank Insurance Fund (BIF), which covers Deposits in most commercial banks; and the Savings Association Insurance Fund (SAIF), which covers deposits in many savings banks and savings associations. The two insurance funds are backed by the 'full faith and credit of the US Government'.

The Security Investor's Protection Corporation

The Securities Investor's Protection Corporation (SIPC) is a nonprofit, membership corporation, funded by its member securities broker-dealers. It protects customers of the SEC registered broker-dealers against losses caused by financial failure of the broker-dealers. The maximum claim amount is US$500,000 with a limitation of US$100,000 in cash. In the event the SIPC Fund is insufficient for all claims, the SIPC may borrow up to US$1 billion from the US Treasury through the SEC. If the SEC determines that industry assessments cannot repay the loan, it may impose a transaction fee on purchasers of equity securities at a rate not exceeding 1/50 of 1% of the purchase price, i.e. US$0.2 per US$1,000. This fee does not apply to transactions of less than US$5,000. SIPC is run by a Board of seven directors, five of whom are appointed by the US President. The others are designated by the Secretary of the Treasury and the Federal Reserve Board.

National Association of Securities Dealers

The National Association of Securities Dealers (NASD) is the largest securities-industry SRO in the United States. NASD conducts several functions which include develops rules and regulations, conducts regulatory reviews of members' business activities and disciplines violators, designs, operates and regulates securities markets and services for the ultimate benefit and protection of investors.

Municipal Securities Rulemaking Board

The Municipal Securities Rulemaking Board (MSRB) is a SRO subject to oversight by the SEC. It develops rules regulating securities firms and banks involved in underwriting, trading and selling municipal securities. The Board has broad rulemaking authority over municipal securities dealers' activities. This include professional qualification standards, fair practice, recordkeeping, confirmation, clearance and settlement of transactions, the scope and frequency of compliance examinations, and the nature of securities quotations. MSRB constitutes 15 members, five of whom come from banking sector, five from securities firms and five from public who are not associated with any bank or securities dealer. The term of service is three years.

In a nut shell, depository institutions are overseen by five**,** agencies, which include the Federal Deposit Insurance Corporation, the Federal Reserve, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the National Credit Union Administration plus many state regulatory institutions. Meanwhile, securities markets are overseen by the

[16] A resolution is a solution to the bank which is the least-costly to the insurance fund and the least disruptive for customers in the event of insolvency

Securities and Exchange Commission, state government entities, and private sector organizations performing self-regulatory functions. Futures trading are overseen by the commodity futures Trading Commission industry self-regulatory organization. Insurance activities are primarily regulated at the state level with little federal involvement.

Financial Reform in the United States[17]

In 1999, the United States Senate and House of Representatives passed the Gramm-Leach-Bliley Financial Services Modernization Act of 1999 (Financial Services Modernization Act). Reasons for Reform Federal laws enacted during the Great Depression such as the Glass-Steagall Act and Bank Holding Company Act which block banks[18], stockbrokers and insurance companies from entering each other's line of business. In order to create financial supermarkets that provide everything from checking accounts to auto insurance, the three industries had lobbied Congress for years to streamline regulatory hurdles that bar such operations. The passage of the Financial Services Modernization Act represents the most significant deregulation of the US financial services industry in over half of a century.

The Financial Services Modernization Act repeals the Glass-Steagall Act's restrictions on bank and securities firm affiliations and amends the Bank Holding Company Act to permit affiliations among financial services companies, including banks, registered investment companies, securities firms and insurance companies. The Financial Services Modernization Act includes several amendments to the Investment Company Act and the Investment Advisers Act that are intended to ensure that the SEC has full authority over investment companies that are affiliated with banks. It also imposes privacy requirements and disclosure obligations on all financial firms, even if they are not affiliated with a bank or thrift. Please refer to Appendix I for summary of provisions of the Financial Services Modernization Act.

Problems that characterize the existing financial institution regulation in the United States, according to Dodaro (2009), include over deregulation with many regulating institutions that lack mechanisms to synchronize systemic risk posed by large financial institutions. This hampers regulators' ability to mitigate systemic risks posed by large and interconnected financial conglomerates and to ensure they adequately manage their risks. Equally important is the large number of financial market activities carried out of large and sometimes less-regulated market participants such as non-bank mortgage lenders, hedge funds, and credit rating agencies. Moreover, the variety of activities large financial institutions carries out today within and across national borders has increased the danger for systemic risk. In any case many financial companies carry out banking, securities, and insurance increased significantly in recent years, but there are no regulators tasked with assessing the risks posed across the entire financial system. The prevalence of unregulated financial service providers such as non-bank lenders, hedge funds, credit rating agencies, and special-purpose investment entities[19] has also complicated regulation and supervision in United States. It is worth noting that the increasing prevalence of new and more complex investment products has compounded regulators and investors, as well as consumers' ability to understand new and

[17] Lee 2001

[18] Glass-Steagall Act is the Banking Act of 1933 (P.L. 73-66, 48 STAT. 162). This Act separated commercial banking from investment banking, establishing them as separate lines of commerce. Bank Holding Company Act of 1956 (P.L. 84-511, 70 STAT. 133) required Federal Reserve Board approval for the establishment of a bank holding company. Prohibited bank holding companies headquartered in one state from acquiring a bank in another state.

[19] Many such institutions played an important role in subprime mortgage led to loosening of underwriting that eventually led to the financial meltdown

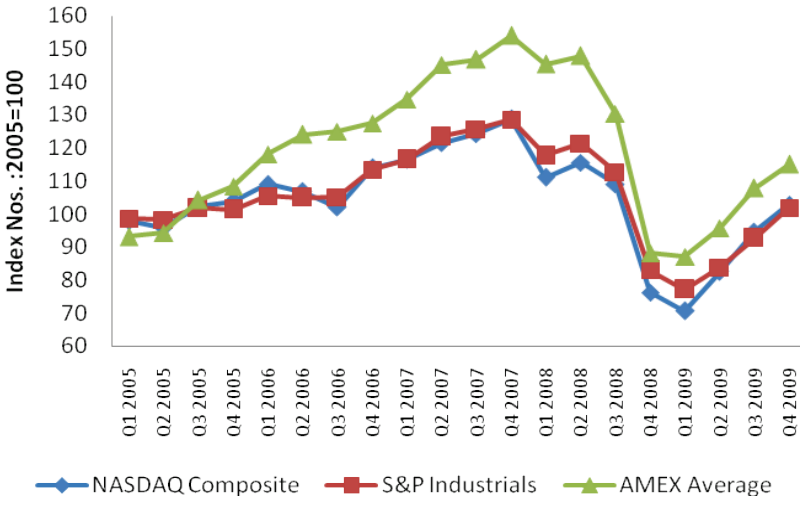
increasingly complex retail mortgage and credit products. It is also true to say that accounting and audit standards have failed to match with financial system and products development in United States.

Moreover, the fragmented nature of US financial system regulation makes it impotent to coordinate internationally with other regulators (GAO 2008). The list of other problems facing financial institution regulation in United States include (IMF 2009) credit rating risk agencies practices which have been decried for lacking sufficient transparence with respect to methodologies used in rating companies, are not sufficiently regulated hence not liable to much scrutiny. It is no longer debatable that rating agencies are decried for accelerating the pace towards default by issuing ratings that downgrade credit grades of distressed firms, complicating their efforts to bounce back. Such a practice hurts not only firms but also investors. Another problem is that credit rating agencies also decried for conflict of interest as they are paid by companies which need good rating, meaning that there is a likelihood of giving good rates for good payers. It should also be noted that proliferation of ratings based regulations and triggers, has meant that once downgrades are issued they become unstoppable to affect other financial institutions in the financial system both local and international.

III.3.5 The Impact of the Financial Crisis on United States Financial Markets

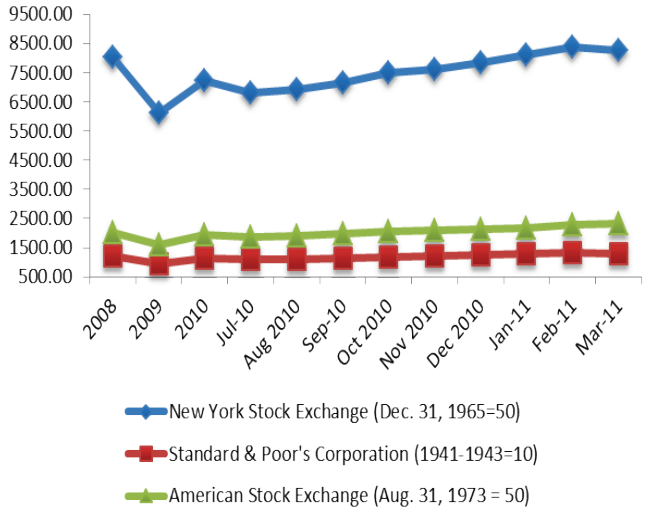
The 2008 financial crisis, which hit the United States economy, caused a drastic decline in the equity markets as economic performance and firm performance plummeted. Such stock markets behavior reflected investors' fears of the worst, as they sold off stocks considered risky especially those in the financial sector in general and those firms with an overhang of toxic securities. The interconnectedness and interdependence among various sub sectors in one economy and across economies meant that the decline in US markets impacted other economies as well in developed and emerging economies alike. This is what made the 2008-2009 financial crises global rather than merely a US problem. However, a rebound of stock prices by the second half of 2009 sparked off by gradual signs of economic recovery induced by the multibillion economic stimulus package rekindles a strengthening of the equity market index which has since then sparked off a boost in stock market capitalization. Such a trend is evidently holding in 2010 and early 2011 (Figure 3.44).

Figure 3.43: Developments in the Index of United States Share Prices



Source: International Monetary Fund 2010c

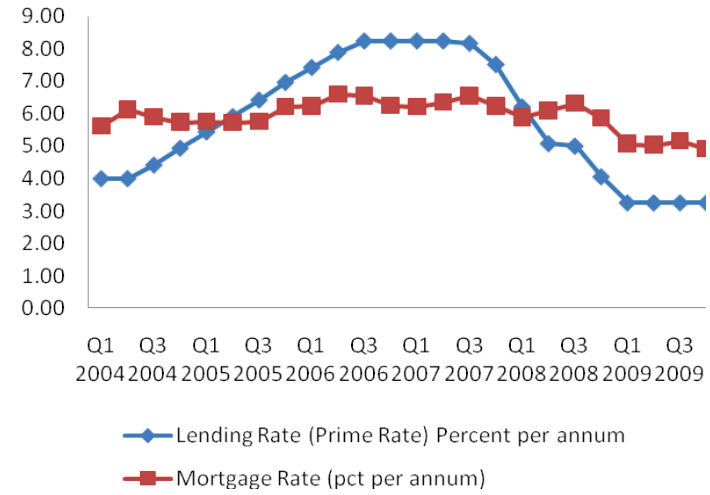
Figure 3.44: Developments in US Stock Market Prices, 2008-2011



Source: US Federal Reserve 2011

Such conditions induced a decrease in the capacity of financial institutions to attract funds thereby undermining their capacity to channel it to various clients including interbank market purposes, and non-financial customers, large and small. Disintermediation compounded liquidity problems in the economy as confidence even among large financial institutions tumbled, leaving borrowers without reliable financial sources to finance their activities. Under such conditions, the cost of borrowing soared (Figure 3.45); hampering economic activities even the more.

Figure 3.45: Rising Cost of Borrowing as the Financial Crisis Intensified



Source: International Monetary Fund 2010c

Though the federal funds rate dropped drastically beginning with the third quarter of 2007 and continues to this day at record low level, lending rates in general and mortgage rates in particular are still significantly high due to high risk of household and to a certain extent corporate default rate that is attributable to the still sluggish performance of the economy which is still shows low economic growth and high unemployment rate; high indebtedness of the household sector as well as unwillingness of banks and other financial institutions due to high capital requirements now in place. High default rate is likely to trigger the need for high capital at a time when financial institutions are still reorganizing their books after the

turbulent 2008-2009 period. Small wonder then that both mortgage –lending rate and mortgage to federal funds rate are still high.

III.3.6 Financial Stability

The United States' Financial Reforms

The causes of the 2008 financial crisis in the United States have been linked to various factors which includes existence of a US$8 trillion highly leveraged shadow banking system made possible thanks to over deregulation (Geithner 2010**)**. Equally important were weak capital requirements made possible by light regulation regime, compounded by weak capital requirements for financial institutions outside commercial banks. What compounded the problem was the availability of ready supply of short term cheap funds from large institutional investors (money market mutual funds and securities lenders.

- The collapse of a US$2 trillion Tri party repurchase and Money market mutual funds, which was caused by liquidity squeeze banks faced during the crisis. Banks often provide the funding of repos hence serve as clearing houses on a daily basis for dealers. During the crisis, banks ran short of cash, hence no longer provided short term credit, with the implication that repos became a source of risk. Consequently, flight to safety from Tripolar repo market. The situation was exacerbated by tri part lenders concerns about collateral quality (like other lenders in the financial market, tri party repo lenders had during the boom lent to riskier sectors such as structured mortgage products, without requiring sufficient haircut to factor in underlying collateral. During the crisis, the values of collateral nosedived, increasing the uncertainty inherent in repos. Money market mutual funds, also substantial funders of tri party repos, faced uncertainty as investors in their portfolios became concerned about the safety of their money, Lehman Brothers, bankruptcy, worsened those fears.
- As if that wasn't enough, the opacity and complexities that characterized the US$60 trillion derivative markets which were mainly traded over the counter, hence not regulated, was yet another sources weakness in the financial system. Being traded over the counter, which did not have a central clearing for trades or repository facility, and neither counterparty positions nor the value of such positions could be determined with certainty.
- The breakdown in basic checks and balances was another contributing factor to the financial crisis. Without sufficient checks and balances, firms engaged in risky investment in which increased the probability of default once a misalignment in economic fundamentals occurred. High leverage, which went unchecked by boards of directors, absence of sound risk management programs, practices of ratings agencies which could not disclose their rating methodologies, proved unable to provide proper assessment of structured credit products, poor audit and disclosure functions which were not adequate to divulge fraudulent practices or designed to perpetrate fraudulent practices) . Moreover, investors were left in the dark as they were unable to obtain enough information regarding product or firm risk, due to opacity and complicity of accounting practices, which increased their dependency on credit rating agencies.
- It is also stated that the financial system prior to the 2008 financial crisis was fraught with opportunities for regulatory and accounting arbitrage enabling firms to shop around for the most lax ' regulatory regime to conduct financial transactions.
- Flawed compensation practices, which were linked to short term upward firm performance, and not downward performance, induced risk taking.

- The absence of mechanisms and tools to wind down large financial firms because many of them were not regulated by the then existing regulators, increased the likelihood that in the event of a problem affecting any of them, they would spread destruction throughout the economy

Measures suggested to prevent recurrence of the 2008 financial crisis (Financial reform blueprint Treasury department and later adopted in the Dodd-Frank Act, 2010). Short term goals include:

- improve regulatory coordination and oversight, to be achieved by establishing 'a new federal commission for mortgage origination to evaluate the adequacy of each state system for regulating participants in the mortgage origination process and clarifying liquidity provisioning by the Federal Reserve to provide it with more information during the current market turmoil;

Meanwhile, intermediate term goals encompass:

- reduce duplication in US financial regulatory structure, and modernization of the existing regulatory system by among other things making it possible for federal thrift charters of savings associations to transition to the national bank charter, creating an optional federal charter for insurance companies to encourage a more competitive US insurance industry, and providing unified oversight for futures and securities by merging the SEC and the Commodity Futures Trading Commission (CFTC), and having the more rules based SEC adopt the more principles-based regulatory philosophy of the CFTC."
- The long term recommendations entail the development of a long term objectives based regulatory model that will comprise:
  - a market stability regulator,
  - a prudential regulator,
  - and a business conduct regulator that would focus on consumer protection.

Highlights include:

a. Ensure uniform supervision of all providers thereby reducing regulation costs and efforts. Replacing all regulators with three: 1) prudential regulator[20], business conduct regulator, and market stability regulator. Supervision of all banks and insurance companies to be merged into a single prudential agency. Business conduct regulator is expected to ensure that financial firms adhere to consumer protection in their operations by being transparent, adequate information (disclosure) in providing their products. Meanwhile, the envisaged market stability regulator, the Federal Reserve, is expected to serve as the agency responsible for limiting the spillover effects from troubles in one firm or sector to the rest of the economy, in other words averting systemic risk. The market stability regulator is to be vested with powers to provide liquidity to illiquid but sound institutions, take regulatory actions that limit or prohibit market developments that are likely to generate market turmoil (Pellerin et al. 2009).
b. Robust, comprehensive supervision of financial firms that pose a risk to financial system under clear regulatory accountability. *More stringent prudential* requirements for major financial firms (higher capital, liquidity, and requirements).

[20] Ensure that institutions under purview do not take unnecessary risk thereby taking away services of the Federal reserve, OCC, FDIC, OTS, state banking supervisory agencies, and state insurance supervisors (all financial firms that have government provided insurance protection which include depository institutions and insurance firms)

c. *Better disclosure and transparency.* This is proposed to be achieved through improvements in accounting standards, by among others forging international accounting convergence
d. *Taking regulatory action to deal with uncertainty in the repo market and money fund* industries. Strengthening policies, procedures, and systems that support tri party repo market to reduce through amplifying effect of repo market on the financial market during times of stress. SEC passed new rules to strengthen liquidity and disclosure in money fund industry
e. *Increase transparency and oversight to OTC derivatives markets through b*ringing them to central clearing arrangements, ensuring full transparency; reduce degree of financial contagion arising from perceived counterparty exposure. Exposing dealers and major market participants to tough prudential standards (including margin and capital requirements). SEC and CFTC to have full authority to set position limits, address fraud, manipulation, and abuse
f. *Standards to be put in place on* disclosure and accountability for executive compensation, compensation committees to be equipped with tools and independence to bargain harder on executive pay. Align compensation with long term shareholder interests, new SEC disclosure rule giving shareholders critical information on the relationship between pay practices and risk taking, incorporate Fed reserve guidance principles on compensation into supervision
g. *Resolution regime that winds down failing* financial institutions (establishing a bankruptcy –like regime for large financial institutions to manage themselves into failure. Dismantling of failing financial firms, selling them off or liquidating them off, in an orderly manner, replacement of implicated management, depleting firm equity, and exposing creditors to losses. The cost of winding down process to be paid for by financial institutions and not tax payers' money.

However, compromises resulted into the Dodd-Frank Act, 2010, which among other things is expected to strengthen if all the components of the Act are implemented. The Act deals with the main source of financial instability that culminated into 2008 financial crisis such as envisages a regime of high capital requirements for banks and financial institutions, strengthening of regulations, supervision and oversight over all financial institutions, and financial transactions including derivatives which prior to the crisis used to be undertaken under OTC framework, strengthening supervision and oversight over large financial institutions that have systemic importance hence have high likelihood of sparking off systemic risk in case they face liquidity and insolvency problems. With OTC transactions put in central clearing system, transparency of information concerning transactions will be enhanced, enabling investors to make informed decisions. Moreover the new regulatory regime makes it easy for financial institutions supervisors to seek and obtain accountability of financial market practitioners.

Other important components of the Dodd-Frank Act 2010 lauded for strengthening long term financial stability include efforts to deal with too big to fail financial institutions by requiring them to have higher capital requirements, calls for the formation of council of federal regulators to be responsible for monitoring for signs of financial instability in the financial system under the financial stability oversight council. The Act also establishes a regime of orderly liquidation of large financial institutions in the event of facing financial difficulties, thereby reducing the adverse effects of such an exercise on the rest of the financial system and economy. Banks are obliged to spin off propriety trading units thereby reducing the

potential danger that risk that emanates from such activities can impact on overall risk of the banks. This is an attempt to reduce counterparty risk, which was an important factor that caused underestimation of risk banks and financial institutions faced due to undisclosed contingent assets and liabilities entered into through proprietary trading activities.

The Act also calls for higher capital requirements for any financial institution that takes excessive risk investments, envisages the establishment of the systemic oversight body, which will coordinate and monitor the economy for signs of vulnerability, and the proposed formation of the consumer protection bureau, which will ensure that consumers of all financial services and products are protected from fraud and other malpractices perpetrated by practitioners in the financial services sector. The establishment of the consumer protection bureau within the federal reserve system, which is to be charged with the task of protection consumers of financial products from fraud, equips the government with the legal framework under which orderly liquidation troubled financial institutions is made, In addition, the implementation of the financial sector assessment program which identifies potential sources of vulnerability paving the way for handling them is another mechanism that is touted by many experts as important for future financial stability. The maintaining of a decentralized coordinating system of the United States financial system is considered pivotal for ensuring future financial stability given the decentralized nature of the United States financial system as it guarantees checks and balances, which may be wanting in a unified system. That said the devil lies in the details. The Dodd-Frank Act is a comprehensive act that takes into account key G20 guidelines as well as is a bold attempt to deal with the root causes of the bubble in sub sector of the United States housing market that eventually bust sparking off the worst recession United States had faced since the great depression. Nonetheless, unless the balance of power in the congress remains as it is for some time to come, considering the long term period in which the key components of the package will be implemented, there is likelihood that some of the fundamental measures will face watering down or outright repeal thereby reducing its impact on overall long term financial stability in future.

Table 3.24: Summary of United States' Response to the Global Financial Crisis

The impact of the global financial crisis on US economy:	• Slower economic growth that reached its bottom in 2009 • An upsurge in unemployment, which meant an increase in dependency, lowers taxation revenues. • Pressure on US dollar (depreciation vis a vis other hard currencies) • International reserves suffer deep contraction in 2008. • Exports and imports declined. • the US stock market dropped sharply in mid-2007 and reached its lowest point in Q1 2009. • Contraction of corporate and private spending • Cutbacks on production capacity as inventories increased • Accelerated home foreclosures • Increased default rates on mortgage loans, hence undermined securities that were either directly or indirectly based on them • Financial institutions suffered huge losses, which led to write downs and write offs of their assets. Many banks and other financial institutions used much of their capital to make the massive write-offs, which undermined their liquidity and solvency.

	• Closure of many banks (147) • Portfolio Investment and FDI (at least during the peak of the financial crisis)
Important policies implemented to deal with the global financial crisis:	• Monetary Policy : Adoption of near zero interest rate regime by the federal reserve to induce investment, keep borrowing costs as low as possible • Injection of substantial liquidity into the economy achieved through quantitative easing I and II, that involved the federal reserve purchasing government debt securities helping maintaining their popping the demand for them, while at the same time, keeping the cost of funding the various federal financial rescue programs by keeping the interest rate low. • Liquidity Support : - The US$ 787 billion economic stimulus program which entailed injection of capital and change of management into troubled financial institutions and non-financial institutions such as Auto-Industry - The federal reserve bought quality assets and government bonds - Efforts to modify mortgage loans to reduce foreclosures • Injection of capital into troubled financial institutions and non-financial institutions contributed to worsening the budget deficit (estimated to reach US$ 1.3 Trillion) this year (2010) • Deposit Guarantee : In 2008 the deposit insurance contribution was increased from US$100, 000 per person per bank to US$250,000, as a temporary measure, which the Dodd-Frank Act 2010 made permanent • Fiscal Stimulus : Tax rebates - Giving cash transfers to economically disadvantaged Americans • The troubled asset relief program implemented under the Emergency "Emergency Economic Stabilization Act of 2008, effectively removed illiquid assets which arose from 'bad mortgages from the books of financial institutions in America, and onto the books of the federal government'. • Financial Regulation: Enacting of the Dodd-Frank Act 2010, which among other things, ensures the implementing of stronger regulatory and supervisory oversight over all financial institutions; calls for higher capital adequacy requirements and supervision over systemically important financial institutions; establishment of the financial stability oversight council, comprising of various financial regulators charged with identifying sources of risk to the financial system, including such risk as arise from interconnected financial institutions; establishment of the consumer financial protection bureau which will have broad regulatory for mortgage loans and other consumer products with the exception of securities, futures and insurance products ;new requirements imposed to ensure that over the counter derivatives will be traded and cleared in clearing houses and exchanges; additional

	requirements and oversight have also been placed on hedge funds, credit rating agencies, and other market participants previously subject to less regulation
Sources of financial market vulnerability:	• Decentralized regulatory and supervisory framework of financial markets still poses coordination problem issues both domestically and across the borders with other economies • Possibility of not implementing Dodd-Frank Act, 2010 as it is due to political bickering and wrangles has the potential to undermine efforts at ensuring financial market stability in future - Particular reference is on reducing systemic risk arising from too large to fail (TLTF) financial institutions and consumer protection among others - Through enacted, regulators have not yet implemented regulations tailored toward addressing some of the sources of risk to the financial system such as proprietary trading practices, on trading and clearing of over the counter derivatives - Moreover, the task of establishing implementing structures, requirements, and entitles as well as staffing them with competent manpower remains undone • Regulators and supervisors that keeps regulation and supervision behind financial market developments (financial innovations) • Indebted household sector that still undergoing deleveraging, making efforts to stimulate demand not as potent as they should • State /municipal leverage in United States which is reaching worrying proportions • Large and rising budget deficit • Large current account deficit and high and rising debt to GDP ratio • The potential danger that the financial and non-financial sector may increase their leverage levels by taking advantage of high liquidity in the economy made possible by quantitative Easing policy and very low interest rate regime. This is the more so given the rising fiscal deficit, huge government debt, and still anemic economic growth figures and high unemployment (Satt 2011; Irwin 2011). • Despite an increase in bank capital and decline in nonperforming loans, US commercial banks still post low profit levels • Consumer financial protection bureau will not be responsible for securities, futures, and insurance products, and very serious omission (GAO 2011).
Factors supporting financial market stability:	• Strengthened regulatory and supervisory framework that apply to all financial market actors • Strong confidence international investors have in United States economy (PRC continued to maintain a good percentage of its huge international reserves in US government treasuries for example), making United States still an important destination for both portfolio and FDI

	• Advanced financial markets that are able to deal with fluctuation of capital flows • Large competitive, innovative, liberalized and diversified economy • US dollar as an international reserve currency
Policies to be implemented to ensure financial market stability:	• Enacted but not so far awaiting implementation, of the Dodd-Frank Act, 2010, which among other things : - Will strengthen supervision of banks and non-bank financial institutions - Calls for the establishment of financial stability council (which has already been implemented) - Establishment of central clearance agency for OTC financial instruments - More supervision and regulation of all players in money and capital markets Establishment of consumer protection agency Calls for higher capital requirements for banks and other financial institutions that have systemic influence of the financial sector and economy - Calls for financial institutions to spin off proprietary trading activities to reduce potential source of counterparty risk - Efforts to standardize financial accounting standards on financial statements reporting, information disclosure among others • Intensify cross border cooperation and coordination on macroeconomic policy, accounting standards, firm establishment rules, taxation, supervision and regulation to reduce the potential danger of regulatory arbitrage which can be exploited by transnational companies to avoid tighter and stronger regulatory regimes • Closer coordination with G20 members to ensure fair and equitable all inclusive balanced growth, financial sector regulation and supervision, and prevention of financial fraud and money laundering practices • Increased regularity of financial sector assessment programs tailored towards identifying potential sources of financial instability for quicker and timely handling.

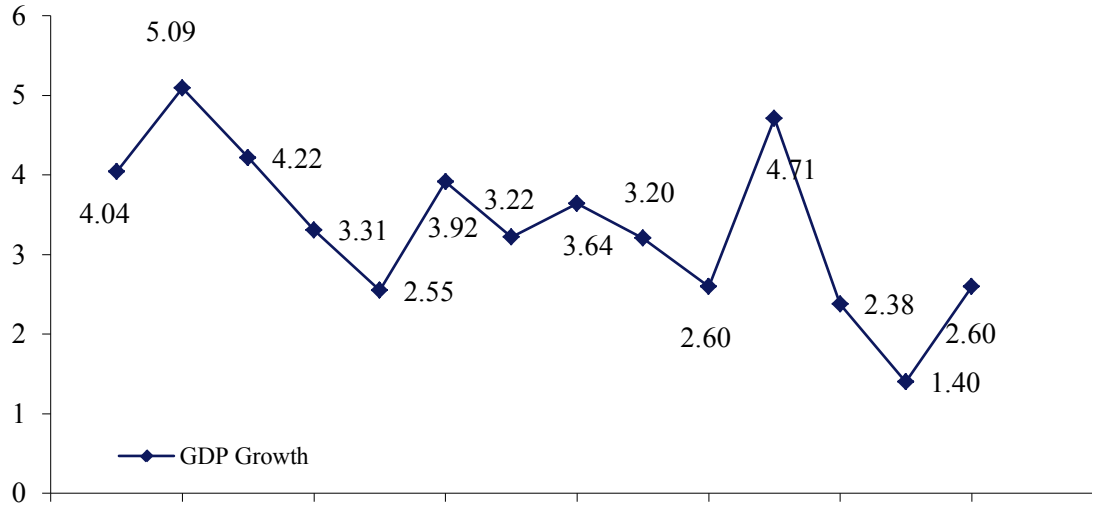
III.4 AUSTRALIA

III.4.1 Macroeconomic Condition

Australia has a stable and strong economy which has been its asset to withstand major economic bashes such as the 1997/1998 Asian financial crisis and the 2008 global economic crisis. This is shown by Australia's gross domestic product that grew by an average of 3.41 percent a year during the period of 1996-2010. Despite its geographical location that is near to Asia, Australia was not affected by the Asian crisis. During the period, Australian GDP reached its highest growth (5.09 percent) in 1998, while South East Asia economies such as Indonesia, Korea and Thailand, had negative GDP growth. Regarding the global crisis in 2008, Organization for Economic Co-operation and Development (OECD) reported that Australia had been less affected compared to other OECD countries and projected that

Australia's GDP growth would reach 2.5 percent in 2010 and 3.5 percent 2011 (Organization for Economic Co-operation and Development 2009). However, IMF had a lower projection that in 2010 Australia's GDP growth would pick up to about 1.5 percent which led by government spending (International Monetary Fund 2009b). In line with OECD's projection, in 2010, Australia's GDP growth reached 2.6 percent.

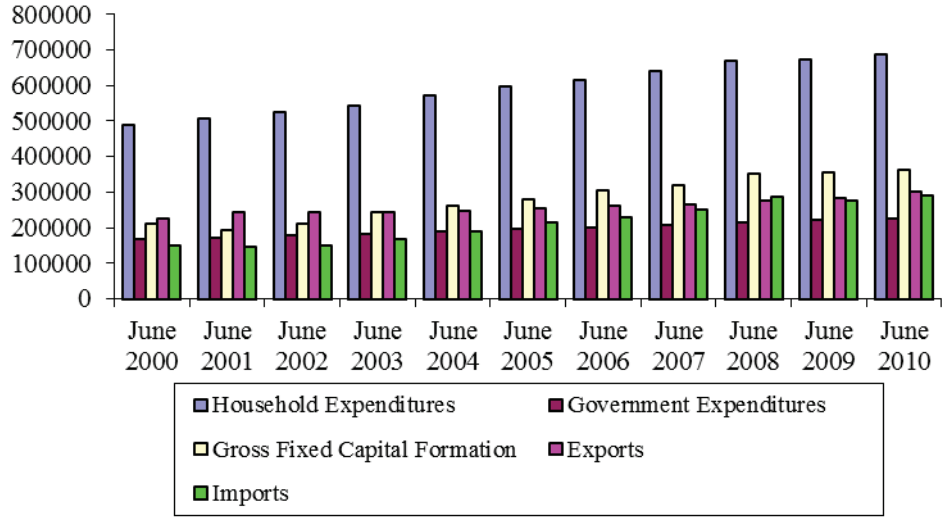
Figure 3.46: Australia GDP Growth, Nominal Value (%)



Source: Australian Bureau of Statistics 2011

Australia's high average growth of GDP has been mostly driven by household expenditure. Share of the household expenditure on GDP was more than 50 percent during the period of 2000-2010. Gross fixed capital formation had the second biggest share on GDP which was 25.16 percent on average during the same period; followed by exports (20.35 percent), imports (17.48 percent), and government expenditure (17.25 percent).

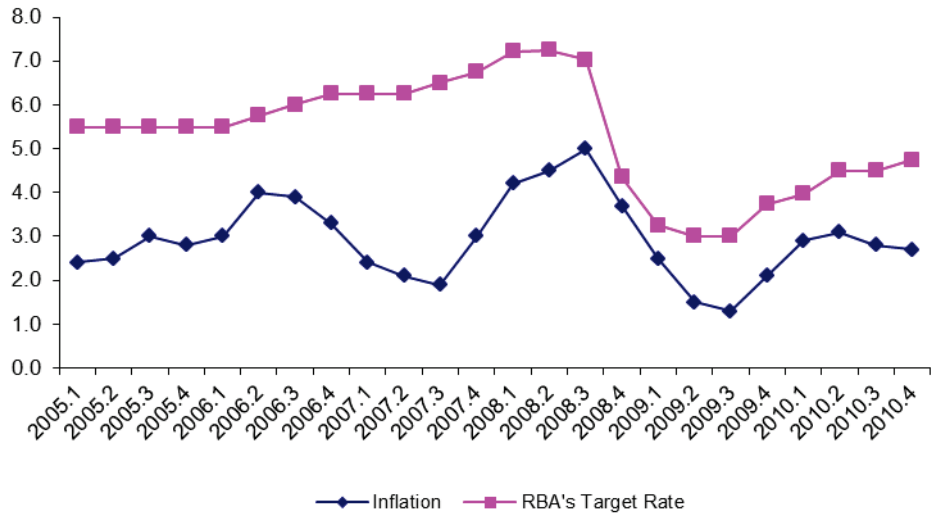
Figure 3.47: Australian GDP by Expenditure, Nominal Value ($ million)



Source: Australian Bureau of Statistics 2011

Supporting the strong growth of GDP, the rate of unemployment in Australia fell from 6.3 percent in 2000 to 4.9 percent in 2009. Since 2006, the rate of unemployment had fallen below 5 percent, a significant decrease compared to the rate in 1996 which was 8.26 percent.

Figure 3.48: Inflation and Central Bank Target Rate of Australia



Source: Reserve Bank of Australia 2011a

Australia's inflation remained stable during 2005-2010, around 2 to 4 percent, except in 2008 when it hit 5 percent, probably as an impact of the 2008 global financial crisis. For the year 2010 the inflation was around 3 percent as predicted by RBA which had targeted Australia's inflation to fall between 2-3 percent in 2010 (Colonial First State Global Asset Management 2010). Following the inflation in the same period, RBA's target rate also peaked to 7.25 percent in 2008. However, the crisis had not hit real economic activities in Australia as hard as in many developed economies. It was shown from the downward trend of inflation and money market rate since the fourth quarter of 2008 although Australian house price index for established homes rose at 11.7 percent in 2008 from 9.9 percent in 2007 and 3.8 percent in 2007(Australian Bureau of Statistics 2010). Before the crisis Australia had only experienced one severe economic crisis in 1930s as an impact of the US Great Depression. It ended when land settlement and technical innovation provided a secure foundation for Australian economic growth (Economic History Services 2010).

Table 3.25: Australia: Selected Economic Indicators, 2000-2009

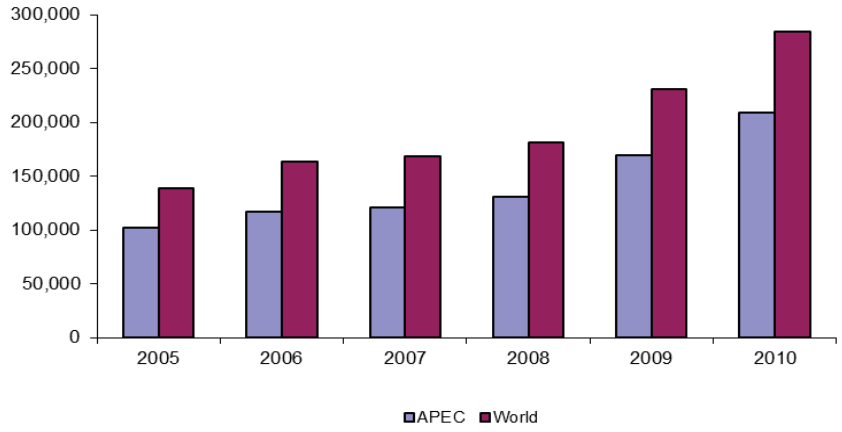
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Growth (percentage change)										
Nominal GDP	3.31	2.55	3.92	3.22	3.64	3.20	2.60	4.71	2.38	1.33
Household Consumption	4.4	3.6	3.1	3.4	5.6	4.4	2.8	4.2	4	1.2
Government Consumption	3.3	1.7	3.1	3	4.2	3.2	2.5	3.7	3.2	2.8
Gross capital formation	7.77	-8.35	9.48	13.89	8.02	6.59	8.74	5.39	10.18	4.17
Total Exports	9.5	7.5	-0.7	-0.5	1.2	2.9	2.3	4	3.9	2.3
Total Imports	12.1	-1.2	1.4	13.3	12.6	12.3	7.3	9.2	14.1	-2.5
Inflation and unemployment										
CPI inflation	2.8	1.8	4.4	2.3	3.5	2.7	2.3	2.8	3.0	4.4
Unemployment rate (percent)	6.3	6.7	6.3	5.9	5.5	5.1	4.9	4.4	4.2	4.9
Money and credit (end of										

period, percentage change)										
Broad money (M3)	8.14	8.24	7.80	19.23	10.17	8.89	10.16	16.15	19.31	13.72
Private domestic credit	5.4	1.9	12.9	19	11.5	-1.6	0.8	9.5	2.6	-1.1
Interest rate (90-day bank bills, in percent)	6.23	4.97	5.07	4.67	5.49	5.66	5.96	6.42	7.81	3.25
Deposit rate (in percent)	4.20	3.20	3.07	3.26	3.63	3.70	3.95	4.66	5.17	
Lending rate (in percent)	9.27	8.66	8.16	8.41	8.85	9.06	9.41	8.20	8.91	
Balance of payments										
Current account balance (ratio to GDP)	-4.8	-2.45	-2.52	-4.89	-5.42	-6.27	-5.44	-5.6	-6.41	-3.21
Stock of FDI assets and liabilities ($ billion)										
FDI assets	194408	208851	215718	217218	262970	243690	321056	374270	371621	361341
FDI liabilities	206574	231509	240722	269980	299956	314722	343427	399794	437979	449665
Net FDI assets	12166	22658	25004	52762	36986	71032	22371	25524	66358	88324
Exchange rate (end of period)										
AUD/USD	0.63	0.54	0.52	0.58	0.71	0.75	0.75	0.79	0.90	0.75

Source: Australian Bureau of Statistics 2011; Reserve Bank of Australia 2011a; International Monetary Fund 2010e

International trade has a major role in Australia's economy. Australia's total exports grew 13.9 percent in 2010. PRC and Japan are Australia's major destinations for its exports. In terms of region, Australia exports its goods and services mostly to APEC members. In 2010, exports to APEC increased 17.3 percent, while exports to ten ASEAN countries and OECD countries grew 7.4 and 9.2 percent respectively. Australia's major exports in 2010 were iron ore and concentrates, coal, gold, crude petroleum, and natural gas.

Figure 3.49: Australia's Export to APEC Region and to the World (A$ million)



Source: Australian Government Department of Foreign Affairs and Trade 2011b

Table 3.26: Australia Major Exports Destination, 2010

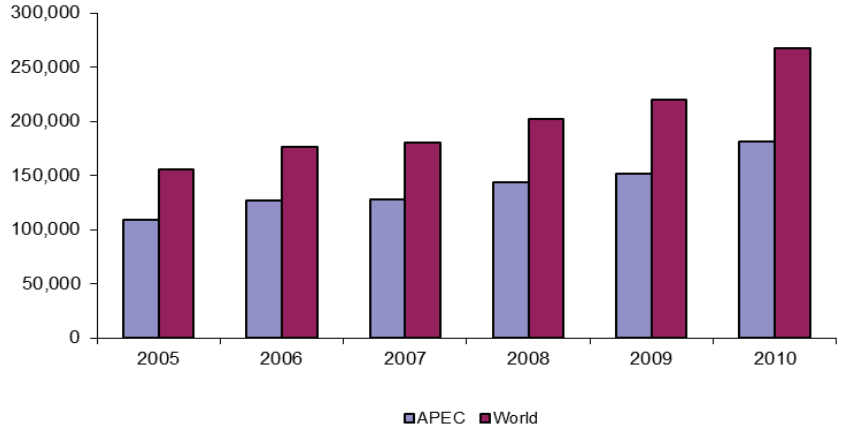
TOP 10 Destinations For Exports	Percent Share	Percent Growth (2009-2010
People's Republic of China	22.6	34.3
Japan	16.0	13.4
Republic of Korea	7.9	28.3
India	6.9	7.9
The United States	5.1	-4.8
United Kingdom	4.4	-6.5
New Zealand	4.0	1.9
Chinese Taipei	3.1	26.2
Singapore	2.6	-10.0

Thailand	2.4	29.5
Total Exports	100.0	13.9

Source: Australian Government Department of Foreign Affairs and Trade 2011c

Members of APEC economies, namely PRC; Japan; and the United States are the top three of sources of Australia's imports. In 2010 Australia's imports grew by 5.4 percent. Australia mostly imported crude petroleum, passenger motor vehicles, refined petroleum, medicaments, and telecom equipment and parts from its trade partners. APEC region is the largest source of imports for Australia, followed by OECD, 27 European Union countries, and ten ASEAN countries respectively.

Figure 3.50: Australia's Import from APEC Region and from the World (A$ millions)



Source: Australian Government Department of Foreign Affairs and Trade 2011b

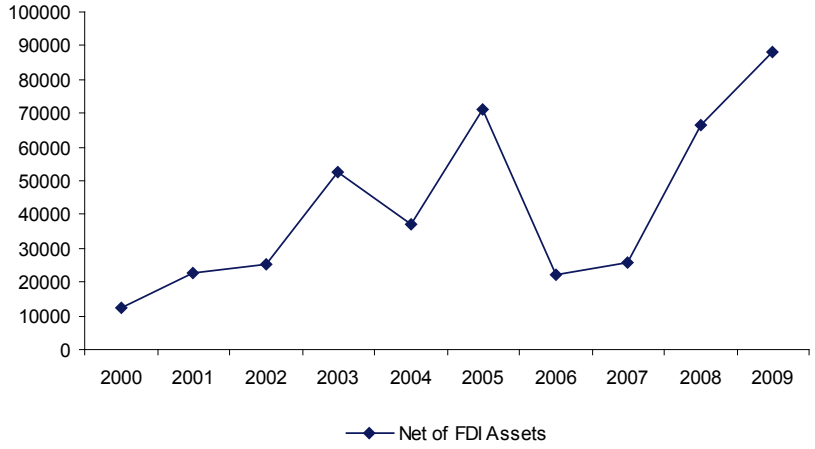
Table 3.27: Australia Major Imports Origin, 2009

TOP10 Origins For Imports	Percent Share	Percent Growth (2009-2010)
People's Republic of China	15.3	10.0
The United States	13.2	1.5
Japan	7.6	8.5
Singapore	5.3	-3.4
Thailand	4.8	-6.4
Germany	4.5	2.2
United Kingdom	3.8	-7.3
Malaysia	3.8	20.0
New Zealand	3.7	5.3
Republic of Korea	2.9	11.1
Total Imports	100.0	5.4

Source: Australian Government Department of Foreign Affairs and Trade 2011c

Supporting the good performance of Australia's international trade (trade as a share of GDP rose from 32.5 per cent in 1988-1989 to 47.1 percent in 2008-2009), Australia's net foreign direct investment grew by 183 percent during the period of June 1998 – June 2009 (Australian Government Department of Foreign Affairs and Trade 2009c). In this period, Australia's assets directly owned by foreign residents (Australia's foreign direct liabilities) were greater than the value of offshore assets directly owned by Australian residents (foreign direct assets). Australia is still considered as a prime location for conducting businesses with its efficient goods markets and flexible labor markets, and excellent public and private institutions (World Economic Forum 2009b).

Figure 3.51: Australia's Net of FDI Assets (A$ billion)

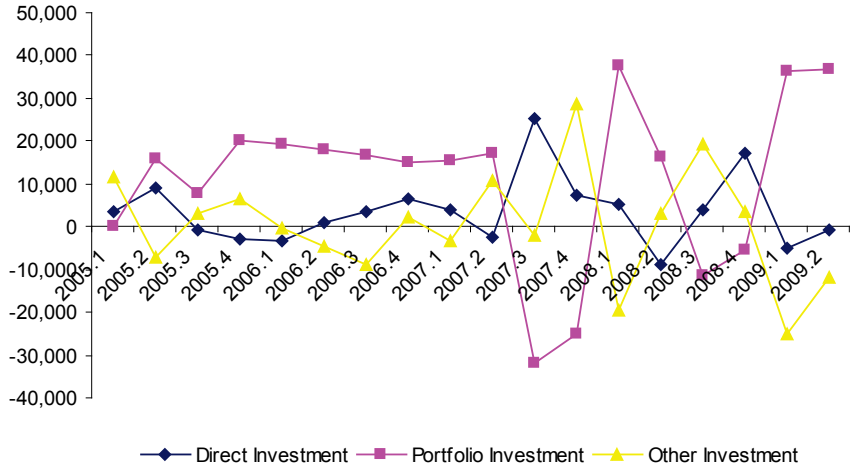


Source: Australian Bureau of Statistics 2010

According to Australia Government Department of Innovation, Industry, Science, and Research (2010), by at the end of 2008, APEC economies had dominated Australia's FDI assets. Most of the assets (43 percent) were located in the United States. New Zealand and Canada had 12 percent and 10 percent of total Australia's FDI assets, followed by United Kingdom and the European Union which had 8 percent and 7 percent respectively. In the same period the top five holders of Australia's FDI liabilities were the United States (24 percent), the European Union (19 percent), the United Kingdom (15 percent), Japan (9 percent), the Netherlands (6 percent), and Switzerland (5 percent).

Of Australia's investment position, direct investment had the most stable value during the period of 2005-2009. When the 2008 crisis struck, portfolio and other investments fluctuated heavily compared to direct investments (Figure 3.52). Figure 3.52 shows that portfolio investment has a larger volatility pattern. It also shows that the portfolio investment has the greatest value which is probably caused by the growth of Australia's economy.

Figure 3.52: Direct, Portfolio, and Other Investment of Australia (A$ millions)



Source: Australian Bureau of Statistics 2010

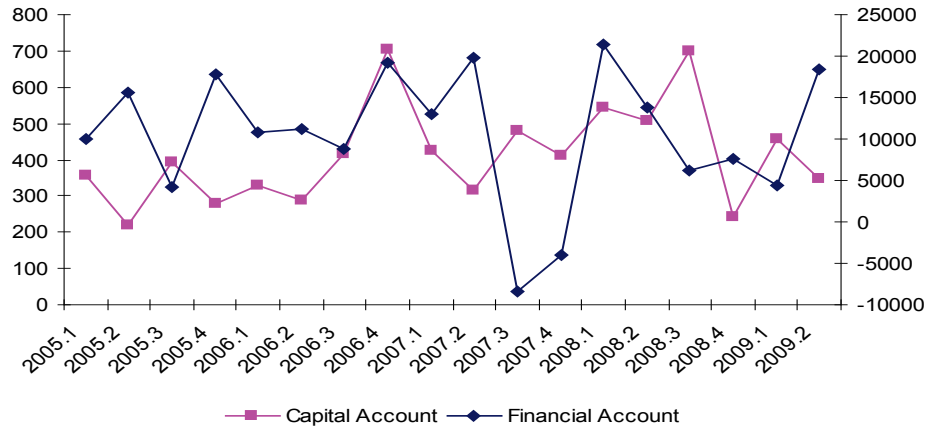
Table 3.28: Australian Investment Income (A$ million), 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Credits										
Direct	8429	9651	8985	9046	9772	12311	13692	19245	21404	21288
Portfolio	2799	3646	4119	4314	4692	6517	8669	11524	15871	14792
Other	1715	2069	1580	1479	1513	1786	3121	4190	3115	2485
Total	12943	15366	14684	14839	15977	20614	25482	34959	40390	38565
Debits										
Direct	-11700	-12896	-13420	-17962	-18689	-27164	-29991	-37262	-41123	-34702
Portfolio	-15897	-17062	-17386	-15744	-18218	-24085	-28641	-37781	-42255	-41999
Other	-3458	-4000	-3251	-2899	-2028	-2491	-3969	-4996	-4954	-4410
Total	-31055	-33958	-34057	-36605	-38935	-53740	-62601	-80039	-88332	-81111
Net										
Direct	-3271	-3245	-4435	-8916	-8917	-14853	-16299	-18017	-19719	-13414
Portfolio	-13098	-13416	-13267	-11430	-13526	-17568	-19972	-26257	-26384	-27207
Other	-1743	-1931	-1671	-1420	-515	-705	-848	-806	-1839	-1925
Total	-18112	-18592	-19373	-21766	-22958	-33126	-37119	-45080	-47942	-42546

Source: Australian Bureau of Statistics 2010

Since financial account consists of direct investments, portfolios, and other investments and that the portfolio investments have the greatest value, the financial account chart pattern is similar to that of portfolio investments (figure 3.52). Capital and financial account both suffered from contraction in the end of 2007 and the beginning of 2008.

Figure 3.53: Capital and Financial Account of Australia (US$ millions)



Source: International Monetary Fund 2010e

Australia had portfolio investment stock per GDP of 109.28 percent in 2005 and 118.7 percent in 2009. As a comparison, its FDI inward stock per GDP was 35.89 percent in 2005 and 35.48 percent in 2009. The Australian Securities Exchange (ASX) notes that there are many short term investments in Australia as it gives high interest rate. This may be the reason behind the high portfolio investments in Australia. Foreign investments from APEC region in Australia continued to grow during the period of 2001-2009 (Table 3.31). However, its percentage to foreign investments from the total world decreased from 44.68 percent in 2001 to 41.69 percent. Direct investments in Australia from APEC region hiked in 2001 to 2004 but dropped in 2005, and kept on increasing from 2005 to 2009, while portfolio investments from APEC continued to increase during the period of 2001-2009. Direct investments from APEC constituted 51.17 percent and 45.54 percent of total direct investments in Australia in

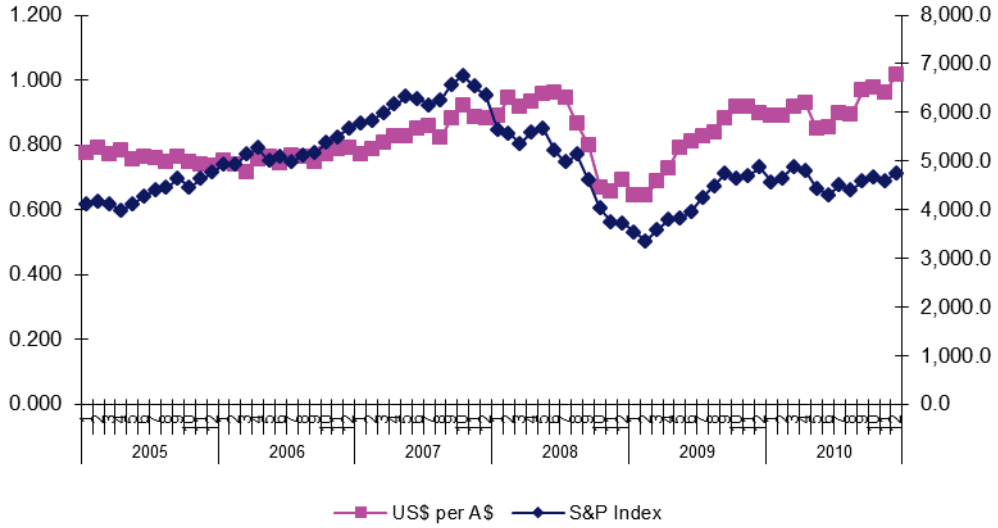
2001 and 2009. About 38.13 percent (2001) and 35.88 percent (2009) of portfolio investments in Australia were from APEC region.

Table 3.29: Foreign Investment in Australia: Level of Investment from APEC by Type of Investment (million A$)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Foreign investment in Australia	382,740	386,083	428,407	508,937	493,429	572,695	676,938	710,993	791,145
Direct investment in Australia	111,697	107,132	127,102	187,816	123,324	144,528	177,391	181,828	198,567
Portfolio investment liabilities	184,517	181,662	195,271	213,691	252,355	305,982	350,173	336,320	393,872
Financial derivative liabilities	11,553	15,655	21,213	17,614	12,990	16,549	22,248	19,373	22,840
Other investment liabilities	74,973	81,634	84,821	89,816	104,761	105,635	127,126	173,472	175,865
Total equity	182,082	160,099	193,758	258,946	218,712	273,901	315,910	245,012	322,004
Total debt	213,688	239,246	250,068	262,889	285,991	309,358	369,728	477,923	477,670

Source: Australian Bureau of Statistics 2010

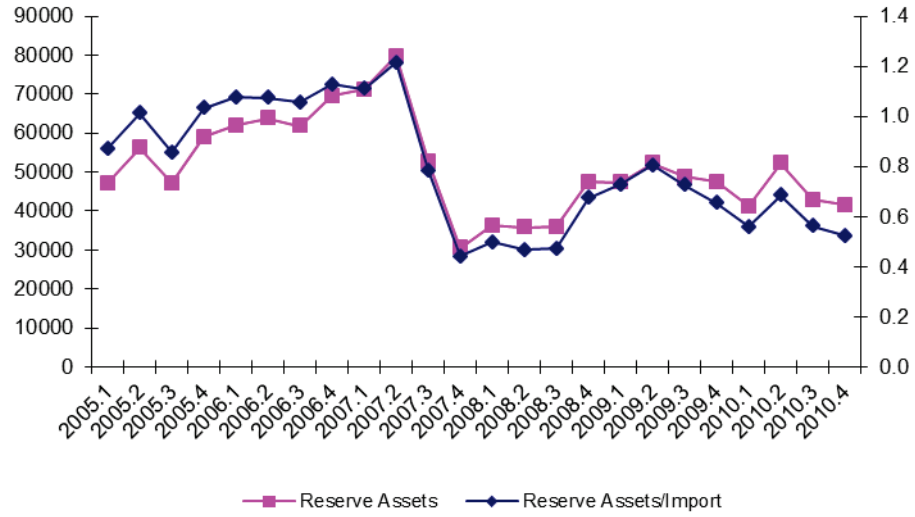
Figure 3.54: Exchange Rate and Share Index of Australia



Source: Reserve Bank of Australia 2011b (Exchange Rate) and Reserve Bank of Australia 2011c (Share Index)

Australia's share market index (S&P index) was in the range of 3,943 – 6,779 during 2005-2007. It reached its peak in 2007.10; valuing 6,779. Although the 2008 crisis has not caused severe impact to Australia's economy, it still has pressure on the S&P index which falls down to around 3,000 since 2008.11. The index reached its momentum to rise to 4,244 in 2009.7. Australia's exchange rate to US$ is also following the S&P index during period of 2005-2009 as seen in Figure 3.54. The exchange rate of A$ to US$ fell down from 0.8 to 0.668 in 2008.10 and hiked back in the first months of 2009.

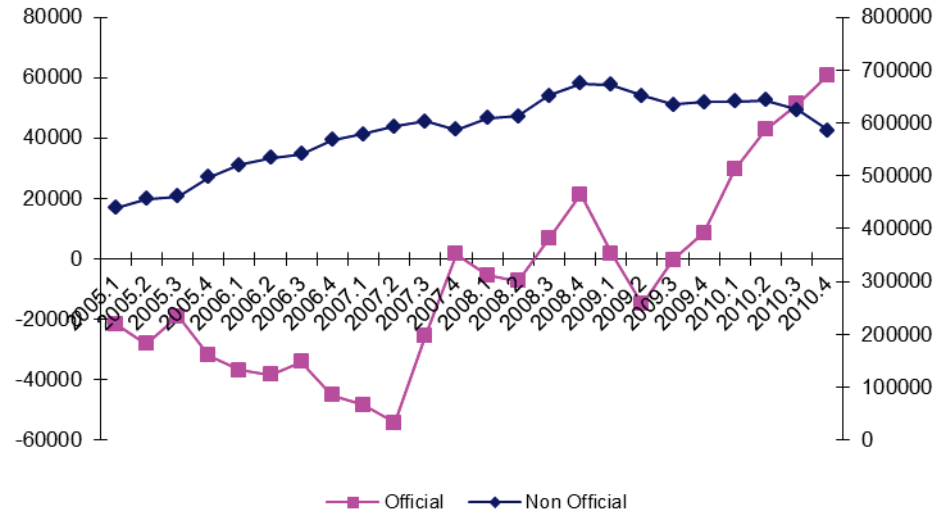
Figure 3.55: Australia's Reserve Assets



Source: Reserve Bank of Australia 2011d

Australia's reserve assets dropped significantly in April 2007 and January 2008 but it recovered in February 2008. The 2008 crisis caused exchange rate contraction, forcing Australia's government to drain its reserve to finance import and pay mature foreign debts. Therefore, the chart of reserve assets and reserve assets per imports has a similar pattern (Figure 3.55).

Figure 3.56: Official and Non Official Foreign Debt Outstanding (A$ millions)



Source: Reserve Bank of Australia 2011e

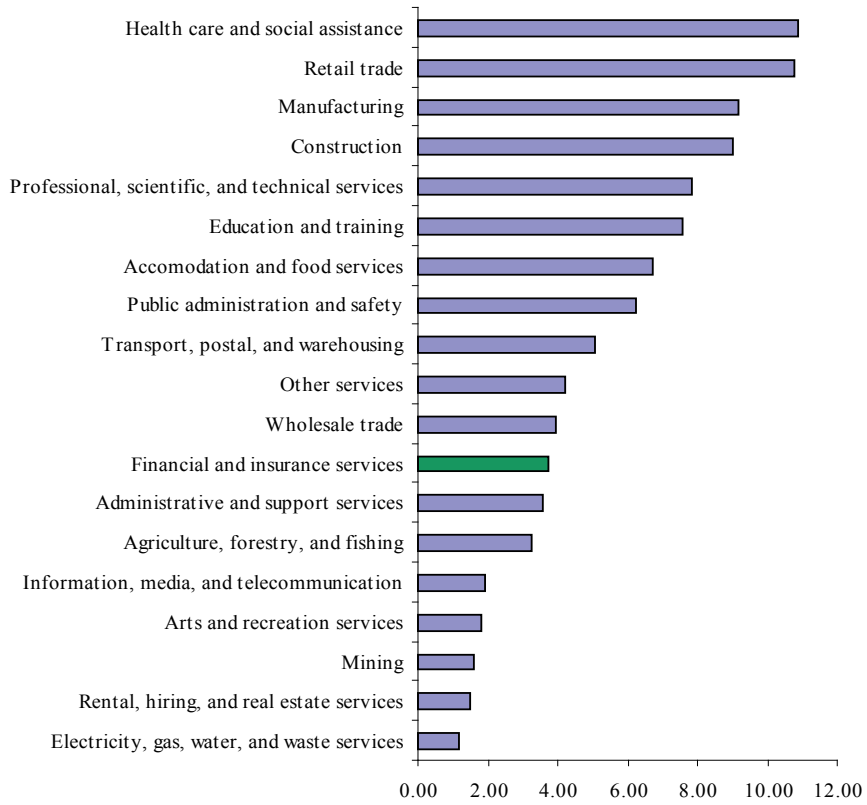
Government (official) debts were considered small compared to the non official debts. Both values were rising in the beginning of 2008. After the global financial crisis in 2008, many economies had a significant growth of government debts as the governments finance their needs by issuing government bonds.

III.4.2 Financial Market Condition

In the ten-year period from the mid 1980s to the mid 19902 there was an unusual rapid change in the Australian financial system. It has been one of the unusual changes in the history of Australia's financial system. Financial system structures alter continually in response to financial innovations and changes in both the economic environment and the regulatory framework. Australia's financial sector has been an important contributor to its national output, employment, economic growth, and development. The sector accounted directly for around 7.5 percent of Australia's GDP and employed directly around 390,000 people in November 2009 (The Australian Financial Forum 2009). Of Australia's 19 industry sectors, total employment of financial and insurance services was at 12th position on February 2010.

Australia is bound to be a leading financial center in Asia Pacific. Australia has innate advantages that support its mission. It has geographic proximity to Asia and similar time zone compared to other financial centers in Europe or the US. According to Financial Development Index Rankings 2009 (World Economic Forum 2009a), Australia was at the second position after United Kingdom, climbing high from the 11th position in 2008. Australia has also improved its performance in the financial markets pillar and positioned itself at the 4th place worldwide, with its score decreasing less than those of other large economies. The trustworthiness and confidence in Australia's banking system have remained essentially intact (4th) (World Economic Forum 2009b).

Figure 3.57: Industry Employment (Percent of Total Employment), February 2010



Source: Australian Bureau of Statistics 2010

III.4.3 Financial Institutions

Basically, Australia's financial sector can be classified into three financial institutions, namely Authorized Deposit-taking Institutions (ADIs), Non Authorized Deposit-taking Institutions (Non-ADI), and Insurers and Fund Managers. The three financial institutions will be described as follows (Reserve Bank of Australia 2009f):

1. Authorized Deposit-taking Institutions (ADIs)
   ADIs are corporations which are authorized under the Banking Act 1959[21].

Type of institution	Main characteristics	Number of institutions
Banks	Provide a wide range of financial services to all sectors of the economy, including (through subsidiaries) funds management and insurance services. Foreign banks authorized to operate as branches in Australia are required to confine their deposit-taking activities to wholesale markets.	58
Building societies	Building societies raise funds primarily by accepting deposits from households; provide loans (mainly mortgage finance for owner-occupied housing) and payment services. As traditional and mutually owned institutions, building societies are increasingly issuing share capital.	11
Credit unions	As mutually owned institutions, credit unions provide deposit, personal/housing loan, and payment services to members.	129

2. Non-ADI Financial Institutions

Type of institution	Main characteristics	Number of institutions
Money market corporations (merchant banks)	Operate primarily in wholesale markets, borrowing from, and lending to, large corporations and government agencies. Other services, including advisory, relate to corporate finance, capital markets, foreign exchange and investment management.	26
Finance companies (including general financiers and pastoral finance companies)	Provide loans to households and small- to medium-sized businesses. Finance companies raise funds from wholesale markets and, using debentures and unsecured notes, from retail investors.	120
Securitisers	Special-purpose vehicles that issue securities backed by pools of assets (e.g. mortgage based housing loans). The securities are usually credit enhanced (e.g. through use of guarantees from third parties).	229

3. Insurers and Fund Managers

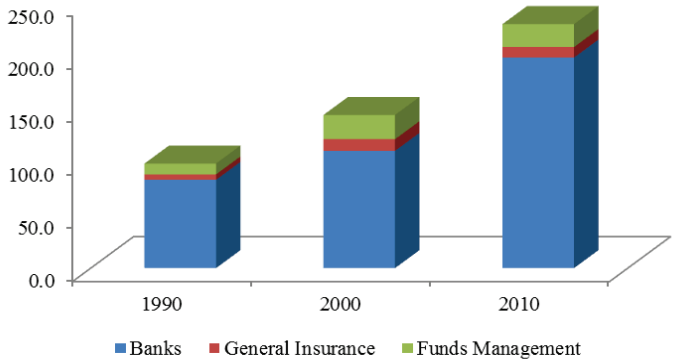
Type of institution	Main characteristics	Number of institutions
Life insurance companies	Provide life, accident and disability insurance, annuities, investment and superannuation products. Assets are managed in	32

[21] An Act to regulate Banking, to make provision for the Protection of the Currency and of the Public Credit of the Commonwealth, and for other purposes.

	statutory funds on a fiduciary basis, and are mostly invested in equities and debt securities.	
General insurance companies	Provide insurance for property, motor vehicles, employers' liability, etc. Assets are invested mainly in deposits and loans, government securities and equities.	129
Superannuation and approved deposit funds	Superannuation funds accept and manage contributions from employers (incl. self-employed) and/or employees to provide retirement income benefits. Funds are controlled by trustees, who often use professional funds managers/advisers. ADFs are generally managed by professional funds managers and, as with superannuation, may accept superannuation lump sums and eligible redundancy payments when a person resigns, retires or is retrenched. Superannuation funds and ADFs usually invest in a range of assets (equities, property, debt securities, and deposits).	5,670
Public unit trusts	Unit trusts pool investors' funds, usually into specific types of assets (e.g. cash, equities, property, money market investments, mortgages, and overseas securities). Most unit trusts are managed by subsidiaries of banks, insurance companies or merchant banks.	268
Cash management trusts	Cash management trusts are unit trusts which are governed by a trust deed and open to the public and generally confine their investments (as authorized by the trust deed) to financial securities available through the short-term money market.	45
Common funds	Trustee companies pool into common funds money received from the general public, or held on behalf of estates or under powers of attorney. Funds are usually invested in specific types of assets (e.g. money market investments, equities, mortgages).	12
Friendly societies	Mutually owned co-operative financial institutions offer benefits to members through a trust-like structure. Benefits include: investment products through insurance or education bonds; funeral; accident; sickness; or other benefits.	24

The major components of Australia's financial sectors are banks, fund managements, and general insurances. Banks' asset per GDP (current price) grew significantly in the period of 1990-2009; from 69.18 percent in 1990 to 198.2 percent in 2010. In the same period, fund managers' asset per GDP grew from 10.2 to 21.2 percent, while general insurances' asset per GDP increased from 5.2 to 9.9 percent. The development of total assets of financial institutions in Australia can be seen in Table 3.32.

Figure 3.58: Financial Sector Assets/GDP – Australia



Source: Reserve Bank of Australia 2011g

Table 3.30: Assets of Financial Institutions in Australia. (billion A$)

Institutions	1990	2000	2010
ADIs	378.1	796	2740.3
Reserve Bank (RBA)	28.4	56	76
Banks (other than RBA)	348	760	2663.6
Other authorized deposit taking institutions	30.1	36	74.7
Building Societies	21.4	13.1	24.6
Credit Unions	8.7	22.9	50.1
Registered Financial Corporations (RFCs)	101.3	150.8	165.1
Money Market Corporations	48.5	76.7	62.0
Finance Companies and General Financiers	52.8	74.1	103.1
Life Offices and Superannuation Funds	159.6	455.9	1130.7
Life Insurance Offices	78.7	167	187.4
Superannuation Funds	81	288.9	943.2
Other Managed Funds	43.9	159.6	289.7
Public Unit Trusts	24	116.7	252.6
Cash Management Trusts	5.3	30.3	25.3
Common Funds	6.9	7.1	6.3
Friendly Societies	7.7	5.5	5.5
Other Financial Institutions	28.8	147.2	271.6
General Insurance Offices	21.6	75.9	133.0
Securitization Vehicles	7.2	71.3	138.6

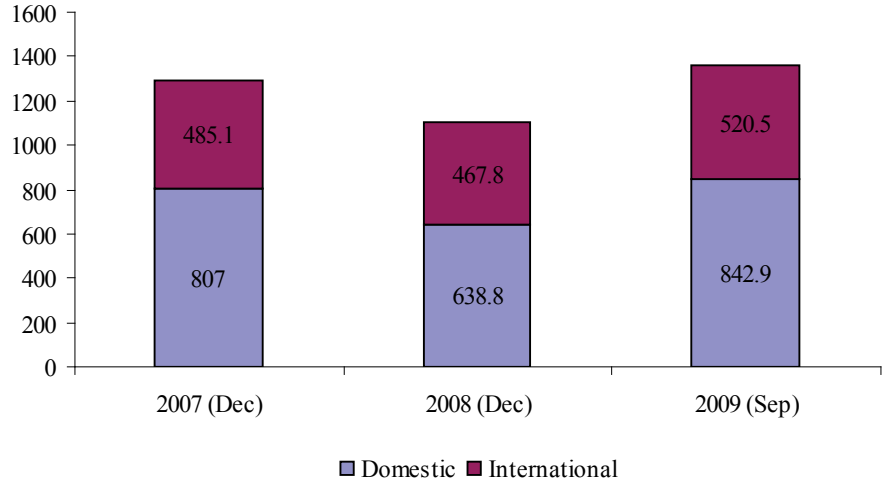
Source: Reserve Bank of Australia 2011g

Australia's financial market has been integrated to the world's financial market. Australia has an 'open financial system', which is described in the following (Carmichael 2000):

- the financial system is open in the sense that it is relatively straightforward for new institutions to obtain a license to operate in various parts of the system – provided they meet the necessary regulatory constraints, such as capital and governance requirements
- it is open in the sense that it is relatively straightforward for foreign financial firms to establish operations in Australia – provided they meet the regulatory requirements
- it is open in the sense that there is healthy competition among financial institutions and also between markets and institutions
- it is open in the sense that Australian financial system competes with international markets for business that could easily migrate elsewhere, if Australian market or institutions prove to be either unsafe or uncompetitive.

In terms of financial product, openness in financial market can be seen from its outstanding debt securities. International debt securities of Australia are still less than the domestic ones, but increased from 485.1 billion US $ in December 2007 to 520.5 billion US $ in September 2009.

Figure 3.59: Australia Debt Securities Outstanding (billion US $)

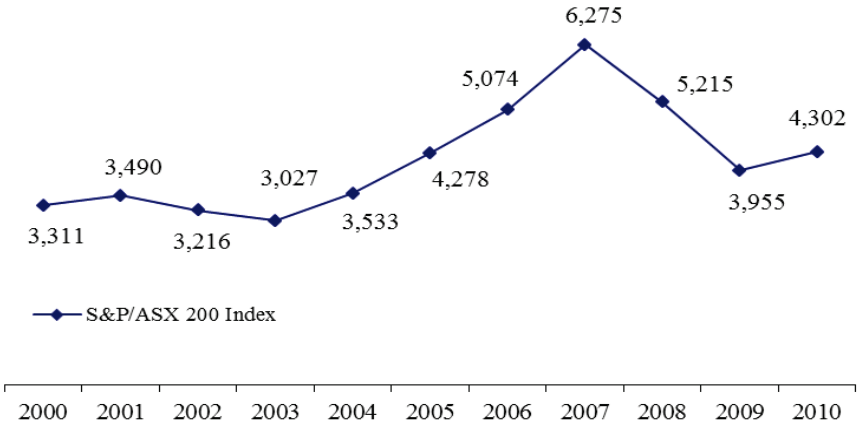


Source: Bank for International Settlement 2010

Australia's International debt securities are dominated by financial institutions' securities, followed by corporate securities, and government securities. Financial institutions' securities also dominate domestic debt securities, while government and corporate ones are in the second and third place.

The Australian Securities Exchange (ASX) is the primary stock exchange in Australia. It was formed in 1987. According to Financial Development Report 2009 (World Economic Forum 2009a), the market ranked eighth in terms of stock market capitalization to GDP. Asia Pacific member economies exceeding Australia are Canada (7th rank); Hong Kong, China (1st rank); Malaysia (6th rank), and Singapore (5th rank). Australia surpasses United States which was in the 9th position.

Figure 3.60: Australian Stock Market Index (S&P/ASX 200), 2000-2010



Source: Australian Bureau of Statistics 2011

The ASX has two indexes, namely all ordinaries index and S&P 200 index. The all ordinaries comprise 500 stocks. The S&P 200 index is used in common as it has 80 percent share of ASX' market capitalization. The top 50 of ASX industries are four largest banks in Australia, mining companies, and insurances. ASX' index has once fallen down to 50 percent as its lowest value.

ASX investors comprise domestic institutions, 40 percent, particularly the superannuation, retail households, 20 percent, that invest directly in the market, and overseas institutions, 40 percent. ASX relies on its domestic investors, particularly from superannuation. Employees in Australia are obliged to put 9 percent of their salaries in superannuation that is invested in equity market. Recently, ASX' market capitalization has been 120 percent of Australia's GDP.

There will be other capital markets that will probably operate in 2011, namely Chi-X. On the positive side, ASX sees that competition will reduce transaction cost. On the negative side, the industries are afraid that adjusting their infrastructure to suit both markets will be very costly for them. ASX is open to competition as long as supervision for both markets is equal. Services that will be brought by Chi are not provided by ASX, such as computer trading and international trading.

Table 3.31: Australia's Financial Market Assets and Market Capitalization per GDP (percent)

	2005	2006	2007	2008	2009	2010
Banks' assets per GDP	158.09	168.39	219.19	226.16	218.11	198.2
Debt securities outstanding per GDP	132.94	137.89	168.96	140.63	149.22	136.6
Stock market capitalization per GDP	141.50	160.66	187.08	124.85	124.53	105.59

Source: Reserve Bank of Australia 2011g

III.4.4 Australian Financial Market Regulators and Regulation

Regulators

The modern financial regulatory institution in Australia began with the establishment of The Financial System Inquiry. The inquiry also known as The Wallis since it was chaired by Stan Wallis. The Wallis was appointed by the Commonwealth Treasurer in May 1996.
What has emerged from Wallis is the creation of a new regulatory structure based along functional lines (one regulator for each of the types of market failure):

- ASIC to regulate market integrity and consumer protection. The objective of ASIC is promoting confidence in the efficiency and fairness of markets by ensuring that markets are sound, orderly, and transparent;
- APRA for regulating asymmetric information problems. APRA sets and enforces standards of prudential behaviors of all institutions in the areas of deposit-taking, insurance and superannuation; and
- The RBA to oversee systemic stabilities, in particular through its influence over monetary conditions and through its oversight of the payments system.

1. The Australian Prudential Regulation Authority (APRA)

The **Australian Prudential Regulation Authority (APRA)** is the prudential regulator of the Australian financial service industries. It supervises banks, credit unions, building societies, general insurance and reinsurance companies, life insurance, friendly societies, and most members of the superannuation industry. APRA was established on 1 July 1998.

APRA's role is to ensure that regulated institutions meet their financial promises. For banks and other deposit takers, this means that deposits are paid back in full and at the agreed

interest rate. Deposit-taking institutions are regulated by APRA under a single licensing regime. The ***Banking Act 1959*** gives APRA power to authorize and revoke authorities of authorized deposit-taking institutions (ADIs), to make prudential standards or issue enforceable directions, and to inspect ADIs. In addition, ADIs which are permitted to accept retail deposits are covered by the 'depositor protection' provisions of the ***Banking Act 1959***. These provisions provide APRA with the power to act in the interests of depositors, including the power to appoint a statutory manager to an ADI in a difficult situation to take control of the institution.

Insurance companies must pay valid policy claims and investment contracts. APRA has the power under the relevant legislation to authorize and revoke authorities of insurers, to make prudential standards or issue enforceable directions, and to inspect insurers. In the relevant legislation, preference is afforded for the policy-holders of statutory funds of life companies and Australian creditors of general insurers over the assets of statutory funds, and assets in Australia of general insurers respectively. A general insurer in Australia is required to hold assets in Australia sufficient to cover the total amount of its liabilities in Australia. In addition, APRA may, in the case of life insurers, seek an appointment of a judicial manager for a troubled insurer.

Super fund trustees must operate in the best interest of their members in order to maximize the members' retirement savings outcome. APRA has authority to remove and appoint trustees in covering troubled superannuation funds. The Treasurer can, on public interest grounds, compensate members of a superannuation fund for losses due to fraudulent conducts or thefts. The assistance can be funded either with Consolidated Revenue or by levying other superannuation funds.

APRA needs to perform two tasks well in order to perform its role. First, APRA must be expert risk analysts, determining that a regulated entity displays warning signs well in advance of any failure. Second, APRA must respond to early warning signals with effective but balanced interventions.

APRA is funded largely by the industries that it supervises. The funds are from levies charged to the industries. The levies value is determined by the Treasury.

APRA and ASIC have similar but not identical goals for investors. ASIC looks after nearly all investors, but APRA is focused on claims on prudentially regulated entities. ASIC is a legal regulator with a focus on process as well as outcome. Their public good is that investors are being treated properly, though not necessarily getting a good investment outcome.

2. <u>The Australian Securities and Investments Commission (ASIC)</u>

ASIC administers and enforces a range of legislative provisions relating to financial markets, financial sector intermediaries and financial products, including investments, insurance, superannuation and deposit-taking activities (but not lending). ASIC's aim is to protect markets and consumers from manipulation, deception and unfair practices and, more generally, to promote confident participation in the financial system by investors and

consumers. With this in mind, ASIC seeks to promote honesty and fairness in company affairs and securities and futures markets through adequate and timely disclosure of market information. In addition, ASIC:

- develops policy and guidance about the laws that it administers;
- licenses and monitors compliance by participants in the financial system; and
- provides comprehensive and accurate information on companies and corporate activities.

As a part of its consumer protection role, ASIC monitors and assesses compliance with the ***Code of Banking Practice***, the ***Credit Union Code of Practice***, the ***Building Society Code of Practice*****,** and the ***Electronic Funds Transfer Code of Practice*** and supervises a number of industry-based alternative dispute resolution schemes.

ASIC also implements the provisions of the **Financial Services Reform Act 2001**, which introduces a streamlined regulatory regime for market integrity and consumer protection across the financial services industry. The Act provides a harmonized licensing, disclosure and conduct framework for financial service providers, and a single statutory regime for financial product disclosure. At the same time, the framework allows flexible treatment of different financial products where appropriate (e.g. basic deposit products are subject to less intensive regulation than more complex investment products).

The ***Financial Services Reform Act 2001*** also introduces a single licensing regime for Australian financial markets and clearing and settlement facilities. Licensees (such as the Australian Securities Exchange and the Sydney Futures Exchange) have primary responsibility for the operation of markets and clearing and settlement facilities; the 'responsible Minister' (currently the Treasurer) has overall responsibility for licensing such entities. ASIC is empowered to advise the Minister on licensing matters. It is also required to undertake assessments of the compliance of market and facility licensees with their legislative obligations and to take enforcement action where necessary.

3. Reserve Bank of Australia (RBA)

The Reserve Bank' roles are conducting monetary policy, maintaining a strong financial system, and issuing the nation's currency. As a policy-making body, the Reserve Bank provides selected banking and registry services to a range of Australian government agencies and to a number of overseas central banks and official institutions. It also manages Australia's gold and foreign exchange reserves.

Since July 1998, RBA has not supervised banks. Supervision of banks has been transferred to new regulator, the Australian Prudential Regulation Authority (APRA). The RBA now has responsibility to maintain financial stability in a whole. In meeting its responsibility for financial stability, the Reserve Bank focuses on the prevention of financial disturbances with potentially systemic consequences.

There are several ways, in which the Reserve Bank attempts to reduce the likelihood of financial instability. One is by laying the foundation for low and stable inflation and sustainable economic growth. The bank also works to ensure that the payments system is safe

and robust, so as to minimize the risk for difficulties in an individual institution to spread to others. The Payments System Board within the bank has an explicit authority for payments system safety and stability and has the backing of strong regulatory powers.

4. The Australian Treasury

The Australian Treasury has a responsibility for advising the Government on financial stability issues and for the legislative and regulatory framework underpinning financial system infrastructure. It provides advice to the Government on policy processes and reforms that:

- promote a secure financial system and sound corporate practices;
- remove impediments to competition in product and service markets; and
- safeguard the public interest in matters such as consumer protection and foreign investment

Regulation

1. Financial Sector (Collection of Data) Act 2001 and the Repealed Financial Corporations Act 1974

APRA has had a responsibility for the registration and categorization of financial corporations since 1 July 2002 when the **Financial Sector (Collection of Data) Act 2001** (the Act)[22], and the **Financial Sector (Collection of Data-Consequential and Transitional Provisions) Act 2001[23], which repealed the Financial Corporations Act 1974[24],commenced**. The responsibility is in the hand of RBA before.

Corporations that were previously registered under the ***Financial Corporations Act*** are now known collectively as Registered Financial Corporations (RFCs). The Act serves mainly as a facilitator for the collection of statistical data. It does not empower APRA to supervise the activities of RFCs.

Responsibility for collecting financial data from RFCs was transferred from the Reserve Bank of Australia to APRA in April 2003. In taking over this responsibility, APRA has introduced new reporting requirements including updated report forms.

2. Financial Services Reform Act 2001

The Financial Services Reform Act 2001 is an Act to amend the law relating to financial services and markets and for other purposes. The amendments were tailored to deal with the changes in Australian financial markets and investment patterns, consistent with such changes elsewhere. In summary, the regulations of markets, the conduct and licensing of

[22] The object of this Act is to enable the collection by the APRA of information to assist it in the prudential regulation or monitoring of bodies in the financial sector and to facilitate the formulation by the Reserve Bank of monetary policy. In order to achieve that object, this Act: (a) provides for certain corporations to be registered, and divided into categories, by APRA; and (b) authorises APRA to determine reporting standards for corporations that are so registered and for certain other bodies that it regulates or monitors and to require them to provide APRA with information about their businesses and activities.

[23] An Act to repeal and amend various Acts, and to deal with transitional matters, in connection with the enactment of the *Financial Sector (Collection of Data) Act 2001*, and for related purposes

[24] The object of this Act is to assist the Reserve Bank by providing for the collection of information to facilitate the formulation of monetary policy.

participants, and the information disclosed to prospective investors are all affected by an overlap of previously separate sectors of the financial markets and interchangeability of the previous investment products separately sold regulated. Therefore, this Act brings together, on a standard or a common basis, the regulation of professionals who sell and the terms they use i.e. insurance, superannuation, managed investments (unit trusts), futures, derivatives, traditional securities (shares, debentures), options (Fox and Willis, 2002).

Two key concepts of this Act are (Fox and Willis, 2002):

1. There is a distinction between the offering of investments to retail investors and to wholesale investors. This distinction has a more generalized application to a wider range of conduct by financial market licensees and issuers of investment products.
2. There is now a functional regulation across products *instead of* a product-based regulation. This provides a common starting point for licensing of professionals and for the advice that must be given to investors and the disclosure that issuers must make regarding the investments (or, as now called, "products") they offer.

3. Banking Act 1959

The Banking Act 1959 is an Act to regulate Banking and to make provision for the Protection of the Currency and the Public Credit of the Commonwealth. According to this Act, banking business means (Wentworth 2005):

(a) A business that consists of banking, or
(b) A business that is carried out by a corporation that consists of:
    (i) both taking money on deposits (other than as part-payment for goods or services) and making advances of money; or
    (ii) other financial activities prescribed by regulations for the purposes of this definition.

A noticeable omission from the definition of banking business was the involvement of banks in the Australian payments system, under which payments were made or funds were transferred by such a mechanism as the collection and payment of cheques, direct credits and debits, debit and credit card payments, and high value payments. This omission was partly rectified when two further activities were prescribed by the regulations to be 'banking business'.

III.4.5 Financial Stability

There are different opinions on how Australia dealt with the 2008 global financial crisis. In general, the crisis did not cause a major shock. Nevertheless, Australia's financial market did shake a little. There was no financial institutions' bail out as performed by many other economies. However, several fund managers failed during the crisis. In general, regulators and financial market practitioners in Australia believe that Australia could go through the crisis smoothly because of its solid fundamental financial market supported by good coordination among regulators. In addition, Australia has had conservative financial market with small derivative market. It has been considered as an advantage as the shake of the market did not cause a major impact on Australia's financial market. The domination of domestic investors (60 percent of total investors) has also supported Australia's financial stability. The Australian Stock Exchange (ASX) relies on its domestic investors, particularly from superannuation. Employees in Australia are obliged to put 9 percent of their salaries in a pension fund (superannuation) that invests the money in equity market.

Australia's major reformation on financial market started in 1990s. In that period the major regulator (the Wallis) was divided into two regulators, namely APRA and ASIC. Australia's financial system ran well after the major reformation. To this stage, the two major regulators were considered well performed in maintaining Australia's financial stability. In other words, the current state of financial market regulators in Australia is up to the required standard. However, the regulators can improve their performance by increasing their staff's skill and knowledge. Ideally, the staff should also comprise market practitioners so that the regulators can understand the market better.

Australia does not have any macro prudential regulation as it is considered not necessary. Implicitly the regulators of Australia's financial market (the RBA, the APRA, the ASIC, and the Australian Treasury) meet frequently to share and gather information about recent issues on financial market. The meeting members are called The Council of Financial Regulators. The council's mandate is to contribute to the efficiency and effectiveness of the regulation and the stability of the financial system. In addition, other efforts performed by the regulators to deal with financial crisis are:

- APRA, ASIC, and RBA have their own financial stability reports. However, they do not calculate financial stability index in particular. RBA's financial stability report is issued twice a year. APRA performs a comprehensive assessment of deposit institutions, insurances, and superannuation and publishes financial stability report regularly. ASIC's research on financial market is not intended to predict instability, but to interpret the causes of the instability.
  APRA meets with financial market practitioners (industries) frequently in order to bridge the gap between the regulator and the market. The meeting is called consultative approach.
- APRA conducts a kind of stress testing to recommend what should be done by the government in dealing with certain issues. It also has a risk assessment, which implicitly has been used to categorize banks' condition (systemic or not).
- External auditors in institutions under ASIC supervision are obliged to be carried out once a year.

More details of some steps taken by Australian government up to September 2009 are (IMF, 2009 and results of Australia visit):

1. Monetary Policy
   The Reserve Bank of Australia (RBA) has cut cash rate target by cumulative 425 basis points to 3 percent since September 2008.
2. Liquidity Support
   a. The list of securities used as collateral in repo operations was extended to include residential mortgage-backed securities, commercial paper, and asset-backed commercial paper. Furthermore, the RBA extended the maturity of repos to one year.
   b. An amount of US$30 billion swap line with the US Federal Reserve Bank was established in September 2008, initially through January 2009 and later extended to October 2009.
   c. An amount of up to AUD $8 billion of residential mortgage-backed securities would be purchased by the government.
3. Funding Guarantees

a. Total deposit balances up to AUD $1 million per customer held in eligible authorized deposit taking institution (Australian-owned and subsidiaries of foreign-owned banks, but not branches) are guaranteed, as stated in the Financial Claims Scheme. Deposits over AUD $1 million can also be guaranteed for the same fees as applied for wholesale funding. The scheme was put into action in October 2008 and will remain in place until October 2011.
b. Eligible authorized deposit taking institutions can secure guarantees for their existing or a new wholesale funding for a fee ranging from 70 to 150 basis points depending on the credit rating of the institution.

4. Financial Regulation/ Supervision
   a. The authorities enhanced supervision of credit rating agencies and research houses.
   b. Short selling of financial and nonfinancial stock is banned by the Australian Securities and Investments Commission (ASIC) in September 2008. A legislation to ban all naked short selling in Australia (subject to any exemption put in place by ASIC) was passed by the government in December 2008. The ban on covered short selling of non-financial stocks was lifted in November 2008, while the ban on covered short selling of financial stocks was lifted in May 2009.
   c. The RBA is working with industry representatives to improve disclosure of securities lending activity.
5. Fiscal Stimulus Package
   a. Economic Security Strategy amounted AUD $10.4 billion was announced on October 14, 2008 to strengthen the national economy and support Australian households.
   b. On December 2008, the Australian Government introduced Nation Building Program. The AUD $4.7 billion program aimed at improving the performance of land transport infrastructure.
   c. On February 2009, the Australian Government introduced$42 billion Nation Building and Jobs Plan to support jobs and to invest in future long-term economic growth. Moreover, the government also introduced a stimulus package for young Australians amounted AUD $1.5 billion in the form of skills jobs package.
   d. Australia's government announced a fiscal stimulus package by giving up to AUD $900 bonus payment for tax payer on 6 April 2009. Under the bonus scheme, those with a taxable income of up to AUD $80,000 will receive AUD $900. Those with an income between AUD $80,001 and AUD $90,000 would receive AUD $600, and those earning between AUD $90,001 and AUD $100,000 would receive AUD $250.
   e. The Australian government invested AUD $22 billion in the nation's infrastructure on May 2009.

According to regulators and financial market participants, sources of Australia's financial market instability are:

- High housing prices; forcing banks to lend less for housing;
- Banks' sources of fund which is highly dominated by off shore borrowing;
- Australia's exchange rate is strongly influenced by commodity prices.

The key factors to avoid the instability are:

- Transparency

The regulators have to keep delivering clear messages to the market and avoid delivering mixed messages.

- Application of international accounting standard
  International accounting standard, in general, is already applied in Australia.
- Investing education for investors as part of consumer protection
  ASIC is in charge of educating the investors or bank customers. This issue is stated in the Financial Services Reform Act 2001. Financial literacy service even has been existed since 1991.

As a part of global financial markets, Australia has contributed to the efforts to greater financial stability by joining numbers of international fora which are formed to promote the strengthening of the international financial system. The international fora are:

1. Basel Committee on Banking Supervision
   The committee is one of the key international groupings for banking regulators. It aims to improve the quality of banking supervision worldwide through fostering regular cooperation on banking supervisory matters.
   Basel II has been implemented by APRA since January 2008. Australia is the only economy implementing interest rate risks in banks' CAR calculation. There are several points in Basel II that have been implemented for long. Australia's banks implement 25 cores of Basel II, except the deposit insurance.
2. Financial Stability Board
   The Financial Stability Board (FSB) was formed in April 2009 as the re-establishment of the Financial Stability Forum (FSF), which has existed since 1999. The FSB has a mandate to assess the vulnerabilities affecting the financial system, identify, and oversee action to address them, and promote cooperation and information sharing among authorities responsible for financial stability.
3. The Group of Twenty
   The Group of Twenty (G-20) was established in 1999 to bring together systemically important industrialized and developing economies to discuss key issues in the global economy. In 2009 Pittsburgh Summit, members of G-20 were committed to strengthen the international financial regulatory system as an effort to deal with the global financial crisis in 1998. Australia is represented in the G-20 by the Australian Treasurer and the Governor of the Reserve Bank of Australia.
   Australia has already performed the G-20 financial market reform. However, several points are considered not suitable for Australia, such as the point of issuing more government bonds to finance economy.
4. International Association of Insurance Supervisors (IAIS)
   The association was formed in 1994 to promote cooperation among insurance regulators, set international standards for insurance supervision, provide training to members, and coordinate work with regulators in the other financial sectors and international financial institutions. As a regulator/supervisor for insurance industry, APRA represents Australia in the IAIS.
5. International Organization of Securities Commissions (IOSCO)
   IOSCO was established in 1983 to be a forum where securities regulators can exchange information and coordinate supervisory and regulatory efforts. ASIC has been an active member of IOSCO since 1991.
   In addition, the ASX also joined the Asian Oceanian Stock Exchange Federation (AOSEF).

6. Joint Forum

The Joint Forum was established in early 1996 to conduct studies on areas of joint interest for banking, insurance and securities regulators. The forum brings together the Basel Committee on Banking Supervision, the IOSCO, and the IAIS. Australia is represented in the forum by APRA and ASIC.

However, as discussed above, not all recommendations generated by the fora can be followed by the members. Particularly in maintaining financial stability in Asia Pacific region, cross border coordination is very important. Therefore, it is recommended to draw "APEC Basel" or "Asian Basel" because the region is becoming more integrated.

Table 3.32: Summary of Australia's Response to the Global Financial Crisis

The impact of the global financial crisis on Australia economy:	• Australia's economic growth has slowed. Real GDP growth decreased to 2.3 percent in 2008 and 1.33 percent in 2009. • Depreciation in Australian dollar. • The real interest rates declined. • Business and consumers' confidence on Australian financial markets fell sharply in 2008. • The stock market fell sharply in 2008. • Several fund managers in Australia failed. • Unemployment increased but not as high as other advanced economies. • Exports and imports declined sharply since mid-2008. • Government bond yields dropped sharply in late 2008. • General insurer's profits declined. • Bank asset quality declined.
Important policies implemented to deal with the global financial crisis:	• Monetary Policy The Reserve Bank of Australia (RBA) cut cash rate target by cumulative 425 basis points to 3 percent between September 2008 and April 2009. Funding Guarantees - Total deposit balances up to AUD $1 million per customer held in eligible authorized deposit taking institution (Australian-owned and subsidiaries of foreign-owned banks, but not branches) are guaranteed, as stated in the Financial Claims Scheme. Deposits over AUD $1 million can also be guaranteed for the same fees as applied for wholesale funding. The scheme was put into action in October 2008 and will remain in place until October 2011. Prior to 2008, RBA estimated that the A $ 20,000 cap would be sufficient to guarantee the deposits of 80 per cent of customers. - Eligible authorized deposit taking institutions can secure guarantees for their existing or new wholesale funding for a fee ranging from 70 to 150 basis points depending on the credit rating of the institution. Financial Regulation/ Supervision

- The authorities enhanced supervision of credit rating agencies and research houses.
- Short selling of financial and non-financial stock is banned by the Australian Securities and Investments Commission (ASIC) in September 2008. A legislation to ban all naked short selling in Australia (subject to any exemption put in place by ASIC) was passed by the government in December 2008. The ban on covered short selling of non-financial stocks was lifted in November 2008, while the ban on covered short selling of financial stocks was lifted in May 2009.
- The RBA is working with industry representatives to improve disclosure of securities lending activity.
- APRA, ASIC, and RBA have their own financial stability reports. However, they do not calculate financial stability index in particular. RBA's financial stability report is issued twice a year. APRA performs a comprehensive assessment of deposit institutions, insurances, and superannuation and publishes financial stability report regularly. ASIC's research on financial market is not intended to predict instability, but to interpret the causes of the instability. APRA meets with financial market practitioners (industries) frequently in order to bridge the gap between the regulator and the market. The meeting is called consultative approach.
- APRA conducts a kind of stress testing to recommend what should be done by the government in dealing with certain issue. It also has risk assessment which implicitly has been used to categorize banks' condition (systemic or not).
- External auditors in institutions under ASIC supervision are obligated to be carried out once a year.
- ASIC has taken over responsibility from Australian Securities Exchange for supervision of real time trading on all of Australia's domestic licensed financial markets.

• Fiscal Stimulus Package
  - Economic Security Strategy ($10.4 billion, 0.9% of GDP) was implemented on October 2008
  - Nation building package - infrastructure projects was implemented on December 2008 ($4.7 billion, 0.4% of GDP)
  - Nation Building and Jobs Plan ($42 billion, 3.5% of GDP) on December 2008 and also skills jobs package ($1.5 billion, 0.1% of GDP) on February 2009
  - Australia's government was giving up to AUD $900 bonus payment for tax payer on 6 April

	2009. Under the bonus scheme, those with a taxable income of up to AUD $80,000 will receive AUD $900. Those with an income between AUD $80,001 and AUD $ 90,000 would receive AUD $600, and those earning between AUD $90,001 and AUD $100,000 would receive AUD $250. - Budget infrastructure ($22 billion, 1.8% of GDP) was implemented on May 2009
Sources of financial market vulnerability:	• Banks' sources of fund which are highly dominated by off shore borrowing. • Australia's exchange rate is strongly influenced by commodity prices. • High housing prices; forcing banks to lend less for housing. • Household debt (valued more than 150 percent of disposable income in 2008) and short-term external borrowing (valued more than 50 percent of GDP in 2008) are high by advanced economies' standards.
Factors supporting financial market stability:	• Australia has solid fundamental financial market supported by good coordination among regulators. • Australia has conservative financial market with small derivative market. It has been considered as an advantage as the shake of the market did not cause major impact on Australia's financial market. • Domestic investors in Australia dominate the Australia's financial market (60 percent of total investors). The Australian Stock Exchange (ASX) relies on its domestic investors, particularly from superannuation. Employees in Australia are obliged to put 9 percent of their salaries in a pension fund (superannuation) that invests the money in equity market. • Australia went through a major reform on financial market in 1990s. The result of the reform, a two peaks regulator, is considered well performed in maintaining Australia's financial stability.
Policies needed to be implemented to ensure financial market stability:	• Addressing shortcomings in financial regulation that has potential to be critical. • Detecting future problems in advance by improving monitoring of global risks. • Returning to a prudent fiscal policy because rapid and substantial fiscal stimulus in the future can be achieved from a sound balance sheet • Updating the capital standards for general insurers and life insurers.

IV. Conclusion and Recommendation

IV.1. Conclusion

Financial markets in the Asia Pacific region have registered rapid development and become increasingly integrated in recent decades. Despite the high variation among APEC member economies, in general, higher level of economic development and better public welfare have induced broader and deeper financial markets in the region. The United States as the developed and largest economy in APEC has the most advanced, broadest, and deepest financial market. In contrast, financial markets in Indonesia and Mexico are still simple. Nonetheless, the rapid development of financial markets in the APEC region over the last two decades has increased sources of volatility. There is no better indicator of that than a series of financial crisis and banking crises, which have affected both developing and developed economies in APEC in the past two decades. The Asian economic crisis of 1997-1998, the Tequila crisis in Mexico in early 1990s, and the Sub Prime Mortgage crisis in the United States in 2008 which led to the global financial crisis are some examples of increasing level of financial markets volatility in the region. In light of that, maintaining financial stability in the APEC region has becoming as urgent as it is imperative. This study constitutes an effort to contribute to greater financial market stability in APEC region, using Australia; Indonesia; Mexico; and United States as case studies.

Research findings on the United States indicate that even an advanced financial market can get embroiled in a deep financial crisis. Rapid development of derivative markets without adequate supervision and regulation, compounded by the greed of financiers plunged the US subprime mortgage market into defaults, which in turn, culminated into a fully-fledged financial crisis that quickly spread to other APEC members and the world. The turbulence in financial markets that ensued shook APEC financial markets as APEC markets are open and integrated. Thus, it is not surprising that the impact of the global financial crisis reverberated in the entire APEC region, albeit with differing severity among APEC members.

Differences in the characteristics of financial markets in the four sample economies, explain varying impact of the recent global financial crisis across economies. The same also applies to policies implemented to deal with the global financial crisis which were varied. This is the more so because sources of financial market vulnerability differ in the four economies. Moreover, factors supporting financial market stability also varied. To that end, policies necessary to ensure financial market stability also varied across the economies.

The Impact of the Global Financial Crisis

The impact of the 2008 financial crisis on APEC economies varied, basically depending on level of openness and degree of financial market development. The US as the centre of the global crisis hit hard. The economy experienced slower economic growth that reached its bottom in 2009. An upsurge in unemployment, which meant an increase in dependency, lowers taxation revenues. Contraction of corporate and private spending and cutbacks on production capacity as inventories increased. At the same time accelerated home foreclosures and increased default rates on mortgage loans, contributed to undermining securities which were either directly or indirectly based on them. Financial institutions with huge investments in such securities suffered huge losses, which led to write downs and write offs of their assets. Many banks and other financial institutions used much of their capital to make the

massive write-offs, which undermined their liquidity and solvency, and even closure of many banks (147). The government also injects of capital into troubled financial institutions and non-financial institutions contributed to worsening the budget deficit (estimated to reach US$ 1.3 Trillion in 2010). The weaker US economy create pressure on US dollar (depreciation vis avis other hard currencies) and noticeable reduction in portfolio and FDI (at least during the peak of the financial crisis).

Australia which is a developed economy was better prepared to deal with the global financial crisis because it has a simple financial market which supported by a strong domestic investor institutions. Moreover, the economy has in place an adequate regulatory framework and prudent investors, who were not easily persuaded to invest in products that are not well known. Financial market reforms in 1990s which strengthened financial market supervision and adherence to prudence ensured that Australia was better prepared for the crisis. Nonetheless, the rising prices of natural resources in the recent years benefited Australia and contributed to reducing the impact of the global crisis on Australia. That is the reason Australia financial market is not hit hard by the global financial crisis. Even Australia's economic growth has slowed. Real GDP growth decreased to 2.3 percent in 2008 and 1.33 percent in 2009, and depreciation in Australian dollar. Like any other economy, unemployment increased but not as high as other advanced economies. However, exports and imports declined sharply since mid-2008. Business and consumers' confidence on Australian financial markets fell sharply in 2008 which induced a plummet in the stock market in 2008. The spreads and volatility in Australian financial market increased, and several fund managers in Australia failed. Government bond yields dropped sharply in late 2008. Equity prices dropped and general insurer's profits declined. Bank asset quality declined.

Indonesia and Mexico have similar characteristics. The two economies experienced a severe economic financial crisis in the 1990s, which obliged them to restructure their financial markets in general and the banking industry in particular. Both economies have 'simple' financial markets, which are dominated by the banking sector, implying that restructuring of the banking industry laid a strong foundation for financial markets stability. Moreover, the increasing role of other financial institutions in the financial markets has hardly changed the share of banking sector. To this day sophisticated derivative products in both economies continues to be under developed, which meant that financial products such as sub-prime mortgages are still not available in the markets. In that regard, banking restructuring in Mexico and Indonesia carried out during 1990s strengthened their banking sectors, which enhanced their soundness that in turn reduced their vulnerability to future financial crises. To that end, though the global financial crisis affected capital markets of both economies, with Indonesian capital market losing more than 50 percent of its value in 2008, the banking industry has remained robust and resilient. Moreover, Indonesia's economy is still largely supported by natural resources, while its manufactured industry does not produce many luxurious goods, which were severely hit by the crisis. A large domestic market and the dominant role of consumption in the economy also contributed to no small measure in preventing Indonesian economy from facing the full wrath of the global crisis. Consequently, Indonesian economy continues to register positive economic growth during the global financial crisis even decreased to 4.5% in 2009 and export and import declined. When the global financial crisis struck, portfolio and other investment fluctuated greatly than direct investment. The foreign ownership of SBIs has dropped significantly. International reserves had been in the increasing trend but were halted as the crisis broke. During 2008, the stock exchange index dropped 50.64% compared the previous year.

On the contrary, despite its financial market was not highly affected, Mexico's economy suffered significantly from the global financial crisis largely because of its high economic dependence on the United States. The economic growth, exports and imports declined. However, Mexico was able to rise quickly, and was able to register economic growth rate of 7.6 percent in the second quarter of 2010 and relatively low unemployment rate of just 5.7 percent in July 2010. The volatility increased risk and higher risk spread between banking rate and market rate which induced a contraction in bank lending. Additionally, there was a run on mutual funds as the crisis unfolded, and the delinquency rate in the corporate sector soared.

Although the impact of the recent global financial crisis varied among APEC economies, there is little doubt that it impacted, albeit to varying degree, the four economies which were used as sample in this research. In general, some common features of the impact of the global financial crisis on the four sample economies were identified. These include among others:

- Slower economic growth that reached its bottom in 2009
- An upsurge in unemployment , which meant an increase in dependency, lower taxation revenues (except for Indonesia)
- Depreciation in of the local currency
- A decrease in capital market composite index
- Decline in exports and imports
- An increase in interest spread and volatility in the financial market
- Bank asset quality declined

Important Policies Implemented to Deal with the Global Financial Crisis

All economies implemented policies tailored toward overcoming the global financial crisis. However, there were differences in policies implemented, which by large depended on the level of severity of the impact of the crisis on the financial markets, overall economy, and condition of the financial market. Nonetheless, in general the four economies studied implemented policies such as:

- Fiscal stimulus program
- Ease monetary policies
- Increasing or introducing the deposit insurance guarantee (except for Mexico)
- Adopting policies to strengthen financial market
- Provide liquidity support for troubled financial institutions

The United States has launched many policies to stabilize its financial markets and restore its economy. The economic stimulus program entailed the injection of capital into key troubled financial institutions and non-financial institutions. The Federal Reserve launched expansionary monetary policies by reducing interest rates. The congress has also enacted Dodd-Frank Act in 2010 which is aimed at reforming and overhauling the financial market by strengthening supervisions of banks and non-bank financial institutions, establishing financial stability council, consumer protection agency, and widen the coverage of supervision and regulation to all players in money and capital markets. The fact reveals that an economy as big and as strong as the United States was eventually forced to reform its financial markets.

Similar to the United States, Australia also reduced the cash target rate, and gave liquidity support and funding guarantees to the banking sector. At the same time the monetary authority also enhanced supervision of credit rating agencies and research house, banned short selling in financial and non-financial institutions, improved disclosure of securities lending activities, conducted stress testing, and performed fiscal stimulus package.

Like other APEC member economies, during and in the wake of 2008 financial crisis, Indonesia also adopted various policies to strengthen its financial market stability and to propel its economic growth. Bank Indonesia reduced its interest rate and provided liquidity support by decreasing the reserve requirement ratio, obliged State Owned Enterprises to deposit their funds in domestic banks, and freed the banks from the requirement to mark to market obligations on their bond holdings. The economy also increased the amount of the deposit insurance up to Rp2 billion. In the capital markets, the authority simplified the share buyback during the crisis, implemented the regulation that reduced income tax by 5 percent for listed companies, and improved good corporate governance. Government also implemented a fiscal stimulus policy.

Mexico's financial market did not suffer severely from the global financial crisis, also implemented several policies that were aimed to strengthen financial market stability. Such policies included giving incentives to banks to increase their capital equity and giving liquidity support in domestic currency to commercial banks. The Mexican government implemented a regulation that aimed at increasing good information disclosure in Mexican stock market. The government also launched fiscal stimulus through many policies such as tax incentives, increasing the amount of retirement savings that can be withdrawn by the unemployed, temporary social security coverage for those suffering from job loss, and increasing public spending on infrastructure.

Sources of Financial Market Vulnerability

Although all economies have implemented various policies tailored toward overcoming the financial crisis, some going to the extent of reforming their financial markets, each economy still faces potential sources of risk. The source of financial market vulnerability differs among the four economies. US still has some sources of financial market vulnerabilities, such as indebted household sector that needs more deleveraging, large budget deficit and high government debt, and large current account deficit, which is continues to elude solution. The same applies to the Australian financial markets, which were not affected by the global financial crisis, face serious potential financial market volatility unless sources of vulnerability are addressed. Australia still faces financial vulnerability which are attributable to source of funds for banks that is highly dominated by offshore funds, high household debt, and high housing prices.

In the meantime, emerging economies such as Indonesia and Mexico, which are small open economies, face even larger sources of vulnerability. Indonesia which has become the destination of large short term capital inflows faces potential financial market vulnerability since large amount of short-term capital inflows would be able to potentially destabilize the financial market if huge capital outflow occurs. And the fact that the financial market is narrow and shallow, consequently it susceptible to shocks. The same applies to Mexico's financial market, which still faces some vulnerability. Sources of Mexico's financial vulnerability, among other things, are attributable to high concentration of share issuers (only

three (3) listed companies contribute to 30 percent of market capitalization), counterparty risks, and derivative transactions between non-financial institutions, and financial institutions abroad, of which domestic authorities had no record.

Factors Supporting Financial Market Stability

The impact of the financial crisis which had its origins in the US on economies in APEC varies. US financial markets suffered the most severe impact, while three other economies though were affected by the financial crisis; the impact was not as debilitating as that in US. In general, the financial markets in Australia, Indonesia and Mexico were not as severely affected, and stability in the financial markets continued to be relatively good. Several factors underlie the resilience of a financial market in facing turbulences in the three economies. Such factors include:

- Successful major financial reforms which had been implemented laid the strong foundation for a resilient financial market that withstood shocks.
- Good coordination among regulators.
- Simple and conservative financial market
- The economies benefited from high commodities price

The financial market in Australia, which was not affected badly by the global financial market, owed its resilience to the existence of a strong domestic investor base in financial markets. Domestic investors in Australia dominate the Australia's financial market (60 percent of total investors). The Australian Stock Exchange (ASX) relies on its domestic investors, particularly from superannuation. Australia has solid fundamental financial market supported by good coordination among regulators. Australia has conservative financial market with small derivative market. Australia went through a major reform on financial market in 1990s. The result of the reform, a two peaks regulator, is considered well performed in maintaining Australia's financial stability.

As regards Mexico, despite its high degree of integration with US economy through North America Free Trade Area, its financial markets were not severely hit by the financial crisis. Several factors were responsible for the ability of Mexican financial markets to withstand shocks. These include Mexico had succeeded in reforming its financial markets in the wake of the financial crisis in 1990s, the low leverage ratio of Mexican firms, low national debt and deficit (low sovereign risk), and long term nature of the largest percentage of Mexican national debt. In the same time strong and rising oil revenue which have served as a reliable source of support for the Mexican peso against speculative attacks. Regulatory framework in financial market is on good terms with other regulators such as Central bank, Ministry of Finance, CNBV. The existence of consumer protection agency which also caters for share holders, and securities holders, induces confidence in investment in securities. Most banks are foreign-owned, only 2 banks are domestically owned. Banks in Mexico have strong capital foundation.

Meanwhile, financial markets in Indonesia were able to remain stable during the recent global financial crisis because of the existence of a simple financial markets, good coordination among national authorities. Financial market reform performed at 1997/1998 crisis had strengthened Indonesia financial market. Indonesia financial market is still dominated by healthy and strong banking sector.

The quick recovery of the US financial markets from the financial crisis was largely due to the large percentage of its huge international reserves for example, making US still an important destination for both portfolio and FDI. Moreover, advanced financial markets were able to deal with fluctuation of capital flows, while the large competitive, innovative, liberalized and diversified economy and US dollar as an international reserve currency also contributed significantly.

Policies that should be Implemented to Ensure Financial Market Stability

Maintaining financial stability calls for the implementation of various policies in the financial sector by economic authorities, which should enhance stability, health, efficiency, and capacity to anticipate developments in financial markets. In general, maintaining financial stability requires the existence of strong regulatory authorities and regulations in financial markets which follow developments in financial markets. Nonetheless, each economy is unique, which means that policies that are needed to ensure financial stability may vary and differ from one economy to the other.

Australia as an advanced economy was able to maintain stability in its financial markets during the global financial crisis. However, the economy should implement policies tailored toward reducing potential sources of vulnerability in its financial markets. Some of the policies that are needed include introducing an un-weighted leverage ratio as a supplement to the Basel II risk based framework to ensure financial stability. The same applies to APRA which will implement prudential standards and a prudential practice guide on sound compensation practices which is expected to strengthen the links between compensation and risk management in the prudentially regulated sector and will update the capital standards for general insurers and life insurers.

Meanwhile, US which suffered severe impact from the financial crisis enacted the Dodd-Frank Act, 2010, which however still awaits implementation. The implementation of the Act will among other things, strengthen supervision of banks and non-bank financial institutions, establishment of the financial stability council (which has already been implemented), establishment of central clearance agency for OTC financial instruments. The Act also envisages intensified supervision and regulation of all players in money and capital markets, and the establishment of consumer protection agency. In addition, the Act calls for higher capital requirements for banks and other financial institutions which have systemic influence on the financial sector and economy, requires financial institutions to spin off proprietary trading activities to reduce potential sources of counterparty risk. Efforts to standardize financial accounting standards on financial statements reporting, information disclosure, efforts to intensify cross border cooperation and coordination on macroeconomic policy, accounting standards, firm establishment rules, taxation, supervision and regulation to reduce the potential danger of regulatory arbitrage, which can be exploited by transnational companies to avoid tighter and stronger regulatory regimes, are other provisions of the Act. The Act also calls for closer coordination with G20 members to ensure fair and equitable all inclusive balanced growth, financial sector regulation and supervision, and prevention of financial fraud and money laundering practices, increased regularity of financial sector assessment programs tailored towards identifying potential sources of financial instability for quicker and timely handling.

Meanwhile, Mexico whose financial markets didn't suffer as much from the global financial crisis, which owed much to the existence of strong regulatory and supervisory framework that ensured financial stability. Such regulations include regulation of foreign banks in Mexico which obliges them to incorporate in Mexico rather than serve as mere subsidiaries or branches. Such a policy enhances the control supervisory and regulatory authorities in Mexico have over their activities. This also reduced potential repercussions from problems that emanate from mother financial institutions to impact their own subsidiaries in Mexico.

With regards Indonesian economy which fared well during the global financial crisis, there is need to strengthen its financial market. To that end, there is need to draft a law on the financial safety net (JPSK) which if implemented will strengthen the resilience of Indonesian economy to withstand shocks in the financial markets. There is also need to enhance coordination among monetary authorities or establish the financial authority (OJK) that should have the powers and authority to conduct independent supervision of not only bank but also non-bank financial institutions. Based on the prevailing BI law, the OJK was supposed to have been established by late 2010 at the latest. There is need for enhancing safely and protection of investors in general and in the regions in particular. That way, strong protection of investors will encourage them to participate actively in the capital market which will foster the emergence of a strong domestic investor, which should strengthen the resilience and thereby stability of financial markets.

IV.2 Policy Recommendations

The findings in this study indicate that maintaining the financial markets stability is becoming more difficult in an increasingly complex, dynamic, and integrated financial markets of APEC region. However, having learned from experiences of financial crises and crisis managements so far, there are some actions that can be done by an economy or a regional cooperation to strengthen its financial market stability in APEC. Some important findings of this study are as follows:

a. Financial market reforms that can develop healthy, strong, and efficient financial markets can be fortifications against financial market shocks. The reforms are not only required by small or developing economies, but also by advanced or developed economies.
b. It is evident from some APEC economies' experiences that it is getting more difficult for financial market regulators to follow the development of new instruments and new institutions of the market as the market is becoming more complex. Therefore, there is need for better management of the development of the market to ensure that regulators have the necessary capacity to supervise them.
c. Regulatory framework needs to follow market developments. Even if necessary, it should be anticipated for market developments so that financial institutions or financial instruments developed in the market can be regulated and supervised properly. Especially in developed economies where financial engeneering plays important role in the development of new instrument or new financial institution, the financial market regulators do not only need to keep following the development, but also directing it. In this way, all the instruments and financial institutions can be well managed despite their rapid development. For the developing economies, it should be easier to design and develop a financial market regulatory framework because

instruments and financial instutions developed in the market are generally still simple and they follow market developments in developed economies.

d. Short-term capital flows should be supervised properly in order to minimize the volatility of financial markets. This recommendation should be implemented particularly in a small opened economy that only has small foreign exchange reserves compared with its short term capital inflows.
e. Financial markets volatility can be reduced through enhancing investor protection or deposit insurance.
f. An institution that acts as a macro prudential supervision is necessary in the market. This is required in both developed and developing economies.
g. Applying international standards for best practices will help strengthen the financial market of an economy, for example follows the Basel Principle for central banks and follows the IOSCO principle for capital market regulatory body. This is appropriate either for developed or developing economies.
h. An agreement or cooperation in maintaining financial market stability across economies is needed in order to minimize the volatility of the region's financial markets, particularly in the framework of Financial Stability Board which was formed by G-20. This is particularly important because generally the financial market in APEC region is integrated.
i. An early warning system in the region in each economy's financial market is important in maintaining financial market stability. This is appropriate either for developed or developing economies.
j. Prudent fiscal policies and strong international reserve can reduce the potential of financial market volatility. This is appropriate for both developed and developing economies.

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Appendix

Appendix 1: Summary of Research Proposal

High financial instability tends to trigger financial crises including economic crises. When a financial crisis occurs, an economy often suffers not only a great financial loss but also struggles to recover from the crisis. When the Asian Financial Crisis struck, several economies including APEC members have encouraged reform in their banking sector and financial market. They also have initiated many efforts such as increasing deregulation of the financial system, opening financial services to foreign institutions, and liberalizing capital accounts.

Furthermore, following the collapse of Lehman Brothers in the US, a global financial crisis spread all over the world. Consequently, many APEC economies experienced a sudden reversal of capital flow, which put substantial pressure on their currencies and stock markets. As capital flow was disrupted, cross border trade activity was also disrupted significantly.

Even though the global financial crisis has now been under control, the experience of financial meltdown was a stark reminder to most APEC economies that they should have had a regional collaboration. There is an urgent need for APEC economies to strengthen their financial markets as strong and healthy financial markets are essential to economic stability and resilience. Supporting the ongoing development on financial market has been one of APEC's key areas of cooperation. Among other things, through capacity building the Finance Ministers' Process (FMP) has applied research and policy dialogues focused on strengthening institutions, regulatory frameworks, government policies and market conditions that contribute to creating stronger financial systems within the region.

Besides, it is also crucial for APEC economies to further promote financial integration within the region in order to reduce their vulnerability to financial contagion. A greater financial integration within APEC economies is more likely to help create more stable financial market and also help rebalance the global economy, thus benefit both the region and the world.

The research undertaken in this project is expected to identify options and strategies on how investment rules that hamper investors' participation in financial markets can be removed, how regulatory frameworks can further be strengthened, and how enforcement processes to encourage better corporate governance and transparency in financial markets can be more effectively implemented.

In doing so, it is deemed necessary to carry out an analysis of the latest situation and trajectory of financial market stability among APEC economies. The research undertaken provides recommendations for relevant economies authorities, as well as making a significant contribution to strengthen financial market stability within APEC region.

To help focus the research the project will target four APEC economies (Indonesia, Mexico, United States, and Australia) and use the data gathered from these economies as sample indicators to determine the degree of financial markets stability and integration in the region. The primary data from the sample economies will be in the form of first-hand information on financial markets stability, expert and practitioners' opinion on the determinants, degree of

financial markets stability, and impact on economic activities in each economy visited, best practices of financial markets transparency and stability.
The research project aims at:

- explaining the current situation of macroeconomic and financial market in Australia, Indonesia, Mexico, and the US,
- determining the conditions that encourage financial market stability in Australia, Indonesia, Mexico, and the US,
- determining factors that support market integration across APEC region,
- formulating policy recommendation to overcome the obstacle in realizing financial market stability and integration within APEC region.

Based on the analyses, outputs of this project are:

- finding the degree of financial integration among APEC economies and factors which support the financial stability;
- recommendation of best practices in maintaining financial market stability;
- a workshop to form recommendation draft to SFOM by discussing project results and accommodating inputs from all related stakeholders.

The research findings are going to have a strong relevance to promoting Australia, Indonesia, Mexico, and the US financial market stability as well as integration in APEC economies. The expectation of the research output is to acquire a better understanding of financial market stability and the need of financial integration.

A report of the general findings will be made and disseminated to the beneficiaries including various APEC groups relevant to financial stability. The final report will be in form of hard publication as well as soft publication in CDs and file posting in Center for Asia Pacific Studies (CAPS) website and also file posting in APEC website is expected. Meanwhile a report summary will be published and disseminated to associations of bankers, stock market operators, financial markets regulators, and entrepreneurs associations.

This research has been conducted over an eight-month period commencing in April 2010 and culminating with a two-day workshop held in Yogyakarta in May 2011 to disseminate research finding and to draft recommendations to Senior Finance Officials Meeting (SFOM).

Appendix 2: Real GDP Growth in APEC Member Economies

Table 1: Real GDP Growth in APEC Members, 2005 – 2009 (Annual Percentage Change)

Member Economy	2005	2006	2007	2008	2009	2010
Australia	3.2	2.6	4.7	2.4	1.4	2.6
Brunei Darussalam	0.4	4.4	0.2	-1.9	-1.8	4.1
Canada	3.0	2.8	2.2	0.5	-2.8	3.2
Chile	5.6	4.6	4.6	3.7	-1.7	5.3
People's Republic of China	10.4	9.3	10.6	9.6	6.0	5.2
Hong Kong, China	7.1	7.0	6.4	2.3	-2.7	6.8
Indonesia	5.7	5.5	6.3	6.0	4.6	6.1
Japan	1.9	2.0	2.4	-1.2	-6.3	4.0
Republic of Korea	4.0	5.2	5.1	2.3	0.2	6.1
Malaysia	5.3	5.8	6.5	4.7	-1.7	7.2
Mexico	3.2	5.2	3.2	1.5	-6.1	5.5
New Zealand	3.2	1.0	2.8	-0.2	-2.1	1.5
Papua New Guinea	3.9	2.3	7.2	6.6	5.5	7.0

Peru	6.8	7.7	8.9	9.8	0.9	8.8
Philippines	5.0	5.3	7.1	3.7	1.1	7.3
The Russian Federation	6.4	8.2	8.5	5.2	-7.9	4.0
Singapore	7.6	8.7	8.8	1.5	-0.8	14.5
Chinese Taipei	4.7	5.4	6.0	0.7	-1.9	10.8
Thailand	4.6	5.1	5.0	2.5	-2.3	7.8
The United States	3.1	2.7	1.9	0.0	-2.6	2.9
Viet Nam	8.4	8.2	8.5	6.3	5.3	6.8

Source: Australian Government Department of Foreign Affairs and Trade 2011a

Appendix 3: Inflation in APEC Member Economies

Table 2: Inflation in APEC Member Economies, 2005 – 2009 (Annual Average Percentage Change)

Member Economy	2005	2006	2007	2008	2009	2010
Australia	2.7	3.3	3.0	3.7	2.1	2.7
Brunei Darussalam	1.1	0.2	1.0	2.1	1.0	0.5
Canada	2.2	2.0	2.1	2.4	0.3	1.8
Chile	3.1	3.4	4.4	8.7	1.7	1.5
People's Republic of China	1.8	1.5	4.8	5.9	-0.7	3.3
Hong Kong, China	0.9	2.0	2.0	4.3	0.5	2.4
Indonesia	10.5	13.1	6.0	9.8	4.8	5.1
Japan	-0.3	0.3	0.0	1.4	-1.4	-0.7
Republic of Korea	2.8	2.2	2.5	4.7	2.8	3.0
Malaysia	3.0	3.6	2.0	5.4	0.6	1.7
Mexico	4.0	3.6	4.0	5.1	5.3	4.2
New Zealand	3.0	3.4	2.4	4.0	2.1	2.3
Papua New Guinea	1.8	2.4	0.9	10.8	6.9	6.6
Peru	1.6	2.0	1.8	5.8	2.9	1.5
Philippines	7.6	6.2	2.8	9.3	3.2	3.8
The Russian Federation	12.7	9.7	9.0	14.1	11.7	6.9
Singapore	0.5	1.0	2.1	6.6	0.6	2.8
Chinese Taipei	2.3	0.6	1.8	3.5	-0.9	1.0
Thailand	4.5	4.6	2.2	5.5	-0.8	3.3
The United States	3.4	3.2	2.9	3.8	-0.3	1.6
Viet Nam	8.4	7.5	8.3	23.1	6.7	9.2

Source: Australian Government Department of Foreign Affairs and Trade 2011a

Appendix 4: Table of FDI Stock and External Debt of APEC Economies

Table 3: GDP, FDI Stock, and External Debt of APEC Economies

Economy	GDP (million US$)		FDI Inward Stock (million US$)		External Debt Stock (million US$)		FDI Stock/GDP		External Debt/GDP	
	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009
Australia	674,817.3	924,843	242,167.36	328,090.4	547,365	1,024,520	35.89	35.48	81.11	110.78
Brunei Darussalam	9,531.4	11,127.2	9,427.69	10,671.52	n.a.	n.a.	98.91	95.91	n.a.	n.a.
Canada	1,134,741.7	1,336,067	341,629.88	524,937.9	439,800	970,444	30.11	39.29	128.74	72.63
People's Republic of China	2,235,914	4,909,280	272,094	473,083	283,986	470,000	12.17	9.64	12.70	9.57
Chile	118,249.6	163,670	74,196.4	121,639.5	45,446.1	74,041	62.75	74.32	38.43	45.24
Hong Kong, China	177,771.7	215,355	523,219.48	912,166.2	454,623	659,548	294.32	423.56	255.73	306.26
Indonesia	285,868.6	540,277	41,187	72,841.4	134,504	172,871	14.41	13.48	47.05	32.00
Japan	4,552,117.6	5,067,526	100,898.53	200,141.2	1,521,065	2,124,647	2.22	3.95	33.41	41.93
Republic of Korea	844,863	832,512	104,880	110,770	187,882	401,922	12.41	13.31	22.24	48.28
Malaysia	137,953.8	191,601	44,459.52	74,643.15	52,301	68,307	32.23	38.96	37.91	35.65
Mexico	846,989.6	874,902	226,740.4	309,523.1	167,942	201,681	26.77	35.38	19.83	23.05
New Zealand	108,403.7	125,160	51,486.47	66,633.71	113,071	175,583	47.50	53.24	104.31	140.29
Peru	79,385.1	126,734	15,889.17	36,911.08	28,953	35,629	20.02	29.12	36.47	28.11
Philippines	98,823.5	160,476	14,978	23,559	54,186	53,255	15.16	14.68	54.83	33.19
Papua New Guinea	4,921.4	7,893	2,253.18	3,071.252	2,271	n.a.	45.78	38.91	46.15	n.a.
The Russia Federation	764,531.1	1,230,726	180,228	252,456.4	229,911	471,591	23.57	20.51	30.07	38.32
Singapore	120,942	182,232	194,580.67	343,598.7	233,435	412,504	160.89	188.55	193.01	226.36
Chinese Taipei	364,832	379,000	43,175	48,261	86,732	90,361	11.83	12.73	23.77	n.a.
Thailand	167,798.5	263,856	60,408	99,000.32	52,162	70,016	36.00	37.52	31.09	26.54
United States	12,376,100	14,256,300	2,817,970	3,120,583	8,837,000	13,767,867	22.77	21.89	71.40	96.57
Viet Nam	52,803.9	91,854	3,1136.32	52,825.3	17,322	n.a.	58.97	57.51	32.80	n.a.

Source: ADB; IMF 2010c; UNCTAD 2010; Economy's Source

Appendix 5: Intra-Extra APEC Exports and Intra-Extra APEC Imports

Table 4: Intra APEC Exports, 2005 – 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2005**	**2009**	**2005**	**2009**	**2005 - 2009**	**AVG.**
Australia	77,235.1	115,663	2.44	3.19	49.75	12.44
Brunei Darussalam	5,530.42	7,683.56	0.17	0.21	38.93	9.73
Canada	328,279	270,777	10.35	7.47	-17.52	-4.38
Chile	21,669.6	33,410.7	0.68	0.92	54.18	13.55
People's Republic of China	523,179	740,467	16.5	20.44	41.53	10.38
Hong Kong, China	230,510	255,673	7.27	7.06	10.92	2.73
Indonesia	64,984.8	88,086	2.05	2.43	35.55	8.89
Japan	454,858	434,237	14.34	11.99	-4.53	-1.13
Republic of Korea	198,022	242,528	6.24	6.69	22.48	5.62
Malaysia	110,959	134,394	3.5	3.71	21.12	5.28
Mexico	193,033	201,275	6.09	5.56	4.27	1.07
New Zealand	15,398.1	17,488.8	0.49	0.48	13.58	3.39
Peru	2,702.59	3,938.55	0.09	0.11	45.73	11.43
Philippines	11,138.7	14,760.7	0.35	0.41	32.52	8.13
Papua New Guinea	33,400.3	38,642.2	1.05	1.07	15.69	3.92
Russian Federation	31,133.2	4,4917.4	0.98	1.24	44.27	11.07
Singapore	177,582	205,559	5.6	5.67	15.75	3.94
Chinese Taipei	79,622.4	102,379	2.51	2.83	28.58	7.15
Thailand	13,918.38	15,446.01	0.44	0.43	10.98	2.74
The United States	574,171	618,016	18.1	17.06	7.64	1.91
Viet Nam	24,158.9	37,619.1	0.76	1.04	55.72	13.93
T O T A L	3,171,485.49	3,622,961.02	100	100	14.24	3.56

Source: International Monetary Fund 2010b; World Trade Organization 2010; Economy's Source

Table 5: Extra APEC Exports, 2005 – 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2005**	**2009**	**2005**	**2009**	**2005 - 2009**	**AVG.**
Australia	27,986.9	38,054	2.10	2.07	35.97	8.99
Brunei Darussalam	102.44	383.4	0.01	0.02	274.27	68.57
Canada	32,383	44,962	2.43	2.45	38.84	9.71
Chile	17,874.6	21,972.5	1.34	1.20	22.93	5.73
People's Republic of China	239,469	462,953	17.98	25.23	93.32	23.33
Hong Kong, China	59,118	63,078	4.44	3.44	6.70	1.67
Indonesia	20,675.4	30,732	1.55	1.67	48.64	12.16
Japan	140,280	147,343	10.53	8.03	5.03	1.26
Republic of Korea	87,462	115,759	6.57	6.31	32.35	8.09
Malaysia	30,021	41,247	2.25	2.25	37.39	9.35
Mexico	21,200	28,508	1.59	1.55	34.47	8.62
New Zealand	6,444.4	7,512.5	0.48	0.41	16.57	4.14
Peru	2,534.57	3,855.34	0.19	0.21	52.11	13.03
Philippines	6,152.6	7,884.3	0.46	0.43	28.15	7.04
Papua New Guinea	7,823.6	7,532.4	0.59	0.41	-3.72	-0.93
Russian Federation	208,164.8	237,316.6	15.63	12.93	14.00	3.50
Singapore	52,126	65,439	3.91	3.57	25.54	6.39
Chinese Taipei	30,537.6	49,593	2.29	2.70	62.40	15.60
Thailand	3,261.89	3,692.81	0.24	0.20	13.21	3.30
The United States	330,260	439,034	24.79	23.92	32.94	8.23
Viet Nam	8,288.2	18,230.3	0.62	0.99	119.95	29.99
T O T A L	1,332,166	1,835,082.15	100	100	37.75	9.44

Source: International Monetary Fund 2010b; World Trade Organization 2010; Economy's Source

Table 6: Intra APEC Imports, 2005 – 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2005**	**2009**	**2005**	**2009**	**2005 - 2009**	**AVG.**
Australia	83,086.6	110,567	2.50	2.93	33.07	8.27
Brunei Darussalam	1,441.8	2,200	0.04	0.06	52.58	13.15
Canada	246,892	248,887	7.42	6.61	0.81	0.20
Chile	13,188.7	24,275.7	0.40	0.64	84.06	21.02
People's Republic of China	438,532	606,629	13.17	16.10	38.33	9.58
Hong Kong, China	260,742	298,316	7.83	7.92	14.41	3.60
Indonesia	42,390.8	94,761.9	1.27	2.51	123.54	30.89
Japan	340,886	367,085	10.24	9.74	7.69	1.92
Republic of Korea	174,282	222,351	5.23	5.90	27.58	6.90
Malaysia	91,399.7	108,973	2.75	2.89	19.23	4.81
Mexico	180,043	192,420	5.41	5.11	6.87	1.72
New Zealand	18,916.4	18,637.4	0.57	0.49	-1.47	-0.37
Peru	1,729.5	3,198.7	0.05	0.08	84.95	21.24
Philippines	5,755.6	11,214.4	0.17	0.30	94.84	23.71
Papua New Guinea	38,352.6	49,106.8	1.15	1.30	28.04	7.01
Russian Federation	25,261.9	47,790.9	0.76	1.27	89.18	22.30
Singapore	144,866	170,907	4.35	4.54	17.98	4.49
Chinese Taipei	81,458.4	91,502	2.45	2.43	12.33	3.08
Thailand	10,490.4	12,581.9	0.32	0.33	19.94	4.98
The United States	1,099,060	1,022,790	33.01	27.14	-6.94	-1.73
Viet Nam	30,667.5	63,837.5	0.92	1.69	108.16	27.04
T O T A L	3,329,442.9	3,768,032.2	100	100	13.17	3.29

Source: International Monetary Fund 2010b; World Trade Organization 2010; Economy's Source

Table 7: Extra APEC Imports, 2005 – 2009

	MILLION US$		SHARE (%)		GROWTH (%)	
MEMBER ECONOMY	**2005**	**2009**	**2005**	**2009**	**2005 - 2009**	**AVG.**
Australia	35,980.4	49,907	2.31	2.69	38.71	9.68
Brunei Darussalam	226.14	298.69	0.01	0.02	32.08	8.02
Canada	67,666	71,883	4.35	3.87	6.23	1.56
Chile	19,132.6	21,407.7	1.23	1.15	11.89	2.97
People's Republic of China	221,692	397,281	14.26	21.38	79.20	19.80
Hong Kong, China	39,275	49,359	2.53	2.66	25.68	6.42
Indonesia	15,323.2	22,156.1	0.99	1.19	44.59	11.15
Japan	174,337	184,777	11.21	9.95	5.99	1.50
Republic of Korea	86,956	121,630	5.59	6.55	39.88	9.97
Malaysia	22,219.3	28,104	1.43	1.51	26.48	6.62
Mexico	41,777	41,965	2.69	2.26	0.45	0.11
New Zealand	7,218	7,022.6	0.46	0.38	-2.71	-0.68
Peru	105.38	273.67	0.01	0.01	159.70	39.92
Philippines	6,249.83	8,742.1	0.40	0.47	39.88	9.97
Papua New Guinea	9,067.5	10,706.9	0.58	0.58	18.08	4.52
Russian Federation	72,143.3	116,187.1	4.64	6.25	61.05	15.26
Singapore	55,331	75,107	3.56	4.04	35.74	8.94
Chinese Taipei	36,684.6	43,353	2.36	2.33	18.18	4.54
Thailand	3,753.05	5,658.02	0.24	0.30	50.76	12.69
The United States	633,480	580,790	40.75	31.26	-8.32	-2.08
Viet Nam	6,093.6	21,193	0.39	1.14	247.79	61.95
T O T A L	1,554,711	1,857,802	100	100	19.50	4.87

Source: International Monetary Fund 2010b; World Trade Organization 2010; Economy's Source

Appendix 6: Panel Data Model

To determine financial market instability for the four APEC economies, this research replicates Hadad et.al. (2007) model. The model uses Stock Market Composite Index (*SMCI*) which is a function of market return (*MR*), inflation level (*INF*), credit interest rate (*i*), money in circulation (*M2*), and lag of Stock Market Composite Index ($SMCI_{t-1}$). The basic model is:

$$SMCI_t = \alpha + \beta_1 MR_t + \beta_2 INF_t + \beta_3 i_t + \beta_4 M2_t + \beta_5 SMCI_{t-1} + \varepsilon_t$$

Data for the model are monthly data from 2000 to 2009 which are retrieved from IFS IMF, except for data of stock market composite index, lag of stock market price, and stock volume. Those data are achieved from Bank Indonesia (Indonesia's stock market data), Reserve Bank of Australia (Australia's stock market data), Dow Jones website (US's stock market data), Banco de Mexico (Mexico's stock market data), and Nikkei.com (Japan's stock market data). The basic model is then developed to be analyzed with a panel regression and a time series regression.

The panel regression uses monthly data from 2000 to 2009 for the samples: Indonesia, Mexico, Australia, and the United States. The first step is selecting models. Pooled Least Square (PLS) model and Panel Fixed Effect (FE) model are used in this research. However, Random Effects Panel (RE) model is not used because the RE's specification is not suitable for the econometric requirements. Chow test is used to determine the best model. The hypothesis of the Chow test is as follows (Baltagi, 2001:14):

H_0: PLS Model (*Restricted*), if $F_{statistik} < F_{tabel}$ or value of probability $F_{statistik}$>Prob *critical value* $(\alpha = 1\%, \alpha = 5\%, \alpha = 10\%)$

H_1: *Fixed Effect* Model (*Unrestricted*), if $F_{statistik} > F_{tabel}$ or value of probability $F_{statistik}$<Prob*critical value* $(\alpha = 1\%, \alpha = 5\%, \alpha = 10\%)$

Result of Chow test is:

CHOW TEST	**(RRSS-URSS)/(N-1):URSS/(NT-N-K)**		
URSS (FIXED)	Sum squared resid	1.61E+08	0.0000
RRSS (PLS)	Sum squared resid	1.61E+08	341102
CHOW TEST			0.0000
F Tabel			1.21

Based on this result, we use Pooled Least Square Model. The regression equation is:

$$SMCI_{it} = f(Infl_{it}, LR_{it}, LogM2_{it}, SMCI(-1)_{it}, SMCJPG_t)$$

Where:

- i = Australia; Indonesia; Mexico; and United States
- t = 2000.1 to 2009. 12
- $SMCI_{it}$ = stock market composite index
- Inflt = inflation
- LR_{it} = lending rate
- Log $(M2)_{it}$ = broad money in logarithm
- $SMCI(-1)_{it}$ = Lag of stock market composite index
- $SMCJPG_t$ = Japan's stock market composite index

The data processing results that use monthly data from 2000 to 2009 show the following conditions.

Table 8: Result of PLS Estimation

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	1542.914	324.1261	4.760229	0.0000
INF?	-60.6689	15.28912	-3.96811	0.0001
LR?	-50.6146	15.37865	-3.29123	0.0011
LM2?	-324.137	67.31522	-4.81522	0.0000
DSMCI?	0.997635	0.010734	92.94523	0.0000
SMCIJPG?	0.027469	0.013593	2.020784	0.0439
R-squared	0.993658	Mean dependent var		7791.72
Adjusted R-squared	0.993591	S.D. dependent var		7291.195
S.E. of regression	583.6844	Sum squared resid		1.61E+08
Log likelihood	-3735.37	F-statistic		14854.02

Durbin-Watson stat	1.758701	Prob(F-statistic)	0.0000

Source: processed data

The regression results find that the $R^2 = 0.993658$. This result shows that 99.36% variation of the stock market composite index (SMCI) is influenced by inflation, lending rate, money supply, the lag of SMCI ($SMCI_{t-1}$), and Japanese SMCI, while 1.64% is influenced by other variables. Based on the testing of the F statistics, it is stated that the four variables provide a significant influence on the formation of SMCI simultaneously.

The t-test shows that all variables have a significant effect on SMCI. If inflation increases by 1%, then SMCI will experience a decline of 60.66 points. This coefficient also indicates that the stock market index in the four economies is affected by the price stability (inflation). Fluctuations in prices or inflation will lower stock market index because inflation reflects economic conditions, particularly price, which is not stable. The increase in interest rates by 1% will also significantly reduce SMCI by 50.61 points. This increase of interest rate will increase cost of financing and might deteriote emiten performance, so that the stock market index is likely to decline. Increasing the money supply should raise SMCI. However, the results of this regression will actually reduce SMCI to 324.137 points which may indicate that increasing money supply would increase inflation in this region. SMCI is also influenced by the SMCI in the previous period. If SMCI increases in the previous period by 1 point, the current SMCI will raise by 0.99 points. This shows the behavior of backward expectation in the stock market. Finally, Japanese SMCI provides a significant positive effect. This result indicates that the Japanese stock market has an important role in the stock markets of other economies.

Appendix 7: Time Series Model

The model used in the analysis of time series for the sample economies is a dynamic model. In the process of regression, we run the data by using Partial Adjustment Model (PAM), Engle-Granger Error Correction Model (ECM-EG), and Wicken-Breusch Error Correction Model (ECM-WB). The best regression result is the Partial Adjustment Model, so this model is used in the analysis of data for each economy.

In the econometric process, time to change from one equilibrium to another equilibrium is described by inclusion of lag variables in the model. Partial Adjustment Models in general can be written as follows (Baltagi, 2002:137):

$$Y_t = \alpha\theta + \beta\theta X_t + (1-\theta)Y_{t-1} + u_t$$

Where the disturbance variable is $u_t = \theta\ \varepsilon_t$.

The adjustment depends on the value of adjustment parameter (θ). When θ = 0 means no adjustment, whilst when θ = 1, then an adjustment in the period is totally adjusted. In general, θ is between these two extreme conditions. If the value of θ is greater, there is a larger adjustment. In fact, θ measures the proportion of the number of mismatches between Yt * and Yt-1 that are eliminated during the period. Coefficients of regression can be interpreted as short run and long run coefficients. The short run coefficient isβθ, whereas the long run coefficient is β/ (1-((1-θ)).

The basic equation used in this analysis is:

$$SMCI_t = f\ (Infl_t, LR_t, LogM2_t, SMCI_{(t-1)}, SMCUS_t, SMCJPG_t)$$

Where:

- $SMCI_t$ = stock market composite index
- $Infl_t$ = inflation
- LR_t = lending rate
- Log $(M2)_t$ = broad money in logarithm
- $SMCI_{(t-1)}$ = Lag of stock market composite index
- $SMCUS_t$= United States' stock market composite index
- $SMCJPG_t$ = Japan's stock market composite index

Hypothetically, inflation has a negative effect on SMCI. If inflation rises then SMCI will move downward. Likewise, when the lending rate increases, the SMCI will decline. On the other hand, the influence of broad money, SMCI (-1), United States' SMCI, and Japanese SMCI against SMCI are expected to be positive. United States' and Japanese SMCI are used in the equation because both economies are the biggest economies in APEC and each has a relatively influential stock market in the region.

Time Series Model for Indonesia

Econometric model that is used to estimate the behavior of Stock Market Composite Index in Indonesia is:

$$SMCI_{INA} = f\ (Infl_{INA}, LR_{INA}, LogM2_{INA}, log(ER)_{INA}, SMCI_{INA}\ (-1), SMCAS, SMCJPG)$$

Where:

- $SMCI_{INA}$= Indonesian stock market composite index
- $Infl_{INA}$= Indonesian inflation
- LR_{INA} = Indonesian lending rate
- Log $(M2)_{INA}$ = Indonesian broad money in logarithm
- $Log(ER)_{INA}$ = Exchange rate Indonesia to USD in logarithm
- $SMCI_{INA}$ (-1) = Lag of Indonesian stock market composite index
- SMCAS = US's stock market composite index
- SMCJPG = Japanese stock market composite index

The data processing results that use monthly data from 2000 to 2009 show the following conditions.

Table 9: Result of the Indonesia's Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14913.52	3565.255	-4.183017	0.0001
INFLATION	-5.185479	10.39330	-0.498925	0.6188
LR	-4.274115	11.72153	-0.364638	0.7161
LM2	2343.730	686.3997	3.414527	0.0009
LOG(ER)	829.0785	190.2347	4.358187	0.0000
SMCIJPG	0.003072	0.005372	0.571760	0.5686
SMCIAS	0.030248	0.014725	2.054147	0.0423
SMCI(-1)	0.851907	0.049216	17.30942	0.0000
R-squared	0.983178	Mean dependent var		1156.905

Adjusted R-squared	0.982117	S.D. dependent var	743.4151
S.E. of regression	99.41566	Akaike info criterion	12.10136
Sum squared resid	1097065.	Schwarz criterion	12.28819
Log likelihood	-712.0307	F-statistic	926.7640
Durbin-Watson stat	1.203107	Prob (F-statistic)	0.000000

Source: processed data

Based on the coefficient of SMCI (-1), the coefficient of adjustment equals to 0.148093(1-0.851907). It means that 1.48% of the discrepancy between the actual SMCI and the desired SMCI will be eliminated within a month. The point of Indonesia's adjustment shows that adjustment in Indonesian stock market is the slowest compared with the three other economies in this research. This condition also indicates that Indonesian stock market is relatively unstable. When there is a shock, Indonesian stock market needs a long time to adjust and return to the normal condition.

Based on the t-test, there are three independent variables that have no significant effect on Indonesian SMCI, i.e. inflation, interest rate, and Japanese SMCI. Variables that have a significant effect are broad money, exchange rate to US Dollar, and United States' SMCI. In the short run if broad money increases by 1%, the SMCI will increase by 2343.73 point. On the other hand, when depreciation occurs, emiten will be better off since the emiten competitiveness increase, so the Indonesian SMCI will increase 829.0785 points. The effect in the long run is greater than in the short run. This finding is also related to some previous research.

The Indonesia's estimation, afterward, is tested with Jarque-Bera normality test, Breusch-Godfrey Correlation LM autocorrelation test, Ramsey Reset linearity test, and White No Cross Term homoskedasticity test. The tests show that the estimation is free from hetereoskedasticity and specification error, but not free from autocorrelation.The estimation also does not pass the normality test. In this case, interpreting the result coefficient of estimation should be done carefully to avoid misleading interpretations.

Time Series Model for Mexico

The econometric model that is used to estimate the behavior of Stock Market Composite Index in Mexico is:

$$SMCI_{MEX} = f\ (Infl_{MEX},\ LR_{MEX},\ LogM2_{MEX},\ SMCI_{MEX}\ (-1),\ SMCAS,\ SMCJPG)$$

Where:

- $SMCI_{MEX}$= Mexican stock market composite index
- $Infl_{MEX}$ = Mexican inflation
- LR_{MEX} = Mexican lending rate
- Log $(M2)_{MEX}$ = Mexican broad money in logarithm
- $SMCI_{MEX}$ (-1) = Lag of Mexican stock market composite index
- SMCAS = US's stock market composite index
- SMCJPG = Japanese stock market composite index

The data processing results that use monthly data from 2000 to 2009 show the following conditions.

Table 10: Result of the Mexico's Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-112841.8	24738.51	-4.561381	0.0000
INFLATION	183.2242	95.35026	1.921591	0.0572
LR	-117.8428	57.00559	-2.067215	0.0410
LM2	24164.64	5960.806	4.053922	0.0001
LOG(ER)	10163.39	1869.829	5.435465	0.0000
SMCIJPG	0.115285	0.055144	2.090598	0.0388
SMCIAS	0.479593	0.165564	2.896724	0.0045
SMCI(-1)	0.735577		0.051227	14.35908
R-squared	0.990002	Mean dependent var		15517.51
Adjusted R-squared	0.989371	S.D. dependent var		9263.152
S.E. of regression	954.9823	Akaike info criterion		16.62612
Sum squared resid	1.01E+08	Schwarz criterion		16.81295
Log likelihood	-981.2543	F-statistic		1570.171
Durbin-Watson stat	1.449934	Prob(F-statistic)		0.000000

Source: processed data

Based on the coefficient of SMCI (-1), the coefficient of adjustment equals to 0.264423 (1-0.735577). This coefficient means that 2.64 percent of the discrepancy between the actual SMCI and the desired SMCI will be eliminated within a month. When compared with the US and Australia, the adjustment towards convergence in Mexico runs slower. Based on the t-test, regression results also indicate that all of variables have a significant impact on Mexican SMCI, but inflation has a positive direction. This may occurs because the degree of inflation in Mexico is quite low during the study period. Based on some theories, when inflation increases, the SMCI will decrease. The increase in lending rate by 1% will reduce the Mexican SMCI by 117.8428 points in the short run and 445.66 point in the long run. In the short run, an increase in broad money of 1% will raise the Mexican SMCI to 24164.64 points and higher in the long run. Increases in US's SMCI and Japanese SMCI also increase the Mexican SMCI. The result of processed data shows that the effect of the rising United States' SMCI is much greater than the Japanese SMCI in both short and long run. It can be concluded that the Mexican stock market is more affected by stock market conditions in the United States compared to Japan.

The Mexico's estimation, afterward, is tested by Jarque-Bera normality test, Breusch-Godfrey Correlation LM autocorrelation test, Ramsey Reset linearity test, and White No Cross Term homoskedasticity test. The tests show that the estimation is free from specification error and autocorrelation. But the estimation has not passed normality and hetereoskedasticity test, so that interpretation on coefficient of the result of estimation should be done carefully to avoid misleading interpretation.

Time Series Model for the United States

Econometric model that is used to estimate the behavior of Stock Market Composite Index in the United States is:

$$SMCI_{US} = f\,(Infl_{US},\ LR_{US},\ LogM2_{US},\ SMCI_{US}\,(-1),\ SMCJPG)$$

Where:

- $SMCI_{US}$= United States' stock market composite index
- $Infl_{US}$ = United States' inflation
- LR_{USA} = United States' lending rate
- Log $(M2)_{US}$ = United States broad money in logarithm
- $SMCI_{US}$ (-1) = Lag of United States stock market composite index
- SMCJPG = Japanese stock market composite index

The data processing results that use monthly data from 2000 to 2009 show the following conditions.

Table 11: Result of the United States' Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6175.05	6332.916	-0.97507	0.3316
INFLATION	-63.8823	58.62542	-1.08967	0.2782
LR	-49.8562	48.71692	-1.02339	0.3083
LM2	1460.381	1337.364	1.091985	0.2772
SMCIJPG	0.119699	0.030619	3.909328	0.0002
SMCI(-1)	0.805799	0.048755	16.52766	0
R-squared	0.924477	Mean dependent var		10462.42
Adjusted R-squared	0.921135	S.D. dependent var		1459.294
S.E. of regression	409.8114	Akaike info criterion		14.91838
Sum squared resid	18977825	Schwarz criterion		15.0585
Log likelihood	-881.643	F-statistic		276.6469
Durbin-Watson stat	1.664115	Prob(F-statistic)		0

Source: processed data

Based on the coefficient of SMCI (-1), the coefficient of adjustment equals to 0.194201 (1-0.805799). This coefficient means that 19.4201 percent of the discrepancy between the actual SMCI and the desired SMCI will be eliminated within a month. Based on the t-test, regression results also indicate that Japanese SMCI is the only significant variable that influences US's SMCI, while other variables do not. In the short term the increase of 1 point of Japanese SMCI will raise US' SMCI by 0.1196. In a simultaneous manner, inflation, lending rate, broad money, Japanese SMCI, and lag of SMCI have a significant effect on the US' SMCI. These five variables form SMCI variation of 92.47%, while the 17.53% is determined by other variables.

The US's estimation, afterward, is tested by Jarque-Bera normality test, Breusch-Godfrey Correlation LM autocorrelation test, Ramsey Reset linearity test, and White No Cross Term homoskedasticity test. The tests show that the estimation is free from specification error, autocorrelation, hetereoskedasticity, and multicollinearity.However, that the estimation has not passed normality test is probably because of the limitation of observation. It is believed that the series will be distributed normally if the number of observation increases by Central Limit Theorem (Gujarati, 2003:890).

Time Series Model for Australia

Econometric model that is used to estimate the behavior of Stock Market Composite Index in Australia is:

$$SMCI_{AUS} = f(Infl_{AUS}, LR_{AUS}, LogM2_{AUS}, SMCI_{AUS}(-1), SMCAS, SMCJPG)$$

Where:

- $SMCI_{AUS}$= Australian stock market composite index
- $Infl_{AUS}$= Australian inflation
- LR_{AUS} = Australian lending rate
- Log $(M2)_{AUS}$ = Australian broad money in logarithm
- $SMCI(-1)_{AUS}$ = Lag of Australian stock market composite index
- SMCAS = US's stock market composite index
- SMCJPG = Japanese stock market composite index

The data processing results that use monthly data from 2000 to 2009 show the following conditions.

Table 12: Result of the Australia's Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1940.59	796.5252	-2.43631	0.0164
INFLATION	-82.3186	18.9918	-4.33443	0.0000
LR	-43.124	20.43531	-2.11027	0.0371
LM2	486.5617	186.2228	2.612793	0.0102
SMCIJPG	0.019756	0.00768	2.572429	0.0114
SMCIAS	0.092353	0.025016	3.691725	0.0003
SMCI(-1)	0.800521	0.037572	21.30631	0.0000
R-squared	0.982487	Mean dependent var		4113.309
Adjusted R-squared	0.981549	S.D. dependent var		1081.008
S.E. of regression	146.8382	Akaike info criterion		12.87356
Sum squared resid	2414882	Schwarz criterion		13.03704
Log likelihood	-758.977	F-statistic		1047.22
Durbin-Watson stat	1.373476	Prob(F-statistic)		0

Source: processed data

Based on the coefficient of SMCI (-1), the coefficient of adjustment equals to 0.199479 (1-0.800521). This coefficient means that 19.9479 percent of the discrepancy between the actual SMCI and the desired SMCI will be eliminated within a month. Based on the t-test, regression results also indicate that inflation, lending rate, broad money, lag of SMCI, Japanese SMCI, and US's SMCI affect Australian SMCI significantly. The six variables figure 98.24% of SMCI variation, while 1.76% is determined by other variables.

In the short run, an increase of inflation by 1% will reduce the Australian SMCI by 82.31 points, while the increase in lending rate by 1% will reduce the Australian SMCI by 43.12 points. In the short run, an increase in broad money of 1% will raise the Australian SMCI to 486.56 points. Increases in United States' SMCI and Japanese SMCI also increase the Australian SMCI. The result of processed data shows that the effect of the rising United States' SMCI is much greater than the Japanese SMCI. It can be concluded that the Australian stock market is more affected by stock market conditions in the Unietd States compared to Japan.

The Australia's estimation, afterward, is tested by Jarque-Bera normality test, Breusch-Godfrey Correlation LM autocorrelation test, Ramsey Reset linearity test, and White No Cross Term homoskedasticity test. The tests show that the estimation is free from specification error, autocorrelation, hetereoskedasticity, and multicollinearity.However, that the estimation has not passed normality test is probably because of the limitation of observation.