Chapter 8

ROLE OF PAYMENT AND SETTLEMENT SYSTEMS IN MONETARY POLICY AND FINANCIAL STABILITY FOR THE PHILIPPINES

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1. Introduction

Payment systems are essential to the effective functioning of financial systems worldwide. They provide the channels through which funds are transferred among banks and other institutions to discharge payment obligations arising from economic and financial transactions across the entire economy. An efficient, secure and reliable payment system reduces the cost of exchanging goods and services. It is an essential tool for the effective implementation of monetary policy and the smooth functioning of money and capital markets. In contrast, a payment system that is not efficient, secure and reliable can adversely affect the financial system and the efficient transmission of monetary policy, and that it can, in turn, contribute to a systemic crisis. It is this key role played by payment and settlement systems (PSS) in the smooth functioning of an economy in general and its financial and monetary system in particular that gives the central bank (CB) a strong incentive for ensuring that an effective, reliable and secure payment and settlement system is in place.

Central banks have a strong interest in promoting and improving safety and efficiency in payments systems as part of their overall concern with financial and monetary stability. For one, the payments system is important for the smooth functioning and integration of financial markets. It can affect the speed, financial risk, reliability, and cost of domestic and international transactions. As Guitián (1998) observed, the payment system can act as a conduit through which financial and non-financial firms and other agents affect overall financial system stability. The payments system also affects the transmission process in monetary

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management, the pace of financial deepening, and the efficiency of financial intermediation. Consequently, monetary authorities have typically been active in promoting sound and efficient payments systems and in seeking the means to reduce related systemic risks.

In the Philippines, the settlement infrastructure has evolved and transformed from a purely physical settlement structure to a more modern electronic process. The Bangko Sentral ng Pilipinas (BSP), fully cognizant of its role in establishing facilities for payment services as mandated under Section 102 of the New Central Bank Act, 1993, or the BSP Charter (Republic Act No. 7653) and the importance of a safe and efficient payments system to financial stability, developed a real time gross settlement system (RTGS) known as the Philippine Payments and Settlements System *(PhilPaSS)* on 12 December 2002. The *PhilPaSS* is an automated facility that provides online, real time uninterruptible settlement of high-value payment transactions between banks through the Demand Deposit Accounts (DDA) of banks maintained with the BSP. As a gross settlement system, the *PhilPaSS* processes and settles fund transfer instructions individually, without netting debits against credits. As a real time settlement system, it effects final settlement continuously rather than periodically at pre-specified times provided that a sending bank has a sufficient balance in its DDA.

Since its implementation, the *PhilPaSS* has evidently minimised the settlement, operational and other risks related to high-value and critical interbank payments by providing a safer and cost-efficient channel for the delivery of funds to intended counterparty-accounts maintained with the BSP. However, the changing contours of the global financial environment have important implications for the payment system and financial stability because they provide new sources of risk and challenges for regulators like the BSP. In particular, developments in technology and the financial innovation they allow, the increasing size and complexity of financial systems, and the globalisation of financial markets are reshaping the landscape in which the payment and settlement system operates.

This paper is generally aimed at identifying the key challenges and issues affecting the efficiency of the payment and settlement system in the Philippines and assessing its implications or influence on domestic monetary and financial stability, and economic performance. The paper starts with this introduction, followed by a section discussing the BSP policy framework in relation to monetary stability, financial stability and an efficient payment system. The third section gives a description of the payment system infrastructure in the Philippines and talks about the system's influence on domestic monetary and financial stability, and economic performance. The paper then also briefly identifies the key issues and challenges affecting the efficiency and reliability of the country's PSS. The next section provides an assessment of the efficiency and reliability of the country's current PSS infrastructure. Lastly, the paper takes stock of the policy implications of the developments facing the Philippine payments system today.

2. BSP Policy Framework

Jenkinson (2007) noted that the central banks' two core functions – monetary, or more specifically, price stability, and financial stability – emerged from their earlier role in providing the ultimate settlement asset in the payment system. From being the provider of the ultimate settlement asset, it became critical for the central bank to maintain monetary stability. This is because it is the central bank's liquid liabilities that are the instruments in which the bulk of domestic payment obligations are legally finally settled. For central bank money to be considered safe so that all participants remain confident about its acceptability as a settlement asset, the promotion of monetary stability became critical.

Central banks also have a natural interest in promoting financial stability. Specifically, it is the central bank's role to ensure that the banking sector is able to meet the public's demand for liquidity. Allowing a bank run to occur when a bank is inherently solvent is not in the interest of financial stability as this can lead to a system-wide crisis that can weaken all banks, and possibly even the central bank itself. Subsequently, the central bank has an integral role in guaranteeing the safety, soundness, efficiency and fairness of the payment system. As former US Federal Reserve Chairman Alan Greenspan observed in his book, "The Age of Turbulence," that if someone wanted to cripple the US economy then they would only have to "…take out the payment system. Banks would then be forced to fall back on inefficient physical transfers of money…the level of economic activity across the country could drop like a rock."

On account of the central banks' strong interest in financial stability as well as the maintenance of the public's confidence in the domestic currency and the smooth functioning of markets for the implementation of monetary policy, the central bank needs to take an active interest in the design, development and smooth functioning of the payment system. As Listfield and Negret (1994) noted, CBs have "a legitimate and important role in guaranteeing the safety, soundness, efficiency and fairness of the payment system."

In accordance with the interrelated role of a CB in monetary and financial stability and maintenance of a stable payment system, the BSP's policy framework revolves around these three main pillars. As prescribed in the BSP charter, the BSP pursues the following primary activities: maintaining price stability through the conduct of prudent monetary policy; promoting financial stability through effective banking supervisions and regulation; and ensuring the safety, soundness and efficiency of the payment and settlement system. These three pillars serve as guidepost to ensure that the BSP appropriately and quickly responds to emerging challenges to price and financial stability.

2.1 Monetary Stability

The BSP, as the Philippine's central monetary authority, has the primary objective to "maintain price stability conducive to a balanced and sustainable growth of the economy." This is spelled out in Section 3 of the New Central Bank Act of 1993.

Achieving price stability is a universal goal shared by *CB*s and monetary authorities all over the world. Price stability, or its equivalent, stability in the domestic purchasing power of the currency, appears as the dominant or one of the dominant legal objectives in 33 of 45 *CB*s (Ortiz, 2009). This does not mean, however, that the BSP pursues price stability to the exclusion of other objectives. Although the price stability objective is the BSP's main priority, other economic goals—such as achieving broadbased, sustainable economic growth—are given consideration in policy decision-making. Thus, the BSP coordinates with other government agencies to ensure that its policies are part of a consistent and coherent overall policy framework.

Price stability refers to the condition of low and stable inflation. By keeping price stable, the BSP helps ensure strong and sustainable economic growth and better living standards. Monetary policy refers to the actions or measures taken by the BSP to regulate the supply of money in the economy to achieve price stability.

The BSP has a number of monetary policy instruments at its disposal to influence the timing, cost and availability of money and credit, as well as other financial factors, for the purpose of stabilising the price level. Of the monetary policy tools at its disposal, the main policy levers are the policy interest rates, which are the overnight repurchase (lending) rate (RP) and the overnight reverse repurchase (borrowing) rate (RRP). In addition, to increase or reduce liquidity in the financial system, the BSP also uses open market operations, accepts fixed-term deposits, offers standing facilities such as the rediscounting facility, and requires banking institutions to hold reserves on deposits and deposit substitutes.

In terms of its approach to monetary policy, the BSP followed the monetary aggregate targeting approach in the past. This approach is based on the assumption that there is a stable and predictable relationship between money on the one hand, and output and inflation on the other hand. In effect, under the monetary targeting framework, the BSP controls inflation indirectly by targeting money supply. This approach was modified beginning in the second semester of 1995 under the modified form of monetary targeting to put greater emphasis on price stability instead of rigidly observing the targets set for monetary aggregates. On 24 January 2000, the BSP's policy-making body, the Monetary Board (MB), approved in principle the shift to inflation targeting as a framework for conducting monetary policy. This was formally adopted in January 2002.

Inflation targeting focuses mainly on achieving price stability as the ultimate objective of monetary policy. Under this approach, the BSP commits to keeping inflation at a pre-announced average rate that the BSP promises to achieve over a given time period. The BSP then compares the actual headline inflation against its inflation forecasts. It uses the various monetary policy instruments at its disposal to achieve the inflation target. This involves mainly adjustments in the key policy interest rates of the BSP and the use of other instruments, including rediscounting and reserve requirement. The *CB* also provides regular reports explaining its policy decisions and containing its assessment of the inflation environment and outlook. If the *CB* fails to meet the inflation target, it is required to explain to the public why the target was not achieved and to come up with measures on how to steer inflation towards the target level.

The inflation targets have been set at 4.5% with a tolerance interval of +1.0 percentage point for 2010 and 4.0% with a tolerance interval of +1.0 percentage point for 2011. In July 2010, the MB announced the BSP's shift to a fixed inflation target for the medium term of 4 ± 1% for 2012-2014. The shift to a fixed medium-term inflation target from a variable annual inflation target was approved by the Development Budget Coordination Committee (DBCC) on 9 July 2010, under DBCC Resolution No. 2010-3.

During the recent global financial crisis, the BSP maintained a prudent monetary policy stance to keep inflation in check and allow market interest rates to decline, hence providing a conducive environment for businesses to expand. As the impact of the global financial crisis began to be felt and the Philippine economic growth began to slow down, the sustained decline in the inflation rate gave the BSP scope to adopt an appropriately accommodative monetary policy stance. Among the measures implemented accordingly include:

- Liquidity-easing measures in 2008 and 2009, including the reduction in bank reserve requirements by two percentage points, opening of the US dollar repurchase window, increase in the peso rediscounting budget to P60 billion, and provision of greater accessibility to these facilities to banking institutions.

- Reduction in the BSP's policy rates by a total of 200 basis points from December 2008 to July 2009 to provide liquidity for the orderly functioning of the financial markets and help support the economy against possible fragilities in the operating environment.

In 2010, the relatively benign inflation environment afforded the BSP the flexibility to keep policy rates steady during the year. At the same time, with economic recovery underway and financial markets starting to normalise, the BSP gradually unwound the liquidity enhancing measures it implemented in 2008-2009 to ensure that ample liquidity was available during the global financial crisis. The peso rediscount rate was aligned with the overnight RRP rate while the peso rediscounting budget was lowered from P60 billion to the pre-crisis level of P20 billion. Requirements for the availment of the rediscounting facility were likewise brought back to their pre-crisis terms.

In early 2011, the BSP continued to unwind from liquidity enhancing measures in the preceding years to help forestall inflation pressures as unfavourable weather conditions and protracted tensions in the Middle East and North Africa (MENA) contributed to mounting pressures on food and oil prices. In particular, the policy rates were raised by total of 50 basis points from March – June 2011. The BSP also raised the reserve requirements by two percentage points as a preemptive move to help manage liquidity given the prospects of sustained foreign exchange inflows. Subsequently, the BSP found scope to maintain monetary policy settings, especially as downside risks to global growth intensified, dampening global growth.

Starting in 2012, the MB decided to hold eight monetary policy meetings a year to discuss and decide on the appropriate monetary policy stance of the BSP in order to keep inflation within the target. Based on the assessment of the macroeconomic environment and the price situation of commodities, the MB takes the necessary actions consistent with the chosen monetary policy stance. The MB receives recommendations from the Advisory Committee (AC), a technical body which meets regularly a few days prior to each MB monetary policy meeting. The meetings of the AC are intended to serve as a forum for in-depth, comprehensive, broad-ranging and balanced assessment of monetary conditions, economic outlook, inflationary expectations, and the forecast inflation path. The AC members agree by majority vote on a set of recommendations that are then submitted to the MB.

In the first seven months of 2012, amid continued benign inflation and the modest pace of growth of domestic demand, reflecting mainly the impact of weaker external demand, the MB cut policy rates by a total of 75 basis points. Moreover, the MB decided to approve three operational adjustments in the BSP's reserve requirement policy during its meeting on 2 February 2012 to increase the effectiveness of reserve requirement as a monetary policy tool, simplify its implementation, and improve the monitoring of banks' compliance. These adjustments, that were made effective April 2012, include:

- The unification of the existing statutory reserve requirement and liquidity reserve requirement into a single set of reserve requirement;
- The non-remuneration of the unified reserve requirement;
- The exclusion of vault cash (for banks) and demand deposits (for non-bank financial institutions with quasi-banking functions) as eligible forms of reserve requirement compliance;
- The reduction in the reserve requirement ratio by three (3) percentage points to 18% from 21% to offset the impact on the intermediation costs of banks.

See Table 1 for changes in the BSP policy rates[3] and the reserve requirement ratio from 2001 to 2012.

2.2 Financial Stability

Alongside its mandate to support price stability, the BSP has also been tasked with maintaining financial stability. While the BSP charter is not explicit on its financial stability objective, the BSP has pursued the promotion of financial stability through its mandate to supervise banks and quasi-banks, their subsidiaries and affiliates, and the non-bank financial institutions that the BSP is mandated to supervise under special laws. It should be noted, however, that the BSP shares oversight responsibility over the Philippine financial systems with other domestic financial regulators such as the Securities and Exchange Commission (SEC) for the non-bank sector and capital market, the Insurance Commission (IC) for the insurance industry, and the Cooperative Development Authority (CDA) for the

3. Specifically, the overnight RRP rate.

cooperative industry. However, since the Philippine financial system is largely bank-based rather than market-based, the onus for the promotion of financial system stability rests largely with the BSP.

The BSP defines financial stability as pertaining to the financial system's efficiency to redistribute and manage risks and carry out payments settlement, while remaining responsive to the demands and challenges faced by the economy. This has been pursued through the issuance of prudential rules and adoption of applicable internationally accepted standards and best practices cognizant of the domestic conditions. The BSP also appropriately monitors and assesses the operational soundness of all banks and other financial institutions under its supervision.

Since the 1997 Asian financial crisis, the BSP has initiatives to expedite the clearing out of non-performing assets and strengthening of bank balance sheets. Furthermore, the BSP pursued broad-based reforms geared toward maintaining a strong banking system, including: (a) aligning domestic prudential standards with international benchmarks and best practices, such as Basel Committee recommendations on supervisory practices and capital adequacy, International Accounting Standards (IAS) and International Financial Standards (IFRS) for the proper accounting and disclosure of financial transactions, and the Organisation for Economic Cooperation and Development (OECD) principles on good corporate governance; (b) implementing a consolidated and risk-based approach to examination, a shift from the traditional checklist approach; and (c) complementing the on-site examinations of banks with off-site surveillance functions[4] through the introduction of new supervisory reports (Financial Reporting Package and Capital Adequacy Ratio Report) and the review of other reports periodically submitted to the BSP. Hence, the BSP has issued rules and guidance aimed at improving risk management and corporate governance of banks and strengthened its own capacity to monitor and intervene.[5] The BSP issued new capital adequacy guidelines in line with BASEL II and plans to adopt BASEL III in 2014.

The BSP has also put in place macro-prudential measures that can help guard against a credit boom and excessive leveraging. These include, among others:

- A ceiling on the ratio of UKbs' and Kbs' loans to the real estate sector set at 20% of the total loan portfolio;

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4. Central Point of Contact
5. IMF Report on the Philippine Financial Sector Assessment Programme, April 2010

- A loan-to-value (LTV) ratio ceiling for real estate loans at 70% of the appraised value of the real estate collateral for commercial banks;

- A minimum leverage ratio of 5% as a trigger for Prompt Corrective Action (PCA) if not complied; and

- A 100% asset cover for their foreign exchange liabilities and 30% liquidity cover to limit the build-up in system-wide financial risk.

Supervisory coordination has also been strengthened by the creation in July 2004 of the Financial Sector Forum (FSF), composed of the BSP, the SEC, the IC and the Philippine Deposit Insurance Corporation (PDIC). This resulted in the improved exchange of information among the different regulatory agencies and coordinated the supervision and regulation of the financial system, particularly with the establishment of formal information-sharing agreements with five foreign supervisors.

However, unlike price stability, financial stability is not easy to define or measure given the interdependence and the complex interactions of different elements of the financial system among themselves and with the real economy. Cognizant of this, the BSP uses various surveillance and analytical tools to measure the safety and soundness of banks and other institutions under the BSP supervision.

- To assess bank's individual performance and supplement its risk-based approach to examination, the BSP has adopted the use of the following: the Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity to Market Risks (CAMELS) ratings system; the Risk Assessment System (RAS); the Risk Management, Operational Control, Compliance and Asset Quality (ROCA) rating system; the Strength of Support Assessment (SOSA) rating system; and, the Trust Rating System (TRS).

- To address both systemic and idiosyncratic risks confronting the financial system, the BSP has developed early warning systems (EWS) for the macroeconomy, which focuses on currency crisis contagion effects, and an EWS for bank solvency.

- The BSP also performs periodic stress tests on the absorptive capacity of bank capital using a modified IMF stress tester 2.0.

Also in relation to its financial stability role, the BSP began to draft a financial stability report (FSR) in 2006. Initially, the exercise rested solely with the Department of Economic Research (DER). However, over time, as interest in financial stability continued to gain ground, the exercise has been formalised with the establishment of the BSP Financial Stability Committee (FSC) in September 2010. The high-level FSC is tasked to take stock of potential system-wide risks in the Philippine financial system. Technical work is underway on the measures and metrics needed to monitor and mitigate system-wide risks. It has also been placed in charge of the FSR which, to date, remains distributed only internally.

2.3 Efficient PSS

Systemically important payment systems can transmit economic shocks across markets and international borders. Hence, poorly designed or operated payment systems can create economic disturbances, while well-managed systems help minimise these disturbances.

The BSP, fully cognizant of its role in establishing facilities for payment services as mandated under Section 102 of R.A. No. 7653 and the importance of a safe and efficient payment system to financial stability, also takes the lead in maintaining a safe, sound and efficient payments and settlements system for the country. As the country's central monetary authority that has the exclusive authority to issue the currency, the BSP performs a pivotal role in the payments and settlements system in the Philippines by: (a) providing/operating the payment facility for final settlement to financial institutions – i.e. through the real time gross settlement system known as the *PhilPaSS*; (b) issuing policy related to payments and settlements; (c) providing credit facilities for banks as a lender of last resort; (d) overseeing the payments and settlements system; and (e) initiating studies/systems reform for the improvement and maturity of payment systems in accordance with the global standards. Moreover, the BSP constantly strives to ensure that the payment infrastructure meets the highest standards for safety soundness and operational resilience.

The BSP's Payments and Settlements Office (PSO), under the direct supervision of the Deputy Governor of the BSP's Resource Management Sector, performs the operator function as it is responsible for the operation and maintenance of the *PhilPaSS* and its critical components. The BSP's Payments and Settlements Steering Committee (PSSC) recommends policy directions and formulates strategy, standards, rules and regulations. Meanwhile, the Core Information Technology Supervision Group (CITSG) of the BSP's Supervision and Examination Sector has oversight on all payments and settlements system of banks and industry consortia.

As operator of the payment systems, the PSO ensures that the payment systems remain safe and efficient and exerts all efforts so that time-critical payments are completed as expected in order to facilitate and enhance economic processes, manage risks, and absorb shocks in order to promote financial stability. The BSP also provides for, maintains and upgrades the system hardware and software to ensure uninterrupted operations, that adequate Continuity of Business (COB) plans are in place, and that adequate back-up files are available for the continuous and efficient operation of the system.

To ensure that the *PhilPaSS* efficiently processes large-value transactions, facilitates the flow of payments among banks, and reduces losses that could arise associated with the payments and settlements process, the following refinements were put in place:

- Implemented the delivery-versus-payment (DvP) system for transactions on secondary trading of government securities in 2004 and the Enhanced Delivery-versus-Payment (e-DvP) system through the Philippine Dealing System (PDS) Settlement Highway in 2008;

- Enhanced the Intraday Liquidity Facility (ILF) system;

- Interconnected the PDS Settlement Highway and the BSP *PhilPaSS*;

- Exerted continuous effort to automate other transactions affecting the demand deposit accounts;

- Connected BancNet and MegaLink to the *PhilPaSS*; and

- Rationalised transaction fees charged to participants to make the fees more reasonable and equitable from P100 per transaction to an amount ranging between P5.00 to P400.00 depending on the value of transaction. However, transactions valued at P100.00 and below are free of charge.

Since payment systems affect the daily demand for liquidity of banks/financial institutions and may therefore affect the level of money market interest rates, the BSP, as a lender of last resort, provides liquidity tools to the *PhilPaSS* participants. Aside from the overnight repos that banks may avail with the BSP in case of liquidity problems, the BSP also established liquidity facilities intended for banks experiencing unexpected temporary liquidity shortages so as to ensure continuous settlement of banks financial transaction, prevent chain defaults and achieve financial stability. The liquidity support facilities provided by the BSP include:

- ILF – a fully collateralised facility established to maintain the smooth and efficient operation of the payments system in order to avoid interbank payments gridlock in the settlement process.

- Overdraft Credit Line (OCL) – a short term credit facility intended to assist bank experiencing unexpected or higher than usual volume of inward cheque transactions. The governing policies and procedures are provided under BSP Circular 681 in order to provide additional liquidity for banks encountering liquidity problems due to cheque clearing losses as well as protect the BSP against settlement exposures.

As overseer of the payment systems, the BSP also relies on policies, circulars, rules and regulations, as well as moral suasion to conduct review and evaluation of systematically important payment systems operating outside of the BSP. Pending the enactment of the Payments Act, the oversight of payment system outside of the BSP is currently confined only to the following:

- The PDS Group due to its quasi-banking licence to provide electronic depository, registry and custody services and the linkage of the PDS Settlement Highway to the *PhilPaSS*;

- BancNet, Inc. and MegaLink Inc., since both are affiliates of banks and outsourse service providers for ATM switch networks;

- Smart Money by Smart Telco, since this is an outsourcing service provided by Smart to its partner banks (i.e. BDO, Chinabank and Landbank), it allows the BSP to have access to the operations of Smart Money; and

- Globe G-Cash operation under Circular 649 dated 9 March 2009.

Lastly, through the role it plays in the PSS, the BSP promotes financial stability by exerting all efforts to ensure that time-critical payments are completed as expected especially of financial/interbank market transactions in order to facilitate and enhance economic processes, manage risks, and absorb shocks. Likewise, the payments system plays a critical role in the implementation of the BSP's monetary policy through the settlement of domestic money market transactions, e.g. siphoning off excess liquidity in the system and ensuring that monetary policy changes get transmitted to the markets faster. The BSP, through the payments system, is also able to monitor the behaviour of the interbank money market and is able to effectively forecast liquidity conditions in the economy. Given a reliable and efficient payment system with real time or same-day settlement, the BSP is able to enhance the effectiveness of monetary policy tools used.

3. Philippine Payment and Settlement Infrastructure

A payment system is defined as an arrangement that allows users to transfer "money". In simple terms, "money" is regarded as cash (i.e., notes and coins issued by the government or central bank) and claims against credit institutions in the form of deposits. The use of bank deposits to make payments has become an important medium in most developed countries and to make a payment, the payer must issue an instruction in the form of a paper-based instrument (e.g. a cheque) or an electronic instruction (e.g. using a credit or plastic card).

The effectiveness of payment activities is fully dependent on the arrangements that facilitate fund transfers between members and it is these arrangements that constitute a "payment system". Payment systems consist therefore of networks that link the members with existing rules and procedures for the of use of this infrastructure. A payment system normally requires the following:

- Standard methods of transmitting payment messages between members;
- Agreed means of settling claims within the members/participants (normally through the deposits of the members/participants with the central bank); and
- Common operating procedures and rules (admission, fees, operating hours).

3.1 PSS Participants

3.1.1 Bangko Sentral ng Pilipinas

The BSP's role in the PSS is already discussed above.

3.1.2 Banks, Non-banks with Quasi Banking Function, and Other Financial Institutions

In the Philippines, the majority of payment service providers are banks. Though there are few non-bank payment service providers, they are not independent from the banks. Under the BSP charter, all banks and non-banks with quasi banking function (NBQBs), including their subsidiaries and affiliates engaged in related activities are supervised and regulated by the BSP.

As of end-June 2012, there were 37 universal and commercial banks, with 4,928 branches. Among such commercial banks, 18 were privately domestic banks, 3 were government-owned banks, and 16 were foreign banks and their subsidiaries. Almost all commercial banks issue their own Automated Teller Machines (ATM) cards.

There are four types of thrift banks operating in the Philippines. These are the Savings and Mortgage Banks (SMBs), Private Development Banks (PDBs) and Stock Savings and Loan Associations (SSLAs) and microfinance-thrift banks. As of end-June 2012, there were 69 thrift banks, with 1,453 branch offices.

For rural banks, as of end-June 2012, there are 606 rural and cooperative banks with 2,114 branches.

The existing specialised government banks are the Development Bank of the Philippines (DBP), the Land Bank of the Philippines (LBP), and Al-Amanah Islamic Investment Bank of the Philippines (AAIIB).

In addition to the foregoing banking institutions, as of end-June 2012, there were 15 non-banks financial intermediaries performing quasi-banking functions with 62 branches. Those non-banks without quasi-banking functions consist of 71 non-stock savings and loan associations with 124 branches, 6,463 pawnshops with 10,665 branches – all under the regulation/supervision of the BSP.

3.1.3 Other Bodies (PCHC, ATM Consortiums, PDS, Credit Card Companies, Other Self-Regulating Organisations (SROs) and Government Agencies)

3.1.3.1 Philippine Clearing House Corporation (PCHC)

The PCHC, incorporated in July 1977, is a private corporation co-owned by all commercial banks enlisted as members of the Bankers Association of the

Philippines (BAP). With the Clearing House Rules and Regulations approved and subsequently the arbitration mechanisms in place, the PCHC commenced its live operations on 06 June 1980 and stood proud being the first automated Magnetic Ink Character Recognition (MICR) Cheque Clearing House in Southeast Asia. Its main purpose was to automate the cheque clearing system through the medium of MICR-encoded cheques.

The PCHC provides cheque clearing services covering sixty nine (69) geographical regions – thirty (35) Greater Manila/Integrated Regions and thirty nine (34) Regional "local" exchange centres, processing a daily average of about 700,000 clearing items from more than 6,000 participating bank branches nationwide. The clearing period for Inter-Regional cheques is 4 days while Greater Manila cheques is 3 days.

3.1.3.2 ATM Consortiums

There are 5 Automated Teller Machine (ATM) switch operators in the Philippines, namely: BancNet, ENCASH, ExpressNet, MegaLink and NATIONLINK. BancNet, ExpressNet and MegaLink are considered major players in the payment systems because of their customer reach. BancNet, ExpressNet and MegaLink are co-owned by the big commercial banks. Their services go beyond the traditional transactions that coursed through the ATM. Meanwhile, ENCASH and NATIONLINK are more geared towards reaching out to people in the rural areas who are not normally reached by the major ATM consortiums.

a) **BancNet** connects the ATM Consortium networks of more than 49 local banks. As a multi-channel payment gateway, BancNet enables its customers to transact at any ATM terminals anywhere, anytime, at point-of-sale (POS), the Internet or through mobile phones. BancNet is also the exclusive gateway of China UnionPay. BancNet has also forged an alliance with the global payment brand JCB International. BancNet serves 8 million members with over 4,000 ATMs and more than 10,000 POS terminals.

b) **ExpressNe**t connects the ATM networks of seven major banks in the Philippines. At present, ExpressNet has 3.5 million customers and has 2,213 ATMs operating nationwide.

c) **MegaLink** connects the ATM networks of 15 member banks in the Philippines with a more than 2,921 ATMs nationwide and 32,439[6] POS terminals.

To this date, this three major ATM networks are already interconnected with each other to enhance the services they provide to their clients.

d) **Electronic Network Cash Tellers, Inc. (ENCASH)** is an independent switch network that also provides ATM service to the Philippine countryside and a close competitor of ENCASH. As the first Independent ATM deployer, ENCASH provides privately-owned ATMs to areas not deemed viable by commercial banks, allowing users in remote locations to conveniently access to their finances. Initially connecting the ATMs of five (5) rural banks in the Philippines, the ENCASH network eventually expanded to more than 101 member- rural banks and cooperatives with 220 ATMs deployed, and operations implemented Luzon, Visayas and Mindanao. ENCASH is a member of MegaLink which is interconnected with the other Philippine interbank networks, i.e., BancNet and ExpressNet. It is also the first network in the Philippines to fully adopt EMV technology on all its ATM cards, although the regular magnetic stripe cards remain an option for the network. ENCASH provides both rural and commercial bank ATM cardholders with the convenience of having access to ATMs in more locations all over the country.

e) **NATIONLINK**'s members consist mostly of savings banks, credit unions, rural banks, cooperatives and non-governmental organisations, and is largely concentrated in rural areas, where the reach of ATMs are more limited than in the cities. The network focuses heavily on the overseas Filipino worker (OFW) market.

The use of ATM networks enable their customers to transact at any ATM terminal anywhere, anytime, at point of sale, the internet or through mobile phones the following transactions: cash withdrawal, cash advance, account balance inquiry, bills payments, funds transfer, load fulfillment and purchases.

3.1.3.3 Philippine Dealing System

The Philippine Dealing System Holdings Corp ("PDS Group") is a private corporation tasked to reshape the architecture of the Philippine financial markets

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6. Source: MegaLink, figures as of end-December 2011.

to meet the needs of public investors while abiding with best international standards. The PDS Group has three operating subsidiaries: Philippine Dealing & Exchange Corp. (PDEx) - an entity that operates electronic trading platforms for securities; Philippine Depository & Trust Corp. (PDTC) - one that provides securities depository, registry and custody services, and Philippine Securities Settlement Corp. (PSSC) - the company that provides electronic settlement facilities with straight through process and delivery vs. payment capabilities. The PDS Group manages or operates electronic trading and settlement platforms in the Philippine's Debt Securities and Foreign Exchange markets, and performs key post-settlement functions for the Debt and Equity markets through its electronic Depository, Registry and Custody services. The large value of financial transactions coursing through the Group's collective platforms make these important to the Philippine financial system. The Group's shareholders are all institutions that are established leaders across the sectors of finance, manufacturing and technology. The Group actively interacts with financial market regulators and participants in its effort to build the venue where investors may have a wider array of financial instruments and issuers have an efficient medium to raise capital for their company's requirements.

3.1.3.4 Bureau of Treasury

With the transfer of the fiscal agency functions from the BSP to the Department of Finance (DoF), the Bureau of Treasury (BTr) has taken the function of booking government securities through the Registry of Scripless Securities (RoSS) effective November 4, 1996. RoSS is the official registry of government securities maintained and administered by the BTr.

3.1.3.5 Philippine Postal Corporation

Under the Republic Act No. 7354, the Philippine Postal Corporation (PPC) is authorised to issue domestic and international money orders. Any mailing patron can buy money order cheques from their local post office; this may be drawn payable to another person or to the person making such application, if he desires so. Money order cheques are then transmitted to the beneficiary either through registered letter or speedy airmail. Upon receipt, domestic money orders may be presented for payment at the designated paying office, issuing office or commercial bank within 90 days from date of issue. For services provided, fees are collected by the issuing post office based on the aggregate or total amount applied for.

3.1.3.6 Securities and Exchange Commission

The SEC, established on 26 Oct 1936 by virtue of the Commonwealth Act No. 83 or the Securities Act, was prompted by the need to safeguard public interest in view of the local stock market boom at that time. Its major functions included registration of securities, analysis of every registered security, evaluation of the financial condition and operations of applicants for security issuance, screening of applications for broker's or dealer's licence and supervision of stock and bond brokers as well as the stock exchanges.

3.1.3.7 Privately-owned Payment Service Providers

Since all large-value payments are finally settled in the DDAs of banks in the BSP and this type of payment is normally used by banks, there is no existing large-value payment system (LVPS) other than the *PhilPaSS*. Retail payment systems (RPS), on the other hand, are owned by private payment service providers, which are incidentally owned by the banks themselves through a separate corporation. Though the majority of the RPS in the Philippines are co-owned by the banks, there are few systems which are owned by non-banking institutions. These retail payment services are registered and supervised under the jurisdiction of the SEC.

3.2 Payment Instruments

Payment instruments in the Philippines may be classified into cash or non-cash. Non-cash payment instruments may be sub-classified generically into cheque payments, direct fund transfers and card payments.

3.2.1 Cash

By law, the BSP has the sole right and authority to issue currency in the Philippines. At present, currency notes are issued in denominations of 1000, 500, 100, 50 and 20 pesos; and, coins in 25, 10, 5 and 1 cent(s). Although in recent years there has been an increasing tendency to use alternative payment methods, a large portion of payments to individuals is still made in the form of cash, especially in the areas of retail trade, land transportation and personal services. This explains the wide increase of cash in circulation from ₱194.7 billion in 2001 to ₱484.0 billion as of end-2011 or 148.6% in 10 years.

3.2.2 Non-cash

There are six main non-cash payment instruments/media that are currently used in the Philippines, as follows:

3.2.2.1 Cheques

Cheques are commonly used by consumers for bills and small value payments. For businesses, cheques are utilised as payment for purchases of goods and services. In the Philippines, banks exchange cheques through Electronic Cheque Clearing System (ECCS) operated by the PCHC for processing and consolidation. The cheque clearing results are then electronically transmitted to the BSP for the corresponding settlement in the banks' respective DDAs.

The volume of cheques cleared in the PCHC increased by 2.15% from 169.952 million in 2005 to 178.60 million in 2011. The increase in volume indicates that cheque is still the preferred mode of payment indicative of consumers' confidence and trust in such payment medium in spite of the availability of electronic payment instruments.

3.2.2.2 Direct Debit and Credit Transfers

The direct debit and credit transfers are used mainly for the settlement of large value payments for small volume transactions such as Interbank Call Loan (IBCL) lending/borrowing, ₱/USD trades/purchases as well as Government Securities trades and purchases. These direct debit and credit transactions covering large value payments settle through the country's real time gross settlement system called the *PhilPaSS*.

3.2.2.3 Credit and Debit Cards

There are at least 12 major credit cards issued in the Philippines. All credit cards in the Philippines have affiliations with major international credit cards, such as Visa, MasterCard, Diners and JCB. Some domestic and international cards have access to the banks' ATM network in the Philippines. Several stores/ retailers issue cards for use in their own chains.

Credit cards in the Philippines are usually issued by the banks which have formed part of their marketing strategy to increase the number of their customer base and improve income that can be generated from retail consumer business. Credit card use is no longer limited to the ordinary purchase of goods and services by the cardholders. Banks have expanded its usage for other purposes such as cash advance, easy installment plan for purchases, link-up to savings and chequeing accounts of cardholders, etc., to attract more customers. On the other hand, most commercial banks and some thrift banks issue debit cards. Debit cards enable the holder to have his purchases directly charged to funds on his account at a deposit-taking institution (may sometimes be combined with another function, e.g. that of a cash card or cheque guarantee card).

3.2.2.4 ATM Cards

The ATM card is a commonly used card issued normally by banks and can be used for account inquiry/information, deposits, withdrawals, bills payment, and interbank funds transfer coursed through the network switches, i.e., BancNet, MegaLink, ExpressNet, NATIONLINK and ENCASH. Some of these switches have developed their own POS systems to allow their cardholders to pay for their purchases electronically through their accounts for credit to the retailer's account.

3.2.2.5 E-money or Stored Value Cards

E-money is a kind of value stored electronically in a device such as a chip card or a hard drive in a personal computer. The BSP classifies e-money further as monetary value stored electronically in an instrument or device, which can be withdrawn in cash and, if issued by a bank, shall not be considered as deposit. The most popular forms of e-money in the Philippines are SMART Money and Globe's G-Cash.

Stored Value Cards are prepaid cards in which the record of funds can be increased as well as decreased. It is also called an electronic purse. In the Philippines, these cards are commonly single use instruments and non-reusable. Typical examples of single use cards are those issued by the Light Rail Transit Authority (LRTA), Metro Rail Transit Authority (MRTA) and major telecommunications companies. A bank also pioneered the use of multi-purpose reloadable e-Cash that can be used for cash withdrawals through the bank's counter or automated teller machines or payment of bills to the accredited establishment of the e-Cash issuer.

3.2.2.6 Electronic Banking

Banking institutions in the Philippines provide electronic banking services which includes telephone banking, desktop banking and mobile banking. Desktop banking and telephone banking are common electronic distribution channels.

Most banking institutions also offer services through their internet banking facilities such as account balance summary, request for account statements, funds transfer between own accounts or third-party accounts, bills payments, cheque book request services and even mobile banking registration.

Likewise, most users of the electronic bill payment system that facilitates customers to pay their various utility bills (e.g. electricity, telephone and water bills, etc.) electronically are coursed through the various ATM network facilities of banks. However, credit card and direct debit are still the preferred method of payment.

3.3 Philippine Payment System Landscape

The Philippine PSS began when banks and other financial institutions used the Enhanced Multi-transaction Interbank Payment System (MIPS2) for their interbank transaction. The MIPS2 was an electronic net clearing system operated by the BAP and the PCHC, in coordination with the BPS. Both counterparties in an interbank transaction under the MIPS2 had to input their transactions through the PCHC, which, in turn, verified and authenticated the transactions prior to electronic transmission to the BSP for settlement. The details of the transactions of banks/financial institutions were obtained by the participants through the reports from the MIPS2, while the balances of their demand deposits were being advised through an hourly electronic broadcast by the BSP Comptrollership Department.

However, the MIPS2 had some problems that hampered the speed of transactions between banks. First, the participant banks needed to wait for the fixed hourly broadcast from the BSP through cc:mail system in order to know the details of the transactions debited from and credited to their accounts and the available balances of their DDA. Second, the MIPS2 had limited operating hours between 10:00 a.m. and 4:00 p.m. daily.

Recognising the need for a system that would enable online, real-time settlement of interbank transactions and eliminate risk in the settlement process, the BSP, in collaboration with the BAP, the Chamber of Thrift Banks (CTB), the Rural Bankers Association of the Philippines (RBAP) and the Investment House Association of the Philippines (IHAP), formally launched on 12 December 2002 an RTGS known as the *PhilPaSS.*

Today, the landscape of Philippine Payment and Settlement System is composed of the following major systems:

3.3.1 Philippine Payments and Settlements System (PhilPaSS)

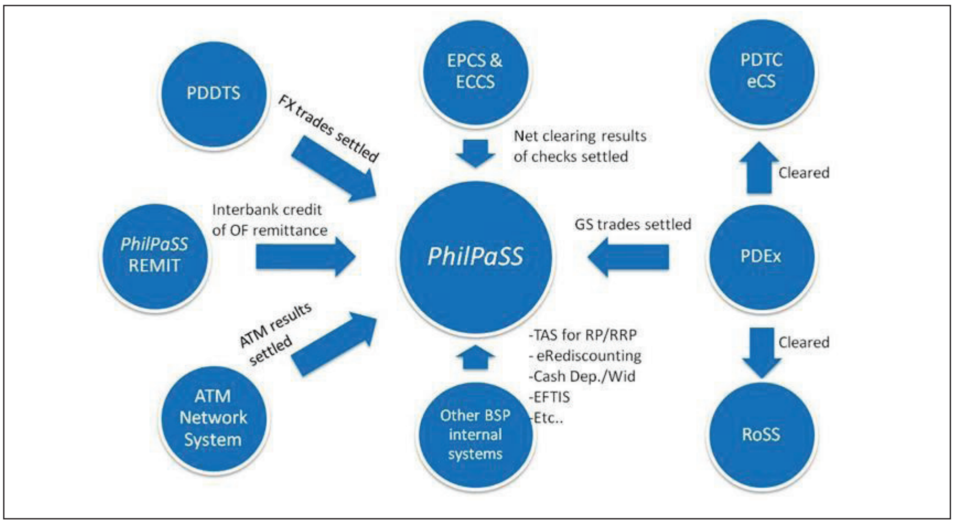
The *PhilPaSS* is a real time gross settlement system, owned and operated by the BSP that caters to the settlement of large value transactions of banks through their DDA maintained with the BSP. The system was implemented in 2002. In the *PhilPaSS,* all transactions are processed and settled on a real time basis through its Central Accounting System (CAS) which prompts the accounting and recording of the settlement instructions received from SWIFT (for Swift member banks) and Philippine Payment System – Front-End System (PPS-FES) (for non-swift), into the participants' DDA with the BSP. The CAS debits the account of the paying bank and credits the account of the receiving bank.

Commercial banks use the SWIFT-based network and message formats to transmit their financial transactions to the *PhilPaSS* for processing and settlement. The thrift/savings banks, financial institutions or NBQBs and rural banks use the PPS-FES which was developed by the BSP's Information Technology, Infrastructure and Operations Department (ITIOD) to enable them to transmit their financial transactions to their counterparties through the *PhilPaSS*-CAS.

In February 2012, the BSP implemented the use of Participant Browser (PB) for the *PhilPaSS* participants. The PB is a web-based facility that aims to improve the banks' mode of accessing the *PhilPaSS*. It is a state of the art browser that will enable the *PhilPaSS* participating banks to efficiently manage their respective DDA maintained with the BSP. The authorised users of the system will be capable of checking and verifying the status and details of incoming and outgoing interbank transactions. Users can also re-prioritise or cancel queued payments as well as generate reports reflecting the DDA transaction that has settled during the day based on the file formats available in the system. More importantly, the PB will eliminate the connectivity problems normally encountered when using dial-up access to establish the link with the BSP-*PhilPaSS*.

The *PhilPaSS* maintains an **interface** or also **act as settlement system for other major payment systems** operating in the country (as shown in diagram below).

Figure 1
The Philippine Payments and Settlements System (*PhilPass*)



3.3.1.1 Electronic Peso Clearing System (EPCS) and ECCS owned and operated by the PCHC

The ECCS pertains to the online transmission of cheque data to the PCHC for a faster exchange of value and the delivery of the corresponding physical items later. Banks use the ECCS front-end application to transmit their outward clearing demands and retrieve their inward data clearing files to debit the account of their individual clients. The cheque items/data are processed and cleared through the PCHC ECCS, the net clearing results of which are then electronically transmitted in the afternoon of the same day by PCHC to the *PhilPaSS* for settlement.

The EPCS, on the other hand**,** is an interbank account-to-account fund transfer system that supports bulk, recurring and non-time sensitive payment and collection transactions. Under this system, the PCHC receives payment instructions from various participating banks. These are instructions coming from bank's client to pay his obligations by transferring the amount owed from his account to the account of the creditor maintained in another bank, which are then forwarded to the PCHC. The electronic transmissions of electronic peso transfers between banks occur between 9:00AM and 4:00PM. Being an online processing system, the participating banks/branches are permitted to gain access to the EPCS Host Computer located at the PCHC via data communication lines. The system enables payees to use funds on the next business day while withdrawals of transferred funds from the payees' accounts in the Peso Netting require at least 48 hours following the remittance date. The fund transfer instructions are processed and cleared through the PCHC EPCS, the net clearing results of which are also electronically transmitted in the afternoon of the same day by the PCHC to the *PhilPaSS* for settlement.

Unlike the ECCS, the payment instruction documents by the banks from their clients are retained by the banks, and no physical document is forwarded to the PCHC.

Any bank which incurs an overdraft in its deposit account with the BSP shall fully cover it, including interest at a rate equivalent to one-tenth of one percent. (1‰) per day or the prevailing 91-day T-bill rate plus three percentage points, whichever is higher, not later than the next clearing day. The corresponding clearing office (PCHC and the BSP Regional Clearing Office) shall officially notify the banks with overdrawn balances.

Settlement of the clearing balances with the BSP shall not be effected for any account which continues to be overdrawn for five consecutive banking days until such time that the overdrawn amount is fully covered or otherwise converted into an emergency loan or advances pursuant to the provisions of Section 84 of R.A. No. 7653. Banks may also borrow from other banks through the interbank facility or from the BSP through the overnight or term regular repurchase facilities at existing rates to cover overdrafts.

3.3.1.2 Philippine Domestic Dollar Transfer System (PDDTS)

The PDDTS is a local clearing and electronic communication system operated by the BAP, PCHC, PSSC and Citibank Manila (as the USD settlement bank). It is a facility used by the banking industry to move US dollar funds from one Philippine bank to another on the same day without having to go through a correspondent bank in the US. The PDDTS allows on-line, real-time gross settlement of domestic interbank US dollar transfer and third-party account to account US dollar transfers.

The PDDTS participating bank maintains a US dollar interest bearing account with the settlement/depository bank (PDDTS account) used solely for effecting credits and debits and other transaction arising from the PDDTS transactions as well as payment(s) of transactions and other charges attendant to the PDDTS transactions. The end-of-day net positions of banks arising from OFW remittances which are coursed through the PCHC, are also settled through the PDDTS.

If the sending bank's PDDTS account balance is insufficient to cover the transfer, the transfer instruction will be placed on queue. Participants who may be temporarily short of funds during the day may then request Citibank for daylight overdraft facility for the queued transactions.

The PDDTS also made possible the implementation of Payment vs. Payment (PvP) facility in 2003 for interbank USD-Peso transactions with the dollar leg settling in the PDDTS and the peso leg settling through the BSP-*PhilPaSS*.

In PvP transactions, the USD leg is checked first and where sufficient, the USD amount is earmarked. A peso payment instruction is then sent to the *PhilPaSS* system, which is queued together with all other payment instructions of the same bank. Upon successful posting of the peso payment debiting the USD buyer's *PhilPaSS* account and crediting the USD seller's *PhilPaSS*, the *PhilPaSS* sends a confirmation message to the PSSC PDDTS System, which triggers the actual transfer of the earmarked USD amount in the USD seller's PDDTS account to the PDDTS account of the USD buyer.

In the Philippines, the peso-dollar trading among banks and between these banks and the BSP are done through the PDS electronic platform called the Philippine Dealing and Exchange Corporation (PDEx).

***3.3.1.3 PhilPaSS* REMIT System**

The *PhilPass* REMIT is a system developed by the **ITSS** group of the BSP that will allow the use of the *PhilPaSS* as a settlement arm for overseas Filipino (OF) remittances in order to ensure safe and immediate transfer and settlement of remittance funds into beneficiary accounts maintained in another bank. Implemented in May 2010, the system interfaces with the *PhilPaSS* to cover the electronic settlement of OF remittances that are received by the 11 private commercial banks, three government-owned banks, and one thrift bank from overseas branches or correspondent banks and partner remittances agencies abroad but for further credit to beneficiary accounts maintained with other banks in the Philippines. Once an OF remits funds through the overseas bank branch or remittance partners abroad, and sent via wire transfer to the participating remitting bank in the Philippines, the remitting banks using an interface *PhilPaSS*

Remit system will prepare and transmit the batched files indicating the details of beneficiary accounts to be credited. Upon settlement in the *PhilPaSS*, the beneficiary bank will further credit the remittance to the account of the ultimate beneficiary. The system has a feedback mechanism feature that requires the beneficiary banks to inform the BSP and remitting bank that it has credited the OFW's beneficiary account within the same day (Day 1) or at the latest on Day 2 , if further validation of beneficiary accounts is needed.

3.3.1.4 BancNet and MegaLink ATM Network Systems

BancNet is the biggest interbank network connecting the ATM Consortium networks of more than 49 local banks compared to MegaLink with just 15 member banks.

The use of ATM networks enable their customers to transact at any ATM terminal anywhere, anytime, at point of sale, the internet or through mobile phones. BancNet and MegaLink send electronic payment instructions/settlement report via leased line to the *PhilPaSS* for the settlement of network funds against the DDA maintained by member banks with the BSP.

3.3.1.5 Registry of Scriptless Securities (RoSS)

The RoSS is a central securities (Treasury Bills and Bonds) depository maintained and administered by the BTr. All government securities (GS) floated/ originated by the National Government under its scripless policy is recorded in the registry in the name of the Government securities eligible dealer (GSED) by virtue of the auction award made by an auction committee. Subsequent transfer of ownership on the scripless securities out of the securities account of a GSED is recorded in the RoSS through the securities account of the counterparty GSED. As of end-December 2011, there are 11,228 registered accounts. (Banks – 12; Non-bank financial institutions – 11; and Others – 11,205).

In the primary market, the BTr through the bridge systems announces, two days in advance, the details of the scheduled GS for auction. The GSED submits their bids using the Reuters Interface, which are electronically linked to the BTr's Automated Debt Auction Processing System (ADAPS). Upon award of GS to a winning GSED bidder, the securities award are electronically downloaded to the RoSS system and cash settlement reports are generated and forwarded to the *PhilPaSS* for debiting the DDA of the winning GSEDs and crediting the DDA of the BTr.

In the secondary market, the GSEDs/non-GSEDs input settlement instructions for closed deals via the PDEx of the PDS which is electronically linked to the RoSS System. The RoSS system checks the securities in the seller's account and earmarks these for transfer. The system then sends an electronic settlement file to the *PhilPaSS* to debit the DDA of the buyer and credit the account of the seller. Securities and cash settlement of GS transaction to the secondary market is done via delivery versus payment on a real time gross trade for trade basis.

3.3.1.6 Philippine Depository and Trust Corporation System (PDTC)

The PDTC a subsidiary of PDS, that provides depository and settlement services for listed fixed income securities traded and cleared in the PDEx (another subsidiary of PDS). This includes government securities and corporate debt issues. The PDTC operates a depository and electronic book-entry transfer system for the centralised handling of all kinds of securities which supports the settlement of securities by book entries in the records of the PDTC without physical delivery of stock certificates. As a depository for the equities market, the PCTC centralises the management of shareholders information through dematerialisation. Dematerialisation eliminates the need to deliver paper certificates for securities traded; hence it eliminates the risk associated with maintaining physical certificates and speeds up the processing and settlement of trade transaction.

Fixed income trades at the PDEx settle on T+1 under PDEx DvP model 1 system (i.e., gross simultaneous settlement of securities and funds transfer) method in which the cash settlement side is linked to the *PhilPaSS*.

3.3.1.7 In the Pipeline

Soon to settle in the *PhilPaSS* are equities traded at the Philippine Stock Exchange (PSE), the clearing of which is handled by the Securities Clearing Corporation of the Philippines (SCCP). Trades at the PSE settle on T+3 under SCCP-DvP model 3 system (simultaneous net settlement of securities and fund transfer) net settlement method for broker-to-broker transactions. Meanwhile, settlement of trades in the PSE-listed stocks between broker and investor is typically done via cheque for local clients and direct credit to bank accounts for foreign clients.

3.3.1.8 Other BSP Internal Systems

The BSP has also integrated in the *PhilPaSS* various BSP internal systems affecting the the DDA accounts of the banks, such as:

a) Electronic Fund Transfer Instruction System (EFTIS) - developed and implemented in 1997 to automate the peso funds transfer instructions coming from authorised agent banks (AABs) of the Bureau of Internal Revenue (BIR) and the Bureau of Customs (BOC) to the BSP. The System ensures that such peso funds transfer instructions are transmitted and settled promptly and efficiently without delay or with minimal manual intervention. The system's implementation was a joint effort between the BAP and the BSP utilising Lotus Notes as the messaging software.

AABs accept the public's (individual/corporate) payments of internal revenue taxes of the BIR and customs duties of the BOC and electronically transmit the fund transfer instructions via EFTIS their remittances of revenue collections to the *PhilPaSS* - for credit to the deposit account of the BTr-National Government maintained with the BSP.

Banks also use EFTIS to transmit transfer instructions to comply with the reserve requirements of *other intra-bank accounts with BSP*, namely: Common Trust Fund (CTF), Trust, Other Fiduciary Accounts (TOFA) and Small- and Medium-enterprise (SME) accounts.

As identified in the BSP's COB Plan, the EFTIS also serves as the back-up messaging system in case SWIFT or PPS-FES Client System becomes inoperable.

b) Electronic Cash Withdrawal System (ECWS) - implemented in February 2006 in order to improve the processing and settlement of banks' cash withdrawals for their daily requirements for peso notes and coins in various denominations.

The ECWS standardised the process of ordering various currency denominations by the introduction of a Cash Order Slip (COS), where banks specify their desired currency denominations subject to approval based on the availability of currency stock held at the BSP Cash Department. The amount approved in the processed COS is indicated in the SWIFT/PPS-FES message instruction sent to the *PhilPaSS* for settlement, subject to available balances in the deposit account of the withdrawing bank. Once settled, a system-generated settlement electronic notification is transmitted to the BSP-Cash Department to trigger the release of the proceeds of withdrawals to awaiting bank representatives.

The use of the *PhilPaSS* as the settlement system of the ECWS eliminated the use and presentation of cheques before cash withdrawals can be completed. The ECWS also facilitated the reengineering of processes involved on previously transacted over-the-counter (OTC) cash withdrawals from the BSP. The system has made cash more convenient and efficient for the banks.

The implementation of the ECWS also resulted in man-hour savings for the banks in terms of time spent in cheque preparation, authorisation of signatures and delivery to the BSP.

c) **eRediscounting System** – The Electronic Rediscounting System or eRediscounting is an online internet-based rediscounting facility that the BSP makes available to all active and qualified banks nationwide. This facility allows banks to conduct their rediscounting transactions and inquiries with the BSP in on-line, real time basis at the convenience of their own bank premises. With its simplified and end-to-end processing capability, the system provides immediate availability and fast delivery of credit to banks, especially those in the countryside. More importantly, it will reduce the transaction costs of banks, which will mutually benefit the participating banks and their clients.

***d) PhilPaSS* Participants**

As of end-August 2012, the following institutions participated in the *PhilPaSS:*

- 34 commercial banks
- 3 specialised banks
- 40 savings and thrift banks
- 30 rural banks
- 14 Non-bank with Quasi Banking Function (NBQBs)
- 2 ATM Networks
- Bureau of the Treasury (BTr)

- BSP-Department of Loans and Credit (DLC)[7]
- BSP-Provident Fund Office (PFO)[8]
- BSP-Supervision Departments
- BSP-Treasury Department (TD)
- Philippine Clearing House Corporation
- Philippine Dealing Exchange

See Table 2 on the number of the *PhilPaSS* participants from 2004 to 2011.

3.3.1.9 Transactions Processed and Settled in PhilPaSS

To date, the following transactions (with value dates equal to the *PhilPaSS* business day) are accepted for processing and settlement in the *PhilPaSS*:

- High-value interbank transfers
- Sale and Purchase of GS trades under outright and repurchase agreements with the BSP in connection with the latter's Open Market Operations
- Interbank Sale and Purchase of Primary and Secondary Market GS trades via the DvP System
- Settlement of payments for the public (tertiary level) market trading of government securities
- Settlement of the peso leg of foreign currency transactions via the PvP System
- Interbank settlement of ATM transactions within the members of ATM network provider and settlement of inter-network transactions of ATM network providers
- Customer payment instructions
- Cash deposits/withdrawals of notes and coins – banks' head offices
- Cash deposits/withdrawals of notes and coins – banks' regional branches
- Results of cheque clearing
- Revenue Collections (Internal Revenue Taxes and Customs Taxes/Duties)

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7. DLC manages the e-rediscounting window and overdraft clearing lines of banks.
8. PFO manages the investment portfolio of BSP employees' retirement fund.

- Treasury Department (domestic) trades/purchases and lending/borrowing
- E-rediscounting, emergency and special facility loans
- OF remittances
- Withdrawal of banks' excess reserves
- Annual supervisory fees

There are no limits on the value or type of transactions that can be processed in the *PhilPaSS* provided both counterparties are maintaining DDAs in the *PhilPaSS* and the value dates of the transactions are equal to the current business date of the *PhilPaSS*. If the transactions are future dated, the value dates should not be more than four (4) calendar days than the current value date of the system. The *PhilPaSS* Business Day opens at 9:00AM and closes at 5:45PM.

Participants may issue system enquiries and secure settlement/status reports through the System by using the message types applicable to SWIFT-user (commercial) banks and PPS-FES user (thrift/rural) banks.

The system has the following capabilities: real time accounting, availability of on-line inquiries and on-demand reports; gridlock detection resolution; liquidity management (Intraday Liquidity Facility); payment queuing/prioritisation; general ledger interface and system security, control and audit trails.

The system rules and regulations governing the *PhilPaSS* are embodied in the Agreement for the Philippine Payments System via Real Time Gross Settlement (PPS-RTGS) and the Rules and Regulations Governing the Philippine Payments System via RTGS that were signed and approved individually by the *PhilPaSS* participants.

Because of the different types of transactions processed and settled in the *PhilPaSS* and sent by other payment systems interfacing the *PhilPaSS*, different settlement timelines are implemented to avoid settlement concentration and prevent closing time bottlenecks. For instance, the cut-off time for settlement of ATM transactions is before 11 am, while for the net results of cheque clearing before 5:45 pm.

3.3.2 Other Retail Payment System Providers

Third party non-financial institutions also offer payment processing services through the internet (such as Pay Pal, Western Union) and through the mobile payment system. However, in the absence of a Payments Act, these are not subject to BSP's oversight and supervision.

3.3.2.1 Mobile Payments System

The most popular forms of e-money in the Philippines are Smart Money and Globe's Gcash. Gcash is an internationally acclaimed micropayment service which transforms a mobile phone into a virtual wallet for a secure, fast and convenient money transfers at the speed and cost of a text message. Gcash is owned and operated by a private company, Globe Telecoms.

Smart money is a Mastercard electronic product issued by Banco De Oro and co-branded with Smart Communications Inc. It is a reloadable payment card that may either be accessed through a smart mobile phone or a mastercard-powered card, similar to a debit/cash card. Smart money enables smart subscribers to manage their money from their mobile phones, wherever they are, whenever they want.Unfortunately, mobile payments are not linked to the *PhilPaSS*.

3.3.2.2 Pay Pal, Xoom et al.

Electronic payment systems provided by non-bank, non-financial operators using the internet like the Pay Pal and Xoom are also utilised for fund transfers in the Philippines. Since the systems are provided by a non-bank, these types of payment providers are likewise not linked to the *PhilPaSS*.

3.4 Dealing with Risks to the Stability of Philippine PSS

Kahn and Roberds (2007) said that payments systems are typically seen as "essential, pervasive and boring until there's a malfunction." Indeed, policymakers and market participants oftentimes take for granted that transfers will be settled as expected. They assume that the PSS will perform as solidly under market stress as it does under normal conditions. Payment systems, however, involve significant exposures and risks for members and it is for this reason that central banks have always taken into account the design and operation of payment systems and additional control features to eliminate these risks.

To ensure the resilience of key payment infrastructures, the BSP has adhered closely to the Core Principles for Systemically Important Payment Systems (Core Principles, 2001) in the design and operation of the *PhilPaSS.* In particular, the

BSP has adapted certain measures/strategies to mitigate risks associated with credit, liquidity, settlement, operational and legal risks, including:

- Strict observance of the *PhilPaSS*' value-added features to mitigate settlement risks;

- Ensure strong adherence of participants to the membership criteria;

- Monitoring/restricting members/class of members which may pose significant risks to the systems;

- Application of caps or limits on intraday exposures to the system by the participants along the lines of counterparty exposure that members themselves adhere to in the markets; and

- System limits so that no single party breaches such limits.

With the *PhilPaSS*, since transactions are settled on a trade-for-trade basis and with finality subject to the availability of balances in the deposit reserves maintained by banks with the BSP, the related risks are eliminated. The BSP is not obliged to effect the transfer of funds in the deposit reserves maintained by banks and NBQBs if there are insufficient balances in the reserve deposits of the transacting (paying) parties. Likewise, the liquidity tools provided by BSP, in case availed by the participants, are all highly collateralised.

In terms of operational risk, each participant is responsible for ensuring the confidentiality, safety and security of its login IDs, passwords and authentication keys for activating the system and initiating IBCL transactions. The participant is legally bound by its electronic fund transfer instruction, which it sends through the system without need of any other manually prepared confirmation, paper, or instrument, provided that the same has been authenticated by the BSP and provided further that they comply with the terms and conditions set forth in the Memorandum of Agreement. Moreover, both the BSP and all the *PhilPaSS* participants shall be responsible for ensuring that adequate COB plans are in place for uninterrupted operations and that all potential single points of failure in its operations are observed.

The *PhilPaSS* has two back-up systems – a local back-up system located within the BSP head office and an off-site location. The back-up systems mirrors the transaction from the primary site in real time so that it can switch its operation at any point in time in case the primary site is inoperable.

In case the two back-up systems become inoperable due to extraordinary circumstances, the BSP can activate its existing EFTIS to allow the participants to send their interbank instructions to BSP for processing and settlement. All the *PhilPaSS* participants will be duly advised through SWIFT and PPS-FES message/advisories on the contingency plan(s) that the BSP will initiate in case the *PhilPaSS'* primary site is encountering technical problems.

In case a bank's SWIFT/PPS-FES computer-based terminals encounter connectivity problems with the *PhilPaSS,* the contingent procedure requires the bank concerned to accomplish a COB Manual Settlement Form; to be transmitted via fax to BSP-Payments and Settlements Office (PSO) for the manual processing and settlement of the payment instruction, if any. After processing and settlement (signature-verification, encoding and authorisation), the BSP-PSO shall inform the paying bank (via fax) that the requested manual settlement has been completed.

Since the *PhilPaSS* operates in a highly computerised environment, technological components that support its operation also expose the system to issues and challenges brought about by the effect of fast changing technology and the global standards and trends that the *PhilPaSS* should adhere to. To ensure the security and operational reliability of the *PhilPaSS*, the BSP continues to keep itself abreast with the latest trends in technology and standards as well as to be vigilant in the proper management of the various risks that affect the operations of the system. In relation to this, the following arrangements were put in place:

- **Security Policy and Controls.** In addition to the built-in security measures for transaction processing, a User Profile is maintained by the BSP to ensure that access levels of users are defined in accordance with their functions. Adequate password controls and management are enforced to prevent unauthorised access to hardware, systems and data. Likewise, online participants are required to implement their own physical and logical security and management controls to protect their own hardware, software and data from unauthorised access.

- **Operational Reliability.** The *PhilPaSS'* reliability depends on the availability of LOGICA-CAS, SWIFT, cFAS and the communications networks. The *PhilPaSS* is considered unavailable when the participants cannot move funds into and out of their accounts because of a probem within the BSP's control, regardless of whether it emanates from an application system or communications network. The *PhilPaSS'* operational reliability standards require that all systems be 99.5% available during operating hours. So far, the longest outage experience by the *PhilPaSS* occurred on 27 April 2007 when one of its SWIFT servers experienced a technical problem. The outage lasted 4 ½ hours. However, the strength of its business continuity procedures enabled the PSO to resume its operations and was able to complete the processing of its transactions on the same day.

Aside from complying with the terms and conditions of the Memorandum of Agreement entered into by other systemically important payment systems (SIPS) with the *PhilPaSS*, the following additional risk management actions of other SIPS interfacing with *PhilPaSS* are observed:

3.4.1 Philippine Domestic Dollar Transfer System (PDDT)/Payment vs Payment (PvP) Facility

In PDDTS/PvP, funds move only against sufficient balance in the accounts. Finality of transfer is achieved real-time. To mitigate gridlock and settlement and liquidity risks, participants may request for a daylight overdraft facility from the USD settlement bank.

The participating banks have control on their USD account without any intervention from the PSSC or the USD settlement bank. The PSSC system is an internet-based system running over a network infrastructure with industry standard security features. Participants access the system via any computer with internet connection.

The use of the PDDTS is governed by the PDDTS Agreement signed among the Bankers Association of the Philippines (on behalf of its member-banks), the PSSC, PCHC and the USD Settlement Bank (currently Citibank Manila). Each participant signs a Participation Agreement which binds them to the Agreement. Use of the PvP is governed by the PvP Agreement signed by the BSP and the PDDTS agreement signatories.

Both the PDDTS and PvP are subject to the BSP Oversight as systematically important payment systems.

3.4.2 ATM Network Consortia

The ATM Network Consortia protect their respective ATM outsourcing facilities by using hardware security modules (HSMs) to ensure critical data protection and transaction security. The respective network ensures that processes are completely safe from adversaries by employing a security systems that protect the integrity of highly sensitive data passed on from network to network during inter-bank ATM transactions including those of cryptographic keys, the process of encryption and decryption, and payment transactions, as well as card and PIN issuance and verification.

The ATM networks' operational, financial, reputational and legal risks are being managed by the quality assurance and risk management through the various programmes and processes, such as accreditation processes, enterprise risk management, internal audit, process reviews, and development of policies and procedures. Besides management level reviews, specific Board level committees, such as the Executive Committee, Audit Committee, and Corporate Governance Committee, have been organised and delegated with specific responsibilities to oversee risk management activities. To enhance their credit and liquidity risk management, MegaLink and BancNet crafted a written policy on loss sharing among member banks in case of credit pressures.

3.4.3 Philippine Clearing House Corporation (PCHC) Disaster Recovery Planning (DRP)/Business Continuity Planning (BCP

The PCHC DRP/BCP risk management focus is on hardware resiliency and data back-up provisions that feature auto failover and load balancing capability. Communication devices are described to be redundant with multi-connectivity options and back-to-back internet gateway with access points supplied by BayanTel and Eastern Telecoms. The PCHC is likewise equipped with EMC storage for hot pluggable disk back up/capacity, a data base redo and archive mechanism to allow point in time recovery. On top of these, end of day back up and daily productions are kept at both Makati and Manila site.

3.4.4 Philippine Depository and Trust Corporation (PDTC)

To minimise risks in securities transactions, the following measures are observed:

a) Asset Commitment Risk

For trades in PSE-listed stocks, settlement between broker and investor is typically via checque (for local clients) and direct credit to bank accounts for foreign clients while settlement between brokers is through the SCCP settlement system (Model 3). The processing of payment between brokers and their clients is FOP as payments do not pass through the Depository or the SCCP. The uncertain degree of asset commitment risk can be partially reduced by arrangements between participants and the settlement banks whereby the cheque exposure is offset against intraday credit limits to ensure that the cheque has same day value.

Settlement of PDEx trades between direct market participants are all done on a trade-for-trade, RTGS basis (Model 1 DvP) using central bank money. This includes trades among dealers, brokers and qualified investors (including those under custodians). There is negligible asset commitment risk for these trades.

b) Liquidity Risk

Liquidity risk exposure is increased by the cash payment methods that transfer funds through cheque payments. However, the availability of credit facilities and market stock lending and a fails management arrangement via the SCCP help mitigate the liquidity risk exposure.

For settlement of PDEx trades, the general mode of settlement between clients and their brokers, which are mostly bank-owned or bank-affiliated, is via automatic debit/credit to the clients' accounts at the bank which minimises the liquidity risk exposure of the broker.

c) Counterparty Risk

The PDTC does not take on counterparty risk in either the equities or fixed income market. The SCCP assumes the role of central counterparty for all PSE-eligible trades and guarantees the settlement of these trades. For off-exchange trades, there is credit exposure between the buying and the selling members.

In the fixed income market, the PDEx participants trade with each other against bilateral counterparty limits, which are entered and monitored in the PDEx trading system. A multilateral counterparty limit system against pre-delivered collateral is planned for implementation by third quarter of 2011 to address the limitations of a purely bilateral counterparty limit system.

d) Asset Servicing Risk

The PDTC's responsibility for the completeness, accuracy and timeliness of corporate action information and the execution of corporate action instructions is limited to gross negligence. The PDTC does not provide proxy voting or tax reclaim services. Otherwise, the PDTC offers an efficient and safe asset servicing facility; information is obtained from or verified with official sources and most communication is in electronic form.

e) Financial Risk

The PDTC does not act as a central counterparty, hence, it does not carry any credit risk. The depository assumes limited liability for losses incurred as a result of an operations failure or the loss of securities, for which it maintains third-party insurance cover. It is not exposed to defective broker lodgments nor is it exposed to clearing and settlement risks of broker trades since this responsibility is assigned to the SCCP.

f) Operational Risk

The PDTC maintains a comprehensive system of internal controls and procedures. The PDTC maintains a disaster recovery site for each of its production systems and are 18 kilometers away from each other. Data in each site is mirrored to the other on real time basis to allow for ease in recovery and resumption in the event of a contingency in one location.

The PDTC operates its own date centre in a secure facility using fault-tolerant and/or redundant computers. Control procedures exist to monitor changes to software, provide for disaster prevention mechanisms, data storage, retention of files, programme libraries and systems software. The internal audit function of the PDTC is handled by Isla Lipana & Company (a member of Price Waterhouse Coopers).

3.5 PSS Implications to MS, FS and Philippine Economic Development

The PSS plays a pivotal role in the economic and financial infrastructure of a country since it facilitates the exchange of goods and services between economic agents by allowing transactions to be completed safely and on time, hence making a key contribution to overall economic performance. A faster exchange of goods and services results in a faster flow of money which can be re-used to finance another payment. Likewise, the availability of faster, cheaper and safer payment system increases the velocity of money and reduces conflict in the economy. Hence, it expands the opportunities for commercial and financial transactions and supports higher investments and economic activity, thus leading to faster economic growth.

Over the years, the *PhilPaSS* has evolved from initially ensuring the safe and immediate settlement of critical high-value interbank transactions to providing the necessary facilities to settle similarly important retail and bulk payments. This has been accomplished by zealously determining the appropriate measures and solutions to facilitate and implement the linkage/interface of the *PhilPaSS* with the systems, processes/procedures of other SIPS operated by other payment institutions. Consequently, the country's payment system has become a necessary channel for economic efficiency, the transmission of monetary policy, and the promotion of financial stability.

Notwithstanding the financial turmoil brought about by the global financial crisis and the related global economic slowdown, the Philippine PSS infrastructure has held up well. Confidence in the system's ability to settle large volumes with little difficulty has remained intact, largely due to reforms adopted in the recent years to ensure the robustness of the major infrastructures and their resilience to major shocks. Hence, transactions processed through the *PhilPaSS* continued to remain robust to provide liquidity in an economy faced by a challenging external environment.

3.5.3 Volume and Value of PhilPaSS Transactions

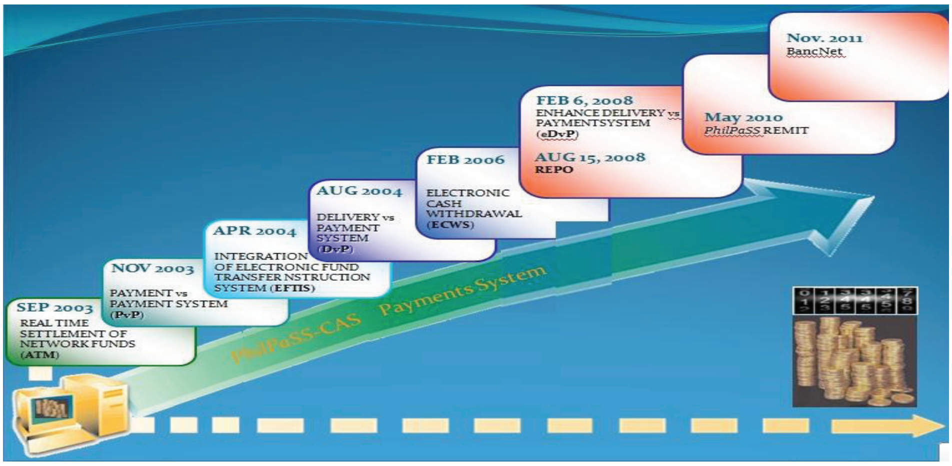
The overall PSS and financial markets have been working well since the *PhilPaSS* was created. The Philippine PSS runs stably and efficiently, with the continued rapid growth in both transaction and value. Not even the onset of the global financial crisis in 2007/2008 negatively affected the systemically important payment system of the country. Transactions continued to grow as other partners/ stakeholders in the financial system realised the fast and safe flow of payments using the *PhilPaSS*. In addition, important critical retail payments settling through the system continued to increase.

The volume and value of financial transactions that are settled via the *PhilPaSS* showed an upward trend from 2003 to 2011, notwithstanding the onset of the global financial crisis in 2007. This is indicative of the participants' confidence in the use of the system. The smooth performance of payment systems amidst the financial market disturbances since 2007 can be attributed, in large part, to the underlying strengths that the payment systems have built up through the years as a result of fundamental reforms in the payment infrastructure.

The number of financial transactions processed and settled via the *PhilPaSS* has grown by a substantial 513% from 160,207 in 2003 to 1,141,587 by 2011, reflecting the increase in the transactions being settled through the *PhilPaSS*

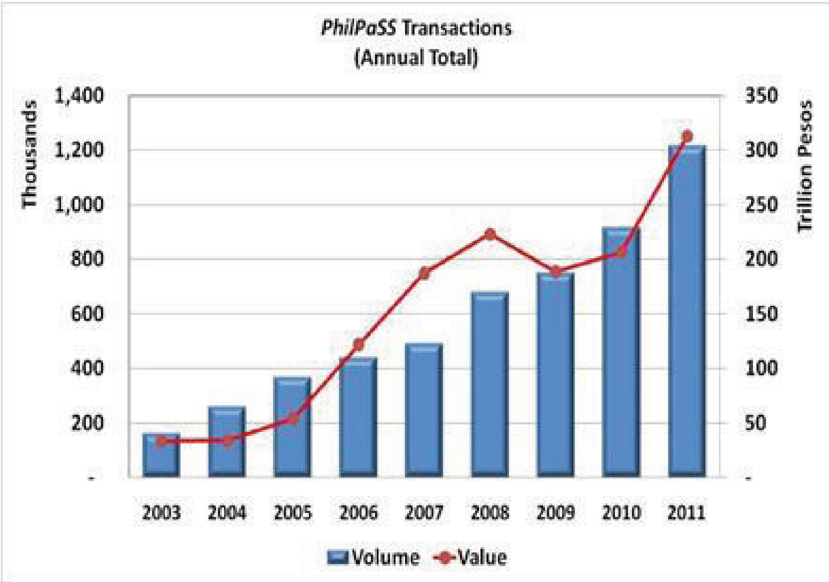
(Table 3). Initially, the largest number of transactions were accounted for by interbank transactions (59.5%) and transactions sent by the PCHC for cheque clearing (30%) in 2003. By 2011, banks' OF remittances via the *PhilPaSS* REMIT, interbank transactions, and PDS trade settlements via PvP accounted for majority of the volume of transactions processed through the *PhilPaSS* with 28.1%, 25.8% and 18.1%, respectively (Table 4a). The chart below shows the dates the different types of transactions began to be settled via the *PhilPaSS*.

Figure 2
***PhilPaSS*- CAS Payment System**



Covering the same period, the value of transactions grew by 341% from ₱33.2 trillion in 2003 to ₱312.6 trillion in 2011. However, it should be noted that the value of transactions showed a year-on-year decline of 15.5% in 2009, notwithstanding the continued increase in the volume of transactions. This reflected the decline in global demand and subsequent slowdown in domestic economic activity.

Figure 3
***PhiPaSS* Transactions**



In terms of average daily turnover, the value of payments transacted daily via the *PhilPaSS* rose remarkably from ₱135 billion in 2003 or 3.0% of the country's Gross Domestic Product (GDP) to ₱1.3 trillion in 2011 or 13.0%. of GDP (Table 3). This reflected the growing role played by the country's PSS in domestic economic growth as a whole.

Classified by type of transaction, over 90.2% of the total payments processed through the *PhilPaSS* in 2003 was from interbank transactions, followed by the PCHC cheque clearing at 8.7% (Table 4b). By 2011, it was the treasury investments of the BSP-Treasury Department that accounted for nearly half of the total value of payments transacted via the *PhilPaSS* (48.9%), followed by interbank transactions (34.3%). OF remittances did not play such as large role in the value of the *PhilPaSS* transactions, comprising a minimal 0.004 %, of the total value of transactions.

3.5.2 Intraday Liquidity Facility and Overdraft Credit Line Availments

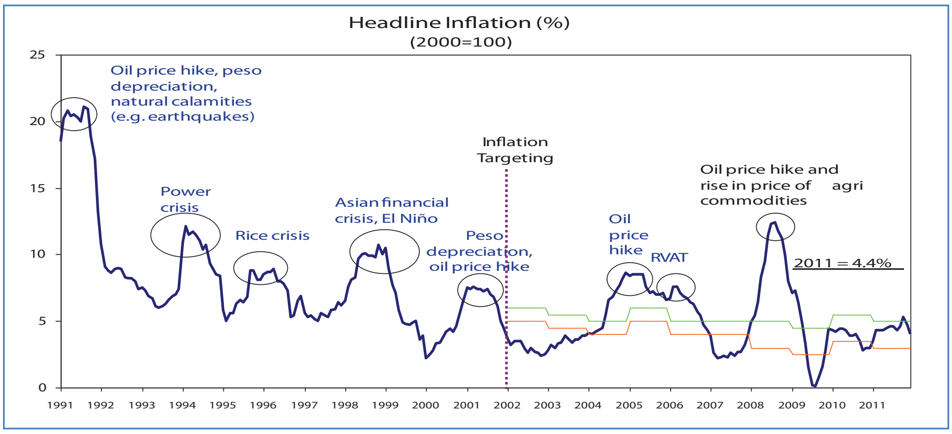
To ensure the continuous settlement of transactions and avoid any payment gridlock, the *PhilPaSS* participants availed of the liquidity tools offered by the BSP sporadically from the period 2002 to 2011. Availments of the ILF were made by only a few banks starting in 2008 with ₱4.4 billion to 2011 with ₱97.4 billion (Table 5). Notwithstanding the substantial rise in availments, however, the ILF availments as a percentage of the total value of payments coursed through the *PhilPaSS* never reached 1% as they ranged from 0.002% – 0.03% only of the total transactions. Similarly, the OCL availments, which were higher in the early years of the *PhilPaSS* before tapering off in 2010-2011, also never reached 1% as a percentage of the total value of payments coursed through the *PhilPaSS* (Table 6).

3.5.3 Inflation and Market Interest Rates

In the Philippines, the automation of the PSS has led to a significant reduction in time lags between transactions, facilitating the transmission of monetary policy decisions to the financial markets. The development and introduction of the Philippine RTGS also allowed the BSP to get a more accurate estimate of monetary aggregates such as reserve money, base money and domestic liquidity, which helped in its assessment of broad money movements and in making better-informed monetary policy decisions.

Since the inflation targeting (IT) introduction in 2002, the BSP has maintained a prudent monetary policy stance to keep inflation in check and to allow market interest rates to decline to provide a conducive environment for businesses to expand. While the trend of inflation in the country has been erratic on the back of various external shocks that has struck the country, it should be noted that beginning with the adoption of IT as the monetary policy framework in the Philippines and the introduction of the *PhilPaSS* in 2002, the country's inflation rate has generally been lower relative to the pre-IT and pre-*PhilPaSS* regime of the early 1990s.

Figure 4
Headline Inflation



Inflation only began to inch up anew in 2008, with inflation pressures stemming mainly from the surge in the international prices of oil and food commodities. While inflation followed an upward trajectory up to August, the subsequent collapse of global commodity prices, reflecting the downturn in global economic activity, complemented by supply and production responses and timely monetary policy actions (Table 1), brought down inflation in the last four months of 2008 up to 2010. In the later part of 2010, however, the impact of higher global crude oil prices on domestic pump prices of petroleum products saw inflation begin to inch up for fuel and transportation and communication services. Hence, the inflation rate for 2011 averaged higher than the 3.8% posted in 2010 at 4.8%, but still well within the government's target range of 3-5 % for the year. For the first eight months of 2012, inflation decelerated to an average of 3.2%, reflecting the 75 basis point cut in the BSP policy rates as well as the reduction in the reserve requirement ratio by 3 percentage points to 18% implemented this year.

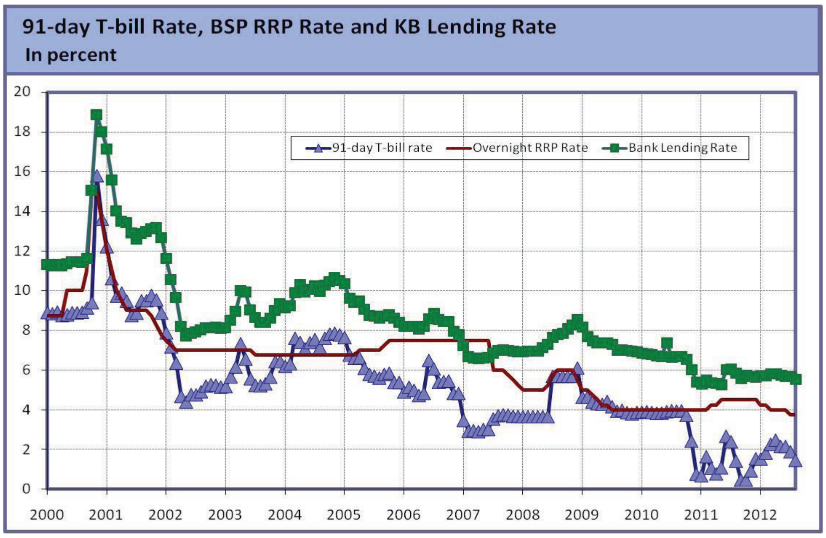
The reduction in the BSP policy rates and liquidity provision measures, combined with the continued improvement in the *PhilPaSS* operations, proved to be confidence-building moves that signaled the BSP's commitment to ensure ample money supply and keep interest rates low in order to support economic growth. The BSP has observed that the banks have followed the BSP's rate cuts as they have passed on the interest reductions to their borrowers, hence providing a conducive environment for businesses to expand. Specifically, there has been a noted reduction in market interest rates from 2001 onwards (Table 8).

- Benchmark 91-day T-bill rate eased from 9.9% in 2001 to 1.9% in July 2012;

- Average bank lending rates declined from peaks of 12.4% to 5.6% in June 2012; and

- Savings deposit rates fell from 7.5% in 2001 to 1.2% in June 2012.

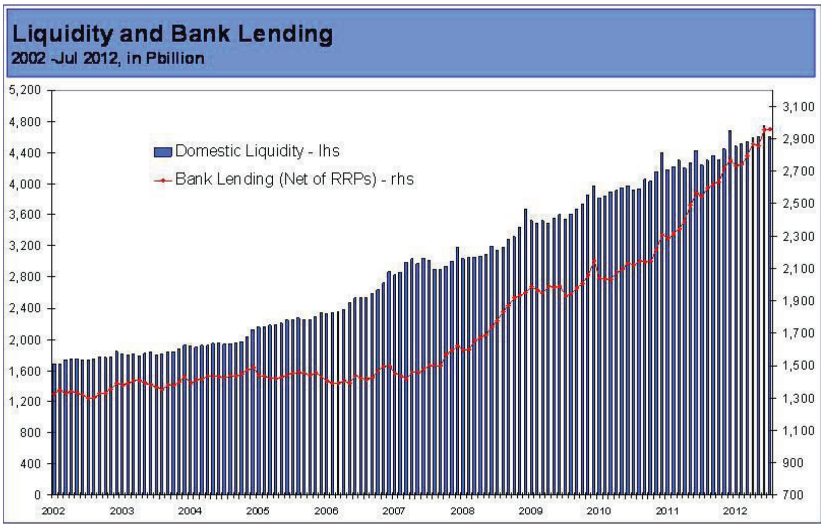
Figure 5
91-day T-bill, BSP RRP Rate & KB Lending Rate (%)



3.5.4 Liquidity and Credit Growth

The steady growth of domestic liquidity, as measured by M3, is another indication that liquidity in the financial system has remained ample to fund the economy's growth requirements. From ₱1.7 trillion in 2001, M3 has grown by 177.3% to reach ₱4.7 trillion in 2011 (Table 9). Double digit growths were posted since 2004 to 2008 and, then again, in 2010 as the overall liquidity condition was supported by steady foreign exchange inflows from overseas remittances and portfolio investments.

Figure 6
Liquidity and Bank Lending



However, beginning in late 2010 up to the first three months of 2012, the growth of domestic liquidity decelerated to single-digit levels. The slower expansion of domestic liquidity can be traced mainly to the sharp increase in banks' foreign liabilities coupled with a considerable reduction in their foreign assets as foreign liabilities expanded due to the higher placements and time deposits made by foreign banks to local banks. Notwithstanding the slowdown in the growth of domestic liquidity, however, it remained sufficient to ensure orderly market conditions and fund growth requirements as reflected in the robust growth of bank lending. In part, this can be traced to the efficiency and wider scope of coverage of the *PhilPaSS*.

With relatively low interest rates, a healthy demand for credit and an efficient payment system, the outstanding loans of universal/commercial banks (net of reverse repurchase placements with the BSP) have grown steadily from ₱1.4 trillion in 2002 to ₱2.8 trillion in 2011 (Table 10). On average, domestic credit grew by 7.4% during the period, with growth turning double-digits beginning in 2008 up until 2011, ensuring that adequate support to domestic production, investment, and spending is provided amidst weaker global economic prospects. This robust credit growth can be attributed mainly to the positive expectations of businesses and consumers on the economy coupled with the improved profile of borrowers.

Figure 7
Growth Rate – M3 and Credit

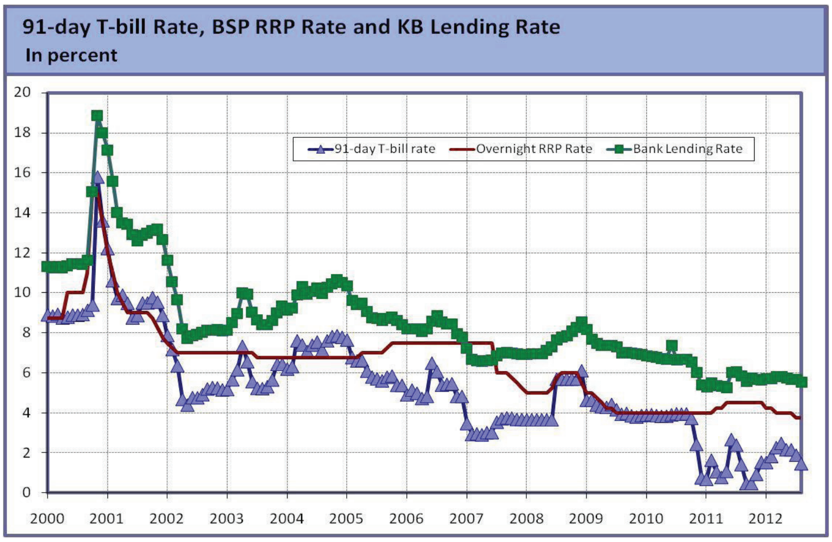
Period	**Growth Rate (%)**	
	M3	**Credit**
2002	9.5	1.1
2003	4.2	2.7
2004	10.3	-0.9
2005	10.3	1.0
2006	22.7	4.5
2007	10.6	8.3
2008	15.6	17.8
2009	8.3	10.0
2010	10.6	10.0
2011	6.3	19.9

In 2012, the growth of the outstanding loans of commercial bank (net RRPs) remained robust, reaching 14.0% in August. Loans for production activities, which typically comprised more than four-fifths of banks' total loan portfolio, grew by 14.1% in the same month.

3.5.5 GDP Growth

Mirroring the continued increase in bank credit, the domestic economy exhibited generally robust growth from the period 2004 to 2008. The slowdown in the global economy in 2008 and 2009, following the onset of the global financial crisis in 2007, also saw the Philippine real GDP growth slide. However, notwithstanding being buffeted by the spillovers from the global economic slowdown, the Philippine economy avoided a recession in 2009 as it posted a respectable GDP growth of 1.1%, buoyed by expansions in public and private consumption (Table 11). Providing support to the growth in consumer demand was the marked decline in inflation, which allowed the BSP to adopt an appropriately accommodative monetary policy stance during the period.

Figure 8
Real Gross Domestic Product & Real Gross National Income



In 2010, the Philippine economy emerged from the global economic turmoil with a solid performance as it rebounded by 7.6%, the highest growth recorded in 34 years, with expansion led by the services and industry sectors (Table 11a). On the demand side, exports and investments were the main growth drivers, supported by strong private consumption. (Table 11b). However, output expansion in 2011 decelerated to 3.9%, weighed down by weak trade activity due to challenging global conditions and below-target spending of the Philippine government.

In the first semester of 2012, the Philippine economy recovered with GDP growing by 6.1% compared to 4.2% for the same period last year. The above expectations growth benefitted from a regime of benign inflation and drew from the revitalised Services Sector, particularly from Trade and Other Services. It also got a big boost from the sustained growth of manufacturing and the rebound of construction.

3.5.6 Financial Stability

Notwithstanding the challenging external environment, particularly following the onset of the global financial crisis in 2007-2008, the Philippine banking system continued to exhibit resilience and fortitude. For one, the sound macroeconomic policies and resulting conditions in the country have provided stability to the domestic financial markets amidst heightened uncertainties. The continuous reform efforts of the BSP, combined with banks' minimal exposure to structured products, have also allowed the financial system to avoid the worst difficulties encountered by other economies. In fact, the financial system's performance has been positively reviewed by third parties like the IMF during its most recent Financial Sector Assessment Programme (FSAP) visit to the Philippines in early 2010.

During the period 2002 to 2011, the total resources of the Philippine banking system grew by an average of 8.5% (Table 12). Asset quality ratios are at historic lows and, at 2.8% in 2011, the non-performing loan ratio is even lower than their previous -1997 Asian financial crisis level of around 4% (Table 13). Solvency ratios were also well-above regulatory and international standards, which provided local banks ample headroom to adjust to higher capital rules under BASEL III by 2014. Capital adequacy ratios (CARs) continued to grow and exceed the BSP's minimum ratio of 10% and the Basel Accord's standard ratio of 8% amid challenging global uncertainties, as a result of the higher growth rate of qualifying capital vis-à-vis that of risk weighted assets (RWA). The system-wide average CARs, for instance, stood at 16.7% on solo basis and 17.6% on consolidated basis as of end-December 2011. Similarly, the Tier 1 (T1) capital ratios remained well above international norms at 14.4% and 14.5% on solo and consolidated bases, respectively. Meanwhile, bank operations remained profitable with the Return on Assets (ROA) rising from 0.4% in 2001 to 1.5% in 2011 and the Return on Equity (ROE) jumping from 3.2% to 12.5% during the same period, providing positive returns to shareholders on account of cost efficient operations.

At present, a single aggregate measure of financial stability has not yet been developed for the Philippines although there are ongoing efforts to develop a single measure that could indicate the degree of financial fragility or stress. Thus far, what the BSP has developed is the Philippine Financial Stress Index (PFSI), which measures the degree of financial stress in the financial system.[9] However, this was designed mainly to help policymakers identify episodes of turmoil and financial market stress as they occur in the economy. Because it is a contemporaneous measure, the PFSI is limited to capturing increased financial

9. The PFSI was constructed using the principal components analysis (PCA), which extracts the factors responsible for the co-movement of a group of variables. This method assumes that financial stress is the primary factor influencing this co-movement, and by extracting this factor (the first principal component), provides an index that would measure financial stress.

stress during crisis periods, and is less suited to be used as an early-warning indicator of a financial crisis, i.e., it is not expected to help predict potential stress or future crises. At any rate, since the significant spike in October 2008 to March 2009, the PFSI trend has declined, showing that financial stress levels that are currently near the historical average.[10]

4. Assessment of Current PSS Framework

4.1 Compliance with BIS' 10 Core Principles for Systemically Important Payment Systems (CPSIPS)

In ensuring a safe, sound and efficient payments system, the *PhilPaSS* adheres to the 10 Core Principles for Systematically Important Payment System (SIPS) developed by the Committee on Payment and Settlement Systems (CPSS) of the *CB*s of the Group of 10 countries.

In 2005, the IMF published a report on an assessment it made on the country's observance of international standards and codes on payment systems which was completed on 16 September 2002. However, this was before the introduction of the *PhilPaSS* in December 2002 and many of the findings/issues identified in the report have since been addressed.

In July 2007, the PSO conducted a self-assessment of its compliance with the core principles. The table below shows the results of the self-assessment on the *PhilPaSS* compliance, using the assessment rating mentioned below the table. The results disclosed that eight of the 10 core principles are observed by the *PhilPaSS*, i.e., all of the assessment criteria of the eight principles are generally met without any significant deficiencies.

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10. A PFSI of more than 2 SDs would mean that financial stress is high enough to require policy attention. A positive PFSI indicates that financial stress is above the historical average, while a negative value signifies that financial stress is below the historical average of zero.

Figure 9
Results of the BSP-PSO's Assessment of *PhilPaSS* Compliance with the Core Principles

Core Principles	*Compliance*
1. The system should have a well-founded legal basis under all relevant jurisdictions.	Partially Observed
2. The system's rules & procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it.	Observed
3. The system should have clearly defined procedures for the management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.	Observed
4. The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.	Observed
5. A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation	Not applicable (to an RTGS System like *PhilPaSS*)
6. Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.	Observed

Results of the BSP-PSO's Assessment of *PhilPaSS* Compliance with the Core Principles

Core Principles	*Compliance*
7. The system should ensure a high degree of security and operational reliability and contingency arrangements for timely completion of daily processing	Observed
8. The system should provide a means of making payments which is practical for its users and efficient for the economy	Observed
9. The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.	Observed
10. The system's governance arrangements should be effective, accountable and transparent	Observed

Notes:

Observed – when all assessment criteria are generally met without any significant deficiencies.
Broadly Observed – when only minor shortcomings are found, which do not raise major concerns and when corrective actions to achieve full observance of the Principles are scheduled and realistically achievable within a prescribed period of time.
Partially Observed – when shortcomings are sufficient to raise doubts about the ability to achieve observance within a reasonable time frame.
Not Observed – when major shortcomings are found in adhering to the assessment criteria.
Not applicable – when it does not apply given the structural, legal and institutional conditions.

However, for the two other core principles, CP1 and CP5, the status of compliance are as follows:

Core Principle No. 1 - that the payment system should have a well founded legal basis, is only <u>*partially observed*</u> *pending the enactment of the Payments and Settlements System Act with the house of Congress.*

Since safe and efficient payments is defined as the third pillar of central banking, it is imperative for the Philippines to have a payment system that is supported by a well founded legal basis. However, the regulation of payment system in the Philippines is still in a developmental stage due to lack of a legal framework that will govern or give the BSP the oversight authority and policies over the operations of payment systems in the country. Pending the enactment of the appropriate legislation, the responsibilities of the parties to a payment and settlement system are fragmented and found in various laws and agreements, as follows:

i) **The New Central Bank Act (RA 7653)** – the law that provides the BSP regulatory power in areas of money banking and credit. Pertinent provisions related to payment and settlements can be found in selected sections of the Act. For instance, Section 3 of the Act provides the BSP the supervisory powers over the operations of banks. However, the provisions in the Act are not adequate to provide the BSP with oversight power over payments systems that it does not operate.

Considering the BSP's mandate to promote and maintain monetary and banking stability, it is logical that the oversight function of the payment system be vested upon the BSP. Under R. A. No. 7653, however, the function of the BSP in helping to establish a stable and financial payment system is merely implied from or incidental to its express responsibilities of supervising banks and promoting and maintaining monetary stability. The provisions in Section 3 are not adequate to provide the BSP with the explicit oversight authority over payments systems that it does not operate. Hence, to address said inadequacy, the BSP crafted amendments to R.A. 7653 in order to include a statement in Section 3 of the Act, to read as – *"it (BSP) shall likewise promote and maintain the stability of the financial and payment systems"*. The amendments have been submitted to the Congress for approval. Likewise, submitted to the Congress for approval is the (draft) Payments Act that will give the BSP the sufficient authority to effectively conduct, monitor, regulate and supervise (oversee) all the payment, clearing and settlement systems in the Philippines.

Section 30 - This contains provisions on payments of obligations of banks/ quasi-banks placed under receivership and liquidation.

Section 60 - Cheques representing demand deposits do not have legal tender power, but a cheque that has been cleared and credited to the account of the creditor shall be equivalent to delivery to the creditor of cash in an amount equal to the amount credited to his account.

Section 102 - Empowers the BSP to establish interbank clearing facilities and that the Monetary Board has the authority to prescribe rules and regulations with respect to such operation. This section also indicates that the deposit reserves of banks with the BSP shall serve as basis for the clearing of cheques and settlement of inter-bank transactions, subject to such rules as the Monetary Board may issue with respect to such operations.

ii) **BSP Circulars.** The BSP also issues a series of circulars for PSS rules and regulations.

iii) **Memorandum of Agreements (MOA) and Participation Agreements.** The BSP also entered into memorandum of agreements with payment system operators and participants in order to lay the responsibilities of systems operators/providers, parties and participants in the payment systems, especially those payment systems that interface with the *PhilPaSS* to facilitate settlement of interbank payment transactions.

iv) **Electronic Commerce Act of 2000 (R. A. No. 8792).** This provides electronic settlement among banks. In particular, Paragraph 2, Section 16 states that "electronic transactions made through networking among banks or linkages thereof with other entities or networks, and vice versa shall be deemed consummated upon the actual dispensing of cash or the debit of one account and the corresponding credit to another."

v) **Negotiable Instruments Law (Act No. 2031).** This legislation **c**ontains provisions on how negotiable instruments are issued, drawn and paid.

vi) **General Banking Law of 2000 (R.A. No. 8791).** In particular, Section 59 gives the BSP authority to regulate the electronic transactions of banks.

vii) **Civil Code of the Philippines (R.A. No. 386, as amended).** This contains provisions on obligations and contracts and concurrence and preference of credits.

viii) **The Insolvency Law (Act No 1956, as amended).** This law intends to cover the entire subject of insolvency and bankruptcy.

> *Core Principle No. 5 - regarding multilateral netting; <u>is not applicable</u> to real time gross settlement (RTGS) systems like the PhilPaSS, since these systems do not defer settlement but settle transactions as they come, depending on available balance of banks' Demand Deposit Account (DDA).*

This principle in not applicable because in the RTGS systems, like the *PhilPaSS*, the settlement is not deferred but settled as they come, depending on the available balances of the DDAs involved.

4.2 Compliance with CPSS-BIS Principles for Financial Market Infrastructures (FMI)

To enhance safety and efficiency in payment, clearing, settlement, and recording arrangements, and more broadly, to limit systemic risk and foster transparency and financial stability, the Committee on Payment and Settlement Systems (CPSS) and the International Organisation of Securities Commissions (IOSCO) issued new and more demanding international standards for payment, clearing and settlement systems, including central counterparties, in a report titled Principles for Financial Market Infrastructures (FMI) last April 2012. This report replaces the previous three sets of standards for these FMIs issued from 2001 to 2004, namely, the Core Principles (CPSS, 2001); the Recommendations for Securities Settlement Systems (CPSS-IOSCO, 2001); and the Recommendations for Central Counterparties (CPSS-IOSCO, 2004). Under the new principles, the CPSS and IOSCO have strengthened and harmonised these three sets of standards by raising the minimum requirements, providing more detailed guidance and broadening the scope of the standards to cover new risk-management areas and new types of FMIs.[11] (See Appendix B for the summary of the 24 FMI principles)

The FMI is defined as a multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.

The definition of an FMI includes five key types of FMIs: payment systems, CSDs, SSSs, and TRs. From the 24 principles/standards for FMIs published by the CPSS-IOSCO, only 18 principles are applicable to payment system.

The G20 countries have committed to gradually adopt new standards in compliance with the FMI principles before the end of year 2012. However, for Asian and developing countries like the Philippines, wherein regulation for payment systems, CSDs, SSSs and TRs are done by different regulatory bodies, compliance to the FMI principles needs more time. The regulatory bodies still need to consolidate and cooperate to establish a framework for the implementation of the FMI principle.

In the case of the Philippines, the BSP will initiate a move to meet with the Philippine Deposit Insurance Corporation, Philippine Insurance Commission, Securities and Exchange Commission, and Department of Finance to discuss the following: (a) FMI principles; (b) the assessment methodology for its compliance; (c) the responsibilities of each authorities/regulators as embodied in the said principles; and (d) framework on how to implement the principles.

Nevertheless, the authors attempt to make a personal assessment on the *PhilPaSS* compliance with the 19 FMI principles affecting payment system. The results of personal assessments are as follows:

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	COMPLIANCE
1. Legal Basis	**Partially observed**

Same as in CPSS Principle 1. Pending approval of the amendment to R.A.7653, the Central Bank Act and the Payments Act by the Congress, the current legal framework supporting PSS are not fit enough to strengthen BSP oversight/authority functions on all core payment arrangements and payment system providers. As stated by the IMF in its MFD Report on Payment Systems dated 29 July 2005, the BSP's current payment system law is fragmented and is contained in a series of rules and regulations issued by means of circulars.

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	COMPLIANCE
2. Governance	**Observed**

Same as in CPSS Principle 10. The issuance of MB Resolution No. 847.A approving the payments and settlements organisation set-up affirmed and strengthened the governance arrangement of the BSP's payment system. The objective of ensuring safety and efficiency of the PSS is clearly defined and is consistently achieved for the past 10 years since the *PhilPaSS* is implemented. The rules and regulations, roles, responsibilities and accountabilities of the members/participants in the payment system are embodied in the MOA and Participation Agreement entered into by and between BSP and the participants. Likewise, the PhilPaSS being subject to the audit of both the BSP's Internal Audit Office and Commission on Audit, reflects transparency of its governance arrangement.

3. Framework for Comprehensive Management of Risks	**Observed**

Same as in CPSS 3. The BSP has adapted certain measures/strategies to mitigate risks associated with credit, liquidity, settlement, operational and legal risks. (as discussed in Section 3.4 of this paper)

4. Credit Risk	**Observed**
5. Collateral	**Observed**
6. Margin	**Not Applicable in PS**

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	COMPLIANCE

7. Liquidity Risk **Observed**

FMI principles No. 4, 5 and 7 are similar to CPSS Principle 3. Settlement in the *PhilPaSS* are on trade-for-trade basis and with finality subject to available the DDA balance. The intraday liquidity tool provided by the BSP is covered by adequate government securities as collateral. Likewise, the *PhilPaSS* has built-in security features (i.e. DDA balance monitoring, queuing and prioritisation mechanism, and gridlock resolution) which can be used by the participants to manage their resources to prevent credit and liquidity risk.

8. Settlement Finality **Observed**

Same as in CPSS 4. Transactions are settled with finality on same day as soon as the payment instructions are entered in the system. Its average time of settlement is 5 seconds. Payment instructions that were not settled on the day it is sent, due to some reasons, will be settled on the following day in the morning before opening of business day, value dated on the day it is sent.

9. Money Settlement **Observed**

Same as in CPSS 6. In the *PhilPaSS*, money used for settlement is through the bank's demand deposit account maintained with the BSP.

10. Physical Deliveries **Not Applicable in PS**

11. Central Securities Depositories **Not Applicable in PS**

12. Exchange-of-value Settlement Systems **Observed**

FX transactions are settled in the *PhilPaSS* via PvP, in which the peso leg is settled first in the *PhilPaSS*, and the USD leg with Citibank as the USD settlement bank. For GS transactions, it is settled in the *PhilPaSS* via DvP. Both FX and GS transactions are settled with finality on gross basis. The time lag between the confirmation of settlement of the FX currency leg and the Peso leg does not exceed one hour.

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	COMPLIANCE

13. Participant-default Rules and Procedures **Observed**

Same as in CPSS 2. The rules and regulations, roles, responsibilities and accountabilities of the members/participants in the payment system are embodied in the MOA and Participation Agreement entered into by and between the BSP and the participants. Likewise, the rules and procedures for availment of the BSP liquidity tools by the participants to cover their losses are clearly defined.

14. Segregation and Portability **Not Applicable in PS**

15. General Business Risk **Broadly Observed**

Same as in CPSS 7. The BSP continues to keep itself abreast with the latest trends in technology and standards as well as to be vigilant in the proper management of the various risks that affect the operations of the system. The built-in security controls on transaction validation, transaction verification, audit trails, queuing and prioritisation mechanism and gridlock resolution features ensure that the *PhilPaSS* operations are carried out with the highest degree of integrity and reliability. A well defined and tested contingency arrangement is in place for the timely completion of daily processing in case of disasters, power outages, and swift inoperability.

16. Custody and Investment Risk **Observed**

The settlement assets of the participants are deposited in the demand deposit accounts, which are maintained with the BSP, the central monetary authority and operator of the *PhilPaSS*. The participants can access on line anytime the balance and movement of their demand deposit account.

17. Operational Risk **Broadly Observed**

Same as in CPSS 7, with adequate COB plans in placed. BSP recognises that the *PhilPaSS* operations are critically important, hence, business contingency measures are observed. The *PhilPaSS* has two back-up equipment and off-site locations that can be made operational in case the primary site is inoperable.

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	COMPLIANCE

18. Access and Participation Requirements **Observed**

Same as in CPSS 9. The requirements for participation in the *PhilPaSS,* the forms and other supporting documents that need to be submitted and other relevant information are published in the BSP Website. A copy of the *PhilPaSS* rules and regulations is provided with the participants for its guidance and reference.

19. Tiered Participation Agreements **Broadly Observed**

Same as in CPSS 2,3 and 9. Third-party system providers interfacing with the *PhilPaSS* are covered by MOA and PA that stipulate the rules, procedures and accountabilities that are required to be observed and complied with.

20. FMI links **Not Applicable in PS**

21. Efficiency and Effectiveness **Observed**

Same as in CPSS 8. The *PhilPaSS* operates efficiently, providing high-quality and practical services to its participants. Complaints, if any, and other queries are immediately acted upon to ensure efficiency and effectiveness of services extended to them.

22. Communication Procedure and Standards **Observed**

The SWIFT network is used as the standard messaging facility for the participants to transmit electronically their financial transactions to their counterparties. The BSP, through its IT sector, also developed a front-end system to enable non-SWIFT member banks transmit their financial transactions to their counterparties through the *PhilPaSS*. Likewise, the BSP has recently purchased a Participant Browser, a web-based facility from LOGICA to further improve communication procedure and standards.

Figure 10
***PhilPass* Compliance with FMI Principles**

FMI PRINCIPLES	**COMPLIANCE**
23. Disclosure of Rules, Key Procedures and Market Data	**Observed**

Same as in CPSS 2,3,9. The requirements for admission of participants are published in the BSP website, including the required fees and forms that should be accomplished and submitted to the BSP for evaluation. The roles of the participants and the institutions where the participant is affiliated is also indicated in the website. Participants in the *PhilPaSS* are provided with a copy of the memorandum of agreement and participation agreement, enumerating the rules and regulations governing the *PhilPaSS.*

24. Disclosure of Market Data by Trade Repositories	**Not Applicable in PS**

5. Policy Implications

The self-assessment undertaken by the BSP in 2007 revealed that specific oversight responsibilities and central bank powers over payment system operators are unclear. Specifically, the BSP does not have a strong legal underpinning since, under R. A. No. 7653, its function in helping to establish a stable and financial payment system is merely implied from or incidental to its expressed responsibilities of supervising banks and promoting and maintaining monetary stability. The provisions in Section 3 of the New Central Bank Act or the BSP charter are not adequate to provide the BSP with the explicit oversight authority over payments systems that it does not operate. Without a formal mandate that explicitly gives the BSP the power to oversee the PSS in the country, there is a higher risk of disruptions in the payment systems, which can result in the inefficient use of financial resources, inequitable risk-sharing among agents, financial losses to market participants and, eventually, a loss of confidence in the financial system as a whole. Hence, to address the said inadequacy, the BSP crafted amendments to R.A. No. 7653 in order to include a statement in Section 3 of the Act, to read as – *"it (BSP) shall likewise promote and maintain the stability of the financial and payment systems"*. The amendments have been submitted to the Congress for approval.

In addition to the proposed BSP charter amendment, a Payments and Settlement System Act has also been drafted to give the BSP the necessary authority to effectively conduct, monitor, regulate and supervise (oversee) all the payment, clearing and settlement systems in the Philippines. In particular, the proposed legislation will provide the legal and regulatory framework for PSS and define the rights and obligations of the system operators, participants and regulators. This legal framework is critical to proper risk management of the system and will ensure the safety and soundness thereof, particularly during times of financial stress. While the BSP exercises regulation over the payment systems provided by banks and financial institutions under its supervision, the development of technology introduced means payment and settlement services can be provided by entities outside the BSP's jurisdiction, such as paypal and mobile payment systems. The non-regulation of these systems poses a great risk to the stability of the financial system. Under the proposed Act, the BSP shall exercise oversight and supervision over all activities of the payment and settlement systems. The proposed bill was drafted by the BSP and was submitted for sponsorship in the 15th Congress of the House of Representatives. To date, no counterpart bill on the same subject has been filed in the Senate of the Philippines.

In addition to these proposed legislative actions, the BSP's roadmap for a stable and efficient PSS will have it pursuing the following strategies:

- Explore and implement the appropriate available technologies to improve the extent of the *PhilPaSS*' delivery of services to both internal (departments/offices) and external (banks) clients in order to achieve a faster, more efficient, secure and reliable system that will address the needs of its users.

- Expand the use of electronic payments services for both retail and large value payments systems to all user groups. This will involve making electronic retail payment systems accessible to individual consumers and of the *PhilPaSS* to all banks and financial institutions maintaining DDA with the BSP, including banks' branches and regional offices, all ATM Network operators, and other payment systems systemically settling outside of central bank money.

- Encourage business and governmental institutions to settle their payments via the *PhilPaSS*. Large business entities using high volume cheque payments as well as government agencies' payments to suppliers and third parties will be the targeted participants in the settlement operations of the *PhilPaSS*.

- Coordinate with the PSE for the settlement of trades in the *PhilPaSS*.

- Develop and continuously enhance the payments system risk monitoring and management measures in order to mitigate the risks and lessen their impact on the payment systems. Ensuring efficient liquidity management for all players of the payments system will promote the smooth operation of the payments system; thus, will increase public confidence in financial systems and institutions in the economy.

- Improve payment system oversight measures in order to ensure safe and reliable payment systems that are efficient and in accordance with local and international standards.

- Continue its study to improve the efficiency of the existing cheque processing and clearing operations through the introduction of the Cheque Truncation Technology and set up limits on the use of cheques as payment. So far, the BSP has already drafted a law on cheque truncation, specifying the standard requirements and features of cheques that will be subject for truncation. This was submitted to Congress for approval.

6. Conclusion

The Philippine PSS remains a work-in-progress, continuously evolving to take into account the challenges posed by new technologies that enable financial innovation and the increasing integration of the world economy. The resilience of the PSS infrastructure, despite new operational and financial shocks, is vital to the BSP's successful pursuit of monetary and financial stability. This is why the evolution of international standards and best practices as detailed in the old Core Principles and the new FMI Principles is of great interest to central banks, particularly those who operate payment systems themselves like the BSP.

In relation to the 10 core principles and the 19 FMI principles affecting payment systems, the BSP recognises the fact that the Philippine PSS only partially complies with the CP-1 or the FMI-1 on having a well-founded legal basis. To address this inadequacy, the BSP drafted amendments to its charter and submitted the said draft amendment to the Congress for approval. Moreover, as noted in the previous section, a Payments and Settlement System Act has also been drafted to provide the legal and regulatory framework for PSS and define the rights and obligations of the system operators, participants and regulators like the BSP.

Going forward, the BSP will continue to work towards ensuring the continued stability, efficiency, and reliability of the country's PSS in recognition of the pivotal role it plays in the smooth functioning of the financial system and the economy as a whole.

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Table 1- BSP Policy Rates*/ and Reserve Requirement Ratio (RRR)
(in percent)

Period	2001 RRP	2001 RRR	2002 RRP	2002 RRR	2003 RRP	2003 RRR	2004 RRP	2004 RRR	2005 RRP	2005 RRR	2006 RRP	2006 RRR
January	12,00	16,00	7,50	16,00	7,00	16,00	6,75	17,00	6,75	19,00	7,50	21,00
February	11,00	16,00	7,25	16,00	7,00	16,00	6,75	19,00	6,75	19,00	7,50	21,00
March	10,00	16,00	7,00	16,00	7,00	17,00	6,75	19,00	6,75	19,00	7,50	21,00
April	9,50	16,00	7,00	16,00	7,00	17,00	6,75	19,00	7,00	19,00	7,50	21,00
May	9,00	16,00	7,00	16,00	7,00	17,00	6,75	19,00	7,00	19,00	7,50	21,00
June	9,00	16,00	7,00	16,00	7,00	17,00	6,75	19,00	7,00	19,00	7,50	21,00
July	9,00	18,00	7,00	16,00	6,75	17,00	6,75	19,00	7,00	21,00	7,50	21,00
August	9,00	20,00	7,00	16,00	6,75	17,00	6,75	19,00	7,00	21,00	7,50	21,00
September	9,00	20,00	7,00	16,00	6,75	17,00	6,75	19,00	7,25	21,00	7,50	21,00
October	8,75	20,00	7,00	16,00	6,75	17,00	6,75	19,00	7,50	21,00	7,50	21,00
November	8,25	20,00	7,00	16,00	6,75	17,00	6,75	19,00	7,50	21,00	7,50	21,00
December	7,75	18,00	7,00	16,00	6,75	17,00	6,75	19,00	7,50	21,00	7,50	21,00

Period	2007 RRP	2007 RRR	2008 RRP	2008 RRR	2009 RRP	2009 RRR	2010 RRP	2010 RRR	2011 RRP	2011 RRR	2012 RRP	2012 RRR
January	7,50	21,00	5,00	21,00	5,00	19,00	4,00	19,00	4,00	19,00	4,25	21,00
February	7,50	21,00	5,00	21,00	5,00	19,00	4,00	19,00	4,00	19,00	4,25	21,00
March	7,50	21,00	5,00	21,00	4,75	19,00	4,00	19,00	4,25	19,00	4,00	21,00
April	7,50	21,00	5,00	21,00	4,50	19,00	4,00	19,00	4,25	19,00	4,00	18,00
May	7,50	21,00	5,00	21,00	4,25	19,00	4,00	19,00	4,50	19,00	4,00	18,00
June	7,50	21,00	5,25	21,00	4,25	19,00	4,00	19,00	4,50	20,00	4,00	18,00
July	6,00	21,00	5,75	21,00	4,00	19,00	4,00	19,00	4,50	20,00	3,75	18,00
August	6,00	21,00	6,00	21,00	4,00	19,00	4,00	19,00	4,50	21,00		
September	6,00	21,00	6,00	21,00	4,00	19,00	4,00	19,00	4,50	21,00		
October	5,75	21,00	6,00	21,00	4,00	19,00	4,00	19,00	4,50	21,00		
November	5,50	21,00	6,00	19,00	4,00	19,00	4,00	19,00	4,50	21,00		
December	5,25	21,00	5,50	19,00	4,00	19,00	4,00	19,00	4,50	21,00		

**/ Overnight RRP Rate*
Source: BSP-Advisory Committee Technical Secretariat

Table 2 - Number of PhilPaSS Participants
By type of institution

Type of Institutions	2004	2005	2006	2007	2008	2009	2010	2011
Commercial Banks	39	39	37	35	35	35	35	35
Specialized Government Banks	3	3	3	3	3	3	3	3
Thrift/Savings Banks	45	39	40	38	36	38	39	42
Rural Banks	1	1	1	1	1	11	25	30
Non-Bank with Quasi Banking Functions	9	10	11	10	10	12	13	14
Third Party System Providers	4	4	4	4	4	4	4	5
Others:								
BSP Departments/Offices		2	2	2	3	3	3	4
Bureau of Treasury								1
PDTC					2	2	2	2
Total	101	98	98	93	94	108	124	136

Source: BSP-PSO

Table 3 - Annual PhilPaSS Transactions

Period	Volume of Transactions	Value of Transactions			Annual Growth Rate (%)	
		Total (P trillion)	Ave. Daily (P trillion)	Ave Daily as % to GDP	Volume	Value
2003	160,207	33.24	0.13	2.96	-	-
2004	259,221	33.64	0.14	2.66	61.8	1.2
2005	368,138	53.92	0.22	3.86	42.0	60.3
2006	439,028	121.98	0.49	7.87	19.3	126.2
2007	491,584	187.13	0.77	11.13	12.0	53.4
2008	679,571	223.01	0.91	11.74	38.2	19.2
2009	749,591	188.48	0.78	9.66	10.3	-15.5
2010	916,304	206.61	0.85	9.40	22.2	9.6
2011	1,214,995	312.61	1.26	12.95	32.6	51.3

Source: BSP-Payments and Settlements Office (PSO)

Table 4a - PhilPaSS Volume of Transactions
2003 -2011

Type of Transaction	Level								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bank Initiated Transactions:	95,272	94,874	109,057	133,943	166,055	205,472	242,547	403,416	652,298
interbank	95,272	68,296	72,907	97,339	129,876	168,931	203,365	252,677	294,574
bank cash withdrawal w/ BSP via ECWS	-	-	-	3,517	4,413	5,167	5,041	4,798	5,280
Bank's Taxes/Customs Duties Collections via EFTIS	-	26,578	36,150	33,087	31,766	31,374	34,141	33,305	31,603
Bank's OF Remittances via PhilPaSS REMIT	-	-	-	-	-	-	-	112,636	320,841
Transactions sent via Third Party Service Providers:	64,935	164,347	259,081	285,621	279,052	305,015	319,676	340,436	314,720
BTr/Bank to Bank GS Transactions via DvP	-	1,665	17,034	24,320	20,798	20,063	21,114	34,787	29,036
Megalink - ATM Network Funds	12,604	42,120	47,353	39,655	34,430	35,233	28,137	18,695	14,440
Bancnet - ATM Network Funds	-	-	-	-	-	-	-	-	1,435
PCHC - Check clearing results	48,122	54,349	64,282	69,915	67,749	66,613	65,014	63,094	53,099
PDS $ Trade Settlements via PvP	4,209	66,213	130,412	151,731	156,075	173,957	192,791	208,741	206,635
PDS Person to Person GS Trades via eDvP	-	-	-	-	-	9,026	12,315	14,313	9,850
PDS Interbank repo transactions	-	-	-	-	-	123	305	806	225
BSP Departments Initiated Transactions:	0	0	0	19,464	46,477	169,084	187,368	172,452	174,569
Treasury investments of TD	-	-	-	19,464	46,364	62,581	38,275	38,582	40,412
e-Rediscounting of DLC	-	-	-	-	113	460	774	1,282	1,215
Supervisory Fees of SES	-	-	-	-	-	86	189	102	121
bank cash deposits w/ BSP with CD	-	-	-	-	-	400	8,973	10,397	12,009
bank's availment of Intraday Liquidity Facility	-	-	-	-	-	8	6	136	398
cFAS of FAD	-	-	-	-	-	105,549	139,151	121,953	120,414
Total	160,207	259,221	368,138	439,028	491,584	679,571	749,591	916,304	1,141,587

Type of Transaction	Growth Rate (%)								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bank Initiated Transactions:	-	-0.4	14.9	22.8	24.0	23.7	18.0	66.3	61.7
interbank	-	-28.3	6.8	33.5	33.4	30.1	20.4	24.2	16.6
bank cash withdrawal w/ BSP via ECWS	-	-	-	-	25.5	17.1	-2.4	-4.8	10.0
Bank's Taxes/Customs Duties Collections via EFTIS	-	-	36.0	-8.5	-4.0	-1.2	8.8	-2.4	-5.1
Bank's OF Remittances via PhilPaSS REMIT	-	-	-	-	-	-	-	-	184.8
Transactions sent via Third Party Service Providers:	-	153.1	57.6	10.2	-2.3	9.3	4.8	6.5	-7.6
BTr/Bank to Bank GS Transactions via DvP	-	-	923.1	42.8	-14.5	-3.5	5.2	64.8	-16.5
Megalink - ATM Network Funds	-	234.2	12.4	-16.3	-13.2	2.3	-20.1	-33.6	-22.8
Bancnet - ATM Network Funds	-	-	-	-	-	-	-	-	-
PCHC - Check clearing results	-	12.9	18.3	8.8	-3.1	-1.7	-2.4	-3.0	-15.8
PDS $ Trade Settlements via PvP	-	1473.1	97.0	16.3	2.9	11.5	10.8	8.3	-1.0
PDS Person to Person GS Trades via eDvP	-	-	-	-	-	-	36.4	16.2	-31.2
PDS Interbank repo transactions	-	-	-	-	-	-	148.0	164.3	-72.1
BSP Departments Initiated Transactions:									
Treasury investments of TD	-	-	-	-	138.2	35.0	-38.8	0.8	4.7
e-Rediscounting of DLC	-	-	-	-	-	307.1	68.3	65.6	-5.2
Supervisory Fees of SES	-	-	-	-	-	-	119.8	-46.0	18.6
bank cash deposits w/ BSP with CD	-	-	-	-	-	-	2143.3	15.9	15.5
bank's availment of Intraday Liquidity Facility	-	-	-	-	-	-	-25.0	2166.7	192.6
cFAS of FAD		-	-	-	-	-	31.8	-12.4	-1.3
Total	-	61.8	42.0	19.3	12.0	38.2	10.3	22.2	24.6

Source: BSP-PSO

Table 4b - PhilPaSS Value of Transactions
2003 -2011

Type of Transaction	Level (Php)								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bank Initiated Transactions:	29,969,536,424,658	24,639,640,310,240	37,616,529,169,930	59,693,840,199,151	86,446,614,073,341	95,059,242,529,073	73,708,039,454,386	78,434,119,020,547	108,863,912,594,300
interbank	29,969,536,424,658	23,885,489,200,144	36,459,806,965,335	58,094,781,770,333	84,320,955,043,058	92,477,245,307,155	71,345,724,252,009	76,449,156,125,857	107,254,657,859,871
bank cash withdrawal w/ BSP via ECWS	-	-	-	284,652,092,500	379,928,333,600	385,517,614,250	353,949,367,500	405,321,407,200	473,062,660,550
Bank's Taxes/Customs Duties Collections via EFTIS	-	754,151,110,096	1,156,722,204,595	1,314,406,336,318	1,745,730,696,683	2,196,479,607,669	2,008,365,834,877	1,575,637,988,760	1,123,563,032,342
Bank's OF Remittances via PhilPaSS REMIT	-	-	-	-	-	-	-	4,003,498,731	12,629,041,537
Transactions sent via Third Party Service Providers:	3,267,069,036,055	8,997,051,247,719	16,304,859,597,779	24,078,859,208,691	32,817,341,525,482	35,078,759,666,506	38,656,687,164,971	46,513,315,836,700	42,408,391,109,711
BTr/Bank to Bank GS Transactions via DvP	-	83,599,074,965	1,038,567,446,162	1,681,353,242,842	1,909,527,854,715	1,674,172,452,957	1,942,865,223,101	4,692,379,739,856	3,586,151,256,202
Megalink - ATM Network Funds	5,547,738,335	42,794,456,136	57,217,962,015	62,437,111,981	90,432,018,140	91,130,637,900	89,605,653,420	93,801,305,079	94,849,485,003
Bancnet - ATM Network Funds	-	-	-	-	-	-	-	-	42,548,832,176
PCHC - Check clearing results	2,893,453,648,013	3,384,840,217,065	3,770,248,138,940	2,672,698,784,898	3,378,180,041,968	3,057,916,368,006	3,209,409,112,788	3,420,253,824,210	3,697,672,954,755
PDS $ Trade Settlements via PvP	368,067,649,707	5,485,817,499,553	11,438,826,050,663	19,662,370,068,971	27,439,201,610,659	30,064,427,455,160	32,946,312,373,075	37,824,099,097,193	34,593,274,132,795
PDS Person to Person GS Trades via eDvP						177,088,723,353	378,139,061,103	404,630,029,421	369,006,444,989
PDS Interbank repo transactions						14,024,029,129	90,355,741,484	78,151,840,942	24,888,003,791
BSP Departments Initiated Transactions:	0	0	0	38,204,561,069,038	67,862,842,289,013	92,873,157,873,056	76,116,775,268,540	81,665,930,954,091	161,334,061,099,514
Treasury investments of TD				38,204,561,069,038	67,862,775,959,513	92,466,486,306,399	75,611,127,005,585	81,053,677,030,174	152,938,375,600,886
e-Rediscounting of DLC					66,329,500	346,974,900	793,051,100	1,327,183,500	1,068,777,300
Supervisory Fees of SES						1,728,816,949	3,807,013,842	1,601,816,116	2,493,395,536
bank cash deposits w/ BSP with CD						12,549,775,000	311,743,447,950	390,488,370,500	431,707,496,060
bank's availment of Intraday Liquidity Facility						4,428,998,254	5,760,368,618	94,271,102,254	97,359,167,989
cFAS of FAD						387,617,001,553	183,544,381,445	124,565,451,547	7,863,056,661,743
Total	33,236,605,460,713	33,636,691,557,959	53,921,388,767,709	121,977,260,476,880	187,126,797,887,836	223,011,160,068,636	188,481,501,887,897	206,613,365,811,337	312,606,364,803,526

Type of Transaction	Growth Rate (%)								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bank Initiated Transactions:	-	-17.8	52.7	58.7	44.8	10.0	-22.5	6.4	38.8
interbank	-	-20.3	52.6	59.3	45.1	9.7	-22.9	7.2	40.3
bank cash withdrawal w/ BSP via ECWS	-	-	-	-	33.5	1.5	-8.2	14.5	16.7
Bank's Taxes/Customs Duties Collections via EFTIS	-	-	53.4	13.6	32.8	25.8	-8.6	-21.5	-28.7
Bank's OF Remittances via PhilPaSS REMIT	-	-	-	-	-	-	-	-	215.5
Transactions sent via Third Party Service Providers:	-	175.4	81.2	47.7	36.3	6.9	10.2	20.3	-8.8
BTr/Bank to Bank GS Transactions via DvP	-	-	1142.3	61.9	13.6	-12.3	16.0	141.5	-23.6
Megalink - ATM Network Funds	-	671.4	33.7	9.1	44.8	0.8	-1.7	4.7	1.1
Bancnet - ATM Network Funds	-	-	-	-	-	-	-	-	-
PCHC - Check clearing results	-	17.0	11.4	-29.1	26.4	-9.5	5.0	6.6	8.1
PDS $ Trade Settlements via PvP	-	1390.4	108.5	71.9	39.6	9.6	9.6	14.8	-8.5
PDS Person to Person GS Trades via eDvP	-	-	-	-	-	-	113.5	7.0	-8.8
PDS Interbank repo transactions	-	-	-	-	-	-	544.3	-13.5	-68.2
BSP Departments Initiated Transactions:	-	-	-	-	77.6	36.9	-18.0	7.3	97.6
Treasury investments of TD	-	-	-	-	77.6	36.3	-18.2	7.2	88.7
e-Rediscounting of DLC	-	-	-	-	-	423.1	128.6	67.4	-19.5
Supervisory Fees of SES	-	-	-	-	-	-	120.2	-57.9	55.7
bank cash deposits w/ BSP with CD	-	-	-	-	-	-	2384.1	25.3	10.6
bank's availment of Intraday Liquidity Facility	-	-	-	-	-	-	30.1	1536.5	3.3
cFAS of FAD		-	-	-	-	-	-52.6	-32.1	6212.4
Total	-	1.2	60.3	126.2	53.4	19.2	-15.5	9.6	51.3

Source: BSP-PSO

Table 5 - ILF AVAILMENTS
2002-2011

YEAR	Total Number of Availment Transactions	Total Value of ILF Availment (in Php)	As percent of the Total Value of PhilPaSS Transactions (in %)
2002	0	0	-
2003	0	0	-
2004	0	0	-
2005	0	0	-
2006	0	0	-
2007	0	0	-
2008	8	4,428,998,254	0.002
2009	4	5,760,368,618	0.003
2010	136	94,271,102,254	0.046
2011	396	97,359,167,989	0.031

Source: BSP-Financial Accounting Department

Table 6 - OCL AVAILMENTS
2002-2011

YEAR	No. of Banks that Availed	Total Number of Availment Transactions	Total Value of OCL Availment (in Php)	As percent of Total Value of PhilPaSS Transactions (in %)
2002	6	52	615,054,209.20	-
2003	6	116	404,549,214.07	0.00122
2004	4	104	944,106,259.13	0.00281
2005	4	9	89,848,906.31	0.00017
2006	2	3	18,468,494.54	0.00002
2007	0	0	-	-
2008	0	0	-	-
2009	1	1	91,006,264.11	0.00005
2010	0	0	-	-
2011	1	1	49,177,000.00	0.00002

Source: BSP-Financial Accounting Department

Table 7 - Inflation Rates

(2006 = 100)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Average	**5.3**	**2.7**	**2.3**	**4.8**	**6.5**	**5.5**	**2.9**	**8.3**	**4.1**	**3.9**	**4.6**
January	5.8	3.3	1.9	2.9	7.3	5.9	3.8	4.6	7.1	3.9	4.0
February	5.8	2.9	2.3	2.9	7.3	6.5	2.9	5.1	7.2	3.9	4.7
March	5.8	3.3	2.1	3.1	7.1	6.6	2.6	5.9	6.5	3.9	4.9
April	5.5	3.4	2.2	3.2	7.2	6.3	2.6	7.3	5.6	4.0	4.7
May	5.5	3.2	2.2	3.6	7.3	6.0	2.6	8.3	4.4	3.9	4.9
June	5.9	2.6	2.8	4.1	6.7	5.9	2.7	9.4	3.1	3.6	5.2
July	6.0	2.5	2.3	5.5	6.0	5.5	2.9	10.2	2.1	3.8	4.9
August	5.7	2.7	2.2	5.7	6.1	5.2	2.7	10.5	1.7	4.1	4.6
September	5.7	2.5	2.2	6.2	6.0	4.9	2.9	10.1	2.2	3.8	4.7
October	5.2	2.3	2.3	6.3	6.2	4.7	2.9	9.7	2.8	3.3	5.2
November	4.2	2.1	2.4	6.8	6.2	4.2	3.1	9.1	3.6	3.7	4.7
December	3.7	2.1	2.5	7.1	5.9	4.1	3.7	7.7	4.4	3.6	4.2

Note: Monthly inflation rates when averaged do not tally with the annual inflation rates computed from the Consumer Price Index in the Philippines.

Source: National Statistics Office

Table 8 - Philippine Selected Domestic Interest rates

weighted averages in percent per annum

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Treasury Bill Rates												
91 - Day	9.86	9.86	5.43	6.03	7.34	6.36	5.35	3.41	5.39	4.19	3.73	1.37
182 - Day	10.84	11.18	7.83	6.95	8.32	7.67	6.15	4.18	6.19	4.40	3.97	1.69
364 - Day	11.80	11.98	6.82	7.49	9.22	8.68	6.96	4.92	6.49	4.59	4.26	2.26
All Maturities	10.90	11.05	6.04	6.65	8.13	7.53	6.20	4.21	6.36	4.46	4.03	1.87
Time Deposit Rates												
S - T < 360 days	8.03	9.48	5.00	5.25	6.26	5.18	4.93	3.43	4.07	2.68	3.06	2.91
L - T > 360 days	10.49	10.76	9.18	8.03	8.18	6.03	5.01	3.06	3.96	2.50	2.07	2.03
Savings Deposit Rates [1]	7.37	7.52	4.24	4.21	4.26	3.76	3.55	2.20	2.22	2.07	1.60	1.62
Bank Average Lending Rates [2]	10.86	12.40	8.90	9.48	10.07	10.15	9.71	8.68	8.76	8.54	7.67	6.63
Lending Rates [3]												
High	15.57	15.31	10.43	10.75	12.08	11.06	10.15	8.59	9.45	9.25	8.70	7.75
Low	12.87	13.67	8.69	8.92	10.07	9.05	8.30	6.85	7.54	7.31	6.55	5.62
Manila Reference Rates [4]												
60	9.50	9.88	6.19	5.56	7.13	6.19	6.00	4.94	4.44	4.38	4.00	3.81
90	8.81	10.13	6.38	9.75	9.50	8.94	8.13	8.25	7.50	7.31	6.88	6.69
180	9.06	9.56	7.88	8.69	10.44	9.88	9.31	8.63	7.69	7.50	7.00	6.81
All Maturities	9.44	9.88	6.75	7.25	8.13	7.06	6.75	6.19	5.31	5.25	4.81	4.81
RP Rates												
Overnight	14.59	11.31	9.25	9.10	9.00	9.31	9.75	8.00	7.80	6.61	6.00	6.25
Term	14.36	12.52	9.39	9.17	9.08	9.23	9.81	8.40	7.88	6.68	n.t.	n.t.
RRP Rates												
Overnight	10.45	9.72	7.06	6.87	6.75	7.04	7.50	6.77	5.44	4.39	4.00	4.35
Term	10.16	10.19	7.21	6.96	6.84	7.07	7.59	7.19	5.70	4.45	4.10	4.56
Interbank Call Loan Rates	10.64	10.03	7.20	7.01	7.05	7.34	7.81	6.86	5.43	4.81	4.22	4.56
Special Deposit Account Rates	10.14	10.86	7.37	7.07	6.85	7.22	7.78	6.88	5.90	4.59	4.10	4.41
PHIBOR Rates (All Mats.)	12.01	12.41	7.06	8.02	7.92	7.08	7.39	6.36	5.78	4.57	3.83	2.82

[1] Refer to the annual percentage equivalent of commercial banks' actual monthly interest expenses on peso-savings deposits to the total outstanding levels of these deposits.

[2] Monthly rates reflect the annual percentage equivalent of all commercial banks' actual monthly interest income on their peso-denominated loans to the total outstanding levels of their peso-denominated loans, bills discounted, mortgage contract receivables and restructured loans.

[3] Average of all high/low values.

[4] Refer to New MRRs computed based on promissory notes and time deposit transactions of sample commercial banks pursuant to Circular No. 1911 dated 23 November 1988 effective 13

n.t. - No transactions n.i. - No. issue n.a. - Not available

Table 9 - Depository Corporations Survey
as of periods indicated
in million pesos

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. NET FOREIGN ASSETS	**352,800**	**493,102**	**597,668**	**677,664**	**911,651**	**1,366,258**	**1,659,261**	**1,930,644**	**2,419,919**	**2,849,243**	**3,251,134**
A. Bangko Sentral ng Pilipinas	**456,042**	**550,203**	**636,989**	**689,251**	**846,112**	**1,077,033**	**1,364,929**	**1,685,738**	**2,027,592**	**2,710,724**	**3,287,478**
Net International Reserves	587,301	691,632	781,781	819,183	937,032	1,127,726	1,397,378	1,717,014	2,053,768	2,732,391	3,307,099
Foreign Assets	806,643	868,884	948,151	913,110	981,465	1,128,401	1,397,665	1,789,184	2,053,965	2,732,539	3,307,207
Foreign Liabilities	219,342	177,252	166,370	93,927	44,433	675	287	72,170	197	148	108
Medium & Long-Term Foreign Liabilities	131,259	141,429	144,792	129,932	90,920	50,693	32,449	31,276	26,176	21,667	19,621
B. Other Depository Corporations	**-103,242**	**-57,102**	**-39,321**	**-11,587**	**65,539**	**289,225**	**294,332**	**244,906**	**392,327**	**138,519**	**-36,345**
Foreign Assets	390,749	441,106	459,632	563,983	675,756	792,182	746,458	696,311	759,533	690,804	599,087
Foreign Liabilities	493,991	498,207	498,953	575,570	610,217	502,958	452,126	451,405	367,206	552,285	635,431
2. NET DOMESTIC ASSETS	**2,002,526**	**2,067,695**	**2,120,078**	**2,306,673**	**2,299,648**	**2,444,787**	**2,421,539**	**2,738,011**	**2,640,268**	**2,651,665**	**2,494,637**
A. Net Claims on Residents (Net Domestic Credits)	**2,363,068**	**2,478,116**	**2,624,827**	**2,849,197**	**2,804,251**	**3,006,570**	**3,161,647**	**3,691,351**	**3,965,129**	**4,310,447**	**4,945,411**
Net Claims on the Public Sector (Public Sector)	684,344	763,648	862,286	1,000,181	960,179	1,039,651	1,027,410	1,199,165	1,269,483	1,379,769	1,554,354
Claims on Other Sectors (Private Sector)	1,678,724	1,714,469	1,762,542	1,849,016	1,844,072	1,966,919	2,134,237	2,492,186	2,695,646	2,930,678	3,391,056
B. Net Other Items	**-360,542**	**-410,421**	**-504,750**	**-542,524**	**-504,602**	**-561,783**	**-740,108**	**-953,340**	**-1,324,861**	**-1,658,781**	**-2,450,774**
3. LIQUIDITY AGGREGATES (TOTAL LIQUIDITY)	**2,355,327**	**2,560,796**	**2,717,745**	**2,984,338**	**3,211,300**	**3,811,044**	**4,080,800**	**4,668,655**	**5,060,188**	**5,500,908**	**5,745,770**
A. M4	**2,284,823**	**2,489,788**	**2,619,091**	**2,908,006**	**3,126,729**	**3,722,087**	**3,925,410**	**4,610,405**	**4,999,903**	**5,446,777**	**5,680,347**
Broad-Money Liabilities (M3)	1,685,662	1,846,142	1,923,637	2,121,392	2,339,012	2,869,568	3,174,365	3,668,433	3,973,970	4,396,811	4,674,258
Currency Outside Depository Corporations and Transferable Deposits (Narrow Money)	392,133	476,728	517,604	564,841	616,668	768,895	886,040	1,070,833	1,216,918	1,345,935	1,492,404
Other Deposits (Quasi-Money)	1,285,999	1,362,096	1,399,299	1,544,313	1,698,742	2,057,843	2,243,005	2,541,080	2,672,653	2,960,294	3,093,925
Securities Other Than Shares Included in Broad Money (Deposit Substitutes)	7,530	7,318	6,734	12,238	23,602	42,830	45,320	56,521	84,400	90,583	87,929
Transferable and Other Deposits in Foreign Currency (FCD-Residents)	599,161	643,646	695,454	786,614	787,716	852,520	751,045	941,972	1,025,933	1,049,965	1,006,089
B. Liabilities Excluded from Broad-Money (Other Liabilities)	**70,504**	**71,009**	**98,655**	**76,332**	**84,571**	**88,957**	**155,390**	**58,250**	**60,284**	**54,131**	**65,423**

Note: Details may not add up to total due to rounding off.

Table 10 - Loans Outstanding of Universal and Commercial Banks[1]

as of periods indicated

	Levels (in million pesos)											
	2001	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
A. For Production by Economic Activity	1,399,644	1,326,935	1,328,594	1,359,792	1,340,441	1,338,083	1,380,571	1,478,294	1,748,206	1,921,667	2,115,283	2,541,159
1. Agriculture, Hunting & Forestry [2]	65,457	61,603	78,563	86,276	117,871	132,818	150,748	202,087	309,279	333,787	378,551	236,149
2. Fishing	5,394	4,810	4,194	4,772	5,799	5,965	5,774	6,889	3,934	3,460	3,717	5,993
3. Mining and Quarrying	21,166	19,890	14,448	14,111	12,211	11,387	9,683	10,342	6,890	5,237	15,783	25,263
4. Manufacturing	404,224	372,906	379,405	367,538	419,380	412,539	376,824	373,154	392,794	327,010	386,653	510,911
5. Electricity, Gas & Water	75,398	70,359	71,372	64,608	77,123	70,055	75,483	122,534	112,599	144,244	166,602	257,413
6. Construction	46,949	42,151	35,390	36,013	29,890	26,084	25,875	25,204	34,485	25,046	28,943	35,397
7. Wholesale & Retail Trade	201,233	197,889	188,653	190,228	190,537	165,374	183,362	178,879	228,716	239,290	255,491	403,082
8. Transportation, Storage & Communication	91,913	72,967	58,323	63,686	61,320	48,334	50,455	55,542	81,017	150,046	144,695	173,411
9. Financial Intermediation	144,820	133,958	137,278	123,769	51,743	111,407	116,471	153,366	130,560	189,936	193,068	225,599
10. Real Estate, Renting & Bus. Services	214,197	202,746	203,146	214,915	203,484	199,887	221,188	217,208	282,880	317,592	356,267	445,928
11. Public Administration and Defense	13,256	21,913	21,243	31,825	35,403	32,333	41,586	37,810	52,704	66,314	67,420	79,638
12. Education	7,406	8,903	8,564	9,136	10,514	9,269	9,526	9,359	10,341	9,825	9,912	8,785
13. Health and Social Work	5,373	4,179	5,285	5,711	7,286	6,398	6,718	7,084	8,364	10,527	10,630	9,432
14. Other Community, Social & Personal Services	88,180	96,048	106,176	132,035	100,919	93,508	94,226	64,256	72,592	71,131	63,404	87,404
15. Undifferentiated Production Activities of Private Households	0	0	0	0	0	0		0	0	0	0	0
16. Hotels and Restaurants	14,678	16,613	16,554	15,168	16,962	12,726	12,653	14,580	21,051	28,222	34,147	36,756
B. For Household Consumption	22,117	49,545	63,408	69,728	76,355	92,189	114,198	140,330	159,066	176,616	192,329	225,566
1. Credit Card	0	24,835	35,126	40,822	47,069	55,997	72,416	89,545	107,943	114,979	119,755	130,557
2. Auto Loans	7,740	10,101	13,624	14,116	14,116	20,889	24,841	32,189	35,560	45,446	56,603	71,555
3. Others	14,377	14,609	14,658	14,790	15,169	15,303	16,940	18,596	15,563	16,191	15,971	23,454
C. Under RRPs Arrangement	27,780	22,495	40,314	58,178	109,130	109,130	200,518	238,082	230,083	232,157	252,353	224,235
TOTAL LOANS OUTSTANDING (Resident)												
Gross of RRPs	1,449,541	1,398,974	1,432,316	1,487,698	1,525,926	1,539,402	1,695,286	1,856,706	2,137,355	2,330,440	2,559,965	2,990,960
Net of RRPs	1,421,761	1,376,479	1,392,002	1,429,520	1,416,796	1,430,272	1,494,768	1,618,624	1,907,272	2,098,283	2,307,612	2,766,725
D. Non-Resident [3]	1,963	262	347	49	23	4	1	0	43,762	48,454	30,991	23,974
TOTAL LOANS OUTSTANDING (Resident and Non-resident)												
Gross of RRPs	1,451,504	1,399,236	1,432,663	1,487,747	1,525,949	1,539,406	1,695,287	1,856,706	2,181,117	2,378,894	2,590,956	3,014,935
Net of RRPs	1,423,724	1,376,741	1,392,349	1,429,569	1,416,819	1,430,276	1,494,769	1,618,624	1,951,034	2,146,737	2,338,603	2,790,700

[1] The old series (2001-2006) covered all Other Depository Corporations that included, apart from universal/commerical banks, thrift banks and rural banks.
[2] Data may include loans to other sectors integrated with agriculture such as trading of agricultural and fishery products and manufacturing of agri-and fishery-based commodities.
[3] In the old series, loans to nonresidents were lodged together with those of residents and classified according to economic sector. Since the old database did not provide for a separate category on loans to non-residents, the 2007 data of the present series were based on the reports of a few banks which could readily identify and estimate the non-resident account.
Source : Department of Economic Statistics

Table 11a - Gross National Income (GNI) By Industrial Origin

at constant 2000 prices

Item	2004	2005	2006	2007	2008	2009	2010	2011	First Semester 2011	First Semester 2012
					Levels (in million pesos)					
I. Agriculture, Fishery and Forestry	**583,629**	**596,727**	**618,457**	**647,687**	**668,550**	**663,744**	**662,665**	**680,445**	**332,097**	**334,895**
II. Industrial Sector	**1,406,338**	**1,465,272**	**1,532,814**	**1,621,226**	**1,699,171**	**1,666,601**	**1,859,515**	**1,901,401**	**939,717**	**986,119**
A. Mining and Quarrying	37,631	43,624	43,535	51,649	50,926	59,130	65,898	70,509	43,987	40,285
B. Manufacturing	1,011,618	1,062,612	1,106,052	1,145,529	1,194,921	1,137,534	1,264,523	1,324,330	647,409	679,759
C. Construction	198,404	198,154	217,637	249,379	266,751	284,994	325,820	302,014	148,885	159,403
D. Electricity, Gas and Water	158,685	160,882	165,591	174,670	186,572	184,943	203,274	204,547	99,437	106,672
III. Service Sector	**2,286,974**	**2,419,280**	**2,564,959**	**2,759,375**	**2,869,379**	**2,966,895**	**3,179,359**	**3,342,564**	**1,631,111**	**1,759,002**
A. Transportation, Storage and Communication	337,039	360,885	376,398	408,076	423,952	423,398	427,766	446,026	228,501	250,498
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	698,830	740,311	784,443	851,892	863,732	875,616	948,743	980,514	444,280	477,817
C. Financial Intermediation	232,730	257,301	287,793	317,104	322,672	340,329	374,716	394,371	201,783	217,756
D. Real Estate, Renting and Business Activities	392,961	419,523	446,975	482,493	526,116	547,866	588,947	643,459	314,220	340,033
E. Public Administration and Defense; Compulsory Social Security	210,720	212,055	219,563	222,665	227,223	241,009	255,087	255,776	131,948	134,357
F. Other Services	414,694	429,205	449,788	477,145	505,683	538,677	584,100	622,418	310,380	338,540
Gross Domestic Product	**4,276,941**	**4,481,279**	**4,716,231**	**5,028,288**	**5,237,101**	**5,297,240**	**5,701,539**	**5,924,409**	**2,902,926**	**3,080,016**
Net Primary Income	985,406	1,148,645	1,195,082	1,247,725	1,352,909	1,691,527	1,859,847	1,878,607	945,563	974,921
Gross National Income (GNI)	**5,262,348**	**5,629,924**	**5,911,313**	**6,276,013**	**6,590,009**	**6,988,767**	**7,561,386**	**7,803,016**	**3,848,489**	**4,054,938**
Gross National Income (Million U.S. Dollars) [1]	119,074	127,392	133,759	142,011	149,116	158,139	171,096	176,564	87,082	91,754
Per Capita GNI (U.S. Dollars) [1]	1,425	1,494	1,538	1,601	1,648	1,737	1,848	1,875	928	962
					Percent to GNI					
I. Agriculture, Fishery and Forestry	**11.09**	**10.60**	**10.46**	**10.32**	**10.14**	**9.50**	**8.76**	**8.72**	**8.63**	**8.26**
II. Industrial Sector	**26.72**	**26.03**	**25.93**	**25.83**	**25.78**	**23.85**	**24.59**	**24.37**	**24.42**	**24.32**
A. Mining and Quarrying	0.72	0.77	0.74	0.82	0.77	0.85	0.87	0.90	1.14	0.99
B. Manufacturing	19.22	18.87	18.71	18.25	18.13	16.28	16.72	16.97	16.82	16.76
C. Construction	3.77	3.52	3.68	3.97	4.05	4.08	4.31	3.87	3.87	3.93
D. Electricity, Gas and Water	3.02	2.86	2.80	2.78	2.83	2.65	2.69	2.62	2.58	2.63
III. Service Sector	**43.46**	**42.97**	**43.39**	**43.97**	**43.54**	**42.45**	**42.05**	**42.84**	**42.38**	**43.38**
A. Transportation, Storage and Communication	6.40	6.41	6.37	6.50	6.43	6.06	5.66	5.72	5.94	6.18
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	13.28	13.15	13.27	13.57	13.11	12.53	12.55	12.57	11.54	11.78
C. Financial Intermediation	4.42	4.57	4.87	5.05	4.90	4.87	4.96	5.05	5.24	5.37
D. Real Estate, Renting and Business Activities	7.47	7.45	7.56	7.69	7.98	7.84	7.79	8.25	8.16	8.39
E. Public Administration and Defense; Compulsory Social Security	4.00	3.77	3.71	3.55	3.45	3.45	3.37	3.28	3.43	3.31
F. Other Services	7.88	7.62	7.61	7.60	7.67	7.71	7.72	7.98	8.06	8.35
Gross Domestic Product	**81.27**	**79.60**	**79.78**	**80.12**	**79.47**	**75.80**	**75.40**	**75.92**	**75.43**	**75.96**
Net Primary Income	18.73	20.40	20.22	19.88	20.53	24.20	24.60	24.08	24.57	24.04
Gross National Income	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
					Percent to GDP					
I. Agriculture, Fishery and Forestry	**13.65**	**13.32**	**13.11**	**12.88**	**12.77**	**12.53**	**11.62**	**11.49**	**11.44**	**10.87**
II. Industrial Sector	**32.88**	**32.70**	**32.50**	**32.24**	**32.44**	**31.46**	**32.61**	**32.09**	**32.37**	**32.02**
A. Mining and Quarrying	0.88	0.97	0.92	1.03	0.97	1.12	1.16	1.19	1.52	1.31
B. Manufacturing	23.65	23.71	23.45	22.78	22.82	21.47	22.18	22.35	22.30	22.07
C. Construction	4.64	4.42	4.61	4.96	5.09	5.38	5.71	5.10	5.13	5.18
D. Electricity, Gas and Water	3.71	3.59	3.51	3.47	3.56	3.49	3.57	3.45	3.43	3.46
III. Service Sector	**53.47**	**53.99**	**54.39**	**54.88**	**54.79**	**56.01**	**55.76**	**56.42**	**56.19**	**57.11**
A. Transportation, Storage and Communication	7.88	8.05	7.98	8.12	8.10	7.99	7.50	7.53	7.87	8.13
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	16.34	16.52	16.63	16.94	16.49	16.53	16.64	16.55	15.30	15.51
C. Financial Intermediation	5.44	5.74	6.10	6.31	6.16	6.42	6.57	6.66	6.95	7.07
D. Real Estate, Renting and Business Activities	9.19	9.36	9.48	9.60	10.05	10.34	10.33	10.86	10.82	11.04
E. Public Administration and Defense; Compulsory Social Security	4.93	4.73	4.66	4.43	4.34	4.55	4.47	4.32	4.55	4.36
F. Other Services	9.70	9.58	9.54	9.49	9.66	10.17	10.24	10.51	10.69	10.99
Gross Domestic Product	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
					Growth Rates in Percent					
I. Agriculture, Fishery and Forestry	**4.32**	**2.24**	**3.64**	**4.73**	**3.22**	**-0.72**	**-0.16**	**2.68**	**6.26**	**0.84**
II. Industrial Sector	**5.23**	**4.19**	**4.61**	**5.77**	**4.81**	**-1.92**	**11.58**	**2.25**	**2.66**	**4.94**
A. Mining and Quarrying	-4.84	15.93	-0.20	18.64	-1.40	16.11	11.45	7.00	17.35	-8.41
B. Manufacturing	5.24	5.04	4.09	3.57	4.31	-4.80	11.16	4.73	6.92	5.00
C. Construction	5.92	-0.13	9.83	14.58	6.97	6.84	14.33	-7.31	-13.37	7.06
D. Electricity, Gas and Water	7.00	1.38	2.93	5.48	6.81	-0.87	9.91	0.63	-1.05	7.28
III. Service Sector	**8.26**	**5.79**	**6.02**	**7.58**	**3.99**	**3.40**	**7.16**	**5.13**	**4.66**	**7.84**
A. Transportation, Storage and Communication	12.09	7.08	4.30	8.42	3.89	-0.13	1.03	4.27	4.22	9.63
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	7.43	5.94	5.96	8.60	1.39	1.38	8.35	3.35	2.66	7.55
C. Financial Intermediation	7.01	10.56	11.85	10.18	1.76	5.47	10.10	5.25	9.13	7.92
D. Real Estate, Renting and Business Activities	9.57	6.76	6.54	7.95	9.04	4.13	7.50	9.26	7.35	8.21
E. Public Administration and Defense; Compulsory Social Security	7.49	0.63	3.54	1.41	2.05	6.07	5.84	0.27	-2.05	1.83
F. Other Services	6.54	3.50	4.80	6.08	5.98	6.52	8.43	6.56	5.49	9.07
Gross Domestic Product	**6.70**	**4.78**	**5.24**	**6.62**	**4.15**	**1.15**	**7.63**	**3.91**	**4.18**	**6.10**
Net Primary Income	8.99	16.57	4.04	4.40	8.43	25.03	9.95	1.01	-0.64	3.10
Gross National Income	**7.12**	**6.99**	**5.00**	**6.17**	**5.00**	**6.05**	**8.19**	**3.20**	**2.95**	**5.36**
Gross National Income (Million U.S. Dollars)	7.12	6.99	5.00	6.17	5.00	6.05	8.19	3.20	2.95	5.36

Note: Data on Real GDP and its components are based on 2000 prices. The use of terminology Gross National Income (GNI) in place of Gross National Product (GNP) has been adopted in the revised/rebased Philippine System of National Accounts (PSNA) in accordance with the 1993/1998 System of National Accounts prescribed by the United Nations.

[1] Derived by dividing peso value at constant 2000 prices by Pesos/US$1 rate in 2000.

Totals may not add up due to rounding.

Source: National Statistical Coordination Board (NSCB)

Table 11b - GROSS NATIONAL INCOME (GNI) BY EXPENDITURE SHARES

at constant 2000 prices

Item	2004	2005	2006	2007	2008	2009	2010	2011	First Semester 2011	First Semester 2012
Levels (in million pesos)										
I. Personal Consumption Expenditures	3,161,890	3,301,789	3,439,876	3,598,443	3,730,861	3,817,908	3,945,827	4,194,513	2,009,628	2,117,777
II. General Government Consumption Expenditures	408,469	416,869	461,108	492,947	494,370	548,297	570,208	575,824	309,449	347,552
III. Gross Domestic Capital Formation	917,875	945,024	802,113	798,328	984,810	899,333	1,183,650	1,279,682	595,823	517,063
A. Fixed Capital Formation	862,985	883,344	930,966	979,749	1,010,616	992,947	1,182,206	1,184,018	595,052	630,777
B. Changes in Inventories	54,889	61,680	-128,852	-181,421	-25,807	-93,614	1,444	95,664	771	-113,714
IV. Exports of Goods and Services	2,108,406	2,212,822	2,491,585	2,659,711	2,588,548	2,385,812	2,886,133	2,764,877	1,473,640	1,613,913
V. Less: Imports of Goods and Non-Factor Services	2,319,697	2,395,226	2,478,452	2,521,141	2,561,488	2,354,109	2,884,280	2,890,486	1,476,425	1,485,991
VI. Statistical Discrepancy	0	0	0	0	0	0	0	0	-9,189	-30,298
Expenditures on Gross Domestic Product	**4,276,941**	**4,481,279**	**4,716,231**	**5,028,288**	**5,237,101**	**5,297,240**	**5,701,539**	**5,924,409**	**2,902,926**	**3,080,016**
Gross Domestic Product (Million U.S. Dollars) [1]	96,777	101,401	106,717	113,778	118,503	119,864	129,012	134,055	65,686	69,693
Net Primary Income	985,406	1,148,645	1,195,082	1,247,725	1,352,909	1,691,527	1,859,847	1,878,607	945,563	974,921
Expenditures on Gross National Income	**5,262,348**	**5,629,924**	**5,911,313**	**6,276,013**	**6,590,009**	**6,988,767**	**7,561,386**	**7,803,016**	**3,848,489**	**4,054,938**
Gross National Income (Million U.S. Dollars) [1]	119,074	127,392	133,759	142,011	149,116	158,139	171,096	176,564	87,082	91,754
Percent to GNI										
I. Personal Consumption Expenditures	60.09	58.65	58.19	57.34	56.61	54.63	52.18	53.76	52.22	52.23
II. General Government Consumption Expenditures	7.76	7.40	7.80	7.85	7.50	7.85	7.54	7.38	8.04	8.57
III. Gross Domestic Capital Formation	17.44	16.79	13.57	12.72	14.94	12.87	15.65	16.40	15.48	12.75
A. Fixed Capital Formation	16.40	15.69	15.75	15.61	15.34	14.21	15.63	15.17	15.46	15.56
B. Changes in Inventories	1.04	1.10	-2.18	-2.89	-0.39	-1.34	0.02	1.23	0.02	-2.80
IV. Exports of Goods and Services	40.07	39.30	42.15	42.38	39.28	34.14	38.17	35.43	38.29	39.80
V. Less: Imports of Goods and Non-Factor Services	44.08	42.54	41.93	40.17	38.87	33.68	38.14	37.04	38.36	36.65
VI. Statistical Discrepancy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.24	-0.75
Expenditures on Gross Domestic Product	**81.27**	**79.60**	**79.78**	**80.12**	**79.47**	**75.80**	**75.40**	**75.92**	**75.43**	**75.96**
Net Primary Income	18.73	20.40	20.22	19.88	20.53	24.20	24.60	24.08	24.57	24.04
Expenditures on Gross National Income	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Percent to GDP										
I. Personal Consumption Expenditures	73.93	73.68	72.94	71.56	71.24	72.07	69.21	70.80	69.23	68.76
II. General Government Consumption Expenditures	9.55	9.30	9.78	9.80	9.44	10.35	10.00	9.72	10.66	11.28
III. Gross Domestic Capital Formation	21.46	21.09	17.01	15.88	18.80	16.98	20.76	21.60	20.52	16.79
A. Fixed Capital Formation	20.18	19.71	19.74	19.48	19.30	18.74	20.73	19.99	20.50	20.48
B. Changes in Inventories	1.28	1.38	-2.73	-3.61	-0.49	-1.77	0.03	1.61	0.03	-3.69
IV. Exports of Goods and Services	49.30	49.38	52.83	52.89	49.43	45.04	50.62	46.67	50.76	52.40
V. Less: Imports of Goods and Non-Factor Services	54.24	53.45	52.55	50.14	48.91	44.44	50.59	48.79	50.86	48.25
VI. Statistical Discrepancy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.32	-0.98
Expenditures on Gross Domestic Product	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Growth Rates in Percent										
I. Personal Consumption Expenditures	5.97	4.42	4.18	4.61	3.68	2.33	3.35	6.30	5.74	5.38
II. General Government Consumption Expenditures	2.00	2.06	10.61	6.90	0.29	10.91	4.00	0.98	-4.57	12.31
III. Gross Domestic Capital Formation	-2.24	2.96	-15.12	-0.47	23.36	-8.68	31.61	8.11	11.00	-13.22
A. Fixed Capital Formation	2.16	2.36	5.39	5.24	3.15	-1.75	19.06	0.15	1.13	6.00
IV. Exports of Goods and Services	12.76	4.95	12.60	6.75	-2.68	-7.83	20.97	-4.20	1.93	9.52
V. Less: Imports of Goods and Non-Factor Services	6.19	3.26	3.47	1.72	1.60	-8.10	22.52	0.22	4.62	0.65
Expenditures on Gross Domestic Product	**6.70**	**4.78**	**5.24**	**6.62**	**4.15**	**1.15**	**7.63**	**3.91**	**4.18**	**6.10**
Net Primary Income	8.99	16.57	4.04	4.40	8.43	25.03	9.95	1.01	-0.64	3.10
Expenditures on Gross National Income	**7.12**	**6.99**	**5.00**	**6.17**	**5.00**	**6.05**	**8.19**	**3.20**	**2.95**	**5.36**
Gross National Income (Million U.S. Dollars)	7.12	6.99	5.00	6.17	5.00	6.05	8.19	3.20	2.95	5.36

Note: Data on Real GDP and its components are based on 2000 prices. The use of terminology Gross National Income (GNI) in place of Gross National Product (GNP) has been adopted in the revised/rebased Philippine System of National Accounts (PSNA) in accordance with the 1993/1998 System of National Accounts prescribed by the United Nations.

[1] Derived by dividing peso value at constant 2000 prices by Pesos/US$1 rate in 2000.

Totals may not add up due to rounding.

Source: National Statistical Coordination Board (NSCB)

Table 11b - Gross National Income (GNI) By Industrial Origin

at constant 2000 prices

Item	2004	2005	2006	2007	2008	2009	2010	2011	First Semester	
									2011	2012
					Levels (in million pesos)					
I. Agriculture, Fishery and Forestry	**583,629**	**596,727**	**618,457**	**647,687**	**668,550**	**663,744**	**662,665**	**680,445**	**332,097**	**334,895**
II. Industrial Sector	**1,406,338**	**1,465,272**	**1,532,814**	**1,621,226**	**1,699,171**	**1,666,601**	**1,859,515**	**1,901,401**	**939,717**	**986,119**
A. Mining and Quarrying	37,631	43,624	43,535	51,649	50,926	59,130	65,898	70,509	43,987	40,285
B. Manufacturing	1,011,618	1,062,612	1,106,052	1,145,529	1,194,921	1,137,534	1,264,523	1,324,330	647,409	679,759
C. Construction	198,404	198,154	217,637	249,379	266,751	284,994	325,820	302,014	148,885	159,403
D. Electricity, Gas and Water	158,685	160,882	165,591	174,670	186,572	184,943	203,274	204,547	99,437	106,672
III. Service Sector	**2,286,974**	**2,419,280**	**2,564,959**	**2,759,375**	**2,869,379**	**2,966,895**	**3,179,359**	**3,342,564**	**1,631,111**	**1,759,002**
A. Transportation, Storage and Communication	337,039	360,885	376,398	408,076	423,952	423,398	427,766	446,026	228,501	250,498
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	698,830	740,311	784,443	851,892	863,732	875,616	948,743	980,514	444,280	477,817
C. Financial Intermediation	232,730	257,301	287,793	317,104	322,672	340,329	374,716	394,371	201,783	217,756
D. Real Estate, Renting and Business Activities	392,961	419,523	446,975	482,493	526,116	547,866	588,947	643,459	314,220	340,033
E. Public Administration and Defense; Compulsory Social Security	210,720	212,055	219,563	222,665	227,223	241,009	255,087	255,776	131,948	134,357
F. Other Services	414,694	429,205	449,788	477,145	505,683	538,677	584,100	622,418	310,380	338,540
Gross Domestic Product	**4,276,941**	**4,481,279**	**4,716,231**	**5,028,288**	**5,237,101**	**5,297,240**	**5,701,539**	**5,924,409**	**2,902,926**	**3,080,016**
Net Primary Income	985,406	1,148,645	1,195,082	1,247,725	1,352,909	1,691,527	1,859,847	1,878,607	945,563	974,921
Gross National Income (GNI)	**5,262,348**	**5,629,924**	**5,911,313**	**6,276,013**	**6,590,009**	**6,988,767**	**7,561,386**	**7,803,016**	**3,848,489**	**4,054,938**
Gross National Income (Million U.S. Dollars) [1]	119,074	127,392	133,759	142,011	149,116	158,139	171,096	176,564	87,082	91,754
Per Capita GNI (U.S. Dollars) [1]	1,425	1,494	1,538	1,601	1,648	1,737	1,848	1,875	928	962
					Percent to GNI					
I. Agriculture, Fishery and Forestry	**11.09**	**10.60**	**10.46**	**10.32**	**10.14**	**9.50**	**8.76**	**8.72**	**8.63**	**8.26**
II. Industrial Sector	**26.72**	**26.03**	**25.93**	**25.83**	**25.78**	**23.85**	**24.59**	**24.37**	**24.42**	**24.32**
A. Mining and Quarrying	0.72	0.77	0.74	0.82	0.77	0.85	0.87	0.90	1.14	0.99
B. Manufacturing	19.22	18.87	18.71	18.25	18.13	16.28	16.72	16.97	16.82	16.76
C. Construction	3.77	3.52	3.68	3.97	4.05	4.08	4.31	3.87	3.87	3.93
D. Electricity, Gas and Water	3.02	2.86	2.80	2.78	2.83	2.65	2.69	2.62	2.58	2.63
III. Service Sector	**43.46**	**42.97**	**43.39**	**43.97**	**43.54**	**42.45**	**42.05**	**42.84**	**42.38**	**43.38**
A. Transportation, Storage and Communication	6.40	6.41	6.37	6.50	6.43	6.06	5.66	5.72	5.94	6.18
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	13.28	13.15	13.27	13.57	13.11	12.53	12.55	12.57	11.54	11.78
C. Financial Intermediation	4.42	4.57	4.87	5.05	4.90	4.87	4.96	5.05	5.24	5.37
D. Real Estate, Renting and Business Activities	7.47	7.45	7.56	7.69	7.98	7.84	7.79	8.25	8.16	8.39
E. Public Administration and Defense; Compulsory Social Security	4.00	3.77	3.71	3.55	3.45	3.45	3.37	3.28	3.43	3.31
F. Other Services	7.88	7.62	7.61	7.60	7.67	7.71	7.72	7.98	8.06	8.35
Gross Domestic Product	**81.27**	**79.60**	**79.78**	**80.12**	**79.47**	**75.80**	**75.40**	**75.92**	**75.43**	**75.96**
Net Primary Income	18.73	20.40	20.22	19.88	20.53	24.20	24.60	24.08	24.57	24.04
Gross National Income	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
					Percent to GDP					
I. Agriculture, Fishery and Forestry	**13.65**	**13.32**	**13.11**	**12.88**	**12.77**	**12.53**	**11.62**	**11.49**	**11.44**	**10.87**
II. Industrial Sector	**32.88**	**32.70**	**32.50**	**32.24**	**32.44**	**31.46**	**32.61**	**32.09**	**32.37**	**32.02**
A. Mining and Quarrying	0.88	0.97	0.92	1.03	0.97	1.12	1.16	1.19	1.52	1.31
B. Manufacturing	23.65	23.71	23.45	22.78	22.82	21.47	22.18	22.35	22.30	22.07
C. Construction	4.64	4.42	4.61	4.96	5.09	5.38	5.71	5.10	5.13	5.18
D. Electricity, Gas and Water	3.71	3.59	3.51	3.47	3.56	3.49	3.57	3.45	3.43	3.46
III. Service Sector	**53.47**	**53.99**	**54.39**	**54.88**	**54.79**	**56.01**	**55.76**	**56.42**	**56.19**	**57.11**
A. Transportation, Storage and Communication	7.88	8.05	7.98	8.12	8.10	7.99	7.50	7.53	7.87	8.13
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	16.34	16.52	16.63	16.94	16.49	16.53	16.64	16.55	15.30	15.51
C. Financial Intermediation	5.44	5.74	6.10	6.31	6.16	6.42	6.57	6.66	6.95	7.07
D. Real Estate, Renting and Business Activities	9.19	9.36	9.48	9.60	10.05	10.34	10.33	10.86	10.82	11.04
E. Public Administration and Defense; Compulsory Social Security	4.93	4.73	4.66	4.43	4.34	4.55	4.47	4.32	4.55	4.36
F. Other Services	9.70	9.58	9.54	9.49	9.66	10.17	10.24	10.51	10.69	10.99
Gross Domestic Product	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
					Growth Rates in Percent					
I. Agriculture, Fishery and Forestry	**4.32**	**2.24**	**3.64**	**4.73**	**3.22**	**-0.72**	**-0.16**	**2.68**	**6.26**	**0.84**
II. Industrial Sector	**5.23**	**4.19**	**4.61**	**5.77**	**4.81**	**-1.92**	**11.58**	**2.25**	**2.66**	**4.94**
A. Mining and Quarrying	-4.84	15.93	-0.20	18.64	-1.40	16.11	11.45	7.00	17.35	-8.41
B. Manufacturing	5.24	5.04	4.09	3.57	4.31	-4.80	11.16	4.73	6.92	5.00
C. Construction	5.92	-0.13	9.83	14.58	6.97	6.84	14.33	-7.31	-13.37	7.06
D. Electricity, Gas and Water	7.00	1.38	2.93	5.48	6.81	-0.87	9.91	0.63	-1.05	7.28
III. Service Sector	**8.26**	**5.79**	**6.02**	**7.58**	**3.99**	**3.40**	**7.16**	**5.13**	**4.66**	**7.84**
A. Transportation, Storage and Communication	12.09	7.08	4.30	8.42	3.89	-0.13	1.03	4.27	4.22	9.63
B. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	7.43	5.94	5.96	8.60	1.39	1.38	8.35	3.35	2.66	7.55
C. Financial Intermediation	7.01	10.56	11.85	10.18	1.76	5.47	10.10	5.25	9.13	7.92
D. Real Estate, Renting and Business Activities	9.57	6.76	6.54	7.95	9.04	4.13	7.50	9.26	7.35	8.21
E. Public Administration and Defense; Compulsory Social Security	7.49	0.63	3.54	1.41	2.05	6.07	5.84	0.27	-2.05	1.83
F. Other Services	6.54	3.50	4.80	6.08	5.98	6.52	8.43	6.56	5.49	9.07
Gross Domestic Product	**6.70**	**4.78**	**5.24**	**6.62**	**4.15**	**1.15**	**7.63**	**3.91**	**4.18**	**6.10**
Net Primary Income	8.99	16.57	4.04	4.40	8.43	25.03	9.95	1.01	-0.64	3.10
Gross National Income	**7.12**	**6.99**	**5.00**	**6.17**	**5.00**	**6.05**	**8.19**	**3.20**	**2.95**	**5.36**
Gross National Income (Million U.S. Dollars)	7.12	6.99	5.00	6.17	5.00	6.05	8.19	3.20	2.95	5.36

Note: Data on Real GDP and its components are based on 2000 prices. The use of terminology Gross National Income (GNI) in place of Gross National Product (GNP) has been adopted in the revised/rebased Philippine System of National Accounts (PSNA) in accordance with the 1993/1998 System of National Accounts prescribed by the United Nations.

[1] Derived by dividing peso value at constant 2000 prices by Pesos/US$1 rate in 2000.

Totals may not add up due to rounding.

Source: National Statistical Coordination Board (NSCB)

Table 12 - Total Resources of the Philippine Financial System[1]

as of periods indicated
levels in billion pesos

	Grand Total	Banks				Non - Banks[4]
		Total	Universal and Commercial Banks[2]	Thrift Banks	Rural Banks	
2001	**4,159.69**	**3,403.23**	3,070.47	259.00	73.76	756.46
2002	**4,416.18**	**3,608.48**	3,250.19	274.77	83.52	807.70
2003	**4,714.58**	**3,810.70**	3,425.59	292.72	92.39	903.88
2004	**5,175.85**	**4,182.99**	3,760.60	317.89	104.50	992.86
2005	**5,619.47**	**4,464.09**	3,985.98	357.83	120.28	1,155.38
2006	**6,257.12**	**4,985.61**	4,392.59	453.75	139.27	1,271.51
2007	**6,613.79**	**5,244.70**	4,578.33	501.78	164.59	1,369.09
2008	**7,384.35**	**5,946.32**	5,282.58	499.86	163.88	1,438.03
2009	**8,201.57**	**6,511.82**	5,779.06	554.55	178.21	1,689.75
2010	**9,081.56** [r]	**7,230.23** [r]	6,423.67	626.43	180.13 [r]	1,851.33 [r]
2011	**9,593.98** [p]	**7,642.24** [p]	6,833.02	623.58	185.64 [a]	1,951.74 [p]

[1] *Excludes the Bangko Sentral ng Pilipinas; amount includes allowance for probable losses*

[2] *Based on the new Financial Reporting Package that was implemented beginning March 2008, asset is valued gross of amortization, depreciation and allowance for probable losses; prior to 2008, data were based on Consolidated Statement of Condition which valued asset gross of allowance for probable losses and net of amortization and depreciation.*

[3] *Beginning February 1996, specialized government banks were consolidated with commercial banks.*

[4] *Includes Investment Houses, Finance Companies, Investment Companies, Securities Dealers/Brokers, Pawnshops, Lending Investors, Non-Stock Savings and Loan Assns., Venture Capital Corps., and Credit Card Companies which are under BSP supervision; also includes Private and Government Insurance Companies (i.e., SSS and GSIS).*

[a] *As of end-September 2011*

[p] *Preliminary*

[r] *Revised*

Notes: (1) Data on Universal, Commercial Banks and Thrift Banks are based on the new Financial Reporting package (FRP) beginning March 2008.
(2) Data on Non-Banks are based on Consolidated Statement of Condition (CSOC).
(3) Data on Rural Banks are based on CSOC up to September 2010. Data from October 2010 onwards are based on FRP for some banks and CSOC for other banks.
(4) Details may not add up to total due to rounding off.

Source: Bangko Sentral ng Pilipinas

Table 13 – Philippine Banking System: Selected Performance Indicators

Indicators	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 p/
Liquidity (%)											
Cash & Due from Banks to deposits	13.6	14.1	11.5	11.6	13.0	18.1	20.5	19.9	18.8	25.9	25.3
Liquid assets to deposits 1/	44.4	47.7	48.0	53.2	53.1	52.1	51.9	52.5	52.7	59.7	56.4
Loans (gross) to deposits	82.4	78.9	80.1	73.3	72.4	69.3	70.9	69.7	68.1	64.4	70.0
Asset Quality (%)											
NPL ratio	16.9	14.6	13.7	12.6	8.4	6.1	5.0	4.1	3.7	3.6	2.8
NPL ratio (net of IBL)	19.0	16.6	16.0	14.5	10.0	7.5	5.8	4.5	4.1	3.8	3.0
NPL coverage ratio	45.3	50.2	52.2	58.0	72.9	75.0	81.5	86.0	93.1	98.7	103.9
NPA ratio	14.6	13.4	13.1	11.8	8.8	6.9	5.8	5.1	4.5	3.9	3.3
NPA coverage ratio	29.6	30.1	31.1	33.2	38.4	37.3	39.8	45.0	48.7	53.0	57.2
ROPA to Gross Assets Ratio	5.6	6.0	6.0	5.8	4.8	4.0	3.4	3.1	2.6	2.3	1.9
ROPA Coverage Ratio	4.4	5.2	6.6	7.4	9.8	9.4	10.0	17.5	18.2	19.6	22.2
Distressed Assets ratio	28.4	27.7	27.0	25.0	19.1	15.1	12.5	10.8	9.3	8.8	7.0
Capital Adequacy (%)											
CAR1/ - Solo Basis 2/	14.5	15.5	16.0	17.4	16.4	16.9	14.7	14.7	14.9	16.0	16.3.
Total capital to total assets 3/	13.6	13.4	13.1	12.1	12.0	11.7	11.7	10.9	11.1	11.7	12.6
Profitability (%)											
Earning Asset Yield 4/	10.2	7.7	7.5	7.7	8.2	8.3	7.9	7.7	7.0	5.9	5.6
Funding Cost 5/	6.2	3.9	3.8	3.8	3.9	3.9	3.3	3.2	2.6	2.1	2.0
Interest Spread 6/	4.0	3.8	3.7	3.9	4.3	4.4	4.6	4.5	4.5	3.8	3.6
Net Interest Margin 7/	3.8	3.8	3.8	4.1	4.3	4.3	4.4	4.3	4.4	3.9	3.8
Net Interest Income to Total Operating Income	35.6	41.1	53.6	65.4	65.9	60.4	59.8	68.4	66.4	62.7	62.3
Cost-to-income ratio 8/	80.7	71.4	62.6	68.1	65.5	64.0	65.2	74.0	65.8	63.4	64.3
Return on assets (ROA) 9/	0.4	0.8	1.2	0.9	1.1	1.3	1.3	0.8	1.2	1.4	1.5
Return on equity (ROE) 9/	3.2	5.8	9.0	7.1	8.8	10.6	10.7	6.9	10.8	12.2	12.5

Source: BSP

1/ Liquid Assets refers to Cash and Due from Banks plus Financial Asset, net of amortization (net of financial assets in equity securities)

2/ Based on the new framework provided for under Circular No. 280 dated 29 March 2001 which was formally adopted starting 1 July 2001. Universal and Commercial banks are required to report their CARs based on combined credit and market risk under Circular No. 360 dated 3 December 2002, which took effect on 1 July 2003. Under Circular No. 538 dated 4 August 2006 effective 1 July 2007, U/KBs are to incorporate operational risk in addition to credit and market risks.

3/ Total capital accounts includes redeemable preferred shares.

4/ Earning Asset Yields refers to the ratio of interest income to average earnings assets.

5/ Funding Cost refers to the ratio of interest expenses to average interest-bearing liabilities.

6/ Interest spread refers to the difference between earning asset yield and funding cost.

7/ Net Interest Margin refers to the ratio of net interest income to average earnings assets.

8/ Cost-to-income ratio refers to the ratio of non-interest expenses to total operating income.

9/ ROA and ROE refers to the ration of annualized net profit to average assets and capital, respectively.