BANGKO SENTRAL NG PILIPINAS

2017 Annual Report

Sustaining the Growth Momentum

BANGKO SENTRAL NG PILIPINAS

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Sustaining the Growth Momentum

The Philippine economic narrative has been one of robust and resilient growth. With real gross domestic product (GDP) growing by 6.7 percent in 2017, the Philippine economy has now expanded by more than 6 percent annually over the past five years. At this pace, the country has reaffirmed its standing as one of the fastest-growing economies in Asia.

NESTOR A. ESPENILLA, JR.
Governor

Clearly, the Philippine economy now stands on solid foundations that could support inclusive growth and balanced development. In the coming years, strong fundamentals, built upon the determined pursuit of disciplined macroeconomic management and broad- based governance reforms, will continue to drive improvements in output growth and productivity.

For these to translate into palpable improvements in Filipinos' quality of living, policymakers will need to sustain the growth momentum. However, an ever-shifting global economic landscape could continue to pose challenges for the conduct of policy, as so-called global megatrends transform the way businesses operate and the way governments tackle policymaking. We have seen some of these forces at work over the past few years—including a rebalancing of economic power, a shift in demographics, urbanization, climate change and resource scarcity, and the rise of disruptive technologies, to name a few.

The impact of these global trends on market activity and sentiment became even more palpable in 2017. Amid a stronger growth impetus and a broadly stable environment for global commodity prices, central banks in advanced economies found scope to unwind their accommodative policies, fueling volatility in capital flows on expectations of higher interest rates overseas. At the same time, with the shift in growth momentum came some degree of uncertainty, particularly over the direction of macroeconomic agendas across the globe. In particular, rising inequality gave traction to populist sentiment. Indeed, discussions over the possible changes in US trade and immigration policies, the ongoing Brexit negotiations, and mounting geopolitical tensions in the Middle East and Asia reflect the belief that the benefits of growth need to be shared more equally and equitably. Meanwhile, the boom in virtual currencies has prompted discussions on how technology can shape finance and investment, and if policymakers have the tools in place to address new threats arising from technological advances.

These developments underscore the need for policies to nurture domestic sources of resilience in sustaining the growth momentum. Decades of reform have resulted in the more disciplined management of the country's fiscal affairs, strengthening the role of fiscal policy in promoting growth by supporting business confidence and spurring investments. In 2017, the National Government (NG) fueled the momentum by executing the first phase of a series of tax reform packages to help finance its infrastructure development program. Designed to take effect in 2018, these tax reform measures should provide more elbow room to boost public spending on much-needed infrastructure and on targeted social services while keeping the country's debt at manageable levels. Together with various initiatives to improve the ease of doing business in the country and to lift restrictions on foreign ownership for certain industries, these measures should enable the country to attract investments and springboard to more rapid and sustainable growth in the long run.

For its part, the Bangko Sentral ng Pilipinas (BSP) recognized how the conduct of monetary policy and financial market supervision needed to adapt to evolving domestic and global economic dynamics in its pursuit of a better quality of life for all Filipinos. As the country's sole monetary authority, the BSP contributed to sustaining the growth momentum in four fundamental areas:

(1) Monetary Policy. After falling below target in 2015 and 2016, inflation trended higher in 2017 due mainly to supply-side factors. Consequently, average headline inflation rose to 3.2 percent, well within the inflation target range of 2-4 percent for the year. Based on its assessment of a manageable inflation environment, supported by firm prospects for domestic economic activity and well-anchored inflation expectations, the Monetary Board decided to hold the BSP's monetary policy settings steady during the year. The BSP continues to be watchful over developments that could pose a risk to the inflation outlook, including further increases in international oil prices and the potential transitory impact of tax reform measures on inflation, in order to maintain price stability.

At the same time, the BSP also made significant progress in its shift toward a more market-based implementation of monetary policy. Further refinements to the interest rate corridor framework allowed the BSP's monetary operations to have stronger traction on market interest rates. These improvements will continue to provide the BSP some scope to reduce over the medium term its reliance on reserve requirements for managing liquidity in the financial system, which would help reduce intermediation cost and free up resources to finance productive endeavors.

(2) Financial Stability. The Philippine banking system saw double-digit growth in assets, deposits, and capital, backed by sufficient provisioning and adequate capital and liquidity buffers to protect the system against external shocks and uncertainties. Moreover, the BSP pursued proactive reforms to preserve the stability of the financial system amid the emergence of risks arising from rapid technological advances and increasing interconnectivity with the rest of the world. These included, among others, the following initiatives: (i) realigning governance standards and risk management regulations for supervised institutions with international best practices and standards to enhance transparency in the financial system; (ii) leveraging technology to fortify the defenses of the banking system against various cyber-security risks; and (iii) issuing relevant guidelines on virtual currencies to support financial innovations while ensuring consumer protection.

The BSP also stepped up its efforts to accelerate the development of the capital market in the country, which will enhance the role of the financial sector as a catalyst for inclusive economic growth. Together with other regulatory agencies, the BSP announced in August

2017 a suite of initiatives that would hasten the development of the local currency debt market. These initiatives include the Government Securities Repo Program, which was formally launched in November 2017.

(3) Payments and Settlements. The BSP continued to champion the development of the country's backbone for payments and settlements with important milestones in 2017. One is the establishment in June 2017 of an industry-driven, self-governing body—the Payments Market Practice Group (PMPG)—to drive the responsible development and operations of the country's retail payment system. Another is the adoption of the National Retail Payments System (NRPS) Framework in November 2017, which requires BSP-supervised financial institutions to ensure that the retail payment systems they participate in demonstrate sound risk management and efficient interoperability.

Furthermore, in November 2017, the BSP launched PESONet, the country's first automated clearing house under the NRPS, to help bring about an interoperable ecosystem for seamless electronic fund transfers and payments. This is part of the BSP's continuing initiative to transform the Philippines into a "cash-lite" economy, in line with emerging trends across the globe.

(4) Financial Inclusion and Other Advocacies. Finally, the BSP carried on with its efforts to promote financial inclusion. The BSP has put in place a solid regulatory framework that facilitates access to credit and other financial services while ensuring the stability of the financial system as a whole. In 2017, the BSP's initiatives were aimed at providing more access points and a broader range of financial products, including (i) the introduction of the "branch-lite" concept to broaden access to financial services and products, especially in underserved markets; and (ii) the issuance of guidelines on agricultural value chain financing to increase the flow of credit to the agricultural sector.

The BSP also stepped up its campaigns to promote financial education and consumer protection, particularly by leveraging the power of the Internet. In Q3 2017, the BSP launched PisoLit, a Facebook page aimed at promoting financial awareness among Filipinos, particularly the youth and other active users of social media platforms. The BSP also issued various advisories to inform the general public about the basic features of deposit accounts, the use of credit cards and the importance of building a good credit standing, as well as the potential risks involved in the acquisition and trading of virtual currencies.

Looking ahead, the Philippine story of robust and resilient growth is set to turn a new chapter. While appropriate policies and timely reforms continue to nurture the country's growth momentum, a more complex global environment owing to incipient megatrends call for more agile policymaking in responding to the challenges on the horizon. Indeed, taking a "business-as-usual" stance may no longer be enough, as the economy will require even stronger foundations for durable growth.

Towards this end, the BSP has embarked on its "Continuity Plus Plus" agenda. This two-fold strategy appreciates that there are home-grown buffers already in place to shield the country from external headwinds and at the same time recognizes the need for additional strategic financial sector reforms to strengthen these buffers in the pursuit of broad-based and inclusive growth.

In brief, this overarching strategy will entail the continued conduct of sound monetary policy to help ward off the risks to inflation and growth. The BSP remains vigilant and stands ready to take the necessary action against possible second-round effects and shifts in inflation expectations.

At the same time, the BSP will also pursue prudential reforms to maintain a stable financial system, as well as build on existing frameworks for surveillance in looking out for excessive credit and leverage.

Finally, the BSP will continue to lead the way in reshaping the financial system into becoming fully responsive to the needs of the domestic economy. Further capital market reforms and the liberalization of existing rules on foreign exchange transactions, for example, should ease the constraints to finance and investments. Establishing regulatory frameworks for financial technology and digital finance should also allow the country to make significant inroads towards financial inclusion and payments efficiency. ■

Who we are

Our Vision

The BSP aims to be a world-class monetary authority and a catalyst for a globally competitive economy and financial system that delivers a high quality of life for all Filipinos.

Our Mission

The BSP is committed to promote and maintain price stability and provide pro-active leadership in bringing about a strong financial system conducive to a balanced and sustainable growth of the economy. Towards this end, it shall conduct sound monetary policy and effective supervision over financial institutions under its jurisdiction.

Our Core Values

Excellence
Accountability
Solidarity
Integrity
Patriotism

About the Bangko Sentral ng Pilipinas

The Congress shall establish an independent central monetary authority… (which) shall provide policy direction in the areas of money, banking and credit. It shall have supervision over the operations of banks and exercise such regulatory powers as may be provided by law over the operations of finance companies and other institutions performing similar functions.

- Section 20, Article XII, 1987 Philippine Constitution

The State shall maintain a central monetary authority that shall function and operate as an independent and accountable body corporate in the discharge of its mandated responsibilities concerning money, banking and credit. In line with this policy, and considering its unique functions and responsibilities, the central monetary authority established under this Act, while being a government-owned corporation, shall enjoy fiscal and administrative autonomy.

- Section 1, Article 1, Chapter 1
Republic Act No. 7653 (The New Central Bank Act)

The BSP's Legal Mandate

The BSP is the central bank of the Republic of the Philippines. It was established on 3 July 1993 as the country's independent central monetary authority, pursuant to the Constitution and Republic Act No. 7653 or the New Central Bank Act. The BSP replaced the old Central Bank of the Philippines, which was established on 3 January 1949.

As the Philippines' central monetary authority, the BSP is responsible, among other things, for:

- Maintaining price stability conducive to a balanced and sustainable growth of the economy;
- Maintaining financial stability by ensuring that the banking system is sound and stable; and
- Ensuring the safe, timely, and accurate payment and settlement of financial transactions.

Powers and Functions

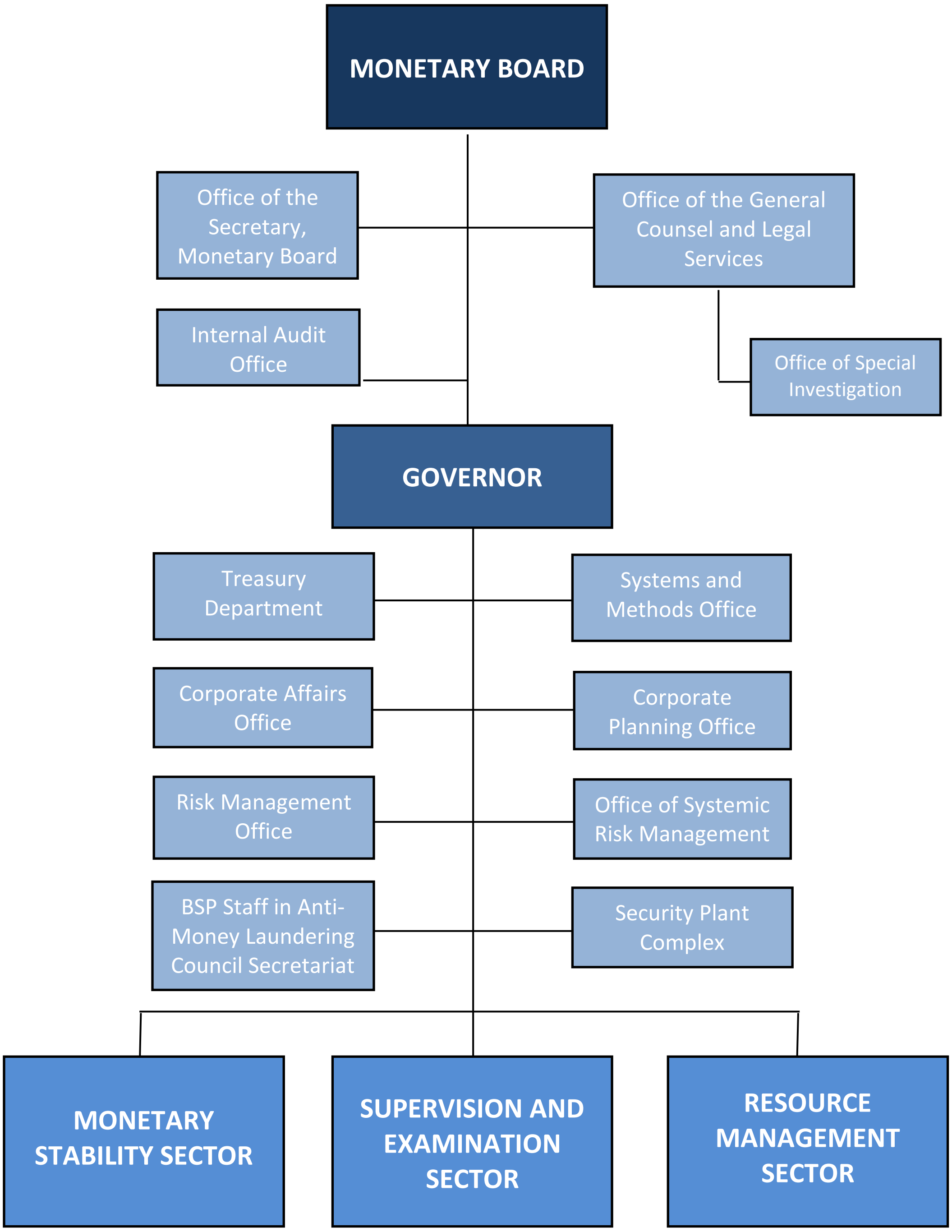
The BSP charter also designates the BSP to perform the following functions:

- *Liquidity management*. The BSP formulates and implements monetary policy aimed at influencing money supply consistent with its primary objective of maintaining price stability.
- *Currency issue.* The BSP has the exclusive power to issue the national currency. All notes and coins issued by the BSP are fully guaranteed by the government and are considered legal tender for all private and public debts.
- *Lender of last resort.* The BSP extends discounts, loans, and advances to banking institutions for liquidity purposes.
- *Financial supervision.* The BSP supervises banks and exercises regulatory powers over non-bank institutions performing quasi-banking functions.
- *Management of foreign currency reserves***.** The BSP seeks to maintain sufficient international reserves to meet any foreseeable net demands for foreign currencies to preserve the international stability and convertibility of the Philippine peso.
- *Determination of exchange rate policy.* The BSP determines the exchange rate policy of the Philippines. Currently, it adheres to a market-oriented foreign exchange rate policy such that its role is principally to ensure orderly conditions in the market.
- *Other activities.* The BSP functions as the banker, financial advisor, and official depository of the Government, its political subdivisions and instrumentalities, and government-owned and -controlled corporations.

The New Central Bank Act imposes limitations and other conditions on the exercise of such powers by the BSP. Among others, the charter limits the circumstances under which the BSP may extend credit to the government and prohibits it from engaging in development banking or financing.

Organizational Structure

As of 31 December 2017



The **Monetary Board** issues rules and regulations necessary for the effective discharge of the responsibilities and exercise of the powers vested upon the BSP. Its chairman is the BSP Governor, with five full-time members from the private sector and one member from the Cabinet.

The **Governor,** as the chief executive officer of the BSP, directs and supervises the operations and internal administration of the BSP.

The BSP is organized into the following functional groupings:

- **Offices under the Monetary Board and the Governor,** which render various administrative support to the Monetary Board or to the Governor and provide support in the formulation and application of the BSP's strategic plans, practices, and procedures. These offices are collectively referred to as the Executive Management Services;
- **Monetary Stability Sector,** which takes charge of the formulation and implementation of the BSP's monetary and macroeconomic stabilization policies;
- **Supervision and Examination Sector,** which enforces and monitors compliance with banking laws and regulations to promote a sound and healthy financial system; and
- **Resource Management Sector,** which serves the human, financial, and physical resource needs of the BSP.

Governance

As of 31 December 2017

The Monetary Board

Chairman and Governor
Nestor A. Espenilla, Jr.

Members
Antonio S. Abacan, Jr.
Valentin A. Araneta
Carlos G. Dominguez III
Peter B. Favila
Felipe M. Medalla
Juan D. De Zuñiga, Jr.

Executive Management Services

Ma. Ramona Gertrudes D.T. Santiago
Assistant Governor

Elmore O. Capule
Assistant Governor and General Counsel

Johnny Noe E. Ravalo
Assistant Governor

Dahlia D. Luna
Assistant Governor

Mary Jane T. Chiong
Managing Director

Mel Georgie B. Racela
Executive Director II

Rhio D. Fuentes-Nuylan
Executive Director I

Monetary Stability Sector

Diwa C. Guinigundo
Deputy Governor

Wilhelmina C. Mañalac
Assistant Governor

Iluminada T. Sicat
Managing Director

Francisco G. Dakila, Jr.
Managing Director

Carlyn A. Pangilinan
Managing Director

Editha L. Martin
Executive Director I

Rosalinda S. Dumaliang
Officer-in-Charge

Supervision and Examination Sector

Chuchi G. Fonacier
Deputy Governor

Restituto C. Cruz
Assistant Governor

Lyn I. Javier
Managing Director

Ma. Belinda G. Caraan
Officer-in-Charge

Resource Management Sector

Cyd N. Tuaño-Amador
Deputy Governor

Gerardo K. Galvey
Assistant Governor

Eduardo G. Bobier
Managing Director

Silvina Q. Mamaril-Roxas
Managing Director

Gerardo A. Butardo
Managing Director

Josefa Elvira E. Ditching-Lorico
Managing Director

Carlos L. Panes
Managing Director

Enrique C. Domingo
Executive Director II

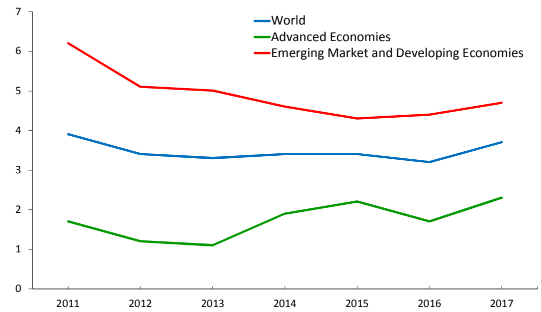
Bella S. Santos
Executive Director II (Acting)

How We Were in 2017: Global and Domestic Macroeconomic Landscape

Global Economic Growth Strengthens

In 2017, the global economic environment showed signs of recovery from the sluggish growth in the previous year, driven mainly by improved capital spending and strengthening external demand.

Chart 1.1. World GDP Growth
at constant prices; year-on-year percent change



Source: IMF World Economic Outlook (WEO), January 2018

Global growth in 2017 gained traction given a synchronized pickup in economies that collectively account for about three quarters of world GDP. Among advanced economies, growth was higher than projected in Germany, Japan, South Korea, and the US. In the US, the estimated pickup in growth was supported by stronger private investment, reflecting a diminished impact from capacity adjustments in the energy sector, rising profits, a weakening dollar, and robust external demand. Economic activity likewise strengthened in the EU, with improvements across member countries driven by policy stimulus and robust external demand. Meanwhile, in Japan, the estimated growth in 2017 was spurred mainly by firmer domestic demand amid a gradual recovery in consumer spending and investment, as well as the implementation of a fiscal stimulus package.[1]

Among emerging markets and developing economies (EMDEs), solid economic expansion continued in 2017, reflecting stronger activity among commodity exporters and steady growth among commodity importers. Among commodity exporters in EMDEs, Brazil and the Russian Federation emerged from recession, commodity prices rose, market confidence strengthened, the drag from policy tightening waned, and investments increased.

EMDEs register solid economic expansion

At the same time, benign global financing conditions and weaker geopolitical and policy uncertainty also supported the global growth momentum. Global financing conditions benefited from favorable growth prospects and historically low interest rates despite expectations of further monetary policy normalization in the US and, to a lesser extent, in the euro area and Japan. Meanwhile, risks emanating from geopolitical and policy uncertainty eased as markets adjusted to key events in advanced economies, including the electoral outcomes in Europe and the major fiscal policy shifts in the US.

However, several factors could potentially weigh on confidence and growth moving forward.[2] In particular, market uncertainty could intensify amid

[1] Growth estimates were based on the IMF *World Economic Outlook Update* and World Bank *Global Economic Prospects*, January 2018
[2] World Bank *Global Economic Prospects*, January 2018

ongoing Brexit negotiations as well as discussions over possible changes to US trade and immigration policies. An increase in trade barriers in the context of ongoing negotiations surrounding the North American Free Trade Agreement and the economic arrangements between the United Kingdom and the rest of the EU could negatively affect investment and production efficiency. In addition, geopolitical risks (i.e., tensions in the Korean peninsula, border disputes in Asia, and territorial strains in the Middle East) could continue to dampen confidence and lead to episodes of financial market volatility.

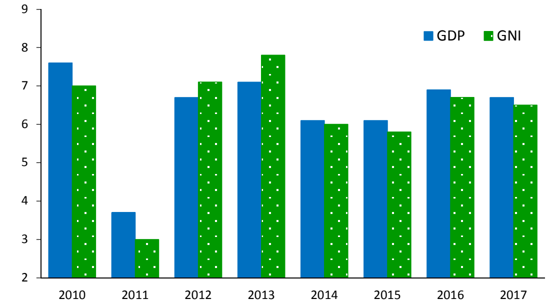
Meanwhile, the East Asia and Pacific region may benefit from the continued expansion of global economic activity, recovery in commodity prices, and benign financing conditions. However, potential growth will remain vulnerable to the possible impact of a faster-than-expected tightening of global financing conditions, or of a steeper-than-projected slowdown in major economies. Geopolitical risks, should they materialize, could also lead to some disruptions to regional economic activity.

The Philippine Economy Sustains Solid Growth

The Philippine economic performance in 2017 demonstrated that the domestic economy continues to be on a steady growth track despite presence of domestic and external challenges. Real gross domestic product (GDP) rose by 6.7 percent in 2017, 2 percentage points (ppts) higher than the low end of the growth target range of the national government (NG) of 6.5 percent to 7.5 percent for the year. The 2017 growth level is also 1 ppt higher than the average growth of the domestic economy of 6.6 percent in the past 6 years (2012-2017). Among its Asian peers, the Philippines' 2017 growth made it the third fastest growing economy following China (6.9 percent) and Vietnam (6.8 percent).

Chart 1.2. Real Gross National Income and Real Gross Domestic Product

annual growth rate in percent; at constant 2000 prices



Source: Philippine Statistics Authority (PSA)

On the supply side, lending strong support to the 2017 GDP growth was the remarkable improvement in the agriculture sector which managed to offset the slowdown in the performance of the traditional pillars of economic growth – the services and industry sectors – during the year. The solid performance of the agriculture sector was buoyed by the reversal in the growth rates of most of its major crops from negative into positive in 2017 relative to 2016 amid more favorable weather conditions and continued government drive to support the agriculture sector. On the demand side, growth impetus came from the firm export numbers providing extra lift to the stable performance of private consumption and investments. The exports sector almost doubled its expansion in 2017 compared to the previous year on the back of improved external demand, particularly among the economy's major trading partners.

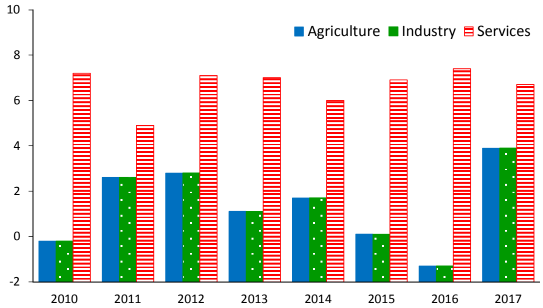
Aggregate Output and Demand

Supply side. The agriculture, hunting, forestry, and fishing (AHFF) sector performance in 2017 of 3.9 percent is a noteworthy change from its usual output in the past years. The 2017 growth of the agriculture sector, which represented a reversal from the 1.3 percent contraction posted by the sector in 2016, was the highest registered since 2008 and enabled the sector to contribute 0.3 ppts to the overall output growth in 2017.

The favorable outturn in the sector can be attributed to the fact that almost all agriculture crops posted a remarkable improvement compared to their performances in 2016.

Chart 1.3. Real Gross Domestic Product by Industrial Origin

annual growth rate in percent; at constant 2000 prices



Source: PSA

Palay, which is the sector's major crop accounting for 24.5 percent of the total agriculture output in 2017, expanded by 9.4 percent, a huge turnaround from the 2.9 percent contraction posted in 2016. This development was attributed in part to the increase in harvest areas due to early occurrence of rains and availability of water during the planting period in key palay-producing regions such as in Cagayan Valley, Central Luzon, Western Visayas, and SOCCSKSARGEN. Additional palay plantings were also cited in MIMAROPA on the back of availability of hybrid and certified seeds from the Department of Agriculture (DA) and local government units (LGUs) and adequate water supply during the planting months.[3] Other agriculture crops which recorded positive yields during the year in review relative to their 2016 levels were corn (which grew by 9.8 percent in 2017 from -4.0 percent in 2016), sugarcane (30.2 percent from -0.7 percent), banana (2.9 percent from -2.0 percent), and rubber (12.1 percent from -8.6 percent). The double-digit expansion in sugarcane production was attributed largely to the favorable weather conditions in Western Visayas during the year and the movement of harvest from the second quarter to the third quarter in Northern Mindanao. Poultry, which accounted for 14.2 percent of the total agriculture output in 2017, also expanded by 4.5 percent from 1.3 percent in the past year. Given these latest progress in the agriculture sector, the government is optimistic that the sector can be a major growth contributor moving forward.

The industry sector remained a key growth driver for 2017. The sector expanded by 7.2 percent during the year in review, pitching in 2.5 ppts to the 6.7 percent GDP outturn in 2017. Amid the deceleration in most of its sub-sectors in 2017 relative to their 2016 growth levels, the sustained uptrend in the manufacturing sub-sector provided a lift to the industry sector's overall performance during the year in review. Mining and quarrying slowed down by 1.9 percent from 3.2 percent in 2016 linked to certain regulatory changes made during the year as well as the conduct of review of the implementation of existing laws governing the mining sector by the Department of Environment and Natural Resources (DENR). During the year in review contractions were posted in the mining of some of the country's major mineral products - copper (-16.4 percent in 2017 from 6.3 percent in 2016) and crude oil (-4.6 percent from 10.9 percent) and slowdown in gold mining (4.1 percent from 9.0 percent) and other metallic mining (17.4 percent from 45.4 percent). The same was observed in the construction and utilities sub-sectors which posted growth levels of 5.4 percent and 3.2 percent, from 13.7 percent and 9.8 percent in 2016, respectively. Amid these developments, the manufacturing sub-sector, which accounted for about 70 percent of the total industry sector's output in 2017 proved to be a reliable growth booster as it buoyed the sector's performance during the year. Manufacturing output rose by 8.6 percent in 2017, the highest relative to the past three years' growth rates. Among the three fastest growing manufacturing industries during the year were:

[3] Philippine Statistics Authority (PSA).

fabricated metal products (which expanded by 50.3 percent), non-metallic mineral products (21.6 percent), and furniture and fixtures (20.4 percent).

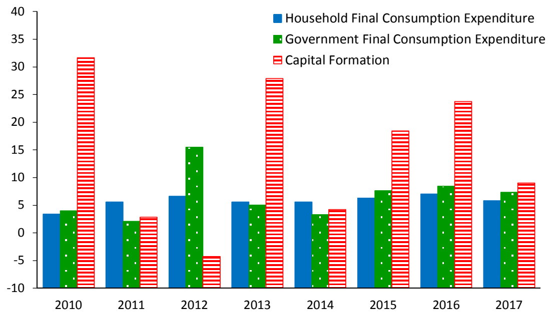
The services sector remained at the forefront of steering the domestic economy in 2017. The sector grew by 6.7 percent during the year in review, albeit lower than its level in 2016 at 7.4 percent. Nonetheless, it continued to account for bulk of the 2017 GDP growth as it added 3.9 ppts to the 6.7 percent output growth during the year. The observed slowdown in the sector relative to the previous year's was reflective of the moderation in transport, storage and communication (which grew by 4.2 percent in 2017 from 5.9 percent in 2016), real estate, renting and business activities (7.5 percent from 8.9 percent), and other services (7.5 percent from 8.9 percent). This downtrend could also partly be explained by the usual post-election cycle developments as well as the plateauing of the business process outsourcing (BPO) industry during the year.

Demand side. On the demand side, the 2017 GDP outturn continued to be propelled by the sustained uninterrupted growth in household consumption and capital formation and buttressed by the improved net exports numbers. While moderating, household spending and investments continued to be the two major contributors to the 2017 output growth. Household spending decelerated by 5.8 percent in 2017 compared to its 7.0 percent growth recorded last year. This deceleration could be traced from the decline in household spending on the following major expenditure items, namely: alcoholic beverages and tobacco (-4.0 percent relative to its 5.9 percent growth in 2016), transport (4.9 percent from 10.6 percent), recreation and culture (1.3 percent from 7.7 percent), health (5.0 percent from 7.3 percent), and food and non-alcoholic beverages (5.5 percent from 6.9 percent). Rising commodity prices and the generally weak peso in 2017 could partly explain the easing of household spending during the year

Growth in investments decelerated to 9.0 percent in 2017 from 23.7 percent in the past year. This was associated with the slowdown in private transaction due to lower project launches on concerns of an oversupply in the market and decline in investments in durable equipment. Investments in durable equipment also decelerated to around one-third of its growth pace in 2016, investments in road vehicles, which accounted for 44.6 percent of durable equipment, dropped to 12.9 percent from 37.1 percent. Meanwhile, the slower growth in investment spending during the year was attributed by the World Bank in the delay in the implementation of some of the planned major infrastructure program of the government.[4]

Chart 1.4. Real Gross Domestic Product by Expenditure Shares

annual growth rate in percent; at constant 2000 prices



Source: PSA

The other major driving force of the Philippine economy in 2017 was the significant improvement in global demand as reflected in the uninterrupted double digit growth in exports for the four quarters of 2017. The sector ended with a solid 19.2 percent growth during the year in review, the highest growth posted since 2011. Exports growth in 2017 was driven mainly by the increase in outbound shipments of some of the country's major manufactured goods such as electronics

[4] World Bank. (2017). "World Bank East Asia and Pacific Economic Update, October 2017: Balancing Act."

components (which grew by 27.5 percent in 2017 from 8.5 percent in 2016), semiconductors (27.2 percent from 4.7 percent), office equipment (58.6 percent from -31.0 percent), coconut oil (28.7 percent from -7.1 percent) and cathodes and sections of cathodes of refined copper (535.7 percent from -72.0 percent). The recent resurgence in global trade has boosted optimism and has improved prospects for the country's exports sector.

The 2017 performance of the Philippine economy continued to fuel confidence in the national government's ability to achieve its growth target of 7.0 percent to 8.0 percent for 2018, reinforced by the implementation of the massive infrastructure agenda of the current administration. The recent enactment of the Tax Reform for Acceleration and Inclusion (TRAIN) is expected to provide the necessary financing to ensure that this agenda aimed to springboard the domestic economy to higher growth will come to fruition.

Box Article 1
Megatrends: Potential Implications for the Philippine Economy

What are megatrends?

Megatrends are global and sustained macroeconomic factors that are expected to affect the economy, businesses, and households. By definition, these developments present significant opportunities and challenges that could define the society's way of doing things in the future. Commonly identified megatrends include demographic transition, urbanization, shift in global economic power, climate change and resource scarcity, and rise in technology. Among these megatrends, demographic changes, accelerating urbanization, and the shift in economic power could potentially impact on the sustainability of economic growth, especially in developing economies.

Demographic megatrends affect almost all aspects of social and economic development, including production and consumption, environmental sustainability, and access to basic human needs such as health services, education, housing, sanitation, water, food, and energy. These also affect employment and social protection, including pensions. (World Economic Forum - The Inclusive Growth and Development Report 2017)

Similarly, accelerating urbanization is expected to introduce economic and social opportunities and challenges as it continues to change the face of cities, both in size and composition. It is estimated that more than half of the population live in urban areas and about 1.5 million individuals are added to the global urban population every week (PricewaterhouseCoopers – Megatrends, Rapid Urbanisation). By year 2050, it is projected that about 66 percent of the world's population will be urban (United Nations, 2014)

Meanwhile, as global economic power continues to shift to rapid-growth economies, some of which have large population sizes such as China and India, new trade and investment patterns are also set to emerge. Although economic benefits may be realized from this transition, the diffusion of economic power among countries are also associated with potential economic loss, sometimes used to support forms of protectionism and nationalism.

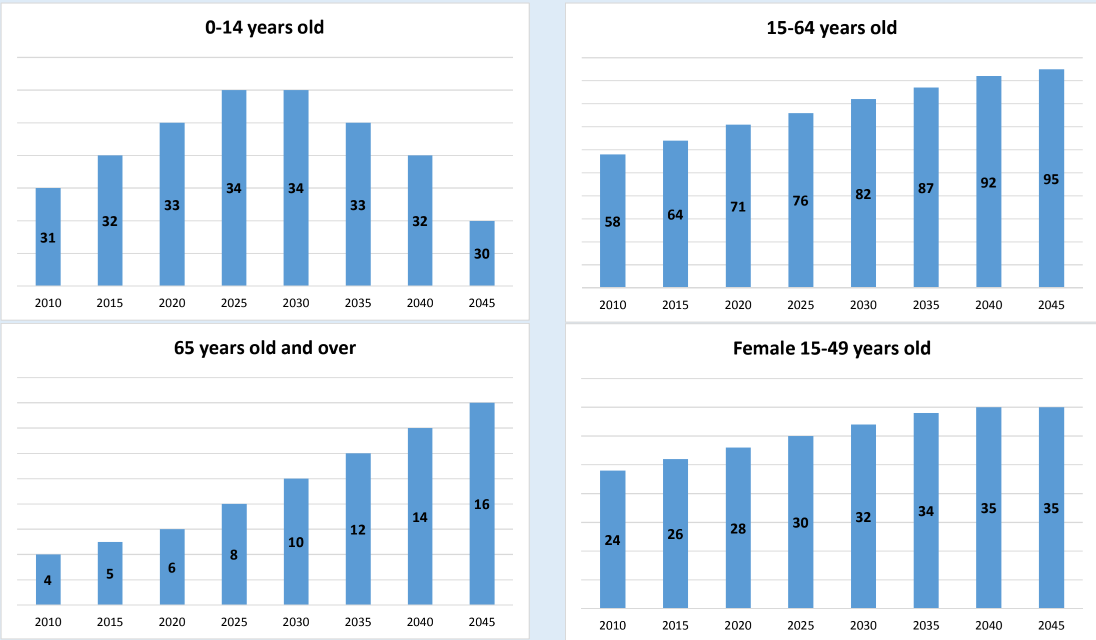
Key Economic Implications

Changes in demographics. Across the globe, the effects of these demographic shifts is expected to be wide-ranging. For advanced economies, population ageing is seen to reduce per capita growth rates in the long term due to lower productivity as the working age population size shrinks. Meanwhile, for developing countries, the expanding size of the working-age population is likely to result to stronger per capita growth, under the assumption that the additional labor inputs are utilized more effectively (Batini, Callen, and McKibbin, 2006).

The sustained increase in the number of young people entering the labor market may pose employment challenges, especially for least developed economies with existing labor issues. In the Philippines, estimates by the Philippine Statistics Office (PSA) show that the population of the working age group (15-64 years old) is projected to rise continuously while the population of non-working age group of 0-14 years old will decrease.

This age structure of the Philippines from 2010 through 2045 present an opportunity for economic advantage as the expected uptrend in the working age population could translate to greater productivity in the future. However, the country's ability to reap the benefits of the demographic dividend will depend on the capacity of the working age population to add productive value.

Figure 1. Projected Population (in millions) by Selected Age Group by Five-calendar Years Philippines (2010-2045)



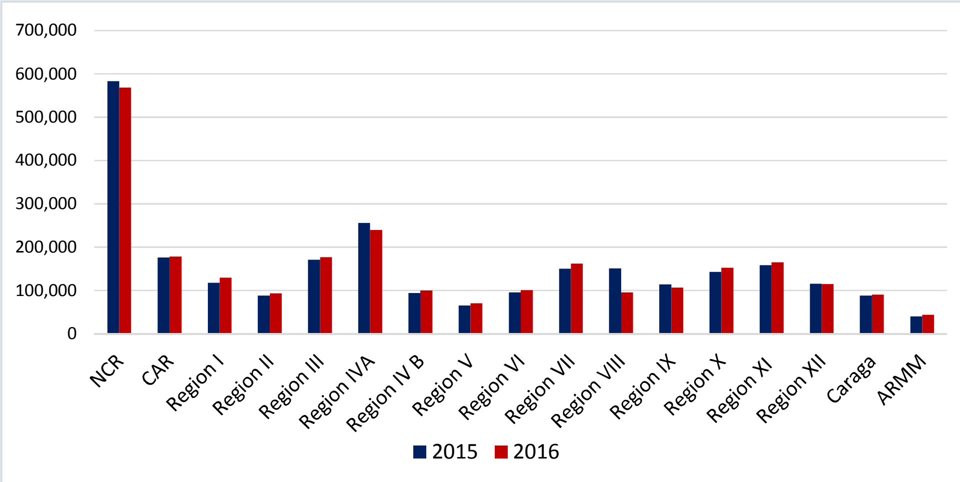
Source: Philippine Statistics Authority (PSA)

Accelerating urbanization. As much of the national economic activity are concentrated in cities, urbanization could promote economic development and reduce poverty. In the Philippines, labor productivity is significantly higher in the National Capital Region (NCR) relative to other regions.

However, rapid and poorly planned urbanization threatens sustainable economic growth, especially when city resources are inadequate to match the surge in demand or when policies are inadequate to promote inclusive and sustainable growth. More specifically, unplanned or inadequately managed urban expansion results to rapid sprawl, pollution, and environmental degradation, together with unsustainable production and consumption patterns. (United Nations World Urbanization Prospects, 2014)

These factors overwhelm the government's capacity to provide basic services, thus reversing the potential economic dividends that may be gained from urbanization. As such, the Rio+20 United Nations Conference on Sustainable Development recognized both the plight of the urban poor and the need for sustainable cities as matters of great urgency for the United Nations development agenda.

Figure 2. Growth Rates in Labor productivity per Region, 2015 - 2016



Source: PSA

*Regional labor productivity, as computed by the PSA, is defined as GRDP per employed person in the region. Labor productivity data for 2015 were computed based on the annualized Labor Force Statistics data using the average of January, April, July and October employment data which excluded Leyte province. Meanwhile, labor productivity data for 2016 were computed using the average of the four survey rounds employment data with the January 2016 data based on the 2010 Census-based population projections.

Shift in Economic Power. According to a PWC study, the long-term global economic power shift away from advanced economies is set to continue over the period to 2050. Emerging markets will continue to increase their share of world GDP in the long run, although these countries have mixed economic performance. By year 2030, emerging and developing countries could account for nearly half of global GDP and 86 percent of the world population (Euromonitor International, September 2017).

The economic implication of this megatrend on the Philippines will depend largely on the structure of the country's trade relations, sources of investments and remittances, and other linkages such as in tourism. For instance, the effect of protectionist policies in the US may be counterbalanced by trade opportunities from rising markets like China and India.

Table 1. Share to Philippine Merchandise Exports by Country (in percent)

Trade Partner	2010	2011	2012	2013	2014	2015	2016	2017
Japan	15.2	18.4	19.0	21.3	22.4	20.9	20.3	16.2
USA (inc. Hawaii & Alaska)	14.7	14.7	14.2	14.7	13.9	15.3	15.4	14.6
ASEAN	22.4	18.0	18.8	15.6	14.8	14.9	15.1	15.4
China	11.1	12.9	11.8	12.4	13.6	10.5	11.1	11.0
European Union	14.4	12.3	11.4	11.6	10.8	12.2	12.1	14.7

Source: PSA

Table 2. Share to Philippine Merchandise Imports by Country (in percent)

Trade Partner	2010	2011	2012	2013	2014	2015	2016	2017
China	8.4	10.1	10.8	12.9	15.1	16.1	18.5	18.2
Japan	12.3	10.8	10.4	8.4	8.0	9.0	11.7	11.4
USA (inc. Hawaii & Alaska)	10.7	10.8	11.5	11.2	8.8	10.5	9.0	7.6
ASEAN	28.2	23.7	22.9	21.7	23.9	25.3	26.2	26.6
European Union	7.2	7.4	7.5	10.0	11.6	9.4	8.0	7.2

Source: PSA

Based on PSA data, the US and China remain as significant trade partners of the Philippines. Exports to the US and China accounted for 15.4 percent and 11.0 percent of the Philippines' total merchandise exports, respectively, in 2016. During the same period, China held an 18.5 percent share in the Philippines' total merchandise imports while the US accounted for 8.9 percent.

Conclusion

Megatrends in the form of changes in demographics and accelerating urbanization generally favor developing countries as it presents greater opportunities for growth through a potential improvement in productivity. Meanwhile, the shift in economic power away from advanced economies and towards developing and emerging markets could open new trade and investment prospects.

However, these developments could also pose challenges to developing countries like the Philippines. A report by the World Economic Forum discussed that in order to reap the potential benefits from changes in demographics, the population must be empowered, educated, and employed (World Economic Forum, 2017). Otherwise, the expanding working age population would not add value to the economy; hence total productivity may not improve.

Meanwhile, benefits from urbanization in the Philippines are yet to be harnessed. For the period 1970 to 2006, the Philippines showed an average increase in per GDP capita of less than two percent for every 1 percent increase in urban population. Such is significantly lower relative to the data recorded for China, India, Vietnam, and Thailand[5] (World Bank, 2017). As more people move into urban areas, inequality between city dwellers and those in the provinces may also widen. Thus, governments will need to ensure that growth benefits are shared more inclusively across the society.

Finally, the impact of the shift in global economic power from advanced economies towards emerging markets may have substantial effects on trade and investments in the Philippines. The introduction of protectionist policies in advanced countries like the US may affect the Philippines' prospects for imports and exports growth as well as remittances. However, the effect of these policies may be offset by the potential gains from the global economic power shift to other emerging markets to which the Philippines also have established strong linkages.

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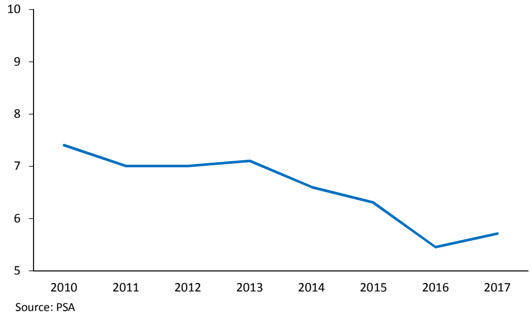
[5] For the period 1970 to 2006, China and India demonstrated an average 6 percent increase in per capita GDP for every 1 percent increase in urban population while Vietnam and Thailand exhibited 8 percent and 10 percent, respectively.

Employment. The number of jobless Filipinos rose to 2.4 million (from 2.3 million in 2016), as the unemployment rate increased slightly to 5.7 percent from the year-ago level of 5.5 percent.

Chart 1.5. Unemployment Rate
in percent



Most of the unemployed were men (65.6 percent), between 15-24 years of age (46.7 percent), and with high school education (43.9 percent). The total number of employed persons in 2017 reached 40.3 million, lower by 1.6 percent from 40.9 million in 2016. Among the three major employment sectors, only the industry sector posted an expansion of 3.0 percent with 212,000 additional employed persons.

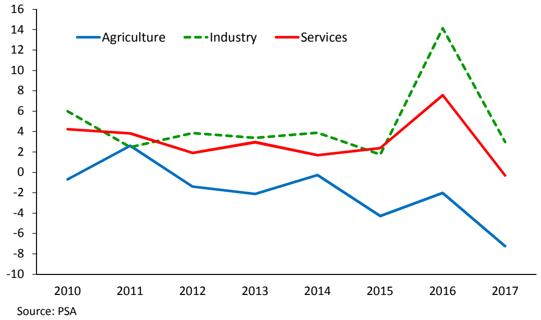
Meanwhile, the number of employed persons in the agriculture sector decreased by 7.3 percent or 803,000 due mainly to the super typhoons that struck the country during the year, which affected farmers and fisherfolk across the country. Employment in the agriculture sector accounted for 25.4 percent of the total employed persons.

Employment in the services sector likewise dropped by 0.3 percent. This sector accounted for 56.3 percent of the total employed persons in the country. Most of the services sub-sectors registered employment losses, except public administration, defense, and compulsory social security as well as administrative and support services activities, which posted additional 213,000 and 105,000 employed persons, respectively.

Employment in the industry sector increases in 2017

This increase was attributed to the additional 160,000 employed persons in construction and the additional 78,000 employed persons in manufacturing. The industry sector accounted for 18.3 percent of the total employed persons in the country.

Chart 1.6. Employment by Sector
year-on-year growth rates; in percent



The labor force participation rate declined to 61.2 percent in 2017 from 63.5 percent in 2016. The decline was attributed primarily to young Filipinos still completing their formal education as a result of the implementation of the "K to 12" program[6] as well as to the increase in females assuming household duties.[7]

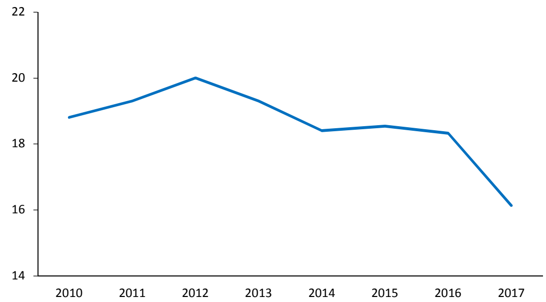
In terms of class of workers, the number of wage and salary workers decreased by 0.1 percent, even as employment in private establishments and in government/government corporations increased slightly. Meanwhile, vulnerable employment (i.e.,

[6] The Philippines implemented the "K to 12" Program in 2013. It covers 13 years of basic education from Kindergarten to Grade 12 (Senior High School), pursuant to Republic Act No. 10533 or the Enhanced Basic Education Act of 2013.
[7] Source: Institute for Labor Studies, www.http://ilsdole.gov.ph/

the proportion of self-employed and unpaid family workers to total employment) declined as the number of unpaid family workers contracted by 25.8 percent.

In 2017, the underemployment rate[8] eased to 16.1 percent from 18.3 percent in 2016. Of the total underemployed, 39.0 percent were in the agriculture sector, 34.7 percent in the services sector, and 26.3 percent in the industry sector. Based on the Institute for Labor Studies (ILS) Report in October 2017, the improvement in underemployment may be attributed to the creation of higher quality jobs and the increase in full-time and wage and salary workers in private establishments. The decline may have also resulted from employment losses in agriculture, as well as among self-employed and unpaid family workers who have exited the labor force.

Chart 1.7. Underemployment Rate
in percent



Source: PSA

Finally, the labor turnover rate[9] in Q2 2017 was at 2.1 percent, lower than the 2.3 percent registered in Q2 2016, with accession rate of 10.6 percent and separation rate of 8.5 percent. All employment sectors in the National Capital Region registered positive labor turnover rates in Q2 2017, as follows: agriculture, forestry, and fishing at 1.9 percent; industry at 3.1 percent; and services at 1.9 percent.

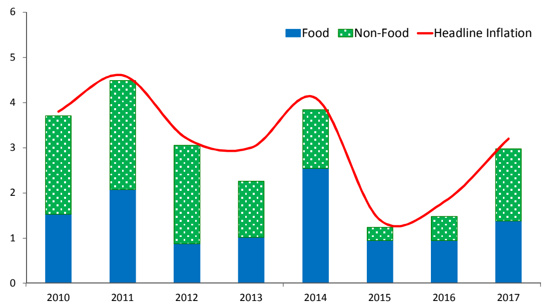
[8] Underemployment covers employed persons who express the desire to have additional hours of work in their present job or an additional job, or to have a new job with longer working hours.
[9] The labor turnover rate is the percent difference between the rates of accession (additions) and separation (losses).

Prices. Year-on-year (y-o-y) headline inflation averaged 3.2 percent in 2017, higher than the 1.8 percent average in the previous year and was well within the Government's 2017 inflation target range of 3.0 percent ± 1.0 percentage point.

Inflation for 2017 is within the Government's target

Inflation accelerated in 2017 due largely to higher price increases for selected food items alongside upward price adjustments for domestic petroleum prices and electricity rates.

Chart 1.8. Headline Inflation (2006=100)
in percent



Source: PSA, BSP

Food inflation in 2017 went up to 3.8 percent from 2.6 percent in the previous year as the prices of key food items increased due to some tightness in domestic supply conditions. In particular, meat prices increased due in part to importation constraints on meat and poultry products during the year, while fish inflation also went up as weather-related production disruptions limited the supply of fish in the market. Price increases for rice, milk, cheese, and eggs also accelerated in 2017. However, the impact of these developments were tempered by the slower price increase in vegetables and the negative inflation rate of sugar, jam, honey, and confectionery.

Meanwhile, non-food inflation rose to 2.7 percent in 2017 from 0.9 percent in the previous year due largely to higher inflation for electricity, gas, and other fuels as well as transport. Inflation for electricity, gas, and other fuels accelerated to 6.9 percent in 2017 from negative 4.4 percent in the previous year owing to higher electricity charges. Moreover, transport inflation increased to 3.3 percent from the year-ago rate of 0.3 percent as fares increased for the Philippine National Railways (PNR) in July, as rising international crude oil prices led to upward adjustments in domestic petroleum prices.

Likewise, core inflation—which excludes certain volatile food and energy items to measure underlying price pressures—rose to 2.9 percent in 2017 from 1.9 percent a year ago. Likewise, alternative measures of core inflation estimated by the BSP also increased relative to the rates registered in the preceding year.

Table 1.1. Measures of Core Inflation
in percent

	Core Inflation	Trimmed Mean [1]	Weighted Median [2]	Net of Volatile
2010	3.6	2.8	2.7	3.8
2011	4.3	3.8	3.1	3.6
2012	3.7	3.2	3.0	3.4
2013	2.9	2.5	2.3	3.1
2014	3.0	3.5	2.9	2.6
2015	2.1	1.9	1.9	1.8
2016	1.9	1.6	1.8	1.6
2017	2.9	2.4	1.9	2.4

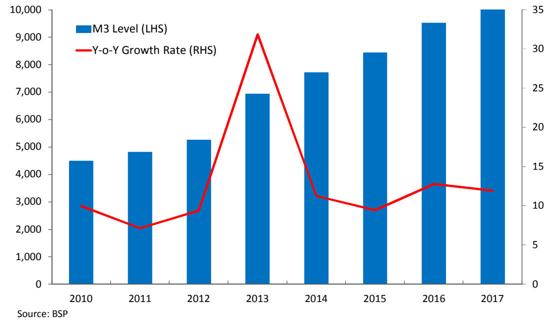
[1] The trimmed mean represents the average inflation rate of the (weighted) middle 70 percent in a lowest-to-highest ranking of year-on-year inflation rates for all CPI components.
[2] The weighted median represents the middle inflation rate (corresponding to a cumulative CPI weight of 50 percent) in a lowest-to-highest ranking of year-on-year inflation rates.
[3] The net of volatile items method excludes the following items: bread and cereals, meat, fish, fruit, vegetables, gas, solid fuels, fuels and lubricants for personal transport equipment, and passenger transport by road, which represents 39.0 percent of all items. The series has been recomputed using a new methodology that is aligned with PSA's method of computing the official core inflation, which re-weights remaining items to comprise 100 percent of the core basket after excluding non-core items. The previous methodology retained the weights of volatile items in the CPI basket while keeping their indices constant at 100.0 from month to month.
Source: PSA, BSP estimates

Monetary Aggregates. Domestic liquidity or M3 increased by 11.9 percent y-o-y as of end-2017 following a 12.8-percent expansion recorded at end-2016. The increase observed in money supply remained consistent with the robust expansion in domestic demand.

Expansion in domestic liquidity continues to support robust domestic demand

The growth in domestic liquidity was due mainly to the continued expansion in credit to the domestic economy. Domestic claims grew by 13.4 percent y-o-y due to the sustained increase in claims on the private sector (15.7 percent), reflecting the steady growth in bank lending. Meanwhile, net claims on the central government rose by 2.2 percent.

Chart 1.9. Domestic Liquidity (M3)
levels in billion pesos; year-on-year growth in percent



Source: BSP

Net foreign assets (NFA) in peso terms rose by 2.3 percent y-o-y in December 2017. The BSP's NFA position continued to increase on the back of robust foreign exchange inflows composed mainly of overseas Filipinos' remittances and business process outsourcing receipts. Meanwhile, the NFA of banks also expanded, driven largely by higher loans and investments in marketable debt securities.

Operations of the NG. The National Government recorded a slightly lower budget deficit in 2017 by 0.8 percent to ₱350.6 billion from ₱353.4 billion in 2016. The 2017 fiscal deficit, which is equivalent to

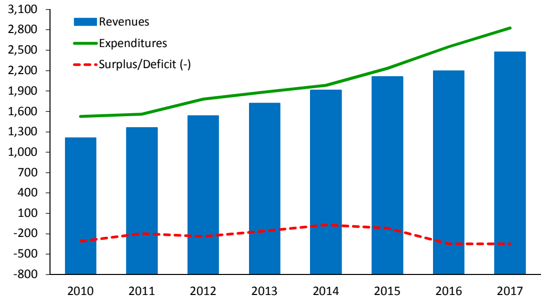
2.2 percent of GDP, is also 27.0 percent short of the ₱482.1 billion programmed deficit for the full year.

Fiscal deficit posts a slight decline

For 2017, revenues increased by 12.6 percent y-o-y to reach ₱2,473.1 billion, supported by higher collections during the year by the Bureau of Customs (BOC) and Bureau of Internal Revenue (BIR) by 15.6 percent and 13.1 percent, respectively. The higher revenue intake was also supported by the 3.2 percent y-o-y increase in non-tax revenues, particularly from fees and other charges. Partly offsetting the increase was the 2.0 percent y-o-y decline in the Bureau of the Treasury's (BTr) total collections mainly due to lower Bond Sinking Fund (BSF) and Securities Stabilization Fund (SSF) investments and NG deposits given the rationalized asset holdings of the BSP as well as lower cash holdings and deposits.

Chart 1.10. Cash Operations of the National Government

in billion pesos



Source: Bureau of the Treasury (BTr)

Total disbursements for 2017 reached ₱2,823.8 billion, 10.8 percent higher than in 2016. The upbeat spending performance was driven mainly by the double-digit growth rates in infrastructure spending, personnel services and maintenance expenditures, subsidies to government-owned and –controlled corporations (GOCCs) and transfers to local government units (LGUs).[10]

The fiscal deficit for the period was financed mainly by domestic fund sources, which covered about 95.8 percent of the gross financing requirement of the NG, reflecting the government's preference for domestic borrowings in order to minimize the impact of fluctuations in the foreign exchange.

The country's favorable fiscal position and sustained economic growth, coupled with proactive liability management, resulted in narrowing debt-to-GDP ratios over the last seven years. The National Government's outstanding debt-to-GDP ratio declined from 52.4 percent in 2010 to 42.1 percent in 2017, with the share of domestic debt at around two-thirds of the total outstanding debt.[11] This provides sufficient fiscal space for authorities to further boost public spending, especially on infrastructure, education, health and targeted social protection programs that provide additional growth incentive as well as improve human capital and enhance the country's competitiveness.

Financial Market Conditions Remain Firm Amid Risks

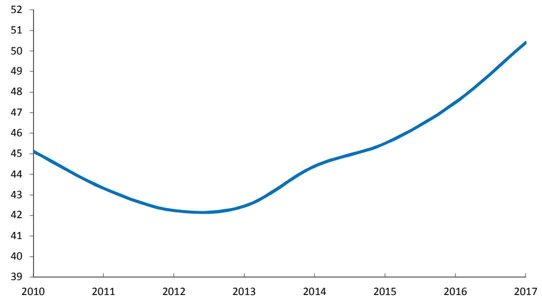
Foreign Exchange Market. The peso depreciated to an average of ₱50.40/US$1 in 2017 from ₱47.47/US$1 in the previous year,[12] driven largely by prospects of monetary policy tightening in advanced economies.

[10] Of the total, 89.0 percent were for primary expenditures, while the remaining 11.0 percent went to interest payments.
[11] For 2017, the total outstanding debt of the NG increased to ₱6,652.4 billion, 9.2 percent higher than in 2016.
[12] Dollar rates or the reciprocal of the peso-dollar rates (based on reference rates data) were used to compute for the percentage change.

Peso maintains external competitiveness

In particular, hawkish comments from a number of US Fed officials and mounting anticipation over the US Fed's unwinding of its bond holdings drove peso's depreciation. However, these depreciation pressures were offset partly by market optimism over the Philippine government's tax reform initiatives through the Tax Reform for Acceleration and Inclusion (TRAIN) bill, which was subsequently passed into law in the the latter part of the year.

Chart 1.11. Peso-Dollar Rate
PhP/US$



Source: Reference Exchange Rate Bulletin, Treasury Department, BSP

Nonetheless, the sustained inflows of foreign exchange from overseas Filipino remittances, foreign direct investments, BPO receipts, the recovery of exports, as well as the ample level of the country's gross international reserves and the country's robust economic growth, all continued to support the peso.[13] The volatility of the peso in 2017 was among the lowest relative to other currencies within the Asia-Pacific region. Furthermore, the peso gained competitiveness vis-à-vis its major trading partners due to its nominal depreciation.

Equities Market. The Philippine stock market recorded a stellar growth in 2017. On 29 December 2017, the benchmark Philippine Stock Exchange index (PSEi) closed at a new record high of 8,558.4 index points, higher year-to-date by 25.1 percent. Geopolitical developments and monetary policy developments overseas dampened investors' sentiment.

Philippine equities market sustains bullish streak

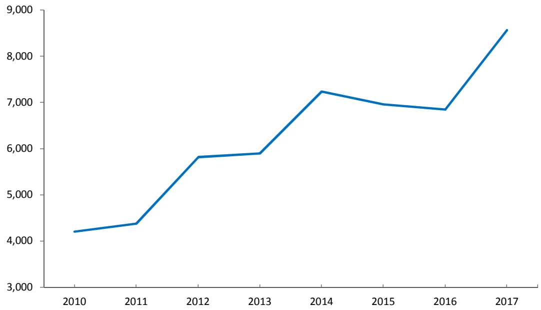
At the start of the year, market jitters over macroeconomic policies in the US, the impact of the Brexit process on the Philippine economy, the US Federal Reserve's readiness to hike interest rates further, the decline in China's foreign exchange reserves, and tensions arising from North Korea's missile test launches weighed on local shares. Later in the year, terror attacks in Barcelona, Spain and the US Fed's decision to raise the federal funds rate in June and December also contributed to pressures on the main index. Meanwhile, on the domestic front, lingering uncertainty over the local mining industry as well as security issues relating to the war in Marawi City also tempered trading sentiments.

Nonetheless, the local stock market was generally bullish in 2017. The index posted 14 all-time high levels in the latter half of the year, supported by expectations of the passage of the first phase of tax reform bill (TRAIN) as well as by optimism over the National Government's massive infrastructure spending plans, the Philippine economy's

[13] As of end-December 2017, country's gross international reserves (GIR) stood at US$81.5 billion (preliminary). This can cover 8.3 months' worth of imports of goods and payments of services and primary income. It is also equivalent to 5.8 times the country's short-term external debt based on original maturity and 4.2 times based on residual maturity. Foreign direct investments (FDI) remained positive and registered a net inflow of US$7.9 billion as of end-October 2017. Remittances from OF workers continue to flow in from various geographical locations globally; for the period January to November 2017, cash remittances from OFs amounted to US$28.2 billion. Exports of goods grew y-o-y by 16.2 percent from January to September 2017. As of end-September 2017, business process outsourcing (BPO) and tourism receipts reached US$16.9 billion and US$5.0 billion, respectively.

continued robust growth, and Fitch Ratings' latest credit rating upgrade for the country.

Chart 1.12. Philippine Stock Exchange Index (PSEi)
end-of-period; in index points

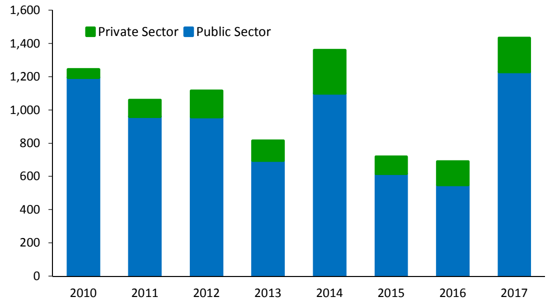


Source: Philippine Stock Exchange, BSP

Trading activity in 2017 was brisk with the daily value turnover amounting to ₱8.2 billion, 5.7 percent higher from the the previous year. The total market capitalization of listed issues was also 21.8 percent higher annually at ₱17.6 trillion as four companies[14] debuted in the PSE. Moreover, foreign investors remained net buyers of ₱56.2 billion in 2017, much more bullish towards local shares than in 2016.

Bond Market. The Philippine bond market continued to be dominated by government securities. Although the size of the Philippine corporate bond market has grown over the past years, it is still relatively small compared to the government bond market. In 2017, private issuances of local currency bonds were mostly from real estate companies, financial corporations, and holding firms. Meanwhile, the NG continued to favor domestic sources of borrowings, which accounted for about 80 percent of its total borrowing mix. This limits the country's exposure to foreign exchange risks.

Chart 1.13. Local Currency Bond Issuances
in billion pesos



Source: Bureau of the Treasury; Bloomberg; and Staff Calculation

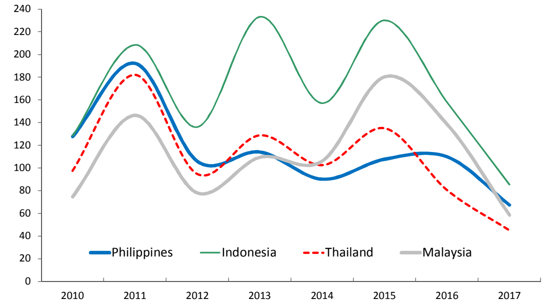
Investors also preferred shorter-tenored instruments as it is easier to discount information and formulate strategies in the immediate term. Market players have also positioned themselves with the expectation of potential increases in interest rates given the ongoing monetary policy normalization by the US Fed.

In the secondary market, trading activity was highly sensitive to external and domestic developments that shifted market sentiment, with prospects of protectionist policies in the US as well as the geopolitical tensions in the Korean Peninsula adversely affecting investor appetite. Meanwhile, on the domestic front, encouraging Philippine growth outturns and the passage of the tax reform bill supported investor confidence.

The immediate spillover was manifested in the higher cost of raising funds from the external market and the higher yield demanded for owning Philippine debt papers. As of end-December, the Philippines' 5-year sovereign CDS stood at 59 bps, lower than Indonesia's 85 bps while higher than Malaysia's 58 bps and Thailand's 46 bps.

[14] Wilcon Depot Inc., Eagle Cement Corp., Cebu Landmasters Inc. and Chelsea Logistics Holdings Corp.

Chart 1.14. Five-Year CDS Spreads of Selected ASEAN Countries
in basis points



Source: Bloomberg

Credit Risk Assessment. Major third-party credit watchers continued to recognize the Philippine economy’s strong fundamentals during the year. Despite domestic challenges and external headwinds, the Philippines secured a one-notch credit-rating upgrade from Fitch Ratings to “BBB”, as well as an outlook change from Malaysia’s RAM Ratings Services from stable to positive on its “gBBB3(pi)” credit rating. Other regional and international debt watchers, namely, Rating and Investment Information, Inc. (R&I) (BBB/stable), Japan Credit Rating Agency, Ltd. (JCRA) (BBB+/stable), National Information and Credit Evaluation (NICE) of Korea (BBB/stable), Standard and Poor’s (BBB/stable), and Moody’s Investors Service (Baa2/stable), likewise maintained their ratings and stable outlook on the Philippines.

Table 1.2. Philippine Sovereign Credit Ratings
as of end-December 2017

	Local Currency (LT/ST)	Foreign Currency (LT/ST)	Outlook
S&P	BBB/A2	BBB/A2	stable
Moody's	Baa2/n.a.	Baa2/n.a.	stable
Fitch	BBB/n.a.	BBB/F3	stable
JCRA	BBB+/n.a.	BBB+/n.a.	stable
NICE	BBB+/n.a.	BBB/n.a.	stable
R&I	n.a.	BBB/a-2	stable

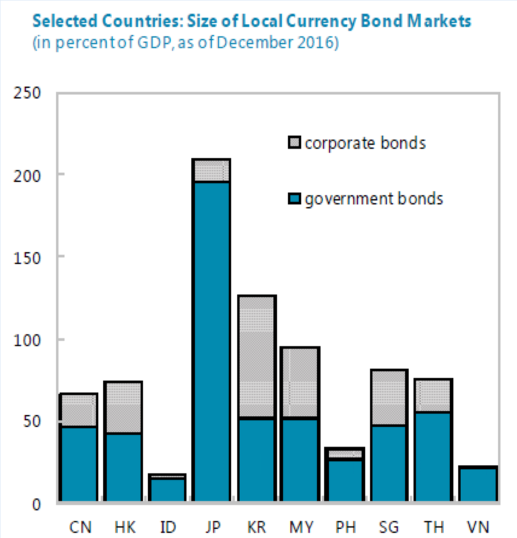
S&P - Standard and Poor's
Moody's - Moody's Investor Service
Fitch - Fitch Ratings
JCRA - Japan Credit Rating Agency
NICE - National Information and Credit Evaluation Investor Service
R&I - Rating and Investment Information, Inc.
Source: Investor Relations Office (IRO), BSP; Report of Credit Rating Agencies

Box Article 2

Developing the Philippine Domestic Debt Market

The Philippines has been an important destination of investments in Asia since the early 2000s. The country's relatively strong macroeconomic fundamentals, coupled with the National Government's more prudent debt management, have fostered substantial growth in the country's domestic capital market over the past decades. However, while the issuances of peso-denominated government and corporate bonds showed a general uptrend from 2000, the Philippines debt market still strives to stand parallel with its regional peers. As of end-December 2016, Philippine local currency bonds are only about 28 percent of the country's gross domestic product (GDP),[15] noticeably lower than those of most Asian countries. The lagging position of the Philippines in the region reflects the capital market hurdles that the country has been trying to overcome, including the scarcity of tradable debt securities, distortions in the yield curve that discourage trading, and the absence of a primary dealer system that could instill market integrity and discipline, among others.

Figure 1: Size of Local Currency Bond Markets of Selected Asian Countries



Source: Guscina, A., et.al. (2017).

Having a vibrant local debt market that is at par with regional counterparts and capable of responding to the dynamic demands of the Philippine economy is the broad, overarching objective of ongoing efforts in developing the domestic debt market. Risk management is embedded in this objective, as a well-functioning and deep fixed-income market contributes to a more balanced financial system where risk is shared between the banking system and the capital market.

The challenge to develop the local debt market becomes more pronounced as the move for regional integration progresses and as the government endeavors to sustain the economy's growth trajectory through massive infrastructure spending which is expected to reach ₱8.0 to ₱9.0 trillion or approximately

[15] Source: Guscina, A., Iacovella, S., Perez, J., & Stella, P. (2017). The Republic of the Philippines Capital Markets Development and Regulatory Reforms (Technical Assistance Report).

US$155.5 billion for a six-year period ending in 2022.[16]The actual public spending on infrastructure has been increasing year-on-year, registering 5.1 percent of the GDP in 2016 from 1.8 percent in 2011 and it is estimated to reach 7.4 percent of the GDP by 2022 on account of the Government's "Build, Build, Build" program.[17]

The crucial question is how such an accelerated spending for capital-intensive projects shall be funded. According to the Philippine Development Plan (PDP), the government will use an optimal mix of official development assistance, private capital, and government financing. As regards government financing, the substantial demand for more debt security issuances opens up an opportunity for developing the local debt market but pushing market reforms forward is in itself a tough endeavor. The Bangko Sentral ng Pilipinas (BSP), together with the Securities and Exchange Commission (SEC), the Department of Finance (DoF), and the Bureau of the Treasury (BTr) are up for this challenge.

The Joint Initiatives – The Philippine Roadmap: The Local Currency Debt Market Development

The BSP, SEC, DoF, and BTr have been working on a joint initiative to develop the local currency debt market. On 25 August 2017, these government offices have announced their consolidated roadmap specifying a set of steps to expand market depth and breadth to encourage active trading and drive quicker development of market-based benchmarks.

Figure 2: Sequence of Reforms

[16] Source: Fiscal Risk Statement of 2018 from the Development Budget Coordination Committee
[17] Source: Philippine Development Plan (2017-2022)

The roadmap involves the following initiatives:

- Adoption of a stable, predictable, and transparent government securities issuance policy to reduce investor uncertainty and allow well-informed portfolio choices;
- Construction of a reliable yield curve for better price discovery and more precise securities valuation;
- Creation of a well-designed primary dealer (PD) incentive program accompanied by defined PD responsibilities to drive both primary and secondary market-making; and
- Ensuring a keen oversight function through market surveillance by a self-regulatory organization as this is critical in ensuring the integrity of the local debt market and preventing abusive market conduct.

These initiatives follow a sequenced program consisting of immediate to medium-term action plans to ensure that urgent and important issues are tackled without causing disruptions in the financial markets. As an initial step, the BTr launched an interdealer government securities repo program on 27 November 2017. This program aims to facilitate bond market liquidity by increasing trade frequency to support a more robust yield curve. By enabling market participants to obtain and reuse securities to meet the delivery requirements of a short sale, the program is expected to result in more efficient capital allocation through the reduction in the cost of maintaining a large inventory of securities.

Being one of the champions of capital market development, the BSP also has devised financial market development-oriented policies and has continued to introduce regulatory reforms that ensure the appropriate balance between satisfying the market's needs and achieving the BSP's prudential objectives:

- In June 2016, the BSP introduced the Interest Rate Corridor (IRC) system to help create an environment conducive to increased money market transactions through better price discovery for short-term interest rates;
- The BSP also issued BSP Circular No. 975 in October 2017 to streamline the requirements on the issuance of bonds and commercial papers by banks and quasi-banks (QBs). The amended regulation removed the required minimum features of bonds issued by banks and emphasized banks' compliance mainly with the security laws and regulations, particularly the Securities Regulations Code (SRC), its implementing rules and regulations, and other applicable rules and regulations issued by the SEC. Moreover, the amended regulation directed banks to notify the BSP of the debt issuances and to observe the liquidity risk management measures required of BSP Supervised Financial Institutions (BSFIs); and
- The BSP further liberalized its foreign exchange rules to facilitate the flow of foreign portfolio investments which fuel development in the local debt market, apart from the equity market.

Moreover, the BSP has adopted global standards on risk management:

- In November 2015, the BSP issued Circular No. 889 to strengthen governance over treasury activities, enhance investor protection, and ensure the integrity of treasury operations. This Circular detailed the BSP's expectations on the management of operational risk arising from treasury activities, emphasizing the need for banks to act ethically and with utmost integrity, especially in the context of their participation in financial markets; and
- Also in 2015, the BSP updated its sales and marketing guidelines for financial products through Circular No. 891. This Circular highlighted the importance of the proper conduct of client suitability assessment to protect not only financial consumers but also the BSFIs against adverse client claims.

Meanwhile, in support of the newly-launched BTr Repurchase (repo) program, the BSP recently reduced the reserve requirements for repo transactions to zero percent effective 27 November 2017. This regulatory amendment was made to attract participation in the repo market on account of the reduction in the friction cost associated with repurchase transactions.

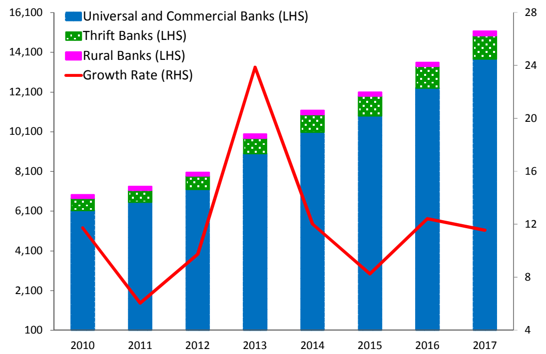
Continuing Collaboration

The Philippine government is continuously working on developing the Philippine fixed-income market. Much work remains to be done but good progress has been made to improve domestic debt market size and resilience.

Philippine Financial Sector Maintains Solid Performance

Banking. The Philippine banking system continued its robust performance in 2017 on the back of sound fundamentals, underpinned by sufficient provisioning and adequate capital and liquidity buffers to ward off unexpected external shocks. The banking system's balance sheet expanded with double-digit growth in assets, deposits, and capital. Moreover, the BSP pursued reforms that translated into improvements in banks' governance and risk management systems. As such, the banking system contributed positively to the economy's growth in 2017.

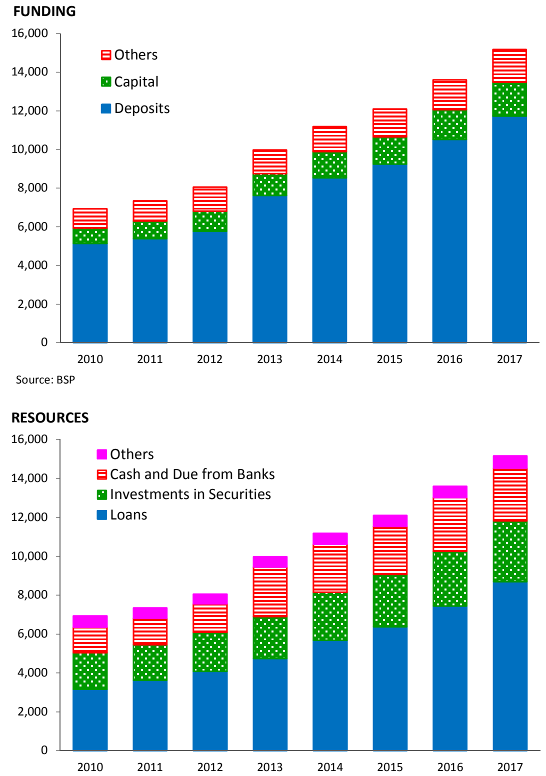
Chart 1.15. Resources of the Banking System
in billion pesos, growth rate in percent



Source: BSP

Total Resources. The total resources of the Philippine banking system grew by 11.5 percent year-on-year (y-o-y) to ₱15,160.6 billion as of end-December 2017. By banking group, total resources of universal and commercial banks (U/KBs), which comprised 90.8 percent of the banking system's total resources, rose by 11.9 percent y-o-y to ₱13,763.3 billion, while that of thrift banks (TBs) grew by 8.4 percent Y-o-y to ₱1,168.2 billion. Meanwhile, total assets of rural and cooperative banks (RBs/Coop Banks) posted an 8.1 percent y-o-y growth to ₱229.2 billion. The bulk of the system's assets were mostly channeled to loans followed by investment in securities.

Chart 1.16. Sources and Uses of Funds
in billion pesos



Source: BSP

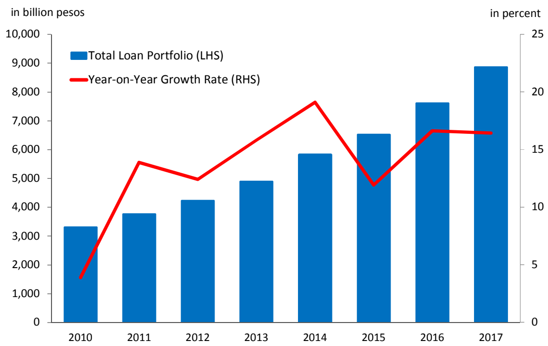
The expansion in the banking system's assets was bolstered by the increase in funding base primarily from deposits which posted a y-o-y growth of 11.6 percent to ₱11,724.8 billion. Both peso- and foreign currency-denominated deposits increased by 12.0 percent and 9.8 percent, respectively[18]. By type of account, deposits were composed of savings account with a share of 47.5 percent, distantly followed by time deposits and demand deposits accounts at 27.8 percent and 23.0 percent, respectively.

Loans. The 16.7 percent y-o-y growth in the total loan portfolio (TLP) of the banking system was broad-based and channeled to production

[18] The share of peso-denominated and foreign currency-denominated savings deposits to total deposits recorded at 83.2 percent and 16.8 percent, respectively.

sectors[19]. Loans to real estate activities captured the largest share of the system's loan portfolio (18.2 percent). Next in line were wholesale and retail sector (13.0 percent), manufacturing sector (11.5 percent) and loans to household (10.9). The banks' rising appetite for lending activities was accompanied by continued improvement in their respective credit risk management systems in light of the issuance of Circular No. 855 in 2014[20].

Chart 1.17. Trends in Lending and Loan Quality
in billion pesos, growth rate in percent



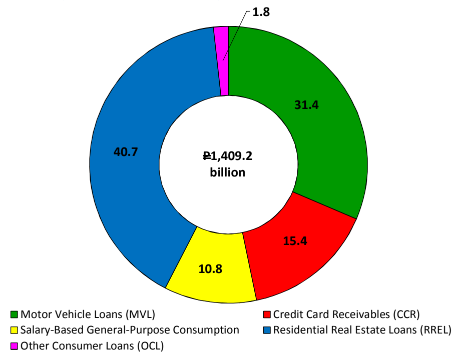
Source: BSP

Exposures of the banking system to the real estate sector aggregating to ₱2,005.7 billion went up by 17.9 percent y-o-y at a moderated pace starting end-March 2017. The 19.0 percent annual growth in commercial real estate loans (RELs) drove the expansion in the real estate exposures (REEs) as of end-September 2017.[21]

The BSP has implemented key measures to mitigate the risks arising from the exposures to the property sector. These include the implementation of a prudential REL limit wherein the REL portfolio of a bank, as defined under Circular No. 600, shall not exceed 20 percent of its TLP, net of interbank loans. This was reinforced by the adoption of the real estate stress test (REST) limits,[22] which combine a macroprudential overlay of a severe stress test scenario, the principle of loss absorbency through minimum capital ratio thresholds, and heightened supervisory response. Reporting templates on REEs, including exposures to project finance, were recently enhanced to refine surveillance of vulnerabilities arising from the real estate sector and, in turn, enable the BSP to formulate targeted policy measures if necessary.

Meanwhile, consumer loans (CLs) recorded a 17.2-percent y-o-y hike to reach ₱1,409.2 billion as of end-September 2017. By component, motor vehicles loans (MVLs) posted the highest growth at 21.5 percent to ₱442.4 billion. Nonetheless, such growth has moderated since June 2016.

Chart 1.18. Components of Consumer Loans
Universal and Commercial Banks and Thrift Banks
as of end-September 2017; in percent



Source: BSP

In terms of cross-border transactions, the Philippine banks were net cross-border lenders with a net financial asset position of US$8.1 billion (₱413.8 billion) as of end-September 2017. Cross border exposures were mostly in the form of investments in debt securities and loans which were denominated largely in US dollars. Philippine banks remained domestically oriented as cross-border claims only accounted for 9.4 percent of the banking system's total assets.

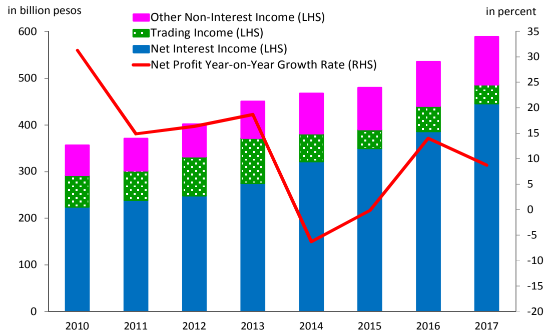
[19] Following the Philippine Standard Industrial Classification (PSIC).
[20] This refers to the comprehensive guidelines that seek to strengthen credit risk management practices of financial institutions in line with global best practices and international standards.
[21] Real estate exposures were composed of real estate loans at 85.3 percent and real estate investments at 14.7 percent.
[22] REST limits are equivalent to 10 percent CAR and 6 percent CET1/Tier 1 ratio after adjusting for stress test scenario of a 25 percent write off rate on REEs and Real Other Properties Acquired (ROPA).

Asset Quality. The loan quality of the banking system improved as non-performing loan (NPL) and non-performing asset (NPA) ratios declined to 1.7 percent and 1.7 percent, respectively. Banks also maintained adequate provision to cover the entire NPL portfolio posting a 120.6 percent coverage ratio. With the adoption of Philippine Financial Reporting Standards (PFRS) 9 *Financial Instruments* effective 1 January 2018, banks will be recognizing allowance for probable losses at an earlier stage, providing buffers to potential credit losses.

Meanwhile, the banking system held sufficient stock of high-quality liquid assets (HQLA) to secure liquidity needs over a 30-day stress scenario. In particular, Basel III Liquidity Coverage Ratio (LCR) of the U/KB industry registered above the minimum requirement.[23] The HQLA stock of banks was predominantly in the form of reserves with the BSP and investments in government securities. The LCR framework is currently implemented under a phased-in arrangement requiring U/KBs to meet minimum LCRs of 90 percent starting 1 January 2018 and higher rate of 100 percent starting 1 January 2019. The said framework was recently amended to extend applicability to banks and quasi-banks (QBs) that are subsidiaries of U/KBs. Such financial institutions shall be required to meet the minimum LCR of 100 percent starting 1 January 2019. Meanwhile, stand-alone TBs, RBs and Coop Banks shall be subject to a separate minimum liquidity ratio (MLR) of 20 percent, which is computed as the ratio of the stock of liquid assets to total qualifying liabilities, effective on 1 January 2019.

Revenues. The overall system's profitability was pushed by the ₱59.7 billion expansion in core business income which was partly offset by the ₱13.8 billion slowdown in trading income due to volatilities in the financial markets. The banking system's resulting net profit registered at ₱167.7 billion, up by 8.7 percent for the period ended December 2017. Meanwhile, return on assets (ROA) and return on equity (ROE) stood at 1.2 percent and 10.2 percent, respectively.

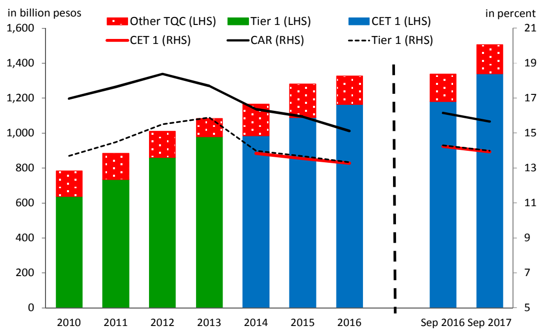
Chart 1.19. Sources of Revenue
in billion pesos, growth rate in percent



Source: BSP

Capital. Alongside satisfactory asset quality and ample liquidity was the banks' adequate capital to support credit expansion activities. Total capital grew by 13.4 percent y-o-y to ₱1,756.1 billion, augmented by fresh funds infused by some banks and higher profits registered for the period covered. Meanwhile, the Basel III capital adequacy ratio (CAR) of U/KBs stood at 15.7 percent[24] on consolidated basis, well-above the BSP and BIS prescribed thresholds. At the same time, banks maintained high quality capital in the form of common equity tier 1 (CET1) capital.

Chart 1.20. Composition of Capital
in billion pesos, growth rate in percent



Source: BSP

[23] As of end-June 2017

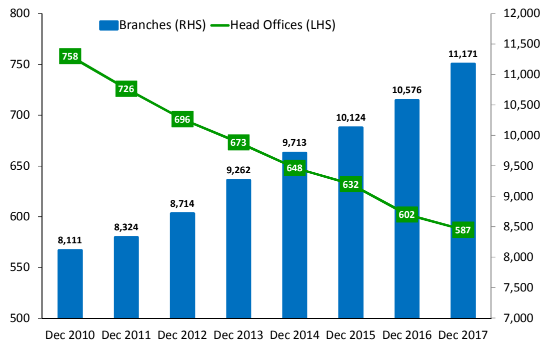
[24] CAR on solo basis at 15.0 percent as of end-September 2017.

To address systemic risk and interconnectedness as well as strengthen going concern capacity of banks, the BSP adopted the framework for dealing with domestic systematically important banks (D-SIBs)[25]. In particular, the framework required banks identified as D-SIBs to maintain higher loss absorbency (HLA) [26] capital given that the failure of a D-SIB is expected to have a greater impact on the financial system and the real economy. Such framework was further supported by the issuance of guidelines on requiring D-SIBs to submit a recovery plan, which sets out the actions that will be taken by a D-SIB to restore viability in cases of significant deterioration in its financial condition.[27] Banks identified as D-SIBs[28] have met the HLA requirements mandatory for their respective classification.

The Basel III Leverage Ratio framework, which forms part of the Basel reform agenda adopted by the BSP, serves as a backstop measure to the CAR. It is designed to constrain the potential buildup of leverage in the banking system. The framework, which will take effect in July 2018, essentially provides the covered entities time to assess their compliance and implement necessary corrective actions. As of end-June 2017, Basel III leverage ratio of U/KBs on both solo and consolidated bases were above the BSP's threshold of 5.0 percent and the international minimum of 3.0 percent.

Bank Operating Networks. Meanwhile, the BSP continued to provide an enabling regulatory environment that promotes greater access to financial products and services. In 2017, the BSP introduced the concepts of cash-agents and branch-lite units. With cash agents, banks can tap third-party agents as a cost-efficient delivery channel and leverage on innovative digital solutions to attract more clients. Aside from this, the BSP rationalized the prudential requirements on banking offices and provided flexible provisions on the establishments of branch-lite units, enabling banks to widen their physical reach particularly to areas with no banking presence. As of end-December 2017, the branch and other banking offices (i.e., EOs, OBOs and MBOs) [29] network of banks increased by 595 to 11,171 banking offices. Such growth can be attributed to the increased efforts of U/KBs and TBs to establish more branches and other banking offices.

Chart 1.21. Physical Network of Banks



Source: BSP

While the network of branches and other banking offices is increasing, the number of head offices of banks continued to decline to 587 units as of end-December 2017, reflecting the streamlined banking system landscape. This is consistent with the BSP's policy thrust of industry consolidation which comes in various forms. First, big banks acquire small banks to become part of a bigger banking group. Second, small banks consolidate themselves to form a larger and stronger bank by entering the Consolidation Program for Rural Banks (CPRB).[30] Third, domestic banks are encouraged to scale up and reposition themselves given the increased competition that comes with

[25] Circular No. 856 dated 29 October 2014
[26] The HLA requirement is to be met with CET1 capital which shall be on top of the capital conservation buffer.
[27] Circular No. 904 dated 10 March 2016
[28] Based on 31 December 2016 data.

[29] Extension Offices (EOs), Other Banking Offices (OBOs) and Micro-Banking Offices (MBOs)
[30] CPRB is a collaboration between the BSP, PDIC, and the Land Bank of the Philippines aimed at strengthening the rural banking industry given their importance in providing essential financial services to the community, particularly in their specialized niche market, and in promoting financial inclusion. The CPRB shall be available for two years until 26 October 2019.

the liberalization of the entry of foreign banks in the Philippine banking system. Since the enactment of the Republic Act No. 10641, a number of foreign banks were already approved by the Monetary Board to operate in the Philippines. In 2017, four foreign banks were authorized by the BSP to establish branches or representative offices in the country. This shows that the Philippines remains one of the top investment destinations of foreign banks. To level the playing field among banks, the BSP also gradually lifted the moratorium on the establishment of domestic banks, except in areas with no existing banking offices. Starting 1 January 2018, the said moratorium shall be fully lifted and locational restrictions shall be fully liberalized.

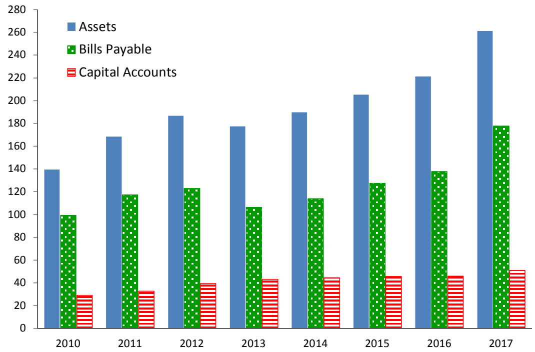
Moving forward, the BSP will sustain the implementation of proactive reforms that will raise the bar on risk management systems, as well as promote sound liquidity and capital positions, and greater access to financial services. These reforms, coupled with banks' prudent risk-taking behavior and adequate buffers against uncertainties, will move the system towards a more inclusive, sound, and stable banking system. Furthermore, indices will be constructed to help measure the banking sector resilience and to aid the BSP in capturing potential vulnerabilities in the banking system.

An equally important initiative is the further strengthening of the existing collaboration with other financial regulators (i.e., SEC, IC, and the PDIC) through the Financial Sector Forum (FSF) and the Financial Stability Coordination Council (FSCC), particularly in adopting common prudential standards to the extent feasible and instituting measures that will further promote financial stability.

Non-Bank Financial Institutions (NBFIs) with Quasi-banking Functions. There were nine operating NBFIs with quasi-banking functions (NBQBs)[31] comprised of seven subsidiary investment houses and financing companies, one stand-alone financing company and one other NBQB as of end-December 2017. The overall network of NBQBs expanded to 119 (composed of nine head offices and 110 other offices) due to the establishment of new branches of financing companies.

Resources. The total resources of the NBQBs grew by 18.0 percent y-o-y to ₱260.9 billion as of end-December 2017. Total resources were mainly channeled to loans which posted a 26.1 percent y-o-y growth to ₱164.1 billion. Meanwhile, investments in securities as well as cash and due from banks went up by 3.6 percent and 11.5 percent, respectively. Asset quality of NBQBs remained satisfactory as the non-performing loans (NPL) and non-performing assets (NPA) ratios stood at 3.8 percent (from 4.0 percent) and 2.7 percent (same from last year), respectively. Cushion against soured loans was maintained as the NPL coverage ratio registered at 62.6 percent.

Chart 1.22. Total Resources of NBQBs
in billion pesos



Source: BSP

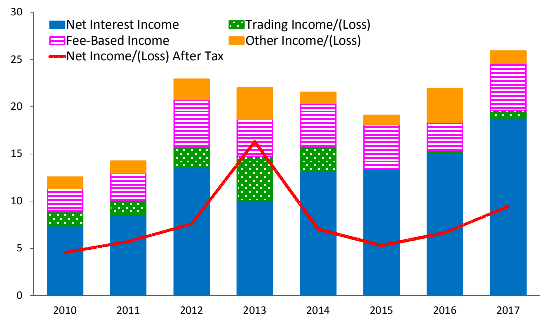
The asset expansion was mostly funded by bills payable in the form of deposit substitutes which

[31] NBQBs are NBFIs comprised of investment houses and financing companies which are authorized by BSP to borrow funds from 20 or more lenders for their own account through issuances, endorsement or assignment with recourse or acceptance of deposit substitutes for purposes of relending or purchasing receivables and other obligations. NBQBs are subject to BSP supervision.

stood at ₱129.5 billion, up by 15.0 percent y-o-y from ₱112.6 billion last year. The capital of NBQBs grew by 11.1 percent to ₱51.0 billion owing to the ₱3.1 billion expansion in surplus, surplus reserves and undivided profits. Meanwhile, common stocks increased by 13.9 percent y-o-y to ₱15.9 billion.

Revenues. The NBQB industry posted a 41.9 percent y-o-y growth in net income to ₱9.4 billion from ₱6.6 billion in end-December 2016. The improved revenue mainly came from the ₱3.6 billion growth in net interest income. Correspondingly, profitability indicators such as ROA and ROE grew to 3.9 percent and 19.5 percent from 3.1 percent and 14.5 percent, respectively.

Chart 1.23. Key Sources of Revenues of NBQBs
in billion pesos



Source: BSP

Non-Stock Savings and Loans Associations. As of end-December 2017, there were 65 NSSLAs with 132 branches operating in the Philippines. Of these NSSLAs, 30 are connected with the private sector, 24 provide financial intermediation to government employees and 11 serve the military and uniformed civilians. The number of NSSLAs accounted for 1.2 percent of the total 5,510 operating NBFIs which are under the supervisory purview of the BSP.

Total resources of NSSLAs rose by 2.6 percent y-o-y to ₱173.4 billion as of end-June 2017. A large portion of the industry's resources were allocated to loans at 71.1 percent, distantly followed by investments in securities at 12.6 percent. Asset quality remained manageable with NPL and NPA ratios registering at 9.6 percent and 7.1 percent, respectively. NPL and NPA coverage ratios grew to 119.8 percent (from 113.2 percent) and 119.1 percent (from 112.2 percent), respectively, which beefed up the industry's cushion against potential credit losses.
Deposits from members likewise went up by 5.5 percent y-o-y to ₱38.6 billion, which comprised 79.8 percent of total liabilities. Majority of the deposits from members were in the form of savings accounts which recorded a ₱31.6 billion level. Meantime, NSSLAs' capital of ₱125.0 billion, mainly composed of paid in capital from members, is still the major source of funding of the industry. This was augmented by the ₱7.9 billion net profit posted by the industry, which mainly came from interest earned from lending activities.

Liquid assets such as cash and due from banks and investments accounted for almost a quarter of the total resources of the industry. Liquid assets to deposits ratio registered at 110.2 percent. This indicated sufficient liquidity to service deposit withdrawals of its members.

The favorable performance of NSSLAs was bolstered by the implementation of BSP regulations particularly on ensuring the safety and soundness of the operations and lending activities of the industry. Recently, the Monetary Board strengthened the guidelines on know-your-member and allowable investments of NSSLAs. The board of trustees and management of NSSLAs are expected to implement effective risk management systems and control measures to ensure eligibility of all members.

Pawnshops. There were a total of 5,371 pawnshops with 11,242 branches nationwide as of end-December 2017. This accounted for 97.6 percent of the total NBFIs supervised by the BSP. Aside from Metro Manila, most pawnshops were located in Region IV-A (CALABARZON), Region III (Central Luzon) and Region VII (Central Visayas). In December 2016, the BSP issued the enhanced supervisory framework on pawnshops. The issuance aimed to strengthen the governance and market conduct of said entities.

Money Service Businesses. The BSP released comprehensive guidelines on the supervision of money service businesses comprised of Remittance and Transfer Companies (RTCs), Money Changers (MCs)/Foreign Exchange Dealers (FXDs). This was followed by pioneering guidelines covering virtual currency (VC) exchanges. Said issuances required such MSBs to comply with the anti-money laundering regulations and consumer protection standards. As of end-December 2017, there were a total of 11,899 MSBs composed of 4,670 head offices and 7,229 branches. Most MSBs are located in Metro Manila and Regions IV-A and III.

External Sector

The BOP position for full year 2017 registered a deficit of US$863 million, more than double the US$420 million deficit recorded in 2016.

Table 1.3. Balance of Payments
in million US dollar

	2016 [r]	2017 [p]
Current Account	-1,199	-2,518
Capital Account	62	57
Financial Account	175	-2,208
Net Unclassified Items	892	-610
Overall BOP	**-420**	**-863**

Details may not add up due to rounding.
[p] Preliminary
[r] Revised to reflect data updates from official sources and post-audit adjustments.
Source: BSP

This development was underpinned mainly by the increased deficit in the current account during the year, despite the reversal in the financial account to net inflows from net outflows in the previous year. The current account deficit of US$2.5 billion stemmed mainly from the widening trade-in-goods deficit that was brought about by increased imports of goods that support domestic capital formation and production. The financial account posted US$2.2 billion net inflows on the back of the surge in net inflows of direct investments, which more than compensated for higher net outflows of portfolio investments, even as net outflows of other investments declined significantly during the review period.

The current account records a higher deficit

Current Account. The current account registered a deficit of US$2.5 billion, more than twice the US$1.2 billion deficit recorded in 2016. This developed on account of the widening trade-in-goods deficit which more than offset the increased net receipts in the trade-in-services, and secondary and primary income accounts during the year.

- The trade-in-goods deficit for full year 2017 went up by 15.9 percent to US$41.2 billion as the growth in imports of goods of 14.2 percent outpaced that of exports of goods at 12.8 percent. Exports of goods rose to US$48.2 billion in 2017 from US$42.7 billion in 2016 driven by continued demand from the country's trading partners (i.e., China, Hong Kong, South Korea and some countries in Europe). The expansion in exports of goods was due largely to higher shipments of manufactured goods and mineral products, which registered double-digit growth of 10.3 percent and 72.4 percent, respectively. Exports of manufactures totaled US$36.8 billion during the year, boosted by higher shipments of non-consigned electronics (including other electronics), and machinery and transport equipment. Meanwhile, exports of mineral products amounted to US$4.1 billion on account of higher demand for copper metal and gold as a result of increased export volume and world market prices.

- Imports of goods aggregated US$89.4 billion in 2017 from US$78.3 billion a year ago. The upturn was accounted for mainly by higher imports of raw materials and intermediate goods (16.7 percent), and mineral fuels and lubricant (32.9 percent). Increased imports of raw materials and intermediate goods emanated largely from imports of semi-processed raw materials, particularly manufactured goods (14.4 percent), notably iron and steel, as well as materials and accessories for the manufacture of non-consigned electronic products (22.4 percent). The growth in imports of mineral fuel and lubricants was due to higher purchases of petroleum crude, and other products of mineral fuels and lubricant. Imports of consumer goods also increased (8.4 percent), spurred by higher purchases of durables, particularly passenger cars and motorized cycle, and miscellaneous manufactures.

- Net receipts in the trade-in-services account amounted to US$9.5 billion in 2017, higher than the US$7 billion net receipts recorded a year ago. The 34.8 percent expansion was accounted for by: a) increased net receipts in other business services, particularly technical, trade-related, and other business services as well as computer services; b) reversal of financial services to net receipts from net payments; and c) lower net payments for travel and government goods and services.[32] These gains more than compensated for higher net payments in charges for use of intellectual property, insurance and pension, and transport services.

- The primary income account posted net receipts of US$3.1 billion, 20 percent higher than the US$2.6 billion net receipts in 2016. This development stemmed from the expansion in net compensation inflows mostly from resident overseas Filipino (OF) workers (by 5.2 percent) coupled with lower net payments in investment income (by 2.8 percent). Investment income on portfolio investments posted lower net payments, due to net interest receipts of corporates on bonds issued by non-residents amounting to US$80 million (a reversal from net payments of US$174 million). Interest receipts on reserve assets also increased (by 20 percent) during the year.

- Net receipts in the secondary income account grew by 5.5 percent to US$26.1 billion, boosted by the 4.1 percent increase in remittances of non-resident OF workers amounting to US$24.1 billion.

Capital account net receipts fall

Capital Account. Net receipts in the capital account totaled US$57 million in 2017, 8.7 percent lower than the US$62 million recorded in 2016. Receipts in other capital transfers of financial corporations, non-financial corporations, households, and non-profit institutions serving households declined during the year.

Financial Account. The financial account reversed to net inflows (or net borrowing by residents from the rest of the world) of US$2.2 billion in 2017 from net outflows of US$175 million in 2016. This developed mainly on account of the increase in residents' net incurrence of liabilities to

[32] Earnings from BPO services for full year 2017 amounted to US$22.1 billion or a growth of 9.6 percent from 2016.

US$8.7 billion even as their net acquisition of financial assets rose to US$6.5 billion.

The financial account reverses to net inflows

Direct investment account. Net inflows of direct investments surged to US$8.1 billion in 2017. The hefty increase was boosted by the significant inflows of FDI which reached a record high of US$10 billion (21.4 percent growth) during the year. Investor sentiment remained positive on the back of the country's sound macroeconomic fundamentals and growth prospects. In particular, investments in debt instruments rose by 20.7 percent to US$6 billion. Moreover, net equity capital investments expanded by 25.9 percent to US$3.3 billion. Gross placements of about US$3.7 billion originated largely from the Netherlands, Singapore, the United States, Japan, and Hong Kong. These were channeled mainly to gas, steam and air-conditioning supply; manufacturing; real estate; construction; and wholesale and retail trade activities. Meanwhile, outflows from residents' net acquisition of assets registered US$1.9 billion in 2017, 19.1 percent lower than the US$2.4 billion outflows in 2016. The increase in residents' net equity capital investments abroad by 138.6 percent to US$1.8 billion was pulled down by lower investments in debt instruments during the year.

Portfolio investment account. Net outflows of portfolio investments more than doubled to US$3.9 billion in 2017 as residents' net acquisition of assets and net repayment of liabilities both increased. In particular, residents' net acquisition of financial assets rose by 154.3 percent to US$3.1 billion as residents' net placements in debt securities issued by non-residents increased markedly to US$2.4 billion. Meanwhile, residents' net repayment of liabilities was higher at US$796 million from US$264 million in the previous year. This developed due to the increase in local corporates' prepayment/repayment of long-term debt securities held by non-residents amounting to US$1.3 billion from US$608 million in 2016.

Financial derivatives. Trading in financial derivatives resulted in a higher net gain of US$51 million in 2017 from US$32 million in the previous year.

Other investment account. The other investment account posted net outflows of US$2.1 billion in 2017, lower by 55.2 percent than the US$4.6 billion registered in 2016. In particular, outflows from residents' net acquisition of financial assets fell by 27.1 percent to US$2 billion due mainly to the decline in loans extended by local banks to non-resident borrowers. Meanwhile, outflows stemming from residents' net repayment of liabilities were lower at US$63 million (from US$1.9 billion) due largely to local corporates' lower repayment of loans availed from non-residents.

International Reserves. The country's gross international reserves (GIR) amounted to US$81.6 billion as of end-December 2017, higher compared to the recorded level of US$80.7 billion in the previous year.

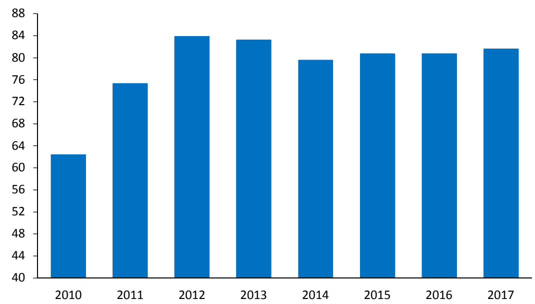
International reserves remain adequate

The increase in reserves was due mainly to inflows arising from the NG net foreign currency deposits, revaluation adjustments on the BSP's foreign currency-denominated reserves and gold holdings, as well as its income from investments abroad.

These were partially offset by outflows from the BSP's foreign operations.

The end-2017 GIR remains well above the standard adequacy metrics as it can cover 8.0 months' worth of imports of goods and payments of services and primary income. It is also equivalent to 5.7 times the country's short-term external debt based on original maturity and 4.1 times based on residual maturity.

Chart 1.24. Gross International Reserves
in billion US dollar



Source: BSP

A bulk of the country's reserves or 80.7 percent of the total reserves was held in foreign investments. Meanwhile, 10.2 percent were in gold and the remaining 9.1 percent were in holdings of Special Drawing Rights (SDRs), the BSP's reserve position in the IMF, as well as foreign exchange.

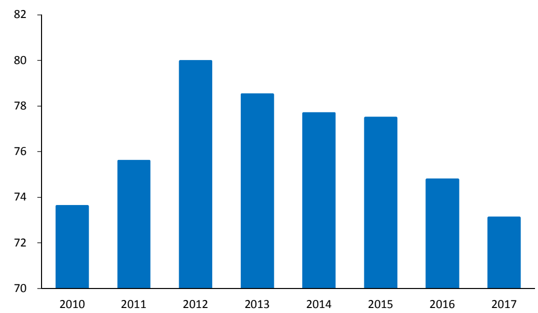
Net international reserves (NIR), which refer to the difference between the BSP's GIR and total short-term liabilities, amounted to US$81.6 billion as of end-2017, an increase of US$877 million from its level a year ago.

External Debt. Outstanding Philippine external debt stood at US$73.1 billion as of end-2017, down by US$1.7 billion from the US$74.8 billion level as of end-2016.

External debt remains manageable

During the year, private sector accounts declined by US$1.7 billion (or 4.6 percent) from US$37.3 billion in 2016 to US$35.6 billion. The decline was mainly attributed to the non-bank sector, whose foreign loans decreased from US$22.2 billion a year ago to US$20.2 billion in 2017. This is consistent with the downward trend in loans from commercial sources (banks and other financial institutions, which are main sources of corporate funding) from the US$25.8 billion level recorded a year ago to US$22.5 billion. The decrease also translated to a drop in US Dollar denominated borrowings from US$48.6 billion to US$45.6 billion (or by US$3.0 billion) during the year. These developments may be indicative of Philippine corporate borrowers' deleveraging from foreign borrowings to minimize foreign exchange risk, among others.

Chart 1.25. External Debt
in billion US dollar



Source: International Operations Department (IOD)-BSP

On the other hand, external debt of the public sector barely increased during the year (US$40 million), to close at US$37.5 billion as of end-2017. It may be noted that the NG has adjusted its 2018 domestic-to-foreign financing mix to 74:26 (from the original 80:20), reflecting plans to tap more financing from external sources, albeit the borrowing mix is still tilted towards domestic borrowings.

As of end-2017, the maturity profile of the country's external debt was primarily medium- to long-term (MLT) [i.e., those with original maturities longer than one year], with its share to total external debt at 80.5 percent (US$58.8 billion), lower than 80.6 percent (US$60.2 billion) a year ago. Short-term (ST) loans [or those with original maturities of up to one year] stood at US$14.3 billion by the close of 2017 and accounted for the 19.5 percent balance of the debt stock.

Private sector external debt decreased from US$37.3 billion in end-2016 to US$35.6 billion at end-2017, representing 48.7 percent of the total debt stock. Of the total private sector debt, US$20.2 billion were from non-banks. Public sector debt, on the other hand, comprised 51.3 percent of total external debt at US$37.5 billion.

Key external debt ratios continued to improve during the year in review. The debt service ratio (DSR), which relates principal and interest payments (debt service burden or DSB) to exports of goods and receipts from services and primary income, is a measure of adequacy of the country's FX earnings to meet maturing obligations. The ratio improved to 6.2 percent as of end-2017 from 7.0 percent, a year ago, due to higher receipts and lower payments during the 12-month period (January 2017 – December 2017). The DSR has also consistently remained well below the international benchmark range of 20.0 to 25.0 percent

The external debt ratio (a solvency indicator), or total outstanding external debt expressed as a percentage of Gross National Income (GNI), continued to improve to 19.4 percent in end-2017 since 2009. The same trend was observed using GDP as denominator. The ratio indicates the country's sustained strong position to service foreign obligations in the medium to long-term.

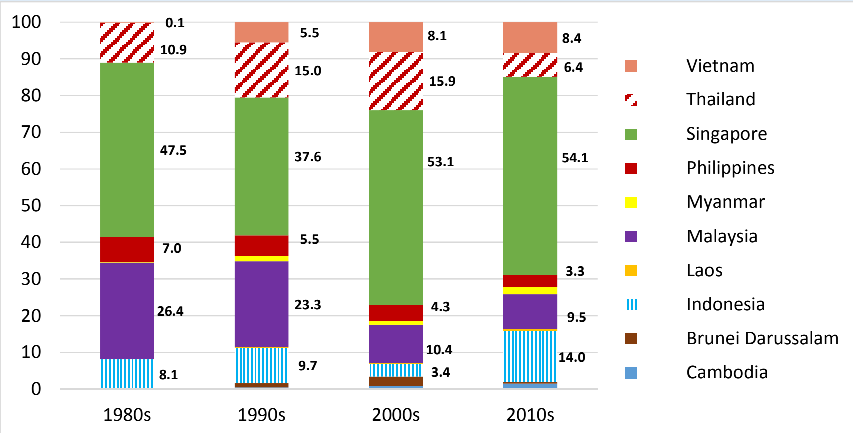
Box Article 3

Determinants of Foreign Direct Investments in ASEAN-6 Economies[33]

From the 1980s up to the 2010s, average world inflows of foreign direct investments (FDI)[34] have increased from US$92.9 billion to US$1.5 trillion, while world FDI stock has increased from US$1.8 trillion at the end of the 1980s to US$26.7 trillion by the end of 2016. Throughout these decades, average FDI inflows to the Association of Southeast Asian Nations (ASEAN)[35] have increased from US$4.0 billion in the 1980s to US$113.9 billion in the 2010s, resulting in a forty-fold rise in FDI stock in the region from US$46.2 billion at the end of the 1980s to US$ 1.9 trillion by the end of 2016.[36]

In relative terms, the share of the ASEAN region to world FDI inflows increased from the 1980s to the 2010s from 4.7 percent to 7.5 percent. Similarly, ASEAN FDI inward stock-to-GDP ratio increased in the same period from 11.2 percent to 61.4 percent.[37] These trends reflect the increasing attractiveness of the region as a destination for FDIs due to member-countries' strong macroeconomic fundamentals, improved policy environment and regional market prospects, and growing positive investor sentiment towards the region.[38]

Figure 1. Country Shares to ASEAN FDI Inflows, 1980s-2010s (average, in percent)



Source of basic data: UNCTAD

Across ASEAN, country experiences vary. Singapore is the consistent largest recipient of FDI in the region, receiving more than one-third of the ASEAN inflows in the 1980s and 1990s and even more than half of the inflows in the 2000s and 2010s. Malaysia was the second top recipient in the 1980s and 1990s with a share of more than 20 percent, but it was overtaken by Thailand in the 2000s. In the 2010s, however, Thailand slipped to 5th place. Indonesia and Vietnam improved, moving from 4th and 8th top recipients of FDI in the 1980s to 2nd and 4th place in the 2010s, respectively. Meanwhile, the Philippines fell in the rankings from 5th in the 1980s to 6th in the 2010s, overtaken by Vietnam.

[33] Excerpt from the BSP Working Paper "An Analysis of Foreign Direct Investments in the Philippines and ASEAN," H. C. Parcon-Santos and M. B. Oliva, forthcoming 2018.
[34] Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise interest (10 percent or more of voting stock) that is resident in another economy (Definition based on the International Monetary Fund's Balance of Payments and International Investment Position Manual, 6th Edition (BPM6)).
[35] Brunei, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
[36] Source: United Nations Conference on Trade and Development (UNCTAD) Database
[37] Source: UNCTAD Database
[38] ASEAN Investment Report 2013-2014

To examine the factors that influence FDI inflows in ASEAN countries and possibly explain why the Philippines has lagged relative to its ASEAN peers in terms of receiving FDI, equation 1 is estimated:[39]

$$FDI_{it} = \alpha + \beta X_{it} + c_i + u_{it}\,, \tag{1}$$

where i refers to country and t refers to year. X_{it} is a set of observed variables that may help explain cross-country differences in FDI_{it}. c_i represents country-specific unobserved factors. α and u_{it} are the constant and error term, respectively. The data cover the period 1990 to 2016.

Determinants of FDI Flows

Macroeconomic Stability. Macroeconomic stability, as represented by various proxy variables, has a statistically significant impact on FDI inflows to the region. Higher inflation has a negative impact on net FDI inflows, while higher real GDP growth has a positive impact (Table 1). Low inflation signifies internal economic stability at the host country and is an indication of the ability of the central bank to conduct effective monetary policy, while higher economic growth signals good economic prospects and greater potential for higher profits in a host country. Both factors tend to raise the incentive of foreigners to invest in the country. Among the ASEAN-6 countries, Singapore has had the lowest average inflation rate for the period 1990-2016, while Indonesia has had the highest inflation rate (Table 2). Meanwhile, Vietnam has had the highest average real GDP growth for the period 1990-2016 at 6.8 percent, while the Philippines has the lowest average real GDP growth at only 4.3 percent. For the Philippines, these results imply that policymakers need to ensure low and stable rates of inflation and rapid economic growth in order to be at par with its ASEAN peers in terms of receiving FDI inflows.

Costs. Cost factors also appear to be an important determinant of FDI inflows in ASEAN-6 countries. In particular, higher taxes on income and higher minimum wages deter FDI inflows. Among the ASEAN-6 countries, Vietnam has had the lowest average tax rates on income, profits, and capital gains for the period 1990-2016 at 33.2 percent, while Singapore has no minimum wage. While the Philippines is at the middle of the pack in terms of tax rates on income, it has the highest minimum wage among the ASEAN-6.

Trade Openness. Foreign investors seem to prefer to invest in countries that are more economically open. Empirical estimates suggest that greater trade openness foster FDI inflows. Among the ASEAN-6 countries, Singapore has the highest average trade-to-GDP ratio for the period 1990-2016, while the Philippines ranks second to the last.

Political and Regulatory Environment. Political stability and regulatory efficiency are also significant determinants of FDI inflows in ASEAN-6 countries. Political stability improves a country's investment climate by reducing uncertainty associated with disorderly changes in political leadership. Similarly, greater regulatory efficiency facilitates the conduct of business and thereby reduces costs faced by investors. Among the ASEAN-6 countries, Singapore is the most politically stable country and has the most efficient business regulations. The Philippines, meanwhile, is ranked second to the last in terms of both political stability and efficiency of business regulations.

[39] Due to data limitations, only the following countries were included in the empirical estimation: ASEAN-6 includes Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

Infrastructure. Greater access to improved infrastructure positively affects FDI inflows in ASEAN-6 countries. Better infrastructure can significantly reduce overhead costs and smoothen business-related activities and thus positively affect investors' location decision. Among the ASEAN-6 countries, Singapore has the highest proportion of its population with access to improved infrastructure facilities, while the Philippines ranks second to the last.[40]

Table 1. Estimation Results: Determinants of FDI Inflows

Dependent Variable: Net FDI Inflows (log first difference)	(1)	(2)	(3)	(4)	(5)
Explanatory Variables:					
Inflation Rate	-8.4 ***	-7.1 ***	-8.2 ***	-8.3 ***	-9.1 ***
GDP growth	5.2 ***	6.8 ***	4.7 ***	5.3 ***	4.8 ***
Tax Rate	-3.0 ***	-3.3 ***	-2.8 ***	-2.8 ***	-3.0 ***
Minimum Wage	-0.3 *				
Trade Openness		2.4 *			
Political Stability			86.8 *		
Ease of Doing Business				8.3 **	
Infrastructure					12.3 **
GFC dummy	-33.9 ***	-5.8	-31.4 **	-38.6 ***	-28.1 **
Constant	31.5	7.2	29.6	18.6	19.3
Adjusted R^2	0.25	0.27	0.26	0.24	0.24

Notes:

a. The following countries were included in the sample: Indonesia, Malaysia, The Philippines, Singapore, Thailand, and Vietnam. The limited number of observations (6 cross sections) constrain estimation to five explanatory variables at a time.

b. All variables were specified either in growth rates, log-first differences, or first differences to make them stationary. For all specifications, random effects estimation was used. Hausman test cannot reject the null hypothesis that random effects is the appropriate estimation technique.

c. * - refer to 10% level of significance. ** - refer to 5% level of significance. *** - refer to 1% level of significance.

Source: BSP staff estimates (Basic data from the World Development Indicators, International Labor Organization, The Global Economy, and World Bank Doing Business Database)

Crisis Periods. Finally, estimation results confirm that the Global Financial Crisis (GFC) had negatively affected FDI inflows in the ASEAN-6 countries, at least in the short term.[41] This result strengthens the case for promoting global financial stability to ensure that investment and business climate remain favorable. In 2007, a year prior to the GFC, average FDI-to-GDP ratio for ASEAN-6 reached a peak of 7.8 percent. The ratio dropped to only 4.1 percent in 2008 and further to 4.0 percent in 2009. While there was a drop in the ratio during the crisis years, a rebound was recorded in 2010, with the ratio increasing to 6.7 percent.

[40] Coefficient of infrastructure in Table 1 uses share of population with access to improved sanitation facilities. Different proxy variables have been used in the literature to capture the impact of infrastructure on FDI inflows, including, but not limited to, paved roads, rail networks, power supply, water infrastructure, international seaports or airports, fixed line telephone and mobile phone subscribers, and internet access. These variables, whenever available for the ASEAN-6 countries, were likewise considered as proxy for infrastructure in the estimation of equation (1).

[41] A dummy for the Asian Financial Crisis was likewise considered, but the dummy was not statistically significant.

Table 2. Factors Driving ASEAN-6 Net FDI Inflows, 1990-2016 Average

Inflation Rate (%)		Real GDP growth (%)		Taxes on Income (%)[a]		Minimum wage (US$)[b]	
Singapore	1.8	Vietnam	6.8	Vietnam	33.2	Singapore	0.0
Malaysia	2.8	Singapore	6.1	Thailand	38.3	Vietnam	27.6
Thailand	3.2	Malaysia	5.9	Philippines	42.2	Malaysia	48.6
Philippines	6.0	Indonesia	4.9	Singapore	45.7	Indonesia	64.8
Vietnam	6.4	Thailand	4.5	Indonesia	53.0	Thailand	154.3
Indonesia	9.9	Philippines	4.3	Malaysia	59.4	Philippines	190.0

Trade-to-GDP (%)[c]		Political Stability Index[d]		Ease of Doing Business - Distance to Frontier[e]		Share of Population with Access to Improved Infrastructure Facilities (%)[f]	
Singapore	358.7	Singapore	1.2	Singapore	90.1	Singapore	99.7
Malaysia	176.0	Vietnam	0.3	Thailand	64.5	Malaysia	92.1
Vietnam	120.9	Malaysia	0.3	Malaysia	61.9	Thailand	91.4
Thailand	112.7	Thailand	-0.3	Vietnam	50.2	Philippines	65.8
Philippines	81.1	Philippines	-1.0	Philippines	39.5	Vietnam	57.9
Indonesia	55.7	Indonesia	-1.2	Indonesia	34.1	Indonesia	49.5

Notes:

a. Taxes on income, profits, and capital gains levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets

b. Statutory nominal gross monthly minimum wage in local currency converted to US$ using the official exchange rate

c. Sum of exports and imports of goods and services measured as a share of gross domestic product

d. The index measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism (2.5 – stable; -2.5 unstable).

e. Distance to frontier refers to the distance of the economy to the regulatory best practice. Higher values signify being closer to the best practice.

f. Share of population with access to improved sanitation facilities

Sources: World Development Indicators, International Labor Organization, The Global Economy, and World Bank Doing Business Database

Implications for the Philippines

The results suggest that there is scope to increase FDI inflows into the Philippines. While inflation rate in the Philippines has been low and stable and economic growth is on an upward trend, FDI inflows in the Philippines has not been at par with other ASEAN-6 countries. This implies that the Philippines is lagging in other factors needed to attract more FDI inflows, particularly tax rates and cost of labor. These factors may be important especially for manufacturing FDI, where cost factors are of primary consideration.

The results likewise indicate that there is significant scope for the Philippine government to enhance the country's political stability and the economy's business regulations. In the Doing Business 2018 report of the World Bank, the Philippines' distance to frontier (DTF) marginally improved to 58.7 from 58.3 in the Doing Business 2017 report. The Philippines' 2018 DTF was likewise below the average of 65.6 across ASEAN economies. The Doing Business report covers a broad range of regulations affecting procedures, cost, and time confronted by businesses. Greater efficiency of business regulations, in general, facilitate business operations and thus enhance a country's investment climate, which helps attract FDI inflows.

Moreover, the results support the government's efforts to upgrade the country's infrastructure to strengthen the country's investment climate and to increase the productive capacity of the economy. Infrastructure development is crucial for the Philippines. The country has long had a substantial infrastructure deficit and the Philippine government's desire to heighten infrastructure spending is set to address a wide variety of infrastructure needs – from new ports, airports, bridges, and expressways to electricity generation and telecommunications infrastructure. In turn, these are expected to provide a more attractive environment for investors; drive growth in many sectors, including construction, tourism, and manufacturing; and boost employment, productivity and economic growth.

Box Article 4

The Effect of Financial Liberalization in the Balance of Payments

Liberalization stood at the core of most economic reforms. The International Monetary Fund (IMF) notes that liberalization is an inevitable step in development, and that the most advanced economies have open capital accounts. Liberalization is characterized by the removal of controls, taxes, subsidies and quantitative restrictions that affect capital transactions. The three measures of financial liberalization include: 1) capital account liberalization (i.e., capital mobility); 2) domestic financial system liberalization (i.e., regulations on deposit interest rates, lending interest rates, among others); and 3) stock markets liberalization (i.e., evolution of regulations on the acquisition of shares in the domestic stock market by foreigners, repatriation of capital, registration of dividends).[42]

Effects on Economic Growth

A plethora of literature offers several discussions on the possible impact of liberalization in an economy. In the early discussions of McKinnon and Shaw (1973), liberalization drives interest rates up towards their competitive market equilibrium, thus, fueling savings and investments for capital accumulation. Furthermore, liberalization helps improve the functioning of financial systems and promotes transparency and liquidity. This increases the availability of funds and allows for country-risk diversification, encouraging investments in projects with higher returns. Moreover, since it opens access to domestic and international capital markets, liberalization allows for increased efficiency in capital allocation, promotes financial sector competitiveness, and facilitates investment.[43]

Meanwhile, results of financial liberalization have not been always desirable. Keynesians consider financial liberalization as risky to emerging economies on the assumption that their financial markets are generally unstable. Removing distortions in some aspects of the economy cannot be wealth serving if other distortions are still present. At the same time, financial liberalization has also been linked to macroeconomic instability as carried out in some Latin American countries during the 1970s. Argentina, Chile, and Uruguay opened their capital account to the private sector, liberalized the domestic financial systems, eased trade restrictions, and privatized some public enterprises. In 1980, financial repression returned, with these countries suffering from debt crises, high inflation, and government deficits.[44,45]

Simply put, the effect of liberalization in a country still depends on a country's economic and institutional fundamentals. Financial liberalization strategies should be well-programmed and institutions must be prepared to handle policy changes that come with it.

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[42] Kaminsky and Schmukler (2001). "On Booms and Crashes: Financial Lilberalization and Stock Market Cycles", World Bank.
[43] Gemech and Struthers (2003). "The McKinnon-Shaw Hypothesis: Thirty Years on: A Review of Recent Developments in Financial Liberalization Theory", University of Paisley.
[44] Damill, Frenkel, Rapetti "Financial and Currency Crises in Latin America", CEDES, Argentina.
[45] "Economic Growth in the 1990s: Learning from a Decade of Reform. *Chapter 7. Financial Liberalization: What Went Right, What Went Wrong?",* World Bank.

Effects on the Balance of Payments

Capital account liberalization predominantly refers to easing of investments flows (i.e., foreign direct investments and foreign portfolio investments) as well as capital transfers and acquisition and disposal of non-produced, non-financial assets. In terms of the impact on the balance of payments (BOP) of an economy, a liberalized capital account induces higher gross inflows of foreign direct, portfolio, and other investments. In effect, an increased inflow of capital appreciates the nominal and real exchange rate which could worsen the current account.[46] In particular, a surge in capital inflows due to capital account liberalization may result in the deterioration in exports, real exchange rate overvaluation, low international reserves in months of imports of goods and services, high external short-term debt to reserve ratio and financial dollarization. These could lead to market speculations on the overvalued currency and could prompt the country's monetary authority to use its reserves to temper such speculations. This will result in a more devalued currency and ultimately, in a potential exchange rate regime shift to save the value of the currency.[47]

Orie (2006) examined the effect of capital account liberalization in Suriname and pointed out the added risk to the country of having a BOP crisis given its weak economic fundamentals. Similarly, in Pakistan, the implementation of a financial liberalization increased the probability of having either a banking crisis or a BOP crisis, which was even intensified given the presence of both crises. Economic conditions then showed instability and deterioration, coupled with shifts in exchange rate regime (Abbas and Pasha). Latin America also liberalized in the 1970s when it suffered from severe economic and political crises. This led to real exchange rate appreciation, current account deficits, and increase in foreign debt in the region. Mexico, specifically, suffered from a BOP crisis and devalued its currency for the first time in more than twenty years (Damill, Frenkel, and Rapetti).

Given the potential risks of capital liberalization in an economy, studies suggest that a gradual execution of capital liberalization coupled with prudential regulations and supervision is necessary.

BSP Efforts to Liberalize Foreign Exchange Rules

In the 1990s, the then Central Bank of the Philippines (CBP) started liberalizing its foreign exchange (FX) regulations and actively carried out ten waves of FX liberalization reforms starting in 2007. These include reforms pertaining to current and capital account transactions, and prudential regulations. These were formulated to promote more disciplined macroeconomic policies, greater financial depth, technological transfer, and institutional development. These strategies were also employed to make the country more responsive to the needs of increasing integration with global markets.[48] Moreover, these policies were implemented to encourage channeling of FX to formal mechanisms to allow greater productive use and more comprehensive data capture.

The BSP's FX regulatory framework liberalization can be further categorized into quantitative and qualitative measures. Quantitative measures involve the increasing of amounts of FX to be sold by authorized agent banks (AABs) and AAB-foreign exchange corporations (FOREX corps) to residents and non-residents alike for a variety

[46] Orie (2006). "Capital Account Liberalization and Balance of Payments Crises: Lessons for Suriname", FHR Institute of Social Studies.
[47] Abbas and Pasha. "Financial Liberalization anf Twin Crises: Banking and Balance of Payments Problems in Pakistan"
[48] Bayangos, Elloso, Hallig, Yeung, and Salamatin (2016). "The Impact of Foreign Exchange Liberalization Reforms on the Philippine Economy: An Initial Assessment", Bangko Sentral ng Pilipinas.

of purpose (i.e., non-trade transactions, full or partial payments of imports and outward investments) without BSP approval.

Meanwhile, qualitative measures involve easing of policies related to the current account and capital accounts of the BOP. Specifically, the BSP lifted the no-splitting rule and notarization requirements of FX purchases and the requirement to obtain prior BSP approval for extensions of Letters of Credits (L/Cs) exceeding the prescribed one-year validity and the mandatory period within which FX purchased for import payments and deposited in FCDU accounts should be remitted to offshore recipients. The BSP also expanded the use of FX swaps involving the Philippine peso to cover both hedging and liquidity requirements to channel funds to priority areas such as the Public-Private Partnership (PPP). Further, the BSP allowed banks to sell FX for peso funds of investors that were not used for investments under certain conditions.

The country's policy on the latest wave of FX liberalization, issued in end-2017, relaxed the rules concerning private sector loans. Particularly, the requirement for BSP approval on private sector loans was lifted, except in cases where the company needs to access banking system resources for its loan payments. Previous pure private sector loans which have not been registered were now given a 6-month window to register their loans with the BSP. The lifting of BSP approval for these loans would facilitate financing of critical and urgent projects and activities that help sustain the economy's growth trajectory, and shall shift more FX transactions to banking system.

FX regulation liberalization in the Philippines has certainly served the growing economy's FX requirements and helped maintain a healthy payments position. The current account has long remained in surplus until 2016, when it rendered a deficit due to the widening of the trade-in-goods deficit. FX inflows from exports of services remained robust following the increase in BPO activities and travel services. From 2007, BPO receipts increased by an average of about 25 percent annually, while travel receipts exhibited an average annual growth of 6.9 percent. Furthermore, receipts from overseas Filipino workers remittances also largely influenced the current account. In 2017, personal remittances grew by 5.3 percent to close at US$31.3 billion and shared 10 percent of the country's GDP.

Similarly, inflows in the financial account exhibited long-term growth from the first wave of liberalization in 2007. The foreign direct investment started growing substantially from 2010. Specifically, Bayangos, et. al. (2008) pointed out that construction and trade/commerce industries were seen to benefit from the liberalization scheme. The level of net foreign portfolio investments also grew substantially with the liberalization of FX rules on foreign investments. As of end-September 2017, the country registered a net external liability position due to the continued build up in foreign direct investments and foreign portfolio investments on the back of the country's sustained positive economic performance and growth prospects.

The large FX inflows led to the steady rise in country's gross international reserves, which recorded US$81.6 billion in end-2017. The end-December 2017 GIR level remains adequate as it can cover 8.3 months' worth of imports of goods and payments of services and primary income. It is also equivalent to 5.9 times the country's short-term external debt based on original maturity and 4.2 times based on residual maturity.

Conclusion

In general, the Philippines has benefited from the liberalization efforts that the BSP initiated since 2007. Capital markets expanded as relaxed FX regulations facilitated a much easier inflow of funds to the country that led to the opening of the country's current and capital accounts. Greater FX transactions reinforced the country's healthy payments positions and facilitated the funding of priority programs that are critical to sustaining the country's growth momentum.

Indeed, while financial liberalization offers a diversity of economic benefits, it equally opens the economy to certain risks. The key is for the economic benefits to outweigh the risks attached to liberalization which depends on the timing, the strength of the country's macroeconomic fundamentals, and the presence of sound macroprudential regulations that could lessen the threats of market volatility. Therefore, the BSP's vigilance and discretion to complement its FX regulation liberalization with sound policies and profound market surveillance is still imperative to lessen the risks that liberalization brings.

What We Did in 2017: Three Pillars of Philippine Central Banking

Price Stability: Monetary Policy Stance Remains Supportive of Economic Growth

Monetary Policy. In 2017, the Monetary Board (MB) held eight monetary policy meetings and decided to maintain the BSP's key policy interest rate on the BSP's overnight reverse repurchase (RRP) facility at 3.0 percent. The corresponding interest rates on the overnight lending and deposit facilities were also kept steady. The reserve requirement ratios were likewise left unchanged.

The BSP maintains monetary policy settings in 2017

The policy decisions of the MB were based on the BSP's assessment that the outlook for the inflation environment remains manageable over the policy horizon. The BSP's forecasts showed inflation staying within-target in 2017 even as inflation trended higher due mainly to supply-side factors. At the same time, the BSP observed that expectations of the public on future inflation remained aligned with the NG's inflation target over the 2017-2019 policy horizon.

The MB also recognized that the balance of risks to the inflation outlook remained tilted toward the upside due in part to higher crude oil prices. While there may be potential transitory effects on consumer prices from the tax reform program of the government, various mitigation measures and the resulting improvement in output and productivity are also expected to temper the impact on inflation over the medium term. Meanwhile, the proposed reforms in the rice industry involving the replacement of quantitative restrictions with tariffs and the deregulation of rice imports could serve to temper inflation. At the same time, geopolitical tensions and lingering uncertainty over macroeconomic policies in advanced economies continued to pose downside risks to the near-term prospects for global economic growth.

Nonetheless, the Monetary Board emphasized that prospects for domestic economic activity are seen to remain firm owing to buoyant consumer and business sentiment and ample liquidity. Moreover, as credit continues to expand in line with output growth, the BSP also emphasized that it would continue to monitor emerging price and output developments for any risks to its inflation outlook and would adjust its policy settings as necessary to ensure stable prices and support sustainable economic growth.

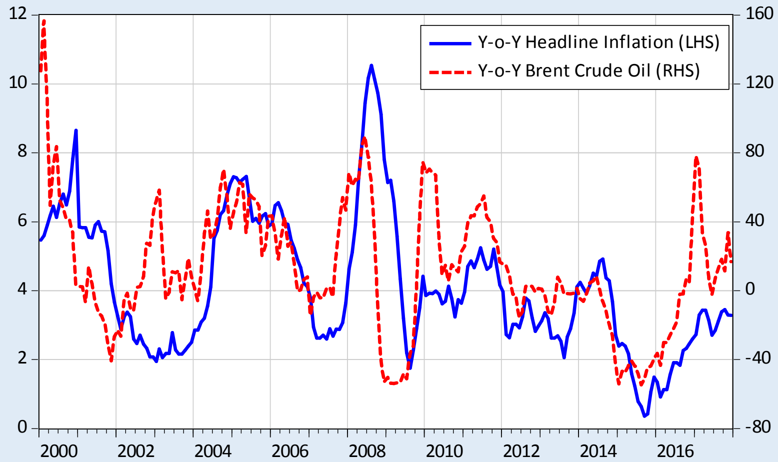
Interest Rate Corridor system strengthens monetary policy transmission

It has been more than a year since the BSP launched the interest rate corridor (IRC) system as a framework for its monetary operations. Thus far, the BSP has been successful in achieving most of its goals in implementing the IRC. The BSP has shifted to more active monetary operations through the conduct of auction-based offerings which allowed for gradual migration of funds from overnight to longer-term deposits. This has helped strengthen the monetary transmission mechanism in terms of the alignment between market interest rates and the BSP's policy rate, with interbank call loan rates moving steadily within the corridor. Nevertheless, the BSP continues to review and assess the features of the IRC system for possible enhancements to ensure its effectiveness in transmitting the BSP's monetary policy actions to the financial markets and the real economy.

Box Article 5
Evaluating the Forecast Efficiency of Crude Oil Futures in Predicting Crude Oil Spot Prices

Global crude oil price is one of the most closely monitored indicators given its strong linkage to inflation. Moreover, oil price movements correlate with upturns and downturns in the business cycles (Barsky and Kilian, 2004). The nexus between oil price and inflation is particularly true for the Philippines where oil and oil-related items account for 13.4 percent of the CPI basket, and movements in international crude oil prices are strongly correlated with domestic inflation (Figure 1). To cite, the significant increase in oil prices resulted in an above-target inflation in the Philippines for 2004-2006 and 2008, while lower oil prices brought about by advances in shale oil production technology contributed to below-target inflation for 2015-2016. Short- and long-term forecasts of oil prices, often proxied by future contract price, are therefore essential in assessing economic conditions.

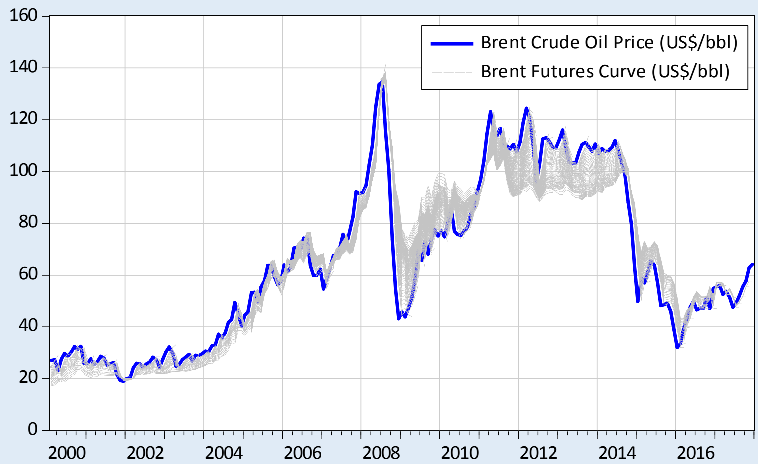
Figure 1. Year-on-Year Headline Inflation and Brent Crude Oil Price



Source: Bloomberg

This paper aims to determine whether the use of such futures contract price is warranted by evaluating the efficiency of the said price in forecasting crude oil spot prices.

Figure 2. Brent Crude Oil Price and Futures Curve



Forecast Efficiency of Futures Prices

To test whether there is an associated bias in using futures prices to forecast spot prices, a forecast efficiency regression was estimated, as follows:

$$\log(Spot_{t+h}) - \log(Spot_t) = \alpha + \beta\big(\log(Futures_{h|t}) - \log(Spot_t)\big) + \epsilon_{t+h}$$

for $h = 3, 6, 9, 12, 24$ months.

In the preceding equation, the left-hand side represents the ex-post percentage change in spot prices while the right-hand side represent the ex-ante or predicted change based on futures prices at time t. In order to determine whether the forecasts from futures prices are unbiased, we tested if we can reject the joint null hypothesis of $\alpha = 0$ and $\beta = 1$. If rejected, it can be inferred that forecasts from futures prices do not systematically over or under-predict actual spot prices. Note that the single null hypothesis of $\beta = 1$ tests whether there is time-varying risk premium.

Table 1 shows the regression results for all forecast horizons for two sample period: 2000-2017 and 2014-2017. Based on the Wald-test, the null hypothesis cannot be rejected for all forecast horizons for the entire sample period of 2000-2017. Thus, forecasts from Brent futures prices were unbiased predictors of actual Brent spot prices.

However, using the sample period of 2014-2017 instead of 2000-2017 results in the rejection of the null hypothesis for forecast horizons from 9 months to 24 months. A possible explanation for this finding is that the shale oil revolution commencing in 2014 could have could have resulted in biased forecasts from futures prices.

Table 1. Forecast Efficiency Test (2000-2017)

Sample: 2000-2017	3-Mo.	6-Mo.	9-Mo.	12-Mo.	24-Mo.
Alpha Coefficient	0.01	0.02	0.03	0.04	0.01
Beta Coefficient	0.01	0.53	0.62	0.65	1.22
Reject H0: Alpha=0, Beta=1?	No	No	No	No	No
(p-value)	0.22	0.46	0.48	0.44	0.84
Sample: 2014-2017	**3-Mo.**	**6-Mo.**	**9-Mo.**	**12-Mo.**	**24-Mo.**
Alpha Coefficient	-0.04	-0.13	-0.19	-0.24	-0.38
Beta Coefficient	0.57	1.82	1.83	1.78	2.07
Reject H0: Alpha=0, Beta=1?	No	No	No	Yes	Yes
(p-value)	0.58	0.23	0.11	0.05	0.00

Source: BSP staff computations

Forecast Performance of Futures Prices

Table 2 compares the mean-absolute error (MAE) and root mean square error (RMSE) between the forecasts from Brent futures prices and random walk model from 2000 to 2017. The results show that the forecasts from both methods are comparable over forecast horizons ranging from 3 months to 24 months. However, the correlation between actual Brent crude spot price and the forecasts decline as the forecast horizon increases.

Table 2. Forecast Accuracy of Brent Futures and Random Walk (2000-2017)

Sample: 2000-2017	Brent Futures				
	3-Mo.	6-Mo.	9-Mo.	12-Mo.	24-Mo.
MAE (US$/bbl)	8.0	11.7	14.2	16.4	24.7
RMSE (US$/bbl)	12.5	18.6	21.4	23.0	30.3
Observations	214	213	210	204	151
Sample: 2000-2017	**Random Walk**				
	3-Mo.	**6-Mo.**	**9-Mo.**	**12-Mo.**	**24-Mo.**
MAE (US$/bbl)	8.0	11.9	14.5	17.0	24.9
RMSE (US$/bbl)	12.4	18.6	21.8	24.0	31.7
Observations	212	209	206	203	191

Source: BSP staff computations

Table 3 provides the result for the same exercise for the sub-sample from 2014 to 2017 (deemed to coincide with shale oil revolution period in North America). Based on the forecast performance, Brent futures prices have a relatively lower forecast errors than the forecast from a random walk over most of the forecast horizons.[1]

Table 3. Forecast Accuracy of Brent Futures and Random Walk Model (2014-2017)

Sample: 2014-2017	Brent Futures				
	3-Mo.	6-Mo.	9-Mo.	12-Mo.	24-Mo.
MAE (US$/bbl)	8.7	12.4	16.1	19.7	29.5
RMSE (US$/bbl)	12.1	18.3	22.3	26.2	36.1
Observations	48	48	48	48	48
Sample: 2014-2017	**Random Walk**				
	3-Mo.	**6-Mo.**	**9-Mo.**	**12-Mo.**	**24-Mo.**
MAE (US$/bbl)	9.0	13.8	18.2	22.6	32.2
RMSE(US$/bbl)	12.3	19.3	24.7	29.1	41.6
Observations	48	48	48	48	48

Source: BSP staff computations

Conclusion

Tests of forecast efficiency indicate that crude oil futures prices provide unbiased forecast of crude oil spot prices. In addition, futures prices registered lower forecast errors compared to forecasts using the random walk model.

[1] This can be verified statistically through the Diebold-Mariano (1995) test for comparing forecast accuracy.

Box Article 6

Behavior and Drivers of Inflation Expectations in the Philippines[89]

Inflation expectations play a central role in the conduct of monetary policy under an inflation targeting (IT) framework. Over a finite time horizon, inflation expectations reflect the credibility of a central bank's commitment to its objectives. In this respect, the effectiveness of monetary policy is likely to be greater if inflation expectations remain anchored. Consequently, the role of the central bank becomes crucial as it will need to keep track of the consistency between expected inflation and the inflation target.

In their review of country experiences, Mohanty and Turner (2008) concluded that inflation expectations have become increasingly important in the monetary policy transmission mechanism. One indicator is the growing convergence of private sector inflation expectations around the central bank's inflation target in many countries[90] in recent years. Another is the stronger reaction of financial markets to central bank policy announcements in several economies.[91]

To gauge the impact of inflation expectations in monetary policy transmission mechanism, determining the likely behavior of inflation expectations in the market would be useful for a central bank. However, findings from various studies indicate that this is becoming more difficult. For instance, indicators of inflation expectations may not be perfectly anchored in the real sector of the economy as suggested by some studies that claim that market's inflation expectations are historically affected by news or perceptions about shocks in the economy (Svensson 2004). Moreover, inflation expectations are strongly linked with the announced monetary policy objectives (i.e., the inflation targets). However, there are also instances when the inflation expectations deviate from the targets especially when agents become more concerned about recent economic developments or when the conduct of monetary policy itself is not aimed at keeping expectations over time. There are also empirical studies which claim that private agents' expectations on inflation tend to depend on past inflation expectations (i.e., backward-looking).

Inflation Expectations: An Essential Channel of Monetary Policy Transmission in the Philippines

In the Philippines, Bayangos et al. (2010) confirmed that inflation expectations are an important channel of monetary transmission. Guinigundo (2014) noted that the enhanced transparency and accountability associated with the shift of the country to IT framework in 2002 has served to increase the BSP's awareness of the importance of the expectations channel in the conduct of monetary policy as some convergence between private sector inflation expectations and the BSP's inflation forecast has been established. Another crucial finding of Bayangos et al. (2010) is the significance of inflation expectations in the previous month in determining expectations, indicating that private sector agents are backward-looking when forming inflation expectations. Meanwhile, in examining the impact of scheduled monthly inflation news announcements on the BSP's credibility,[92] Bayangos and Ramon (2009) showed that a policy rate hike to address the widening of inflation news not only leads to lower inflation, inflation forecast and inflation expectations but also to an

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[89] Excerpt from Bayangos, V.B. and M. B. Oliva. 2018. "Dispersion and Anchoring of Inflation Expectations in the Philippines: A Quantitative Assessment Post-Global Financial Crisis," BSP Working Paper Series, forthcoming.

[90] For instance, Czech Republic, Colombia, Mexico and South Africa.

[91] In Singapore, the volatility of market rates around policy announcement dates has fallen significantly following increased communication of the central bank's monetary policy stance to the public. In India, the opening-up of a two-way communication channel between the central bank and market participants has increased the signaling role of monetary policy.

[92] Defined as the absolute difference between the actual and expected inflation.

improvement in the BSP's credibility. Moreover, Guinigundo (2016) showed that a change in inflation gap is estimated to have the greatest impact on inflation expectations holding other variables constant.

Since the formal adoption of IT in 2002, inflation expectations in the Philippines have been declining except for upward shifts in the latter part of 2005[93] and in 2008.[94] Starting in 2011, inflation expectations have likewise become less volatile.[95] These developments so far suggest that anchoring of inflation expectations[96] may have changed following the GFC. Hence, a comprehensive understanding of the evolution of inflation expectations in the country appears to be useful.

This article intends to address the need by employing a two-part approach. The first part looks at the dispersion among surveys of inflation expectations in the Philippines. Basically, the intention is to examine the evolution of inflation expectations by looking at various measures of dispersion among indicators of inflation expectations. Such an approach is expected to provide important insights into the variability and stability of inflation expectations. The second part quantifies the factors that drive the behavior of inflation expectations using ordinary least squares (OLS) and general methods of moments (GMM) approaches. To determine the impact of GFC on the evolution of inflation expectations in the Philippines, the analysis will be divided into two sub-periods – from 2002 to 2008 and from 2010 to 2017.[97] The factors through which monetary policy impacts on inflation expectations are seen in the movements of interest rates and past inflation. A contribution of this analysis is the construction of intensity of BSP news and its impact on inflation expectations in the Philippines.

Is There Disagreement in Market Expectations on Inflation?

Four measures of inflation expectations for the Philippines are considered in this analysis. The BSP conducts quarterly consumer and business expectations surveys, which are aimed at generating indicators of overall business sentiment, economic outlook, and the inflation outlook of households and businesses. The BSP also conducts a monthly survey of private analysts which are reported in its quarterly inflation reports. The Asia Pacific (AP) Consensus conducts monthly surveys over financial and economic forecasters.

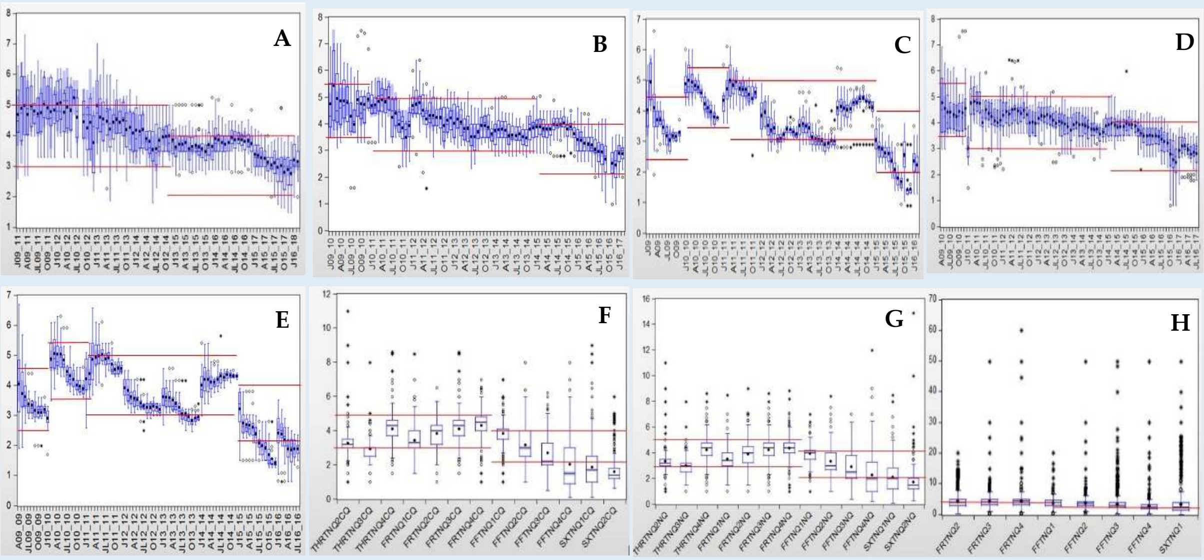
Following Hassan et al. (2015),[98] various measures of dispersion were considered in the analysis and these include standard deviation,[99] range,[100] inter-quartile range (IQR), and coefficient of variation.[101] Focusing on inter-quartile range (IQR)[102] as this measure of variability overcomes the dependency on extreme values, the analysis shows generally lesser disagreements among inflation forecasters in recent years, except for

[93] This could be attributed in part to the expected price adjustments arising from the implementation of the reformed value added tax (RVAT). However, this was only short-lived as the BSP's policy pronouncements continued to emphasize to the public that the impact of the RVAT will consist mainly of one-off increases in prices, and thus unlikely to fuel a sustained rise in inflation. Such a policy message helped ease public expectations about the price increases from RVAT, particularly when combined with mitigating measures to stabilize commodity supply through timely imports and strict enforcement of regulations against unreasonable price increases.
[94] The upward spike in inflation expectations was due partly to supply shocks from rising food and energy prices that continued over a longer period and contributed to second-round effects. These affected the wage- and price–setting behavior of businesses and households, but the BSP responded with decisive action (raised key policy rates by a total of 100 basis points from June to August) and strong anti-inflation pronouncements.
[95] The less volatile inflation expectations starting in 2011 could be attributed in part to within target actual inflation since 2009.
[96] Anchoring of inflation expectations in this article refers to anchoring to the level of anticipated future inflation.
[97] The choice of sub-periods took into consideration the change of economic structure of the Philippines starting 2010. Also, prior to 2009, the country had not achieved its inflation target after the IT framework was started in 2002.
[98] Hassan, S, S. Redford and F. Ruch (2015), "Dispersion of Inflation Expectations- preliminary," August.
[99] This is considered to be the most widely used measure of dispersion, defined as the deviation from the mean (Source: Anderson, et al (2006)
[100] This is the simplest measure of variability, which is defined as the difference between the highest and the lowest forecast values. However, this is highly influenced by outliers or extreme values (Source: Anderson, et al. [2006]).
[101] This is the ratio of the standard deviation to the average forecast.
[102] This measures how spread out the data points are from the mean of the data set by excluding the forecasts in the highest and lowest quartiles. This is the range for the middle 50 percent of the data or where the middle 50 percent of the data is, computed as the difference between the third and the first quartiles (Anderson, et al., 2006).

consumers. However, the use of average inflation forecast in analysis or policy making should be taken with caution due to the presence of outliers.

Based on the evolution of box plots[103] (Figure 1) of the two-year ahead forecast of private sector economists, the IQR was highest (i.e., longest length of boxes) in early 2009, it gradually declined thereafter until 2010 but it increased anew in early 2011. From 2013 to first half of 2015, there is a gradual narrowing and stability of IQR and mostly within the inflation target range. These indicate that in recent years, two-year ahead inflation expectations of private sector economists are more bunched up around the mean and are increasingly firmly anchored. However, the presence of outliers (i.e., clear dots) during this period indicates a caution in reporting mean forecasts as these can be weak indicators of central tendency. In the second half of 2015, higher IQR indicates a more spread out inflation forecasts, although still within the inflation target band.

Figure 1: Inter-quartile Range of Inflation Expectations



Note: The x-axis labels refer to the date of the survey and the corresponding year of the forecast (e.g., J10_10 means January 2010 survey for 2010 inflation forecast). The box portion represents the IQR. The line through the center of the box is the median and the shaded dot within the box is the mean. The cleared dots outside the box are near outliers and the asterisks are far outliers. Legend: A: Two – Year Ahead Private Sector Forecast; B: One – Year Ahead Private Sector Forecast; C: Same Year Private Sector Forecast; D: One – Year Ahead AP Consensus Forecast; E: Same Year AP Consensus Forecast; F: Business Expectations Survey: Current Quarter Forecast; G: Business Expectations Survey: Next Quarter Forecast; H: Consumer Expectations Survey: 12 Months Ahead Forecast. Sources of basic data: AP Consensus Forecast, Department of Economic Research and Department of Economic Statistics

For one-year ahead forecasts, lesser disagreements among inflation forecasters and private sector economists were observed compared to two-year ahead forecast. However, there was an increase in dispersion in 2015 although a decline in recent months. Most of the IQRs are within the inflation target band, indicating that most of the middle 50 percent of one-year ahead forecasts are within the government's target for the following year. Again, there is caution on the use of average inflation forecast due to the presence of outliers. Current year forecasts also show an improvement in dispersion, but worth noting are the increasing number of IQRs that are already below the inflation target band in recent periods and the presence of near and far outliers.

For current and next quarter inflation forecasts of businesses, dispersion of inflation expectations appears to be increasing in the last quarter of 2015. While this disagreement in inflation expectations declined in 2016,

[103] One representation of IQR is the box plot, which summarizes the distribution of a set of data by displaying the centering and spread of the data (Eviews 9.5 Help).

the IQR is already below the inflation target band particularly in the second quarter of 2016 and near and far outliers are present. Meanwhile, for 12-month ahead inflation expectations of consumers, there were higher dispersions in recent quarters and far outliers are present. This indicates the need to further educate and inform the consumers to further improve their inflation expectations.

What Drives Inflation Expectations in the Philippines?

In this section, (one-year ahead) inflation expectations of international forecasts (AP Consensus) were used to estimate the drivers of inflation expectations in the Philippines.

Empirical model. Following Cerisola and Gelos (2005), various regressions were conducted to estimate the possible factors that drive monthly one-year ahead inflation expectations in the Philippines, added by a variable that represents the intensity of BSP news related to inflation (policy stance, inflation media releases, inflation report, BES, CES, domestic liquidity, bank lending and other occasional announcements (e.g., DBCC target, open letter to the President, etc.)). The regression is expressed in equation 1 as:

$$\pi_t^e = \alpha_0 + \alpha_1\, \pi_{t-2} + \alpha_2\, rwmor_t \; + \alpha_3\, pb_{t-3} + \alpha_4\, reer_t \; + \alpha_4\, wage_{t-2} + \alpha_5\, news_t \; + \varepsilon_{it} \qquad (1)$$

where,

Variable name	Definition	Description	Frequency/ Source of data
π_t^e	One year ahead inflation expectation	One-year ahead inflation forecast	Monthly; AP Consensus
π_{t-2}	Past actual inflation rate	Year-on-year growth of consumer price index lagged by 2 periods	Monthly; Philippine Statistics Authority (PSA)
$rwmor_t$	Real weighted monetary operations rate	Weighted monetary operations rate less inflation rate	Monthly; Bangko Sentral ng Pilipinas (BSP)
pb_{t-3}	Primary balance to GDP ratio lagged by 3 months	National government deficit net of interest payments divided by nominal GDP	Monthly (estimated from quarterly); Bureau of Treasury and PSA
$reer_t$	Real effective exchange rate (REER) deviation from trend	Real effective exchange rate less its trend value (trend is approximated through a Hodrick-Prescott filter)	Monthly; BSP
$wage_{t-2}$	Growth of real non-agricultural wage in NCR lagged by two months	Non-agricultural minimum wage in NCR deflated by CPI	Monthly; PSA
$news_t$	News intensity	Historical	Authors' estimate
ε_{it}	Error term		

Estimation method and robustness. In this study, the parameters in the model are estimated using OLS and GMM. The GMM is considered to deal with potential endogeneity of certain regressors when using OLS.

Key Findings. Table 1 shows the empirical regression results. Following diagnostics and robustness checks, the following insights can be highlighted:

- **On a full period analysis, it appears that inflation expectations in the Philippines can be influenced by past inflation, policy rate and intensity of BSP news.** Fiscal policy also appears to have an influence on inflation expectations using the OLS approach, but its statistical significance appears to wane under the GMM approach.

- **Breaking the period of analysis into two periods from 2002 to 2008 and from 2010 to 2017, it appears that since the adoption of the IT framework, inflation expectations in the Philippines are continually influenced by past inflation and intensity of BSP news, although the role of past inflation in the formation of inflation expectations appears to be decreasing.** Meanwhile, the influence of policy rates have improved after 2010 or a year after the country has started meeting its inflation target. These results appear to indicate that inflation expectations in the Philippines have become less backward-looking, reflecting the increasing credibility of monetary policy in the country in recent years. This could be attributed to the increasing effectiveness of the BSP in implementing its IT framework. From 2009 to 2014, the country was able to achieve its inflation target for six consecutive years and recently in 2017, amid the country's strong economic growth. Meanwhile for 2015 and 2016, timely and clear communication of BSP's monetary policy stance based on meticulous assessment of current macroeconomic conditions and inflation outlook enabled the BSP to maintain its credibility in anchoring inflation expectations.

- **Under the two-period analysis, it appears that the effect of fiscal variables is more pronounced from 2002 to 2008.** This could be attributed in part to the fiscal crisis experience of the country in 2004, during which, the government's fiscal position was closely monitored by the market and it is considered as a significant factor in forming economic expectations. The statistical significance of fiscal policy appears to have disappeared starting 2010 as the government has started to improve its fiscal position and fiscal sustainability has been achieved.

- **The deviation of real effective exchange rate from trend is not statistically significant** in influencing inflation expectations while the effect of growth of real non-agricultural wage is increasingly appearing in recent years.

Table 1: Empirical Regression Model Results

Dependent Variable: Inflation Expectation				
Independent Variables	Model 1 (OLS)	Model 2 (GMM)	Model 3 (GMM)	Model 4 (GMM)
Constant	3.67***	3.50***	3.76***	3.36***
Inflation (-2)	0.18***	0.17***	0.28***	0.10***
Real weighted monetary operations rate	-0.08**	-0.09***	-0.04	-0.05**
Primary balance to GDP ratio (-3)	-0.01*	-0.00	-0.02**	-0.00
REER deviation from trend	-0.01	-0.00	-0.03	0.01
Growth of real non-agricultural wage in NCR (-2)	0.01	0.01	0.02	0.01**
News intensity	-0.03***	-0.03***	-0.04**	-0.02***
AR(1)	0.94***	0.93***	0.72***	0.95***
Adjusted R^2	0.93	0.93	0.88	0.95
F/J-statistic	346.78 (0.00)	8.43 (0.39)	5.97 (0.54)	9.54 (0.22)
DW stat	1.97	1.93	1.75	1.49
Cointegrated	Yes			
Not serially correlated	Yes	Yes	Yes	Yes
Instrument variables		Dummy variable if actual inflation is within target; Mid-point of inflation target	Mid-point of inflation target	Dummy variable if actual inflation is within target; Mid-point of inflation target
Sample Period	M1.02-M6.17	M1.02-M6.17	M1.02-M12.08	M1.10-M6.17
Sample Period (Adjusted)	M4.03-M6.17	M4.03-M6.17	M4.03-M12.08	M1.10-M6.17

*Note: Statistically significant at ***1%, ** 5%, *10%; Figures in parentheses are probabilities.*
Source of estimates: BSP (as of 29 January 2018)

The results of the first and second parts of this analysis indicate that there is scope to further improve the influence of monetary policy on inflation expectations in order to increasingly reduce the backward-looking tendency of inflation expectations and to reduce the dispersions in inflation expectations, particularly among consumers. Meanwhile, the effect of fiscal variables on inflation expectations is also worth continuous monitoring considering that it had been an important factor prior to GFC and given the recent implementation of fiscal reforms. Moving forward, improvements on the model will be useful such as re-estimating the model using other approaches (e.g., VAR, DSGE) and consideration of other variables that may influence inflation expectations.

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Loans and Credit. The BSP ensured effective delivery of credit through its rediscounting facility. The BSP provided assistance to banks with temporary liquidity needs. During the year, the BSP focused on intensifying its loan collection efforts, enhancing delivery of credit through the Credit Surety Fund (CSF), and maximizing the full potential of technology with the use of the Electronic Rediscounting System and Loans and Credit Management Information System (LCMIS).

The BSP also remained consistent with its lender of last resort (LOLR) function through its issuances during the year. The Monetary Board approved the amendments to Section X269 and Subsections X269.5 and X269.6 of the Manual of Regulations for Banks, terminating the sunset provision[104] on 21 July 2017 per Circular No. 964 dated 27 June 2017. As a result, all banks shall access a unified rediscounting window (RW) which shall adopt the rates and terms under the previous RW I.

Moreover, the BSP also granted temporary rediscounting relief, in addition to regulatory relief, to banks affected by Typhoon Nina in Q1 2017 and Typhoon Maring in Q3 2017. The temporary relief granted a 60-day grace period to settle outstanding rediscounting obligations with the BSP to all rediscounting banks with operations or end-user borrowers in affected areas. The measure also allowed rediscounting banks to restructure with the BSP the outstanding rediscounted loans of their end-user borrowers affected by the calamities on a case-to-case basis, subject to the terms and conditions stated in the implementing guidelines.

Total loan availments in 2017 amounted to ₽1,590.6 million. All loan releases pertain to availments under the rediscounting facility, of which ₽1,578.5 million went to thrift banks (TBs), and ₽12.1 million to rural banks (RBs). A majority of the loans released through the BSP rediscounting facility went to commercial credits, accounting for ₽1,502.6 million or 94.47 percent of all rediscounting availments. The loan collections applied to principal reached ₽905.6 million, a bulk of which pertained to peso rediscounting amounting to ₽766.7 million.

The total outstanding loan portfolio of the BSP as of 31 December 2017 increased by ₽541.4 million or 0.4 percent to ₽134,972.0 million from the previous year's level of ₽134,430.6 million. This was due largely to the increase in the peso rediscounting facility, which stood at ₽1,167.4 million as of end-2017 from ₽402.8 million in end-2016. Of the outstanding peso rediscounting loans, TBs and RBs accounted for ₽940.2 million (80.54 percent) and ₽227.2 million (19.46 percent), respectively.

Targets related to the provision of loans and credit were met in 2017. Total gross income from lending operations reached ₽1,781.9 million, slightly exceeding the projected level of ₽1,719.1 million. Moreover, collection levels in 2017 are as follows: 93.3 percent for rediscounting loans; 42.3 percent for emergency loans; 100 percent for loans to PDIC; and 96 percent for other loans. Collections on rediscounting and emergency loans were below the target of 95 percent and 50 percent, respectively, as BSP management decided not to pursue the foreclosure of some collaterals of closed banks due to legal property issues that, if pursued, would be costly to BSP, and due to on-going cases and pending issues initiated by concerned third parties. Nevertheless, current loans accounted for 95.5 percent of the total loan portfolio, exceeding the 90 percent target.

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[104] In 2013, reforms were made to bring the BSP Peso rediscounting policies in line with its LOLR function through Circular No. 806 dated 15 August 2013. The Circular established, for a prescribed period, two separate RWs, namely: RW I for U/KBs, and RW II for TBs, RBs and CBs. TBs were given a sunset period of five years or until 15 November 2018 while RBs and CBs were given 10 years or until 15 November 2023 to access RW II at the then existing terms. These banks were expected to use the transition period to improve their deposit mobilization capacities and increase the utilization of other funding sources, thus reducing their dependence on BSP funding over time. Based on the review, these banks are no longer dependent on BSP funding, warranting the termination of the sunset provision.

The credit risks on current rediscounting loans were proactively managed through off-site analysis and on-site credit verifications. Through its effective system and continued compliance with policy relating to lending operations, the BSP Department of Loans and Credit (DLC) has maintained its ISO:9001 certification status.

The BSP continues to improve the delivery of credit. Various projects to enhance the delivery of credit to all productive sectors of the economy were implemented. Among the accomplishments were:

Credit Surety Fund (CSF) Program.[105] From January to November 2017, a total of ₱952.2 million loans were released from lender banks and there were 713 new beneficiaries under the CSF Program. Outstanding loan balance as of 30 November 2017 was about ₱1.1 billion of which ₱865.7 million was covered by the CSF. As of said cut-off date, the accumulated approved loans from inception in 2008 stood at ₱4.2 billion of which ₱3.9 billion was released to 16,993 beneficiaries. Six CSFs were established in 2017, bringing the total to 51 CSFs established in 32 provinces and 19 cities nationwide since 2008.

The Implementing Rules and Regulations (IRR) of Republic Act No. 10744, otherwise known as the "Credit Surety Fund Cooperative Act of 2015", was published on 9 October 2017. As mandated by the CSF Act, the BSP will continue to promote and organize CSFs nationwide and provide technical assistance such as trainings and seminars in coordination with other public or private stakeholders in 2018. The BSP will also assist the Cooperative Development Authority (CDA) in the transition of the CSFs. The transition will entail a knowledge transfer phase between BSP and CDA to ensure that the program initiated by the BSP will have proper continuity.

Electronic Rediscounting System (eRS). Technical assistance programs were provided by DLC to banks, covering an in-depth discussion of the BSP's rediscounting facility, documentary requirements for each loan type, and key features of the eRS. The DLC likewise proactively addressed all incidents reported by eRS users during the year.

Loans and Credit Management Information System (LCMIS). The LCMIS which primarily aims to provide immediate delivery of credit, streamline the DLC's operations, and centralize and integrate databases of DLC transactions, started its production in 2017. The DLC's initiatives in the development of the LCMIS proved its commitment in providing real-time and risk-managed lending operation. This low-risk and high-value project has been marked as a trailblazer for information technology innovations and is expected to be completed by the end of 2018. This is to enable the BSP to be one step ahead in the digital revolution.

Asset Management. As of 31 December 2017, the total book value of acquired assets stood at ₱16.0 billion,[106] higher by about ₱0.1 billion or 0.5 percent than the previous year's level of ₱15.9 billion.

Through the various asset disposal schemes, the BSP Committee on Disposal of Real Properties disposed of an aggregate 837 titles with a total net book value of ₱1.3 billion for a total contract price of ₱2.6 billion. This generated an estimated net income of ₱2.1 billion, inclusive of interest income estimated at ₱1.0 billion that will be generated over the term of the contracts for installment sales.

The total collections of ₱804.1 million of sales contract receivables which represent 112 percent of the total installments due were higher than the

[105] The CSF Program is a credit enhancement that allows micro, small and medium enterprises (MSMEs), which are members of cooperatives, to borrow form banks using the CSF surety cover as security for the loan in lieu of conventional collateral. Loans granted by banks under the CSF Program are eligible for rediscounting with the BSP through the Department of Loans and Credit.

[106] Subject to adjustments

target collection rate of 88 percent for the year. Interest income earned from the total collections amounted to ₱255.5 million.[107] In addition, the BSP earned a total miscellaneous income of ₱35.2 million from penalties.

The BSP is continuously taking measures to intensify its collection efforts through the timely sending of notices to delinquent buyers and lessees. Contracts to sell are cancelled for failure of the buyers to settle their delinquent installments after the first and second notices.

Notes and Securities Printing. A total of 4.4 billion pieces of banknotes were delivered for the 2017 order. The delivery consisted of about 3.3 billion pieces outsourced finished banknotes (OFB) and 1.1 billion pieces produced in-house finished bank notes (IFB). The completion of the installation of the new Banknote Printing and Finishing Equipment Lines 3 and 4 in June 2017 and October 2017, respectively, doubled the banknote printing capacity of the BSP Banknotes and Securities Printing Department to 3.6 billion pieces from 1.8 billion pieces.

The BSP was also able to deliver all client orders for securities documents. These included about 2.3 million pieces of judicial title forms to the Land Registration Authority and a total of 162,650 pieces of official receipts, expense checks, charge slips and forms.

Mint and Refinery. A total of 2.3 billion pieces of coins were delivered to the Currency Issue and Integrity Office (CIIO), about 39.0 percent more than the CIIO reassessed order of about 1.7 billion pieces for 2017. This consists of various denominations of the BSP Coin Series and 5-piso New Generation Currency (NGC) coins. As support to coin production, the Mint and Refinery Operations Department fabricated approximately 6,000 pieces NGC coin toolings which were used for the production of the 5-Piso NGC coins and would subsequently be used for the production of other NGC denominations, i.e., 10-Piso, 1-Piso, 25-Sentimo, 5-Sentimo, and 1-Sentimo.

Apart from the production and delivery of circulation coins, the mint produced and delivered 2,361 pieces presidential medals, 130 pieces state decorations, 26 million pieces commemorative coins, and 813 pieces commemorative medals. Furthermore, the mint received about 14,542.8 troy ounce (tr. oz.) panned gold from its gold buying stations, which contained 12,845.739 tr. oz. of fine gold.

Currency Issuance and Retirement. The BSP has continued to provide timely, good-quality and adequate currency to meet the requirements of expanding domestic economy. Total currency in circulation (CIC) as of end-2017 increased to ₱1.3 trillion, up by 13.8 percent from the level recorded in the previous year. Activities that were implemented to ensure sufficient supply of banknotes and coins included strengthening the BSP's methodology for forecasting denominational currency requirements; close monitoring of currency inventory for a more efficient management of currency holdings; implementing the second phase of the Enhanced Cash Management[108] services; acceptance of deposits for credit to banks' demand deposit accounts; facilitating efficient of banknote and coin deposits; expediting the retirement of unfit notes through the use of Currency Disintegrator System; purchasing foreign currencies from banks as part of the BSP's service to banks; and facilitating shipment of foreign currencies to correspondent banks abroad.

At the same time, to preserve currency integrity, the BSP continued to conduct public information campaigns on various currency-related programs and policies of the BSP, such as counterfeit detection of Philippine Peso and foreign currencies, demonetization of the New Design Series banknotes and full shift to the New

[107] Subject to adjustment.

[108] The implementation of the ECM consists of three phases: Phase 1 covers head offices and cash centers of banks in Metro Manila; Phase 2 extends coverage to bank branches in Metro Manila; and, Phase 3 covers regional offices and branches.

Generation Currency (NGC) bank notes, preparation for the launch of NGC coins, Clean Note and Coin Policy (CNCP), among others; strengthened the anti-counterfeiting drive; and calibrated the ABPMs for accuracy in counterfeit detection and in support of CNCP.

International Operations. The BSP, through the International Operations Department (IOD), continues to review and refine regulations governing foreign exchange (FX) transactions to keep these attuned with prevailing market conditions and responsive to the needs of the country's expanding and dynamic economy. The BSP has implemented nine (9) waves of FX reforms since 2007, primarily aimed at rationalizing and facilitating access to FX resources of the banking system for legitimate transactions to support business activities that will contribute to sustained and inclusive economic growth.

In 2017, the BSP issued two circulars to institute reforms in FX transactions and to expand the coverage of the BSP's records of the country's external obligations.[109] Circular No. 984 was issued on 22 December 2017 to further liberalize the rules on purely private sector loans[110] by lifting the prior BSP approval requirement. Under the new rules, these loans now only need to be registered with the BSP to allow use of the banking system's FX resources for loan payments. The list of documents to support applications for registration and purchase of FX from the banking system was also substantially trimmed down and simplified to facilitate the financing of critical projects and activities that can contribute to a more vibrant business climate in support of the national development agenda. Another issuance on the same date was Circular No. 985, which opened a temporary six-month window during which purely private sector loans (borrowings that were obtained without the requisite BSP approval) are outstanding and recorded in the obligor's books as of the date of the circular, can be applied for registration with the BSP following the guidelines set for the purpose. Such registration will qualify the full outstanding balances of the obligations to be paid on scheduled due dates using FX resources of the banking system. Previously, these loans can only be settled with the borrower's own FX or with funds sourced outside the banking system.

To ensure proper understanding and appreciation of BSP rules governing FX transactions, the BSP, through the IOD, regularly conducts information dissemination activities. In 2017, briefings for banks' compliance officers and industry associations were held at the BSP Head Office. The Department likewise sent a resource speaker to the Conference on Gearing Up for External Competitiveness in Cebu City.

Aside from press releases regarding policy issuances, the BSP likewise regularly updates the "Frequently Asked Questions on FX Rules" which is posted at the BSP website for easy access and reference by interested parties.

[109] Circular Nos. 984 and 985 took effect on 15 January 2018
[110] loans without guarantee from/exposure of any public sector entity

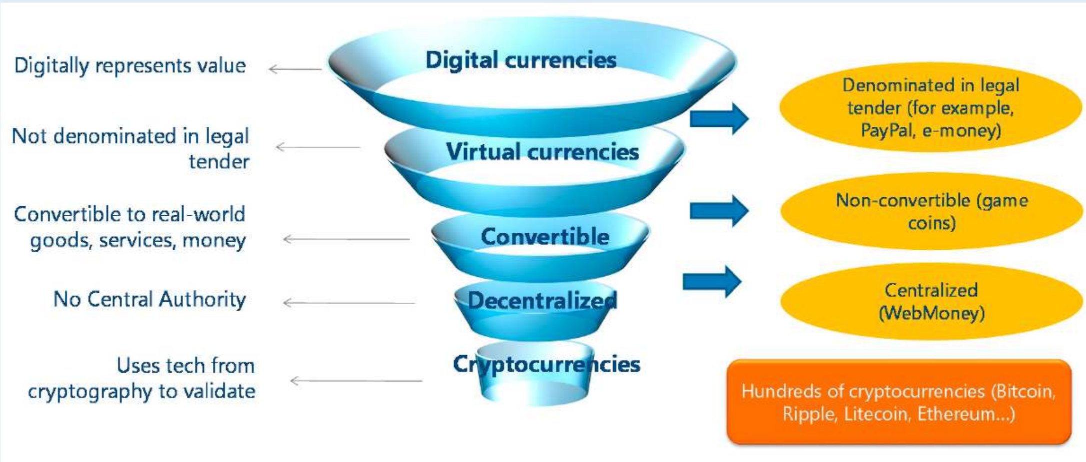
Box Article 7

Cryptocurrency: Gaining Currency in the Future?[111]

Cryptocurrencies are a special type of virtual currencies, which fall within the broader category of digital currencies as shown in Figure 1. Cryptocurrency uses techniques from cryptography to deter counterfeiting, secure transactions and generate the units of currency. Its operations are managed in a decentralized manner among participants, which has no need for central authority (for example, a central bank) to supervise the system. Unlike e-money, cryptocurrency is not denominated in fiat currency, has no intrinsic value like gold but has its own unit of account.

To date, Bitcoin is the most popular and dominant cryptocurrency capturing almost 40 percent (or two-fifths) of the total cryptocurrency market capitalizations worldwide.[112] Bitcoin is obtained by "mining" (a transaction validation process). In addition, Bitcoins are convertible. They can be purchased or exchanged with fiat currency or other currencies, and used for payments of goods and services in the real economy through a Bitcoin exchange, through a trade platform, or directly with another Bitcoin holder. Bitcoin is not only a currency, but also a payment system. The payment mechanisms of Bitcoin are based on a distributed ledger technology (DLT), more popularly known as the blockchain technology, which allows peer-to-peer value exchange without the involvement of trusted third parties, like a central bank. This is the most important innovation introduced by Bitcoin that makes it revolutionary or disruptive.

Figure 1. Taxonomy of Digital Currencies



Source: He, Dong, et al. (2016). "Virtual currencies and beyond: Initial considerations" IMF Staff Discussion Note SDN/16/03, January, page.8.

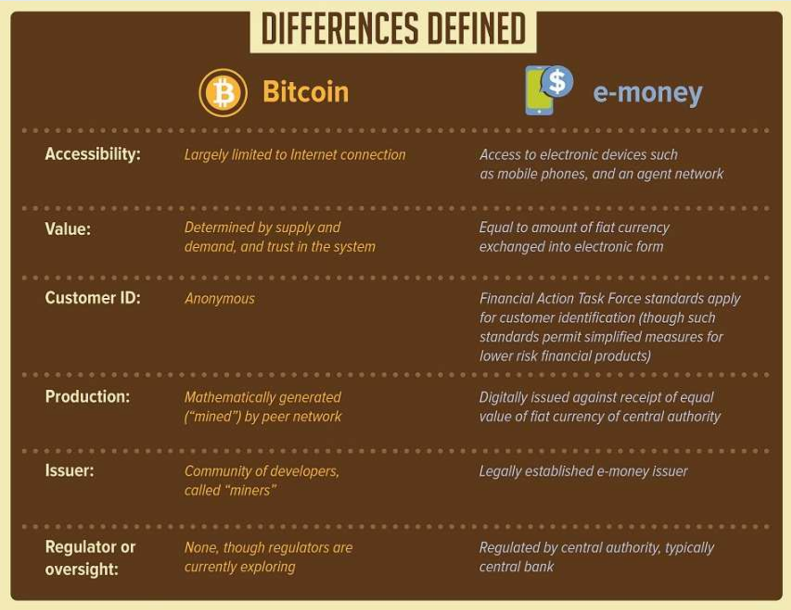
Differentiating Bitcoin and E-money

Figure 2 provides a simpler comparison and differences between Bitcoin and e-money. First, Bitcoin can be accessed through electronic devices like computer or smartphones with internet connection while e-money requires network connectivity of telecommunications company (telco) for smartphones to transfer values. G-Cash and SMART money are examples of e-money in the Philippines. Second, the value of Bitcoin is determined by the supply and demand, while the value of e-money is equal to the amount of fiat currency exchanged into electronic form, i.e. there exists a one-to-one correspondence. Third, customer identification

[111] Based on the internal report prepared by the Center for Monetary and Financial Policy entitled "Biting on virtual currencies and Bitcoin: Some preliminary assessment for the Philippines".
[112] From https://coinmarketcap.com/ that monitors in real time the cryptocurrency market capitalizations. Accessed on 22 February 2018.

using bitcoin is anonymous while e-money must satisfy the Financial Action Task Force[113] standards, in general. Fourth, Bitcoin is mathematically generated by peer network through computer algorithm, while e-money is digitally issued against the receipt of equal value of fiat currency of central authority. Fifth, the issuer of Bitcoin is composed of a community of developers called "miners" while an e-money issuer is formally and legally established. Lastly, regulations on Bitcoin vary across different jurisdictions with some jurisdictions having no regulations at all while others are further exploring their options. E-money is regulated by a central authority, typically the central bank.

Figure 2. Difference between Bitcoin and E-money


DIFFERENCES DEFINED

	Bitcoin	e-money
Accessibility:	Largely limited to Internet connection	Access to electronic devices such as mobile phones, and an agent network
Value:	Determined by supply and demand, and trust in the system	Equal to amount of fiat currency exchanged into electronic form
Customer ID:	Anonymous	Financial Action Task Force standards apply for customer identification (though such standards permit simplified measures for lower risk financial products)
Production:	Mathematically generated ("mined") by peer network	Digitally issued against receipt of equal value of fiat currency of central authority
Issuer:	Community of developers, called "miners"	Legally established e-money issuer
Regulator or oversight:	None, though regulators are currently exploring	Regulated by central authority, typically central bank

Source: Consultative Group to Assist the Poor (CGAP)[114]

Figure 3 provides a framework to help explain where e-money and digital currencies could be placed in relation to other types of money. It illustrates the separation between the two basic aspects of digital currency schemes (the asset side and the decentralized exchange mechanism based on a distributed ledger). As shown in the figure, Bitcoin is an example of a decentralized digital currency wherein the settlement of a payment obligation takes place on a peer-to-peer basis, without the intermediation of a trusted third party, such as an automated clearinghouse, commercial bank, or central bank. This property is very similar to banknotes and metal coins, however, physical presence is not a requirement. In fact, Bitcoin founder Satoshi Nakamoto (2008) claims that bitcoin transactions are as secure as settlement in bank notes and that no other "mechanism exists to make payments over a communications channel without a trusted third party."[115]

Figure 3. Taxonomy of Money and Exchange Mechanisms

<table>
<tr><th rowspan="5">The Asset</th><th colspan="2">Physical</th><th colspan="5">Electronic</th></tr>
<tr><td>Potential substitutes for physical money</td><td colspan="4">Money in the traditional sense (denominated in a sovereign currency)</td><td colspan="2">Potential substitute for non-physical money</td></tr>
<tr><td rowspan="3">Physical tokens (beads, shells); Privately issued notes (eg, "money" issued by certain local</td><td colspan="2" rowspan="2">Central bank money</td><td rowspan="3">Commercial bank money</td><td colspan="3">E-money (broad sense)</td></tr>
<tr><td rowspan="2">Legally recognized e-money</td><td colspan="2">Digital currencies</td></tr>
<tr><td>Cash</td><td>Central</td><td>Centrally</td><td>Decentralized</td></tr>
</table>

[113] The Financial Action Task Force (on Money Laundering) (FATF), also known by its French name, Groupe d'action financière (GAFI), is an intergovernmental organization founded in 1989 on the initiative of the G7 to develop policies to combat money laundering. In 2001 the purpose expanded to act on terrorism financing. It monitors countries' progress in implementing the FATF Recommendations by 'peer reviews' ('mutual evaluations') of member countries. The FATF Secretariat is housed at the headquarters of the OECD in Paris.

[114] The Consultative Group to Assist the Poor (www.cgap.org/) is a global partnership of more than 30 leading organizations that seek to advance financial inclusion. CGAP develops innovative solutions through practical research and active engagement with financial service providers, policy makers, and funders to enable approaches at scale.

[115] To date, the identity of Satoshi Nakamoto remains a mystery. It is still unknown which person or group hides behind this pseudonym.

	authorities)	(notes and coins)	bank deposits		(e-money in a narrow sense)	issued	or automatic issuance (eg, **Bitcoin**)
The exchange mechanism	Peer-to-peer physical exchange (no specific infrastructure is needed)		Traditional centralized FMIs (large value and retails payment systems, including card schemes…) Alternative bilateral arrangements (eg, correspondence banking)		E-money exchange mechanisms: peer-to-peer exchange possible but a trusted third party is also needed (eg, to avoid double-spending). In many cases, the exchange mechanisms is centralized and is similar to traditional FMIs		Decentralized payment mechanism (peer-to-peer electronic exchange)
	Peer-to-peer	**Need for a trusted third party or a "chain of trust"**					**Peer-to-peer**

Source: BIS Committee on Payment and Market Infrastructures (2015). Digital Currencies, November.

Are Cryptocurrencies Money?

Cryptocurrencies like Bitcoin do not yet completely fulfill the three economic roles of money – as a store of value, a medium of exchange and a unit of account. They have limitations in performing these three functions of money required of a fiat or sovereign currency, to wit: (1) cryptocurrencies have high price volatility that limits their ability to serve as a reliable store of value; (2) this same extreme volatility prevents Bitcoin from becoming a useful unit of account—a frequent repricing of goods would be costly for merchants and confusing for consumers;[116] and (3) the currently small size and limited acceptance network of cryptocurrencies significantly restrict their use as a medium of exchange.

Policy Responses of Central Banks

Various central banks have expressed their reservations about Bitcoin in varying degrees (Table 1). A number of countries have addressed the immediate risks arising from cryptocurrencies such as risks to consumer safety, tax collection and financial integrity. Some (like the BSP) have issued warnings to consumers and regulated cryptocurrency exchanges. Still others have decided to ban the use of cryptocurrencies altogether rather than adopt measures to mitigate risks. There are central banks which are neutral and have yet to issue a formal position on cryptocurrencies.[117]

BSP Policy Responses. In 2014, the BSP issued a warning advising the public on the risks of engaging with Bitcoin exchanges. More recently, however, BSP Circular No. 944[118] dated 06 February 2017 established a regulatory framework in recognition of the rapid growth of virtual currency (VC)-based payments and remittance transactions. Under the framework, VC exchanges (entities facilitating the conversion or exchange of any VC into fiat currency or vice versa) are classified as remittance and transfer companies (RTCs) and as such, subject to the basic requirements for RTCs such as, registration, minimum capital, internal controls, regulatory reports and compliance with the Anti-Money Laundering Act, as amended, and its implementing rules and regulations. The framework thus promotes a level regulatory playing field for financial service providers performing similar services. Moreover, regulating virtual currency entities signifies the BSP's acknowledgement of virtual currency as an innovative instrument that can facilitate the speed and affordability of remittance and payment transactions.

[116] Yermack, D. (2013). "Is Bitcoin real currency? An economic appraisal," NBER Working Paper 19747, December.
[117] International Monetary Fund (2016) "Virtual currencies and beyond: Initial considerations" IMF Staff Discussion Note SDN/16/03.
[118] Issued 6 February 2017.

Moving Forward: Proactively Keeping Track of Developments

Cryptocurrencies, such as the Bitcoin, may offer benefits such as greater speed and efficiency in payments and transfers, and increased financial inclusion. However, it remains uncertain how the marketplace for Bitcoins or other forms of cryptocurrencies will evolve in the near future. Still, the Blockchain, or distributed ledger technology, which is the backbone of Bitcoin, offers numerous possible applications even outside the financial sector.

Table 1. Responses of Selected Countries to Virtual Currencies

Jurisdictions	AML/CFT: Warning and regulation	Tax Treatment	Consumer Warnings and Advisories	Licensing/ Registration of VC Intermediaries	Financial Sector Warnings, and Bans	Bans on the Issuance/Use
Argentina	Warning on the ML/TF risks		Consumer Warning		Warning on reporting entities	
Bolivia						Yes
Canada	Amending existing regulations	Clarified tax treatment	Consumer Advisory			
China					Ban	
France	Application of existing regulations	Clarified tax treatment	Consumer Warning			
Germany	Application of existing regulations					
Italy			Consumer Warning		Warning	
Japan	Plan to introduce new regulations		Consumer Warning	Plan to introduce new regulations		
Russia	Application of existing regulations		Consumer Warning			Yes – draft law
Singapore	Plan to introduce new regulations	Clarified tax treatment	Consumer Warning			
South Africa			Consumer Warning			
U.K.	Application of existing regulations	Clarified tax treatment				
U.S.	Application of existing regulations (Federal)	Clarified tax treatment (Ferderal)	Consumer Warning	State Licensing Regime (eg., NYBitLicense)		
Philippines*			Consumer Advisory	Regulations of Virtual Currency Exchanges		

Source: IMF Staff Discussion Note. "Virtual Currencies and Beyond: Initial Considerations", IMF SDN 16/03, January 2016.
Note: *Based on the following BSP media releases:
- Warning Advisory on Virtual Currencies dated 06 March 2014.
- BSP Issues Pioneer Regulatory Framework for Virtual Currency Exchanges dated 07 February 2017.

Regulators and industry leaders should find the right balance between know-your-customer banking laws and individuals' desire for privacy. Standards and mechanisms, whether governmental or industry (i.e. voluntary), will have to evolve to protect consumers and small players in the marketplace.

At present, the use of cryptocurrencies (particularly Bitcoin) in the Philippines is still limited, albeit increasing. In the event that its usage expands, the BSP should be prepared to manage potential risks. Thus, prudential regulations should include cryptocurrency service providers, such as brokers and exchanges, and wallet providers.

The BSP may need to balance prudential regulations with the spirit of innovation. The challenge though is how the BSP will respond, both at the domestic level and at the global level, in turning these innovations into an overall positive development. The recent adoption by the BSP of the improved oversight framework for money service businesses, which include all cryptocurrency exchanges, is one step toward the promotion of socially responsible and beneficial innovations while addressing risk management and consumer protection issues and concerns as well as regulatory compliance considerations.

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Economic Research and Information Dissemination Activities

Regular reports. The BSP continued to publish regular reports to provide the public information on the macroeconomic and external factors behind its monetary policy actions and to guide expectations on the future path of the BSP monetary policy stance. Among the published regular reports in 2017 were the quarterly Inflation Report, the quarterly Report on Economic and Financial Developments, and the Report on Regional Economic Developments. The BSP likewise published relevant statistical reports on the Balance of Payments (BOP) Report, International Investment Position (IIP), Philippine Flow of Funds (FOF), Selected Economic and Financial Indicators (SEFI), Selected Philippine Economic Indicators (SPEI), and Statistical Bulletin.

Press releases. The publication of press communications, in addition to the regular reports, helped the BSP enhance its transparency and accountability mechanisms to the public. Apart from the publication of the highlights of the monetary policy meetings, the BSP published press releases on its monetary policy decisions as well as press releases on money supply, bank lending, and inflation. Press releases on the gross international reserves (GIR), BOP position, foreign direct investments and OF remittances, as well as the results of the quarterly Residential Real Estate Price Index (RREPI)[119] were also published by the BSP.

Surveys. The BSP conducted regular surveys in 2017 to supplement information from data releases in aid of better policy-making. Among these surveys were the monthly Private Sector Economists' Survey and the quarterly Senior Loan Officers' Survey (SLOS), which assessed the private sector's views on emerging inflation and current bank lending conditions; the semi-annual Coordinated Portfolio Investment Survey (CPIS) which monitors residents' holdings of foreign-issued equities and long- and short-term debt securities; the annual and quarterly Coordinated Direct Investment Survey (CDIS), which accounted the financial transactions and stock of equity and debt between resident companies and their immediate foreign direct investors, direct investment enterprise abroad, and fellow enterprises abroad; and, the quarterly Business Expectations Survey (BES) and Consumer Expectations Survey (CES), which captured the business sentiment and general consumer outlook on future economic conditions. The BSP also conducted the monthly Cross-Border Transactions Survey (CBTS) which covered intercompany accounts for transactions settled through accounts abroad.

The BSP released the results of the 2014 Consumer Finance Survey (CFS). The 2014 CFS is the second survey on consumer finances following the 2009 inaugural CFS. Thirteen CFS dissemination activities were successfully completed in major cities nationwide. The BSP also continued the conduct of information sessions to introduce the Other Financial Corporation Survey (OFCS).[120] Companies supervised by the Insurance Commission, Governance Commission for Government –Owned or –Controlled Corporations and the Securities and Exchange Commission have started submitting data for the Other Financial Corporations Survey (OFCS) compilation.

Research initiatives. Research studies on timely issues and developments affecting the conduct of monetary policy have also been conducted by the BSP in 2017. These included studies on the implications of monetary policy normalization in

[119] RREPI forms part of the financial soundness indicators (FSIs) for the Philippines and serves as a valuable tool in assessing the real estate and credit market conditions in the Philippines.

[120] The OFCS is an analytical survey that will provide comprehensive measure of the claims (or assets) and liabilities of OFCs in the Philippines.

advanced countries in the Philippines; impact of monetary policy in bank lending activity; market herding behavior in the local equities market; current account dynamics in the Philippines; exchange rate pass-through in the Philippines; foreign exchange flows, balance of payments and reserve money in the Philippines; estimation models of potential output, output gap and total factor productivity; macro-prudential policy in emerging Asian economies; adequacy of international reserves; implications of Basel III on risk-taking activities of banks; financial technology and virtual currencies; development of a Renminbi trading market in the Philippines; balance sheet analysis as a new approach to financial stability surveillance; and, assessing the financial inclusiveness of the Philippines. Some of the notable research studies that were conducted in 2017 included the following: *Asymmetric Mechanism in Exchange Rate Pass-Through: The Case for the Philippines*[121]*; The Three Phases of Global liquidity and the Philippine Case*[122]*; Underlying Inflation and the Common Component of CPI in the Philippines*; and, *Review of the BSP's Econometric Models for Forecasting and Policy Analysis*.

Information dissemination activities. Aiming to augment public awareness and broaden the discourse on timely issues affecting its operating environment, the BSP organized events such as the annual Exporters' Forum held in March 2017; two (2) rounds of "Conferences on Gearing Up for External Competitiveness" (CGUEC) for users of foreign exchange; three (3) rounds of Public Information Campaigns (PIC) for lending banks relative to the revised guidelines for requests for Monetary Board (MB) Opinion on the BOP implications of proposed domestic government borrowings; ten (10) information sessions, through the Financial Stability Coordination Council (FSCC), introducing a set of survey instruments designed to collect financial data from non-financial corporations (NFCs); three (3) consultation meetings with export industry associations and exporting firms; and two (2) Environmental Scanning Exercises.

In an effort to equip its employees with a more holistic knowledge of economic developments concerning the institution, the BSP organized thirteen (13) brownbag seminars in 2017, covering research topics such as: *The Impact of US Unconventional Monetary Policy and its Normalization to the Philippines*; *World Bank's Philippine Update for April 2017*; *Policy Rate Divergence in the ASEAN-4: Impact of Global Risk Perception and Financial Market Characteristics*; *Heterogeneous Response of Banks to Monetary Policy in the Philippines*; and *The Impact of Monetary Policy on Bank Lending Activity in the Philippines*.

As part of the collaboration between BSP and the academe, the BSP organized the annual BSP-University of the Philippines (UP) Professorial Chair Lectures conference in Q4 2017 to continuously support the research, teaching, training and other programs of the UP system and to help maintain a critical mass of productive research scholars in economics, statistics, business administration, finance, accounting, agriculture and other related fields. Research studies and lectures covered in the said conference include topics on big data and business management, the effect of diesel excise tax on inflation and poverty, genesis and effects of asset booms, financial inclusion and inclusive growth, allowed rates of return in regulated utilities in the Philippines, and agglomeration forces in the Philippines.

The BSP has been active in engaging professional organizations such as the Philippine Statistical Association, Inc. (PSAI) through participation in conferences that promote various advocacies, including financial inclusion. A one-day training on "Implementing and Monitoring Financial Inclusion for Good Local Governance" was held during the 2017 PSA Annual Conference to better prepare local government units and other local development stakeholders in making financial

[121] Published in SEACEN as Working Paper No. 19/2017
[122] Published in SEACEN Research Paper, May 2015

inclusion as an integral part of planning and delivery social and economic development services to their constituents.

Inter-agency and multilateral committees. The BSP continued to work towards enhanced relationships with the public and private sector as it actively participated in local and international committees and working groups. As a resource institution of the Development Budget Coordination Committee (DBCC), the BSP engaged in discussions regarding economic policy and macroeconomic assumptions serving as basis for the preparation of the National Government (NG)'s annual budget plan and fiscal program. The BSP likewise acted as resource institution in various legislative hearings including on Tax Reform for Acceleration and Inclusion (TRAIN); BSP Charter-related issues; NG budget; mandated credit for sectors particularly in agriculture and agrarian reform, as well as micro, small, and medium enterprises (MSMEs); rice tariffication; economic zones; mining; and government indebtedness cap.

The BSP participated actively in other inter-agency committees, including the National Food Authority Council, Food Security Committee on Rice, Committee on Tariff and Related Matters, Financial Stability Coordination Council, and Bureau of Treasury Auction Committee. The BSP is also an active member of statistical committees and working groups involved in the compilation of various macroeconomic, monetary and financial statistics and in the enhancement of statistical standards.

Recognizing the importance of international cooperation and dialogue, the BSP also joined meetings such as the Executives' Meeting of Asia-Pacific Central Banks (EMEAP) Monetary and Financial Stability Committee (MFSC); Bank for International Settlements (BIS) Research Conference; South East Asian Central Banks (SEACEN) Directors of Monetary Policy/Research; SEACEN Research Week; and International Monetary Fund (IMF)-Japan International Cooperation Agency (JICA) Joint Conference on Regional Development. The BSP also hosted the Association of Southeast Asian Nation's (ASEAN) 1st Sub-Regional Workshop on Foreign Direct Investments (SRWFDIS) and the 10th Regional Workshop on Foreign Direct Investments (RWFDIS), which were held in Cebu City in Q3 2017. These were held back-to-back with the 31st Meeting of the ASEAN Working Group on Investment Statistics (WGIIS).

To give recognition to the BSP's government and private sector stakeholders, the BSP hosted the 14th Awards Ceremony and Appreciation Lunch for Stakeholders in Q3 2017 with the theme "Transforming Shared Visions into Dynamic Partnership", in which 146 awards were given to 144 outstanding institutional and two (2) individuals nationwide. The BSP also partnered with the Department of Labor and Employment-National Reintegration Center for Overseas Filipino Workers (DOLE-NRCO), Overseas Workers Welfare Administration (OWWA), and International Organization for Migration (IOM) in holding the National Reintegration Summit, with the theme *"Ang Pagbabalikbayan ay ang Bagong Bayanihan"*. In Q4 2017, the BSP also hosted the 2017 BSP-DepEd Annual Oratorical Contest (NCR) with the theme "Figures for the Future: Realizing *Ambisyon Natin 2014* Through Statistics" wherein 16 school divisions from the NCR have participated.

In fulfilling its role as the government's financial advisor on official credit operations, the BSP evaluated a total of 253 requests for MB opinion on proposed borrowings by the NG, local government units (LGUs), government-owned and controlled corporations (GOCCs), local water districts (LWDs), and state university/colleges (SUCs).

Trainings, workshops and technical assistance projects. In coordination with the Asian Development Bank (ADB), the BSP conducted a training course on Macro-Financial Stability Policies on Capital Flows for Brunei, Cambodia, Laos, Myanmar, and Vietnam (BCLMV) in Q3 2017.

The BSP also hosted the South East Asian Central Banks (SEACEN) Intermediate Training Course on Analytics of Macroeconomic and Monetary Policy Management in Q4 2017 in coordination with the SEACEN Centre. Meanwhile, a research collaboration on the development of an Excel-based Financial Computable General Equilibrium (FCGE) Model for the Philippines also commenced in 2017, following the signing of a memorandum of agreement (MOA) with Dr. Kim Kwangmoon, Associate Professor of the Graduate School of Management of Kyoto University.[123] The FCGE model will equip the BSP with the facility to study in depth the relationship between the financial and real sectors of the economy.

Program and Process Initiatives. Following the BSP's adoption of an interest rate corridor (IRC) framework in June 2016, the BSP continued to review the features and operations of the IRC system to ensure its efficient implementation. Two operational refinements in monetary operations that were implemented in 2017 were the adjustment of schedule of the daily RRP auction to 4:30 PM starting April 2017 and the shortened lead time of one week for announcing the term deposit facility (TDF) auction offer volumes. These enhancements have enabled BSP counterparties to better plan their liquidity management. Furthermore, the BSP conducted a survey and consultation meeting with IRC counterparties in Q3 2017 to study possible further enhancements to the system.

To strengthen its analytical capability and enhance the conduct of its economic surveillance, the BSP improved its continuing initiatives such as the Early Warning System (EWS) and the Philippine Composite Index of Financial Stress (PCIFS) as well as ongoing projects such as the Financial Connectedness Index, which will form part of the larger Macro-financial Surveillance Framework.

The BSP also reviewed its data gathering and database management processes which will aid in expanding the scope of its macro-economic surveillance activities. The Corporate Leverage Workstream of the Financial Stability Coordination Council (FSCC), which is chaired by the BSP, developed the corporate leverage framework that served as reference for the database and its further improvement into the proposed Corporate Financial Trends Survey (CFTS). Prior to the conduct of the survey, a series of information sessions was held on August and September 2017. The information sessions served as a venue for consultation and feedback gathering on the proposed survey questionnaire. The BSP also conducted an interdepartmental workshop on the Consumer Expectations Survey (CES) and Consumer Finance Survey (CFS) questionnaires to generate new data and indicators of household indebtedness and other potential vulnerabilities in the banking system.

In 2017, the BSP has embarked on developing an electronic survey system that includes an online questionnaire, a database, and an application for data maintenance and consolidation system for the regular surveys conducted by the BSP. The electronic system was envisioned to strengthen the collection of data inputs for the compilation of statistics and at the same time, reduce respondents' burden in their participation to BSP surveys. The E-Survey Portal was launched in July 2017 and has over 860 registered users representing at least 400 institutional respondents to the CBTS. The system for consolidation and report generation is still under system testing. Other BSP conducted surveys, e.g. BSP-Senior Loan Officers' Survey (SLOS), Business Expectations Survey (BES) and Consumer Expectation Survey (CES) will also be included in the Portal.

[123] An Excel-based FCGE model will provide the staff with an opportunity to fill in the gap between formal theory and numerical reality of practical general equilibrium analysis. By adopting an easy-to-use platform, such as Excel, to show how to build and solve simple general equilibrium models for policy analysis, it would be easy for the staff, especially those who are non-specialists, to relate to and draw policy implications from the results.

Box Article 8
Macroeconomic Analysis of Big Data: Putting Value to Volume, Velocity and Variety

The past decade saw the explosion of data that can be generated, stored and analyzed. As early as 2011 alone, around 1.8 zettabytes of data have been created, processed and even expected to double every two years.[124] This was roughly equivalent to 200 billion of high definition movies (each 120 minutes long).[125] Large quantities (large volume) of data or information, taking various forms or structures (large variety), are now easily observable in a quick or even real time manner (large degree of velocity).[126] Indeed, with the advancement of technology, big data has become more available, giving rise to the question: how can big data be used by central banks to expand the breadth of economic analysis?

The Three V's of Big Data

Before proceeding further, some basic questions need to be addressed. What exactly is big data? What distinguishes it from standard data being collected, generated, archived and used at the BSP?

The emerging consensus is that big data has any of the following features: large volume, large variety and large velocity. Big data refers to huge data sets characterized by larger volumes (by orders of magnitude) with greater variety and complexity, while being generated at a higher velocity (Intel, 2012). These three key characteristics are sometimes described as the three V's of big data.[127]

Bholat (2016), in documenting the Centre for Central Banking Studies[128] event on Big Data and Central Banking, provided a standard definition of big data as displaying one or more of the following characteristics:

a. High volume, often because data are reported on a granular basis, that is, item-by item, for example, loan-by-loan or security-by security.
b. High velocity, because these data are frequently updated and, at the limit, collected and analyzed in real-time.
c. High variety, i.e. qualitatively various, as these are either non-numeric, such as text or video, or they are extracted from novel sources, such as social media, internet search records or biometric sensors.

Structured vs. Unstructured Data

Big data can be typically classified into structured and unstructured data. Structured data is traditional in the sense that it involves a set or sets of data that can be organized into a formatted repository, typically a database, so that its elements can be made addressable for more effective processing and analysis. Structured

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[124] One zettabyte is roughly equal to a thousand exabytes (one exabyte is equivalent to 1 billion gigabytes). A zettabyte is therefore roughly equivalent to about 250 billion DVDs (Cisco, 2011).
[125] Leek, J. (2014), "What about Big Data," Johns Hopkins Bloomberg School of Public Health.
[126] Data comes in various forms aside from traditional items consisting of a combination of alphanumeric characters, i.e. in terms of texts, social media expressions, emoticons, street views, jobs and wage, among others.
[127] For some, big data is referred broadly to include not only the three V's but four V's: Volume, Variety, Velocity and "Veracity" (BIS, 2015; IBM, 2013). With the extended definition, the fourth "V" for "Veracity" expresses the issue on uncertainty about and the quality of data sources involved in observing big data. In any case, the big data concept encompasses a variety of large-scale, raw information that has to be processed to make sense. From this perspective, one may wish to speak of "smart data" instead of "big data" (IBM, 2013). Meanwhile, the International Monetary Fund (IMF) further expanded these V's of big data by adding "Volatility" as the fifth "V". Volatility refers to changing technology or business environments in which big data are produced, which could lead to invalid analyses and results, as well as to fragility in big data as a data source (Hammer et al., 2017).
[128] Center for Central Banking Studies of the Bank of England.

data differs with unstructured data because the latter is more or less not formatted and not readily subject to processing.

Examples of structured data include those that conform to traditional business systems with processes and procedures predefined by the systems owners themselves (such as the BSP). For the BSP, raw survey data of prices of goods and economic time series (usually high frequency) gathered from the financial markets are examples of sources of structured data. In all cases, the data are stored in a well-formatted way (typically and organically by rows and columns).

As opposed to traditional data currently used in economic analysis, unstructured big data in general cannot be stored in terms of structured or traditional formats (e.g. in rows vis-à-vis columns) unless significant amount of information is removed from raw data. Operationally, data that is not structured cannot be placed in a standard database management system. Unstructured data "tends to be in many cases human-generated and people-oriented content that does not fit neatly into database tables".[129] Aside from volume and real-time availability, major features of unstructured data include:

a. being heterogeneous and variable in nature or format, such as text, image, and video;
b. having a massive scale and growth that outpaced traditional storage and analytical solutions (Intel, 2012)[130];
c. having grown faster than structured data;
d. getting collected usually from new sources that have not been mined for some insight in the past. There is therefore value to produce transformational research that can help improve, enhance and even revolutionize the way the macroeconomy and other economic sectors are analyzed; and
e. being difficult to manage as traditional processes cannot cope with its heterogeneity and variability.

Big Data as a Tool

The availability of both structured and unstructured data has led to the production of lots of information sets, most of which tend to be new forms or types of data for possible incorporation in economic analysis (including those relating to central bank research on the macroeconomy and other sectors). Central banks like the BSP can already expect a growing use of big data sources for macroeconomic and financial stability purposes, especially in the areas of: economic forecasting (for economic indicators such as inflation, housing prices, unemployment, GDP, industrial production, retail sales, external sector developments and tourism activity), business cycle analysis (e.g. sentiment indicators, nowcasting techniques), and financial stability analysis (e.g. construction of risk indicators and assessment of investors' behaviour, identification of credit and market risk, monitoring of capital flows and operationalization of supervisory tasks) (Bholat, 2016).

Big Data Applications

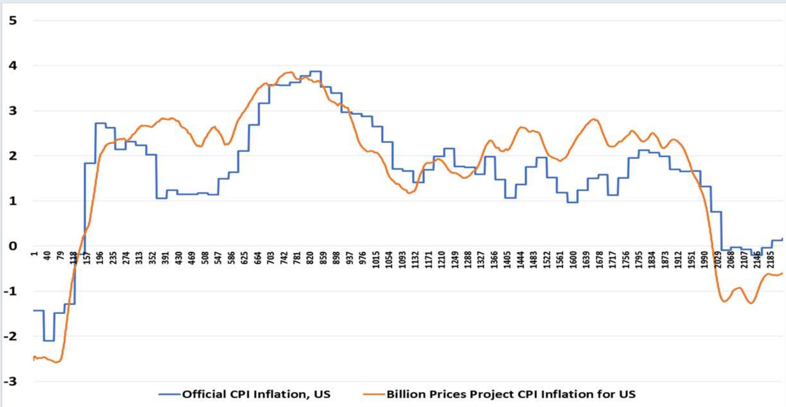
On the part of BSP researchers, putting value to big data means, for example, helping policymakers extract and make a good reading of relevant information out of revealed data. Empirical work may include estimating public expectations, economic simulations and policy evaluations to analyze monetary conditions and other macroeconomic phenomena. Ultimately, bigger volumes and variety of data should present plenty of avenues for macroeconomists to understand better the dynamics of the economy, thereby complementing the BSP's

[129] Inmon W.H., (2014) described further that data are "unstructured only if there is no rational way to explain the structure."
[130] More data has been generated in the past two years than in the entire previous history of the human race (Forbes, 2015).

current suite of models. The following examples could provide useful guide on how big data can be applied to improve the conduct of central banking.

- **The Billion Prices Project (BPP).** BPP works with online data and derives key lessons for both inflation measurement and some fundamental research questions in macro and international economics. In particular, Cavallo and Rigodon (2016) show how online prices can be used to construct daily price indices in multiple countries while avoiding measurement biases that distort evidence of price stickiness and international relative prices. The BPP techniques are examples of learning from unstructured data (online prices) that undergo a transformation process and are summarized by algorithms/mathematical formula into various indices. In order to exploit the potential of internet data to improve statistics and empirical research in economics, the BPP introduces new data-gathering techniques that make use of relevant big data.

Figure 1. Official CPI Inflation and Billion Prices Project CPI Inflation (USA, 1 July 2009 to 1 August 2015)

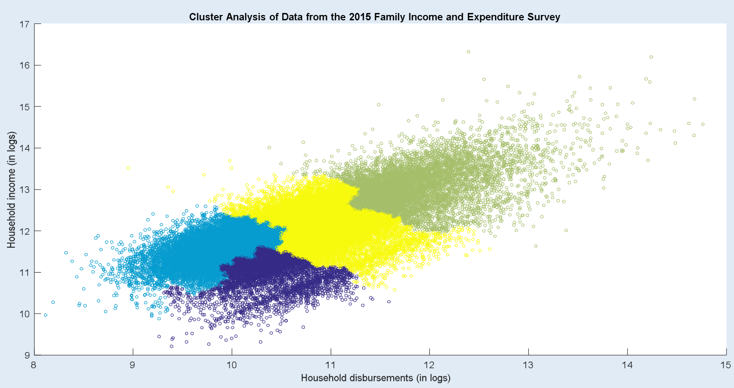


Source: Cavallo and Rigobon (2016)

The BPP's methodology consists of algorithms that use known database (including online prices as input data) to make predictions of official consumer price index (CPI) inflation as response variables (Figure 1). The use of an assumed model that makes prediction of a response variable (with inputs) is called "supervised learning." On the other hand, "unsupervised learning" is a technique that makes use of an algorithm (or sets thereof) to draw inferences from a dataset containing input data but without labeled responses.

- **Income and disbursements.** Figure 2 shows results of a cluster analysis of the 41,545 households surveyed under the Family Income and Expenditure Survey (FIES) of 2015.

Figure 2. Cluster Analysis of Income-Disbursement Gap of the 2015 FIES Data



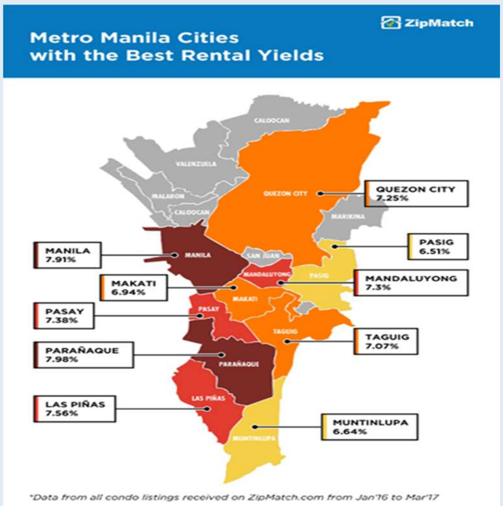
Sources: PSA, BSP

In finding natural groupings and patterns in the data, the technique employs algorithms that are objectively applied to the data.[131] The figure plots the total disbursements (expenditures) of households against total income and partitions the households into four groups. The cluster convincingly separates the households belonging to those with highest income and, as expected, with higher levels of expenditures/disbursements. Observations pertaining to so-called middle income households are plotted in yellow.

Meanwhile, the lower income households are interestingly clustered into two by the algorithm.[132] The results are useful to the extent that households in the lower bracket are naturally or algorithmically separated into those who spend within their means (plotted in light blue) and those who spend beyond their income (plotted in dark blue). Using cluster analysis, the latter households are identified without imposing a fixed threshold in the data. Policywise, the latter dark blue-dotted households are ones who require additional financial resources from: (1) overseas remittances; (2) government transfers through, for example, poverty programs; or (3) debts from either the formal or informal sectors. The third implication has direct and immediate consequences to household financing conditions and, therefore, to financial policies.[133]

- **A comparison of rental yields in Metro Manila**.[134] Philippine real property markets have made use of online platforms to reveal the price listings of various properties, at least, in big cities. ZipMatch looked at a year's worth of data from 75,000 Metro Manila properties that are for sale or for rent listed on its site.[135] The heatmap below (Figure 3) shows a comparison of Metro Manila cities' rental yields. Data shows that the Metro Manila rental investments may yield between 6.51 percent in Pasig up to 7.98 percent in Parañaque. When stored and evaluated by analysts, these types of online data sets can be useful for assessing asset price inflation.

Figure 3. Rental Yields per Cities and Municipalities



Source: ZipMatch

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[131] Cluster analysis, also called segmentation analysis or taxonomy analysis, partitions sample data into groups or clusters. Clusters are formed such that objects in the same cluster are very similar, and objects in different clusters are very distinct (www. mathworks.com). Matlab's "Statistics and Machine Learning Toolbox™"provides several clustering techniques and measures of similarity (also called distance measures) to create the clusters.
[132] The algorithm employs hierarchical cluster trees using the Ward's linkage identifier.
[133] A related subsequent research may involve answering what determines the differential between disbursements and income.
[134] *Gross Rental Yield = (Monthly Rent * 12 / Property Cost) * 100*
[135] Source: www.zipmatch.com

Going forward. The impact of big data on the wider economy may be similarly double-edged. While it might boost productivity and lower costs, it may also alter the productive structure of the real economy and wealth distribution in ways that are difficult to forecast and measure (Rifkin, 2014). Given the pace and depth of these possible changes, central banks will likely need to make further advances while taking a deep dive into data lakes in order to train and learn from big data.[136] In fact, big data is now an active area of new projects in central banks, where big data has become a fixture in policymaking, and data mining and trend forecasting tend to become popular methods for analytics (Glass, 2017).

In spite of the challenges and difficulties in handling and modeling big data, there are potential benefits to the practical application of big data to economic and financial issues. These include, for example, use of:

a. Individual credit information to predict probability of defaults (Hurley and Adebayo, 2016);
b. Google's "street views" to generate indicators of poverty in cities and regions; and
c. Supermarket scanner price data to obtain alternative measures of inflation.

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[136] A data lake is a method of storing data within a system or repository, in its natural format that facilitates the collocation of data in various schemata and structural forms, usually object blobs or files. The idea of data lake is to have a single store of all data in the enterprise ranging from raw data (which implies exact copy of source system data) to transformed data which is used for various tasks including reporting, visualization, analytics and machine learning.

Financial Stability: Proactive Supervision Promotes Stability of the Banking System

In 2017, the BSP pursued progressive and proactive prudential reforms in the Philippine banking system to support a broad-based and inclusive growth as well as to promote stability of the banking system. These reforms reinforced the holistic approach to supervision of financial institutions by the BSP which exhibited robust performance. The Philippine banking system showed double-digit growth in assets, deposits and capital backed by sufficient provisioning and adequate capital and liquidity buffers to protect the system against external shocks and uncertainties.

Progressive and Proactive Prudential Reforms. The strategic policy reforms of the BSP focused on (i) broadening access to efficient and competitive financial services and products; (ii) strengthening corporate governance and promoting financial transparency; and (iii) improving risk governance through upgrading of minimum risk management standards across critical risk areas, strengthening self-assessment capabilities and ensuring capital adequacy is in line with risk profile. Parallel to these, the BSP is committed to promote the accelerated development of capital markets, the modernization of the payment systems and the enhanced supervisory oversight on non-bank financial institutions (NBFIs). The BSP also continued to fine tune its surveillance tools to identify any incipient risks in the banking system. Toward this end, the landmark reforms adopted in 2017 include the following:

Broadening access to efficient and competitive financial products and services. The BSP continued to provide an enabling environment to support financial inclusion. To facilitate faster and more efficient onboarding of clients, banks were allowed to use third party cash agents as a cost-efficient service delivery channel, ease Know-Your-Customer (KYC) procedures for low-risk clients, and use technology for customer identification, subject to implementation of measures to manage attendant risks.

To expand banks' physical reach particularly in underserved and unbanked areas, the BSP introduced the branch-lite concept. A branch-lite unit may perform activities and provide any of the products and services that a branch offers except those that are suited to sophisticated clients with aggressive risk tolerance. The range of activities and services to be provided by the branch-lite unit should be consistent with the bank's business model in offering financial services to a targeted sector or market.

Further, to usher more credit to micro, small and medium enterprises (MSMEs), a lower 20 percent risk weight was assigned to banks' exposures to this sector that are guaranteed by eligible Credit Surety Fund (CSF) Cooperatives. This effort is expected to translate to the success of MSMEs and their communities.

Strengthening corporate governance and financial transparency. Towards strengthening governance and transparency in the financial system, the BSP remained committed in raising the bar of corporate governance. The BSP revised the governance standards for its supervised financial institutions (BSFIs) to align with the regulations of the Securities and Exchange Commission (SEC) on the Code of Corporate Governance for Publicly-Listed Companies as well as with the international standards and best practices. The amendments covered enhanced standards on the fitness and propriety and strengthened requirements on the membership composition of the board of directors, including board-level committees. The board of directors is expected to promote a culture of good governance by setting the tone at the top and ensuring that all employees adhere to the values of the corporation while collectively achieve its strategic objectives.

Moreover, the board of directors is expected to establish an effective governance process over the bank's reporting system and ensure that prudential reports submitted to the BSP are complete, accurate, consistent, reliable and timely. This should be supported by a management information system and technology infrastructure that are commensurate with the bank's level of activity and complexity of operations.

Meanwhile, in an effort to promote greater transparency, the BSP also enhanced the disclosure requirements in the annual reports of BSFIs to ensure that relevant information such as financial highlights, corporate governance and risk management systems are disclosed therein to enable the public to make informed decisions.

In upholding the integrity of the financial system, the BSP amended its Anti-Money Laundering (AML) regulations taking into account the lessons learned from money laundering/terrorist financing (ML/TF) cases, the revised implementing rules and regulations of the AML Act and the latest Financial Action Task Force (FATF) Recommendations. The revised regulations also emphasized the adoption of a proportionate, risk-based approach in managing AML-related risk so that the BSFIs could allocate more resources to areas with higher risk exposures. Further to this effort, the BSP along with other member-agencies of the Anti-Money Laundering Council (AMLC) proposed the inclusion of other potential channels or persons who may be tapped for the transfer of illicit funds. In July 2017, Republic Act No. 10927 was signed into law which included casinos as well as internet- and ship-based casinos as part of the covered persons under the AML Act.

Improving risk governance. To complement the enhancement of governance standards, the BSP defined the minimum expectations on risk governance. The framework on risk governance integrates all risk-related issuances under one umbrella. Following this, the guidelines on managing operational risks, particularly on information technology, liquidity and credit risks were also improved.

With the increasing threats in cyber space, the BSP released the guidelines on the adoption of multi-factor authentication controls and cyber security risk management framework to fortify the defenses of the banking system against cyber fraud and other security-related threats. Pioneering guidelines on social media risk management were also released to support the responsible use of social media by the BSFIs. The appropriate governance structure and the necessary safeguards were underscored in managing associated risks.

To further strengthen the liquidity position of the banking system, the BSP embarked on a four-phased program. The first phase covers the enhancement of the liquidity risk management guidelines. The revised guidelines also emphasized the management of foreign currency exposures, intragroup and intraday liquidity positions, and collateral requirements like the use of repurchase (repo) agreements. The second phase is on the amendment to the Basel III Liquidity Coverage Ratio (LCR) and the introduction of a minimum liquidity ratio requirement for stand-alone thrift, rural and cooperative banks. The scope of application of the LCR framework was expanded to include not only the universal and commercial banks (U/KBs) but also their subsidiary banks and quasi-banks (QBs). The third and fourth phases will cover the adoption of the Basel III Standards on Net Stable Funding Ratio and intraday liquidity reporting guidelines. All these liquidity requirements were aimed at ensuring that the BSFIs function smoothly during normal and stress times.

Complementary to the adoption of comprehensive credit risk management guidelines that were issued in October 2014, the BSP adopted a stringent definition of past due loans while the definition of non-performing loans (NPL) was aligned with international standards. Meanwhile, the adoption of the Philippine Financial Reporting Standards (PFRS) 9 *Financial Instruments* beginning 1 January 2018 which prescribed the use of expected credit loss model is expected to further strengthen the provisioning process of the BSFIs. Further, the BSP adopted the Basel III leverage ratio framework which will take effect on 1 July 2018. This framework is designed to curtail the potential build-up of risks from leverage in the banking system.

The effectiveness of risk management systems of the BSFIs is supported by a dynamic compliance risk management system. The BSP strengthened its compliance frameworks for the BSFIs and emphasized that the board of directors has an important role to play in establishing a responsive compliance system and that all personnel of BSFIs including the board and officers have a shared responsibility in managing business risks.

Accelerating capital market development and modernization of payment systems. The BSP together with the Department of Finance (DOF), the SEC and the Bureau of Treasury (BTr) announced in August 2017 a suite of initiatives to hasten the development of the local currency debt market. The reform agenda started with the launching of the Government Securities Repo Program (Program) in November 2017. The Program is expected to facilitate bond market liquidity by increasing trade frequency that will eventually lead to a more robust yield curve. In support of this initiative, the BSP approved the assignment of a zero percent reserve requirement on repo transactions.

Guided by the vision to increase the usage of electronic payments to 20 percent (from 1 percent) by 2020 and to develop a seamless payments and settlements highway, the BSP together with the private sector launched the National Retail Payment System (NRPS) in December 2015. Two critical milestones were achieved in 2017. These were first, the establishment and operationalization of the industry-led payment system management body, and second, the launching of the PESO Net, the first multilateral automated clearing house (ACH) under the NRPS focused on batch electronic fund transfer. Moreover, the BSP issued the principles on the adoption of the NRPS framework. It is designed to promote the inter-operability, availability, affordability, safety and accessibility of electronic payment products in the country.

Enhancing supervisory oversight on non-bank financial institutions. Recognizing the significant role of the NBFIs in promoting financial inclusion and upholding the integrity of the financial system, the BSP enhanced its supervision on the NBFIs through the issuance of comprehensive frameworks on pawnshops, money service businesses (MSBs) and virtual currency exchanges.

The new supervisory framework on pawnshops strengthened the governance and market conduct of said entities. The pawnshop operators shall be subject to enhanced fit and proper rules and the entities shall be subject to financial consumer protection standards specifically on disclosure and transparency.

Meanwhile, the new supervisory framework for MSBs which is composed of remittance transfer companies (RTCs),[137] money changers and foreign exchange dealers adopted a network-based regulatory approach since MSBs are numerous but generally interconnected. In this respect, an MSB shall be held responsible in monitoring the operations of its remittance network for compliance with relevant rules and regulations, including their accreditation with the BSP. Towards a more effective compliance with AML regulations, MSBs are likewise required to register with the AMLC for purposes of reporting covered and suspicious transactions.

The BSP also acknowledged the increasing popularity of virtual currency (VC). In this regard, guidelines covering VC entities that facilitate the conversion or exchange of any VC into fiat currency and vice versa were issued in February 2017. Under this framework, VC exchanges shall comply with the relevant AML regulations and

[137] RTCs include remittance agents, remittance platform providers, and electronic money issuers.

minimum standards on consumer protection. This framework strikes a balance between allowing financial innovation to flourish and at the same time ensuring that financial consumers are adequately protected and the country is not used for ML/TF activities.

Enhancing financial surveillance tools. The BSP continued to fine tune its surveillance tools particularly in monitoring exposures of the banking system to the real estate sector. The existing report on banks' real estate exposures was enhanced to include, among others, the segregation of banks exposures to mid- and high-end housing segments, segregation of commercial real estate loans according to the type of underlying commercial project being financed, and disclosure of real estate loans granted to overseas Filipinos and/or their beneficiaries. Moreover, banks shall now be required to submit data on project finance exposures including the type of infrastructure being financed and project phase as of reporting date. This is very relevant as the National Government pursued its "Build, Build, Build" infrastructure projects.

Strengthened Stakeholder Partnerships. The BSP is proactive in fostering stronger relationships with the banking industry, other local financial authorities and foreign counterpart regulators.

The Bank Supervision Policy Committee (BSPC) held 34 meetings with 15 industry associations in 2017. The BSPC meetings served as a venue for discussing BSFIs' issues or concerns and the BSP's forthcoming policies. The BSP's policy-making process incorporates consultative mechanisms with the industry and other relevant stakeholders. Their views and feedback are evaluated and considered in the final draft of the policy to be approved by the Monetary Board.

With the continued commitment of industry associations in furthering partnership initiatives with the BSP, the BSPC worked towards the inclusion of the "Outstanding Strategic Industry Partner of the Year" in the BSP's Stakeholder Awards Ceremony annually starting in 2017. This is in recognition of the industry association's utmost dedication and commitment in supporting the BSP's mandate and advocacies as well as in implementing innovative projects/programs that are relevant to financial stability, inclusive finance or consumer empowerment.

The BSP also played an active role at the Financial Sector Forum (FSF), which is a voluntary cooperation of local financial authorities such as the BSP, the SEC, the Insurance Commission (IC) and the Philippine Deposit Insurance Corporation (PDIC). The FSF member-agencies remained committed in pursuing reforms to empower financial consumers, to facilitate faster exchange of information through the Electronic Information Sharing framework, and to adopt common governance standards across sectors anchored on the Revised Code of Corporate Governance of the SEC for Publicly-Listed Companies.

With the coming regional integration and increasing globalization, the BSP fostered cooperative arrangements with its foreign counterpart regulators. In particular, the BSP entered into a Memorandum of Understanding (MOU) on Banking Supervision with the Bank of Thailand in December 2017. The MOU served as a solid foundation for effective supervision of banking institutions operating in both countries. A Cooperation Agreement (CA) was likewise inked between the BSP and the Monetary Authority of Singapore (MAS) to promote innovation in the financial services industry. The CA enabled the BSP and the MAS to refer capable financial technology (FinTech) firms, share emerging FinTech trends and developments, and facilitate work on FinTech projects.

Meanwhile, the BSP continued to support both Houses of Congress for the timely passage of critical legislative reforms which include, among others, the BSP Charter Amendments, Consumer Protection Act, Collective Investment Schemes, and Secrecy of Bank Deposits Law. These legislative reforms are all essential in the promotion of industry competitiveness, transparency, and integrity that altogether, support the BSP's financial stability objective. Close coordination were also accorded to other government agencies and offices for the completion of various initiatives.

Effective conduct of supervision. The BSP has been faithful in carrying out its responsibility to supervise banks and the NBFIs under its regulatory ambit. The onsite team of the BSP examined 493 banks and 36 subsidiaries and/or affiliates. On the other hand, the off-site supervision team confirmed 485 elected directors and appointed officers as well as processed 934 various licensing requests. Meanwhile, the Monetary Board approved four applications of foreign banks from Taiwan, Malaysia, Japan and Switzerland to establish branches or representative offices in the country.

With respect to supervision of NBFIs, the BSP inspected 134 entities comprised of pawnshops, MSBs, non-stock savings and loan associations (NSSLAs) and other NBFIs. The BSP has also partnered with local government units across the country to ensure that the growing number of pawnshops, foreign exchange dealers, money changers and remittance agents in their respective communities are duly registered and licensed. During the year, a total of 60 briefings and seminars on pawnshop and AML regulations were conducted by the BSP to increase awareness and compliance of pawnshops and MSBs with pertinent laws, rules and regulations.

Meanwhile, the quality of supervision of the BSFIs is continuously being improved as the BSP remained committed to invest in programs to progressively increase capacity and skill set of supervisory personnel and examiners. Various learning tools and events were made available to bank supervisors. Over time bank supervisors have already evolved into thought leaders sharing prudential insights in study visits of foreign counterpart regulators as well as in local and international fora or trainings.

Moving forward, the BSP will likewise harness the potential of technology in enhancing its supervision tools and data analytics in order to further improve the quality of financial supervision.

The effective conduct of supervision, strengthened coordination with counterpart financial regulators, and progressive implementation of prudential reforms are essential elements in supporting the sustained positive performance of the financial system.

Box Article 9

Raising the Bar on Corporate Governance of Financial Institutions

The BSP's corporate governance reform agenda constitutes establishing the fit and proper requirements for the appointment of the Board of Directors (BOD) and senior officers; raising the standards for internal control and compliance; promoting fairness, accountability and transparency in financial reporting; and strengthening the management of specific risk areas such as credit, information technology, and operational risks. To continuously improve benchmarks for the prudent operations of banks and other BSP-supervised financial institutions (BSFIs), the BSP has raised the bar on corporate governance through the following enhancements to corporate governance standards:[138]

- **Promoting board independence and accountability**. As corporate decision-makers, the BSP has always emphasized the role, accountability and responsibility of the BOD in strengthening the foundation for good governance, particularly, the board's ability to exercise objective judgment and establish a strong system for checks and balances within the bank or financial institution. The BSP's recent regulatory issuance (Circular No. 969 dated 22 August 2017) sets out enhanced requirements on the membership composition of the board. This is to ensure that the board is comprised of a collective mix of individuals who possess the expertise and competence to effectively manage the financial institution. The revised guidelines also aim to promote an environment that fosters critical exchange of views and exercise of objective judgment through the appointment of independent directors, as well as the creation of independent units of risk management, internal control and compliance within the organization.

  The enhanced policy requires non-executive directors, who shall include independent directors, to comprise majority of the board. Moreover, the prescribed number of independent directors was increased from 20 percent to one-third of the members of the board, or two directors, whichever is higher. On the other hand, consistent with the proportionality principle, the Monetary Board retained the existing requirement for simple rural banks to have only one independent director. The policy further provides that an independent director may only serve as such for a maximum cumulative term of nine years and that a non-executive director may concurrently serve as director in a maximum of five publicly listed companies (5-2-5 rule). To promote independence of the board from senior management, the positions of Chairperson and Chief Executive Officer (CEO) shall not be held by one person. In exceptional cases when the Chairperson and the CEO is held by one person as approved by the Monetary Board, a lead independent director shall be appointed. This is to distinguish policymaking from the executive function.

  Under the revised governance framework, the members of the board are expected to adopt policies and display practices that maintain the appropriate balance between rewarding effective and efficient performance and upholding consistent adherence with the corporate values of the organization. As part of its duties and responsibilities, the board shall be accountable for: (1) shaping the corporate culture and values; (2) setting out objectives and strategies, including risk management oversight; (3) appointing key members of senior management and control functions; (4) overseeing the corporate governance framework; and (5) adopting a robust risk governance framework.

[138] cf: "BSP Raises Bar on Corporate Governance". Press release dated 22 August 2017; Circular No. 969 issued on 22 August 2017 which approved the amendments to the corporate governance guidelines for BSFIs and further raising the bar set by the BSP with respect to expectations from the BOD and senior officers as well as the effectiveness of risk management systems of its BSFIs.

- **Strengthening the risk governance framework.**[139] The enhanced corporate governance standards also define the supervisory expectations and minimum prudential requirements on risk governance. The policy provides a framework for risk governance that integrates the principles set out in other risk-related issuances of the BSP under one umbrella. It also covers principles on risk data aggregation and risk reporting. The risk governance framework shall consider the entities in the conglomerate and shall be applied on a group-wide basis.

- **Adopting a more dynamic and responsive compliance system.**[140] The BSP likewise approved the enhanced guidelines to establish a more dynamic and responsive compliance risk management system. The compliance risk management system shall be designed to specifically identify and mitigate risks that may erode the franchise value of the BSFI such as risks of legal or regulatory sanctions, material financial loss, or loss to reputation a BSFI may suffer as a result of its failure to comply with laws, rules, related self-regulatory organization standards, or codes of conduct applicable to its activities. Compliance risk management should be an integral part of the culture and risk governance framework of the BSFI. The board down to the officers and personnel shall all be accountable for the effective implementation of the BSFI's risk governance and compliance framework. Here, the roles of the Chief Risk Officer (CRO) and the Chief Compliance Officer (CCO) are also critical in promoting the formal authority and independence of the risk management and compliance function.

- **Strengthening liquidity risk management**.[141] The BSP also issued revised guidelines on liquidity risk management for banks and quasi-banks. The guidelines emphasize the responsibility of the board to clearly define the tolerance for liquidity risk in a manner that can easily be communicated and understood by personnel. Meanwhile, senior management is responsible for developing funding strategies that are aligned with the set risk tolerance. While the BSP expects all covered supervised institutions to identify, measure, monitor, and control liquidity risk, the guidelines recognize that approaches of simple and complex banks on liquidity risk management vary. Complex institutions, however, are expected to employ dynamic approaches that factor in the future changes in their activities and the impact of these changes on their balance sheets. Key provisions in the guidelines will have significant bearing on complex banks and quasi-banks, such as those on foreign currency management, intraday liquidity management, intragroup liquidity management, collateral management, and stress testing and contingency funding plans.

The enhanced corporate governance standards are aimed at promoting prudence and greater accountability among industry players. It is viewed that this BSP initiative will reinforce market discipline at the institutional level as well as promote overall resilience and soundness of BSFIs.

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[139] Circular No. 971 dated 22 August 2017 approved the adoption of a robust risk governance framework that shall include policies, supported by appropriate processes and control procedures, designed to ensure that the risk identification, aggregation, mitigation and monitoring capabilities are commensurate with the BSFI's size, complexity, risk profile, and systemic importance. The risk governance framework shall consider the entities in the conglomerate and shall be applied on a group-wide scale. Section X174/4174Q of the MORB/MORNBFI on Risk Management Function is renamed as Risk Governance Framework.
[140] Circular No. 972 dated 22 August 2017 approved the revisions to compliance frameworks in BSFIs amending relevant provisions of the MORB/MORNBFI.
[141] "BSP Strengthens Liquidity Risk Management Guidelines". Press release dated 30 October 2017; Circular No. 981 dated 3 November 2017

Box Article 10

Streamlining Supervisory Functions Using Innovative Technology

The banking and financial services industry continues to evolve. Alongside this, the use of innovative technology has become an integral part of its growth and development. The integration of finance and technology has revolutionized the delivery of financial services, leading to a speedier, more efficient and more convenient access to core financial products and services. On the downside, the financial technology (FinTech) phenomenon continues to raise concerns about data privacy usage and distribution as FinTech companies rely on consumer data to produce digital products. Fintech products and services are susceptible to cyber threats, money laundering, and other fraudulent activities. This has become a major challenge in terms of regulation and supervision. As a result, regulatory technology (RegTech) has emerged as an important technological solution with the potential to address regulatory challenges in the financial services sector.

RegTech uses technology to help businesses comply with regulations efficiently and inexpensively. Regtech operates in various spheres of the financial and regulatory space. A number of projects that RegTech automates include employee surveillance, compliance data management, fraud prevention, and audit trail capabilities.[142] Regtech companies work in collaboration with financial institutions and regulatory bodies, and utilize cloud computing, as well as big data, for sharing of information.

Adopting RegTech to Enhance Reporting Process

The BSP recognizes the role and impact of innovative technology and data analytics in the future of financial regulation, supervision, and policymaking. As a policy, the BSP has maintained a flexible stance when it comes to responding to innovation, balancing between the benefits of technology and being mindful of the safety and integrity of the banking system.

A RegTech approach has the potential to reduce the cost of compliance for supervised financial institutions and increase consumer trust and participation in the financial system. The BSP is exploring RegTech solutions mainly to streamline supervisory functions, particularly in terms of addressing regulatory compliance and reporting of its supervised financial institutions.

The RegTech for Regulators Accelerators (R2A) Project,[143] or simply R2A, is a pioneering project that provides technical assistance for financial sector regulators,[144] such as the BSP, to develop and test the next generation of digital supervision tools and techniques (commonly referred to as RegTech solutions). In February 2017, the BSP, together with Bankable Frontier Associates (BFA) Global[145] and the R2A Project Steering Committee, signed the Project Charter which binds all parties to observe all applicable laws, rules and regulations, and secure appropriate consents and approvals necessary to acquire, use and share all data and information in the course of implementing R2A. The Project Charter is supported by mutually-agreed work plans.

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[142] KPMG (April 2017). The nexus between regulation and technology. KPMG, LLP: Delaware

[143] R2A is fully funded by the United States Agency for International Development (USAID), Bill and Melinda Gates Foundation (BMGF), and Omidyar Network. The Rockefeller Philanthropy Advisors acts as fiscal sponsor. The Philippines is one among only four regulators around the world targeted by donors as R2A partners.

[144] R2A provides participating regulators with (a) technical specialists with expertise in financial regulation, supervision and fintechs that foster financial inclusion; (b) a local project manager to ensure effective implementation and coordination of R2A activities; (c) peer learning opportunities; and (d) financial resources to contract innovators and relevant service providers to develop RegTech solutions.

[145] BFA Global manages the implementation of R2A in the Philippines. BFA Global is an international consulting firm renowned for its expertise in financial inclusion policy development and digital financial services, among others.

R2A consists of three phases: (1) assessment of regulatory needs and prioritizing one focus area; (2) identification of potential RegTech solutions on this focus area; and (3) engagement of private sector innovators to design and test solutions that meet the priority regulatory need. The first two phases of R2A were jointly conducted by the BSP and BFA Global in November 2016 and involved a series of scoping visits, key informant interviews, and conversations with local FinTech companies. Based on the assessment made during this phase, the BSP began prototyping an API-based solution[146] and data warehouse that can make regulatory reporting more efficient and timely, and lower the cost of compliance.

Under the third phase of the project which began in July 2017, the BSP and BFA have engaged the assistance of private sector innovators to design and test a prototype API and clearing house to: (a) allow financial institutions to submit data digitally and automatically to the BSP and (b) enable BSP staff to generate customized, higher-quality reports that would be more meaningful for supervisory analysis and policy development.[147] Once the API is tested, the focus can shift from data acquisition to data analytics and visualization, where the vendor[148] will assess BSP's needs, and develop mechanisms for extracting reports in various formats. The R2A project will deliver a prototype rather than a fully-complete product at the end of the R2A project on May 2018. The BSP will then make the decision whether to adopt the prototype and make additional investments to fully flesh-out the solution to all BSP-supervised financial institutions.

Meanwhile, the BSP is also studying the possibility of using "chatbots" to collate consumer complaints. Complaints received from the public consist of a mass of unstructured data. The difficulty of evaluating unstructured data may be resolved by using artificial intelligence (AI) or chatbots. Some banks are already looking at investing in AI to augment customer service, streamline backroom processes, and boost internet banking capabilities.

Enhancing the Supervisory Framework to Manage Technology and Cybersecurity Risks

Amid the evolving technological landscape, the BSP is continuously enhancing its supervisory framework to ensure the safety and integrity of the banking system and the protection of consumers. Toward this end, the BSP has taken a proactive stance in implementing guidelines[149] and policies that focus on managing risks associated with the use of Fintech. The BSP has also formed a unit[150] dedicated to studying cybersecurity threats with the aim of enhancing regulatory policy framework and institutionalizing cybersecurity due diligence within the financial industry. Initiatives are also underway to develop a cybersecurity risk management framework which shall include the conduct of cybersecurity self-assessments and BSP cyber-examination. The framework shall consist of standards and best practices to prevent, detect, respond to, and recover from cyber-attacks.

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[146] Application Program Interface (API), a set of routines, protocols, and tools for building software applications and specifying how software components should interact.

[147] During API prototype development and testing, the BSP and BFA project teams, together with an innovator/vendor, will only work with 2 financial institutions selected by the BSP and willing to participate in the project. Data will only cover a small subset of required supervisory reports. Any data being submitted via the API will only be a sample data. Real data will only be introduced to the system once proper security protocols are in place. Testing on real institutional data from the participating financial institutions can begin once all parties are satisfied with the prototype development.

[148] The BSP and BFA will engage the services of a vendor, preferably from the local tech community, with the capability, experience, knowledge and resources to build the prototype. This vendor will be selected through a competitive process in the form of Request for Proposals (RFP), preceded by Expressions of Interest (EOI).

[149] Comprehensive IT risk management regulatory framework (Circular No. 808 dated 22 August 2013) provides BSFIs guidance in managing the risks associated with the use of technology; Guidelines for virtual currency exchanges (Circular No. 944 dated 06 February 2017) which aim to proactively address emerging risks to the banking system arising out of these new technologies; Guidelines on social media risk management (Circular No. 949 dated 15 March 2017) which advocate responsible use of social media by BSFIs; Guidelines on business continuity management (Circular No. 951 dated 20 March 2017) which incorporates cyber-resilience so that supervised institutions adequately capture the potential impact of cyber events in their business continuity planning process; Adoption of multi-factor authentication techniques for high-risk transactions and/or sensitive communications such as enrolment in transactional e-services, payments and fund transfers to third parties, online remittance, account maintenance and use of payment cards in e-commerce websites, among others.

[150] Cybersecurity Oversight and Surveillance Staff (CSOS)

Moving forward, the BSP will continue to monitor developments in the realm of technology with the view of maintaining the safety and integrity of the banking system and at the same time, upholding public trust and confidence.

Payments and Settlements System: *PhilPaSS* remains safe and efficient

The BSP as operator of the Philippine Payments and Settlements System (*PhilPaSS*) continued to provide safe and uninterruptible system for the settlement of financial transactions in real time.

In 2017, the number of transactions processed and settled via *PhilPaSS* reached about ₱1.9 million or 16.8 percent higher compared to 2016 due mainly to OF remittances via PhilPaSS REMIT, banks' Monetary Operations System (MOS) transactions with the BSP, interbank fund transfers, and interbank customer payments. However, the equivalent value of transactions that settled through the system was recorded at ₱267.5 trillion or 43.0 percent lower compared to the previous year's value.

The *PhilPaSS'* total transaction revenue in 2017 reached ₱142.6 million or 0.6 percent lower than the year-ago level. The decline was caused by lower inquiry fees collected since the operationalization of the *PhilPaSS* Participant Browser in October 2014, which provides free online access to real time DDA balances.

The BSP, through the Payments and Settlements Office (PSO), has also actively engaged in various projects, activities, and initiatives in 2017 to enhance the efficiency of the existing payments system and compliance in international standards, which included the following:

Initiated the formation of Payments Market Practice Group in the Philippines. In June 2017, in connection with the planned migration of *PhilPaSS* to ISO 20022, the PSO, created the Philippines 1st Payments Market Practice Group (PMPG) in coordination with the banking industry and SWIFT. The PMPG is a global forum that fosters collaboration to drive common market practices, which together with the correct use of standards will help in achieving straight through processing (STP) and improved customer service. Its mission is to take stock of payments market practices in the Philippines; discuss, explain/document issues and recommend best market practices, covering end-to-end transactions in the payments business area.

Initiated the formation of the World Bank Greenback 2.0 Project in the BSP. PSO spearheaded the formation of the Greenback 2.0 Project in partnership with the World Bank (WB) who will provide the necessary technical assistance in the implementation of Greenback 2.0 Project similar to the one implemented in Johor Bahru, Malaysia and Turin, Italy. The objective of the Greenback 2.0 Project is to improve the remittance systems and services in the Philippines and to enhance the impact of these remittances on financial inclusion through innovative approaches and methodologies by leveraging on the lessons learned from Malaysia and Italy.

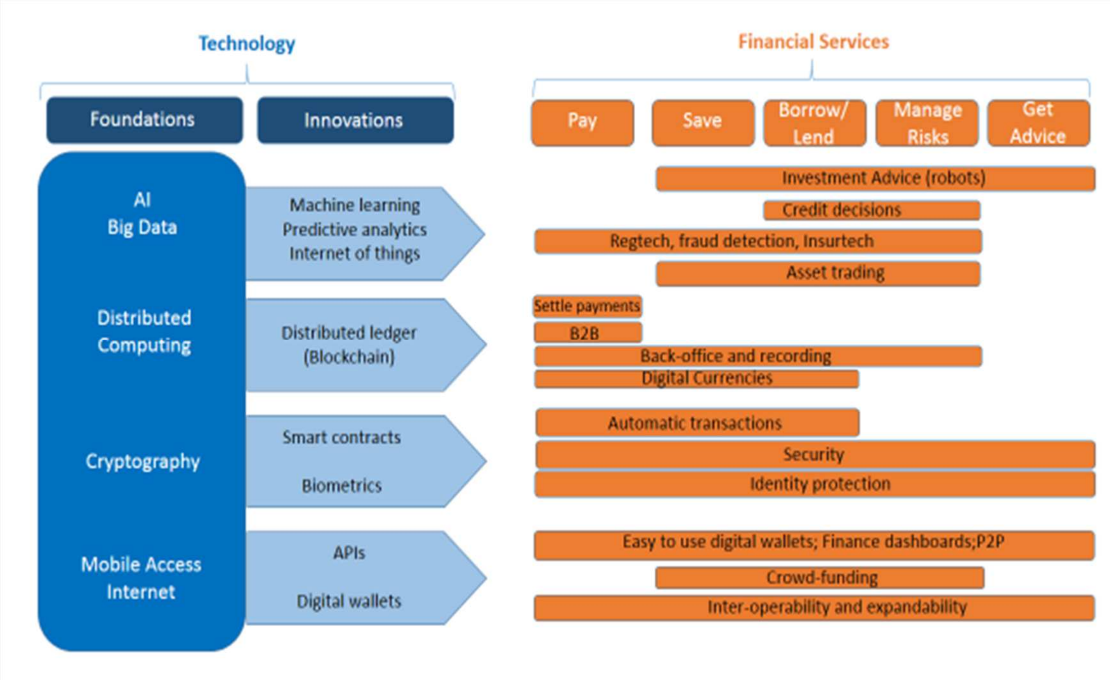
Encouraged more banks to participate in PhilPaSS. *PhilPaSS* One-Stop-Shop activities were conducted for the Rural Bankers Chamber of Oriental Mindoro and for the Federation of Rural Banks Central Luzon to encourage participation of rural banks in *PhilPaSS* as well as in the National Retail Payment System.

Involved stakeholders in policy formulation. Two forums were held in 2017 to update *PhilPaSS* participants on the developments in *PhilPaSS* settlement operations as well as trends in payments and settlements.

Box Article 11
Fintech Developments in the Philippines

Fintech (financial technology) refers to the integration of finance and technology in a manner that drives the transformation or disruption of the traditional processes in financial service delivery.[151] In this light, it is useful to classify Fintech developments by the main existing financial services they provide.

Figure 1. Major Technologies Transforming Financial Services



Sources: IMF, BSP
Abbreviations: APIs (Application Programming Interfaces); B2B (Business-to-Business Market); Insurtech -refers to the use of technology innovations designed to squeeze out savings and efficiency from the current insurance industry model.

In the payments space, for example, mobile and web-based payment platforms, such as Alipay, Apple Pay, and PayPal offer end users the ability to pay for goods and services online or through handheld devices, potentially providing the ability to reduce transaction costs relative to more traditional payment methods.[152] Digital currencies, such as Bitcoin and Litecoin, aim to be used for similar purposes by households and firms to pay for real economic transactions.[153] Loans can also be granted in digital currencies. Crowdfunding, meanwhile, connects investors to borrowers (or, for equity, issuers) through an internet-based platform; this can be seen as a means to pool funds and streamline the sharing of information outside traditional financial intermediaries, although the degree of effectiveness in this regard may vary across platforms.[154] Across a range of economic functions, financial institutions are investigating applications of Distributed Ledger Technology (DLT) for cross-border interbank payments, credit provision, capital raising and for digital clearing

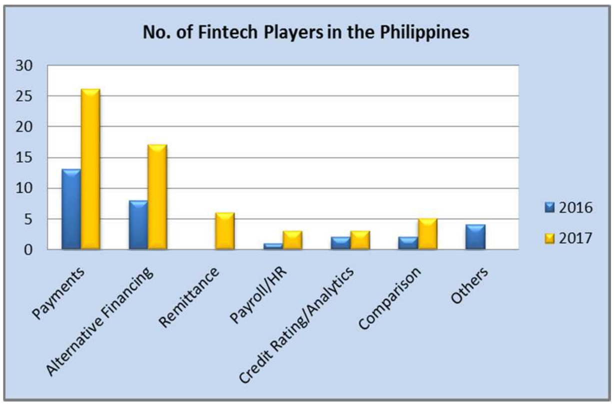
[151] The Financial Stability Board (FSB) defines Fintech as technology-enabled financial innovation that could result in new business models, applications, process or products with an associated material effect on financial markets and institutions and the provision of financial services.
[152] Deloitte (2014), "Digital Transaction Banking: Opportunities & Challenges."
[153] Digital currencies include private currencies, such as Bitcoin, Ethereum, Ripple and Litecoin, and digital versions of national bank currencies. Because of the use of cryptography techniques, a (large) subset of digital currencies are referred to as "cryptocurrencies."
[154] Equity and loan crowdfunding is the practice of funding a project or venture by raising monetary contributions from a large number of people. It is often performed today via internet-mediated registries that facilitate the money collection for the borrower (lending) or issuer (equity).

and settlement.[155] The potential gains for customers may be substantial; in the area of remittances, for example, transaction costs for sending US$200 currently average 7.4 percent globally.[156] The ability to transfer and to record the ownership of digital assets and immutably store information are considered advantages of the technology that may help reduce information asymmetries.[157] Digital identity verification brings similar potential advantages in terms of information security, and further reduction of transaction costs.

In the Philippines, fintech services are mostly dominated by e-money services (Globe Cash and Smart Money) and payment services (such as Dragonpay, Paymaya, and Mynt) while others are focused on remittance (MyRemitHub) and lending (LoanSolutions.ph) services. Other firms are also utilizing bitcoin and blockchain technology such as Rebit (a bitcoin remittance service), BuyBitcoin.ph (a platform to sell and buy bitcoins), and Bitmarket.ph (the first bitcoin payment processor in the country with nearly 100 merchants).

Fintech startups in the Philippines mainly comprise of mobile payments and alternative finance, with 26 and 17 players, respectively. Currently, there are 60 fintech startups in the Philippines. The transaction value in the fintech market is estimated to amount to $5.5 million in 2017. It is expected to grow annually at a rate of 19.0 percent, amounting to $11.0 million in 2021. There is much potential for further growth of the fintech industry in the Philippines.[158]

Figure 2. Fintech Players in the Philippines



Fintech Sectors (as of 2017)	No. of Services	As percent of total (%)
Payments	26	43
Alternative Financing	17	28
Remittance	6	10
Payroll/HR	3	5
Credit Rating/Analytics	3	5
Comparison	5	8
TOTAL	60	100

Source: BSP

Potential Benefits and Risks from Fintech

Rapid technological innovations have allowed for lower costs of transactions, greater accessibility to funds and increased speed, efficiency, and convenience in value transfers and payments. With the elimination of the middle-men, lenders and borrowers have more direct and immediate access to one another. With the accessibility provided by mobile phones, fintech platforms promote financial inclusion.

Moreover, by directly linking lenders with borrowers, alternative lending platforms avoid mismatched maturities which may lead to more stable credit environment. Also, with more fintech innovators entering the

[155] Distributed ledger technology (DLT) is a means of saving information through a distributed ledger, i.e. a repeated digital copy of data at multiple locations, as in a blockchain.
[156] World Bank (2016), "Remittances Prices Worldwide," Issue 20, December.
[157] David Mills, Kathy Wang, Brendan Malone, Anjana Ravi, Jeff Marquardt, Clinton Chen, Anton Badev, Timothy Brezinski, Linda Fahy, Kimberley Liao, Vanessa Kargenian, Max Ellithorpe, Wendy Ng, and Maria Baird (2016), "Distributed ledger technology in payments, clearing, and settlement," Finance and Economics Discussion Series 2016-095. Washington: Board of Governors of the Federal Reserve System.
[158] Konig, C. (2017). Philippines FinTech Startup Report 2017. Retrieved from https://www.slideshare.net/MauriceGonzales/sector-study-of-financial-technology-in-the-philippines-64733032

market, there would be fewer systemically important banking entities.[159]

However, these same platforms that simplify and facilitate transactions also present risks, the more immediate of which are the risks to consumers. Most of these fintech startups are outside the regulatory reach of monetary and financial authorities and there may not be defined rights and obligations for the parties involved. There is no protection for the public who avail of these services.

Also, there is the possibility of fraud, and possibly loss of funds with the lack of transparency and specially for alternative lending, the non-requirement of collateral. A breakdown in the platform may likewise lead to the loss of data. There is also the concern that the ease of use of the fintech platforms together with their opacity may allow for the use for money laundering and terrorism financing.

In the longer run, with the widespread use of fintech services, there may be greater risks on financial stability. With a wider usage, the risks would not be limited to the users of the services but may spread and affect the formal financial system.

Hence, it is imperative for the regulators to have a balanced approach to risks and growth by keeping pace with the latest developments in the financial markets, addressing consumer protection issues and managing financial stability risks while promoting innovation and healthy competition.

BSP's Policy Direction: Balanced approach towards innovation

Central banks have been developing regulatory approaches for fintech innovations. Most central banks have placed "regulatory sandboxes." Sandboxes allow firms to test new technologies and business models in a controlled environment, and enable regulators to address the potential risks of new technologies without stifling innovation. Sandboxes have been developed by regulators and supervisors in a few jurisdictions (including Hong Kong, Malaysia, and Singapore) to provide a controlled and contained environment in which firms can conduct pilot trials of innovative financial services and products in a timely and cost-effective manner before these are launched on a larger-scale. The sandbox approach aims to strike a balance between promoting innovation by lowering barriers to testing innovative financial products and services while at the same time ensuring that adequate safeguards are in place to mitigate risks (particularly technology and money laundering/terrorist financing) and protect consumers.

The BSP continuously monitors developments in fintech in order to develop a balanced regulatory approach which is anchored on three pillars: (1) risk-based and proportionate regulation; (2) active multi-stakeholder collaboration; and (3) consumer protection.[160] These principles are pragmatically implemented through the BSP's flexible "test and learn" approach to financial innovations, also referred to as "regulatory sandbox" which provides an opportunity for innovators to connect to banks and other financial system players with clear authority from the regulators. The ultimate objective is to be aware of the risks, employ mitigating actions as needed, but in a manner that also allows benefits, leveraging on these new technologies.

The BSP is also on constant surveillance mode for other fintech activities by emerging market players. For example, the BSP monitors industry developments on crowd-funding and peer-to-peer lending. While crowd-

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[159] Watson (2016)

[160] The BSP has in fact issued Circular No. 944 dated 6 February 2017 governing the operations of virtual currency exchanges in the Philippines. This is a "pioneering" regulatory issuance that sets the stage for mixing regulation, transparency, data requirements, with innovation and stability of process.

funding has potential to expand financial access for new businesses and MSMEs, there is also heightened risk of investor and consumer abuse.

The BSP is working with the industry to define the National Retail Payment System (NRPS) – a policy and regulatory framework that aims to establish a safe, reliable and affordable retail payments system in the country. Critical milestones had been achieved in 2017 since the launch of the NRPS in 2015, including the establishment of a payment system management body, now incorporated as Philippine Payments Management, Inc. (PPMI), and the formation of two priority ACHs,[161] the Batch Credit Push EFT (PesoNet)[162] and the Real-time EFT Credit (InstaPay), which represent payment streams that could potentially contribute to the shift from a cash-heavy economy to more payments being made through electronic delivery channels and platforms. The core goal is to enable consumers to make payments and transfer funds from any account to any account using any digital device. The NRPS, and the payment ecosystem that is envisioned to arise from it, is positioned to be a platform for fintech innovations. Industry players can utilize fintech solutions and provide services within an organized, commercially-viable and efficient retail payment system.

Lastly, the BSP entered into a fintech collaboration agreement with the Monetary Authority of Singapore (MAS) covering information sharing and referral system specifically focused on fintechs. Under the agreement, both authorities will facilitate the entry of potential fintech players from either jurisdiction to minimize duplication of efforts and further promote expansion of fintech innovations. The BSP and the MAS forged the Fintech Cooperation Agreement in November 2017.

[161] Simply put, ACHs (Automated Clearing Houses) are multilateral agreements among payment system participants governing their clearing and settlement activities. It should be emphasized that an ACH is neither an infrastructure nor a physical network.
[162] PesoNet was launched on 8 November 2017.

How We Performed in 2017: Operations, Advocacies, and Financial Results

Currency Operations

Demonetization of New Design Series (NDS) Banknotes. To preserve the integrity of Philippine bank notes, the BSP launched the New Generation Currency (NGC) in 2010. The NGC series contains new design and security features for all the denominations of the bank notes. Alongside the introduction of the NGC, the BSP set a timeline for the demonetization of the old bank note series (NDS). The provisions of Section 57 of the R.A. No. 7653 (or the Central Bank Act) authorize the BSP to replace or demonetize banknotes that are more than five years old.[111] The old banknotes have been in circulation for more than three decades.

Under the original timeline, all NDS banknotes would no longer be acceptable as payment for any transaction by 1 January 2016 but could still be exchanged at face value, free of charge, at any authorized agent bank (AAB), the BSP-Cash Department, or any of the BSP's regional offices (ROs) and branches initially until 31 December 2016.[112]

To give the general public ample time to exchange the old banknote series and to ensure the orderly transition to the NGC banknote series, the BSP extended the deadline to 31 March 2017 and then again to 30 June 2017. The final and non-extendable deadline was set to 29 December 2017.

[111]Demonetization is the process of removing the monetary value of the legal tender currency by the issuing authority.
[112]BSP Circular No. 863, pursuant to BSP Circular No. 935 dated 28 December 2016, was issued on 29 December 2014 which contains the provisions on the replacement and demonetization of NDS banknotes.

Online registration of NDS holdings of OFs, Filipino immigrants and non-residents. The Online Registration of NDS Banknotes System (ORBS)[113] was operationalized on 1 October 2016. The registered NDS banknotes shall be submitted for exchange with NGC banknotes within one year from date of registration at any of the BSP Offices. In the case of OFs located in countries experiencing geopolitical crisis during the registration period (i.e., 1 October 2016 to 31 December 2016), they were allowed to avail the BSP exchange facility for OFs until 31 December 2017 without registration.

As of 31 December 2016, a total of 2,318 OFs, Filipino immigrants and non-residents registered their NDS holdings amounting to ₱26.3 million in the ORBS.

BSP Communication Program on Currency-related Advocacies. The BSP utilized various communication platforms in conducting a nationwide information campaign on the NDS demonetization and other currency-related advocacies. In 2017, the Composite Communication Team accomplished the following:

- *Printed Materials and Promotional Items* – Various posters, primers, brochures and other promotional items were distributed by the BSP nationwide.

- *Media Channels* – A dedicated portal on the NDS demonetization and NGC banknotes was integrated in the BSP website, which include

[113]Pursuant to BSP Circular No. 910, dated 22 April 2016, and Monetary Board Resolution No. 1967 dated 3 November 2016 on the online registration for OFs working living/abroad, Filipino immigrants and non-residents.

posters in various languages and dialects (English, Filipino, Ilocano, Cebuano and Bicolano), the NDS demonetization schedule, Frequently Asked Questions (FAQs), and an interactive NGC brochure. Relevant details were likewise repeatedly disseminated through various media outlets such as newspapers, radio, and television, as well as through text blasts by different partner-networks for the past three years.

- *Face-to-Face Engagements* – A total of 182 public information campaigns (PICs) on the BSP's currency-related programs and policies were conducted nationwide in 2017. An intensified PIC roadmap was rolled out during the year, covering the conduct of (a) 39 regular in-house Know Your Money (KYM) and counterfeit detection briefings every second, third, and fourth Tuesdays of the month; (b) 113 special sessions on counterfeit detection of the Philippine Peso and foreign currencies as requested by various stakeholders; (c) 26 regional KYM briefings for representatives of transport groups, market vendors, and cash handlers from supermarket/retail stores, Office of Municipal/City Treasurers, credit institutions, and cooperatives; (d) two Training of Trainers intended for senior staff/officers from banks, credit institutions, cooperatives, and supermarket chains in the regions; and (e) two Currency Management Briefings that cover an overview of the cash cycle in the Philippines, currency forecasting, and a refresher briefing on the handling and processing of mutilated and doubtful banknotes and coins.

  The participants of the abovementioned PICs gave an average rating of 4.9 using a five-point rating scale, i.e., 1-strongly disagree to 5-strongly agree, for the following criteria: program module, duration, venue, resource person and training materials.

- *Pro-Active Presence in Mass Media* – For 2017, the Currency Issue and Integrity Office (CIIO) of the BSP provided 21 interviews on currency related matters, various print media and television/radio programs.

Status of NDS banknotes in Circulation. The communication program on the NDS demonetization by the BSP's Composite Communication Team helped reduce the volume of NDS banknotes in circulation. As of 31 December 2017, the volume of NDS banknotes in circulation constituted 6.2 percent (equivalent to 263.2 million pieces) of the total volume of banknotes in circulation (BIC). In value terms, 0.9 percent (₱11.6 billion) of the ₱1,246.6 billion BIC are NDS banknotes. When the demonetization process was announced by the BSP in December 2014, 21 percent (equivalent to 711.7 million pieces) of the volume of BIC were NDS banknotes. In value terms, NDS banknotes represented 20.4 percent (₱184.3 billion) of the total BIC for the same period.

Approximately 449 million pieces or 63 percent of the 711.7 million pieces of the total volume of NDS banknotes as of end-December 2014 were withdrawn from the system from January 2015 to end-December 2017. In value terms, the NDS banknotes exchanged with the BSP amounted to ₱172.6 billion or 94 percent of the ₱184.3 billion NDS banknotes in circulation as of end-December 2014.

Moreover, the campaign on the demonetization of the NDS banknotes was selected as one of the three finalists under the category of Best Communications Program in the 2017 Excellence in Currency Award of the International Association of Currency Affairs (IACA), wherein 17 projects of various central banks/institutions were nominated in the abovementioned category. The top three finalists per category in IACA's Excellence in Currency Award were honored during the Currency Conference in Kuala Lumpur, Malaysia, on 15 May 2017.

International Reserves Management

The BSP remained vigilant in the face of world developments that may impact the GIR and, thus, continue to search for opportunities that will increase the return on and diversify the risk of its reserves. In 2017, the BSP, under the stewardship of its Investment Management Committee (IMC), implemented portfolio strategies to generate returns from its international assets while observing guidelines approved by the Monetary Board. The BSP continued to implement measures aimed at ensuring the safety and diversification of the BSP's international assets.

Key strategies and measures during the year include the continued investment in the hold-to-maturity portfolio as well as the active management of the internally-managed portfolio (IMP). The IMP outperformed its benchmark. Also, the absolute value of the externally-managed portfolio (EMP) increased as interest earned more than compensated for the loss in capital due to rising bond yields in global markets. As a result of the combined active management strategies of the external fund managers (EFMs), the EMP tracked the performance of the benchmark on a relative basis. This was contrary to the flat performance of the internally- and externally-managed portfolios (IMP and EMP) relative to their benchmarks in 2016.

The BSP continued to manage the country's gold reserves in compliance with existing management guidelines. Total gold reserves of the Bank as of end-2017 stood at AU6.313 million fine troy ounces (FTO), which is slightly higher than the AU6.312 million FTO registered as of end-2016. While there were no spot gold transactions during the year, the BSP continued to generate premium collections from gold call and put options trading and earned interest income from gold deposits with accredited counterparties.

Key policies and strategies adopted in the past decade. With the GIR increasing since the Asian Financial Crisis in 1997, the BSP saw the need for changes in the way it manages its reserves. The growing reserves level required increased focus on governance, risk management, and yield enhancement, especially as the domestic economic conditions improved after 2005. Thus, as early as 2006, the BSP had already embarked on various projects to strengthen its reserve management. The BSP moved towards evaluating the performance of the internally-managed portion of the GIR, the IMP, through a benchmark.

The BSP also adopted the relevant provisions of the International Accounting Standards (IAS) to improve the transparency and quality of the BSP's financial statements. In particular, the adoption of IAS39 resulted in the reclassification of most securities held by the BSP as Available for Sale, which have to be reported at market or fair values instead of amortized cost.[114] In addition, the BSP started a project to implement a risk management system that would allow for a more efficient management of the GIR through systematic risk identification, measurement, monitoring, and control. Further, the BSP took advantage of the opportunities to reduce interest expense by prepaying foreign loans, including the borrowings from the IMF's extended fund facility. Such payment has sent a clear signal to the international community that the structural reform process and macroeconomic prudence in the Philippines have firmly taken root to allow reduced dependence on external financing.

Since then, the BSP has continued to improve the governance structure for reserve management, has strengthened risk management, and has sought ways to improve profitability.

The improvements in the governance structure reflected the recognition of the need to adapt to the changing market environment in a timely manner. In 2008, the internally managed portion of the GIR was divided into tranches so that investment management could be better aligned with the various objectives of reserve management, i.e., ensuring the availability of sufficient foreign exchange liquidity for day-to-day operations; and generating income over the medium-term while maintaining acceptable risk

[114] IAS39 - Financial Instruments: Recognition and Measurement

exposures. Also, in 2008, the MB approved the creation of the IMC, which includes top management officials, to provide strategic guidance in the management of the reserve portfolio. The IMC is tasked, among others, to review the benchmarks and investment guidelines, and recommend necessary changes to the MB. In addition, the BSP formed a compliance unit in 2008 that was tasked to check on a daily basis if the reserve managers are observing the investment guidelines approved by the MB.

As the GIR level continued to increase, the need to have a stronger organizational focus on reserve management became imminent. Thus, in 2011, the MB approved the reorganization of the Treasury Department (TD), the department responsible for both reserve management and domestic market operations. The reorganization allowed TD to have, among others, a dedicated group that focuses on reserve management, and another group that focuses on market research, risk management, performance analysis, and compliance reporting.

Box Article 12

Does News on International Reserves Matter to Financial Markets?[115]

Existing studies show ample evidence that financial markets are sensitive to news in macroeconomic announcements. Fleming and Remolona (1999), Balduzzi et al (2001), Andersen et al (2003, 2007) and Faust et al (2007), for example, show that bond and foreign exchange prices respond to news on employment, inflation, output, housing, and consumer and producer confidence. For stocks, earlier studies find little evidence that their prices respond to macroeconomic announcements other than to inflation.[116] However, recognizing that macroeconomic announcements contain news on future interest rates and growth expectations, which may be valued differently over expansions and contractions, McQueen and Roley (1993), Boyd et al (2005) and Andersen et al (2007) show that stocks respond negatively to news about higher economic activity and employment during expansions, but positively during contractions.

In particular, McQueen and Roley (1993) showed that after allowing for different stages of the business cycle, a stronger relationship between stock prices and news is evident. They also found that when the economy is strong the stock market responds negatively to news about higher real economic activity. This negative relation is caused by the larger increase in discount rates relative to expected cash flows.

Meanwhile, Boyd et al (2005) found that, on average, an announcement of rising unemployment is good news for stocks during economic expansions and bad news during economic contractions. Unemployment news bundles three types of basic information relevant for valuing stocks: information about future interest rates, the equity risk premium, and corporate earnings and dividends. The nature of the information bundle, and hence the relative importance of the three effects, changes over time depending on the state of the economy. For stocks as a group, information about interest rates dominates during expansions and information about future corporate dividends dominates during contractions.

Andersen et al. (2007) characterized the real-time interactions among U.S., German and British stock, bond and foreign exchange markets in the periods surrounding U.S. macroeconomic news announcements. They found that announcement surprises produce conditional mean jumps; hence high-frequency stock, bond and exchange rate dynamics are linked to fundamentals. The results are especially significant as regards stock market responses to news, which display distinct state dependence. In particular, bad macroeconomic news has the traditionally-expected negative equity market impact during contractions, but a positive impact during expansions.

NOTES ON PHILIPPINE FOREIGN RESERVES

The Philippine government's foreign reserves is seen as a determinant of a strong and resilient external sector - a key pillar that helped its sovereign borrowing investment grade status. It is argued that the sustained strength of Philippine international reserves reflects the relatively stable trend of the growth of overseas Filipino remittances and business process outsourcing (BPO) receipts. Stylized facts on Philippine foreign reserves are as follows. First, relative to nominal GDP, the Philippine foreign reserves is in the lower pack of its ASEAN peers but is higher than selected similarly credit-rated countries. Second, the volatility of the Philippine foreign reserves has declined from 1999 to 2017 and has been on average below the volatility of ASEAN and selected similarly rated countries. Third, using the IMF's more comprehensive measure of reserve adequacy (the IMF's Assessing Reserve Adequacy (ARA) metric), the Philippine international reserves have generally been more than adequate compared with its ASEAN and similarly rated countries

An important macroeconomic variable that is often tracked is

[115] Excerpt from Bagsic, Cristeta, Eufrocinio, Jr., Bernabe, Lilia Elloso, John Hallig, and Jade Eric Redoblado. 2017. "Dynamics of International Reserves Under Globalized Finance - the Philippine Case". Internal manuscript.
[116] See Schwert (1981), Hardouvelis (1987), and Cutler et al (1989).

the adequacy of foreign reserves by governments. It is interesting to note, however, that while it is widely documented in the literature that financial markets are sensitive to macroeconomic announcement news, relatively few studies deal with the impact of news on international reserves on financial markets and whether the reaction of the market participants are symmetric.

In this section, an event study approach using panel regression is utilized to study the financial market effects of news announcement relating to changes in international reserves, particularly the decline in international reserves. The analysis covered weekly data from January 2014 to July 2017. The dataset covers 16 countries from the ASEAN, China, and similarly-rated countries such as Colombia, Panama, Spain, and Italy.[117] However due to data limitation, the final list was reduced to six countries to include the Philippines, Malaysia, Thailand, China, Colombia, and Indonesia.

Empirical model. Following Remolona et al (2015) and Alberola et al (2012), the panel regression estimates the impact of news relating to a decline in international reserves on stock, bond and currency markets of emerging market economies. The impact of economic news is estimated as the coefficient of a dummy variable that corresponds to a specific event date. The country-by-country panel regression is expressed in equation 1 as,

$$R_{it} = \alpha + \beta_i^1 POSNEWS_{it} + \beta_i^2 NEGNEWS_{it} + \beta_i^3 DUMLO_{it} + \beta_i^4 DUMEQ_{it} + \beta_i^5 DUMHI_{it} + \beta_i^6 S_{it} + \beta_i^7 X_{it} + \varepsilon_{it} \quad (1)$$

where,

Variable name	Definition	Description	Source of data
R_{it}	country-specific r Return on the variable of interest, i.e., exchange rates, domestic stock markets, and bond yields	• Exchange rate • Domestic stock markets • Treasury bond yield	• Weekly; Bloomberg • Weekly; Bloomberg • Weekly; Bloomberg
$POSNEWS_{it}$	Vector of dummy variables which take the value of 1 when a rise in GIR is announced and 0 on all other dates	• Press release, central bank announcements on increase in international reserves	• Weekly; Bloomberg
$NEGNEWS_{it}$	Vector of dummy variables which take the value of 1 when a drop in GIR is announced and 0 on all other dates	• Press release, central bank announcements on decrease in international reserves	• Weekly; Bloomberg
$DUMLO_{it}$	Vector of dummy variables which take the value of 1 when the country's GIR-to-ARA metric is less than 1, and 0 otherwise;	• GIR-to-Adequacy Reserves Assessment metric is less than 1	• Weekly; Bloomberg
$DUMEQ_{it}$	Vector of dummy variables which take the value of 1 when the country's GIR-to-ARA metric is between 1 and 1.5, and 0 otherwise;	• GIR-to-Adequacy Reserves Assessment metric is between 1 and 1.5	• Weekly; IMF website

[117] Brunei Darussalam, Cambodia, China, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, South Korea, Thailand, Vietnam, Colombia, Italy, Panama, Spain

Variable name	Definition	Description	Source of data
DUMHI_{it}	Vector of dummy Variables which take the value of 1 when the country's GIR-to-ARA metric is greater than 1.5, and 0 otherwise;	• GIR-to-Adequacy Reserves Assessment metric is greater than 1.5	• Weekly; IMF website
S_{it}	Vector of country-specific characteristics which can be time-varying at any frequency (such as GDP, inflation, gross international reserves);	• Real GDP • Inflation • Gross international reserves	• Quarterly converted [118] to higher frequency; IMF website • Monthly converted to higher frequency; IMF website
ε_{it}	Standard error		

The IMF's ARA metric differentiates between economies that have fixed versus floating exchange rate regimes. Under a fixed exchange rate regime, international reserves are recommended for 10 percent of its exports, 10 percent of its broad money, 30 percent of its short-term external debt, and 20 percent of its other liabilities. For an economy under a floating exchange rate regime, the ARA metric is estimated as the sum of 5 percent of its exports, 5 percent of its broad money, 30 percent of its short-term external debt, and 15 percent of its other liabilities.

The relative riskiness of the four potential drains on reserves are estimated primarily based on the observed distributions of outflows from each source during periods of exchange market pressure; and aggregated into a "risk-weighted liability stock" (or metric) that is constructed as follows:

$$ARA^{Fixed} = (10\% \times Exports) + (10\% \times Broad\ Money) + (30\% \times Short-term\ Debt\ ) + (20\% \times Other\ Liabilities)$$

$$ARA^{Float} = (5\% \times Exports) + (5\% \times Broad\ Money) + (30\% \times Short-term\ Debt) + (15\% \times Other\ Liabilities)$$

Estimation method. To date, there is no generally accepted framework for analyzing the impact of news on financial markets. It is well known that attempts to measure the impacts of economic news create an endogeneity problem. Many studies explored the use of instrumental variables and Vector Autoregression (VAR) with a variable ordering assumption to address such a problem. Moreover, the results are sensitive to the details of model specification, notably the choice of control or instrument variables.

[118] Monthly CPI was converted to weekly using constant, match average; monthly GIR was converted to weekly using linear, match last; quarterly real GDP level was converted using constant, match sum; and the annual ratio of GIR to ARA metric was converted to higher frequency using linear, match last.

Definition:

- Constant, match average: This simply repeats the low value for each of the high observations, i.e., each quarter in 2009 will have the same value as the annual value for 2009.
- Linear, match last: This inserts the low observation value into the last period of the high frequency data, then performs linear interpolation on the missing values, i.e., 2009Q4 will be given the annual 2009 value, 2010Q$ will be given the annual 2010 value, then linear interpolation will fill in 2010Q1, 2010Q2, 2010Q3.
- Constant, match sum: This simply repeats the low value divided by the number of observations in the high page, i.e., each quarter in 2009 will have the annual value for 2009 divided by 4 (since there are 4 quarters in a year).

In this study, the parameters in the model are estimated using Two-Stage Least Squares (TSLS). Formal panel data tests of serial correlation do not indicate the presence of first- and second-order serial correlation in the error terms. All estimated coefficients are significant, based on 1 percent, 5 percent, and 10 percent levels of significance under the TSLS method. Meanwhile, residuals of the models (on Log (FX) and Bond yield) do not exhibit cross-sectional dependence using Pesaran Cross Dependence Test, except for the model on log(Stock).

Robustness. To check the robustness of the results, year-on-year, semester on semester, quarter on quarter and six-week on six-week growth of explanatory variables such as CPI, real GDP and GIR are also used. Different specifications for instrument variables are also considered. Finally, the exercise also checked for alternative regression such as Pooled Least Squares.

Table 1: Expected Economic Relationships between Returns and Explanatory Variables

Explanatory variable	Macroeconomic Risk	Expected relationship between risk and:		
		log(FX)	10-year Bond yield	log(Stock index)
Log(CPI)	↑CPI, ↑ risk	(+) Higher risk increases interest differential, weaker peso	(+) Higher risk requires higher return, higher yield	(-) Higher risk increases the discount rate, lower stock index
Log(Real GDP)	↑GDP, ↓risk	(-) Lower risk attracts capital flows, stronger peso	(-) Lower risk lowers the required return, lower yield	(+) Lower risk increases value of firms, higher stock index
Log(GIR)	↑GIR, ↓risk	(-) Lower risk because of higher insurance attracts capital flows, stronger peso	(-) Lower risk lowers the required return, lower yield	(+) Lower risk makes stock market more attractive, higher stock index

Table 2: Empirical Pooled Regression Model Results

Explanatory variable	**Dependent variable**		
	log(FX)	**10-year Bond yield**	**log(Stock index)**
Log(CPI)	1.188*	2.304*	0.089*
Log(Real GDP)	0.076*	0.107*	0.514*
Log(GIR)	-0.521*	-0.861*	0.585*
Negative News*Dummy High	0.003*	-0.091	-1.031*
Positive News*Dummy Low	1.083*	0.280 *	0.011***
Diagnostics			
Instrument variables	*Year-on-year, semester-on-semester, quarter-on-quarter growth for RGDP, year-on-year, semester-on-semester, quarter-on-quarter, month-on-month growth of CPI, GIR*		
Adjusted R-squared	*0.867*	*0.945*	*0.793**
Residual diagnostics: Pesaran Cross-Section Dependence	*No cross-sectional dependence*	*No cross-sectional dependence*	*With cross-sectional dependence*

*Note: Statistically significant at *1%, ** 5%, ***10%*
Source of estimates: Center for Monetary and Financial Policy as of 9 August 2017.

Key Findings. Table 2 shows the baseline results. Based on the impact of the changes in macroeconomic indicators on risk, and following diagnostics and robustness checks, four insights can be highlighted.

- **For the six countries namely, Philippines, Malaysia, Thailand, China, Colombia and Indonesia, inflation is expected to weaken the domestic currency and increase bond yields.** Meanwhile, the impact of inflation on equity value for the period under consideration is opposite the expected sign. This could reflect the observed low and stable inflation despite consistent and solid GDP growth during the period under study.

- **Higher real GDP growth is associated with higher stock prices, stronger domestic currency and lower bond yield (i.e., higher bond prices) as the domestic economy attracts foreign capital. However, the results of the econometric exercise show an opposite impact.** Table 3 shows the actual data for these variables validating the econometric results. This empirical finding needs further investigation to determine the reason why the expected relationships did not manifest for the FX and bond markets. Future research could investigate whether policy interactions have influenced these relationships.

Table 3: Macroeconomic data, average, 2014-2017, in percent

	2014	2015	2016
GDP Growth Rate, in percent	6.1	6.1	6.9
Peso-Dollar Rate (app+/dep-), in percent	-4.4	-2.4	-4.2
Philippine Stock Exchange Index Growth Rate, in percent	5.0	9.4	-2.0
10-year Bond Yield	4.0	4.0	4.2

Source: SEFI as of 11 August 2017; Bloomberg

- **The growth of GIR is expected to be associated with a stronger currency, lower long-term bond yield, and higher stock prices. These arise from stronger capital inflows.** As the economy attracts capital inflows, the peso relative to the US dollar appreciates, bond prices go up translating to lower bond yield, and equity valuations increase.

- **News of increases and decreases in international reserves have asymmetric impacts across foreign exchange, bond, and stock markets.** To have some insights on whether increases and declines in GIR are symmetric, dummies for positive news (increase) and negative news (decline) are interacted with whether a country's GIR level is less than or more than adequate. For the three markets, the impact of news of an increase in the GIR for countries with GIR below ARA metric (i.e., actual GIR is less than 100 percent of ARA metric) has greater magnitude compared to the impact of news of GIR declines for countries with GIR above ARA metric (i.e., actual GIR is greater than 150 percent of ARA metric). In other words, increases and decreases in GIR have asymmetric impacts.

To gauge the potential impact of an adverse scenario of reserves being less than adequate, the study introduces a database covering weekly data from January 2014 to July 2017 on announcements on the level of international reserves. In addition to the Philippines, this database includes five other countries to estimate the impact of these announcements on foreign exchange rates, Treasury bond yields, and stock prices using a pooled Two-Stage Least Squares regression.

Following diagnostic and robustness checks, the results of the empirical analysis revealed that news of increases and decreases in international reserves have asymmetric impacts across foreign exchange, bond, and stock markets. Consequently, the policy implications of these results from the pooled regression bear highlighting. The literature on transparency in central bank communication has focused mainly on policy signaling and the future path of inflation and interest rate but there is no similar attention on standards of transparency and communication when it comes to reserves management. The default has been to regularly report actual reserves vis-à-vis the rules-of-thumb indicators. It should be noted that central banks report to the public their level of reserves more frequently than others, e.g., the Bank Negara Malaysia reports their reserves twice a month, the BSP reports monthly.

Moreover, as in Remolona et al (2015) (on US bond prices), event analysis research has centered on the impact in general of economic news on financial asset prices, but not on impact of one specific economic event for a cross-section of countries through time. Within this context, the results from the pooled regression show that (1) announcements of reserves could affect returns on financial markets, and that (2) these effects differ—asymmetrical—depending on the whether the announcement is good or bad offer fresh insights. These results may indicate that the transparency and communication framework for reserves management and central bank operational considerations regarding reserves management is not straightforward. The issue, then, for policymakers is to decide on an optimal level of transparency.

Recommendations for Further Study. Moving forward, improvements on the model will be useful. For instance, re-estimating the model using higher frequencies to better approximate trading horizons could be useful. Additionally and quite notably, the model is a linear approximation of a potentially nonlinear process. Consequently, there may be more parameters to be estimated as compared to using an actual nonlinear modeling framework. There is, therefore, scope to transition to a nonlinear model (preferably a regime-switching one) to more fully take into account the dynamics of the process under study. Likewise, there may be scope to develop a model that could account for shifts in the status of reserve adequacy measures. The panel version of a Markov switching vector autoregressive (MSVAR) may be considered. The said model would more fully account for the nonlinear behavior in the process under study by allowing estimation of thresholds and effects specific to regimes. Additionally, a dynamic estimate of the probability of sudden stop to enhance estimate of optimal level of reserves could be implemented. Moreover, adjusting the model to capture announcement surprises could enhance the robustness of the estimates. The impact of an announcement surprise could be further examined on different phases of the business cycle.

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International Economic Cooperation

The year 2017 witnessed a milestone in the BSP's engagement with the regional and international community, as the Philippines took center stage as the Chair of the ASEAN. This provided opportunity for the BSP to exhibit thought leadership among its partners and counterparts in strengthening monetary and financial cooperation and integration in the international, regional and bilateral fronts.

The BSP continued its active participation in high-level and technical meetings and hosted international conferences/workshops in line with the BSP Strategy Map 2012-2017 of being proactive in domestic and international forums. Its participation in regional and international initiatives has become more than necessary to achieve central bank mandates.

Policy coordination was seen important not only in times of crisis but also during peace time to discuss observed risks and anticipate scenarios. Through BSP's engagement with other countries in the region, there is continued commitments of support for one another through bilateral and regional financial arrangements. This gives central banks comfort that brothers in the region are ready to help in times of need. Moreover, the BSP's commitment for financial support expands to other regions with its participation in global financial arrangements.

Among the highlights of the year is the BSP's hosting and co-/chairmanship of several ASEAN and ASEAN+3 finance ministers' and central bank governors' meetings and related meetings, which established the BSP's significant role in the regional cooperation and integration agenda. As Chair, the Philippines' agenda focused on inclusive regional cooperation and integration with the theme "Partnering for Change, Engaging the World."

Economic Surveillance. In 2017, President Rodrigo Duterte designated BSP governor Nestor A. Espenilla, Jr. as the Philippine Governor to the International Monetary Fund (IMF) effective 2 July 2017. At the IMF South East Asia Voting Group Constituency Office, the Philippines is represented by an Alternate Executive Director. Such senior representation allowed the Philippines, through the BSP, to further advance its interests and positions on key policy discussions in the IMF.

The BSP also facilitated the conduct of regular surveillance activities in line with the Fund's Article IV Consultation Mission, which was held on 26 July-8 August 2017. The IMF Staff Report, which was published on 10 November 2017, provided a glowing assessment of the Philippine economy and indicated ample policy space to deal with emerging risks.

The BSP Governor was also designated as the Philippine's Alternate Governor to the World Bank (WB) Group and the Asian Development Bank (ADB).

Similarly, the BSP contributed to the surveillance initiatives of the Executives' Meeting of Asia-Pacific Central Bankers (EMEAP) through monthly financial market monitoring which tracked quick-moving financial market movements in the currencies, equities, and credit default swap (CDS) markets, as well as policy rate movements among EMEAP member economies and selected advanced and emerging market economies.

The BSP likewise facilitated the conduct of the ASEAN+3 Macroeconomic Research Office (AMRO) Staff Consultation Visit held on 19-26 September 2017. The mission assessed the country's macroeconomic conditions, as well as the emerging risks, policy challenges and macroeconomic outlook. The AMRO Country report arising from the consultation visit aims to provide an in-depth assessment of macroeconomic and financial conditions and provide policy recommendations geared towards safeguarding domestic and regional stability. In addition, the BSP contributed technical inputs to the preparation of various regional economic monitoring reports, such as the ASEAN Financial Integration Monitoring Report (AFIMR), ASEAN Capital Account Liberalization Policy Dialogue Report, and the EMEAP Macro Monitoring Report.

Policy Dialogue. The BSP demonstrated thought leadership in various international forums, such as the World Trade Organization (WTO), IMF, Bank for International Settlements (BIS), EMEAP, Asia-Pacific Economic Cooperation (APEC), ASEAN, ASEAN+3, and the Southeast Asian Central Banks (SEACEN) Research and Training Centre to discuss monetary, economic and financial cooperation issues. During the year, the BSP also engaged in bilateral meetings with central bank counterparts to share common experiences, discuss economic developments, and exchange views on emerging policy challenges relevant to both institutions.

WTO. The BSP participated in the preparation of the 5th WTO Trade Policy Report of the Philippines during the WTO Secretariat Visit by drafting inputs for the Government and WTO Secretariat in the areas of recent economic developments, banking services and foreign exchange regulations.

BIS. The BIS BI-monthly meetings provided the venue to discuss issues of common concern among small open economies such as: foreign exchange intervention, reserve management and central bank profitability; impact and policy responses arising from the expected shift in US monetary policy; ensuring economic resilience amid increasing political and policy uncertainty; and role of exchange rates in monetary frameworks and policy implementation, among others.

Likewise, the BSP participated actively in the meetings of the Asian Consultative Council (ACC). The ACC provides a vehicle for communication between the Asia and Pacific members of the BIS and its Board and Management on matters of interest to the central bank community in the region. The ACC discussions focused on researches on monetary and financial stability, and recent BIS banking activity in Asia, among others.

IMF. To facilitate policy dialogue and provide the platform for the IMF's outreach activities, the BSP organized two (2) seminars/workshops, which were held in Manila, on the following topics:
(a) World Economic Outlook (19 April 2017); and
(b) Regional Economic Outlook for Asia (10 May 2017). The seminars/workshops were attended by participants from the BSP and other government agencies. The discussions were informative and insightful in fostering understanding of the global and regional developments that may have an impact on domestic development and policy-making.

SEACEN. The BSP engaged meaningfully in the high-level governance meetings of the SEACEN Centre which included the Deputy Governor-level Executive Committee Meeting and the Board of Governors' Meeting to discuss policy directions in the areas of research, training and capacity-building of the twenty (20) SEACEN member central banks, as well as critical internal, strategic issues. Aligned with BSP's thought leadership thrust, the BSP also served as resource speaker during the High-Level Seminar held on 29 September 2017 on the topic "Central Banking Ten Years After the Onset of the Financial Crisis – Back to Business as Usual?" and during the High-Level Conference held on 16 December 2017 on the topic "Redefining mandates of central banks: Monetary policy and financial cycles?".

ASEAN. During the 3rd ASEAN Finance Ministers and Central Bank Governors Joint Meeting on 7 April 2017 in Cebu, Philippines the BSP participated in the ASEAN policy dialogue with the IMF, ADB, AMRO and WB on the regional and global economic developments and outlook, as well as on issues on regional economic integration in ASEAN. The BSP co-hosted with the Official Monetary and Financial Institutions Forum (OMFIF) on 3 April 2017 a debate among distinguished panelists from the region on the issue "Is Asia bound to follow the advanced economies' "new mediocre"? The BSP also chaired a dialogue among the ASEAN financial institution CEOs on 6 April 2017 and discussed the topic "Furthering ASEAN Financial Integration: Opportunities in Addressing Systemic Risk". The BSP continued its participation in the enhanced policy dialogue mechanism on safeguard measures for capital account liberalization under the ASEAN Working Committee on Capital Account Liberalization. Likewise, the BSP led the initiatives as Co-Chair of the ASEAN Senior Level Committee (SLC) on Financial Integration, on surveillance of and discussions on macroeconomic and financial stability risks in the financial integration process in the region.

ASEAN+3. Moreover, the BSP as co-chair of the ASEAN+3 Finance Ministers and Central Bank Governors and ASEAN+3 Finance and Central Bank Deputies (AFCDM+3) processes, shepherded the Deputies' endorsement of the enhanced Economic Review and Policy Dialogue (ERPD) framework which will assess the qualification of member economies in the Chiang Mai Initiative Multilateralization (CMIM) facilities. The BSP also played a key role in the organizational capacity building of the AMRO in terms of developing medium-term strategies for the Office including enhancing its governance structure; ensuring its continued transition to an international organization; and conducting internal test runs to ensure that the relevant stakeholders are operationally ready in case of a drawdown.

EMEAP. The BSP exchanged views in high-level and technical-level EMEAP meetings to exchange views on: (a) global and regional financial and economic developments, as well as policy implications for EMEAP economies; (b) impact of ongoing international regulatory reforms; and (c) research studies in the areas of financial markets, banking supervision, payment and settlement systems, and other monetary and financial stability-related topics. The BSP also actively participated in regular meetings of the EMEAP Asian Bond Fund (ABF) Oversight Committee and the Pan Asian Index Fund Supervisory Committee to monitor the performance of the ABF and discuss enhancements to ABF governance, marketing strategies, and single market funds monitoring.

Asia Pacific Economic Co-operation (APEC). The BSP provided active support to the activities and initiatives under the APEC Finance Ministers' Process (FMP) spearheaded by the DOF. Under Vietnam's chairmanship of the APEC process, the BSP provided relevant technical inputs to various important APEC documents and statements under various initiatives focusing on the issues related to financial inclusion and the implementation of the Cebu Action Plan (CAP).

Bilateral Meetings. The BSP hosted a Joint Working Group (JWG) Meeting on Bilateral Financial Cooperation between the Philippines and Japan on 21 June 2017 that discussed issues of mutual interest such as those faced by Japanese banks in the Philippines, financial markets and capital market reforms, ASEAN financial integration and details of the Bilateral Swap Arrangement (BSA) between Japan and the Philippines.

Financial Technology (FinTech) Issues. To further strengthen the key strategies in the BSP's financial inclusion agenda of putting in place banking regulations that leverage on technology, the BSP took part in various regional discussions on approaches by regulators and supervisors on striking a balance between encouraging technology-enabled innovation in financial services (FinTech) and safeguarding financial stability and consumer protection. In particular, the BSP contributed in the drafting of the EMEAP Paper on "Regulatory Sandboxes for FinTech - Current approaches in EMEAP jurisdictions". Ongoing discussions of the ASEAN SLC has also identified FinTech among the issues to be monitored that may impact on financial integration. Recognizing the urgency of the issue, a Special Briefing on FinTech for the Monetary Board was held on 22 December 2017.

Global Arrangements. On 25 October 2017, the BSP and the IMF concluded the Note Purchase Agreement (NPA), where the former will provide up to US$1 billion to the IMF to supplement the global financial safety net. Prior to the conclusion of the agreement, the President of the Republic of the Philippines granted the Instrument of Consent for the BSP to continue participation in the facility. The renewal of the agreement is a testament to the country's sound macroeconomic fundamentals and strong external position. The agreement, which took effect on 2 November 2017 and to expire on 31 December 2019, will contribute towards boosting confidence in the adequacy of the Fund's resources to restore global economic and financial stability.

The Philippines, through the BSP, continued its participation in the Fund's Financial Transactions Plan (FTP) and the New Arrangements to Borrow (NAB) facility to enhance the global financial safety net. The IMF had drawn from funds exchanged by the BSP to finance arrangements for countries with balance of payments difficulties. Similarly, the Fund has made drawdowns from the BSP's NAB commitment to finance extended arrangements for Greece, Portugal, Tunisia, Cyprus, Ukraine, Jamaica, Jordan, and Pakistan.

Regional Arrangements. The BSP maintained active engagement in strengthening the CMIM as the ASEAN+3 regional financial arrangement, particularly on efforts to ensure operational readiness of the facility through the conduct of test runs and the development of mechanism to accurately detect potential crisis scenarios. The BSP, together with the nine (9) ASEAN central banks, signed the sixth supplemental memorandum of agreement to renew the ASEAN Swap Agreement (ASA) for a period of another two (2) years commencing on 17 November 2017. The ASA involves the provision of US$2 billion short-term foreign exchange liquidity support for ASEAN Member Countries that experience balance of payments difficulties.

Bilateral Arrangements. The BSP and Bank of Japan signed the Restatement Agreement of the third Bilateral Swap Arrangement (restated BSA) effective 6 October 2017, enabling the Philippines to swap its local currency against Japanese yen in addition to US dollars with the facility size of up to US$12 billion equivalent for the Philippines and US$500 million for Japan.

ASEAN Financial Integration, Financial Inclusion, and Financial Stability. Ensuring that the financial sector is inclusive and stable remains a key goal of regional economic integration. The financial sector integration vision for ASEAN Economic Community (AEC) 2025 encompasses three strategic objectives, namely financial integration, financial inclusion, and financial stability, and three cross-cutting areas (Capital Account Liberalization, Payment and Settlement Systems and Capacity Building). The BSP continued its active participation in the implementation of the AEC Blueprint 2025. With the Philippines' Chairmanship of the ASEAN in 2017, the BSP Chaired and Co-Chaired (with the DOF) various central bank related ASEAN meetings including the 25th ASEAN Central Bank Governors' Meeting held on 6 April 2017 and the 3rd Joint Meeting of ASEAN Finance Ministers' and Central Bank Governors' Meeting on 7 April 2017 in Cebu, Philippines. Under the BSP's Co-Chairmanship, the ASEAN finance ministries and central banks vowed to deepen regional financial cooperation to achieve the AEC 2025 and reiterated our support for the ASEAN Working Committees to implement the Strategic Action Plans (SAP) for ASEAN Financial Integration 2016-2025.

In support of the ASEAN efforts for regional banking integration, the BSP signed the ASEAN Banking Integration Framework (ABIF) accord with Bank Negara Malaysia (BNM), Bank of Thailand (BOT) and Indonesia Financial Services Authority (OJK). Specifically, the BSP and BNM signed the Declaration of Conclusion of Negotiations (DCN) on the entry of qualified ASEAN banks (QABs) between the two countries. The BSP also signed Letters of Intent (LOIs) with the BOT and Indonesia OJK to begin bilateral negotiations between the two countries. This is expected to provide more access to financial services and products for Filipinos, create jobs in the financial services sector, and expand market opportunities for Philippine banks across the region.

Under the Working Committee on Financial Services Liberalization (WC-FSL), the BSP continued to work with its regional counterparts in the drafting of the Annex on Financial Services under the proposed enhanced ASEAN Framework Agreement on Services (AFAS) or ASEAN Agreement on Trade in Services (ATISA).

Inclusive Regional Integration. The BSP also actively engaged in the ongoing negotiations of the Regional Comprehensive Economic Partnership Agreement, Philippines-EU Free Trade Agreement, and the Eight Round of Negotiations on Financial Services Liberalization under the AFAS. The BSP participated in the finalization of and submitted its concurrence to the ASEAN-Hong Kong Free Trade Agreement, which was signed on 12 November 2017. The BSP also participated in the conclusion of negotiations of the Agreement between the Taipei Economic and Cultural Office in Taiwan and the Manila Economic and Cultural Office in The Philippines for the Promotion and Protection of Investments, which was signed on 7 December 2017. The BSP concurred in the Philippines' adoption of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific. Furthermore, the BSP signed the Memorandum of Understanding (MOU) with the State Bank of Pakistan (SBP) to establish cooperation between the BSP and the SBP concerning the exchange of information and experience on the development and performance of the banking system, payments and settlements, and other central banking areas of mutual interest.

Capital Market Development. Lending further support to the development of the regional bond markets, in 2017, the BSP participated in the discussions of the ASEAN+3 Asian Bond Market Initiative (ABMI) task forces focusing on promoting the issuance and demand of local currency-denominated bonds, and improving regulatory and related infrastructure for bond markets. Further, the BSP was also part of the 12th and 13th Cross-Border Settlement Infrastructure Forum (CSIF) organized by the ADB, contributing to the discussions on the importance of Cross-border Business Continuity Planning (BCP) and cyber security concerning central securities depository and the real-time gross settlement (CSD-RTGS) linkages. The BSP, with technical support from the Daiwa Institute of Research, facilitated the completion of Phase V of the Technical Assistance Coordination Team's (TACT) Bond Market Development Program covering issues related to further deepening of the Philippine corporate bond market, exchange traded funds (ETFs) and peso-denominated debt instruments. The BSP also supported the acceptance of Mongolia as observer in the ASEAN+3 Bond Market Forum (ABMF), in an attempt to share and disseminate TA outcomes beyond ASEAN+3.

Capacity-Building Initiatives. The Philippines secured technical assistance (TA) from the IMF in the areas of fiscal management and financial market development and government finance statistics. The BSP provided capacity-building support to CLMV (Cambodia, Lao PDR, Myanmar, Vietnam) central banks through the conduct of the *"Training Course on Macro-Financial Stability Policies on Capital Flows: Framework, Surveillance, and Diagnostics"* on 14-18 August 2017.

In view of further developing the Philippine bond market, the BSP continued its close collaboration with the Securities and Exchange Commission, among others, in monitoring the progress of TA activities being facilitated by the Daiwa Institute of Research (DIR) for Phase V of the Philippines' TA program under the ABMI.

As part of the BSP's advocacy in increasing awareness on the benefits that the country may gain in AEC, the BSP served as resource speaker on ASEAN financial integration initiatives in conferences and forums throughout the year, including the presentation conducted before Business Administration students of St. Michael College of Caraga on 30 August 2017 and briefings provided to Economic and Financial Learning Center Staffs from the regions. An ASEAN Awareness Exhibit to showcase the Philippines' 2017 ASEAN Chairmanship and the BSP's role was held on 2-12 May 2017 at the BSP Lobby.

Hosting of International Cooperation Events. The BSP hosted a number of conferences, workshops and meetings in line with the following objectives: (a) to sustain the discussion on issues relevant to emerging market economies; (b) to provide perspectives on critical issues affecting the region in general and the country; and (c) to strengthen ties with other central banks and financial authorities by performing a leadership role in various bodies.

Advocacy Programs

Microfinance and Financial Inclusion

The BSP's pursuit of a broader goal on financial inclusion began with the effort to develop a sustainable microfinance in the country through the issuance of regulations on microfinance starting 2001. Over the years, positive developments in the financial inclusion agenda became evident as seen in the following factors:

- *More financial access points.* The overall banks' network of branch and other offices expanded to 11,171 in end-December 2017 from 10,576 in end-December 2016. The growth was supported by the rationalization of branching guidelines which allowed banks to expand their physical network to strategic locations. Moreover, the Monetary Board recently approved the establishment of branch-lite units. This initiative aimed at providing banks with more flexibility to establish units in underserved or unbanked areas. As of end-September 2017, there are 563 cities and municipalities with no banking presence.

  Apart from banks, there are other financial service providers such as 16,613 pawnshops and 11,688 money service businesses (MSBs) which serve as important financial access points especially in areas where banking presence is not yet established. The BSP issued comprehensive supervisory frameworks for pawnshops and MSBs to ensure that these entities effectively comply with anti-money laundering (AML) regulations, internal control rules and consumer protection standards.

Banks are also engaged in electronic banking solutions for better access to financial products particularly for deposit transactions as well as payment and transfer services. There are 70 banks offering e-banking services such as internet and mobile banking, electronic wallets and electronic fund transfer point of sale (EFTPOS) payments. Moreover, a total of 19,744 automated teller machines (ATMs) are situated nationwide, 44.1 percent of which are stand-alone or offsite units positioned in transport terminals, convenience stores, supermarkets, department stores and gasoline stations to better reach financial consumers. Also, the BSP allowed banks to tap third party cash agents as an alternative access point which can accept and disburse cash on behalf of the bank in bringing about efficiency in banking operations and convenience to financial consumers.

- *Wider range of products.* The range of microfinance loans offered by banks has broadened from regular microloans to microcredit for agriculture, housing and business, as well as micro-insurance in line with the growing needs and strengthened capacities of banks' clients. This was further expanded through the issuance of guidelines on agricultural value chain financing framework to increase the flow of credit to the agricultural sector. Moreover, banks are now given flexibility to expand the range of products and services offered and activities performed by their branch-lite units as opposed to the limited transactional and non-transactional services offered by other banking offices and micro-banking offices. The expanded menu of products and services to be offered by branch-lite units should be consistent with the banks' business model in providing financial services to a specifically defined market or sector.[119] To enable the unbanked to have access to these financial products, the BSP recently approved the framework which set out the mechanics for offering basic deposit account (BDA). The BDA has no maintaining balance and not subject to dormancy charges.

- *Lower barrier to customer onboarding.* The BSP aspires to onboard more Filipinos into the banking system. Based on the latest available data from World Bank Findex (2014), 31.3 percent of adult Filipinos have transaction accounts. Moreover, only 14 percent of Filipino adults have savings in banks based on the results of the National Baseline Financial Inclusion Survey (2015). To strike a balance between financial inclusion and financial integrity, the BSP introduced the concept of a "restricted account" under the amended AML regulations. This provided banks with greater flexibility in targeting the unbanked sector especially in rural areas where official IDs are not usually used by extending reduced Know-Your-Customer (KYC) procedures. Further, the BSP now allowed the use of technology for customer identification and verification subject to certain controls to manage any attendant risks. Lastly, the recently-approved BDA framework is expected to bring the banking system closer to the unbanked sector and make available to them the expanded menu of financial products and services which could meet their growing needs.

With increasing technological advances, the BSP is now leveraging on digital innovations and

[119] The range of products and services to be offered by branch-lite units shall not include those suited for sophisticated clients with aggressive risk tolerance.

solutions to drive financial inclusion and reach greater scale at a lower cost and more efficient way. As an initial response, the National Retail Payment System (NRPS) was launched to serve as a backbone of a digital finance ecosystem facilitating the deployment of a wide range of financial products and services. The NRPS is a policy and regulatory framework for creating safe and efficient retail payments in the country.

The goal of financial inclusion has to be elevated as a national agenda requiring multi-stakeholder undertaking to indeed achieve inclusive growth of the country. Towards this end, the National Strategy for Financial Inclusion (NSFI) was launched in 2015. Detailed tactical plans were developed to ensure that concrete actions will be taken by various agencies to implement the NSFI. The implementation of the national strategy was spearheaded by the Financial Inclusion Steering Committee (FISC) in which the chairmanship and the secretariat were designated to the BSP. In April 2017, the BSP hosted the NSFI General Assembly to discuss the ongoing and priority activities of the NSFI.

The multilateral agencies such as the Asian Development Bank (ADB) and the World Bank were also instrumental to realize the financial inclusion objective. In May 2017, the BSP together with the ADB hosted the Conference on Financing Agriculture Value Chain in the Philippines. This forum enlightened the participants on the role of agriculture value chain financing as a viable business strategy and as an important contribution to inclusive growth. Further, a roadmap will be developed promoting innovative agriculture financing in the country.

Financial Education and Consumer Protection

Alongside the financial inclusion advocacy, the BSP likewise promotes consumer protection. Consumers are empowered to make informed financial decisions through various financial literacy initiatives undertaken by the BSP.

In 2017, the BSP issued numerous advisories for the protection of the general public. First, the public was informed on the different fees and charges that a deposit account might incur. For instance a deposit account is charged with maintenance fees for not meeting the minimum monthly average daily balance for at least two consecutive months, and dormancy fees if the said account has no activity (i.e., no withdrawal or deposit) for five years. Second, an advisory containing the measures to be taken in case of undispensed withdrawal was issued. It is very important that the details (e.g., date, time, ATM location) of the said incident be reported immediately to the bank concerned. Third, consumers were advised to properly manage their credit card transactions to build good credit history. Consumers were also informed to pay the full credit due on time to avoid any debt trap, deal with trusted sites when purchasing online and keep credit card information confidential to avoid any fraudulent card transactions. Lastly, the investing public was advised to exercise caution regarding the acquisition, possession and trading of virtual currencies (VCs), including the investment on initial coin offerings (ICOs). The value of VCs are highly volatile which might lead to loss of the entire principal investment. VC users should take strong security measures to protect their VC holdings, personal information and transaction details. The BSP also does not endorse VCs as legal tender, store of value or an investment vehicle.

Meanwhile, the BSP issued guidelines governing the domestic remittance transactions of supervised financial institutions. Said issuance intends to improve transparency of remittance charges by requiring the banks to charge upfront all remittance fees. This will make the remittance sender aware of the full cost of his transaction and the exact amount to be received by his beneficiary.

In addition, the BSP rolled out several financial learning events and other initiatives as part of consumer empowerment. In 2017, the BSP conducted six financial education expo (Fin-Ed Expo) in the provinces of Oriental Mindoro, Southern Leyte, Negros Occidental, Siquijor, and La Union and in Taguig City. The Fin-Ed Expo was carried out targeting the working sector, students and members of the academe. Further, the Wealth Watch Book II which was launched in June 2017 focused on prudent consumer spending, investment and entrepreneurship.

The BSP also leveraged on the power of social media and launched its PisoLit, a Facebook page, in the third quarter of 2017. PisoLit targets online Filipinos particularly the millennials and other active users of social media. It presents different themes and creative visuals to be more attractive to Facebook users. The end goal of this initiative is to increase financial awareness among Filipinos.

Moreover, the BSP continued to provide consumer assistance mechanism through its Financial Consumer Protection Department. This dedicated unit handled a number of consumer complaints, inquiries and requests mostly related to credit card concerns, e-banking, lending and deposit-related activities.

Said unit also assessed compliance of BSP supervised financial institutions (BSFIs) with the Financial Consumer Protection Framework (FCPF), including the review for completeness, breadth of scope and overall adherence to FCPF of the consumer protection documents submitted by BSFIs. Results of such assessment are fed into the overall supervision of BSFIs.

Economic and Financial Learning Program (EFLP). The EFLP serves as the umbrella program of the BSP that combines the relevant awareness and learning campaigns of various BSP departments and offices with the end objective of enabling the public to acquire the knowledge and develop the skills needed to make well-informed economic and financial choices and decisions. Programs under the EFLP, directly handled by the Economic and Financial Learning Center (EFLC) of the BSP, are as follows:

- *"Be up to SPeed on BSP" Public Information Campaign (PIC) on the Role of the BSP in the Philippine Economy.* The PIC intends to enhance public awareness on the BSP as an institution, including its core functions and responsibilities and its role in the economy. It also aims to generate public understanding of policies and programs implemented by the BSP. In 2017, 15 PICs were conducted in different parts of the country attended by a total of 2,211 participants, largely composed of members of the academe.[120] The campaigns were also attended by representatives from private and public offices. A special program was conducted for the Senate staff.

- *"Paghahanda sa Kinabukasan" Financial Learning Campaign (FLC) for Overseas Filipinos (OFs) and their Beneficiaries*. The BSP's FLCs, organized in coordination with the Overseas Workers Welfare Administration (OWWA), aim to educate participants on the importance of using remittances to build up savings and directing these into investments in financial

[120] Two PICs in September were included in the "Economic and Financial Expo (EFEx)" conducted in partnership with the Financial Consumer Protection Department (FCPD) in Siquijor.

products and business ventures. Eleven FLCs were conducted which were attended by 1,682 participants, mainly family members and other beneficiaries of OFs.

- *"Users' Forum (UF) on BSP-Produced Statistics."* The forum aims to inform the public and enhance their appreciation of the various BSP-produced statistics and the relevance of these statistics in their individual undertakings. It covers topics on monetary, banking, financial, external sector statistics and expectation surveys. The UF was conducted as part of the BSP's celebration of the National Statistics Month (NSM) in October 2017 held in BSP Manila and San Fernando, La Union. This was attended by a total of 94 participants, mostly representing government offices.

- *In-House Tours and Guided Group Discussion.* The BSP provides an introductory learning session featuring the functions of the BSP and its role in the Philippine economy through an audio-visual presentation (AVP), lecture, open forum, and an optional walk-through of the library facilities. A total of 3,145 visitors, mostly students, have benefited from this initiative.

- *Mounting of Exhibits.* To enhance the learning experience of BSP visitors, quarterly exhibits were mounted at the BSP to serve as educational tool that provided them with updates on recent economic developments and additional knowledge on featured topics for the quarter.

- *Learning Materials.* Different materials were produced internally by EFLC to explain economic and financial concepts and various functions of the BSP as the country's monetary authority. These include: 1) a comic book (fourth in a series) on the key functions of the BSP entitled "Cracking the Central Bank Code"; 2) a short video on price level and inflation; and 3) info graphics about the BSP as an institution.

Capacity-building Session on Central Banking Topics for Selected BSP Officers/Staff. In order to update selected BSP EFLC officers/staff on matters related to the BSP's functions as well as enhance their capacity to discuss these issues to a variety of target audiences (students, employed sector, etc.), two capacity-building sessions were held in 2017 (May-June).

Knowledge Resource Network

A major initiative introduced to further advocate public awareness of monetary policy and other essential economic and financial concepts is the establishment of the KRN, which was approved by the Monetary Board in December 2016. The BSP partnered with 101 libraries of local government units, state universities/colleges and private academic institutions and established Knowledge Resource Collections (KRCs) in the National Capital Region (NCR) and 38 provinces in the country. These KRCs featured various BSP publications such as books, annual reports, comics, guides and brochures. It provides information resource sharing and reference assistance service free of charge.

BSP Feedback Management System (FMS) for External Stakeholders

The BSP Feedback Management System (FMS) provides real time external feedback to BSP Servicing Departments/Offices (SDOs) through the four (4) feedback channels: emoticon tablets in SDOs, touchscreen kiosks in the BSP entry points and lobbies of regional offices/branches (ROBs), FMS Weblink (Feedback Corner in the BSP website), and paper-based structured forms with scanning facility.

In 2017, total feedback responses reached 41,217, of which 32,782 were emoticon responses

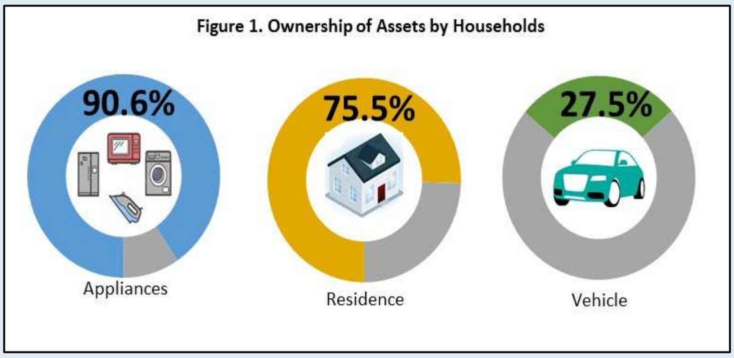
(79.5 percent) and 8,435 were structured-form responses (20.5 percent). From the emoticon responses, 97.3 percent were “happy”, while neutral and sad responses were only 2.0 percent and 0.7 percent, respectively. For the structured-form responses, the BSP received an overall rating of 4.9 (with 5 as the highest).

Box Article 13
2014 CFS Results and Conduct of the 2018 Survey

The CFS is the only household-based survey in the Philippines that provides comprehensive information on the financial conditions of Filipino households, in particular their financial and non-financial assets, sources of credit and level of indebtedness, work and income, and retirement insurance coverage. The survey also provides information on household behaviour and preferences with respect to risk attitude, beliefs as well as time discounting. The 2014 CFS, which was conducted from July 2014 to January 2015, had a sample size of 18,000 households covering all regions in the country, except Leyte province (excluded due to Typhoon Yolanda) and the Autonomous Region in Muslim Mindanao (ARMM). Highlights of the 2014 CFS are as follows.

- **The biggest asset of most Filipino households is their home or dwelling unit.** About 75.5 percent of households are homeowners (with 44.1 percent owning or co-owning their houses and lots and 31.4 percent owning or co-owning their houses only). Majority of households that owned their houses/ houses and lot acquired their property through cash (51.7 percent) and inheritance/gift (39.4 percent). Government institutions continued to be the most popular providers of housing loans, followed by banks and money lenders. Meanwhile, respondents also reported owning various types of appliances (90.6 percent), motor vehicles (27.5 percent), other real property aside from respondent's residence (13 percent), and precious objects (10.3 percent).

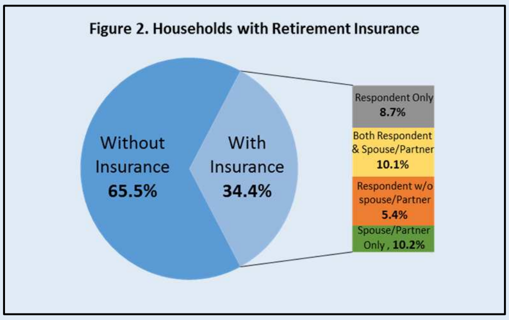
Figure 1. Ownership of Assets by Households



- **Eighty-six percent of households remain unbanked.** In terms of financial assets, results showed that only 14 percent of households own deposit accounts. Banks are the most popular type of depository institution. The main reasons cited by respondents in choosing a depository institution were: proximity to place of residence (29.2 percent), efficient service (24.7 percent), bank size (6.7 percent), recommendation of personal acquaintances (5.1 percent), and proximity to workplace (4.7 percent).

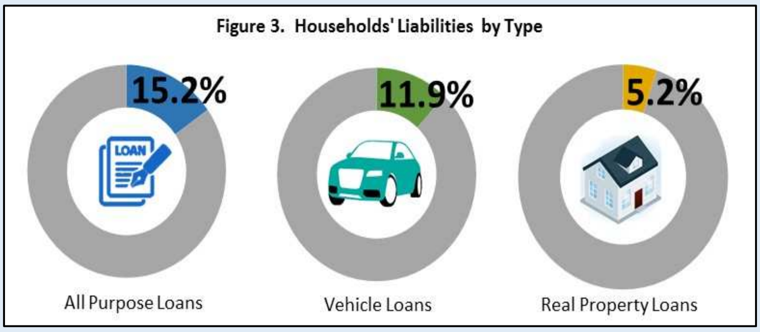
- **Thirty-four percent of households have retirement insurance.** About 34 percent of households reported having retirement/ insurance coverage. Of these respondents, 10.1 percent reported that both respondent and spouse had retirement/insurance plans, 8.7 percent reported that only respondent had retirement/insurance plans, and 10.2 percent replied that only the respondents' spouse/partner had retirement/insurance plans. Meanwhile, 5.4 percent of respondents without spouse or partner reported having retirement/insurance plans.

Figure 2. Households with Retirement Insurance



- **Only two percent of households have credit cards.** Only two percent of households reported having credit cards. About 71.4 percent of credit card holders paid their monthly bills through banks. These included over-the-counter transactions (65 percent), mobile banking (3.5 percent), internet banking (2 percent), and ATM bank-to-bank transfers (0.9 percent). Other respondents paid through Bayad Centers (18.9 percent), direct cash payments (3.9 percent), and salary deduction (1.9 percent).

Figure 3. Types of Liabilities Held by Households



- **Fifteen percent of households had outstanding all-purpose loans.** With respect to liabilities, a bigger percentage of households had outstanding consumer loans such as all-purpose loans and motor vehicle loans while few households had outstanding loans on their residence and other real property and credit card loans. About 15.2 percent of households availed of loans such as personal, salary, multipurpose, and business loans. Loan proceeds were used primarily for business start-ups and expansion, educational expenses, debt payments, medical, and house improvement expenses. Meanwhile, 11.9 percent of households that owned motor vehicles had outstanding loans on their vehicles. Only 5.2 percent of households borrowed money to acquire their residence.

- **The most popular collateral being used by borrowers is "Sangla ATM".** About eight different kinds of assets of households were used as collateral on their all-purpose loans (e.g., personal, salary, multipurpose, business, educational and emergency loans). The "Sangla ATM" was the most used collateral of the borrowers at 39.9 percent. This was followed by land (22.5 percent), appliances (11.7 percent), vehicles (7.7 percent) and agriculture harvest (6.0 percent).

The results of the 2014 CFS validated the key policy direction of the BSP towards building a more inclusive financial system. The quantitative micro-level data of the CFS provided new information on household finances that helped the BSP to re-evaluate the changing market needs and financial capacities of the unbanked. Furthermore, the CFS results underscored the importance of the BSP's advocacy for an inclusive financial system and a proactive economic and financial education program among MSME's and private households as well as the need to institutionalize financial education in the country's school system from elementary to college.

Dissemination activities have been successfully completed. Thirteen CFS dissemination activities were successfully completed in Manila (Bangko Sentral ng Pilipinas and Department of Finance), Davao City, Tagaytay City, Cebu City, Tuguegarao City, Legazpi City, Iloilo City, San Fernando City in Pampanga, General Santos City, City of San Fernando in La Union, Cagayan de Oro City and Zamboanga City. Participants from the public and private sector as well as the academe lauded the conduct of the CFS and expressed support for more government initiatives that promote financial literacy and financial inclusion.

Preparations for the 2018 CFS.

The BSP will conduct the third CFS in 2018. Preparations for the conduct of the 2018 survey are ongoing, including the adoption of Computer-Assisted Personal Interviewing (CAPI) technology (which is used in similar surveys in other countries) to expedite the data collection and processing of survey results. Data collection and encoding of responses will be done simultaneously with the use of a portable computer during field interviews. The encoded data can be transmitted immediately which will facilitate real-time editing of accomplished questionnaires/encoded data. This will enable survey field supervisors/enumerators to double-check/verify responses in the field to ensure accuracy and completeness of survey response. Consultative workshops with BSP departments and external data users will help identify data requirements on measures of household debt and other indicators that will be incorporated in the CFS questionnaire. Moving forward, the CFS will be conducted every three years to allow comparability with wealth and financial surveys in other countries with similar data collection frequency.

BSP Clean Note and Coin Policy

The BSP issued Circular No. 931, dated 9 December 2016, containing the guidelines on the Clean Note and Coin Policy (CNCP) and approval of the new service fees for banks' deposit and withdrawal transactions.

The BSP circular stipulates the requirement on banks' adoption of a CNCP which shall include the following: (a) bank-wide coverage of the policy; (b) criteria to determine when a note/coin is to be pulled out of circulation; (c) guidelines in ensuring that the life of currency is extended; and (d) deposit and/or exchange on a regular basis of unfit notes/coins with the BSP. BSP Circular No. 931 also lays down the important roles of compliance and internal audit functions of banks in assessing consistent adherence to the CNCP.

The Currency Management Sub-Sector (CMSS) continually reviews the BSP's guidelines that further strengthen banks' compliance with the CNCP. Fitness standards of banknotes are calibrated to reflect best practices and adhere to international standards.

Coin Recirculation

As part of the National Coin Recirculation Program, the BSP continuously conducts PICs to make all sectors of society realize fully the importance of coins and develop the habit of regularly using them in the payment of goods and services and in facilitating exact change in cash transactions. Effective recirculation of coins will lead to less minting cost on the part of the BSP, which may result in a potential increase in the amount of dividends that the BSP will be able to remit to the NG. Ultimately, this will allow the NG to allocate additional resources to build public infrastructures, particularly farm-to-market roads and school buildings, among others.
The CMSS participated in the ASEAN Philatelic Exhibition (ASEANPex) on 4-6 November 2017 at the SMX Convention Center. The backdrop of the booth showcased BSP's currency-related programs, as follows:

- Coin Recirculation Program, which reminds the public of the value of coins and their importance in payments and in giving the exact change, in an effort to encourage the public to recirculate coins;
- Know Your Money Briefings, which aim to discuss the security features of the Philippine banknotes in order to inform the public of the proper identification of genuine banknotes; and
- Clean Note and Coin Policy, which sets the guidelines on the proper handling of fit, unfit, and mutilated currencies.

Investor Relations

The year 2017 was very challenging from an economic communications standpoint. International media reporting on the Philippines was predominantly negative and focused mostly on statements on a range of topics by the President (seen internationally as sensational and controversial), the campaign against illegal drugs, the Marawi siege and declaration of Martial Law in Mindanao, among others. These issues crowded out the coverage of the strong performance of the Philippine economy and the sound socio-economic agenda of the government.

To help dispel apprehensions of international audiences that may have been caused by negative coverage in international media, a more intensive and message-driven international economic communications program was pursued in 2017, in close coordination with the economic agencies.

The economic communications campaign in 2017 focused on highlighting positive economic developments in the Philippines such as sustained strong GDP growth and solid macroeconomic fundamentals, structural changes (investments and manufacturing as leading growth drivers), the government's reform agenda (e.g. Build Build Build Program, Tax Reform for Acceleration and Inclusion or *TRAIN*, campaign against corruption and red tape), the Philippines' competitiveness as an investment destination as well as the vast investment opportunities in the country, and clarifying the independent foreign policy of the government.

The economic communications initiatives included economic briefings in key financial centers abroad, face-to-face meetings with investors and credit rating analysts and officials here and abroad, sit-down, written and phone interviews with international media, production of audio-video presentations, and intensified social media campaign. The said initiatives have contributed in helping international stakeholders see through the noise and focus on the country's strong fundamentals and robust growth prospects.

The BSP also continued to pursue a proactive and strategic program for engaging credit rating agencies (CRAs). Despite domestic challenges and external headwinds, the Philippines secured a one-notch credit-rating upgrade from Fitch Ratings to "BBB", and an outlook change to positive from stable on its "gBBB3(pi)" credit rating from Malaysia's RAM Ratings Services. The Philippines, likewise, maintained the stable outlook on its investment grade credit ratings from other regional and international debt watchers, namely: Rating and Investment Information, Inc. (R&I) (BBB/stable), Japan Credit Rating Agency, Ltd. (JCRA) (BBB+/stable), National Information and Credit Evaluation (NICE) of Korea (BBB/stable), Standard and Poor's (BBB/stable) and Moody's Investors Service (Baa2/stable).

Meanwhile, indications of renewed investor confidence include recovery of both equity (i.e., PSEi closed at 8,558.4 at end-December 2017, up 25.11 percent y-o-y) and foreign direct investments in the latter half of the year (i.e., net FDI inflows in September 2017 reached US$754 million, 61.8 percent higher than the US$466 million recorded in the same period in 2016).

Further, the Board of Investments (BOI) approved ₱616.7 billion investments, the highest in the agency's 50-year history, up by 39.5 percent from the ₱442B recorded in 2016; and 23.5 percent over the ₱500 billion targeted at the start of the year.

Credit Rating Agency Meetings. A total of 195 face-to-face meetings and conference calls were organized during the year to facilitate the annual review of the Philippines' credit profile by regional and international credit-rating agencies (CRAs). In the said meetings, CRA analysts were provided with a better grasp of the strength of the Philippines' credit profile as well as clarification on various issues through comprehensive discussions with the country's economic officials and with private sector talking heads. The BSP and the economic agencies also provided the CRAs with comprehensive economic and financial statistics, information, and updates on the Philippine economy.

Among the CRAs, the BSP's discussions with Fitch led to an upgrade of the positive outlook on the Philippines' "BBB-" rating which had been in place since September 2015. On December 11, Fitch upgraded the Philippines' rating to BBB with stable outlook.

During the meeting with Fitch analysts and officials, the BSP stressed that the Philippine Government is implementing a sound macroeconomic policy framework as it recognizes that sound fiscal and monetary policies that foster macroeconomic stability are crucial to achieving sustained economic growth. As a result of a long history of sound macroeconomic management, the Philippines displays stronger macroeconomic performance compared to the "BBB" and even "A" medians. The BSP as well as other economic officials also argued that the economy has been undergoing positive structural transformation with continued expansion in capital formation and manufacturing on the back of steady progress in improving the business environment, strategic infrastructure and human capital investments.

Moreover, the BSP emphasized that the Philippines has built ample buffers over the past few years which made the Philippines less vulnerable to external risks. Finally, BSP and economic officials also highlighted that government continues to pursue meaningful reforms to accelerate fiscal sustainability, strengthen governance and boost competitiveness.

Improved sovereign credit ratings have contributed to the reduction in the borrowing costs not only of the Philippine government but also of Philippine firms, as reflected in the significant compression of the country's CDS[121] level for the past several years.

The BSP also helped the Bureau of the Treasury in the initial due diligence meetings with a Chinese credit rating agency and in providing data that the agency needs for assigning its debut rating on the Philippines in preparation for the Panda bond issuance of the Republic.

[121] Financial markets' assessment of the credit worthiness of a country is reflected in credit default swap (CDS) levels. The CDS level is the risk premia paid by an investor for a given fixed income security. A lower CDS level indicates lower credit risk.

Investor meetings. A total of 64 investor meetings were arranged in 2017 where analysts, economists, and/or clients of investment banks and asset management companies get updated about developments in the Philippine economy through discussions with officials from various economic agencies of the Philippine government. Among the investor meetings arranged were those for HSBC, Goldman Sachs, Morgan Stanley, Alliance Bernstein, Citi, Barclays, CDPQ, Credit Suisse, Nomura, Norges Bank, and Qatar Investment Authority.

Media Interviews. A total of 63 media interviews with the country's economic officials, mostly from the BSP and the Department of Finance, led by former BSP Governor Amando M. Tetangco, Jr., BSP Governor Nestor Espenilla, Jr., BSP Deputy Governor Diwa Guinigundo, Finance Secretary Carlos Dominguez III, and AMLC Secretariat Executive Director Mel Georgie Racela were arranged and facilitated by the IRO. The IRO also arranged interviews with economic officials at the sidelines of the ASEAN Finance Ministers' Investor Seminar (AFMIS) in Cebu and the launch event of the Philippines Hosting of ADB Annual Meeting 2018 during the ADB Annual Meeting 2017 in Yokohama, Japan.

Audio Video Presentations. The IRO produced 4 audio-video presentations on the Philippine economy that were shown in the following events: ASEAN Finance Ministers Meeting held in Cebu in April (1 AVP), ADB Annual Meetings held in Yokohama, Japan in April (2 AVPs), and Sulong Conference (1 AVP) held in Manila in August. The AVPs were meant to reinforce messages about the strong growth prospects and competitive advantages of the Philippine economy.

Assistance in High-Profile Conferences. The IRO provided logistics- and communications-related assistance for the following events: (a) ASEAN

Finance Ministers' Investor Seminar (AFMIS) held in Cebu in April; (b) Country Event at the sidelines of the ADB Annual Meetings held in Yokohama, Japan in May; (c) Philippine Economic Briefing (PEB) held in Singapore in August; (d) PEB in Japan in September; (e) PEB in China in September, (f) PEB in the United States in October; and (g) in the Financial Infrastructure Development Network (FIDN) Conference held in Manila in November.

The events, though with varying objectives, all helped send out messages about the strengths of the Philippine economy to various stakeholders.

Social Media. The BSP, through its Investor Relations Office (IRO), continued to maintain its website (www.iro.ph) and social media accounts (#EconomyPH on Facebook and Twitter), which are vital in promoting the strengths of the Philippine economy.

The IRO was able to increase its social media reach through posts of various economic updates, led by regular statistics and press releases issued by economic agencies, as well as of info graphics and positive news about the Philippine economy that the IRO deemed interesting to readers, the IRO was able to increase its social media reach. The IRO now has close to 1,325 followers on Twitter, up by 331 from the end-2016 figure of 994. Also, the IRO now has over 4,653 likers on Facebook, up by 153 from the end-2016 figure of 4,500.

Press Releases. The IRO issued a total of 12 press releases during the year, mostly about developments in the country's credit ratings and on international non-deal roadshows conducted by the Philippine economic managers. The press statements, released both to members of the local and international media, helped send out messages about the Philippine economy to international stakeholders, and helped promote the Philippines as an investment destination.

Speeches. The IRO also helped draft speeches for select speaking engagements of the BSP Governor. In 2017, it drafted acceptance speeches for former BSP Governor Amando M. Tetangco, Jr. for his Lifetime Leadership Award by Arangkada given to him in November and for his Lifetime Leadership Award by The Asian Banker given to him in June in Singapore.

The IRO likewise helped draft speeches of the BSP Governor Nestor A. Espenilla, Jr. for his speaking engagements for Deutsche Bank's Philippine Investor Conference held in October and for Euromoney's Philippines Investment Forum in November as well as helped draft the Governor's speaking notes for his presentations in the Republic's series of international roadshows, held in Singapore in August, Japan and China in September, and the United States in October.

Investor Presentation and Other Collaterals. The IRO regularly updates its investor presentation which highlights recent economic developments, government's reform agenda and policy thrusts. These were either printed or saved in customized flash drives along with other reference materials on the Philippine economy, i.e. Philippine Development Plan 2017-2022, *Ambisyon Natin 2040*, 2017 Philippines Investment Priorities Plan and were distributed to credit rating analysts, investors and other stakeholders during IR events. The IRO also prepared briefers for BSP officials and the economic managers for all IRO-arranged meetings.

Strengthening Governance

Strengthening good governance is one of the priority programs of the BSP. The Phase III of the "Strengthening Good Governance in the BSP Project", which was concluded in January 2017, was undertaken in collaboration with the Development Academy of the Philippines (DAP).

The five governance principles of integrity; accountability and transparency; ownership and voice; strategic direction; and responsiveness were noted to be imbedded in our systems and work ethics. By the end of Governor Tetangco's term, the BSP reached the highest level of integration for two of the five governance principles namely, accountability and transparency as well as strategic direction. The other three governance principles were rated to be at the second highest level of integration at "Sustainable" level.

Embracing the belief that good governance is everyone's business is not new to Governor Espenilla, who was the strategic theme leader for Good Governance of the 2012-2017 BSP Strategy. Among the notable institutional transformations as a result of program implementation on Good Governance were the adoption of a standard Project Management (PM) Methodology and a PM Portal, enhanced BSP Code of Ethics, the launch of the BSP Employees' Charter, integration of Customer Satisfaction Measurement tools, adoption of a policy on disclosure of wrongdoing, development of guidelines for signature reduction program, and implementation of the BSP Enterprise-Wide Communication (BSP-EWC) Plan. Along with the 2017 System-wide Governance Assessment (SGA) Report is the Governance Initiatives Roadmap for 2017-2019 which incorporates the key recommendations per principle that will ensure commitment to operationalize good governance into projects and programs.

Institutional Capacity Building

The fiscal year 2017 closed with a positive level of confidence relative to the BSP's initiatives in sustaining its capacity in terms of knowledge, skills, technologies, policies, and programs and with much to anticipate in the coming years. This means that the Bank continues to deliver on its organizational readiness strategy by ensuring that it has the right talent placed at the right position and at the right time.

Such strategy is carried out under the five main objectives of the Human Resource Sub-sector (HRSs), guided by its Human Capital Management Framework.

Talent acquisition. In order to keep the business running, the BSP ensures that it has the adequate manpower complement at any given time. The filling of vacancies has been maintained at a 20-working day efficiency fill rate from the average of 75 in 2014, 29 in 2016 and 37 in 2017. This is primarily due to the full ownership and support from the departments and offices through its submission of their respective Annual Manpower Plans (AMP), the institutionalization of the accounts-based approach of the Human Resource Management Department (HRMD), and the continued collaboration with administrative officers at the Main Complex, Security Plant Complex, and the Regional Offices and Branches.

The BSP has also harvested a good number of potential employees from job fairs for positions in the Security, Investigation, and Transport Department at the Main Complex and the Regional Offices and Branches, in the Office of Systemic Risk Management, and in the Information Technology Sub-sector. To expedite the recruitment process, the BSP has simultaneously administered pre-employment tests during these job fairs.

Talent succession. Filling of vacancies also has to be continuously prioritized, and the BSP has drawn utmost attention toward the positions held by key and critical positions (KCPs) - its leaders and executives. In 2017, the earlier established time frame for KCP filling has improved from four months in 2015 and two months in 2016 to only 1.5 months in 2017.

Focus has also been made on the implementation of various initiatives to prepare potential successors to take on higher roles and responsibilities. The Bangko Sentral ng Pilipinas Institute's (BSPI) Management Development Program (MDP) Accelerated Track paved the way for 49 potential successors to complete the required five modules. Whereas, the MDP Regular Track, which addresses long-term leadership requirements of the Bank, recorded a high of 338 participants.

The MDP is well-complemented by the Mentoring Program (MP) and Job Shadowing Program of BSP through the Human Resource Development Department (HRDD), which have been successfully participated by 14 and 22 potential successors, respectively. To date, the MP BSP has 135 mentees and 18 mentors enrolled, sustained through their respective schedules of mentoring sessions and quarterly touch-base meetings or learning sessions for all MP BSP participants.

To ensure that the leadership pipeline of the Bank is agile, the BSP has crafted its Talent Optimization Program to commence in January 2018 that is designed for managers and leaders, aimed at nurturing their holistic or multi-discipline capacities and managerial and leadership competencies by means of inter-sector job rotation.

Talent development. To address the knowledge and skills of the entire workforce, the BSPI has ensured that training requirements, as identified in Individual Development Plans, have been 100 percent complied with. So that our employees are guided in their development journey, the Management also approved the curriculum for each of the total of 25 job families or occupational groupings in BSP for full implementation starting First Quarter of 2018.

The courses thereunder are dynamically changing in terms of content, based on the findings of the Assessment of Bankwide Competencies which was completed in February 2017 and serving as a baseline data of the competency levels of BSP employees from Job Levels 1 to 6. These training courses were harmonized with workplace development interventions, certifications, and other activities through the development of a Capacity Building Program (CBP) for each job family as approved by Management in the Third Quarter of 2017. As of end 2017, 20 percent have already been completed.

In view of promoting academic advancement and expanded learning, the Monetary Board also approved in 2017 under Resolution Numbers 1764 and 1674 the BSP Scholarship and Continuing Professional Education Program and the Workplace Development Interventions-External, respectively. Moreover, the BSPI remains in technical assistance to departments and offices as regards earning Global Certification Programs for BSP employees based on industry and global standards. In 2017 alone, seven employees have been authorized, two of whom have already been certified.

Talent retention. The Organizational Climate Survey (OCS) for 2017, whose turnout was 83 percent (or 4,278) of the total BSP population, reported that Employee Engagement remains to be the highest-rated facet since 2012. The other facets featured in the OCS have also been rated positively resulting in a 4.9 overall mean score compared with 4.9, 4.9, and 4.8 in 2014, 2013, and 2012, respectively. The other facets are Structure, Teamwork, Management style, Communication, Performance Management, Rewards comprising Growth and Development, Financial Security, and Recognition, Diversity, and Work-Life Balance. This can mean that the Bank's initiatives are perceived to result in high engagement or satisfaction at work.

Accordingly, HRMD carried out certain activities that support talent retention such as implementation of the guidelines on the BSP Severance Package, enhancement of the Grant of the Motor Vehicle-Lease Purchase Plan vis-à-vis national tax amendments, and the revision of the grant of Performance Salary Review. The foregoing and other similar initiatives are for revisit and improvement in 2018.

These rewards-oriented activities are complemented by HRMD's Wellness programs such as the institutionalization of regular fitness exercises at the Main Complex, Security Plant Complex and Regional Offices and Branches, Wellness Festivals, and lactation rooms, among others. In line with the nationwide Gender and Development advocacy, HRMD facilitated the conduct of a series of learning sessions on Sexual Orientation, Gender Identity, and Expression to address the facet Diversity. These are alongside HRMD's continued assistance to employees on certain benefits and other programs and advocacies in the Bank.

Moreover, the BSP ensures through the Health Services Office (HSO) that employees are at their best of health at work. The MB approved in its Resolution No. 1323 dated 03 August 2017 certain enhancements to the BSP Hospitalization, Medical, and Dental Privileges Plan which highlighted, among others, the increase of ceiling rates and combination of existing quotas on selected services, which would result in minimized personal claim disallowances. The HSO facilitated around 150 health information sessions and accomplished targeted programs on immunization, weight management, diabetes and hypertension prevention, and kidney care for 5,258 participating personnel in 2017 alone.

Knowledge management. To ensure that employees possess the sufficient knowledge of the BSP's processes, policies, and programs in order to aid them in the discharge of their duties and responsibilities, the Knowledge Management Group (KMG) carries out initiatives in embedding the KM culture in the BSP and strengthening its data governance activities.

KMG recorded a high number of access to the BSP portal (*iKnow*)—an average of 4,578 visitors in 2017 with an average page views of 2.4 per visitor. KMG also provided 100 percent timely technical support to around 158 employee queries and other concerns, of which 38 were tagged as complex. Information sessions and other promotional collaterals and communications on data privacy, Communities of Practice, records management, data classification, and KM operationalization as a whole have also been pursued at the Main Complex, Security Plant Complex, and the Regional Offices and Branches.

Furthermore, the Head of the KMG was designated in May 2017 as the Lead Data Protection Officer of the Bank in compliance with the Data Privacy Act of 2012 and with the other issuances of the National Privacy Commission on personal data protection. KMG spearheaded the provision of guidance on data privacy risk assessment, inventoried around 279 pertinent programs, processes, and measures, and formulated 80 percent of the BSP's Privacy Management Program, among others.

Leadership and recognition. The BSP through its Human Resources Sub-sector has been recognized by the Civil Service Commission (CSC) in March 2017 as the sole government institution to have reached the status "Strategic HR" with the highest Maturity Level (Level 4) under the Commission's Program to Institutionalize Meritocracy and Excellence in Human Resource Management on all of the four core HR areas of 1. Recruitment, Selection, and Placement (RSP); 2. Performance Management (PM); 3. Learning and Development (L&D); and 4. Rewards and Recognition (R&R).

Subject to final validation in 2018, the BSP, if conferred the ultimate Seal of Excellence Award, shall, among others, enjoy autonomy on certain HR processes, and serve as a major decision-maker or policy-maker on Philippine civil service and as a benchmark institution primarily for government agencies and bodies.

The major factor which contributed to the earning of the Strategic HR epithet has been the practice of People Analytics which means that HR decisions, actions, policies, and programs are based on valid and reliable data. This scientific approach through the creation and operationalization of the People Information Management and Analytics Group (PIMAG), resulted in various findings and recommendations on people management such as personnel statistics, attendance, educational attainment analysis, gender and age analysis, salary analysis and new performance bonus system, and performance analysis to Management in 2017. PIMAG spearheaded the implementation of 13 modules in view of the integrated HR Information System (iHRIS) Project which will consolidate all HR systems and strengthen their linkages and streamline processes. The full-blast implementation of iHRIS will be in the second quarter of 2018. Aside from Analytics and Data Management, PIMAG also serves as the frontrunner of Data Governance. It issued the Principles, Roles and Responsibilities, and Guidelines on Data Governance in the HRSs and communicated the same to strengthen data governance and data stewardship.

People Analytics, together with BSP's competency-based HR system have been featured as foundations of the various HR areas of the Bank. Of these HR areas, the CSC duly noted the best practices that led to a Strategic HR Level, as follows: (On RSP) Strategic recruitment initiatives such as AMP submissions, job fairs, targeted executive search, corporate conventions, e-recruitment or online application and interview process, and onboarding framework; (On PM) Competency-based and Feedback-oriented activities, and performance-based incentives; (On L&D) Development of curriculum for all job families, integration of training programs and workplace development interventions, offering of scholarship of certification programs, and institutionalization of the Mentoring Program; and (On R&R) Establishment of monetary and non-monetary rewards for employees, and annual recognition of high-performing departments and individual employees. Certain reinforcing attributes were also accounted for such as a consistently healthy workplace as recognized by the Department of Health, HR's responsiveness through feedback management systems, and the participation of employees in decision-making activities through the BSP Employees Association, Inc.

The HRSs has served as a subject matter expert to various benchmarking institutions such as the Nepal Rastra Bank on People Analytics, State Bank of Pakistan on Knowledge Management, and around 50 government agencies in the Philippines and other local firms on various HR areas, especially RSP, PM, L&D, and R&R. The HRSs through BSPI also facilitated learning requests on other central banking functions. In 2017, five study visits from foreign central banks were accommodated on the areas of monetary policy, gold operations, financial reporting standards, and facility and security design and mechanisms.

Awards and Commendations

Awards given to the BSP. In 2017, the BSP was named *The Best Macroeconomic Regulator in the Asia Pacific Region* by The Asian Banker's Regulation and Supervision Awards. This is the third time that such citation was given to the BSP with the first two citations given in 2016 and 2013.

In the same year, the BSP's campaign on the demonetization of the Old Banknote Series became Best Communications Program Finalist in the 2017 Excellence in Currency Awards of the International Association of Currency Affairs (IACA). Introduced in 2007, the Currency Awards promote and recognize excellence in banknote and coin production, processing, management and distribution.

Also, the Civil Service Commission (CSC) awarded the BSP a certificate of recognition for being the only government institution that reached the highest maturity (Level 4) for all core HR areas under the CSC's Program to Institutionalize Meritocracy and Excellence in the Human Resource Management (PRIME-HRM). BSP is also PRIME-HRM's first awardee since its establishment in 2012.

By June 2017, 91 percent of the BSP offices were ISO-certified. Moreover, in October 2017, the BSP received a plaque of recognition from the Association of Government Internal Auditors for winning the search for government offices with innovations and/or best practices in internal auditing for 2017 (under the category of government financial institution/government-owned and -controlled corporation)

Awards given to Governor Amando Tetangco. Former Governor Amando M. Tetangco, Jr., likewise received accolades to his merit. During the same year, he was conferred the 2016 Outstanding Achievement Award by Hong Kong-based publication *FinanceAsia* for his excellent stewardship of the BSP. He also received the "Lifetime Leadership Achievement Award" from *The Asian Banker*. The Singapore-based financial publication cited the remarkable contributions of the Bangko Sentral to the country's financial services industry and the economy under Governor Tetangco's leadership. The awards were given during ceremonies held at the Asian Civilizations Museum in Singapore on 8 June 2017.

BSP Financial Results

The BSP's Balance Sheet. The BSP's total assets as of end-December 2017 was ₱4,666.6 billion, higher than the year-ago level of ₱4,559.1 billion. The BSP's assets were composed mainly of international reserves amounting to ₱4,056.6 billion[122] (U$81.6 billion) as of end-December 2017, higher than the year-ago balance of ₱3,998.0 billion (U$80.7 billion). The bulk or 80.7 percent of international reserves were composed largely of foreign investments and about 10.2 percent were in gold holdings.

Table 1. Balance Sheet of the BSP
in billion pesos

	2017 Dec [p]	2016 Dec [a]
Assets	4,666.6	4,559.1
Liabilities	4,586.2	4,500.7
Net Worth	80.5	58.4

Note: Details may not add up to total due to rounding.
[p] Based on the preliminary and unaudited balance sheet as of end-December 2017.
[a] Audited but subject to restatement.

As of end-December 2017, the BSP's liabilities amounted to ₱4,586.2 billion, comprised mostly of deposits and currency issues. This amount was above the previous year's level of ₱4,500.7 billion owing mainly to the rise in the level of currency issuances during the year. This was partially offset by lower placements in overnight and term deposit facilities.

Operating Profit. Based on unaudited data, the BSP registered a net income of ₱22.8 billion for the year 2017. Net income was composed primarily of higher income on international reserves, recording

[122] The amount in peso of the International Reserves reported in the Balance Sheet of the BSP excludes the reserve tranche position with the IMF.

of demonetization income and supported by lower interest expenses.

Table 2. Income Statement of the BSP
in billion pesos

	2017 Dec [p]	2016 Dec [a]
Revenues	75.622	69.991
Less: Expenses	66.871	71.194
Net Income/(Loss) Before Gain/(Loss) on FXR Fluctuations and Income Tax Expense/(Benefit)	8.751	(1.203)
Gain/(Loss) on Foreign Exchange Rate Fluctuation	15.478	19.124
Income Tax Expense/(Benefit)	1.384	0.107
Net Income/(Loss) After Tax	22.845	17.814

Note: Details may not add up to total due to rounding.
[p] Based on the preliminary and unaudited income statement as of end-December 2017.
[a] Audited but subject to restatement.

Total revenues for 2017 amounted to ₱75.6 billion, higher than the ₱70.0 billion posted in the previous year. The growth in total revenues was due mainly to the increase in miscellaneous income and interest income on international reserves and domestic securities.

Total expenditures amounted to ₱66.9 billion, lower than the ₱71.2 billion posted last year. The y-o-y decrease in expenditures was due mainly to the drop in interest expense on overnight deposit facilities and reverse repurchase agreements.

Statistical Annexes

List of Tables

1 GROSS NATIONAL INCOME (GNI) AND GROSS DOMESTIC PRODUCT (GDP) BY INDUSTRIAL ORIGIN

for periods indicated

	LEVELS (in million pesos; at constant 2000 prices)		
	2015	2016	2017
Agriculture, Hunting, Forestry and Fishing	719,742	710,510	738,491
Industry Sector	2,545,411	2,758,346	2,958,187
Mining and Quarrying	80,500	83,112	84,691
Manufacturing	1,760,989	1,884,320	2,045,517
Construction	456,932	519,697	547,995
Electricity, Gas and Water Supply	246,990	271,218	279,985
Services Sector	4,335,022	4,657,547	4,971,610
Transportation, Storage and Communication	581,289	615,583	641,162
Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	1,270,526	1,362,635	1,458,742
Financial Intermediation	546,714	588,169	633,287
Real Estate, Renting and Busines Activities	854,747	930,555	1,000,021
Public Administration and Defense; Compulsory Social Security	297,449	318,900	343,045
Other Services	784,297	841,704	895,354
Gross Domestic Product	**7,600,175**	**8,126,403**	**8,668,287**
Net Primary Income from the Rest of the World	1,543,062	1,630,427	1,721,698
Gross National Income	**9,143,238**	**9,756,831**	**10,389,984**

	PERCENT CHANGE (in percent)		
	2015	2016	2017
Agriculture, Hunting, Forestry and Fishing	0.1	-1.3	3.9
Industry Sector	6.4	8.4	7.2
Mining and Quarrying	-1.5	3.2	1.9
Manufacturing	5.7	7.0	8.6
Construction	11.6	13.7	5.4
Electricity, Gas and Water Supply	5.7	9.8	3.2
Services Sector	6.9	7.4	6.7
Transportation, Storage and Communication	8.0	5.9	4.2
Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	7.1	7.2	7.1
Financial Intermediation	6.1	7.6	7.7
Real Estate, Renting and Busines Activities	7.1	8.9	7.5
Public Administration and Defense; Compulsory Social Security	1.2	7.2	7.6
Other Services	8.3	7.3	6.4
Gross Domestic Product	**6.1**	**6.9**	**6.7**
Net Primary Income from the Rest of the World	4.6	5.7	5.6
Gross National Income	**5.8**	**6.7**	**6.5**

Notes:
(1) 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.
(2) Numbers may not add up due to rounding.
Source of basic data: Philippine Statistics Authority (PSA)

1a GROSS NATIONAL INCOME AND GROSS DOMESTIC PRODUCT BY EXPENDITURE SHARES

for periods indicated

	LEVELS (in million pesos; at constant 2000 prices)		
	2015	2016	2017
Household Final Consumption Expenditure	5,266,632	5,632,776	5,958,500
Government Final Consumption Expenditure	783,955	850,146	912,010
Capital Formation	1,838,432	2,274,792	2,479,583
Fixed Capital	1,800,535	2,254,361	2,486,530
Construction	701,802	807,476	853,683
Durable Equipment	938,733	1,262,541	1,415,953
Breeding Stock & Orchard Development	99,286	102,846	106,271
Intellectual Property Products	60,713	81,498	110,623
Changes in Inventories	37,897	20,431	-6,947
Exports	3,695,428	4,090,137	4,875,653
Less: Imports	3,984,272	4,721,448	5,552,631
Statistical Discrepancy	-20,460	-20,125	-23,606
Gross Domestic Product	**7,600,175**	**8,126,403**	**8,668,287**
Net Primary Income from the Rest of the Wor	1,543,062	1,630,427	1,721,698
Gross National Income	**9,143,238**	**9,756,831**	**10,389,984**

	PERCENT CHANGE (in percent)		
	2015	2016	2017
Household Final Consumption Expenditure	6.3	7.0	5.8
Government Final Consumption Expenditure	7.6	8.4	7.3
Capital Formation	18.4	23.7	9.0
Fixed Capital	16.9	25.2	10.3
Construction	11.0	15.1	5.7
Durable Equipment	23.0	34.5	12.2
Breeding Stock & Orchard Development	2.0	3.6	3.3
Intellectual Property Products	27.6	34.2	35.7
Exports	8.5	10.7	19.2
Less: Imports	14.6	18.5	17.6
Gross Domestic Product	6.1	6.9	6.7
Gross National Income	5.8	6.7	6.5

Notes:
(1) 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.
(2) Numbers may not add up due to rounding.
Source of basic data: Philippine Statistics Authority (PSA)

2 SELECTED LABOR, EMPLOYMENT AND WAGE INDICATORS
for periods indicated

	LEVELS				PERCENT CHANGE (in percent)	
	2015		2016	2017 [p]	2016	2017
	with Leyte	without Leyte	with Leyte	with Leyte	with Leyte	with Leyte
Employment Status [1]						
Labor Force (in thousands)		41,343	43,361	42,777		-1.3
Employed		38,741	40,998	40,335		-1.6
Unemployed		2,602	2,363	2,441		3.3
Underemployed		7,180	7,513	6,506		-13.4
Labor Force Participation Rate (%)		63.7	63.5	61.2		-3.6
Employment Rate (%)		93.7	94.6	94.3		-0.3
Unemployment Rate (%)		6.3	5.4	5.7		4.7
Underemployment Rate (%)		18.5	18.3	16.1		-12.0
Overseas Employment [2] (Deployed, in thousands)	1,844		2,112		14.5	
Land-based	1,438		1,670		16.1	
Sea-based	407		443		8.9	
Strikes						
Number of New Strikes	5		15	9 [a]	200.0	
Number of Workers Involved	730		3,106	1,479 [a]	325.5	
Legislated Wage Rates [3]						
In Nominal Terms (in pesos)						
Non-Agricultural						
National Capital Region (NCR)	481.00		491.00	512.00	2.1	4.3
Regions Outside NCR (ONCR)	362.50		378.50	380.00	4.4	0.4
Agricultural						
NCR						
Plantation	444.00		454.00	475.00	2.3	4.6
Non-Plantation	444.00		454.00	475.00	2.3	4.6
ONCR						
Plantation	337.50		353.50	353.50	4.7	0.0
Non-Plantation	335.00		335.00	348.00	0.0	3.9
In Real Terms [4] (in pesos), at 2006 prices						
Non-Agricultural						
NCR	363.84		361.56	360.31	-0.6	-0.3
Regions Outside NCR	257.82		265.24	251.16	2.9	-5.3
Agricultural						
NCR						
Plantation	335.85		334.32	334.27	-0.5	0.0
Non-Plantation	335.85		334.32	334.27	-0.5	0.0
ONCR						
Plantation	240.04		247.72	240.64	3.2	-2.9
Non-Plantation	229.45		223.48	224.66	-2.6	0.5

[1] Starting April 2016 round, the Labor Force Survey (LFS) adopted the 2013 Master Sample Design, with a sample size of approximately 44,000 households as well as the population projections based on the 2010 Census of Population and Housing (CPH). Meanwhile, previous survey rounds were derived using 2000 CPH population projection. Starting January 2017 round, Computer-Aided Personal Interviewing (CAPI) using tablet was utilized in the LFS enumeration.
[2] Details may not add up due to rounding.
[3] Source of data for both nominal and real wage rates is the National Wages and Productivity Commission and includes basic minimum wage and cost of living allowance (COLA). Starting 2006, annual average/total is as of December.
[4] Starting 10 November 1990, adjustments in the minimum legislated wage rates are being determined by the Regional Tripartite Wages Productivity Board. Starting 2010, real terms is computed using 2006 as base year.
[5] Annual 2014 data refer to the average estimates for April, July and October survey rounds only excluding data of the province of Leyte.
[6] Data covers January to November 2017.
[p] Preliminary
Sources of data: Philippine Overseas Employment Administration (POEA), National Wages and Productivity Commission (NWPC), National Conciliation and Mediation Board (NCMB) and Philippine Statistics Authority (PSA)

3 CONSUMER PRICE INDEX (CPI) IN THE PHILIPPINES, NATIONAL CAPITAL REGION (NCR) AND AREAS OUTSIDE THE NATIONAL CAPITAL REGION (AONCR)

for periods indicated; 2006=100

COMMODITY GROUP	PHILIPPINES			NCR			AONCR		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
All Items	**141.5**	**144.0**	**148.6**	**131.8**	**133.4**	**138.7**	**144.6**	**147.4**	**151.7**
Food, and Non-Alcoholic Beverages	157.3	161.2	167.1	148.1	153.5	161.8	159.2	162.9	168.2
Food Items	159.2	163.3	169.5	150.0	155.6	164.5	161.1	164.9	170.5
Alcoholic Beverages, Tobacco and Narcotics	182.4	192.8	204.8	156.0	162.1	174.7	187.7	198.9	210.8
Non-Food	129.8	131.0	134.5	124.7	124.6	128.6	131.8	133.6	136.8
Clothing and Footwear	136.3	139.5	142.6	141.5	145.0	148.9	134.5	137.7	140.6
Housing, Water, Electricity, Gas and Other Fuels	129.1	128.9	133.0	123.1	120.9	124.2	131.8	132.5	137.0
Furnishings, Household Equipment and Routing Maintenance of the House	130.9	133.4	136.2	126.4	127.7	130.5	132.5	135.4	138.2
Health	139.3	142.6	146.0	146.2	148.1	152.3	137.4	141.1	144.3
Transport	127.6	128.0	132.2	116.8	116.3	124.2	130.9	131.6	134.8
Communication	92.7	92.8	93.0	94.2	94.4	95.1	91.9	92.0	92.1
Recreation and Culture	115.3	117.1	118.9	119.5	122.9	126.4	113.9	115.0	116.2
Education	155.8	159.8	163.1	159.5	165.5	169.0	154.7	158.1	161.4
Restaurants and Miscellaneous Goods and Services	130.2	132.9	135.8	123.5	124.8	129.2	133.1	136.4	138.6

COMMODITY GROUP	PERCENT CHANGE (in percent)								
	PHILIPPINES			NCR			AONCR		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
All Items	**1.4**	**1.8**	**3.2**	**1.0**	**1.2**	**4.0**	**1.5**	**1.9**	**2.9**
Food, and Non-Alcoholic Beverages	2.5	2.5	3.7	2.2	3.6	5.4	2.6	2.3	3.3
Food Items	2.6	2.6	3.8	2.4	3.7	5.7	2.6	2.4	3.4
Alcoholic Beverages, Tobacco and Narcotics	3.8	5.7	6.2	2.2	3.9	7.8	4.1	6.0	6.0
Non-Food	0.5	0.9	2.7	0.4	-0.1	3.2	0.5	1.4	2.4
Clothing and Footwear	2.6	2.3	2.2	3.0	2.5	2.7	2.4	2.4	2.1
Housing, Water, Electricity, Gas and Other Fuels	-1.3	-0.2	3.2	-1.5	-1.8	2.7	-1.1	0.5	3.4
Furnishings, Household Equipment and Routing Maintenance of the House	1.9	1.9	2.1	1.0	1.0	2.2	2.2	2.2	2.1
Health	2.1	2.4	2.4	3.1	1.3	2.8	1.8	2.7	2.3
Transport	-0.1	0.3	3.3	1.5	-0.4	6.8	-0.5	0.5	2.4
Communication	0.0	0.1	0.2	0.1	0.2	0.7	-0.2	0.1	0.1
Recreation and Culture	1.1	1.6	1.5	2.1	2.8	2.8	0.8	1.0	1.0
Education	4.2	2.6	2.1	5.6	3.8	2.1	3.8	2.2	2.1
Restaurants and Miscellaneous Goods and Services	1.3	2.1	2.2	0.7	1.1	3.5	1.6	2.5	1.6

Source of basic data: Philippine Statistics Authority (PSA)

4 CASH OPERATIONS OF THE NATIONAL GOVERNMENT
for periods indicated

	LEVELS (in million pesos)			ANNUAL CHANGE (in percent)		
	2015	2016	2017	2015	2016	2017
Revenues	**2,108,956**	**2,195,914**	**2,473,132**	**10.5**	**4.1**	**12.6**
Tax Revenues	1,815,475	1,980,390	2,250,678	5.6	9.1	13.6
Bureau of Internal Revenue	1,433,302	1,567,214	1,772,321	7.4	9.3	13.1
Bureau of Customs	367,534	396,365	458,184	-0.5	7.8	15.6
Other Offices	14,639	16,811	20,173	-2.1	14.8	20.0
Non-Tax Revenues	293,481	215,524	222,454	**54.8**	**-26.6**	**3.2**
of which: Bureau of the Treasury	110,035	101,737	99,905	17.8	-7.5	-1.8
Expenditures	**2,230,645**	**2,549,336**	**2,823,769**	**12.6**	**14.3**	**10.8**
of which:						
Allotments to Local Government Units	387,559	449,776	530,150	12.6	16.1	17.9
Interest Payments	309,364	304,454	310,541	-3.7	-1.6	2.0
Equity and Net lending	10,463	26,979	1,121	-30.9	157.9	-95.8
Surplus/Deficit (-)	**-121,689**	**-353,422**	**-350,637**	**-66.5**	**-190.4**	**0.8**
Financing	**92,851**	**220,938**	**663,929**	**-47.0**	**137.9**	**200.5**
External Borrowings (net)	64,782	-24,113	27,569	415.3	-137.2	214.3
Domestic Borrowings (net)	28,069	245,051	636,360	-82.7	773.0	159.7
Total Change in Cash: Deposit/Withdrawal (-)	**-1,580**	**-257,654**	**255,403**	**-104.2**	**-16,207.2**	**199.1**
Budgetary	-28,838	-132,484	313,292	-128.2	-359.4	336.5
Non-Budgetary [1]	27,258	-125,170	-57,889	142.4	-559.2	53.8

[1] Refers to accounts not included in the NG budget, e.g., sale, purchase or redemption of government securities, but included in the cash operations report to show the complete relationship in the movements of the cash accounts.

Source: Bureau of the Treasury (BTr)

5 DEPOSITORY CORPORATIONS SURVEY [1]
as of periods indicated

	LEVELS (in million pesos)			GROWTH RATES (in percent)		
	Dec 2015	Dec 2016	Dec 2017	Dec 2015	Dec 2016	Dec 2017
I. NET FOREIGN ASSETS	**3,998,783**	**4,309,018**	**4,403,150**	**6.6**	**7.8**	**2.2**
A. Monetary Authorities	3,762,845	3,946,631	4,003,568	7.1	4.9	1.4
Claims on Non-Residents	3,837,264	4,023,829	4,084,675	7.0	4.9	1.5
Less: Liabilities to Non-Residents	74,419	77,198	81,107	1.9	3.7	5.1
B. Other Depository Corporation	235,938	362,387	399,582	-0.8	53.6	10.3
Claims on Non-Residents	1,023,852	1,211,638	1,295,958	-0.5	18.3	7.0
Less: Liabilities to Non-Residents	787,913	849,251	896,376	-0.4	7.8	5.5
II. DOMESTIC CLAIMS	**7,861,026**	**9,199,882**	**10,457,773**	**11.5**	**17.0**	**13.7**
A. Net Claims on Central Government	1,261,692	1,603,047	1,634,989	12.7	27.1	2.0
Claims on Central Government	1,992,572	2,097,032	2,399,794	7.0	5.2	14.4
Less: Liabilities to Central Government	730,880	493,985	764,805	-1.7	-32.4	54.8
B. Claims on Other Sectors	6,599,334	7,596,834	8,822,785	11.2	15.1	16.1
Claims on Other Financial Corporations	680,481	770,783	925,037	8.0	13.3	20.0
Claims on State and Local Government	76,635	82,833	81,009	7.2	8.1	-2.2
Claims on Public Non-Financial Corporations	277,971	256,796	284,606	3.2	-7.6	10.8
Claims on Private Sector	5,564,247	6,486,423	7,532,133	12.1	16.6	16.1
III. LIQUIDITY AGGREGATES						
M4 (M3 + III.E)	9,888,718	11,214,561	12,488,008	9.3	13.4	11.4
M3 (M2 + III.D) [2]	8,429,929	9,505,978	10,637,427	9.4	12.8	11.9
M2 (M1 + III.C)	8,067,273	9,140,446	10,211,341	9.1	13.3	11.7
M1 (3.a + III.B)	2,667,609	3,069,459	3,562,323	15.2	15.1	16.1
A. Currency Outside Depository Corporations (Currency in Circulation)	791,431	920,954	1,059,226	10.9	16.4	15.0
B. Transferable Deposits Included in Broad Money (Demand Deposits)	1,876,179	2,148,505	2,503,096	17.1	14.5	16.5
C. Other Deposits Included in Broad Money (Quasi-Money)	5,399,663	6,070,987	6,649,019	6.3	12.4	9.5
1. Savings Deposits	3,586,873	4,100,820	4,407,138	12.4	14.3	7.5
2. Time Deposits	1,812,790	1,970,167	2,241,881	-4.0	8.7	13.8
D. Securities Other than Shares Included in Broad Money (Deposit Substitutes)	362,656	365,532	426,085	17.9	0.8	16.6
E. Transferable and Other Deposits in Foreign Currency (FCDs-Residents)	1,458,789	1,708,583	1,850,581	8.3	17.1	8.3
IV. LIABILITIES EXCLUDED FROM BROAD MONEY	**1,971,092**	**2,294,339**	**2,372,915**	**12.4**	**16.4**	**3.4**

[1] Based on the Standardized Report Forms (SRFs), a unified framework for reporting monetary and financial statistics to the International Monetary Fund (IMF).
[2] May also be derived as Net Foreign Assets + Domestic Claims, net of Liabilities Excluded from Broad Money and Transferable and Other Deposits in Foregn Currency (FCDs-Residents)
[p] preliminary
Source: Bangko Sentral ng Pilipinas (BSP)

6 SELECTED DOMESTIC INTEREST RATES [1]

for periods indicated; in percent per annum

	NOMINAL INTEREST RATES			REAL INTEREST RATES [8]		
	2015	2016	2017	2015	2016	2017
Borrowing Rates of Banks						
Interbank Call Loans	2.526	2.525	2.730	1.126	0.725	-0.470
Savings Deposits [2]	0.710	0.720	0.685	-0.690	-1.080	-2.515
Time Deposits (All Maturities) [2]	1.496	1.541	1.807	0.096	-0.259	-1.393
Lending Rates						
All Maturities [3]	5.580	5.642	5.630	4.180	3.842	2.430
High [4]	6.877	6.671	6.492	5.477	4.871	3.292
Low [5]	4.470	4.300	4.137	3.070	2.500	0.937
Bangko Sentral Rates [6]						
Overnight Lending Rates (OLF)	...	..	..	...	..	..
RR/P (Overnight)	4.000	3.417	3.000	2.600	1.617	-0.200
Overnight Deposit Facility (ODF)	...	2.500	2.500	...	0.700	-0.700
Term Deposit Auction Facility (TDF)						
7-day	...	2.661	3.234	...	0.861	0.034
28-day	...	2.761	3.446	...	0.961	0.246
Rediscounting	4.079	3.839	3.443	2.679	2.039	0.243
Rates on Government Securities						
Treasury Bills (All Maturities)	1.894	1.595	2.449	0.494	-0.205	-0.751
91-day	1.772	1.500	2.147	0.372	-0.300	-1.053
182-day	1.924	1.583	2.502	0.524	-0.217	-0.698
364-day	2.077	1.761	2.879	0.677	-0.039	-0.321
Government Securities in the Secondary Market [7]						
3-month	2.667	2.076	2.432	1.167	-0.525	-0.868
6-month	2.918	2.946	3.308	1.418	0.346	0.008
1-year	2.371	2.452	3.032	0.871	-0.148	-0.268
2-year	3.985	3.868	3.986	2.485	1.268	0.686
3-year	3.663	3.517	4.298	2.163	0.917	0.998
4-year	3.875	3.881	4.921	2.375	1.281	1.621
5-year	3.925	4.743	4.744	2.425	2.143	1.444
7-year	4.585	4.886	5.328	3.085	2.286	2.028
10-year	4.100	4.628	5.699	2.600	2.028	2.399
20-year	5.522	5.377	5.704	4.022	2.777	2.404
25-year	4.892	..	..	3.392	..	..

[1] All figures are weighted average rates, unless stated otherwise

[2] Covers all commercial banks

[3] Ratio of all commercial banks' total interest incomes to their total outstanding peso-denominated loans

[4] Refers to the average of all highs quoted by reporting commercial banks

[5] Refers to the average of all lows quoted by reporting commercial banks

[6] Beginning 3 June 2016, the BSP shifted its monetary operations to an interest rate corridor (IRC) system. The repurchase (RP) and Special Deposit Account (SDA) windows were replaced by standing overnight lending and overnight deposit facilities, respectively. The reverse repurchase (RRP) facility was modified to a purely overnight RRP. In addition, the term deposit facility (TDF) will serve as the main tool for absorbing liquidity. Starting 3 June 2016, the interest rates for these facilities were set as follows: 3.5 percent in the OLF (a reduction from 6.0 percent); 3.0 percent in the overnight RRP rate (an adjustment from 4.0 percent); and 2.5 percent in the ODF (no change from the current SDA rate). The OLF and ODF will serve as upper and lower bound, respectively, of the IRC system.

[7] End-of-Period; beginning 2015, data refers to PDST-R2 while those for earlier periods refers to PDST-F.

[8] Nominal interest rate less inflation rate

.. No Transaction/No Quotation/No Issue

... Blank

Source: BSP

7 CROSS RATES OF THE PESO

period averages; pesos per unit of foreign currency

	2015	2016	2017
US Dollar	45.5028	47.4925	50.4037
Japanese Yen	0.3760	0.4375	0.4495
Pound Sterling	69.5888	64.3793	64.9706
Hongkong Dollar	5.8697	6.1185	6.4686
Swiss Franc	47.3197	48.2201	51.2195
Canadian Dollar	35.6520	35.8617	38.8850
Singapore Dollar	33.1266	34.4082	36.5254
Australian Dollar	34.2412	35.3147	38.6418
Bahrain Dollar	120.7585	126.0707	133.7434
Saudi Rial	12.1317	12.6651	13.4412
Brunei Dollar	33.0064	34.2839	36.3935
Indo Rupiah	0.0034	0.0036	0.0038
Thai Baht	1.3308	1.3461	1.4866
UAE Dirham	12.3892	12.9315	13.7244
Euro	50.5291	52.5568	56.9491

7a EFFECTIVE EXCHANGE RATE INDICES OF THE PESO

period averages; 1980=100

	2015	2016	2017
Nominal			
Overall [1]	15.68	15.00	14.14
Trading Partners			
Advanced [2]	13.25	12.15	11.53
Developing [3]	24.39	24.03	22.54
Real			
Overall [1]	92.12	88.79	85.14
Trading Partners			
Advanced [2]	90.22	83.86	81.11
Developing [3]	117.81	116.43	110.98

[1] Australia, Euro Area, US, Japan, Hong Kong, Taiwan, Thailand, Indonesia, Malaysia, Singapore, South Korea, China, Saudi Arabia, and UAE

[2] US, Japan, Euro Area, and Australia

[3] Hong Kong, Taiwan, Thailand, Indonesia, Malaysia, Singapore, South Korea, China, Saudi Arabia, and UAE

Source: BSP

8 STOCK MARKET TRANSACTIONS
for the periods indicated

	Volume (in million shares); Value (in million pesos)					
	2015		2016		2017	
	Volume	Value	Volume	Value	Volume	Value
VOLUME	**493,261.9**	**2,151,411.1**	**442,270.5**	**1,929,499.2**	**440,547.4**	**1,958,364.1**
Financials	4,094.6	273,521.9	5,109.0	275,527.6	5,486.9	293,846.1
Industrial	34,467.1	530,927.0	29,029.5	401,978.7	40,960.8	487,105.4
Holding Firms	55,334.7	538,920.6	37,014.4	491,273.5	54,916.7	427,941.0
Property	45,161.7	361,165.6	55,205.3	347,679.4	85,696.1	318,017.9
Services	49,463.1	358,736.4	86,585.7	330,139.4	79,183.7	349,965.2
Mining and Oil	303,635.6	75,723.9	227,142.4	65,175.4	173,117.1	72,031.8
SME (in thousand shares)	1,098.0	11,558.6	2,178.2	17,033.0	1,182.0	8,953.4
ETF [1] (in thousand shares)	7.1	857.1	5.9	692.2	4.1	503.3
Composite Index (PSEi)						
Average	**7,432.6**		**7,284.5**		**7,850.5**	
End of Period	**6,952.1**		**6,840.6**		**8,558.4**	

	Percent Change (in percent)					
	2015		2016		2017	
	Volume	Value	Volume	Value	Volume	Value
VOLUME	**-39.5**	**1.0**	**-10.3**	**-10.3**	**-0.4**	**1.5**
Financials	-17.8	-1.7	24.8	0.7	7.4	6.6
Industrial	-46.5	24.0	-15.8	-24.3	41.1	21.2
Holding Firms	48.0	7.8	-33.1	-8.8	48.4	-12.9
Property	-35.7	0.2	22.2	-3.7	55.2	-8.5
Services	-29.6	-22.3	75.1	-8.0	-8.5	6.0
Mining and Oil	-46.4	-15.8	-25.2	-13.9	-23.8	10.5
SME (in thousand shares)	-32.0	4.4	98.4	47.4	-45.7	-47.4
ETF [1] (in thousand shares)	6.5	15.1	-16.4	-19.2	-30.7	-27.3
Composite Index (PSEi)						
Average	9.4		-2.0		7.8	
End of Period	-3.9		-1.6		25.1	

Source: Philippine Stock Exchange

9 PHILIPPINES: BALANCE OF PAYMENTS
for the periods indicated

	LEVELS (in million US dollars)		GROWTH RATES (in percent)
	2016 r	2017 p	2017 p
Current Account	**-1,199**	**-2,518**	**-110.0**
Export	108,905	121,140	11.2
Import	110,104	123,658	12.3
Goods, Services, and Primary Income	**-25,926**	**-28,601**	**-10.3**
Export	83,494	94,315	13.0
Import	109,420	122,916	12.3
Goods and Services	-28,506	-31,695	-11.2
Export	73,938	83,804	13.3
Import	102,444	115,499	12.7
Goods	-35,549	-41,191	-15.9
Credit: Exports	42,734	48,199	12.8
Debit: Imports	78,283	89,390	14.2
Services	7,043	9,496	34.8
Credit: Exports	31,204	35,605	14.1
Debit: Imports	24,160	26,109	8.1
Primary Income	2,579	3,094	20.0
Credit: Receipts	9,556	10,511	10.0
Debit: Payments	6,977	7,417	6.3
Secondary Income	**24,728**	**26,083**	**5.5**
Credit: Receipts	25,411	26,826	5.6
Debit: Payments	684	742	8.6
Capital Account	**62**	**57**	**-8.7**
Credit: Receipts	77	90	17.5
Debit: Payments	15	34	127.7
Financial Account	**175**	**-2,208**	**-1,361.6**
Net Acquisition of Financial Assets	5,658	6,530	15.4
Net Incurrence of Liabilities	5,483	8,738	59.3
Direct Investment	-5,883	-8,110	-37.9
Net Acquisition of Financial Assets	2,397	1,939	-19.1
Net Incurrence of Liabilities	8,280	10,049	21.4
Portfolio Investment	1,480	3,889	162.7
Net Acquisition of Financial Assets	1,216	3,093	154.3
Net Incurrence of Liabilities	-264	-796	-201.9
Financial Derivatives	-32	-51	-57.4
Net Acquisition of Financial Assets	-701	-503	28.2
Net Incurrence of Liabilities	-669	-453	32.3
Other Investment	4,610	2,064	-55.2
Net Acquisition of Financial Assets	2,746	2,001	-27.1
Net Incurrence of Liabilities	-1,864	-63	96.6
Net Unclassified Items	**892**	**-610**	**-168.4**
Overall BOP Position	**-420**	**-863**	**-105.4**
Debit: Change in Reserve Assets	-420	-862	-105.3
Credit: Change in Reserve Liabilities	.	1	236.0

Details may not add up to total due to rounding
[p] preliminary
[r] Revised to reflect data updates from official data sources and post-audit adjustments.
. Rounds off to zero
Technical Notes:
1. Balance of Payments Statistics from 2005 onwards are based on the IMF's Balance of Payments and International Investment Position Manual, 6th edition.
2. Financial Account, including Reserve Assets, is calculated as sum of net acquisitions of financial assets less net incurrence of liabilities.
3. Balances in the current and capital accounts are derived by deducting debit entries from credit entries.
4. Balances in the financial account are derived by deducting net incurrence of liabilities from net acquisition of financial assets.
5. Negative values of Net Acquisition of Financial Assets indicate withdrawal/disposal of financial assets; negative values of Net Incurrence of Liabilities indicate repayment of liabilities.
6. Overall BOP position is calculated as the change in the country's net international reserves (NIR) less non-economic trasactions (revaluation and gold monetization/demonetization). Alternatively, it can be derived by adding the current and capital account balances less financial account plus net unclassified items.
7. Net unclassified items is an offsetting account to the overstatement or understatement in either receipts or payments of the recorded BOP components vis-à-vis the overall BOP position.
8. Data on deposit-taking corporations, except the central bank consist of transactions of commercial and thrift banks and offshore banking units.
Source: BSP

10 GROSS INTERNATIONAL RESERVES

as of periods indicated; in million US dollars

	2015	2016	2017
Gross International Reserves (GIR)	**80,666.9**	**80,691.8**	**81,569.9**
Reserve Position in the Fund	438.6	441.6	424.4
Gold	6,702.9	7,259.1	8,336.9
SDRs	1,172.9	1,138.0	1,210.8
Foreign Investments	71,739.4	68,290.0	65,815.3
Foreign Exchange	613.0	3,563.1	5,782.5
Import Cover [1]	9.9	8.8	8.0
Short-Term External Debt Cover (in percent) [2]			
Original Maturity [3]	534.3	555.5	571.4
Residual Maturity [4]	409.5	423.9	411.8

Details may not add up to total due to rounding.

[1] Number of months of average imports of goods and payment of services and primary income that can be financed by reserves. Starting 2005, figures were revised to reflect data based on BPM6 concept.

[2] Starting December 2005, annual outstanding short-term debt were revised to reflect the new reporting framework in line with international standards under the latest External Debt Statistics Guide and International Monetary Fund's Balance of Payments and International Investment Position Manual, 6th Edition.

[3] Based on latest available outstanding short-term external debt.

[4] Refers to adequacy of reserves to cover outstanding short-term debt based on original maturity plus principal payments on medium- and long-term loans of the public and private sectors falling due in the next 12 months. Figures reflect data based on outstanding short-term debt as of 31 December 2017; and debt service schedule on outstanding external debt as of 30 September 2017.

Source: BSP

11 TOTAL EXTERNAL DEBT [1]
as of periods indicated; in million US dollars

	31 December 2016				31 December 2017			
	Short-Term		Medium & Long-Term	Total	Short-Term		Medium & Long-Term	Total
	Trade	Non-Trade			Trade	Non-Trade		
Grand Total	**2,087**	**12,440**	**60,237**	**74,763** [a]	**2,498**	**11,777**	**58,823**	**73,098** [a]
Public Sector		**801**	**36,669** [b]	**37,470**		**287**	**37,223** [b]	**37,510**
Banks		801	3,119	3,921		287	3,428	3,716
Bangko Sentral ng Pilipinas			1,292 [c]	1,292			1,347 [c]	1,347
Others		801	1,828 [d]	2,629		287	2,082 [d]	2,369
Non-Banks			33,549	33,549			33,794	33,794
CB-BOL								
NG and Others			33,549	33,549			33,794	33,794
Private Sector	**2,087**	**11,638**	**23,568**	**37,293**	**2,498**	**11,489**	**21,601**	**35,588**
Banks		11,450	3,666	15,116		11,297	4,131	15,428
Foreign Bank Branches		4,012	166	4,178 [e]		4,562	150	4,712 [e]
Domestic Banks		7,438	3,500 [d]	10,938		6,735	3,981 [d]	10,716
Non-Banks	2,087	188	19,902 [f]	22,177	2,498	192	17,469 [f]	20,160

[1] Covers debt owed to non-residents, with classification by borrower based on primary obligor per covering loan/rescheduling agreement/document.

	31 Dec 2016	31 Dec 2017
Exclusions:		
[a] Residents' holdings of Philippine debt papers issued offshore;	16,529	15,936
Non-residents' holdings of peso-denominated debt securities	5,506	5,308
Inclusions:		
[b] Cumulative foreign exchange revaluation on US $-denominated multi-currency loans from Asian Development Bank and World Bank	-43	-29
[c] Accumulated SDR allocations from the IMF	1,121	1,190
[d] Outstanding Hybrid Tier 1 capital of banks excludes: Residents' Holdings		
[e] "Due to Head Office/Branches Abroad" (DTHOBA) accounts of branches and offshore banking units of foreign banks operating in the Philippines which are considered by BSP as "quasi-equity"	3,123	3,614
[f] Loans without BSP approval/registration which cannot be serviced using foreign exchange from the banking system;	13,139	12,342
Obligations under capital lease agreements	1,306	1,170

Source: Bangko Sentral ng Pilipinas

12 SELECTED FOREIGN DEBT SERVICE INDICATORS

for periods indicated; in million US dollars

	2015	2016	2017
Debt Service Burden (DSB) [1]	5,584	7,188	7,048
Principal	2,998	4,602	4,511
Interest	2,587	2,586	2,537
Export Shipments (XS) [2]	43,197	42,734	48,249
Exports of Goods and Receipts from Services and Income (XGSI) [2/ 3/]	99,563	102,876	114,449
Current Account Receipts (CAR) [2]	105,851	108,905	121,140
External Debt	77,474	74,763	73,098
Gross Domestic Product (GDP)	292,774	304,906	313,419
Gross National Income (GNI)	354,144	367,014	376,692
RATIOS:			
DSB to XS	**12.93**	**16.82**	**14.61**
DSB to XGSI	**5.61**	**6.99**	**6.16**
DSB to CAR	**5.28**	**6.60**	**5.82**
DSB to GNI	**1.58**	**1.96**	**1.87**
External Debt to GDP	**26.46**	**24.52**	**23.32**
External Debt to GNI	**21.88**	**20.37**	**19.41**

[1] Debt service burden represents principal and interest payments after rescheduling. In accordance with the internationally-accepted concept, debt service burden consists of (a) principal and interest payments on fixed MLT credits including IMF credits, loans covered by the Paris Club and Commercial Banks rescheduling, and New Money Facilities; and (b) interest payments on fixed and revolving short-term liabilities of banks and non-banks but excludes (i) prepayments of future years' maturities of foreign loans and (ii) principal payments on fixed and revolving ST liabilities of banks and non-banks.

[2] Based on the accounting principle under the Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)

[3] Includes cash remittances of overseas Filipino workers that were coursed through and reported by commercial banks which are reflected under Compensation of Employees in the Primary Income account and workers' remittances in the Secondary Income account.

[r] Revised to reflect latest data adjustments

[p] preliminary

Source: Bangko Sentral ng Pilipinas

13 BALANCE SHEET OF THE BANGKO SENTRAL NG PILIPINAS

as of periods indicated

in million pesos

	2016 [a] Dec	2017 [p] Dec	Percent Change (in percent)
Assets	**4,559,098.3**	**4,666,641.4**	**2.4**
International Reserves [1]	3,997,977.8	4,056,596.1	1.5
Domestic Securities	223,226.6	224,624.1	0.6
Loans and Advances	151,051.6	187,410.1	24.1
Revaluation of International Reserves	0.0	0.0	....
Bank Premises and Other Fixed Assets	18,061.3	23,065.0	27.7
Derivative Instruments in a Gain/(Loss) Position	0.0	100.0	....
Other Assets	168,781.1	174,846.2	3.6
Liabilities	**4,500,743.0**	**4,586,190.4**	**1.9**
Currency Issue	1,124,192.6	1,267,482.3	12.7
Deposits	2,679,033.8	2,531,380.8	-5.5
Reserve Deposits of Other Depository Corporations (ODCs) [2]	1,631,642.6	1,867,228.1	14.4
Reserve Deposits of Other Financial Corporations (OFCs) [3]	1,946.8	2,010.2	3.3
Overnight Deposit Facility [4]	236,591.0	85,472.4	-63.9
Term Deposit Facility [4]	529,218.4	100,957.5	-80.9
Treasurer of the Philippines [5]	136,869.5	326,815.4	138.8
Foreign Financial Institutions	111,089.6	115,052.8	3.6
Other Foreign Currency Deposits	50.8	1,012.5	1,891.7
Other Deposits [6]	31,625.1	32,831.9	3.8
Foreign Loans Payable	28.4	30.4	7.3
Net Bonds Payable	24,891.2	24,986.5	0.4
Allocation of SDRs	56,084.9	59,856.9	6.7
Derivatives Liability	0.0	98.3	....
Derivative Instruments in a Loss Position	0.0	4.5	....
Revaluation of International Reserves	299,527.2	381,544.8	27.4
Reverse Repurchase Facility [4]	305,057.2	305,057.2	0.0
Other Liabilities	11,927.7	15,748.6	32.0
Net Worth	**58,355.4**	**80,451.0**	**37.9**
Capital	50,000.0	50,000.0	0.0
Surplus/Reserves	8,355.4	30,451.0	264.4

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

[1] Excludes the reserve tranche position with the IMF.

[2] ODCs are deposit generating institutions other than the BSP such as universal and commercial banks (UB/KBs), specialized government banks (SGBs), thrift banks (TBs), rural banks (RBs) and non-banks with quasi-banking functions (NBQBs).

[3] OFCs are trust units of banks.

[4] Starting 3 June 2016, the Reverse Repurchase Agreement and Special Deposit Account have been replaced by the Reverse Repurchase Facility and Overnight Deposit Facility, respectively, and a Term Deposit Facility was introduced in line with the implementation of the Interest Rate Corridor (IRC) system. Includes accrued interest payables.

[5] Includes foreign currency deposits.

[6] Mostly GOCC deposits.

[a] Audited but subject to restatement

[p] Based on the preliminary and unaudited BSP balance sheet as of end-December 2017 prepared by the Financial Accounting Department (FAD) of the BSP.

.... Not computed

Source: Bangko Sentral ng Pilipinas

14 INCOME POSITION OF THE BANGKO SENTRAL NG PILIPINAS

for periods indicated

in billion pesos

	2016 [a] Dec	2017 [p] Dec	Percent Change (in percent)
Revenues	**69.991**	**75.622**	**8.0**
Interest Income	46.826	58.295	24.5
International Reserves	37.735	47.791	26.6
Domestic Securities	3.968	5.134	29.4
Loans and Advances	1.757	1.664	-5.3
Others	3.366	3.706	10.1
Miscellaneous Income	22.505	17.088	-24.1
Net Income from Branches	0.660	0.239	-63.8
Expenses	**71.194**	**66.871**	**-6.1**
Interest Expenses	43.620	35.504	-18.6
Reserve Deposits of ODCs and OFCs [1]	0.000	0.000	....
Overnight Deposit Facility [2]	19.951	2.115	-89.4
Term Deposit Facility [2]	4.688	15.882	238.8
National Government Deposits	6.122	6.768	10.6
Reverse Repurchase Facility [2]	10.699	8.075	-24.5
Loans Payable	2.115	2.464	16.5
Other Foreign Currency Deposits	0.000	0.000	....
Other Liabilities	0.045	0.200	344.4
Cost of Minting	9.240	8.061	-12.8
Other Expenses	18.334	23.306	27.1
Net Income/(Loss) Before Gain/(Loss) on FXR Fluctuations and Income Tax Expense/(Benefit)	**-1.203**	**8.751**	**827.4**
Gain/(Loss) on FXR Fluctuations [3]	19.124	15.478	-19.1
Income Tax Expense/(Benefit)	0.107	1.384	1,193.5
Net Income/(Loss) After Tax	17.814	22.845	28.2

Note: Details may not add-up to totals due to rounding

[1] ODCs are deposit generating institutions other than the BSP such as universal and commercial banks (UB/KBs), specialized government banks (SGBs), thrift banks (TBs), rural banks (RBs) and non-banks with quasi-banking functions (NBQBs) while OFCs are trust units of banks.

[2] Starting 3 June 2016, the Reverse Repurchase Agreement and Special Deposit Account have been replaced by the Reverse Repurchase Facility and Overnight Deposit Facility, respectively, and a Term Deposit Facility was introduced in line with the implementation of the Interest Rate Corridor (IRC) system.

[3] This represents realized gains or losses from fluctuations in FX rates arising from foreign currency-denominated transactions of the BSP, including: 1) rollover/re-investments of matured FX investments with foreign financial institutions and FX-denominated government securities; 2) servicing of matured FX obligations of the BSP; and 3) maturity of derivatives instruments.

[a] Audited but subject to restatement

[p] Based on the preliminary and unaudited BSP income statement as of end-December 2017 prepared by the Financial Accounting Department (FAD) of the BSP.

.... Not computed

Source: Bangko Sentral ng Pilipinas

15 BSP: CONDENSED STATEMENT OF CONDITION

in thousand pesos

ASSETS	31 Dec 2017 *	31 Dec 2016 **
Foreign Currency Financial Assets		
Deposits with Foreign Banks	831,774,931	898,320,913
Other Cash Balances	233,179	258,108
Investment Securities	2,719,308,711	2,659,148,174
Foreign Securities Purchased under Agreements to Resell	25,521,651	18,370,207
Loan to International Monetary Fund (IMF)	2,687,564	3,943,509
Gold	416,509,799	361,277,662
IMF Special Drawing Rights	60,560,218	56,659,243
Gross International Reserves	**4,056,596,053**	**3,997,977,816**
Other Foreign Currency Receivables	91,737,574	87,859,512
Non-IR Foreign Currency	32,471	34,552
Derivative Instruments in a Gain Position	99,983	0
Total Foreign Currency Financial Assets	**4,148,466,081**	**4,085,871,880**
Local Currency Financial Assets		
Investment Securities	224,624,086	223,226,567
Loans and Advances	187,410,071	151,051,555
Due from Administrator of Funds	30,629,080	29,961,114
Other Receivables	20,488,516	18,309,021
Total Local Currency Financial Assets	**463,151,753**	**422,548,257**
Total Financial Assets	**4,611,617,834**	**4,508,420,137**
Acquired Assets Held for Sale	59,556	68,976
Investment Property	15,200,084	15,618,972
Bank Premises, Furniture, Fixtures and Equipment	23,065,045	18,061,250
Intangible Assets	253,085	269,183
Inventories	8,049,021	7,179,876
Property Dividend to NG	285,214	285,214
Deferred Tax Assets	5,904,319	7,194,171
Miscellaneous Assets	2,207,262	2,000,527
Total Other Assets	**55,023,586**	**50,678,169**
TOTAL ASSETS	**4,666,641,420**	**4,559,098,306**

* Preliminary and unaudited

** Audited but subject to restatement

Source: Financial Accounting Department (FAD), Bangko Sentral ng Pilipinas

15 BSP: CONDENSED STATEMENT OF CONDITION (continuation)

in thousand pesos

LIABILITIES AND CAPITAL	31 Dec 2017 *	31 Dec 2016 **
Foreign Currency Financial Liabilities		
Short-Term Deposits	16,101,750	11,071,130
Loans Payable	30,449	28,377
Bonds Payable	24,986,493	24,891,234
Allocation of IMF Special Drawing Rights	59,856,929	56,084,887
Derivatives Liability	98,293	0
Derivative Instruments in Gain/(Loss) Position	4,479	0
Other Liabilities	6,289,873	2,888,225
Total Foreign Currency Financial Liabilities	**107,368,266**	**94,963,853**
Local Currency Financial Liabilities		
Government Deposits	311,708,439	127,644,201
Deposits of Banks and Quasi-Banks	1,902,087,916	1,663,419,422
Deposits of the IMF and Other FIs	115,052,829	111,089,598
Securities Sold Under Agreements to Repurchase	305,057,187	305,057,187
Term Deposit Account	100,957,503	529,218,447
Overnight Deposit Account	85,472,353	236,590,976
Total Local Currency Financial Liabilities	**2,820,336,227**	**2,973,019,831**
Total Financial Liabilities	**2,927,704,493**	**3,067,983,684**
Other Liabilities		
Currency in Circulation	1,267,482,316	1,124,192,577
Retirement Benefit Obligations	2,998,142	2,499,889
Miscellaneous Liabilities	6,003,821	6,081,491
Deferred Tax Liability	7,444	8,768
Dividends Payable	449,345	449,345
Revaluation of Foreign Currency Accounts	381,544,828	299,527,201
Total Other Liabilities	**1,658,485,896**	**1,432,759,271**
TOTAL LIABILITIES	**4,586,190,389**	**4,500,742,955**
Capital Accounts		
Capital	50,000,000	50,000,000
Surplus	-45,845,534	-66,847,216
Unrealized Gains/(Losses) on Investments	-1,324,098	-2,495,068
Capital Reserves	77,620,663	77,697,635
TOTAL CAPITAL ACCOUNTS	**80,451,031**	**58,355,351**
TOTAL LIABILITIES AND CAPITAL ACCOUNTS	**4,666,641,420**	**4,559,098,306**

* Preliminary and unaudited

** Audited but subject to restatement

Source: Financial Accounting Department (FAD), Bangko Sentral ng Pilipinas

16 BSP: CONDENSED STATEMENT OF INCOME AND EXPENSES WITH BUDGET INFORMATION
in thousand pesos

	31 Dec 2017		31 Dec 2016
	BUDGET *	ACTUAL **	ACTUAL ***
Operating Income			
Income from Foreign Currency Financial Assets			
Interest Income	41,470,978	51,213,506	40,829,516
Fees, Miscellaneous Foreign Currency Income and Trading Gains-Foreign	250,049	(1,722,839)	15,279,186
Total Income from Foreign Currency Financial Assets	**41,721,027**	**49,490,667**	**56,108,702**
Expenses on Foreign Currency Financial Liabilities			
Interest Expense	2,138,650	2,649,199	2,223,671
Other Foreign Currency Expenses	1,100,515	976,300	919,094
Total Expenses on Foreign Currency Financial Liabilities	**3,239,165**	**3,625,499**	**3,142,765**
Net Income from Foreign Currency Financial Assets and Liabilities	**38,481,862**	**45,865,168**	**52,965,937**
Income from Local Currency Financial Assets			
Interest Income and Trading Gains-Local	5,414,832	7,083,425	5,998,288
Total Income from Local Currency Financial Assets	**5,414,832**	**7,083,425**	**5,998,288**
Expenses on Local Currency Financial Assets/Liabilities			
Interest Expense	46,565,658	32,855,567	41,396,329
Provision for Probable Losses	0	56,496	433,379
Final Tax on Interest Income/Discounts	711,251	1,040,371	793,461
Total Expenses on Local Currency Financial Assets	**47,276,909**	**33,952,434**	**42,623,169**
Net Loss from Local Currency Financial Assets and Liabilities	**(41,862,077)**	**(26,869,009)**	**(36,624,880)**
Net Income/(Loss) from Financial Accounts	**(3,380,216)**	**18,996,158**	**16,341,057**
Other Operating Income	**6,154,051**	**19,047,984**	**7,884,155**
Currency Printing and Minting Cost	**7,956,435**	**8,060,938**	**9,239,503**
Operating Expenses:			
Personnel Services, Development and Training	13,778,720	13,463,973	12,580,312
Traveling	405,019	393,125	322,469
Taxes and Licenses	159,046	2,960,914	143,110
Currency and Gold Operations	353,219	320,609	318,892
Acquired Assets	367,100	212,337	247,515
Prior Period Expense			
Other Services	3,677,606	3,364,947	2,612,134
Depreciation	756,962	833,027	769,810
Fidelity Insurance	77,813	67,054	71,507
Light, Fuel and Water	234,669	302,463	290,414
Repairs and Maintenance	973,151	547,800	470,002
Communication Services	359,160	264,041	266,449
Supplies	114,757	69,593	53,072
Others	1,161,095	1,280,971	690,879
Bad Debts - PICC	0	1,093	9
Market Decline of Acquired Assets	19,122	514,813	(36,356)
Total Operating Expenses	**18,759,831**	**21,231,812**	**16,188,084**
Net Income/(Loss) Before FX Rates Fluctuation	**(23,942,431)**	**8,751,393**	**(1,202,376)**
Prior Period Income			
Net Realized Gain on FX Rates Fluctuation	**0**	**15,478,154**	**19,123,838**
Income/(Loss) Before Income Tax	**(23,942,431)**	**24,229,548**	**17,921,462**
Income Tax Expense	**0**	**1,384,047**	**106,503**
Income/(Loss) for the Year	**(23,942,431)**	**22,845,501**	**17,814,959**

* Preliminary excluding PICCI budget
** Preliminary and unaudited
*** Audited but subject to restatement
Source: Financial Accounting Department (FAD), Bangko Sentral ng Pilipinas