HOUSEHOLD CREDIT IN THE PHILIPPINES: DEVELOPMENTS, CROSS-COUNTRY COMPARISON AND IMPLICATIONS TO FINANCIAL STABILITY

Jean Christine A. Armas [1]

Abstract

The balance sheet weaknesses in the household sector contributed largely to the recent Global Financial Crisis (GFC). These developments in the household sector transmitted shocks in the financial system. Following the GFC, many central banks have put forth a number of statistical research studies related to household leverage. Using the newly constructed microeconomic statistics and indicators on household indebtedness to evaluate the stability of the Philippine financial system, this paper argues that while the level of household credit provided by the banking system is seen to be growing, it is less likely to pose ominous signs and stress to the stability of the Philippine financial system. [2] *Two leading reasons behind this argument are – first, the banking system which dominates the Philippine financial system has relatively less direct exposure to the household sector vis-à-vis other economic sectors in terms of credit provisions; and second, the banking system, which remains as the main source of credit of the economy adopts generally conservative lending standards.*

JEL Codes: D10, G01 and G21

1. Introduction

The balance sheet fragilities in the household and financial sectors were identified to have contributed largely to the 2007-2009 Global Financial Crisis (GFC) (International Monetary Fund, 2015). The inability of the already overstretched household sector to service its loan obligations also caused significant stress in the financial system. The aftermath of the recent GFC, along with the increasing complexities associated with global financial integration, prompted international statistical community to generate and compile microeconomic statistics, particularly on household debt statistics, in order to assess and monitor the financial vulnerability and sensitivity to macroeconomic shocks of the household

[1] Miss Jean Christine A. Armas, Bangko Sentral ng Pilipinas (BSP) and University of the Philippines School of Economics (UPSE). E-mail: jeanchristinearmas@yahoo.com or armasja@bsp.gov.ph. The views expressed in this paper are those of the author and do not necessarily reflect those of the BSP and UPSE. Any errors and omissions are the responsibility of the author. The researcher acknowledged the technical and data assistance of the banking sub-group of the Department of Economic Statistics (DES) of BSP.

[2] Household debt, household credit and household loans are interchangeably used in this paper.

sector. It is also in this light that much of the recent researches that has been put forth by many central banks focus on household leverage because of its important implications to financial stability.

While the unprecedented high levels of household debt have been evident in a number of advanced countries long before the recent Global Financial Crisis (GFC), household debt in many emerging economies has shown noticeable signs of growth in recent years (Jappelli, Pagano, & Maggio, 2008). Likewise, in the International Monetary Fund's (IMF) April 2014 Regional Economic Outlook (REO), household debt in Asia and the Pacific region has also risen. Despite the existing literature on household debt in emerging Asia, this field of research has rarely been focused and discussed comprehensively in the Philippine setting. This is the gap which this research paper seeks to address. In particular, this research paper aims to contribute to existing literature in household debt by addressing the succeeding research questions:

1.) What are the trends and developments in the household debt using historical annual and quarterly data from the other depository corporations (ODCs)?[3] How does the Philippines compare against other countries in terms of household indebtedness?
2.) What are the implications of household debt to Philippine financial stability especially on the banking system?
3.) What are the policy measures and regulations related to monitoring household credit as well as to banks' financial soundness that are currently in place or being implemented by the Bangko Sentral ng Pilipinas (BSP) as the financial supervisor?

This paper argues that while the level of household credit provided by the ODCs or the banking system in the Philippines is seen to be growing, as will be shown by the statistics in the latter sections of the paper, it is less likely to pose ominous signs and stress to the stability of the Philippine financial system.[4] Two leading reasons behind this argument are – first, the banking system which dominates the Philippine financial system[5] has relatively *less direct exposure*[6] to the household sector vis-à-vis other economic sectors in terms of credit provisions; and second, the banking system, which remains as the main source of credit of the economy,[7] adopts generally conservative lending standards (Madrid P., 2010).

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[3] Banks or other depository corporations are interchangeably used in this paper.

[4] ODCs in the Philippines include universal/commercial, thrift and rural banks, and non-stock savings and loan associations (NSSLAs).

[5] In this paper, the Philippine financial system (PFS) includes ODCs, investment houses, finance and investment companies, securities dealers/brokers, pawnshops, lending investors, credit card companies, private and government insurance companies. As of end-December 2015, the ODCs account for 81 percent of the total resources of the PFS.

[6] The limitation of this argument in this paper is the ***indirect*** and ***implicit*** exposure of the banks to the household sector (in terms of lending). A case in point is when banks lend to other financial or non-financial corporations (first loop) and the latter lends those funds to the household sector (second loop), the banks are already exposed to the household sector should there be any changes in macroeconomic conditions that can adversely affect the debt servicing behavior of the household sector. This indirect exposure of the banks to the household sector, which is beyond the scope of this paper, may serve as potential basis or topic for future research studies or papers.

[7] The loan provision of the financial corporations sector for the period 2014 represents 98 percent of the total credit provision of the total economy (domestic sector plus rest of the world sector). Of that 98 percent, 90 percent is accounted for by the ODCs sub-sector. (Source: 2014 Philippine Flow of Funds).

Nevertheless, household credit provision by the Philippine banking system still warrants careful and close monitoring so that any admonitory signs that may potentially imperil the stability of financial system can be tempered, if not averted.

The remainder of the paper is organized as follows. Section 2 provides a review of related literature on household debt. Section 3 details the trends and developments on household credit in the Philippines to examine if the current developments in household debt are likely to cause significant stress to banking stability. Section 4 shows cross-country comparison on household debt statistics to compare Philippines against selected emerging and advanced economies. Section 5 discusses the implications of the recent developments in household credit to financial stability. Section 6 concludes the paper by presenting some directions for future statistical research works related to household debt.

2. Review of Related Literature

The importance of monitoring household indebtedness received worldwide attention with the unprecedented 2007-2009 GFC. The recent GFC emerged from the U.S. housing market and triggered by sub-prime mortgage lending (i.e., lending to borrowers with poor credit ratings) by the U.S. financial institutions (International Organization of Supreme Audit Institutions, 2010).
This development resulted in sudden increase in households' debt relative to their income, which peaked at about 136 percent in 2007.[8] The most notable factors explaining this phenomenon in the household debt literature are the low interest rate (borrowing costs) environment, subdued financial constraints and financial innovations.

Household debt is viewed in two different perspectives. On the one end, moderate level of household debt improves economic welfare and evens household consumption. It is also reflective of the stage of financial development of an economy. On the other end of the spectrum, excessive household debt (especially when left unmonitored) can dampen economic growth and may lead to financial instability. And, as precisely demonstrated by the recent GFC, the financial stress that started to manifest in the household sector consequently amplified shocks to other domestic sectors (notably the financial sector) and eventually spilled over to the global financial system.

From a financial stability standpoint, assessing the potential risks and implications of household debt to banking system's stability is crucial since banks are the largest and major source of credit to the household sector especially in most emerging economies (International Monetary Fund, April 2012). The ample *core liquidity* in the Philippine banking system is an idiosyncratic feature that makes the banking sector a stable source of credit. [9,10] Further, the relatively extensive physical network of the banking

[8] *Ibid.*
[9] Core liquidity pertains to the use of traditional deposit-based funding. It approximates the conventional monetary aggregates such as M2 (currency in circulation + demand deposits + savings and time deposits) or M3 (M2 + deposit substitutes). (Source: Shinohara, N., 2013).
[10] The 2013 Philippine Flow of Funds

system (banks' regional branches and head offices) allows for greater access to credit financing, especially to individuals who are outside the National Capital Region or are in the rural areas.

The relative exposure of the banks' loan portfolio to the household sector is significant to evaluate the banks' potential risks associated with the household sector. This research paper aims to examine whether the banks' loan portfolio concentration to household sector relative to other economic sectors has been increasing or not throughout the periods under study.

Meanwhile, the most common statistical measure used across countries for monitoring the financial health of the household sector is the household debt as percentage of the Gross Domestic Product (GDP). In addition to household debt-to-GDP as a monitoring tool, this paper includes household debt measured against household disposable income (HDI) and gross national disposable income (GNDI) in assessing household indebtedness. The magnitude of household debt could also be evaluated in relation to household sector's financial asset cover, which is measured in this paper as the ratio of households' holdings of financial assets to household debt from the banks.

This paper's main contribution to the literature is to analyze the recent trends and developments of household credit in the Philippines and its implications to the stability and resiliency of the Philippine banking sector and of the financial system in general.

3. Trends and Developments on Household Credit in the Philippines

Household credit, in this paper, pertains to loans extended by the Philippine banking system. The compilation of household credit follows that of IMF's Monetary and Financial Statistics Manual and Compilation Guide (MFSMCG) wherein loans are valued at nominal value, which means that the *outstanding amount the debtor owes to the creditor include accrued but not yet paid interest.*

This paper uses two sets of data. The first set of data is an annual data on aggregate household loans provided by the banks from 2008 to 2015 to examine the development and evolution of household credit during and after the GFC.[11] The second set of data is a quarterly data on banks' loan provision to the household sector from 2010:Q4-2016:Q1 that will be used for a detailed and micro-level discussion of household credit (i.e., household debt, by type of purpose). The researcher chose Q4 2010 as the starting period in analyzing the trends in household credit since it is the earliest available quarterly data for the rural banks using the standardized report form (SRF) of the IMF.[12] Another consideration for the choice of period is homogeneity and consistency since this paper will examine household credit provided by banks as a whole; and, therefore, it is necessary that the earliest quarterly data is available for all universal/commercial (UKBs), thrift (TBs), rural banks (RBs) and non-stock savings & loan associations (NSSLAs). Hence, for the purpose of this study, the SRF is very useful not only in obtaining loan provision

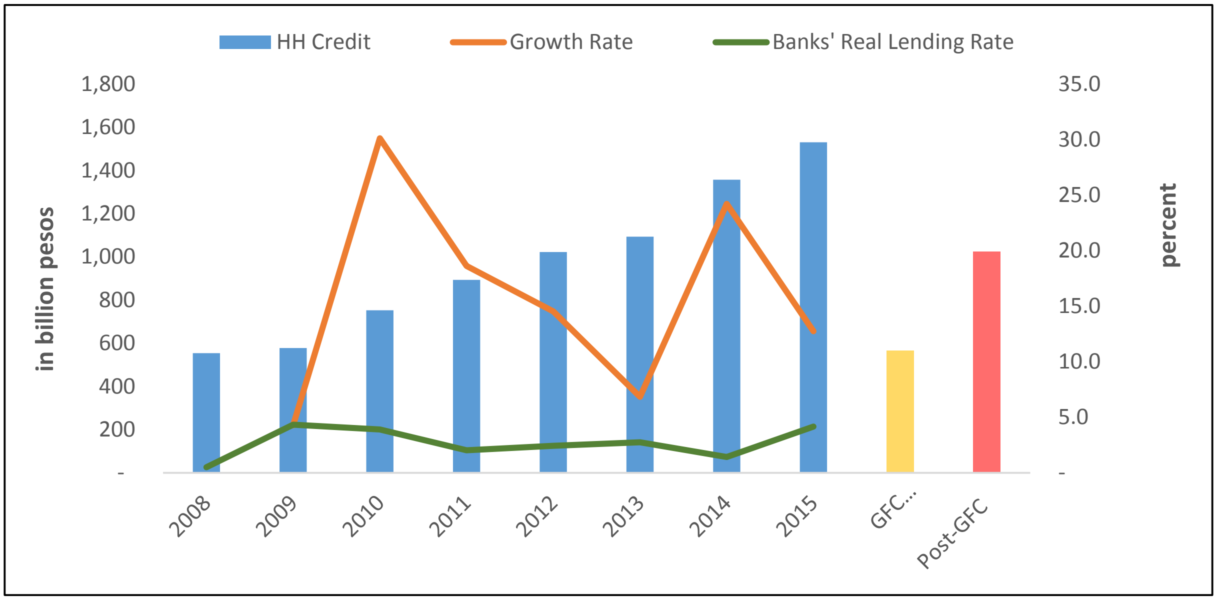
[11] The earliest annual data available is 2008 as the BSP adopted the SRF only in 2008.

[12] The SRF, which was introduced by IMF in 2004, is a new reporting format that conforms to certain principles and concepts as guideposts. The SRF is a detailed template used as a standard in reporting monetary and financial statistics that captures the banks' claims (by debtor sector) and liabilities (by creditor sector).

by the banks to the household sector; but, also in identifying banks' loan portfolio exposure to economic sectors.

3.1. Level and Growth Rate of Household Credit

Figure 1: Household Loan Provision by Banks (2008-2015)



Source: Bangko Sentral ng Pilipinas (BSP)-Department of Economic Statistics (DES), author's computations

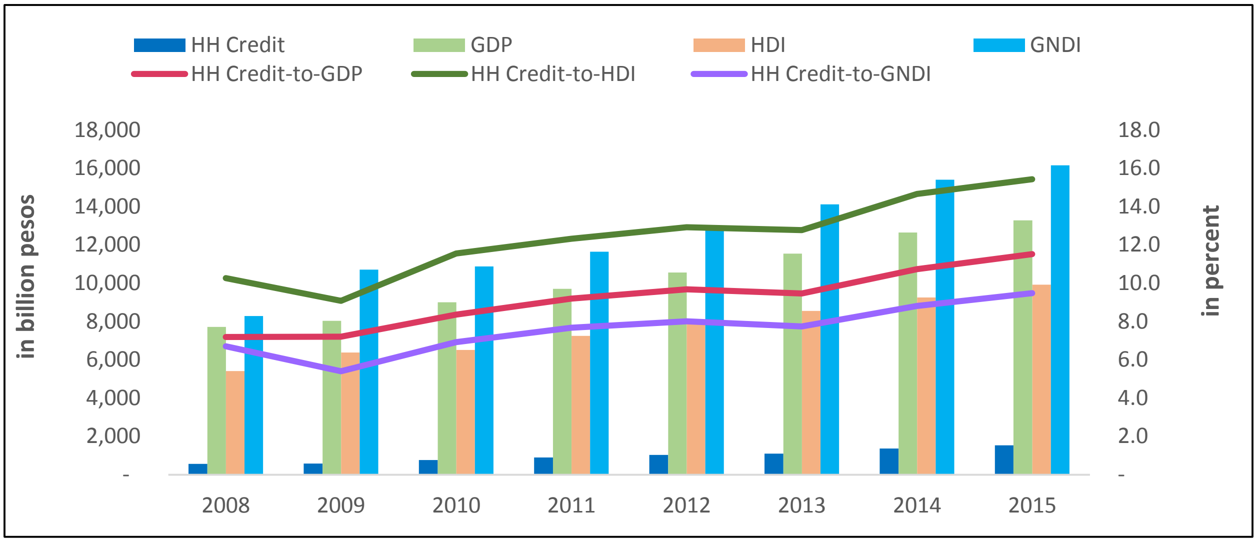
Total stock of loans extended by the banks to the household sector (Figure 1) exhibits an increasing trend since 2008. The recent trend and development in the household credit growth is supported by the low lending rates offered by the banking system, with the lowest rate observed during the height of the GFC in 2008 at 0.5 percent. While the cost of borrowing during the height of the GFC (i.e., 2008) is at its lowest, household debt grew at a modest rate of 4.3 percent only from 2008 to 2009. This development might be indicative of households' bleak economic outlook and cautious stance to borrow even at low interest rates due to the economic and financial instability in the global economy.

3.2. Measures of Household Indebtedness [13]

Household credit scaled to GDP and HDI are commonly used indicators to monitor household sector's financial health. In addition to these two common indicators, this paper presents household credit-to-GNDI as another important indicator in assessing household sector's relative sensitivity to changes in macroeconomic conditions.

[13] Smaller or lower household indebtedness ratios are viewed as favorable.

Figure 2: Household Indebtedness Indicators (2008-2015)



Source: BSP-DES, National Accounts of the Philippines, author's computations

Household debt-to-GDP provides a broad measurement of household debt relative to the size of the *aggregate economy*. This ratio can be viewed in two ways: (i) as an indication of the degree by which household debt-funded consumption and production activities have contributed to or spurred the economy's total production or output; and (ii) as an indication of credit risk on the pretext that a highly leveraged household is deemed vulnerable to shocks in the economy.

While household credit is seen to be growing (Figure 1), its share relative to the size of the total economy (household credit-to-GDP) is still small at an average of 9.2 percent from 2008-2015. This relatively low and modest ratio could imply two things. On the one hand, this ratio suggests that household indebtedness is less likely to cause instability and crisis in the economy. In fact, there is still room to increase household borrowings from the banking sector, which could consequently improve not only the economic welfare of the household sector but also the economy in general if debt is used wisely. On the other hand, it can be inferred that the relatively low indebtedness ratios in these countries are reflective of the economic structure and stage of financial development of a country.[14]

Household debt-to-HDI measures the indebtedness of households in relation to their disposable income (i.e., income that can be used for final consumption expenditure and/or saving).[15] Disposable income is an important variable to consider when assessing the household's capacity to make loan repayments in full and on time. This metric is a more accurate representation of the households' ability

[14] In developing countries like the Philippines where majority of their population is dominated by the low-to-middle income group, one important factor considered by households when borrowing is ease of business (i.e., access to borrowing funds is relatively easy and less stringent in terms of requirements and borrowers' background). Another factor is the household sector's limited knowledge on the credit facilities offered by lending institutions as well as households' difficulty (especially low-income bracket) to provide collaterals when borrowing.

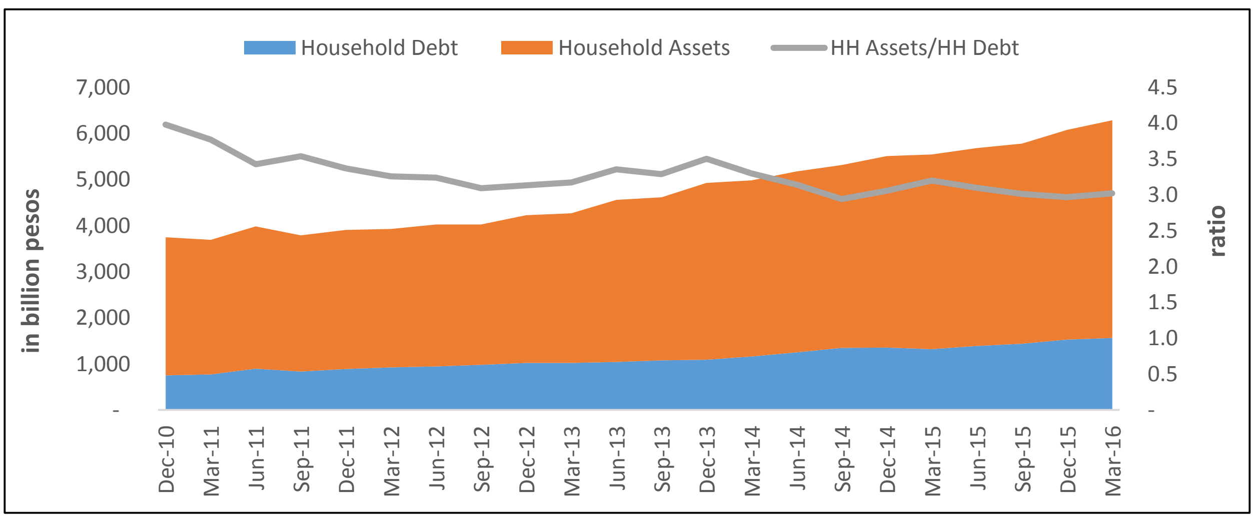
[15] In the Philippines, HDI is computed as households' personal income less property expense, taxes on income and wealth, compulsory fees, social security contributions and current transfers' payments.

to service debt *based on their disposable income*, that is, their "residual" income after paying for taxes and other overhead costs or expenses (Nakornthab, Integrative Report: Household Indebtedness and Its Implications for Financial Stability, 2010). Meanwhile, household debt-to-GNDI is a significant household leverage indicator especially in a remittance-dependent country like the Philippines. The GNDI differs from Gross National Income (GNI) in that the former covers additional income items, particularly current transfers such as Overseas Filipinos' remittances, foreign donations and grants. [16]

Figure 2 also shows that HDI and GNDI have risen significantly relative to the increase in household credit during the periods under study. The HDI and GNDI are more than eight (8) and fourteen (14) times the level of household debt, respectively, from 2008-2015. This development demonstrates that the household sector has enough resources to cover for its debt obligations, showing greater capability and flexibility to adapt to changes in macroeconomic conditions. It is also important to note that among the household indebtedness indicators, household debt-to-GNDI registered the lowest ratio. An important economic variable that contributed to this favourable development is the solid growth of Overseas Filipinos' (OFs) remittance inflows into the economy. Remittances are one of the major sources of income of households in the Philippines, an indication that households receiving remittances from overseas have the capability as well as *additional resources* to fund or service their debt obligations. [17]

Meanwhile, households' capacity to withstand inevitable macroeconomic shocks could also be evaluated by looking at the household sector's accumulation of financial assets relative to household debt. Figure 3 shows the financial asset cover from Q4 2010 to Q1 2016, which is defined in this paper as the ratio of household financial assets to household debt.

Figure 3: Financial Asset Cover (Household Assets-to-Household Debt)



Source: BSP-DES, author's computations

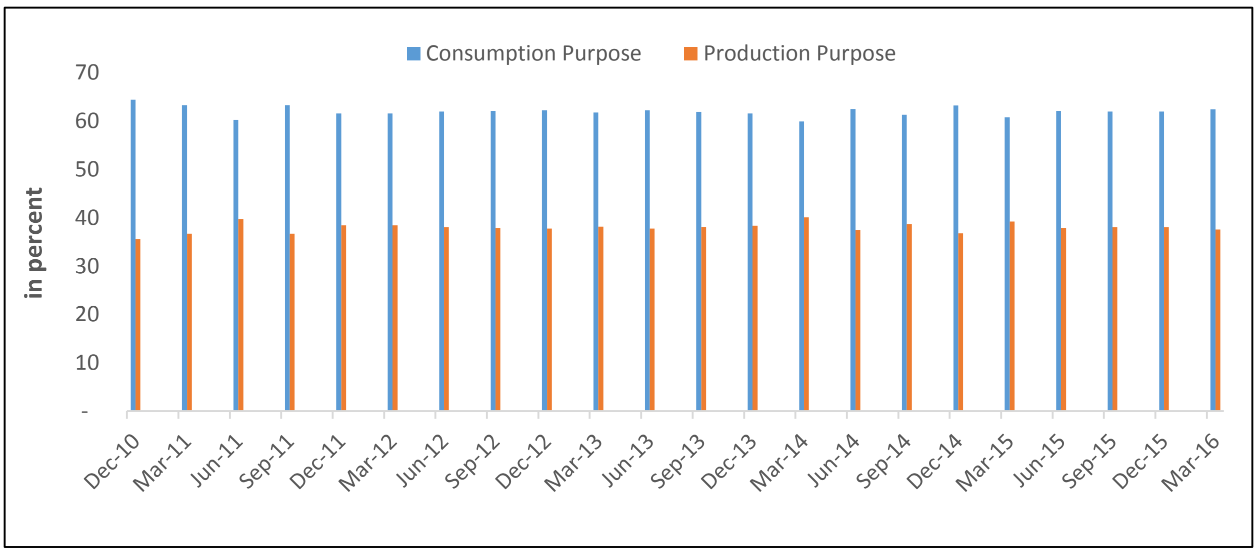
[16] Gross National Disposable Income, in the National Accounts of the Philippines, is computed as Gross National Income plus Current Transfers from the Rest of the World (ROW) less Current Transfers to the ROW.
[17] Cash remittances continue to grow steadily, registering a year-on-year growth rate of 4.6 percent to US$ 25.8 billion in 2015. http://www.bsp.gov.ph/statistics/keystat/ofw.htm

While household debt is seen to be increasing, household sector have also amassed considerable stock of financial assets that are relatively liquid assets (e.g., currency, deposits and debt securities). Financial asset cover ranges from 2.9 to 4.0. This means that households' holdings of financial assets are, on the average, 3.3 times their incurrence of financial liabilities. One could infer that the ample level of households' holdings of financial assets (especially liquid assets) can serve as household sector's additional resources or buffer (in addition to their disposable income) to circumvent potential liquidity and solvency problems. Even during the height of the GFC, households' stock of financial assets continue to grow.

3.3. Household Credit, by Type of Purpose

Identifying the components of household debt or knowing the purpose for which households incur debt is significant for better monitoring and understanding of the key developments in household debt. Figure 4 presents quarterly data on household debt by consumption and production purpose to determine the driver of growth in household credit. Debt intended for consumption purposes include credit card loans, auto loans, other personal or salary loans and loans to individuals for other purposes. Meanwhile, liabilities intended for production purposes include housing or mortgage, agricultural (such as poultry and livestock raising), small and medium enterprise, and microfinance loans for individuals.[18]

<u>Figure 4: Household Credit, by Type of Purpose (% share to total household credit)</u>



Source: BSP-DES, author's computations

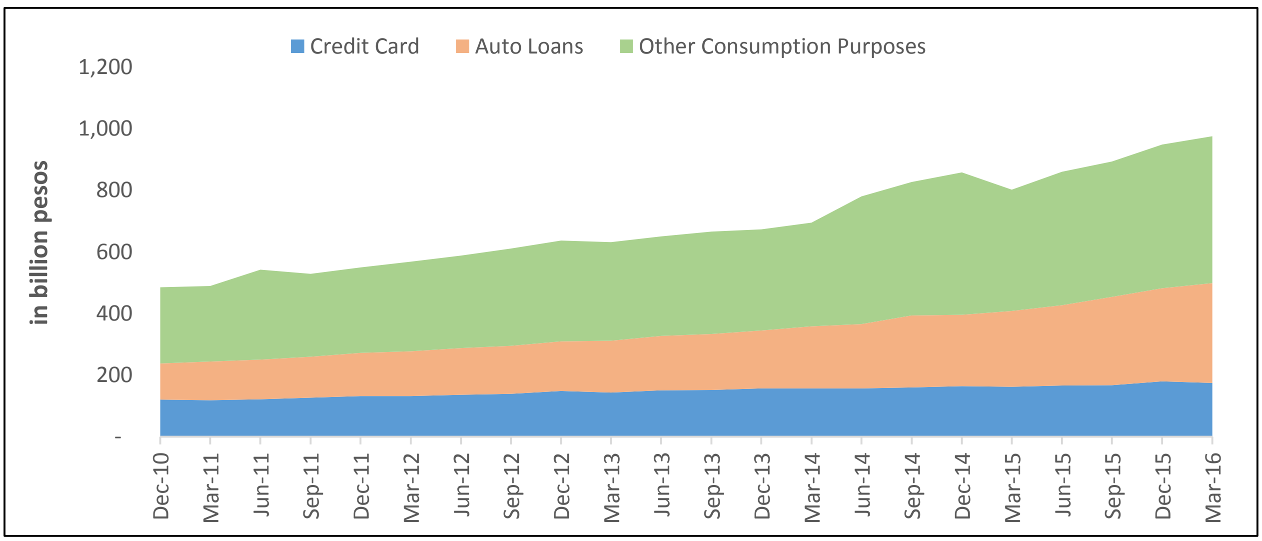
[18] Dwellings or housing (part of the households' gross fixed capital formation), according to the 2008 System of National Accounts (SNA), is one of those productive activities that remain within the household sector. Moreover, the production of housing services by households or by owner occupiers, whether it is intended for their own final consumption or not, has always been included within the production boundary of the system of national accounts. For more detailed explanation on households as producers, please refer to these paragraphs in the 2008 SNA: (¶ 6.32, 6.34, 24.46, 24.50-24.56)

The share of household debt intended for consumption and production purposes (Figure 4) reveals a generally stable trend throughout the periods under study. Debt for consumption purpose represents the largest share of household debt at an average of 62 percent while debt intended for purposes of production accounts for 38 percent of total household debt. This trend gives an inkling of the relatively consumption-driven nature of the economy, where household final consumption expenditure represented 73 percent of the Philippine GDP for the 4th quarter of 2015. It also signals potential creation of strong demand for household loans to boost further their consumption activities.

3.4. Household Credit, by Consumption Purpose

Loans for other consumption purposes remain as the largest component of household debt intended for consumption purposes (Figure 5), which constitutes half of the total consumption debt. Loan to individuals for other consumption purposes include salary loans, educational and appliance loans, and other consumption-related purposes.

Figure 5: Level of Household Credit for Consumption Purposes



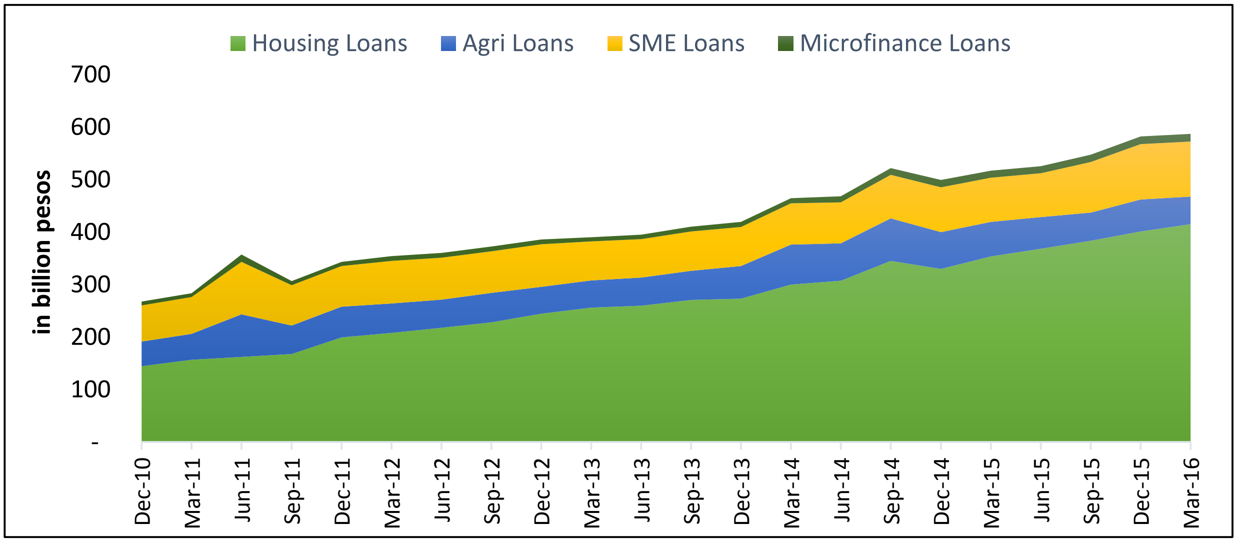
Source: BSP-DES, author's computations

Auto loans and other consumption-related debt generally moves in an increasing trend while credit card debt remains fairly stable from Q4 2010-Q1 2016. In the recent years, auto loans (2nd biggest component of consumption debt at an average of 27 percent) have risen considerably by 22.3 percent at ₱286.6 billion in 2015 from ₱234.3 billion in 2014. The current developments in the banks' auto lending schemes and offers allow households to avail of auto loan products in a relatively easy and speedy way.[19]

[19] These recent trends include technological innovations where auto loan approvals can be executed through short message service (SMS) within a day as well as attractive marketing strategies where loan applicants can pay

3.5. Household Credit, by Production Purpose

Figure 6: Level of Household Credit for Production Purposes



Source: BSP-DES, author's computations

Household credit intended for production purposes exhibited an upward trend (Figure 6) from Q4 2010 to Q1 2016. Housing loans represent the bulk of household debt intended for production purposes, accounting for more than half (63 percent) of total production-related debt. Loans granted or provided by the banking system to the household sector for the purpose of constructing, improving or acquiring a residential property have risen significantly by 186.9 percent to ₱415.5 billion in Q1 2016 from ₱144.8 billion in Q4 2010 as households took advantage of the relatively low lending rates offered by the banks (Figure 1). Households' inclination to borrow funds from the banks to venture into small and medium enterprise businesses likewise contributes to the increase of household debt for production-related purposes, which explains for an average of 20 percent of the total from Q4 2010 to Q1 2016.

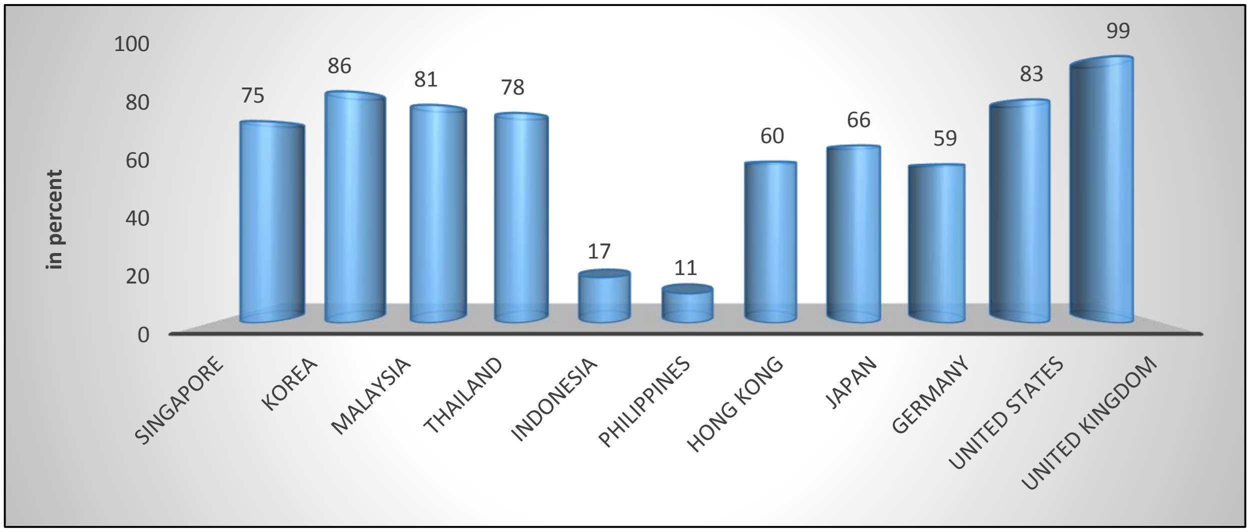
4. Household Debt Across Selected Countries

Understanding household debt in a cross-country perspective is imperative for a more informed analysis of the household sector's current leverage conditions. The Philippine household debt will be placed alongside its neighbouring countries (i.e., ASEAN) and selected emerging and advanced economies using end-December 2012 data on household debt-to-GDP ratio. The data used was 2012 since this is the most commonly available period for the selected countries under study, except for Singapore, Japan and Indonesia which are based on the Q3-2012 data of Standard Chartered Regional Research. While household debt-to-GDP ratios provide comparative benchmark indicator on how Philippine household

minimum down payments and at the same time choose flexible repayment arrangements (Source: https://www.bankbazaar.ph/car-loan.html).

debt compares against other countries, the comparison may not provide a strong and robust conclusion or analysis given the diversity and heterogeneity in compilation methodologies used as well as the structure and level of financial development of each economy.

Figure 7: Household Debt-to-GDP across Selected Countries (2012)



Sources: Standard Chartered Regional Research - Singapore, Indonesia and Japan; Federal Reserve Bank of St. Louis Economic Research - Korea and United States; Bank Negara Malaysia – Malaysia; Compiled by Bank of Tokyo - Mitsubishi UFJ Economic Research Office from Bank of Thailand data – Thailand; Hong Kong Monetary Authority, Census & Statistics Department - Hong Kong; International Monetary Fund, Financial Soundness Indicators – Germany; London School of Economics & Political Science - United Kingdom; and Bangko Sentral ng Pilipinas (Department of Economic Statistics) – the Philippines.

Figure 7 shows that household debt-to-GDP varies widely across selected economies, with economies either showing more leeway to increase household credit or exhibiting potential signs of future credit risk. Using household debt-to-GDP ratio and the threshold estimated in the study of Cecchetti, *et. al.* (2011) as a *rough indicator* for credit risk, Indonesia and Philippines are the outliers in that the risk of over-leveraging in the household sector in these countries is relatively low and modest.[20,21] It could be inferred that given such low level of indebtedness in Indonesia and Philippines, household leverage is not likely to cause a crisis in these economies. Moreover, the ratios in these countries can be viewed in two different angles. On the one hand, the ratios may imply that there is still room for higher household borrowings in these countries to reinforce the growth of the economy through an increase in

[20] Cecchetti, Mohanty, & Zampolli (2011) reported a threshold of 85 percent of GDP for household debt, arguing that beyond this threshold, there could be a significant slackening of growth in the economy. They, however, highlighted that the impact of the threshold they set for household debt-to-GDP ratio is imprecisely estimated.

[21] The Standard Chartered Global Research based the thresholds for categorizing household debt-to-GDP ratio as low, moderate and high risk on the findings of Cecchetti, et al. (2011)," The Real Effects of Debt". The three broad categories for household leverage are: (i) high-risk if household debt exceeds 85 percent of the GDP; (ii) moderate-risk if household debt-to-GDP ranges from 84 percent to 60 percent; and (iii) low-risk category if household debt-to-GDP is below 60 percent.

the households' consumption expenditures.[22] On the other hand, the ratios may indicate that the relatively low indebtedness ratios in these countries are reflective of the level of financial development of a country.

Meanwhile, Korea's household debt is graded as high-risk while the rest of the Asian countries, except for the Philippines and Indonesia (identified as low-risk), are placed in the moderate-risk category. That said, the recent developments in the household debt of countries placed under moderate-to-high risk category *merit extra concern and careful monitoring* because these indicators are likely to show potential threats to the households' vulnerability to certain shocks as well as to the financial health of the banking system and other financial institutions. In the event of a macroeconomic shock, say, a sharp decline in the property prices coupled with a slowdown in households' income, debt servicing could become extremely difficult especially for those individuals who are already over-leveraged and have lost their jobs. Hence, strong regulation (on the side of the banks) and close monitoring on the developments and conditions in the household sector is indispensable.

Figure 7 also illustrates that households in the advanced economies (except for Japan and Germany) are highly indebted, particularly those in the United States (US) and United Kingdom (UK). Most of these advanced economies (i.e., OECD member countries) have already experienced household debt run-ups even before the GFC (Leigh, et.al., 2012). The broad-based trend in the household debt of these developed countries suggests that the extent of household indebtedness is relatively reflective of the economic and financial structure as well as the stage of development of a country. The well-developed credit markets, reinforced by the financial liberalization and innovations (especially in mortgage markets) in these countries, have allowed borrowers/households greater access to credit. One of the remarkable results of this financial innovation in the mortgage market is the sudden increase in the homeownership or property acquisition rates because of the readily available credit and low-cost of borrowing against existing collateral (OECD, 2006). Another reason cited in the literature is the country's standard of living, arguing that households with higher levels of income tend to corner the greatest share of debt stock in the world (Barba & Pivetti, 2009).

5. Implications to Financial Stability (Banking System)

The question on the extent to which household indebtedness or leverage can seriously impact the stability of the financial system depends upon two (2) focal points, that is, the solvency of the household sector and the exposure of the financial system (particularly the banking sector) to the household sector. This policy question became more pronounced following the 2007-2009 GFC when the household sector's insolvency in tandem with the sudden fall of house prices led to unprecedented disruption of the global financial system.

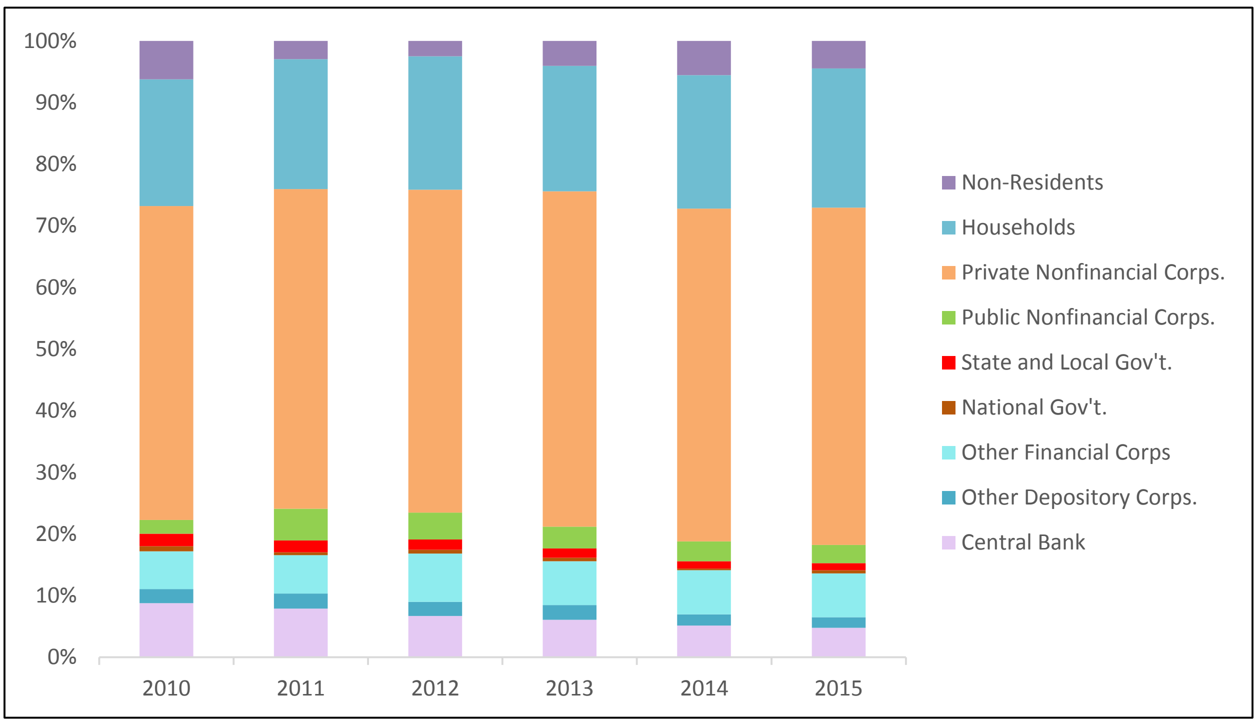
[22] The household sector is one of the institutional sectors that supports and sustains the economic growth of the Philippines, with household final consumption expenditure accounting for 73 percent of the Philippine GDP for the 4th quarter of 2015. (Source: National Accounts of the Philippines).

In the Philippines, as this paper argues, the current developments in household indebtedness is less likely to cause an impending stress in the stability and resiliency of the Philippine financial system. The reasons behind this underlying argument are two-pronged. On one hand, the banking system that dominates the Philippine financial sector has relatively *less direct exposure* to the household sector vis-à-vis other economic sectors in terms of banks' credit provision. On the other hand, the banking system, which remains as the main source of credit of the economy, adopts generally conservative and cautious lending standards.

The banking system's exposure to the household sector (as well as with other economic sectors) is a matter of concern from a financial stability standpoint. Bank credit facilitates the economic interests of the household sector by smoothing their consumption as well as investment activities, which would eventually lead to higher economic output. However, it could also be a source of unanticipated distress in the banking network and therefore, in the financial system if banks' loan exposure to the household sector is left unmonitored.

Banks' exposure to the household sector is measured, in this paper, as the percentage of household loans extended by the banks to the total outstanding loan provision of the banking system (Ruiz-Tagle & Vella, 2010). Figure 8 presents banks' loan exposure to the household sector vis-à-vis other economic sectors from 2010 to 2015.

Figure 8: Philippine Banking System's Loans Outstanding, by Economic Sector



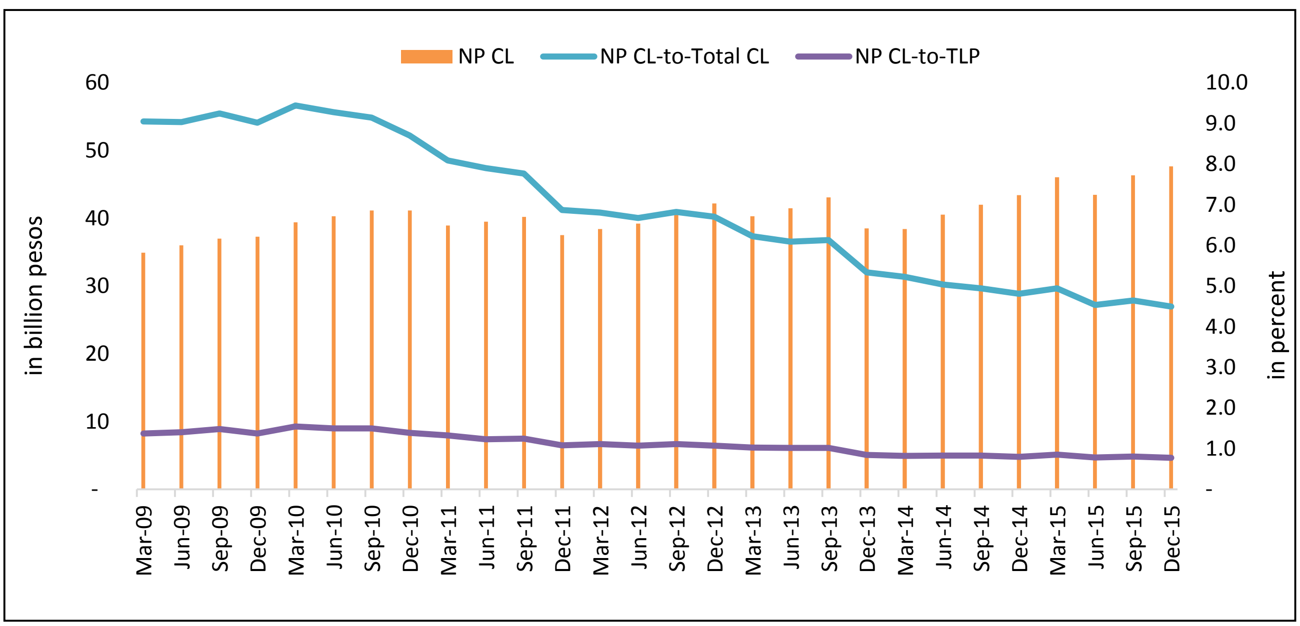
Source: BSP-DES; author's computations

Figure 8 provides plausible evidence that the banks' direct exposure to the household sector in terms of credit provision is relatively low at an average of 21 percent of the banking system's total loan provision from 2010-2015 vis-à-vis banks' exposure to private nonfinancial corporations at an average of 53 percent. The figure above also shows that banks' credit concentration to different economic sectors remain fairly stable throughout the periods under study.

Looking ahead, bank lending to the private nonfinancial corporates (firms) is likely to slow down especially with the recent developments in the Philippine corporate bond markets. The gradual shifting pattern from bank to bond financing is typically brought about by banks' higher cost of lending, prompting firms to lean toward bond funding (Contessi, Li, & Russ, 2013). After the GFC, the share to GDP of Philippine corporate bonds outstanding has expanded noticeably at 9 percent in 2013 from 5 percent in 2008 (Levinger & Chen, 2014). Given these recent developments in corporate bond market, it could be inferred that banks' credit concentration to the household sector is likely to grow as private firms are starting to tap non-bank funding sources. It is in this regard that close supervision and prudent regulation over the households by the banks is still substantially warranted despite the relatively low and modest credit exposure of the banks to the households at the moment.

Another important financial indicator to look at when assessing banks' financial soundness as well as its credit risk exposure to the household sector is the non-performing consumer loans (CL). Monitoring the level of bad debt in the banking system's loan portfolio is imperative for more informed baseline scenarios especially when evaluating the likelihood of banks' failure or crisis. To determine the quality of CL in the Philippine banking system from Q1 2009 to Q4 2015, Figure 9 presents the share of non-performing CL to total CL and to total loan portfolio (TLP) of the banks.

Figure 9: Non-performing CL, percentage share to total CL and TLP

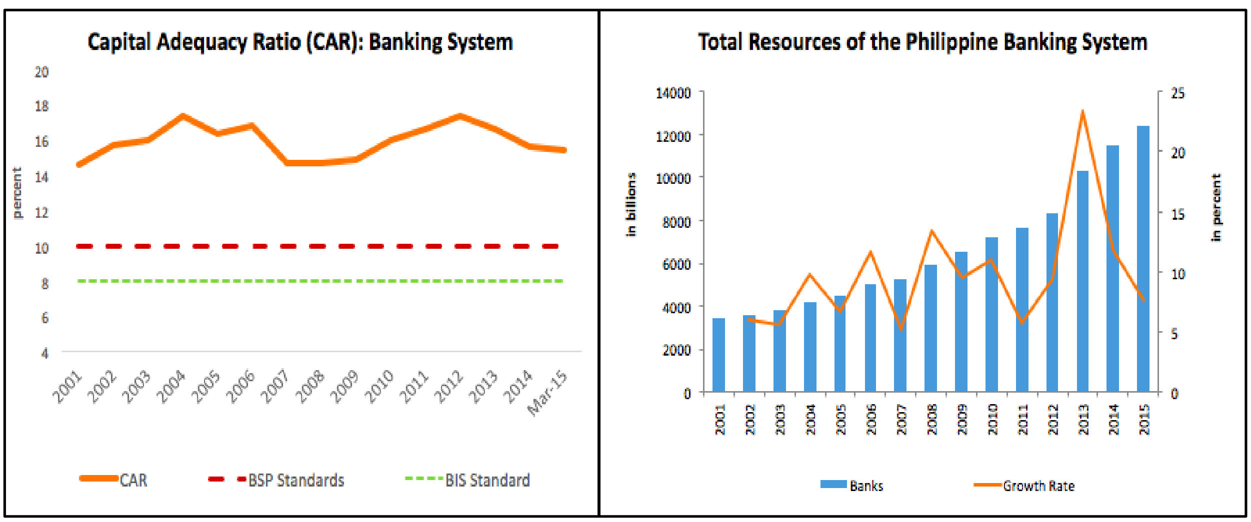


Source: BSP

Non-performing loans (NPL), as defined in Section X309 of Bangko Sentral ng Pilipinas' (BSP) Manual of Regulation for Banks, shall (as a general rule) refer to loan accounts whose principal and/or interest is unpaid for thirty (30) days or more after due date or after they have become past due in accordance with existing rules and regulations. The figure above clearly shows that non-performing CL to total CL is low at an average of 6.9 percent and follows a decreasing trajectory from Q1 2009-Q4 2015. Furthermore, the share of non-performing CL to banks' total loan portfolio is rather immaterial at an average of 1.1 percent, with the highest and lowest registered points at 1.5 and 0.8 percent, respectively, throughout the quarters under review.

Meanwhile, the strong financial condition and adequate capital buffers of the Philippine banking system allows the financial system to respond to unavoidable crashes as business economic cycle changes. Figure 10 demonstrates the significant build-up of assets in the banking system from 2001-2015. It also illustrates that the system remains well capitalized, with capital adequacy ratios (CAR) exceeding that of the Bank for International Settlements' (BIS) BASEL III prescribed threshold of 8 percent and BSP's capital ratio requirement of 10 percent.[23] The figure below likewise evinced that the positive developments in the Philippine banking system, along with the country's strong macroeconomic fundamentals, were among the exceptional advantages of the country during the 2007-2009 GFC.

Figure 10: Philippine Banking System's CAR and Total Resources



Source: BSP

In terms of the policy measures and lending regulations governing banks and all financial institutions under the supervision of the BSP in the Philippines, a relatively stringent and cautious credit standard (the second argument of this paper) is adopted and implemented. Generally, a credit applicant is subject to many qualifications in which banks conduct thorough investigation on the applicant

[23] Basel III is a comprehensive set of reform measures, developed by the **Basel** Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector.

(borrower) as well as the co-maker, endorser and/or guarantor, if applicable, to assess if they are financially capable to meet their financial obligations or commitments to the bank (Bangko Sentral ng Pilipinas, Revised Circular No. 472).[24] Cash-flow analysis and ability-to-pay are used to determine borrower's creditworthiness. Other financial data or information that are relevant in the borrower's credit evaluation are also considered.

In the case of real estate mortgage (REM) as collateral, the maximum loan value for regulatory purposes shall be capped at 60 percent based on an appraisal acceptable to the BSP. It should be noted, though, that the REM collateral value is not the same as a loan-to-value ratio limit imposed in some jurisdictions for real estate lending. Moreover, banks are required to re-evaluate the creditworthiness of the borrower for loan renewal or extension of maturities in order to establish a clear evidence of the sufficiency of cash flow to support the renewal of loans. A policy of "clean-up" or minimum payment of principal will have to be in place.[25] These credit risk-management practices and measures are cautiously observed by the banking sector for effective bank supervision over the household sector.

6. Conclusion and Directions for Future Statistical Research

Notwithstanding the substantial data support in demonstrating the miniscule likelihood of household indebtedness causing financial instability in the banking system, household debt in the Philippines still merits continuous and close monitoring to ensure that the financial system remains solid and sound while upholding consumers' financial protection.

For future statistical research undertakings on household leverage, improving data capture of household debt is indispensable to generate more robust household indebtedness indicators as well as to craft more proactive policy responses. This paper, which will serve as a foundation or starting point of future research studies, can be extended by disaggregating household credit by income bracket to facilitate stress testing analysis. Moreover, this information will aid in identifying the most vulnerable segment of household sector, especially in times of unexpected macroeconomic and financial shocks for more targeted policy decisions and actions. Finally, future research studies could also look at the extent of loan provision by the non-bank sector to paint a complete picture of the total level of household debt for a more holistic approach in understanding the implications of household indebtedness to the economy in general.

[24] Before a credit application of a borrower is granted, he/she is required to submit various requirements that will prove his/her financial capability to service debt obligations (i.e., a copy of the latest Income Tax Return, statement of assets and liabilities, income and expenses, employment history, among others).

[25] Bangko Sentral ng Pilipinas' (BSP) Enhanced Regulations on Credit Risk Management was approved by the BSP's Monetary Board (MB) last 20 October 2014.

References

Bangko Sentral ng Pilipinas. (n.d.). *Revised Circular No. 472, Series of 2005.* Manila, Philippines.

Barba, A., & Pivetti, M. (2009). Rising household debt: Its causes and macroeconomic implications -- a long period analysis. *Cambridge Journal of Economics*, 113-137.

Cecchetti, S., Mohanty, M., & Zampolli, F. (2011). The Real Effects of Debt. *Bank for International Settlements (BIS) Working Papers*, 1-34.

Contessi, S., Li, L., & Russ, K. (2013). Bank vs. Bond Financing over the Business Cycle. *Federal Reserve Bank of St. Louis Economic Synopses*, 1-3.

Donovan, M. M. (2011). Promoting Financial Stability in the Philippines. In I. Gunadi, *Addressing Risks in Promoting Financial Stability* (p. 371). Kuala Lumpur, Malaysia: The Southeast Asian Association of Central Banks (SEACEN) Centre.

International Monetary Fund (2015). Balance Sheet Analysis in Fund Surveillance (p.12). Washington, D.C.: International Monetary Fund.

International Monetary Fund. (2014). *Regional Economic Outlook - Asia and Pacific: Sustaining the Momentum: Vigilance and Reforms.* Washington, D.C.: International Monetary Fund.

International Monetary Fund. (April 2012). *Dealing with household debt.* Washington, D.C.: IMF World Economic Outlook.

International Organization of Supreme Audit Institutions. (2010). *The Causes of the Global Financial Crisis and Their Implications for Supreme Audit Institutions.* Stockholm, Sweden: INTOSAI.

Jappelli, T., Pagano, M., & Maggio, M. (2008). Households' Indebtedness and Financial Fragility. *9th Jacques Polak Annual Research Conference* (p. 43). Washington, D.C.: International Monetary Fund.

Leigh, D., Igan, D., Simon, J., & Topalova, P. (2012). Dealing with Household Debt. Washington, D.C.: International Monetary Fund.

Levinger, H., & Chen, L. (2014). *What's behind recent trends in Asian corporate bond markets?* Frankfurt, Germany: Deutsche Bank Research.

Madrid, P. (2010). *Philippines: Financial System Stability Assessment Update.* Washington, D.C.: International Monetary Fund.

Nakornthab, D. (2010). *Integrative Report: Household Indebtedness and Its Implications for Financial Stability.* Malaysia: The SEACEN Centre.

OECD Economic Outlook. (2006). *Has the Rise in Household Debt made Households More Vulnerable?* Organisation for Economic Cooperation and Development.

Ruiz-Tagle, J., & Vella, F. (2010, January 20). Borrowing Constraints and Credit Demand.

Standard Chartered Global Research. (2013). *Asia Leverage Uncovered.*