Implications of 2008 SNA recommendations for the measurement of households' income and savings

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Abstract

The 2008 SNA includes many recommendations which affect the measurement of households' income and savings, in particular those regarding pension funds, investment funds, and provisions for calls under standardized guarantees. First, the 2008 SNA requires reporting separately the two types of employment-related pension schemes: a defined benefit scheme and a defined contribution scheme. Regarding a defined benefit scheme, the amount of claim that the households hold (pension entitlements) is to be recorded not as the amount of pension assets set aside in the pension funds, but recognized on an accrual basis. Second, the 2008 SNA recommends that retained earnings of investment funds be recorded as the income and thus savings of the investor, rather than the investment fund, highlighting the role of investment fund as the investment vehicle. Third, while the 2008 SNA maintains the principle of treating guarantees as contingent liabilities and not being recorded as financial assets/liabilities, it recommends, as an exception, that granular and standardized guarantees be reported as financial assets/liabilities. In July 2014, the Bank of Japan (BOJ) released its methodologies to implement those recommendations, projecting to publish its revised financial accounts in the first half of 2016. This paper briefly describes BOJ's estimation methodologies and presents their tentative numerical impacts on households' income and savings through pension funds, investment funds and provisions for calls under standardized guarantees.

Keywords: defined benefit pension schemes; retained earnings of investment funds; provisions for calls under standardized guarantees

1. Introduction

During the course of complying with the 2008 SNA, the Bank of Japan (BOJ) has made significant progresses to revise its Flow of Funds Accounts (FFA). In July 2014, the BOJ released its methodologies to implement 2008 SNA recommendations, projecting to publish its revised FFA in the first half of 2016[1].

The 2008 SNA, as one of its major characteristics in the area of the financial account, puts forward many recommendations to enhance the data coverage and estimation accuracy in non-bank financial institutions (non-banks) such as introducing the accrual accounting to employment-related pension schemes and highlighting an investments fund's role as conduit. As reflected in international initiatives following the recent financial crisis such as G20's DGI and IMF's SDDS-plus, it is important to develop and improve data in capturing activities of non-banks for the purpose of better

[1] Refer to Bank of Japan (2014) for details of those methodologies.

assessing financial system risks. Consequently, this would improve the accuracy of estimating households' income and thus savings distributed and reinvested through the non-banking sector.

In contrast with this conceptual appeal of shedding light on non-banks, data limitations have posed a serious practical difficulty common to many countries. In its effort to overcome this practical challenge, the BOJ gives priority to minimizing the reporting burden, by maximizing the usage of the existing data, most of which are publicly disclosed. For example, the BOJ plans to use micro data for employment-related pension schemes and also for investment funds. As for standardized guarantees, despite its plans to conduct surveys to estimate the amount of provisions for calls under standardized guarantees for housing loans to individuals, the BOJ selects the minimum number of sample respondents, by striking a balance between the reporting burden and the adequacy of statistics.

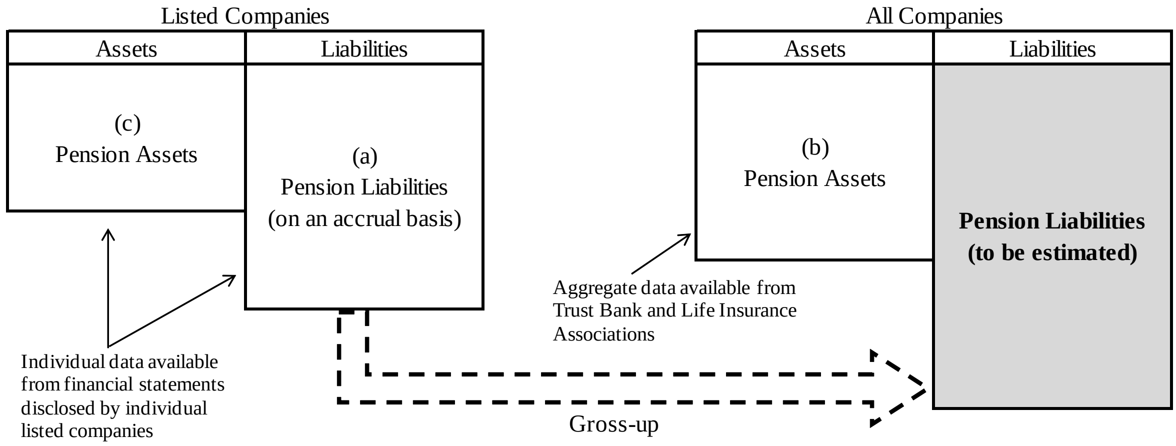
This paper briefly describes 2008 SNA recommendations and corresponding BOJ's estimation methodologies to revise the FFA, and presents tentative numerical impacts of the revisions on households' income and savings through pension funds, investment funds and provisions for calls under standardized guarantees.

2. 2008 SNA Recommendations and Revised BOJ's Methods

(1) Pension entitlements to employment-related pension schemes

The 2008 SNA requires reporting separately the two types of employment-related pension schemes: a defined benefit scheme and a defined contribution scheme. Regarding a defined benefit scheme, the amount of claim that the households hold (pension entitlements) is to be recorded not as the amount of pension assets set aside in the pension funds, but recognized on an accrual basis, i.e., as the amount of pension commitments made by the employer to households.

Chart 1 : Estimation Method of Pension Entitlements to Defined Benefit Schemes

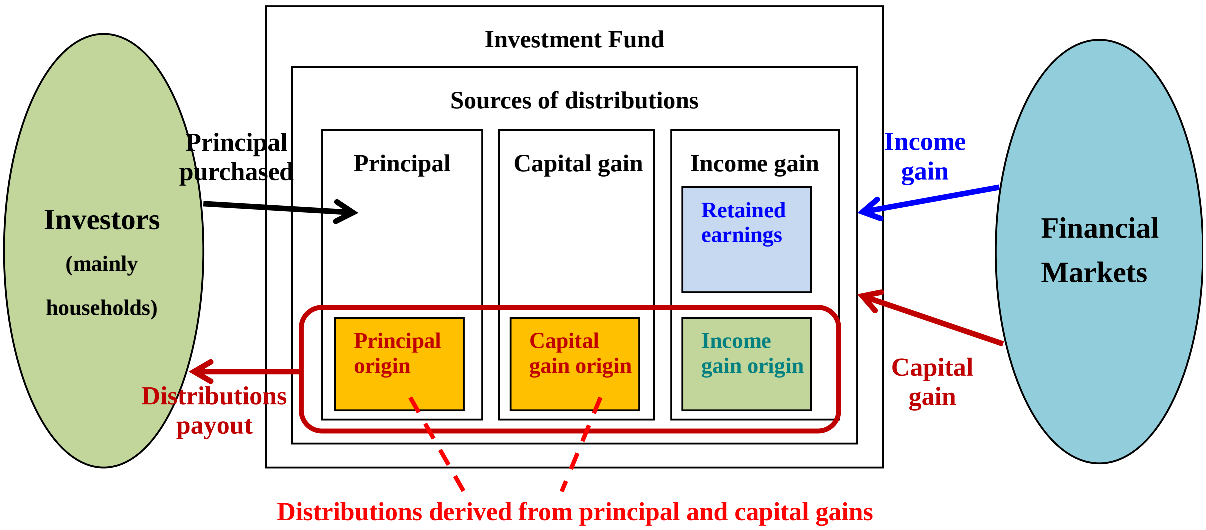


$$\text{all companies' pension liabilities} = \frac{\text{(b)all companies' pension assets}}{\text{(c)listed companies' pension assets}} \times \text{(a)listed companies' pension liabilities}$$

In line with the 2008 SNA recommendations, the method used to calculate pension entitlements in the FFA will be revised in three respects. First, a defined benefit pension scheme and a defined contribution pension scheme will be recorded and published separately. Second, the amount outstanding of the pension entitlements to all employment-related pension schemes, including those of unlisted companies, will be recognized on an accrual basis[2]. Specifically, the amount will be estimated based on three sets of available source data: (a) the amount of retirement benefit obligations/liabilities owed by listed companies, multiplied by (b) the ratio of the amount of pension assets held by all employment-related pension schemes to (c) that of listed companies (Chart 1). Third, the transaction flow of pension entitlements to defined benefit pensions will also be recorded on an accrual basis. The amount will be estimated as follows: The gross increase in pension entitlements to all employment-related pension scheme will be computed as service costs (benefits earned by employee service) and interest costs (the unwinding of the discount) in pension accounting aggregated for all listed companies multiplied by the ratio of (b) the amount of pension assets held by all employment-related pensions schemes to (c) that of listed companies as used in estimating the outstanding amount. Then, the amount of paid benefits will be subtracted, which will be estimated by the information disclosed by the different types of pension funds.

(2) Retained earnings and distributions by investment funds
The 2008 SNA recommends that retained earnings of investment funds, i.e., investment income that funds receive and reinvest without distributing them to investors, should be treated as if they were distributed to and reinvested by investors. This reflects the view that investment funds are a conduit through which income merely passes. The revised FFA will follow this recommendation to impute the retained earnings derived from the income obtained by investment funds as if they were distributed to and reinvested by investors, which are mainly households.

Chart 2: Investment Fund Sector's Retained Earnings and Distributions



In addition, in the revised FFA, distributions that are derived from the principal and capital gains will be recorded as withdrawals of equity (the beneficiary certificates of investment funds) by investors (or repurchases by issuers). This change will arise as a consequence of regarding investment funds as a conduit even though such treatment is not explicitly discussed in the 2008 SNA. The BOJ views that the treatment of distributions derived from the principal and capital gains is relevant rather

[2] Currently, the FFA treats only listed companies on an accrual basis, but not unlisted companies.

uniquely to Japan in light of the increasing number of investment funds that distribute to investors more than the investment income they receive in times of deteriorating investment performance. In Japan, while the outstanding amount of foreign-currency denominated investment funds has been increasing in recent years, there are a large number of funds among these that pay out a fixed amount of distributions per month regardless of investment performance (Chart 2)[3].

(3) Provisions for calls under standardized guarantees

The SNA has long treated guarantees as contingent liabilities and the standard practice has been not to record them as financial assets/liabilities, with only certain exceptions. While the 2008 SNA continues to maintain this principle, it recommends, as an exception, that granular and standardized guarantees (standardized guarantees) be recorded as financial assets/liabilities because the probability of their being called may be estimated with a certain degree of accuracy if they are issued in large numbers, usually for fairly small amounts, along identical lines.

Standardized guarantees in Japan include loan guarantees given by private sector financial institutions to individuals as well as public credit guarantees given to companies and the self-employed. However, there is no available source data on the outstanding amount of mortgage guarantees in the private sector, which supposedly account for the majority of the loan guarantees to individuals. The amount of provisions for standardized guarantees related to mortgage guarantees will be estimated using information obtained through surveys conducted by the BOJ on guarantee firms affiliated with banks and cooperative financial institutions. This estimated amount will be added to the amount of provisions for calls under standardized guarantees for public credit guarantees and the resulting amount will be recorded as provisions for calls under standardized guarantees.

In designing surveys, based on a pilot survey of 159 firms with 147 effective responses, the BOJ reduced the number of samples to 40 firms from the pool of 79 firms which meet data requirements, minimizing the reporting burden[4].

3. Priliminary Assesment of Numerical Impacts

First, regarding employment-related pensions, the amount outstanding of defined benefit pension entitlements (retirement benefit obligations/liabilities) is estimated to be 130 trillion yen at the end of fiscal year 2004, gradually declining to 110 trillion yen toward the end of the fiscal year 2012. When compared to the current FFA, the amounts outstanding are estimated to increase by 20 trillion yen at the end of fiscal year 2004, and by 10 trillion yen at the end of fiscal year 2012 – financial assets of households holding pension entitlements will also increase by 20 trillion yen and 10 trillion yen, respectively. The revision is likely to reveal that the more retroactively the retirement benefit obligations/liabilities are revised, the greater the amounts outstanding are. This reflects the impacts of the demographic changes in Japan on employment-related pension schemes: while withdrawal of pension entitlements has increased as a large group of post-war baby-boomers have started retiring since the late-2000s, new contributions from current employees have decreased. As a result, the amount of transaction flow in pension entitlements is likely to be revised down by an annual average of a few trillion yen. Accordingly, the surplus in the household sector is also set to be revised down by an annual average of a few trillion yen (0.5% of GDP).

Second, with regard to investment funds, the revised methods will not affect the amounts outstanding, but will have a considerable impact on the figures of the transaction flow. Distributions derived from the principal and capital gains are expected to amount to an annual withdrawal from

[3] Refer to Osawa (2014) for more details about issues on distributions from the principal and capital gains in Japan and estimation methods by using individual fund-level micro data.

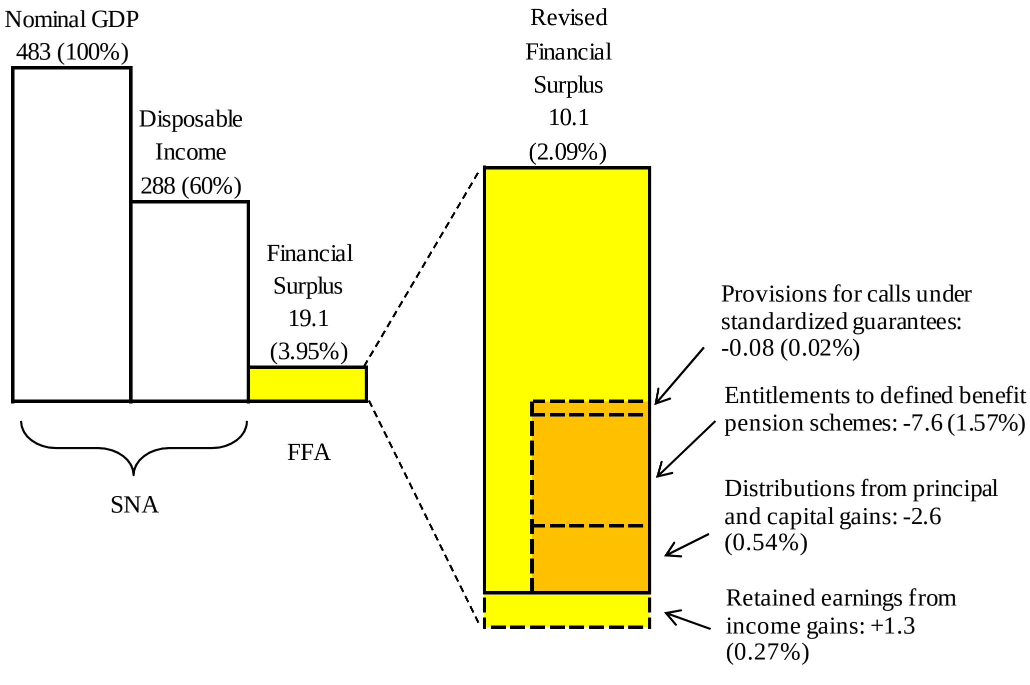
[4] 40 firms selected by the size of loan asset account for over 90% of total housing loans outstanding.

investment funds in the range of 1 to 3 trillion yen in 2006 and onward. For example, in fiscal year 2013, the annual withdrawal from funds by investors, which are mainly households, is estimated to be 2.6 trillion yen. This would lead to a net annual reduction of the surplus of households by about 1.3 trillion yen, after recording reinvestment of retained earnings which amounts to about 1.3 trillion yen annually (0.3% of GDP)[5].

Third, in terms of provisions for calls under standardized guarantees, the aggregate of mortgage guarantees and credit guarantee schemes is expected to be around 3 to 4 trillion yen. However, the transaction flow, which is recorded as household sector's assets, is estimated to be in the order of ten billion yen, with a minimal impact on the financial surplus of the household sector, compared with the pension fund sector and the investment fund sector mentioned above (around 0.1 trillion yen for fiscal year 2013).

All the above sectors considered, the revisions in the compilation methods of employment-related pensions, investment trusts, and standardized guarantees will have a considerable degree of quantitative impacts on the household sector, resulting in a decline of the surplus of about 19 trillion yen per year on average (4% of GDP) by about 9 trillion yen per year at most (1.9% of GDP) between fiscal year 2005 and fiscal year 2013 (Chart 3)[6].

Chart 3: Estimated Impacts on Household Sector's Financial Surplus (Example: FY2013)



Note: Priliminary figures for Fiscal Year 2013 (trillion yen) with GDP ratio in parenthesis.

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[5] Refer to Osawa (2014) for effects of adjusting distributions from the principal and capital gains on substantial financial deficit in recent years of the investment fund sector in the current FFA.

[6] For example, revised financial surplus of household sector (10.1 trillion yen) = pre-revised financial surplus (19.1) - provisions for calls under standardized guarantees (0.08) - entitlements to defined benefit pension schemes (7.6) - distributions from the principal and capital gains (2.6) + retained earnings from investment funds (1.3). The revision of entitlements to defined benefit pension schemes is rather large, reflecting the fact that the current FFA estimates the figures based on assets set aside in the pension funds which tend to increase in part as asset prices rise and in part as companies make more contributions from higher profits during the economic expansion. All figures are preliminary for fiscal year 2013.

4. Concluding Remarks

This paper briefly describes 2008 SNA recommendations and correspondingly revised BOJ's estimation methodologies for pension funds, investment funds and provisions for calls under standardized guarantees, and presents tentative numerical impacts of the revisions on households' income and savings. While specific methods to comply with the 2008 SNA should, as a principle, reflect each country's circumstances such as available source data, financial market structures, and institutional arrangements, the BOJ has focused on overcoming data limitations to capture activities in non-banks, by making maximum use of the existing data where possible, with the principle of minimizing the reporting burden.

As a result, while applying the best possible methods to revise the FFA given the current data constraint, the BOJ uses estimation techniques which compromise to a certain degree on the level of estimation accuracy and data coverage. First, as for defined benefit pension schemes, the BOJ makes use of data on pension entitlements disclosed in financial statements of listed companies, grossing up to all companies including unlisted companies in the economy. An implicit assumption made in the process is to use the ratio of assets to liabilities for listed companies for unlisted companies as well, potentially resulting in underestimation of pension entitlements given that unlisted companies tend to hold less pension assets than listed companies. Moreover, using data on all companies' pension assets managed by trust banks and insurance companies exclude companies which do not use trust funds but hold their pension assets by themselves, leading to underestimation. On the contrary, consolidated financial statements of listed companies include their overseas brunch offices and subsidiaries which include their pension liabilities overseas, potentially overestimating pension entitlements for the SNA which excludes overseas activities.

Second, as for investment funds, because individual funds do not disclose figures of retained earnings and distributions from the principal and capital gains as such, the BOJ makes use of data on sources of distributions for their estimations. When dividing distributions between income gain origin, on one hand, and capital gain origin, on the other hand, the BOJ makes the assumption that the ratio of sources of distributions between income gains and capital gains is the same as the amount of distributions actually paid out between them[7]. Third, as for standardized guarantees, unlike the public sector whose data are readily available, data on the private sector are limited and thus the BOJ conducts survey for housing loans which account for most of the private sector, with guarantee firms' cooperation. Nonetheless, other types of loans which are not covered by the survey include credit card loans and auto loans to individuals, both of which are nonetheless not large in amount, and corporate loans to small and mid-size companies.

Despite estimation issues mentioned above, the BOJ regards revising the FFA in accordance with the 2008 SNA as an important step toward better applicability and adequacy of financial statistics. Going forward, the BOJ will continue its effort to improve the FFA.

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[7] The detailed data on sources of distributions are disclosed only after June 2012. For an alternative estimation method prior to May 2012, refer to Osawa (2014).