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Canadian SNA Pension Satellite Account

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CANADIAN SNA PENSION SATELLITE ACCOUNT

Background

1.   There continues to be a great deal of interest in the topic of pensions, and how pensions are treated in post-war economies.   It seems clear that there is a need to better understand the impact of pension stocks and flows on both economic behaviour and on the economy as a whole – both currently, and for the next 15-20 years. A satellite account for pensions was conceived by national accountants in Canada in the mid-1990s. This note summarizes progress on this initiative.

2.   This presentation arises from two basic directions. First, the deliberations on the revisions to the treatment of pensions in SNA93 were extensive, involving both and IMF EDG and an OECD Working Group. Coincidentally, pensions have been on the joint WPFS-WPNA agenda for each of the last 3-4 years. Second, at the 2005 WPFS meeting Canada presented a note on *Recent Trends in the Evolution of Household Saving and Wealth Components in Canada.* At the end of this presentation, the initiative in Canada to construct a **Pension Satellite Account** (PSA) was noted. At last years meeting, Canada agreed to present a summary of its work on the PSA at the 2007 WPFS-WPNA.

Structure of the Pension Satellite Account

3.   The CSNA has two basic architectures: The production-oriented industry-based architecture of the detailed input output tables and the current monthly measures out of output by industry; and, the sector-based accounts designed to articulate economic behaviour. This latter set includes the quarterly measures of income arising and final expenditure on GDP and the underlying and detailed sequence of sector accounts. The sector accounts include: the income and outlay account; the capital account, the financial account and the balance sheet account (including the other changes in assets). ***The Pension Satellite Account*** (PSA) is an articulation and extension of the stock-flow dimension to the sector accounts.

4.   The PSA project is largely analytical in nature. A significant amount of pension information is currently available and is embedded in the core SNA sector accounts; however, only a limited amount of this information is visible in these accounts. The PSA project focused mainly on articulating pension details in a structure that "fit' with the existing SNA core accounts. In addition, the PSA developed estimates for missing pension detail.

5.   The PSA covers the entire universe of the retirement regime in Canada which includes government-sponsored social security, employer-sponsored pension plans ESPP), and voluntary individual retirement saving plans (IRSP). Considerable classification detail exist under ESPP, including private and public plans, funded and unfunded plans, under-funded pension liabilities, defined benefit-contribution schemes, and other characteristics.   Almost all of this detail is linked to the institutional investors and cross-referenced to the underlying assets for easy analysis.

Social security

6.   Social security schemes are safety nets aiming to prevent poverty of the elderly. In Canada, there are two schemes fall into this category: Old Age Security/Guaranteed Income Supplement (OAS/GIS)

program which is a non-contributory plan and has no association with employment earnings. Benefit payments are out of government general revenue. It is broader-income tested (reducing payments if a retiree receives income from other sources).

7.   The second scheme in this category is the Canada Pension Plan and the Quebec Pension Plan (CQPP). CQPP was established in 1966 and covers all people who worked in Canada. It is publicly managed scheme with mandatory participation of all workers and it is also earning related. The purpose of CQPP is to provide workers and their families with certain retirement income as well as protection against disability and death. It falls under social security because it is the government who pays the benefit and employers have no obligations under these plans. Invested assets were under-funded prior to 1997.

Employer-sponsored plans

8.   Employer-sponsored pension plans are plans established by employers in both public and private sectors and are of basically two types as either defined benefit or defined contribution. The plans under this category take the basic three forms: trusteed pension funds, government arrangements, or insurance contracts. There are variations of employer-sponsored plans, such as deferred profit sharing plans and retirement compensation arrangements for the purpose of retirement compensation package.

Individual saving plans

9.   In Canada, these plans were set up to encourage people to save for retirement. Registered retirement saving plans (RRSP) were introduced in 1957 with tax incentives. Contributions to RRSP are tax-sheltered with a limit and are on a voluntary basis. Withdrawals are allowed but subject to income tax at the time of withdrawal. The amount is converted to payout vehicle such as registered retirement income fund (RRIF) or an annuity when the owner turns age 69.

PSA framework

10.   The PSA basic framework, in a condensed version, is shown in the matrix form below. Social security plans represent saving and wealth accumulation in the government sector. Employer-sponsored plans and individual saving plans (dominated by and often referred to as referred to as RRSP[1]) in Canada are treated as part of household sector saving and wealth accumulation. PSA is a detailed three dimensional matrix, with the third dimension being time series.

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[1] These are equivalent to LIRA in the U.S.

	Opening wealth position	Inflows: contributions, Investment-income	Outlays: Withdrawals, Other flows	Other changes: Gains/losses, etc	Closing wealth position
Social security					
Employer-sponsored plans					
Individual savings plans					

11.   The accounting framework of the PSA includes wealth positions in market and book values, and detailed inflows and outflows, revaluations, etc. Specifically included are entries for investment income and realized and unrealized capital gains/loses which are some of the key components of wealth change.

Sources of data

12.   Most of the data for the PSA were available but there were some challenges, in particular with self-directed individual retirement saving plans.   The basic sources were as follows:

- Surveys of institutional investors (insurance, pension funds, banks)

- Enterprise surveys for employers

- Government public accounts and other government administrative data

- Tax data

- Household survey data

- Some degree of modeling and derived data

Two features of pensions in the CSNA

13.   It is useful to clarify two features of the CSNA treatment of pensions that are different from a number of other countries. First, all household pension plans have a similar treatment with respect to their impact on personal saving and wealth. It does not matter whether a government ESPP is unfunded (no invested assets), by virtue of the fact that it is recognized as a liability (by government) is treated as a household sector asset, with corresponding saving flows. Second, Canada has a treatment for all ESPP that does not require the D8 adjustment described in SNA93 to bring personal saving and personal disposable income into line. Essentially, the incomes and outlay of pension funds are consolidated in the household sector[2]

Some analytics of the Pension Satellite Account

Supplementing pensions detail in the CSNA core accounts

14.   The detail of employer and employee contributions to ESPP included in wages and salaries and supplementary income can be articulated. Investment income accruing to pension investments can be identified under total household investment income. Pension benefit payments (dis-saving) can be related

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[2]   These are treated as a form of collective investment schemes. Employee contributions are in wages and salaries and employee contributions in supplementary labour income; investment income of the pension funds (excluding gains and losses are in household investment income; benefit payments to pensioners are part of dis-saving in the financial account, such that the net flows in the financial account reflect the major items contributions plus investment income less withdrawals.

to personal expenditure, and transfers to government. Net pension asset flows in the financial account can be grossed up into their components. The impact of pensions on saving and the net lending-borrowing position of households can displayed. Pension assets in household net worth, and their growth (capital gains), are evident. Pension assets account for close to one-half of the size of the total financial assets and one-third of the net worth. The proportion of employer-sponsored pension assets is about 60%, while individual retirement plans account for 34%.

Personal saving and wealth evolution

15.　　　The declining saving rate over the last few decades has attracted mixed attention. Up to 1990, the decline was considered a return to a normal level, after having peaked at over 20% in 1981. Thereafter, the decline which continued through the 1990s and beyond has generated more interest. Despite the downward trend in personal saving since 1990, household wealth has continued to accumulate at good pace … essentially substituting capital gains (price appreciation of assets) for saving out of current income. Pension saving has been an increasing share of a downward trending personal saving since 1990, and pension wealth has been a significant contributor to the growth in household net worth. What remains to be understood is the impact of the increasing pension payments/withdrawals, going forward in time, on household financial positions.

Forecasting the economy

16.　　　Personal expenditure accounts for about 60% of GDP, and being able to estimate future growth is essential for central banks, policy-makers and analysts. As population ages, there are increasing sources of funds from other than income arising from production and transfers. Pension benefit payments and individual retirement saving plan withdrawals – dis-saving – will soon be key variables to any forecasts of personal expenditure. The PSA indicates that propensity to spend quite high out of retirement dis-saving.

Projecting tax revenue

17.　　　There is already a gap between reported SNA income and income taxes paid, largely because realized capital gains are excluded from SNA income, which is of concern to some analysts. Increasingly, taxes will be generated out of pension benefit payments and individual retirement plan withdrawals. The need to project tax revenues from pension dis-saving for fiscal planning purposes is clear, and the federal finance department has expressed interest in this detail of the PSA.

Impact on Capital markets

18.　　　The accumulated investments in ESPP, social security and individual saving plans are very significant part of economy-wide assets. As assets in these funds grew sharply beginning in about 1987-90s, they have had a substantial influence on capital markets – with respect to both growth and fluctuations. However, as these funds are drawn down by retirees over the years to come, the impact on these markets and on the economy is unclear.

Sustainability issues

19.　　　This is the fundamental question of: Is there enough accumulated pension saving – by type, by composition – to meet the needs of increasing number of baby-boomer retirees over the next several years? If not, there are clear implications for the standard of living and likely also for government fiscal balances. Notably, there is a need to understand the age-income class distributions of this accumulated pension saving in order to fully address this issue.

Pension system risks

20.   There is a series of risks associated with the pension system that feedback on the sustainability question. The overall burden of pension saving has gradually shifted from government to employers and to individuals. For defined-benefit ESPP, there are financial risks for employers associated with fluctuating values for invested pension assets. A market correction implies increased business costs as any subsequent actuarial deficits must be eliminated.   Clearly, significant market corrections, risky investments or sustained poor returns on pension investments can translate into an overall cost to the economy.

21.   Partly to counteract these vulnerabilities, employers have been moving away from defined benefit schemes in favour of defined contribution schemes. This is a disadvantage for employees covered by these plans, as known benefit streams provide income security.

22.   A further risk to households' future income security relates to the significant amounts invested in individual retirement saving plans. Increasingly, these investments have shifted from fixed income into equities and real estate. If returns are not adequate or capital loses are registered, future incomes can be eroded. With the significant amount of funds invested in pensions, it could be argued that the financial position of households is considerably more sensitive to market risk (both asset price and interest rate fluctuations) now than it was 17 years ago, with potential impacts on the economy.

Future work on the Pension Satellite Account

23.   The Pension Satellite Account (PSA) contains detailed information that allows users to conduct broader and deeper analysis on many social economic issues associated with an aging population. Initial estimates of the PSA are expected to be released in the form of a paper in early 2008. Sometime thereafter, following initial feedback from key users, the plan is to regularly release the PSA data as part of standard output of the Canadian System of National Accounts.

24.   It is likely that parts of the database will shift to quarterly frequency, to enhance current analysis. In particular with respect to the development of standard supplementary SNA tables on pension incomes, saving and wealth, payments/withdrawals, taxes paid and estimates of personal expenditure from retirees.

25.   Certain further developments/extensions are also planned. One area of interest is with respect to the market vulnerabilities of assets defined benefit plans and the implications for employers.   In addition, there are plans to link up with household micro data to expand the analytical capability of the PSA. Lastly, there will be Improvements in the accuracy of derived and modeled data in the PSA matrix.