

International Differences in the Recording of General Government Pension Schemes in the National Accounts

Contribution to the IMF EDG on the Treatment of Pension Schemes in Macroeconomic Statistics

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The objective of this paper is to raise the attention of national accountants on the necessity to review the recommendations of the SNA regarding the recording of public pension schemes, whether they concern the government as an employer or as the organiser of social security schemes. In many countries public pension schemes are reformed, in particular because of ageing population, sometimes creating mix systems that are difficult to analyse using present SNA categories. Also, public accounting bodies increasingly recommend treatments that are seemingly not consistent with the SNA, driving some OECD countries to depart, with solid arguments, from current SNA recommendations. The international comparability of national accounts is therefore impaired.

This paper is composed of four parts. The first discusses the recognition of liabilities for unfunded pension schemes and concludes that there is probably a case for a review of the SNA regarding the treatment of unfunded government employee pension schemes. The second discusses the sector classification issue and concludes that a review of the SNA would be necessary to ensure economically consistent classifications of public pension schemes across countries. The third discusses collateral implications on the international comparability of household saving rates, and poses the question of the “D8 adjustment” in the accounts. The fourth discusses the change that would occur on the figure for net lending/borrowing of the general government if changes were implemented in the SNA regarding unfunded general government employee pension schemes. This fourth part concludes first that the paragraphs of the SNA regarding imputed social contributions should be clarified and second that it is more than necessary to have consistent recording principles to obtain internationally consistent net lending/borrowing figures. Implementing the solution discussed in the first chapter, which is to treat all general government employee pension plans as if funded, would have the advantage of this internationally consistent recording for net lending/borrowing.

The paper uses the example of Canada to illustrate the issues. The author recognises that one important limitation of the paper is that it does not extend more systematically its analysis to the case of other countries. It is probably only when having a view on a larger sample of concrete situations that one could start to give constructive recommendations for treatments that would ensure the international comparability of aggregates such as government net lending/borrowing or government total liabilities or household saving rates. However, the author considered that the present draft of the paper could already be of interest to participants in the EDG on pension schemes.

The author has found useful to add an appendix presenting some definitions drafted by the OECD task force on pension schemes, as the SNA/ESA uses many technical terms without sometimes defining them.

Finally, the paper reflects personal views and do not engage the responsibility of the OECD.

Chapter I: Liabilities of unfunded schemes.

The original background of this paper was a complaint by the Canadian authorities to the OECD regarding the international comparability of the figure in the OECD Economic Outlook for the total financial liabilities of the Canadian general government, a figure extracted from the Canadian National Accounts tables. Indeed, since 2001, the Canadian System of National Accounts (CSNA) recognises an implicit¹ liability of the general government of Canada regarding pensions of government employees, while it is not recognised (in accordance with present SNA recommendations) in many other countries except, to the author's knowledge, Australia and New Zealand. In Canada, it represented an additional debt of 18% of GDP (figure for 2001).

This highlighted that difference in the treatment made by national accountants of the explicit or implicit liabilities of general government employees pension schemes lead to non-comparable figures for total financial liabilities². Pending comparable treatments, it has been therefore decided at the OECD that the liability data for Canada published in the OECD Economic Outlook will be now on adjusted, as is currently done for Australia and New Zealand.

OECD treatment: exclusion of unfunded government employee pension schemes

<i>In % of GDP</i>	Australia (2001)	New Zealand (2001)	Canada (2001)
(1) Total liabilities	44.4	52.1	101.6
(2) Unfunded GG employees pension schemes treated as if they were funded	20.0	7.5	17.7
(1) – (2) Comparable result published by the OECD after exclusion of unfunded pension schemes	24.4	44.6	83.9

However, while the OECD has *excluded* those liabilities for the above two countries, another solution would have been to *include* estimates of the corresponding liabilities for other countries. The SNA does not yet recognise such liabilities, but it does open the door to compile “memorandum items”. However, countries do not estimate (or do not transmit to the OECD) these memorandum items.

In this context, this chapter recommends that (1) a full picture be made of the difficulties in comparability with the present situation between the national accounts of OECD countries, (2) that a full picture be made of the emerging recommendations from other accounting bodies (GFS, IFAC), (3) that the SNA should be reviewed if it is confirmed that there is a growing movement towards the recognition of these implicit liabilities. The present chapter discusses mainly of *general government employees* pension funds, and only partly of the more general case of public pension schemes for *all employees*.

¹ Implicit is a term used by the author of this paper.

² This remark does not concern the Maastricht debt which excludes, by construction, pension fund liabilities. However, the recognition of an (implicit) debt of general government regarding their own employees could have indirect consequences on other Maastricht criteria.

I.1 When is there a liability for the current SNA?

The SNA bases its recognition of a liability of the pension fund to its contributor on the criterion of whether *the pension scheme is funded*. Funded means that there is an identifiable reserve assigned for the payments of benefits (paragraph 11, Annex IV). In this case, the reserve is treated in the SNA as an asset belonging to the beneficiaries (paragraph 8.63.b).

The simplest institutional arrangement is the following: the employee is part of an autonomous scheme (a private pension plan, for example) to which he contributes (including the employer's contribution, which can be analysed as part of the compensation of the employee). The scheme uses these contributions to buy various assets and thus creates a reserve from which it will pay, in the future, the pension benefit, under the agreements that were defined. One can distinguish "defined benefits" pension schemes (see definitions in appendix 1) and "defined contributions" systems (idem, appendix 1).

In the above case, the SNA recognises a liability of the scheme in favour of the contributor, thus, in terms of national accounts, a financial claim by households on the sector in which the pension scheme is classified. This is logical: the contract between the contributor and the pension scheme is that the contributor has an explicit ownership of his "account" in the fund³. This asset is coded "AF61 net equity of households on life insurance reserves and on pension funds", in the financial accounts. Contributions are added to AF61, benefits paid are deducted from AF61⁴. The value of the liability depends on the kind of the pension plan. In paragraphs 13.78 to 13.83, the SNA states that the liability of a defined benefit pension plan is equal to the present value of the promised benefits. As such, this amount can be larger or smaller than the value of the assets. In other words, the SNA recognises that the liability of a defined benefits pension plan is obtained as the sum of the value of the assets plus (minus) the actuarial value of expected deficits (surplus). For defined contributions pension plans (called "money purchase plans" in the SNA), there is no such difference; the liability is exactly equal to the current market value of the funds' assets.

The opposite situation is the case of unfunded pension schemes. The typical situation is the case of social security systems in which the current receipts from employees and employers cover (more or less) for the current benefits of retirees (pay-as-you-go, PAYG, see appendix 1). These schemes do not create reserves. In this case, the SNA does not record a liability of the scheme vis-à-vis its current contributors who will be its future beneficiaries, *in its official financial accounts*. However, the SNA does recommend showing these liabilities as a memorandum item, at least for occupational schemes (paragraph 13.88): *Unfunded occupational pension schemes are by definition defined benefit schemes. There is no pool of assets accumulated from which to pay benefits, however. It is recommended that the present value to households of promises by these schemes to pay future pension benefits be shown as a memorandum item in the balance sheets as assets of households (and thus as liabilities of the scheme)*.

Why this prudent stance, while one could say that there is obviously an implicit liability, whatever the form of the financing (i.e. whether there is a fund or not)? Arguments against the recording of the implicit liability are the following. The first is that the liability could be seen to be, in some sense, a contingent one, and contingent liabilities are not recorded in the SNA. However, while the liability to any individual may be contingent on his survival pattern, an actuarial estimate for the survival pattern for the relevant population as a whole can be made with reasonable accuracy. The more compelling reason for not recording the liability is that, since all or part of the contributions are imputed, there is no matching asset for the pension scheme corresponding to the liability⁵. Another similar argument is that it would be incorrect to recognise a liability of the general government for future benefits, while not recognising an

³ Making this situation similar to life-insurance, which is itself classified, without discussion, as a financial asset.

⁴ We will see later that the SNA also recommends the recording of contributions and benefits in the income accounts.

⁵ This is why a "notional" asset was created by the CSNA (see footnote next page).

asset of the general government for future contributions (or other compulsory levies received by the general government). Also putting a value on the liability is difficult. An OECD working paper (*Ageing populations, pension systems and government budgets: simulations for 20 OECD countries*, n°84, 1996, <http://www.oecd.org/pdf/M00001000/M00001183.pdf>) constructed scenarios of future liabilities for public pension schemes. As explained, “scenarios are highly speculative and rely on fairly heroic assumptions”. The assessment of the liability depends on demographic assumptions, and on the rate of discount. Calculations showed that the net worth of public pension schemes for a given country could vary between -62% of GDP, or -102%, up to -198% of GDP, depending if you took a discount rate of 7% 5% or 3%. However, the SNA admits, as explained above, the introduction of such speculative calculations when compiling the liability of defined benefits pension funds. The difficulty of the exercise is thus not a completely convincing argument regarding the difference made between funded and unfunded pension plans. Finally, there is not also a fully consensual view on how the valuation of the liability can be made: based on the rights due to past employment of current employees at the time the valuation is made, based on the future rights, at the time the valuation is made, of current employees when they will be in retirement, or based on future rights of current and possible future employees when they will be on retirement?

I.2 General government employees pension schemes

In front of these arguments, is a growing problem with the SNA treatment in the specific case of *general government unfunded pension schemes for their own employees*. Indeed, this is where their commitment is most engaged (see discussion in the next paragraph). The IMF's *Government Finance Statistics Manual 2001 (GFSM 2001)* has already recommended that, contrary to the SNA, stocks of government liabilities for all employer schemes, both funded and unfunded, be recognized in the form of *insurance technical reserves*⁶. This itself reflects the increasing consensus of general government accounting bodies (and international accounting boards such as the IFAC-PSC⁷) to show in their own accounts the liabilities of general governments regarding the future benefits of their *own employees*. Liabilities of unfunded government pension plans *for their own employees* have been recognised for many years by Canadian and Australian Government Finance Statistics (outside national accounts), pushing national accountants of these countries to go further than the current SNA limit and recognise the liabilities of those schemes, *even if they are technically unfunded*.

In Canada, the national accountants recognised, in their 2000Q1 revision of the CSNA, the liabilities of the old unfunded government employee pension plan. The impact was a nearly 18% increase of total government liabilities. This treatment is in contradiction with a strict interpretation of the current SNA, although the CSNA argues that one may consider that the old pension scheme is “notionally funded”⁸, but the move reflects the contradiction of a situation in which the SNA does not recognise a liability which is officially recognised by the institutional sector itself!

⁶ GFS (Government Finance Statistics) logically recommends also that contributions and benefits of government employer insurance pension schemes be recorded exclusively as financing transactions. This regards Chapter III of the present paper. The treatment of government employee pension plans is one of the two major departures of the GFS from the SNA. The other one is reinvested benefits.

⁷ Public Sector Committee of the International Federation of Accountants (IFAC).

⁸ The first step of the CSNA rational is to consider that there is a “notional” unit of government dealing with the pension scheme. The second step is to consider that this notional unit has, as asset, a “notional bond” issued by the government, and equal to the value of liabilities. The CSNA argues that this corresponds to the effective situation, as the future benefits to pensioners include the cumulated interest (based on effective treasury bonds’ interest rates) on contributions paid. However, there is no effective reserve, in the sense that the SNA recognises.

The Australian Bureau of Statistics criticises the criterion based on the existence of a reserve that is used by the SNA. The ABS “*does not consider that there is any material difference between non-autonomous (funded) pension plans and unfunded pension schemes in the general government sector in Australia [from the point of view of government employees]*” (“The Treatment of Pension Funds in the Australian National Accounts”, paper presented by ABS to the OECD National Accounts Expert Meeting, 1999, STD/NA(99)24, <http://www.oecd.org/pdf/M00020000/M00020782.pdf>). First, the benefits are explicitly defined as they relate to the length of service, age at retirement and final salary on retirement. Second, when changes are made to benefits they apply only to new employees joining the schemes. Third, liabilities of unfunded schemes are being recorded, as in Canada, in the annual budget documents of both the Federal and State governments. Fourth, employees clearly regard their entitlements as financial assets. As a consequence, the ABS decided to show assets and liabilities associated with unfunded public sector pension schemes as integral components of the Australian sectoral balance sheets rather than, as recommended in the SNA, as memorandum items.

I.3 Why limit the treatment to *government employee* pension schemes?

But this covers the case of unfunded *government employee* pension plans. In most countries, there are unfunded public pension schemes (social security schemes) organised by the general government for *all employees*. The implicit liabilities of these *all employee* pension schemes are much larger than those related to *government employee* pension plans. For example, the *Canada Pension Fund* until recently was almost entirely “pay as you go”. In the OECD working paper quoted previously, the OECD estimated the (gross) liability of the public Canadian pension plans (CPF and other public schemes), based on all expected future payments, at 200% of GDP. However, the Canadian System of National Accounts does not record this huge implicit liability.

The logical question is therefore: why record the implicit liability of unfunded government pension plans and not extend this treatment to all employee pension schemes organised by the general government? The main argument is that there is a much stronger contract, and thus liability, between the government as an employer with its employees than as the government as an organiser of the pension plans with the society at large. In the case of its own employee, there is an “exchange” transaction: the employee gives the service, in return of what the government pays the compensation of the period plus the deferred compensation corresponding to the future benefits. In the case of the government as the organiser of a scheme for the entire society, there is no such strong link, and the government is more able, to reconsider its past commitments, when they are difficult to achieve. What has been promised by law can be changed by a new law...

Also, there is a case, in the social security scheme situation, that, if one recognises a liability for the future benefits to be paid, one would have to recognise an asset for the future contributions to be received. We would enter then in an uncontrolled domain of starting to recognise the capacity of the general government to raise future tax as an asset, something which is probably not welcome. Does this apply also to unfunded general government employee scheme? In the view of the author, it does not because for employer pension schemes and, as such, government employer pension schemes, future contributions to be received correspond to future expenses (as part of the compensation) and therefore cannot constitute an asset. As a matter of fact (see Chapter IV), the net lending/borrowing for general government employer pension schemes is not the difference between contributions and benefits but is equal to the benefits (or the contributions) themselves. The change in the net worth of the general government as an employer is thus affected by the level of benefits themselves, not by the difference between contributions and benefits, as is the case of social security.

The criterion used by the SNA on whether or not to recognise the liability, is based on a formally recognised *reserve*. But it can be noted that when the institutional unit which finances the reserve is also

the payer of the liability, the criterion becomes purely formal, because the it may organise things as it wants: without contributions, with contributions but without reserve, with contributions and reserves. It can even constitute “reserves” consisting of special, unmarketable, or even “notional”, bonds. The international comparability of the figure of total liabilities of general government is then seriously impaired, because based on a technicality which is not essential to the system. It appears thus that it should not be the mode of financing of the benefits which should trigger the recognition of the liability in the SNA, but the recognition of the liability by the institutional unit. In Australia and Canada the government fully recognises the liability, whatever its mode of financing.

On the contrary, when government organises a public pension scheme to *non-government* employees, there has to be payments made by employers and employees outside the government to the government. In this case, the pension scheme has explicitly the choice of either constituting a specific reserve or not. In this case, the choice of not making a reserve could be a signal that the government *does not recognise the liability*.

Two provisional conclusions may be therefore drawn: (1) there is a case that pension schemes of government to their own employees may be treated differently than pension schemes organised by government for all employees, (2) the criterion is the recognition of the liability.

For the author of the present paper, the main argument in favour of a change of the SNA regarding the recognition of these implicit liabilities for general government employee pension schemes is that there is an explicit recognition of these liabilities by the governments themselves in their accounting practices. If, as it seems, but should be confirmed, those liabilities of employers’ schemes are treated such in private business accounting and these recommendations are increasingly implemented in general government accounting, why should the SNA not recognise liabilities that would be recognised by the debtor itself? In contrast, the opinion of public accounting bodies regarding the implicit liabilities of social security schemes is very split. It is therefore probably not the time to change this in the SNA. However, such liabilities could be shown as memorandum items.

Chapter II: Sector classification of general government pension schemes in the SNA

If a pension scheme is classified within government its surplus/deficit will be included in the general government surplus/deficit and any (implicit or explicit) liability *vis à vis* households will appear in the government balance sheet. In the opposite case, it will not.

It is therefore essential to clarify the sector classification of the pension scheme.

The SNA (par 8.63) distinguishes three categories:

- Social security schemes covering the entire community, or large sections of the community, that are imposed, controlled and financed by government units. These schemes are classified in the sub-sector “social security”, within general government.
- Private funded schemes, which can be of two types: autonomous schemes (see appendix 1), and non-autonomous ones, which cannot be distinguished from the employers’ unit⁹. The formers are classified as insurance, the latter in the same sector as the employer. If the employer is government, it will thus be government.
- Unfunded schemes in which employers pay social benefits to their employees out of their own resources without creating social reserves for the purpose. These schemes are classified in the same sector as the employers. In particular, when the employer is the government itself (i.e. the employees are civil servants), the scheme is included within general government.

In addition the SNA specifies that “*social insurance schemes organised by government units for their own employees, as opposed to the working population at large, are classified as private funded schemes or unfunded schemes as appropriate and are not classified as social security schemes.*”

Paragraph 4.98 which defines the content of the sector “S125 Insurance and pension fund” states that pension funds included in this sector are “*those which are constituted in such a way that they are a separate institutional unit from the unit which creates them. [...] They have their own assets and liabilities.*” Logically this means that all non autonomous pension funds are classified either in general government or in the employer’s sector.

Investment in employer’s securities

Paragraph 4.98 of the SNA adds that “*Pension funds classified within the insurance sector do not cover pension arrangements for the employees of private or government entities which do not include a separately organised fund nor an arrangement organised by a non-government employer in which the reserves of the fund are simply added to that employer’s own reserve or invested in securities issued by that employer*”. This paragraph is interesting as it explicitly mentions in its last words a criterion based on the composition of the assets: when reserves are invested *in securities issued by the employer*, the pension fund is classified within the employer institutional sector and not as an autonomous pension fund. In other words, some 401k pension funds in the USA which invest all their reserves in securities issued by the employer would not be considered as an autonomous pension plan. It is not clear, however, whether the paragraph applies also to government pension plans, because the sentence includes the words “non-government employer”. If one overlooks this point, it would appear that a fund operated by government for its own employees with a reserve constituted only of government securities would be automatically classified within the employer’s sector (the general government) even if it is funded and autonomous. On the contrary, it could be that holding government securities could be considered specific, in the sense that they are non risk assets. In this case, an autonomous fund operated for government employees investing in its own securities could be classified outside the government sector.

⁹ The SNA specifies that employers funded schemes can be considered non autonomous even when the funds are “segregated” from the rest of the employers’ own funds.

Regarding pension schemes that are relevant to general government, there are two major cases to review: (1) pension schemes organised by GG for their own employees, (2) social security schemes.

Regarding pension schemes organised by the government for their own employees, the interpretation of the above SNA recommendations is the following: (a) if the scheme is funded and autonomous, then it is classified outside the general government, in the insurance sector; (b) if the scheme is funded but not autonomous then it is classified inside the general government; (c) if the scheme is unfunded then it is classified inside general government. Case (a) covers clear cut funded pension schemes. Generally, the fund managers are responsible for the acquisition of assets, including non government assets, etc... In this case, it is appropriate to classify this fund outside general government. Conversely, when the pension scheme is not funded (case (c)), its financial transactions are inextricable from the financial transactions of the general government. It is often not even segregated nor a separate unit of government. It has thus no autonomy and so must be classified inside general government. Case (b) covers mixed cases.

For example, a country like Canada covers the whole range of cases.

- In 1998, legislation at the federal level created a new fund for government employees, which receives contributions and has a pension board presiding over market investment. This unit is clearly an autonomous funded pension scheme (case (a)) and is classified accordingly in the insurance sector in the Canadian National Accounts (CSNA).
- The old pension scheme for government employees still exists. As explained in the previous chapter, there is a debate on whether it can be considered funded or not. But, regarding its classification, the CSNA is clearly in accordance with SNA in considering it as included in the government sector. It can be considered funded but non-autonomous (case (b)) or simply unfunded (case (c)).
- In addition to these plans, there are, in Canada, two or three small funded pension schemes that are managed by government and are thus classified within the general government (case (b)). Mention is also made to recently set up funded pension schemes (i.e. converted from unfunded to funded) which were initially funded by issues of government bonds. The treatment of these last funds in the CSNA is not fully clear to the author of the present paper.

The situation regarding social security schemes was probably quite clear at the time the SNA was drafted because at these times these systems had similar characteristics: directed towards the general population, compulsory contributions, pay as you go (PAYG) financing of benefits. However, the major challenge of ageing population is conducting OECD governments to implement reforms of these systems, which questions their sector classification in the SNA. In several countries, for example Poland, old PAYG social security systems are replaced by mixed system that have characteristics of the old system (compulsory, general), characteristics of private funded systems (defined contribution system: benefits equal to accumulated contributions plus investment return, private management) and new characteristics (for example some guarantee of minimal pension offered by government). Eurostat has started a task force which discusses the precise conditions under which such new systems can be classified or not inside general government, strictly under the strict interpretation of ESA 95 (this is without envisaging changes, contrary to the present paper). The OECD participates in this task force, but discussions are not yet sufficiently advanced to report them in the present paper.

Chapter III: Collateral issues regarding income accounts

The present chapter section focuses on the impact of the different methods of recording pension schemes for households' disposable income and savings, and the corresponding savings ratio. These issues are discussed in paragraphs 9-14 to 9-16 of SNA.

As explained in the previous chapters, payments by households to pension funds (i.e. funded schemes) supply their reserves, which are themselves considered as a financial asset of households. Conversely, payments by pension funds to retired households are considered as a reimbursement of these assets. Thus, in principle, these flows could be only registered in the financial accounts, as are, for example, flows corresponding to life-insurance payments and returns. Life insurance is often considered as a close substitute to pension funds¹⁰.

However, the SNA 93 adopted a mix treatment for the pension funds flows. It recommends that payments to pension funds and receipts from pension funds are *also* recorded in the current income accounts of the SNA in the same category as traditional social contributions and benefits, *at the same time that they are* recorded as purchases and reimbursement of assets in the financial accounts.

This treatment allows to take into account the “*perception of households concerned, who tend to regard the pensions they receive as income in the form of current transfers*”. To record pension contributions and benefits only in the financial accounts would have had consequences that were considered unreasonable at the time the SNA 93 was drafted. If we assume that there are two groups of households, one only contributing and the other only benefiting, the former would have a high disposable income and the former a low disposable income. For those contributing, part of their disposable income would be in fact not available to spend as they liked. It constitutes “obligatory” savings. Equally, characterising pensioners as having no regular income also would have been counter intuitive. Also, this treatment ensures in theory a better international comparability of figures for social contributions and benefits. Institutional differences between countries in the organisation of pension schemes do not affect the comparability of these flows.

However, this mixed treatment will generally lead to an inconsistency in the accounts, if no adjustment is made. This can be illustrated using the following (very simplified¹¹) example. Households pay 1000 to pension funds and receive 950 from them in benefits. Under the assumption of this example that “other receipts” of 50 finance the difference, this leads to a figure of 0 for disposable income, savings, and net lending borrowing. At the same time, in the financial accounts, an increase of 50 of the net assets of households in AF61 is recorded. Indeed as payments are above receipts by 50, households assets in pension funds reserves have increased by 50. *There is therefore an imbalance of 50 between the net lending/borrowing as measured in the non financial accounts (B.9A) and the net lending/borrowing as measured in the financial accounts (B.9B).*

Table 1: SNA 93 treatment (before adjustment)
Households: simplified income accounts

Uses		Resources	
D61 Contributions	1000	D62 Benefits	950
		Other receipts	50
B6 Disposable income	0		
P3 Consumption	0		
B8 Savings	0		
B9A Net lending/borrowing	0		

¹⁰ To the point that some propose to merge the two categories in one.

¹¹ Not only consumption is assumed to be 0, but the increase in assets in the form of pension funds reserves is assumed to be financed only by current income sources rather than by changes of other financial assets.

Households: financial accounts			
An imbalance of +50			
Changes in assets		Changes in liabilities	
F61 Net equity of households on pension funds	+50	B9B Net lending borrowing	50

Therefore, SNA 93 has created the transaction “*D8 Adjustment for the change in net equity of households on pension funds*”, an adjustment item necessary to balance this accounting framework. This adjustment increases savings, and net lending/borrowing by the amount of the difference between payments and receipts, as shown in the continuation of the above example.

Table 2: SNA 93 treatment (after adjustment)
Households: simplified income accounts

Uses		Resources	
D61 Contributions	1000	D62 Benefits	950
B6 Disposable income	0	Other receipts	50
P3 Consumption	0	D8 Adjustment for the change in net equity of households on pension funds	+50
B8 Savings	+50		
B9A Net lending/borrowing	+50		

As a result, the financial accounts are now balanced:

Households: financial accounts			
Changes in assets		Changes in liabilities	
F61 Net equity of households on pension funds	+50	B9 Net lending borrowing	+50

An alternative presentation of this adjustment would be to say that it was introduced in order to re-obtain the value of savings that would have been obtained if the SNA had only recorded the pension fund payments in the financial accounts. Such an alternative presentation is illustrated in Table 3, which departs from the current SNA presentation.

Table 3: departure from SNA 93 treatment
Households: simplified income accounts

Uses		Resources	
B6 Disposable income	+50	Other receipts	50
P3 Consumption	0		
B8 Savings	+50		
B9 Net lending/borrowing	+50		

Households: financial accounts	
Changes in assets	Changes in liabilities
F61 Net equity of households on pension funds	B9 Net lending borrowing
+50	+50

The table 3 presentation is consistent with the idea that pension funds are only financial assets and are not different than, for example, life insurance. It is not therefore fully a surprise that countries that have chosen to treat unfunded government employee pension schemes *as if they were funded* (Canada, Australia), also base their presentation of the flows in the income account on the method of Table 3, departing also from SNA on this point. In other words, these countries do not have “D8 adjustments” because they only record flows of contributions and benefits of pension funds as financial transactions, and not in the non financial accounts¹². The objective of international comparability of social contributions and benefits is therefore, in practice, not reached.

One complication of the SNA recommendation is that, if the presentation of Table 3 is equivalent to the one of Table 2 for savings, it is not equivalent for the savings ratio (savings/disposable income), because disposable income is different in Table 3 from Table 2. Therefore, for countries applying the SNA recommendation, the formula for the saving ratio should not be $B8/B6$ but $B8/(B6 + D8)$.

This is illustrated by the following tables. Table 4 covers the case of a country applying the SNA treatment for D8. Table 5 represents another country, with exactly the same pension fund flows, but not applying the SNA treatment for D8. In the first case, the saving ratio ($B8/B6$) SR is 20.4%, in the second 20%¹³.

Table 4: Country with pension funds applying the SNA treatment
Households: income accounts

Uses		Resources
D61 Contributions	1000	D62 Benefits
		950
B6 Disposable income	2450	Other receipts
P3 Consumption	2000	2500
		D8 Adjustment for the change in net equity of households on pension funds
		+50
B8 Savings	+500	
Saving Ratio = $500/2450 = 20.4\%$		
SR' = $500/(2450+50)=20\%$		

¹² As such they follow the recommendations of the IMF GFS manual.

¹³ Here the difference is positive in favor of the SNA treatment. But this is because payments are higher than benefits. In the opposite case, the results would be opposite on saving ratios.

Table 5: Country with pension funds departing from the SNA treatment
Households: income accounts

Uses		Resources	
		Other receipts	2500
B6 Disposable income	2500		
P3 Consumption	2000		
B8 Savings	+500		
$SR = 500/2500 = 20\%$			

This difference is unwelcome. In fact, the correct saving ratio is 20% not 20.4%. Household saving ratios for countries that apply the SNA should be compiled as SR' (shown in Table 4), equal to $B8/(B6+D8)$. In other words, the numerator of the ratio (B8) and the denominator (B6) should be homogeneous for the rate to be consistent. This adjustment is applied in the OECD Economic Outlook table for saving ratios. The quite original “dual” treatment recommended by the SNA has therefore some drawbacks.

Impact on Canadian saving ratio

Canada changed in 2000 its treatment of general government employee unfunded pension schemes. They decided to treat them *as if they were funded*. At the same time Canada did not implement the SNA “mixed” treatment, but, as in Table 5, excluded all corresponding contributions and benefits from the current income accounts. The net effect of the change was an increased personal saving of 11 billion \$, pushing the saving rate to 3.6% from 1.9%. This is due to the fact that payments to these unfunded pension schemes were 11 billion of \$ above benefits in that year.

One of the arguments invoked by countries that have departed from the SNA on the treatment of unfunded government employee pension funds is that their treatment is better than the SNA treatment regarding the comparability in time of saving ratios, in a context of a progressive shift from a traditional system of unfunded pension schemes to a funded pension scheme as in the case of Australia and Canada.

The following example illustrates the impact of such a change on the household saving ratio. Table 6 shows the situation of a country with an unfunded government pension scheme applying the SNA. The household saving ratio is equal to 18.4%.

Table 6: Country with unfunded pension schemes (social security)

Uses		Resources	
Year Y			
D61 Contributions	1000	D62 Benefits	950
		Other receipts	2500
B6 Disposable income	2450		
P3 Consumption	2000		
B8 Savings	+450		
$SR = 450/2450 = 18.4\%$			

Table 7 shows the situation of the same country (and same flows) but now under an arrangement in which there is a funded pension scheme, in year $Y + t$. The household saving ratio is equal to 20.0%, whether or not the country applies fully the SNA regarding D8. The shift from a situation in which the institutional arrangement is an unfunded pension scheme to a situation in which the institutional arrangement is a fully

fledged pension plan leads to a structural change in the measurement of household saving ratios. This can be considered by some economists as unwelcome, because, households did not, in fact, modify their behaviour.

Table 7: Country with pension funds: Year Y + t
 Applying the SNA treatment: SR; Not applying the SNA treatment: SR'

Uses		Resources	
D61 Contributions	1000	D62 Benefits	950
		Other receipts	2500
B6 Disposable income	2450		
P3 Consumption	2000	D8 Adjustment for the change in net equity of households on pension funds	+50
B8 Savings	+500		
SR' = 500/(2450+50)=20%			

The solution, applied by these countries that depart from the SNA, is therefore to treat the traditional pension schemes *as if they were pension funds*. In this case, the measured household saving ratio will not be affected by the institutional change during the period of change of institutional arrangements, that is between year Y and year Y+t. In the above example, this will raise the historical saving ratio of year Y from 18.4% to 20% or 20.4%. This treatment has been applied by Canada for its historical time series.

As a provisional conclusion of this chapter, the author considers that there is a case for a review of the dual treatment of social contributions and benefits in the SNA and the D8 adjustment. First, users should know better the implication for the saving rate, and beware not making the error discussed above. Second, the usefulness of the treatment should be analyzed, in particular in the context of international comparability. If one confirms this treatment then international organisations should better enforce its implementation in national accounts.

Chapter IV: Consequences of recognition of implicit pension liabilities on government net lending borrowing

As explained in Chapter I, a change in the treatment of government employee unfunded pension schemes has been implemented in recent years by certain countries (Australia, Canada). This chapter discusses the consequences of such a change on *general government net lending/borrowing* for countries that have continued to strictly follow the SNA principles but would envisage implementing the same change. The chapter does not cover at all social security schemes.

Its conclusion is first that, if such a change is implemented, the deficit (surplus) of the general government will change by the amount of the imbalance (deficit or surplus) between contributions and benefits. This conclusion applies whether contributions are actual or imputed. The only case in which it does not apply is when imputed contributions are estimated systematically as equal to benefits paid. This is a solution which the SNA allows as second best, but which is evidently not applicable in particular when, as is going to be the case in OECD countries, there is a gap between benefits paid to *actual* retirees and imputed contributions necessary to cover *future* retirees. Second, the chapter concludes that it is essential to have a consistent recording system for these schemes in order to obtain internationally comparable data for general government net lending borrowing.

The chapter is completely organised around simplified numerical examples. We consider a country in which the government organises the pension schemes of its own employees on the basis of a defined benefit system, financed by pay-as-you-go (PAYG). Two situations are explored: (1) there are effective contributions paid by the employee and the general government (the employer), (2) there are no explicit contributions, the government finances this pension scheme out of its current operations (general tax), so there are “imputed” social contributions. In each of the examples, we successively treat the case in which contributions and benefits are non financial flows (current SNA treatment), and the alternative treatment (corresponding to the one applied by Australia or Canada), in which the flows are treated as financial. We then compare the resulting net lending/borrowing. In this entire chapter we will not use the full SNA presentation (i.e. including the “dual” treatment described in the previous chapter). This simplification does not change the conclusions of the chapter¹⁴. Also, we have omitted any property income attributed to insurance policy holders (D44), because the fund is, in our example, “virtual”¹⁵.

IV.1. Effective contributions

Let us suppose that the contributions (employer and/or employee) to the pension schemes are equal to 1000 and that benefits are equal to 800 (surplus of 200¹⁶). The current SNA sequence of accounts will be the following. First, general government pays 1000 of compensation to the (active) employees¹⁷. Then, these repay to the general government (which is the organiser of the scheme) these contributions. Then, the government pays the benefits to the (retired) employees.

¹⁴ The full presentation is made in appendix 2.

¹⁵ In fact, even if the fund was not virtual, this would not change the conclusions of the chapter because the general government would receive a property income (D4) which would be immediately rerouted (D44) to households (who are the owners of the assets).

¹⁶ This reflects the current situation. But the opposite situation could occur in the future in most public pension schemes, essentially for demographic reasons.

¹⁷ For simplicity, amounts are restricted to those of strict interest to the example: total compensation, for example, is not shown.

Case 1, version a

Generation of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 1000 <i>Of which, contributions 1000</i>			Compensation 1000

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
	Social contributions 1000	Social contributions 1000	

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources
Social benefits 800			Social benefits 800

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending borrowing -800		Net lending borrowing +800	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800		Cash +800	

The net lending/borrowing of the general government is equal to -800, which is the level of benefits. It may look surprising that the net lending/borrowing is not the deficit of the system (benefits – contributions) but the level of benefits. But this is logical for an employer scheme: the employer pays the contribution as part of the compensation, so, in fact, it is not a net resource. One can also explain it this way: the net lending of -800 corresponds to a net lending of -1000, representing the cost of the contributions to the employer (the general government), plus a net lending of +200, corresponding to the current surplus of the system which is supposed to be a PAYG system (i.e. with no recognition of liabilities), in which benefits are supposed to be met by current contributions.

Let us now present the alternative treatment based on the concept that pension flows are no more payments but are accruing financial assets/liabilities, *as if the scheme was funded (i.e. had a reserve)*. Pension benefits are recorded as a decrease of households' assets. Contributions are recorded as an increase in asset/liability.

Case 1, version b

Generation of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 1000 <i>Of which, contributions 1000</i>			Compensation 1000

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending borrowing -1000		Net lending borrowing +1000	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800	Net equity on pension funds: -800 for retirees +1000 for active employees	Cash +800 Net equity on pension funds: -800 for retirees +1000 for active employees	

The following changes can be noted in this version (b) of case 1. First, the flows of contributions as well as benefits paid are no more recorded in the distribution of income approach. They only appear in the financial accounts as an increase/decrease in the general government liabilities (and a parallel increase/decrease of household assets).

Second, which is the important result from the point of view of this chapter, is that, contrary to the version (a) of the accounts, net lending borrowing of the general government is now equal to -1000, the amount of contributions paid. This result is logical in the context of this version (b) which reflects the existence of pension liabilities. As in version (a) the net lending is affected by the cost of the contribution to the employer, but contrary to version (a), there is nothing to add to this cost, because contributions and benefits are recorded under the line of net lending borrowing. This reflects that, in our simplified example,

a funded system has by construction a net lending/borrowing equal to zero (see Case 1, version c, at the end of this chapter).

Whatever the interpretation of this change, the simple conclusion is that the change from a situation in which an unfunded government employee scheme is treated as recommended in the SNA to a situation in which it is treated as if it was funded, leads to a difference for net lending/borrowing equal to the amount of the imbalance between contributions and benefits. This can therefore seriously impair the comparability of figures for net lending borrowing between countries. If contributions are larger than benefits (surplus), net lending borrowing of the general government will be impacted negatively, and, in the opposite situation (deficit), net lending borrowing will be impacted positively.

IV.2. Imputed contributions

Let us now suppose that there are no actual contributions paid by neither employees nor employers. Indeed, it could seem useless for the employer to include a contribution (in compensation of employees) which is immediately rerouted to itself¹⁸. Despite this absence of explicit contributions, the SNA recommends to impute them in order to reflect the real cost of employees. As, by definition, “imputed” social contributions do not exist as real transactions, they must be estimated. In principle (paragraph 8.72) the SNA recommends that imputed social contributions should be equal to “*the amount of social contributions that would be needed to secure the de facto entitlements to the social benefits they accumulate. These amounts depend not only of the levels of the benefits currently payable but also on the way employers’ liabilities under such schemes are likely to evolve in the future as a result of factors such as expected changes in the number, age distribution and life expectancy of their present and future employees*”. However, more practically (paragraph 8.73) the SNA envisages, but as a second or third best, to use “*the unfunded social benefits payable by the enterprise during the same accounting period as an estimate of the imputed remuneration that would be needed to cover the imputed contributions*”. In other words, imputed contributions of the period may be estimated on the basis of benefits paid. Let us illustrate now (starting with a version a, then a version b) how the SNA functions through a Case 2 of our simple example, based, first, on the simplified assumption that the imputed social contributions of the period are equal to the benefits of the period.

Government pays 800 to retirees (out of general taxes). Imputed social contributions are therefore also mechanically equal to 800. The SNA sequence of accounts will be exactly the same as in Case 1, version (a), except for the fact that contributions are now imputed. Finally, net lending borrowing is equal to the benefits paid (as in case 1 version a), and to its corresponding cash.

Case 2, version a

Generation of income account			
General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 800 <i>Of which, imputed contributions 800</i>			Compensation 800

¹⁸ However, in some countries (for example France), for various reasons, government may want to show explicitly an employee contribution.

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
	Imputed social contributions 800	Imputed social contributions 800	

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources
Social benefits 800			Social benefits 800

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending borrowing -800		Net lending borrowing +800	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800		Cash +800	

Let us now introduce the alternative treatment (i.e. version (b)), in which flows of contributions and benefits are treated as financial.

Case 2, version b

Generation of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 800 <i>Of which, imputed contributions 800</i>			Compensation 800

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources

General government		Capital account		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending		Net lending		Net lending	
borrowing -800		borrowing +800		borrowing +800	

General government (pension plan)		Financial account		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800		Cash +1000		Cash +1000	
	Net equity on pension funds:	Net equity on pension funds:		Net equity on pension funds:	
	-800 for retirees	-800 for retirees		-800 for retirees	
	+800 for active employees	+800 for active employees		+800 for active employees	

Contrary to the situation of Case 1, one obtains the same net lending/borrowing in version (b) than in version (a): a change in the treatment of pension schemes, does not apparently have an impact on net lending/borrowing.

However, this is because Case 2 is based on the simplified assumption that imputed contributions are equal to benefits paid. This assumption is fundamentally flawed in the context of the version (b) of the accounts: pension benefits are not paid to the same people that “pay” the imputed contribution. The first are the retirees, the second the active employees. It is absurd to equate them in version (b). In any case, the more we are getting into an economic period in which there is going to be a growing gap between the two flows, the more it is not recommended to equate imputed contributions to benefits. Imputed contributions should reflect the effective costs for government of the future pension benefits of the current employees, not the current costs of the past employees, as recommended in paragraph 8.72 of SNA quoted above, and contrary to paragraph 8.73 of SNA. But the logic is then to treat the difference between contributions and benefits in the financial accounts, thus implying a treatment such as version (b).

Let us now make the more reasonable assumption that imputed contributions differ from effective benefits, which we will call our “Case 3”. Imputed social contributions are now equal to 1000 (the costs of the future benefits of active employees), and are different to pension benefits paid, which remain at 800.

First, let us illustrate this new situation when the flows are treated as current flows.

Case 3, version a

General government		Generation of income account		Households (active gvt employees)	
Uses	Resources	Uses	Resources	Uses	Resources
Compensation 1000				Compensation 1000	
<i>Of which, imputed contributions 1000</i>					

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
	Imputed social contributions 1000		Imputed social contributions 1000

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources
Social benefits 800			Social benefits 800

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending borrowing -800		Net lending borrowing +800	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800		Cash +800	

It is interesting to note that the accounts are exactly similar as in Case 1, version (a) in which contributions were not imputed but explicit.

Let us now present the version (b) of the same accounts (when benefits and contributions are considered as liabilities/assets).

Case 3, version b

Generation of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 1000 <i>Of which, imputed contributions 1000</i>			Compensation 1000

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources
Capital account			
General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending		Net lending	
borrowing -1000		borrowing +1000	
Financial account			
General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800		Cash +800	
	Net equity on pension funds: -800 for retirees +1000 for active employees		Net equity on pension funds: -800 for retirees +1000 for active employees

Net lending borrowing is now equal to –1000 and we confirm the result that we found in Case 1, when there were actual contributions: the change in the recording system induces a change in net lending borrowing equal to the difference between contributions and benefits.

Thus the impact on net lending/borrowing of the change in the recording of benefits/contributions from a situation in which they are treated as a current transfer to a situation in which they are treated as a purely financial transaction depends on the method of estimation of imputed social contributions. If the accounting convention is that imputed social contributions of the period are equal to the benefits paid in the period, the change has no effect on net lending/borrowing. If, on contrary, the accounting convention is that imputed social contributions are not equal to benefits paid, then net lending/borrowing changes by the amount of the difference between the two flows.

This result may appear to be a mechanical accounting feature. But in fact, it has an economic logic in it.

- If one considers these pension schemes as reflecting a “solidarity” system backed by the employer, there is some logic in using a version (a) of the sets of accounts and, *at the same time*, an estimate of imputed contributions identically equal to benefits paid. The idea is that the system functions as if the active government employees, *by solidarity*, were paying at each period contributions exactly equal to the social benefits of their retired colleagues.
- If one breaks that “solidarity” assumption and assumes that pension benefits is simply a contract between individual employees and the employer, then the estimate of imputed social contributions of the period should reflect the costs of the future individual benefits and not the costs of the current pension benefits which are paid to other individuals, and, *at the same time*, version (b) is more adapted.

The “solidarity” hypothesis does not function very well in the case of employer sponsored pension funds, and in particular government employee pension schemes. Most employees behave as if they had an individual contract with the employer, the government. The latter also behaves vis a vis its employees on an individual basis.

IV.4 Extension to really funded plans

In this chapter, up to now, we have discussed of the consequences on the general government net lending borrowing of the change of the treatment of unfunded government employee pension schemes from the current SNA recommendation to the system that some countries have now put in place, in which these pension schemes are treated *as if they were funded*.

However, similar conclusions would apply if there was effectively a reform changing unfunded pension schemes to actually funded pension schemes, as is the case in some countries. Thus, everything else being equal, the net lending/borrowing of a government would differ from another owing to the mode of financing of the pension scheme: if unfunded, the net lending/borrowing would include the difference between contributions and benefits, if funded, it would not. Is that justified? This is a question to which the author has no response yet. However, one could at least say that if all countries accepted to record the pension funds as if they were funded, there would be full international comparability of the net lending/borrowing figures.

Even more encouraging for international comparability would be that, in this case, the net/lending borrowing of the general government would not be affected by the sector classification of the fund itself, whether inside or outside the general government¹⁹. The following example illustrates this point. The idea is to compare Case 1, b, which reflects the treatment *with the fund included in the general government* to Case 1, c, below, which reflects the same treatment but *with the fund being autonomous and classified outside the general government*. The fund’s financial account is shown at the end²⁰. As can be seen, the figure for net lending borrowing of version (c) is unchanged from version (b): it remains equal to contributions paid. The interpretation is that the net lending borrowing of a funded system is not affected by contributions and benefits (thus, in our simplified example, is equal to 0 by construction). Thus this recording system has the advantage of keeping the figure for net lending borrowing robust to the change of the sector classification of the fund.

Case 1, version c

Generation of income account			
General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 1000 <i>Of which, contributions 1000</i>			Compensation 1000

¹⁹ Of course, total liabilities and net liabilities would differ whether the fun is classified inside or outside the general government, but this is normal.

²⁰ In this case, as expected, the fund supports the liability/assets, not the general government.

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending		Net lending	
borrowing -1000		borrowing +1000	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -1000		Cash +800	
		Net equity on pension funds:	
		-800 for retirees	
		+1000 for active employees	

Financial account

Autonomous pension plan			
Changes in Assets	Changes in liabilities		
Net lending			
borrowing : 0			
Cash : +200			
	Net equity on pension funds:		
	-800 for retirees		
	+1000 for active employees		

IV.3 Conclusions of chapter IV

- The impact on net lending/borrowing of a move from a system that does not recognise pension liabilities for unfunded government employee pension schemes to a system that does, leads to a change of the figure for net lending borrowing, by the amount of the difference between contributions and benefits. As some countries effectively apply the second and others the first, the international comparability of the general government net lending borrowing is impaired.
- Net lending/borrowing of the general government will be impacted negatively if the (imputed or not) social contributions are higher than benefits paid, and positively in the other situation.
- However, if contributions are imputed *and* estimated as equal to benefits paid, the change has no effect on net lending borrowing, but such an estimate is not recommended by the SNA, and is particularly not adapted to current and medium term situations. Paragraph 8.73 of the SNA, which opens this possibility, should be reviewed.
- Also, it would be quite inconsistent to implement a new recording system and maintain an estimate of imputed social contributions identically equal to benefits. The two logics are not compatible. The move to a new system automatically should ask for the implementation of a method of estimation of the imputed contributions that correspond to the costs of future pension benefits and not of the current ones.
- Net lending/borrowing of general government of countries using a PAYG system for their employees will differ, everything else being equal, from the net lending/borrowing of countries using a funded system. Is this difference justified? This remains an open question in the context of this paper. However, if all countries accepted to record their general government employee pensions schemes as if they were funded, the international comparability of net lending/borrowing will be ensured and, in addition, will not be affected by the sector classification of the fund (i.e. whether autonomous or not).

March 2003

Appendix 1

Some useful definitions

The following definitions are extracted from the “Taxonomy” document of the OECD task force. However, it is possible that when used in the SNA the implicit definition was not exactly the one sponsored by this task force. In this context, it is interesting to note that, in this taxonomy, the term “fund” refers specifically to funded pension plans. This questions the use in SNA/ESA of the terminology “social security funds” (SNA 4.111, ESA 2.69, 2.74) which should perhaps be interpreted as “social security institutions”.

Public Pension Plan: social security and similar schemes where the general government (that is central, state and local governments, including social security institutions) administers the payment of pension benefits. Their purpose is to provide minimum (flat or/and earnings related) benefits on retirement for the population at large (or at least the formal sector). Public plans have been traditionally PAYG-financed, but some OECD countries have partial pre-funding of public pension liabilities or have replaced these plans by private pension plans.

Private Pension Plans: a pension plan where an institution other than general government administers the payment of pension benefits. Private pension plans are managed by the employer acting as the plan sponsor, a pension entity or a private sector provider. Private pension plans may be complements or substitutes to social security systems. In some countries, these may include plans for public sector workers. Private pension plans are funded in OECD countries.

Defined Benefits Plan: any pension plan other than a defined contribution plan, including all plans in which the financial or longevity risk are borne by the plan sponsor. Benefits to members are typically based on a formula linked to members’ wages or salaries and length of employment.

Defined Contribution Plan: a pension plan by which benefits to members are based solely on the amount contributed to the plan by the sponsor or member plus the investment return thereon. This does not include plans in which the employer that sponsors the plan guarantees a rate of return.

Funded Pension Plans: pension plans that have accumulated dedicated assets (may be identified reserves in the plan sponsor balance sheet or/and segregated assets) to pay for the pension benefits.

Unfunded pension plans: are those that are financed directly from contributions from the plan sponsor or provider and/or the plan participant. Unfunded pension plans are said to be paid on a current disbursement method (also known as PAYG). Unfunded plans may still have associated reserves used to cover immediate expenses.

Pension funds: the pool of assets, including employer’s assets in the case of some occupational plans, that are bought with the contributions to a pension plan or that are assigned by law or contract as pension plan assets.

Autonomous pension fund: in occupational plans, a pension fund that is legally separated from the plan sponsor taking the form of either a special purpose legal entity (a pension entity) or a separate account managed by financial institutions on behalf of the plan/fund members. Pension funds that support personal pension plans are by definition autonomous. Both in occupational and personal pension plans, the plan/fund members have a legal or beneficial right or some other contractual claim against the assets held in the autonomous pension fund.

Non-autonomous pension funds: in occupational plans, a pension fund that is not legally separated from the plan sponsor. The pension assets may form a reserve in the plan sponsor's balance sheet ("book reserves") or they may be held in legally separated vehicles but are the property of the plan sponsor ("financial reserves"). Pension plan members have no legal claims on the pension fund assets.

Appendix 2

Chapter IV: Full SNA presentation including the D8 adjustment

This appendix is linked to Chapter IV. It illustrates the complete SNA presentation, which, as explained just before Case 2, version b, is more complex than the presentation of the accounts used in this chapter for the (b) versions of the accounts.

However, this does not affect the conclusions of Chapter IV, and this is why this detailed presentation was left to this appendix.

We will limit ourselves in presenting the complete SNA presentation for “Case 3, version b”.

In order to understand this presentation, one must recall that the SNA recommends, regarding funded pension schemes (which corresponds to the (b) version of accounts), to record dual flows for actual/imputed social contributions and benefits. They should be recorded at the same time in the financial accounts as changes in assets/liabilities and as current flows.

The result of this dual accounting is that, as explained in other parts of this paper, there is a mechanical imbalance between the net lending borrowing coming from the non-financial accounts and the same concept coming from the financial accounts. An adjustment entry, (D8 Adjustment for net equity on pension schemes) has to be recorded to reconcile the accounts.

In our Case 3, version b, we assume that these unfunded pension schemes are conceptually funded. As a result, the recommendation of dual recording is applied, and gives the following sequence of accounts.

Case 3, version b, SNA recommended presentation

Generation of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
Compensation 1000 <i>Of which, imputed contributions 1000</i>			Compensation 1000

Distribution of income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
	Imputed contributions 1000	Imputed contributions 1000	

Distribution of income account (continued)

General government		Households (retired gvt employees)	
Uses	Resources	Uses	Resources
Social benefits 800			Social benefits 800

Use of disposable income account

General government		Households (active gvt employees)	
Uses	Resources	Uses	Resources
D8 Adjustment for net equity on pension funds +200			D8 Adjustment for net equity on pension funds +200

Capital account

General government		Households (active gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Net lending borrowing -1000		Net lending borrowing +1000	

Financial account

General government (pension plan)		Households (gvt employees)	
Changes in Assets	Changes in liabilities	Changes in Assets	Changes in liabilities
Cash -800	Net equity on pension funds: -800 for retirees +1000 for active employees	Cash +800 Net equity on pension funds: -800 for retirees +1000 for active employees	

As can be noted, this SNA recommended presentation does not change net lending borrowing, nor does it change the financial accounts. The only differences are that it records contributions and benefits also in the non-financial accounts. According to the SNA, the reason is because pension benefits are also considered as income by pensioners. This dual presentation mechanically leads to an inconsistency between the non-financial and the financial accounts, needing an adjustment coded D8, which evidently complicates the presentation.

However, this adjustment factor has one minor practical interest. It is identically equal, in absolute value, to the difference between imputed contributions and benefits, and thus to the difference that impacts net lending borrowing between the two alternatives discussed in this chapter.