The Treatment of Employer Retirement Pension Schemes in Macroeconomic Statistics

—the EDG on Pensions December 2003 Report

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29th December 2003

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List of Acronyms

AEG	Advisory Expert Group
ASB	Accounting Standards Board (UK)
ABS	Australian Bureau of Statistics
BPM5	*Balance of Payment Manual 5th Edition*
CIS	Collective investment schemes
COLA	Cost of living adjustment
CPC	Central Product Classification
CPI	Consumer price index
ECB	European Central Bank
EDG	Electronic Discussion Group
ESA 1995	*European System of Accounts 1995*
FAD	Fiscal Affairs Department (IMF)
FAS	Financial Accounting Standard (USA)
FASB	Financial Accounting Standard Board (USA)
FRS	Financial Reporting Standard (UK) (formerly SSAP)
GAAP	Generally Agreed Accounting Practices
GFSM 2001	*Government Finance Statistics Manual 2001*
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standard (formerly IAS)
IMF	International Monetary Fund
IPSAS	International Public Sector Accounting Standard
ISIC	International Standard Industrial Classification of all Economic Activities
ISWGNA	Intersecretariat Working Group on National Accounts
MFSM 2000	*Monetary and Financial Statistics Manual (2000)*
NAEM	OECD National Accounts Experts Meeting
NDC	Notional defined contribution (schemes)
OCV	Other changes in volume of assets
OECD	Organisation for Economic Co-operation and Development
PBGC	Pension Benefit Guaranty Corporation
PSC	Public Sector Committee
ROW	Rest of the World
1993 SNA	*System of National Accounts 1993*
SNA	System of National Accounts
SPO	Social policy obligations (of government)
SPQ	Straw Poll Questionnaire
SSAP	Statement of standard accounting practices (UK)
STRGL	Statement of total recognized gains and losses
UN	United Nations
UITF	Urgent Issues Task Force (UK)
WPFS	OECD Working Party on Financial Statistics and

List of SNA codes used

AF.2	Currency and deposits
AF.3	Securities other than shares
AF.5	Shares and other equity
AF.6	Insurance technical reserves
AF.612	Net equity of households in pension funds
AF.619	***Net position of the employer against the pension fund (New instrument)***
AN	Non-financial assets
B.9	Net lending / net borrowing
B.90	Net worth
B.10.1	Changes in net worth due to saving and capital transfers
B.10.2	Changes in net worth due to other changes in volume of assets
B.10.3	Changes in net worth due to nominal holding gains/losses
D.1	Compensation of employees
D.11	Wages and salaries
D.121	Employers’ actual social contributions
D.1211	***Employers’ actual (retirement) pension contributions (New category)***
D.122	Employers' imputed social contributions
D.1221	***Employers’ imputed (retirement) pension contributions (New category)***
D.4	Property income
D.41	Interest
D.421	Dividends
D.44	Property income attributed to insurance policy holders
D.5	Current taxes on income, wealth, etc.
D.61	Social contributions
D.6111	Employers' actual social contributions
D.6112	Employees' social contributions
D.6121	Imputed social contributions
D.62	Social benefits other than social transfers in kind
D.75	Miscellaneous current transfers
D.8	Adjustment for the change in net equity of households in pension funds
K.1	Consumption of fixed capital
P.1	Output
P.2	Intermediate consumption
P.3	Final consumption expenditure
P.51	Gross fixed capital formation
S.11	Non-financial corporations
S.122	Other depository corporations
S.124	Financial auxiliaries
S.125	Insurance corporations and pension funds
S.13	General government
S.14	Households

EXECUTIVE SUMMARY

A. Background

1. In autumn 2001, the Intersecretariat Working Group on National Accounts (ISWGNA) requested the Statistics Department of the IMF to establish an Electronic Discussion Group (EDG) on pensions. The purposes of the EDG are to explore alternative treatments for, and to identify the most appropriate treatment of, pension schemes in macroeconomic statistical systems. Initially, the EDG was limited to unfunded 'private' (employer) schemes, but was extended in autumn 2002 to all pension schemes—including funded employer schemes and social security schemes. The EDG has been accessible to the public since October 2002 at: http://www.imf.org/external/np/sta/ueps/index.htm.

2. Under the *System of National Accounts 1993* (*1993 SNA*), pension obligations are recognized on balance sheet only for funded 'private' (e.g., employer) schemes. Hence, the activities of many pension schemes, such as social security and unfunded employer schemes, do not lead to recognition of financial assets/liabilities. In contrast, the IMF's *Government Finance Statistics Manual 2001* (*GFSM 2001)* recognizes stocks of government liabilities for all government employer schemes, both funded and unfunded.

3. The EDG Moderator agreed to an ISWGNA request to provide, by December 2003, a Report on recommendations for changes of the *1993 SNA* restricted to employer retirement pension schemes, for examination by a joint ISWGNA—Advisory Expert Group (AEG) meeting scheduled in February 2004. While an EDG consensus broadly exists on this topic, other topics are too uncertain and/or contentious to be amenable to a rapid preliminary conclusion.

B. Structure of the EDG December 2003 Report

4. This current Report describes the position of the EDG regarding the treatment of employer retirement pension schemes and the related recommendations for changes to the *1993 SNA*. The "employer" could be a government unit, a corporation (public or private), or any other institutional unit. The Report takes into account the balance of opinions of EDG contributions received so far (44), the answers to a Straw Poll Questionnaire (SPQ), the position of the OECD National Accounts Experts, the position taken by the *GFSM 2001* and the views recognized as valid by the accounting community.

5. Part I provides background, including the EDG mandate (I.A) and a brief description of its activities (I.B)[1]. Part II considers the current *1993 SNA* recordings (II.A) and terminology issues[2] (II.B). Part III provides recommendations for changes to the *1993 SNA*. Part IV provides a brief comparison with existing manuals. Part V provides a comparison with business accounting standards, including a bridge with the UK standard FRS 17 (V.B).

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[1] The reader can refer to the Interim Report of the Moderator for an extensive description of all EDG activities and for a summary of each EDG contributions.

[2] The EDG Moderator observed different interpretations of the terms "**funded**" and "**defined contribution schemes,**" which in practice proved a considerable impediment to the exchanges of views. However, they become less relevant under the new SNA recording that is suggested in the Report.

Part VI provides numerical examples, of an unfunded scheme (VI.A), of an autonomous defined benefit scheme (VI.B) and of the total economy (VI.C).

C. Summary of Recommendations

6. The following only concerns defined benefit schemes "managed by an employer directly on his own behalf" (SNA Annex IV, paragraph 11), whether autonomous, nonautonomous or unfunded. ***So far, the EDG does not recommend changes in relation to defined contribution schemes (Recommendation 0).***

Liability recognition

7. ***The EDG recommends that the reviewed SNA should recognize obligations of employer retirement pension schemes as liabilities whether or not the scheme is funded (Recommendation 1).***[3] Households' behavior (consumption and saving decisions) depend in large part upon their perception regarding the existence and solidity of their pension claims, not upon the funded character.

8. The funded character (existence of legally segregated assets) is not a criterion for economic asset recognition of pension obligations. Instead, the necessary and sufficient criteria are: will they be a source of economic benefits? and are these benefits enforceable? ***It is recommended that employer pension obligations should be recognized as liabilities in the SNA if they are <u>legal obligations</u> or <u>constructive obligations</u> (Recommendation 2).***[4] Constructive obligations are recognized as liabilities by accountants, as they are likely to be enforceable in court, even though this may be conjectural. Restricting recognition of pension obligations to legal obligations is too narrow and may be less applicable in some countries or for some schemes (including those for civil servants).

9. Pension benefits promised in the context of employer schemes have a clear **deferred compensation nature**. They are part of employees' compensation packages and this must be reflected in the cost of labor (to business or government), irrespective of the type of institutional arrangements. It is inappropriate to differentiate statistical treatments amongst schemes, according to the institutional character or financing arrangement, as the *1993 SNA* does now. The employer has a net liability whether it has funded its obligations (i.e., the amount borrowed or set aside by the employer) or it has not (i.e., the liability is direct). Such obligations arise because of the service rendered to the employer by the employee.

10. The EDG feels it acceptable to **restrict, by convention, recognition of constructive obligations** initially **to employer retirement pension schemes**, using the *1993 SNA* existing life/non life and employer[5]/social security schemes delineations. Those boundaries already

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[3] In the form of *insurance technical reserves* (AF.6).

[4] Constructive obligations are, according to the International Accounting Standard Board (IASB), obligations that derive from an enterprise's actions where: (a) By an established pattern of past practice, published policies or a sufficiently specific current statement, the enterprise has indicated to other parties that it will accept certain responsibilities; and (b) As a result, the enterprise has created a valid expectation on the part of those other parties that it will discharge those responsibilities.

[5] To be more precise, the *1993 SNA* distinguishes amongst social insurance between: social security schemes and private schemes. Private schemes encompass mainly employer schemes (including those for civil servants), but not necessarily only those.

exist in the *1993 SNA* and already impart very different recordings. Further work will be needed later on the treatment of social security and assistance pensions and on the classification of schemes (e.g., whether a scheme falls within social insurance or not).

11. This would **remove** a difference in which the cost of **different ways of providing public sector occupational pensions is accounted for,** with sub-optimal decision making implications in terms of economic efficiency. At present, as national accounts do not record financial liabilities for unfunded government-operated pension schemes, the impact on the government deficit is simply the payment of pensions to retired employees, net of any current employee contributions, and no liability is recorded in government debt. However, if a government makes payments to private–sector pension funds on behalf of its employees, the impact on the government deficit would be different. The impact would be the accruing pension rights of its employees plus the interest on the extra borrowing by government needed to finance the pension contributions (which arise earlier than the pension payments). And government debt would be higher for the same reason.

Actual versus actuarial amounts

12. ***The EDG recommends that*** **employer social contributions** ***and*** **property income receivable by households** ***should be measured using*** **actuarial amounts**[6] ***(Recommendation 3)***, instead of the current SNA measurements.

13. The *1993 SNA* refers to actuarial recording for unfunded pension schemes only (**employer social contributions**).[7] ***The proposal would eliminate the use of actual amounts. It would eliminate the 1993 SNA flexibility option for unfunded pension schemes (counterpart of the liability recognition) (Recommendation 3.1) and extend actuarial recording to funded pension schemes (Recommendation 3.2) and to property income receivable by households.*** With those changes, or extensions, funded and unfunded schemes would be recorded similarly. Even more important:

a. The cost of employment would be more appropriately measured. Supercontributions originating from under-performance of defined benefit pension funds' assets (recapitalization of pension funds) would no longer be part of compensation of employees and affect the gross operating surplus of the employer (or its value added and the measurement of GDP, when the employer is nonmarket). Actual payments of contributions would be seen purely as financial transactions, being settlements of liabilities originally incurred through accrued employer social contributions (income: transactions) or through underperformance of funds' assets (holding losses: revaluations).
b. The property income payable by the pension scheme on its pension debt (*insurance technical reserves*[8]) to households would be more correctly measured, ***using for instance the discount rate used and the amounts calculated by***

[6] Actuarial amounts are stocks (generally calculated by actuaries) and associated flows (calculated by actuaries or by accountants), using mortality tables and all hypotheses generally accepted or good practices by actuaries. The amounts in question should not be confused with or assimilated to the amounts of funding called, for the period, by the fund trustees on advice from actuaries.
[7] Paragraph 8.72 of the *1993 SNA* states that "the value that should be imputed for the contribution ought, in principle, to be based on ... actuarial considerations."
[8] Likely to be called *insurance technical provisions* in the reviewed SNA.

actuaries/accountants, instead of using the property income receivable by the pension fund (current recording) ***(Recommendation 3.5)***. The difference between amounts paid in or lent today (the "contribution") and repayments well in the future (the "pension") is analogous to the discount on a zero coupon bond: it is of a nature of property income. Its measurement may be somewhat problematic, though, owing to the indexation character as well as to the uncertainty attached. Such recording would remove the *1993 SNA* anomaly that the mere passing of time generates entries in "other economic flows" (other changes in assets). By implication, defined benefit schemes would likely now generate "savings," similar to the *1993 SNA* current treatment of mutual funds (another type of collective investment scheme).

14. **The EDG believes the proposed recording will reinforce the two essential SNA principles:** market valuation and the accrual basis.

i. Market valuation: the SNA ought to recognize on the employer's balance sheet the market value of all residual obligations to the autonomous scheme. It is often observed that the degradations (improvements) in net assets of pension funds lead to falls (increases) in share prices of the sponsoring corporations. Currently, such falls (increases) are being reflected in a change in employer's SNA Net Worth. Under the proposed change, that part in share fluctuations related to pension fund performance would now be matched by a holding loss (gain) in the employer's financial position against the fund, and would be Net Worth neutral, which is appropriate.[9]

ii. Accrual basis: the amounts recorded in a given period should reflect the change in assets and obligations originating from the event occurring during the period (i.e., the service rendered by the work performed or by the lending of funds, during that period), not the amount actually paid (the actual contribution).

Allocation of defined benefit autonomous pension funds' net assets to the employer

15. With this perspective, ***the EDG supports the view that the net assets of defined benefit autonomous funds should be allocated to the employer without delay (Recommendation 4).***[10] This would have the advantage of equal treatment across schemes, of enhancing international comparability, and of applying more systematically the SNA's market valuation and accrual principles. Furthermore, such an allocation conforms with generally accepted accounting practices (GAAP), as well as with the observable trend favoring immediate recognition of the employer's liability .[11] ***A new SNA financial instrument would need to be created to establish the debtor/creditor relationship between the employer and the pension fund, possibly within*** **insurance technical reserves** ***(AF.619, new instrument) (Recommendation 4.2)***.

[9] In practice falls (or increases) in prices may exceed the observed degradation (improvement) in pension fund's net assets, as shares often "overshoot," notably in periods of sudden pessimism or optimism.

[10] They are automatically "allocated" in the case of unfunded schemes or in the case of nonautonomous funds.

[11] The existing option of delayed recognition under *International Accounting Standard* (*IAS*) *19* is under review. Immediate recognition is prescribed under the UK's *Financial Reporting Standard (FRS) 17* rules, one of the most advanced standards.

Recording of other events: taking advantage of the SNA sequence of flows

16. ***The EDG believes that the reviewed SNA should take full advantage of the powerful articulation of balance sheets and flows, and clarify the recording of changes in pension liability outstanding owing to specific events (Recommendation 5)***. In general, changes in the stock of liabilities due to changes in actuarial assumptions, which are not in the hands of the employer, seem to be of an "other changes in assets" nature, likely to be a revaluation, while consistency with the recording of the re-estimation of life and non-life insurance reserves needs to be ensured. In particular, it recommends that (1) a change **in discount rate** be a revaluation ***(Recommendation 5.1)***; (2) a change in **demographic actuarial assumptions** be an Other economic flow, perhaps a revaluation, although many suggest an Other change in the volume of assets (OCV) ***(Recommendation 5.2)***; (3) a **cost of living adjustment (COLA)** be income or revaluation depending on circumstances (notably whether the discount rate used is a nominal or real rate), but in a manner that—ideally—should be consistent with the SNA treatment of securities/assets indexed on the CPI (Consumer Price Index)(treatment that may need revisiting) ***(Recommendation 5.3)***; (4) the **granting of additional rights** be income/transaction ***(Recommendation 5.4)***; and (5) a **change in benefits structure** be generally an OCV, but could be income/transaction if there is an intention to convey a benefit, that is only in circumstances where the change in question increases the outstanding liabilities ***(Recommendation 5.5)***. Changes in benefits structure that reduce the pension liability outstanding are forced on households and seem not to meet the income criteria, being instead akin to a debt write-off.

Consistency with other macroeconomic statistics and source data

17. The EDG notes that the recommended changes mostly align with the treatments prescribed in the *Government Finance Statistics Manual 2001* (*GFSM 2001*).

18. In addition the changes are not expected to cause substantial difficulties in terms of source data. Proposed changes largely reflect existing accounting practices, in both private and public sectors, or clear trends towards new accounting standards. In particular, the Report documents that in many accounting standards, actuarial amounts are used to measure the "current service cost" to business (i.e., labor cost), while the (actuarially based) "interest" on pension liabilities is often also reported: both items are observable in the books of the employer. In addition, it is expected that pension funds' own accounts could also provide a useful compatible and independent source of information. Quite separately, transparency requires that governments make an effort to account for the unfunded employer schemes' obligations, where they exist.

19. In this respect, the EDG noted the bridge between the proposed reviewed SNA treatment and the UK accounting standard FRS 17. More generally, it also noted that the UK based FRSs use a two-statement approach to income:[12] the *Profit and Loss Account* (narrow view of income) and the *Statement of Total Recognized Gains and Losses* (comprehensive income), which bears close resemblance with the SNA three-flow approach: Transactions, Revaluations, and OCV. Such an approach has the potential to bring accounting and statistical reporting standards decisively closer.

[12] This approach is also being examined by the *International Accounting Standard Board* (Performance Reporting project).

Volatility of data

20. The EDG notes that the proposed approach **will not lead to an increase in volatility of employers' income** or of the SNA **Net Worth** for corporations, as sometimes asserted. Instead the proposal would seem to have the potential to reduce such volatility. Lump sums to underfunded schemes would now be recorded as financial transactions instead of as income; and changes in prices of companies' shares directly related to the over- or under-performance of the pension fund's manager would now be matched by changes in the asset or liability position of the corporation (the employer) against the pension fund, neutralizing their effect on the net worth. The approach will nonetheless increase the volatility of institutional units' "**own funds**," which seems appropriate in an environment where assets and liabilities are marked to market.

Dual recording[13]

21. ***There is no recommendation at this stage to eliminate the 1993 SNA "dual recording,"*** because it allows, though somewhat artificially, linking macroeconomic with microeconomic data ***(Recommendation 6).*** However, supplementary information will be needed to bridge other datasets (e.g., government finance and balance of payments statistics) with the SNA categories ***(Recommendation 6.1).***

Output

22. ***The EDG recommends exploring the extension of the measurement of output to nonautonomous funds and unfunded schemes (Recommendation 7)***—with flexibility granted in practice. The financial intermediation service provided is consumed by the households (the insured). It does not have the characteristic of an ancillary activity, but of a secondary activity.

D. List of Recommendations

23. The following provides the list of recommendations, including more detailed one appearing in the core of the text. The Moderator's notes distinguish these recommendations among a change (CH), interpretation/clarification (IC), or where there would be no change (UN) relative to the *1993 SNA*.

Recommendation 0—*So far, the EDG does not recommend changes in relation to defined contribution schemes (UN).*

Recommendation 1—*The EDG recommends that the reviewed SNA should recognize obligations of employer retirement pension schemes as liabilities whether or not the scheme is funded (CH).*

> **Recommendation 1.1.** *When policyholders can transfer pension rights/entitlements, or can obtain their liquidation, the economic asset character of the entity in question is indisputably established (CH).*

[13] Where (funded) schemes' contributions and pensions are recorded both as non-financial transactions and as financial transactions, with an adjustment item.

Recommendation 1.2. *The EDG recommends that the reviewed SNA should indicate, amongst actuarial methods, the need to use accrued benefits methods and a preference for the projected unit method, in particular (IC).*

<u>Recommendation 2</u>—*The EDG recommends that employer pension obligations should be recognized as liabilities in the SNA if they are <u>legal obligations</u> or <u>constructive obligations</u> (CH).*

<u>Recommendation 3</u>—*The EDG recommends that* employer social contributions *and* property income receivable by households *should be measured using* <u>actuarial amounts</u> (CH).

Recommendation 3.1. *The proposal supposes eliminating the 1993 SNA flexibility option for recording employer social contributions of unfunded pension schemes (CH).*

Recommendation 3.2. *The EDG suggests extending actuarial recording to funded pension schemes—in place of the 1993 SNA actual amounts (CH).*

Recommendation 3.3. *The EDG recommends that employer contributions related to employer defined benefit pension (funded) schemes be booked as imputed for the full amount (CH).*

Recommendation 3.4. *Owing to the importance of pension contributions, the EDG suggests identifying those relevant amounts in the accounts (CH):*

D.1211 Employers' actual (retirement) pension contributions
D.1221 Employers' imputed (retirement) pension contributions

Recommendation 3.5. *The property income attributed to policyholders/households on defined benefit schemes that is associated with each contribution should be set equal to the difference between the present value of future benefits and the value of those future benefits (using the discount rate used by actuaries). In practice, the property income flow could be approximated as being equal to the discount rate used by actuaries times the stock of pension obligations (CH).*

<u>Recommendation 4</u>—*The EDG recommends that the net assets of defined benefit autonomous funds be allocated to the employer without delay: when the scheme is underfunded, the employer has a liability; when the scheme is overfunded, the employer has (generally) an asset (CH).*

Recommendation 4.1. *Defined benefit schemes/funds would have by construction zero net worth (CH).*

Recommendation 4.2. *The instrument used for this allocation would be a type of insurance technical reserves (AF.619) (CH).*

Recommendation 4.3. *The EDG found (for the time being) no credible way to avoid a new situation where defined benefit schemes will exhibit saving (CH).*

Recommendation 4.4. *The EDG recommends that the employer pay or receive a property income on the net position it has against the pension fund/scheme (CH), based on the discount rate used by the scheme (or on the actuarial return rate on fund's assets).*

<u>Recommendation 5</u>—*The EDG believes that the reviewed SNA should take full advantage of the powerful articulation of balance sheets and flows, and clarify the recording of changes in pension liability outstanding owing to specific events (IC).*

Recommendation 5.1. *A change in discount rate is a revaluation (IC).*

Recommendation 5.2. *A change in demographic actuarial assumptions is an Other economic flow, perhaps a revaluation (UN—IC), although many suggest an OCV (CH—IC).*

Recommendation 5.3. *A cost of living adjustment (COLA) is income or revaluation depending on circumstances (notably, whether the discount rate used is a nominal or real rate) but in a manner that—ideally—should be consistent with the SNA treatment of CPI indexed securities/assets (IC).*

Recommendation 5.4. *The granting of additional rights is income (IC).*

Recommendation 5.4.1. *The classification of the transaction needs to be defined and may be a current transfer (IC).*

Recommendation 5.4.2. *When it is a transfer type, the counterpart is to policyholders, not to the scheme (IC) (CH to ESA1995).*

Recommendation 5.5. *Changes in benefits structure should be generally regarded as an OCV (UN), but could be income/transaction if there is an intention to convey a benefit, that is in some of the occasions when the change in question increases the outstanding liabilities (an asymmetric rule could be applicable) (IC).*

Recommendation 6—*There is no recommendation at this stage to eliminate the 1993 SNA "dual recording" (UN).*

Recommendation 6.1. *Supplementary information is needed to allow bridging other datasets (government finance statistics or balance of payments statistics) with the SNA categories, for instance by way of splitting item D.8 (into D.81: contributions, D.82: property income and D.83: pensions)(CH).*

Recommendation 7—*The EDG recommends exploring the extension of the measurement of output to nonautonomous funds and unfunded schemes (CH).*

Recommendation 7.1. *The EDG recommends by a small majority not to include holding gains and losses in the measurement of output (UN).*

Recommendation 8—*The EDG recommends improving and clarifying the terminology used in the 1993 SNA (IC—CH).*

Recommendation 8.1. *The term "private" schemes should be changed (CH).*

Recommendation 8.2. *The term funded should unequivocally mean that economic assets are segregated. This segregation must be enforced by a legal mechanism (IC). Usage of the term "reserve" should not be avoided, unless clearly explained (CH).*

Recommendation 8.2.2. *For the definition of funded, one issue is whether employers liabilities that are held (segregated) by the pension fund but are not resalable should be counted as assets. Can notional schemes be defined contribution? (CH —IC).*

Recommendation 8.3. *It should be explored whether the term defined contribution should refer to the nature of the award formula, i.e., schemes where benefits are determined by contributions and a return on those that is either fixed or, if variable, that is not determined by the employer, such as a market return (CH).*

Recommendation 8.3.1. *The term "defined contribution" should replace the term "money purchase" used in the 1993 SNA.*

Recommendation 8.4. *It is recommended distinguishing between partially funded and underfunded scheme (IC). Underfunded (overfunded) schemes are schemes where the market value of economic assets is below (above) the amount of pension liabilities (UN). Partially funded schemes are those operating with (deliberately) insufficient funding in relation to actuarial contributions on current service costs (IC).*

I. Background

A. EDG mandate

24. In Autumn 2001, the Intersecretariat Working Group on National Accounts (ISWGNA) requested the IMF Statistics Department establish an Electronic Discussion Group (EDG) on unfunded 'private' (employer) pension schemes. In autumn 2002, the ISWGNA extended the mandate to all pension schemes—including social security schemes.[14] The purpose of the EDG is to explore alternative treatments for, and to identify the most appropriate treatment of, pension schemes in macroeconomic statistical systems.

25. Pension obligations have the potential to exert pressure on government finance and have been the subject of increased focus in assessing medium-to-long-term fiscal sustainability. In the accounting area, the International Federation of Accountants (IFAC) has begun work on the accounting treatment of government social policy obligations (SPO). On-going work on how to properly account for post employment social benefits is also being carried out by national standards setters as well as the International Accounting Standards Board (IASB).

26. These developments have led to a renewed interest in the question of how the activities of pension schemes should be recorded in macroeconomic statistics. Under the current rules of *System of National Accounts 1993* (*1993 SNA*), pension obligations are recognized on balance sheet only for funded 'private' schemes. Hence, activities of many pension schemes, such as social security and unfunded employer schemes, do not lead to recognition of financial assets/liabilities.

27. The IMF's *Government Finance Statistics Manual 2001* (*GFSM 2001)* recommends that contributions and benefits of government employer insurance pension schemes be recorded exclusively as financing transactions, and recognizes stocks of government liabilities for all employer schemes, both funded and unfunded, in the form of *insurance technical reserves.*

28. In autumn 2003, the EDG Moderator agreed to an ISWGNA request to provide by December 2003 a Report on recommendations for changes of the SNA [to be examined by a joint ISWGNA—Advisory Expert Group (AEG) February 2004 meeting], as long as the recommendations would be restricted to employer retirement pension schemes. The EDG Moderator felt that while a consensus broadly existed on this topic, other topics were too uncertain and/or contentious to be amenable to rapid preliminary conclusions.

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[14] See the minutes of the October 14–15, 2002 ISWGNA meeting: http://unstats.un.org/unsd/nationalaccount/iswgna/iswgna10.pdf

B. EDG Activities

29. The EDG was established in October 2002 and is accessible to the public at: http://www.imf.org/external/np/sta/ueps/index.htm.

30. By December 23, 2003, **forty four contributions**[15] from thirty one contributors had been posted on the EDG, totaling about 500 pages. Appendix I provides a chronological list of those contributions. No contribution received by the Moderator was refused from posting on the EDG's website. Appendix II provides the EDG membership.

31. Contributors are: Henry **Aaron** (FAD[16] Panel of Experts), the UK **Accounting Standards Board** (ASB) staff, Nicholas **Barr** (FAD Panel of Experts), Barry **Bosworth** (FAD Panel of Experts), Paul **Cotterell** (Consultant), Richard **Disney** (FAD Panel of Experts), Brian **Donaghue** (Consultant), **Eurostat—Unit B.4**, **Eurostat—Unit E.4**, Jeff **Golland** (ECB)**,** Edwards **Gramlich** (FAD Panel of Experts), Ahmad **Hamidi-Ravari** (IFAC Project manager), Peter **Harper—Australian Bureau of Statistics**, Anne **Harrison** (OECD), Robert **Holzmann** (FAD Panel of Experts), François **Lequiller** (OECD), Anne **McGeachin** (IASB project manager), Patrick **O'Hagan—Statistics Canada**, Robert **Palacios,** (FAD Panel of Experts), Murray **Petrie** (FAD Panel of Experts), John **Pitzer** (Consultant), David **Pritchett** (IMF), Philippe **de Rougemont**, (EDG Moderator—IMF), Jean-Marc **Salou** (OECD), Anton **Steurer** (Eurostat), the **Statistics Department** (IMF), Paul **Sutcliffe** (Technical director IFAC PSC), Gabe H. **de Vries** (Consultant), John **Walton** (Consultant), David **Watkins** (U.K. Treasury), and Juan **Yermo** (OECD).

32. Brief notices on the EDG activities were published in the *SNA News and Notes* issues number 15, 16, and 17. One-pagers describing the EDG were distributed in a couple of occasions.

EDG Interim Report

33. An **EDG Interim Report** was circulated to the ISWGNA on September 23, 2003 and posted on the EDG the following day.[17] The EDG Interim Report provided: a background to the EDG, including references to business accounting practices; a summary of the *1993 SNA* rules and a description of the **scope of the EDG**; **short summaries** of each of the first 25 contributions; tentative conclusions of the Moderator.

34. The EDG Interim Report notably reported that "in respect of **unfunded employer pension schemes**, the thrust of the arguments is pervasive. Not one contributor suggests keeping the unfunded treatment advocated in the *1993 SNA*, while most of contributors specifically recommend that unfunded obligations be recognized as liabilities. It is argued that the obligation does not depend on the funding characteristic of the arrangement [Pitzer], particularly when the obligation is recognized in the own financial statement of the entity in question [Lequiller, Harper, O'Hagan]. Most consider that while pension entitlements seem to be conditional assets from the point of view of the household, such is not the case from the point of view of the pension fund/employer whose outflows can be quite accurately estimated

[15] In addition to four various reports from the Moderator.
[16] Fiscal Affairs Department of the IMF.
[17] A draft had been posted for comment on August 25, 2003.

[Harper, O'Hagan, Lequiller, Pitzer…]. Both the accounting standards in the business area (IAS for instance) as well as in the public sector area (IPSAS) consider that contractual obligations related to retirement pensions arising from an employment contract need to be recognized on balance sheet of the employer when unfunded. The *GFSM 2001* already recommends such an approach. At least three countries, Australia [Harper], Canada [O'Hagan] and New Zealand [Lequiller] have already amended their national accounts to this effect. **At this stage, the Moderator tentatively concludes that a consensus exist among EDG members.**" (Interim Report, Paragraph 101).

35. The EDG Interim Report provided further orientations on other issues, notably on the recordings of funded schemes, but generally concluded that more work was necessary.

Straw Poll Questionnaire

36. On September 17, 2003, a **Straw Poll Questionnaire** (SPQ) was circulated to various parties. The SPQ was designed to explore in a more comprehensive way the opinions of EDG contributors who had hitherto generally expressed opinions on a narrower list of items, in order to help prepare a presentation at the OECD and to allow for an acceleration of the SNA Review process. 35 parties provided responses.

37. The SPQ was rather detailed, encompassing 95 elementary "closed" questions grouped into 21 main questions further grouped into six topics: employer insurance (28 elementary questions), terminology (12), defined-contribution versus defined benefit schemes (6), social security schemes (32), social insurance (11) and other (6).

38. The results were posted on the EDG on November 25, 2003. Appendix II lists the 35 respondents. Appendix V provides the template of the SPQ as well as aggregated results. **The responses indicated broad support for a revision of employer pension schemes recording in the SNA**, including:

a. A quasi unanimous support for recognizing pension obligations of unfunded employer schemes as liabilities.
b. A broad support for allocating the pension net assets (autonomous defined benefit schemes) to the employer and for changing the recording of flows for funded employer schemes—switching to an actuarial basis (employer social contributions and property income receivable by households).

Although many tended to favor abandoning the *1993 SNA* dual recording of (funded) pensions, a substantial and vocal minority opposed the view. The responses showed a diversity of opinion concerning the type of flows being impacted for specific events (such as: change in benefit structure, change in life expectancy hypothesis, COLA adjustments and granting of additional rights), as well as for the recording of transfers of pension rights/entitlements. This calls for an in-depth review of the SNA recording of such events at the occasion of the SNA Review, and for recommending more detailed guidance.

39. Further, the SPQ responses showed that respondents are rather divided on their understanding of what "funded" and "segregated reserves" mean in the *1993 SNA*. The responses showed differences in opinion regarding the recognition of pension obligations of social security schemes as a liability, and regarding the classification of schemes and the delineation of social insurance.

OECD National Accounts Expert session on pensions

40. On October 7, 2003, the Moderator made a presentation to the **Joint OECD Working Party on Financial Statistics and OECD National Accounts Experts Meeting** (WPFS/NAEM) in Paris, using the EDG Interim Report and the preliminary results of the SPQ. Participants strongly endorsed recognizing liabilities of unfunded employer schemes (Australia, the Netherlands, Denmark, the UK, the USA) while no member expressed opposition, as the Chair asked for a *tour de table*. **The Chair "concluded that the OECD National Accounts Experts supported this change and that … the positive orientations of the WPFS/NAEM in favor of recording liabilities in the case of unfunded employer pension schemes will be communicated to the Advisory Expert Group meeting in February 2004 in Washington."**[18] The Moderator's presentation and notes of the meeting were posted on the EDG on November 25, 2003.

December 2003 activities

41. On December 1, 2003, the Moderator posted on the EDG for comments an **EDG Position Paper on Employer Retirement Pensions Schemes (draft 1)** ("EDG Position Paper"). On December 16, 2003, an **EDG Questionnaire on Employer Pensions** was posted on the EDG. This Questionnaire builds and improves on the SPQ, and restricts it to employer schemes. The due date is February 3, 2003. The results will be presented to the AEG.

42. On December 22, 2003, the Statistics Department of the IMF provided its position in the debate: **STA Position on Employer Retirement Pension Schemes**. It endorses most of EDG Position Paper views.

43. On December 22, 2003, a draft December 2003 EDG Report was sent for comments to EDG members. On December 29, 2003, the Moderator provided, for submission to the ISWGNA, his report: **The Treatment of Employer Retirement Pension Schemes in macroeconomic statistics— the December 2003 EDG Report** ("December 2003 Report").

C. Basis to the December 2003 Report: Scope

44. The **December 2003 Report** describes the position of the EDG regarding the treatment of employer retirement pension schemes (social insurance) and the recommendations for change to the *1993 SNA*. It concerns defined benefit schemes "managed by an employer directly on his own behalf" (SNA Annex IV, paragraph 11), whether autonomous, nonautonomous or unfunded. The "employer" need not be an enterprise, but can a government unit, a corporation (public or private) or any other institutional unit.

45. This **December 2003 Report** reflects the balance of opinions of EDG contributions received so far[19], the answers to the Straw Poll Questionnaire (SPQ), the position taken by the *GFSM 2001* and the views recognized as valid by the accounting community.

[18] Draft minutes of the secretariat.
[19] The reader can refer to the Interim Report of the Moderator for an extensive description of all EDG activities and, in particular, for a summary of each EDG contributions.

46. Part II provides considerations on the current *1993 SNA* recordings (II.A) and on terminology issues (II.B). Part III provides recommendations for changes in the SNA Recording. Part IV provides a brief comparison with existing manuals. Part V provides a comparison with business accounting standards, including a bridge with the UK FRS 17 (V.B). Part VI provides numerical examples: an unfunded scheme (VI.A), an autonomous defined benefit scheme (VI.B) and the total economy (VI.C).

47. The position paper does not elaborate on the exact definition of retirement pensions[20], which may be the subject of further work. It does not consider the case of so-called "private schemes" other than employer schemes, which will be studied later (see below).

II. *1993 SNA* PRESCRIPTION

A. Short summary

48. It is widely recognized that the *1993 SNA* prescribes **recognizing employer retirement pension schemes promises or obligations as liabilities** only **when the scheme is funded.** In the *1993 SNA*, an employer pension scheme is deemed funded when there exists "**segregated reserves**"; the pension scheme in question is then called a "**pension fund**", which may be autonomous or nonautonomous. Autonomous pension funds are deemed to be institutional units, classified in the insurance corporations and pension funds sub-sector (S.125), whereas nonautonomous pension funds are ancillary units (i.e., assimilated to the employer). Unfunded employer schemes are often observed where government is the employer.

49. Separately, pension schemes can be either of a **defined benefit** type or of a **defined contribution** type (called "money purchase" in the *1993 SNA*—***it is recommended the SNA adopts the former term***). The *1993 SNA* recording accordingly differs: the net worth of the former depends on the comparison between segregated assets and the pension liability calculated on an actuarial basis, while the net worth of the latter is always zero because the liability is not determined actuarially but is equal to the current market value of the segregated assets (SNA 13.79). As such, defined contribution schemes are arguably always funded, as is suggested in SNA 13.88.

50. **Social insurance schemes** are arrangements where the beneficiary or policyholder (the household) is obliged or encouraged to insure, by the intervention of a **third party**, against social risks (see SNA Appendix IV). In the case of employer schemes, the third party, or "sponsor", is by definition the employer. The sponsor is not necessarily the same as the organizer or manager of the scheme or as the entity that records the liabilities against the households and holds the assets. That the obligation to insure may derive by law or from an industry wide arrangement does not change the fact that the obligation originates from the employment contract. The sponsor is also the entity that retains the residual risk under a defined benefit scheme.

51. The *1993 SNA* distinguishes amongst social insurance schemes between **social security schemes,** which cover the population at large and are imposed and controlled by

[20] SNA distinguishes between life and nonlife insurance. It is simply assumed that pensions schemes are those schemes that fall into the life category and cover an old age "risk". See notably SNA Annex IV.

government, from other schemes called **private schemes**. The latter is mainly composed of employer schemes. The terminology used in *1993 SNA* of "private" schemes is rather unfortunate—and ***should be eliminated in the future SNA***—as they comprise employer schemes of government, of public corporations as well as of private corporations.

52. While "private schemes" are sometimes assimilated by commentators to employer schemes, the *1993 SNA* does not restrict them to those. The sponsor can be a party other than an employer (SNA Annex IV, Para 10-11), such as a trade union. The scheme can take the form of purchases of insurance contracts. Finally, some schemes that have features similar to social security but where government does not control benefits (for instance schemes that are defined contribution), may also be classified as "private". All those difficult issues will be discussed further within the EDG in 2004.

B. Terminology issues (see also Appendix IV)

Summary of difficulties

53. It has been observed that there is **no agreement in the statistical community on the exact meaning of terms such as "funded", "reserves", or even "defined contribution"**, by a wide margin. This lack of agreement results from the loose wording in the *1993 SNA* and from its interaction with accounting or financial community's common parlance. This lack of agreement prevents effectively implementing the *1993 SNA* on an equal footing, but also poses, in practice, a **considerable impediment to the exchanges of views**.

54. Appendix IV provides a detailed discussion of the possible meanings of the funded/unfunded and the defined benefit/defined contribution delineations and the interaction between those ("defined contribution schemes are always funded" as suggested in SNA 13.88). The EDG Moderator notes that while those issues are very important during discussions, they would become largely secondary if the proposed changes in the *1993 SNA* recordings were agreed.

55. Some argue that **"reserves" mean <u>economic assets</u>** accumulated by the pension fund (the squirrel accumulates "reserves" in the form of nuts) while others argue that **"reserves" mean a <u>liability entry in the own accounts</u> of the schemes** (the statement of appropriation of earnings determine the part to be distributed and the remainder to be booked as "reserve"). The EDG moderator notes that the former definition aligns more with the financial market parlance, while the latter aligns better with the *1993 SNA* internal logic (see Appendix IV).

56. There is a question whether defined contribution would refer to an award formula or to the existence of a liability (or residual liability) against the households or the pension scheme. At stakes is the classification of notional defined contribution (NDC) [21] schemes.

[21] Notional Defined Contribution schemes involve an award formula based on contributions and a return not determined by the employer, while no segregated economic assets exist. In some alleged NDC schemes, the return is variable and is (conveniently) determined by the employer: these are improperly called NDCs. NDC schemes have typically been created in the context of social security reforms. However, there is no reason for employer schemes not to use this method (although they may need reinsurance).

57. The EDG moderator believes—though many commentators disagree—that there is a substantial and underestimated difficulty, not yet resolved, related to the fact that assets in the form of **employer's liabilities** (notes, bonds, shares) held by the pension schemes that are **not resalable** differ in no sense from other unfunded obligations. This question however does not impact the economic character of the asset in question, but only and simply the funded/unfunded character of the scheme—which is of secondary importance in the context of an amended SNA.

Recommended terminology options, also taken in this Report

58. ***For the future SNA, the EDG recommends the term funded should be brought closer to the meaning retained in the business community: it should unequivocally mean that economic assets are segregated. This segregation must be enforced by a legal mechanism.*** **These are both clarifications of the *1993 SNA*. *The EDG recommends banning the term "reserve" (and use "asset", in its place), unless it is clearly explained what this means.***

59. ***For the future SNA, the EDG will explore whether or not recommending the term defined contribution should refer to an award formula: all schemes where benefits are determined by contributions and a return on those that is either fixed or, if variable, that is not determined by the employer, such as a market return.*** **This would be a change (clarification) in the *1993 SNA*.** They cover true NDC schemes. A defined contribution scheme may be unfunded, hence. **This would be a change in the *1993 SNA*.** In the meantime, the moderator will follow this terminology in the rest of this Report.

60. ***For the future SNA, the EDG Moderator believes that schemes obligated to invest in employer's liabilities should not be considered funded.*** **This is a change (clarification) in the *1993 SNA*.** Where they are defined contribution, then they are similar to NDC.

61. ***For the future SNA, the EDG recommends underfunded (overfunded) schemes be defined as schemes where the market value of economic assets are below (above) the amount of pension liabilities.*** **This is unchanged from the *1993 SNA*. *Economic assets exclude employer's liabilities that must be held by the scheme/fund (and do not result from the own choice of the fund's manager).***

62. ***For the future SNA, the EDG recommends schemes operating with (deliberately) insufficient funding of the callable contributions (on current service costs) to be called partially funded.*** **This is a clarification of the *1993 SNA*.** Partially funded schemes can be overfunded or underfunded at any point in time[22]. The first delineation is a classification of schemes by type of funding policy, the second delineation is by type of observed net worth.

[22] Partially funded schemes will generally be underfunded although they occasionally become overfunded when assets considerably over perform expectations.

III. Recording Issues in the New SNA

The balance of SPQ answers to the relevant question related to the issue examined below can be read in the Appendix V.

63. ***The EDG nearly unanimously recommends recognizing all employer retirement pension obligations as liabilities, whether funded or unfunded, and to change the way transactions are recorded.*** **These are changes in the *1993 SNA*.** The rationale for these changes is described below.

64. In practice those changes are only applicable to defined benefit schemes. ***At this stage, the EDG recommends no change to the way the SNA records defined contribution schemes.*** **This is unchanged from the *1993 SNA*.** The EDG notes that such schemes function like mutual funds, more so than life insurance contracts, with the difference that there is an additional compulsory element. Any change in treatment would need to be analyzed in the context of the SNA recording of mutual funds and life insurance contracts.

A. Recognition of employer pension obligations as liabilities

Liability recognition

Recognition

65. ***The EDG nearly unanimously recommends recognizing as liabilities, all promises made by employers to their employees and pensioners regarding retirement pension schemes, for all types of arrangements.*** **This is a change in the *1993 SNA*.** The liability is in the form of *insurance technical reserves* (AF.6)[23].

66. When pension promises are contractual engagements, they are expected or likely to be enforceable. In this case, they should be recognized as households' assets, irrespective of the facts that segregated schemes' assets exist or not, and of the fact that the employers' accountant may have recorded an associated liability entry in the employer's balance sheet or not. **This is a change in the *1993 SNA*.** When pension promises are not explicit contractual engagements but are implicit, or when the enforceability of engagements has not been tested or established, or is uncertain, a liability must nonetheless be recorded, if a constructive obligation exists. GAAP's (Generally Agreed Accounting Practices) standards (including International Accounting Standards—IASs) are used to decide whether a constructive obligation exists. **This is a change (or possibly a clarification) in the *1993 SNA*.**

67. Constructive obligations are, according to the International Accounting Standards Board (IASB), obligations that derive from an enterprise's actions where:

- By an established pattern of past practice, published policies or a sufficiently specific current statement, the enterprise has indicated to other parties that it will accept certain responsibilities; and

[23] It is understood that the OECD *Task Force on the measurement of non-life insurance production in the context of catastrophes* (François Lequiller) will propose re-labeling the instrument AF.6 into *insurance technical provisions*.

- As a result, the enterprise has created a valid expectation on the part of those other parties that it will discharge those responsibilities.

68. The fact that the employer or its accountant did not recognize or record a liability—applying the local accounting standards (particularly, government accounting standards)— is not what is decisive, here.[25] Instead, the question is whether, considering the feature of the scheme, internationally agreed standards would recognize a liability.

69. ***When policyholders can transfer pension rights/entitlements*** from one employer scheme to another scheme, involving a lump sum payment from the departing scheme, ***or can obtain their liquidation, the economic asset character of the entity (the "asset") in question is indisputably established in the view of the Moderator***.

70. When the possibility of transfer is restricted to specific circumstances (e.g., when the employee changes country), some wonder whether the economic asset character is established or not. The Moderator believes it is. Similarly, when lump sums are exchanged in case of transfer of the whole scheme to another scheme, it seems to the Moderator that the economic asset character of the pension liability is also established. **Those issues may be further discussed by the EDG in 2004.**

71. In practice, it is likely that statisticians will have access to the required source data in case the local accountant follows standards aligned on, or close to, international standards. There may be source data difficulties when the local accountant departs from those standards. However, to remediate this situation, usual statistical techniques ought to be put to work, such as exploiting per capita data for comparable schemes (employment structure) available elsewhere (SNA 8.72 second sentence).

Increased transparency and efficient in government

72. Many governments plan, monitor, and judge their fiscal policies using statistics from national accounts. At present, as national accounts do not record financial liabilities for unfunded government-operated pension schemes, the impact on the government deficit is simply the payment of pensions to retired employees, net of any current employee contributions, and no liability is recorded in government debt[26]. However, if a government makes payments to private–sector pension funds on behalf of its employees, the impact on the government deficit would be different. The impact would be the accruing pension rights of its employees plus the interest on the extra borrowing by government needed to finance the pension contributions (which arise earlier than the pension payments), and government debt would be higher for the same reason. This difference in accounting for the cost of different ways of proving public sector occupational pensions can lead to sub-optimal decision making in terms of economic efficiency.

[25] Otherwise international comparability would terribly suffer.

[26] The "debt" here is the used to mean the sum of liabilities on the government balance sheet in national accounts.

Recognition boundary

73. At this stage, it is proposed that asset recognition of constructive obligations be restricted for the time being, by convention, to old age employer schemes, i.e., to arrangements with a "life insurance" character (see SNA Appendix IV) other than social security/assistance.

74. It is worth noting that many conventions of treatment already exist in the *1993 SNA*:

- Life insurance is treated differently from non-life insurance.
- Funded employer schemes are treated differently from unfunded employer schemes.
- Funded social security schemes are treated differently from funded employer schemes.

75. It is simply suggested to use, for the time being, the *1993 SNA* existing life/non life and employer[27]/social security schemes delineations. Those boundaries have proved reasonably solid and already impart very different recordings in the *1993 SNA*. Further work will be needed later on the treatment of social security and assistance pensions and on the classification of schemes (e.g., whether a scheme falls within social insurance or not).

76. The life/nonlife is useful to exclude obligations of the type of "health insurance," as some would wonder why liability recognition would not be extended to those obligations. Others argue that retirement pensions is sufficiently specific in that the contribution today relates to an outflow tomorrow, while non retirement insurance does not involve similar inter-temporal features.

77. It is also an important consideration that the nature of the promised outflow has to be established. In case the promise of health care would be set by reference to monetary amounts, the valuation of the obligation would seem without difficulty (within an actuarial framework), and the arrangement may be assimilated to retirement pensions. When the health care promise relates to a sole and "vague" promise of care in the distant future, then the valuation of the obligation is questionable.

Counterpart institutional sector

78. The household's asset is a liability of the institutional unit consisting of the employer and the scheme when the fund is non-autonomous (**This is unchanged from the *1993 SNA***) or when the scheme is unfunded. It is a liability of the autonomous fund (**This is unchanged from the *1993 SNA***). If the pension obligations exceed the autonomous fund's assets, the latter has a claim on the employer, who would recognize a liability to the pension fund for the difference. Alternatively, if the pension fund's assets exceed the pension obligations, the pension fund would have a liability to the employer, who would recognize a claim on the pension fund for the difference (**This is a change from the *1993 SNA***).

[27] To be more precise: "private schemes". Private schemes encompass mainly employer schemes (including those for civil servants), but not necessarily only those.

Valuation of pension obligations (actuarial methods)

79. ***The EDG recommends that pension obligations be recorded using actuarial[28] amounts/values for defined benefit schemes, and using market values of existing assets[29] for defined contribution schemes*. This is unchanged from the *1993 SNA*.**

80. The EDG notes that there exists a variety of actuarial methods. It sees merit in recommending a preferred one, but also recognizes the usefulness for flexibility where statisticians obtain actuarial based source data using other methods that are sufficiently close.

81. According to the former UK accounting standard, *Statement of standard accounting practices* (SSAP) 24:

a. "*Accrued benefits* are the benefits for service up to a given point in time, whether the rights to the benefits are vested or not. They may be calculated in relation to current earnings or projected final earnings" (Para 56).
b. "The *accrued benefits method* of actuarial valuation is a valuation method in which the actuarial value of liabilities relate at a given date to:
    i. The benefits, including future increases promised by the rules, for the current and deferred pensioners and their dependants; and
    ii. The benefits which the member assumed to be in service on the given date will receive for service up to that given date.

    Allowance may be made for expected increases in earnings after the given date, and/or for additional pension increases not promised by the rules. The given date may be a current or future date. The further into the future the adopted date lies, the closer the results will be to those of a prospective benefits valuation method." (Para 57).
c. "A *prospective benefits method* of valuation is a valuation method in which the actuarial value of liabilities relates to:
    i. The benefits for current and deferred pensioners and their dependants, allowing where appropriate for future pension increases; and
    ii. The benefits that active members will receive in respect of both past and future service, allowing for future increases in earning up to their assumed exit dates, and where appropriate for pension increases thereafter." (Para 71).

[28] Actuarial amounts are stocks, calculated by actuaries, and associated flows, calculated by actuaries or by accountants, using mortality tables and all other necessary hypotheses provided by actuaries.
[29] Or bookkeeping entries.

82. According to the current UK accounting standard FRS 17 (Para 2), the "*projected unit method* is an accrued benefits valuation method in which the scheme liability makes allowances for projected earnings. An accrued benefits valuation method is a valuation method in which the scheme liabilities at the valuation date relate to:

a. The benefits for pensioners and deferred pensioners (i.e., individuals who have ceased to be active members but are entitled to benefits payable at a later stage) and their dependants, allowing where appropriate for future increases, and
b. The accrued benefits for members in service on the valuation date.

The accrued benefits are the benefits for service up to a given point in time, whether vested rights or not."

83. ***The EDG recommends that the reviewed SNA indicate a preference for using accrued benefits methods.*** Prospective benefits methods are inappropriate, as they also relate to future periods of work, and future contributions are not recognized as assets in the SNA. **This is a clarification of the *1993 SNA*.**[30] However, the discounted forecasted benefits should reflect future increases in salaries and pensions, at a minimum for general inflation. ***The EDG recommends that the SNA would advise that the projected unit method, towards which accounting standards seem to be converging at the moment, is an appropriate method.*** The *projected unit method* has the characteristic of spreading more evenly across time the cost of pensions arising from many schemes. This is because in many defined benefit schemes, end of career promotions tend to have disproportionate effects on the final annuity; the *projected unit method* tends to spread those amounts over the whole career.

Discount rate

84. One debated question is the appropriate discount rate to use. In this respect, the discount rate selected must be related to the projected inflation rates used. It is essential that a reasonable real discount rate (i.e., the nominal discount rate minus the projected inflation rate) be used for actuarial calculations. A method is simply to use a real discount rate and disregard altogether future inflation (i.e., set it at zero). Measures of real interest rate both with end XIX century's government perpetual bonds (gilts, "rente"), with negligible long term inflation market expectations under the gold standard, and currently with CPI (Consumer price index) indexed government bonds, suggest that yearly real interest rate are rather stable and close to 3 percent.

85. Another question relates to the type of credit risk that should be embodied in the discount rate used by some (private sector) employers. Should it use a risk free rate (government bond or swap rate)? Or should it allow for some private risks (AAA rated bonds etc.)? Or should it more reflect the "expected return on assets" which may well exceed 3 percent in real terms, even for a diversified portfolio?

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[30] Another way to look at it is simply to observe that, since the *1993 SNA* follows market valuation, the present value of future contributions receivable should be exactly equal to the present value of additional benefits payable (under the prospective benefits method): as long as the latter are presented net of the former on the balance sheet, one obtain the same result as with a projected unit method.

B. Allocation of autonomous defined benefit schemes' net assets to the employer

86. ***The EDG recommends, by a wide margin, allocating the pension scheme's net assets to the employer (this is de facto only applicable to defined benefit autonomous schemes)[31]: when the scheme is underfunded, the employer has a liability; when the scheme is overfunded the employer has (generally) an asset.***[32] **This is a change in the *1993 SNA.***

87. ***Pension funds would have by construction zero net worth for both defined benefit schemes*** **(This is a change in the *1993 SNA*)** and defined contribution schemes (**This is unchanged from the *1993 SNA***).

88. ***The instrument used for this allocation would be a type of insurance technical reserves (AF.6)*, taken to be AF.619 in the rest of this December 2003 Report**, to identify it. **This is a change of the *1993 SNA*.**

89. Not allocating the net assets to the employer creates an asymmetry in recording between schemes, which should be corrected. Employers have currently the ability to artificially improve their *1993 SNA* net worth, by creating autonomous funds and partially funding them or leaving them underfunded. Their net worth also depends upon the autonomous versus nonautonomous character of the funds in question, which seems to be another anomaly.

90. In addition, such an allocation seems necessary to uphold the accrual principle as well as the market value principle. An underfunded position (as an example) can accrue because:

- the employer has provided systematically insufficient contributions related to the current service cost (additional rights accumulated due to the period worked) (partially funded); or
- the fund assets has performed badly[33], the return on assets being below the cost of its pension obligations (see below).

91. The accrual principle suggests that contributions must not be measured by the cash provided to the fund during the period, but by the amount that the employer ought to provide corresponding to the value required to purchase the promised additional pension rights from the market, or as notified by the pension fund's actuary. This approach is also required to appropriately measure the cost of employment— including additional largesses regarding current employees—with an implication on value added (GDP) when the employer is a nonmarket producer, and an implication on the gross operating surplus when the employer is a market producer.

92. The accrual principle and the market valuation principle suggest recognizing immediately the additional obligations to the schemes arising from poor performance of

[31] The net asset is *de facto* already recorded in the books of the employer in *1993 SNA* when the scheme is unfunded or a non-autonomous fund. Furthermore, defined contribution schemes have by definition zero net assets (net worth).

[32] Further detailing on the conditions for the employer's asset to exist may be necessary.

[33] Either because all or most assets of the economy performed badly, or because the manager of the fund underperformed.

scheme's assets during the period, instead of delaying it. This approach is also required for transparency reasons and notably to explain the behavior of the price of shares in companies whose pension schemes' underfunding position deteriorates rapidly due to poor asset performance. The non allocation of the pension net assets to the employer (corporation) tends to make the *1993 SNA* net worth (i.e., assets minus liabilities including in the form of shares) of the employer (corporation) different and much more volatile than it should be, which risks impairing the analytical usefulness of SNA balance sheets. In contrast, its allocation reduces the volatility of corporations' net worth. However the allocation increases the volatility of own funds (i.e., assets minus liabilities excluding in the form of shares), which is appropriate in a system which marks-to-market assets and liabilities.[34]

93. One dissenting view is that the employer does not have an effective liability to the fund at the accounting date when the scheme is "fully funded on the actuarial basis of valuation of assets" and the risk of shortfall on premature wind-up is reinsured. According to this dissent, under- or overfunding measures the difference between assets and liabilities when both are valued on an actuarial basis. (see Appendix IV, Para 306). The employer's apparent liability to a scheme which is fully funded on this basis is measured by the shortfall of assets at market values to assets at actuarial values; this is also a reasonable estimate of the employer's potential claim on the reinsurer, if there had been premature wind-up at the same date of such a scheme. However, as this is regarded, when there is no wind-up, as only a contingent asset of the employer and a contingent liability of the reinsurer, further consideration is needed for SNA recording. According to this dissent, options are: to regard the shortfall of assets at market values to actuarial values, being amounts potentially claimable, as an actual asset/liability of the employer; to attribute these short-term elements of deficit or surplus to the employees; or to leave a short-term element of net worth with the fund, which will tend to average out to zero over a number of years. A similar distinction between short-term and structural elements of deficit or surplus would be made in the case of schemes which are under- or overfunded on the fully actuarial basis.

94. The Moderator believes that this dissenting view while appealing at first sight has numerous defaults, and generally does not accord with SNA market valuation and accrual principles.

a. First, it is not acceptable to allocate to employees the difference between the market value of assets and their actuarial value, as long as the employer is a going concern (and has committed to make good any shortfalls). It would not agree with the principle of valuing *insurance technical reserves* in defined benefit pension fund using actuarial values.
b. Second, reinsurance would generally involve making good on shortfalls only in case the employer obligations could not be met on its bankruptcy and final liquidation of all its assets. Hence, the employer has a liability.
c. Third, the best estimate of the premature wind-up costs to the employer is not measured by the "actuarial value of fund's assets" but by their market value. Measuring the residual employer obligation (to the pension fund) (or claim) on the basis of the former would not be in line with the market principle. It is worth noting that the appearance of the claim against the employer (on poor performance of assets)

[34] For units of government, net worth = own funds.

under the proposition of the dissent would necessarily arise via an Other economic flow, which would not be reflecting (at time of entry in the accounts) any market (price) changes (but ones that occurred potentially long in the past).

d. Fourth, while one may find some signification to the actuarial value of bonds, the actuarial valuation of shares would seem much more problematic.
e. Fifth, the proposition corresponds to adopting the option of delayed recognition of assets and liabilities in the employer's balance sheet provided by many business accounting standards, at a time the latter are under review to the effect of removing this option.
f. Sixth, the proposition can lead to circumstances where an employer would have an asset (under the "actuarial valuation") despite the pension fund being in poor conditions (i.e., being SNA underfunded). This is due to the fact that employers may have had some incentive to recapitalize it quickly, and in excess to the cost booked by the accountant for the recent periods. This anomaly is one of the (many) reasons why accounting standards are under review.

C. Recording of employer contributions

Actuarial amounts

95. ***The EDG recommends by a wide margin valuing employer contributions using actuarial amounts*[35]*, as part of compensation of employees (D.1), in all cases, instead of actual amounts paid.*** **This is a change in the *1993 SNA*.**

96. The *1993 SNA* recognizes the use of "the same kind of actuarial considerations that determine the levels of premium charged by insurance enterprises" for valuing imputed employer contributions, i.e., for unfunded schemes (SNA 8.72). But it thereafter provides a waiver to statisticians (SNA 8.73). Hence, it can be argued that the **EDG proposal above merely generalizes the guidance of SNA 8.72** to all employer retirement pension schemes.

Autonomous fund

97. In the case of an autonomous fund, the **counterpart entry to D.1 is a transaction in financial liabilities (F.619)**, or reduction in financial assets when the scheme is overfunded.[36] In the books of the pension fund, a matching entry F.619 (counterpart of the recording by the employer) has a counterpart entry in F.612, the appearance of a liability against the household. Finally, from the point of view of the household, the counterpart transaction to D.1 received is F.612. This interesting trilateral recording illustrates that recordings in the SNA financial accounts (transactions) follow the debtor/creditor approach not the transactor approach: the recording show against, for instance, a Use (the compensation of employee) which is a Resource of someone, an incurrence of a liability against a creditor who is generally another entity than the someone in question.

[35] The amounts in question should not be confused or assimilated with the amounts of funding called, for the period, by the fund trustees on advice from actuaries.
[36] This is a type of other receivable/payable (AF.7). However, it is useful to follow here the option taken, in the *1993 SNA*, for non life insurance where prepayments and provisions for litigious settlements are booked under the insurance technical reserve itself (AF.62).

98. In compliance with the accrual principle, at time of **actual payment to the scheme, settled amounts are simply booked as a financial transaction in the books of the employer (F.2 against F.619)**. This should not be confused with payments of benefits (the pension), that are not reflected in the accounts of the employer but solely in those of the pension fund (F.2 against F.612).

99. Lump sums paid to recapitalize underfunded schemes are treated similarly to regular payments. They are hence financial transactions, presumably arising in settlement of a prior recording of a holding loss on the instrument AF.619, as is appropriate: this is not a cost of employment but a cost related to an unexpected (past) underperformance of assets. Such lump sums are to be distinguished from the lump sums to schemes as counterpart of the granting of additional pension rights to policy holders (see below) (ESA 4.165i. and ESA Annex III Para 20 tend not to distinguish these two events, it would seem).

Nonautonomous funds and unfunded schemes

100. The same principles and the same recording apply for nonautonomous funds and unfunded schemes, except that the pension fund is now "consolidated" with the employer. Hence, the AF.619 link washes out in "consolidation"[37] in the case of nonautonomous funds and do not even appear, in the first place, in the case of unfunded schemes. The employer books, at time of work by the employee: D.1 against F.612. Nothing is recorded at time of settlement or of lumpsum. The employer books, at time of pension payment: F.2 against F.612.

Advantage and practical issues

101. With such an approach, the cost of employment would be much more appropriately measured than currently:

a. **Supercontributions** originating from under-performance of defined benefit pension funds' assets (recapitalization of pension funds) would no longer be part of compensation of employees and affect the gross operating surplus of the employer (or its value added when the employer is nonmarket, and the measurement of GDP). Actual payments of contributions would be seen purely as financial transactions, being settlements of liabilities originally incurred through accrued employer social contributions (income: transactions) or through underperformance of funds' assets (holding losses: revaluations).
b. Observed episodes of **contribution "holidays"**, where employers are being granted waivers on the payment of contributions due to consistent overperformance of scheme's assets, would not translate any more into anomalous reductions of compensation of employees. Instead such "holidays" are recorded in the system as part of holding gains on liabilities: social contributions payable are booked (but not paid), and the accumulation of "contribution arrears" (so to speak) is continuously

[37] Consolidation in a common sense, not necessarily in a statistical sense, as some reserve the notion of consolidation in statistics to the elimination of links between institutional units in groupings of **more than one** unit (and not to the elimination of links within one institutional unit).

being cancelled by holding gains on the employer's net exposure to the pension fund.[38]

102. Therefore, the recommended approach will provide identical labor costs measurement originating from the pension scheme, irrespective of its organization, providing a considerable boost to international as well as to inter temporal comparability.

103. Some argue that such a major innovation may create significant measurement problems. The Moderator does not believe so, as the information is provided in employer's accounts. Being generally maintained on an accrual basis, the information should be even more readily retrievable than data on a cash basis. Information may also be retrievable using pension fund data.

104. Hence, in practice, this information is part of the business accounting cost of employment (current service cost—see below part V). Where this information is not readily available, the amount in question can be compiled using coefficients used for past periods or being used for the current period by other employers whose pension scheme's features are reasonably close. (SNA 8.72 second sentence). In practice, contribution "rates/ratios" are relatively smooth, and should not exhibit large swings.

Actual or imputed

105. ***The EDG recommends that employer contributions related to employer defined benefit pension schemes be booked as imputed for the full amount*** (**this is a change in the *1993 SNA***) while those related to funded defined contribution schemes would be actual social contributions. Owing to the importance of pension contributions, ***it is suggested to identify in the accounts those relevant amounts:***
D.1211 Employers' actual (retirement) pension contributions
D.1221 Employers' imputed (retirement) pension contributions
This is a change in the *1993 SNA*.

106. Another option would be to book, as imputed social contributions, the sole difference between the actuarial and the actual amounts (positive or negative).

D. Employee contributions

107. ***The EDG recommends recording employee contributions using the amounts payable (inclusive of the contribution supplement—see below).*** **This is unchanged from the *1993 SNA*.** The time of recording would be the time when the pension rights are recognized, irrespective of the time of actual payment, as appropriate, the difference being recorded in other receivable/payable.

108. The employee contribution is a financial transaction (F.61), unless the dual recording is maintained, and in this case it is booked as a non financial transaction as well (D.61).

[38] Or, alternatively, the social contributions payable that are booked translate into a reduction of the asset of the employer that appeared in past periods from holding gains on the employer's net exposure to the pension fund.

E. Property income

Actuarial amount

109. ***The EDG, by a wide margin, recommends recording as a property income attributed to policyholders/households on defined benefit schemes, the difference between the present value of future benefits and the value of those future benefits (using the discount rate used by actuaries).*** **This is a change in the *1993 SNA*. *In practice the property income flow could be approximated as being equal to the discount rate used by actuaries times the stock of pension obligations.*** The property income is receivable by the households and payable by the pension scheme, irrespective of whether it is funded or not, autonomous or not.

110. This amount is exactly equal to the amount by which the stock of pension (*insurance technical reserves*) obligations increases owing to the time passing (exclusive from all other events). This increase is due to the fact that, after one period, the projected cash outflows for pensions are discounted one period less.

111. This recording recognizes that contributions paid today are merely the present value of the promised cash flows to which the policyholder/household is entitled to, in the distant future. The difference between the present value and the future flows is in the nature of a property income that ought to be accrued over the length of the contract, similar to a zero coupon bond. The fact that the amount promised is not fixed but is indexed would not change the nature of the property income in question, but would change its valuation—in theory and in practice.

112. When the discount rate applicable is a real interest rate, the property income to record should add, to the flow calculated using that real interest rate, the observed periodic (e.g., yearly) "upticks" in CPI. The property income is to be measured as if the liability was CPI indexed (SNA 7.104).

113. The rule is applicable for all employer schemes: autonomous funds, non-autonomous funds or unfunded schemes.

114. Currently, in the *1993 SNA*, the property income payable by the pension fund to households is by convention set equal to the property income receivable by the pension funds on its assets (such as interest on bonds and dividends on shares).[39] The *1993 SNA* current treatment leads to an anomalous entry in Other economic flow (Other change in assets), presumably a revaluation, in *insurance technical reserves* (generally positive) due to time passing; but it is unclear what (price) changed other than time. This unsatisfactory outcome would be removed under the EDG recommendation.

115. One consequence of this recommendation is a clarification that one common reading of the *1993 SNA* text, according to which the "reserves"—meaning the assets of the pension fund—belong to households, is not applicable. Households own a claim against the pension fund [it is represented in the form of *insurance technical reserves* (AF.6)] representing those assets. However, they do not "directly" own the fund assets, but only "indirectly". In the

[39] In the case of unfunded scheme, there is no segregated asset (it seems), but also no liability in the *1993 SNA*.

financial accounts, the fund's assets (bonds, notes, shares) appear in the insurance corporation and pension funds subsector (S.125), not in the household subsector (S.14). See Para 117 and 143.

Autonomous schemes

116. ***The EDG recognizes that this new recording will create a new situation where defined benefit schemes will exhibit savings,*** which some consider an unwelcome feature for collective investment schemes. **This is a change in the *1993 SNA.*** The saving position of the economy would not be changed (unless cross border relationships would exist between pension funds and policyholders), but it will change the sectoral savings. It is argued that, on balance, the proposed changes will provide a better measure of sectoral savings than the current SNA. ***The EDG sees no reasonable way to avoid this feature of scheme generating savings.*** Two other options are rejected:

- **Allocating the difference in property income on the funds' assets** would seem inappropriate and would not be in line with the debtor principle; and
- **Allocating the difference in property income to the employer** has the inconvenience of generating substantial property income flows between the fund and the employer only loosely related to the employer's net position against the pension fund, with even a possibility that the employer may pay a property income on an asset (overfunded position), which is not reasonable.

117. The Moderator believes it counterintuitive when collective investment schemes (CIS) generate savings (positive or negative). In general, the essential feature of financial intermediaries is to pool assets and liabilities, and to transform those. In the process of this productive activity, they may generate savings on their operations, but they should be commensurate to only a fraction of their output (and not a faction of their balance sheet, which is what property income is). Within financial intermediation, CIS (autonomous pension funds, mutual funds) are a particular specie, where the "lender" is also the "owner". The sole purpose of those entities is to pool assets together in a bid to cut management costs, which can generally be defrayed by explicit commissions. Following this line of reasoning, the *1993 SNA* allocates property income receivable by the pension fund as being payable to the policy holder (and being reinvested), while the ESA 1995 extends this principle to all CIS, i.e., including mutual funds (but not *1993 SNA*). This allows distributing in the accounts enough income to households, irrespective of whether their assets are "direct" or "indirect", allowing more satisfactorily explaining the gradual increase in their net worth (which otherwise would have to transit via an other economic flow, a less satisfactory option).

118. It has been lately suggested that a way of dealing with the issue of CIS exhibiting savings would be to show a matching transfer, equal to the net income of the scheme, back to the employer, which would be then "reinvested" by the employer in the scheme as a financial transaction. This shifts the saving from one corporation to another. ***The EDG would have to further examine the usefulness of this suggestion***.

119. The ***EDG recommends by a narrow majority that the employer pay or receive a property income on the net position it has against the pension fund*** (applicable only to autonomous funds), ***based on the discount rate used by the scheme (or on the actuarial return on fund's assets).*** This property income would possibly be classifiable under D.41 Interest. **This is a change in the *1993 SNA*.**

120. Some find this an unnecessary and artificial imputation. However, the Moderator believes this recommendation will not be difficult to implement (see next paragraph) and would reestablish some neutrality for the measurement of the total property income (payable by the employer) between those employers that deliberately keep pension schemes underfunded and those that recapitalize, when necessary, their schemes by way of issuing debt instruments (which carry an explicit interest). It would also mitigate unduly negative saving positions for partially funded schemes. In addition, it is reasonable to expect that a newly created economic asset (AF.619) accrues property income. This recommendation may also be applied only for partially funded schemes.[40]

121. It has been suggested that the employer's property income should be calculated on the basis of the return of the fund's assets, and not on the discount rate used by the scheme. The Moderator feels not completely comfortable with this perspective. In case the applicable return would be the actual return on assets (fund's assets), it would mean recording holding gains/losses (on fund's assets) within the property income (exchanged between the pension fund and the employer). The Moderator advises against. In case the applicable return would be the **actuarial return on assets** (fund's assets), this would seem reasonable, although possibly manipulable and more difficult to enforce. ***This is an option opened.***

122. In practice, the property income payable to policy holders will tend to be measured in business accounting (of the employer) as part of the total cost of pension. Where it is not readily available, the use of a long term bond yield applied to the stock of pension obligations would provide a good estimation. In addition, the property income payable (or receivable) by the employer to the pension fund (imputed) can easily be estimated, by prorating the calculated property income payable to policy holders/households, using the observed underfunded (overfunded) ratio.

Debtor versus creditor principles

123. While the difference between the contribution and the benefit is property income, and in fact reflects the discount rate used by the actuary (to compile the "contribution"), there is a question as to what to do when the actuary changes its discount rate.

124. One natural option is to use the new discount rate and apply it to the new value of the pension liability. This corresponds to the **creditor principle approach** for interest recording on bonds. It is well established that the cross product between a market yield and the market value of the instrument is not invariant, except for polar cases: floating overnight debt or perpetual debt. In the case of pension obligations, although the average duration of obligations may be rather long, it is likely that the interest flow would be quite sensitive to changes in discount rate. However an interesting complication occurs in the case of pension debts: changes in nominal discount rate will tend to be matched by changes in inflation expectations, leaving the stock of liabilities unchanged: hence, the volatility in property income flow will generally essentially reflect a volatility in expected inflation. See Para 160.

[40] Note the analogy with swaps: the *1993 SNA* does not record property income on the balance sheet value of swaps. However, one would wonder if off-market swaps (swaps with a market value at inception) ought not to be considered a loan plus a swap, the former accruing interest.

125. The ***EDG considers that the recommendation*** to use actuaries' or accountants' measures for property income ***need not be seen as a departure from the debtor principle***, insofar as the basic tenet of actuarial estimations is that the future outflows under the contract are not precisely known and subject to change (in contrast to fixed rate bonds).

126. A plausible option would be to recommend, in concept, a purer approach to the recording of property income on *insurance technical reserves*, where each periodic contribution would determine a stream of predetermined future property income flows (based on the discount rate used by the actuary for the period of contribution) until redemption (such as the retirement date). For any given period, the property income payable by pension funds to households would reflect a summation of fixed flows related to each stream of property income pre-fixed in the past. However, it is unlikely that source data would be available for such calculations and as a matter of practicality, the use of actuarial amounts would be acceptable.

127. The use of the creditor principle here seems also a benign practical problem, in comparison to the considerable practical advantage: the additional volatility to property income payable and to the savings of the pension fund would hardly be a difficulty in so far as the (non zero) saving position already largely reflects an inadequate, i.e., too low, measure of property income on assets (mostly in shares and other equity).

F. Dual recording (retained)

No suppression yet recommended

128. ***The EDG does not recommend the suppression of the dual recording. However, the*** **1993 SNA** ***text should be improved, and further information on benefits and contributions should be provided, for instance, by way of splitting item D.8 into D.81: contributions, D.82: property income, and D.83: pensions.***[41]

129. The EDG is divided on the question of dual recording (recognizing simultaneously nonfinancial and financial transactions for contributions and for pensions, as well as an adjustment entry: D.8). A majority of SPQ respondents leans towards abandoning it. However, there is vocal minority with substantial arguments.

130. For some, the dual recording of pension contributions and benefits reflects ambiguity in, or misunderstanding of, the essential character of pensions, namely, that it is a mandatory investment plan with an insurance element. The IMF's *Government Finance Statistics Manual 2001* (*GFSM 2001*) does not record government employee pension contributions (employer schemes) as government revenue or the associated pension benefits as government expense; those are financial transactions[42]. A consideration would be to remove the dual recording in the reviewed SNA and have it as a memorandum item only.

[41] In case dual recording would be abandoned, a memo item should be provided in the accounts on contributions and benefits, and possibly some sub-classification of the transactions in insurance technical reserves F.6121, F.6122, and F.6123.

[42] Nonetheless, both the contribution, part of compensation of employees, and the property income are government expenses, which lead to the appearance of a liability—*insurance technical reserves.*

131. The argument for keeping the dual recording rests on the idea that pensioners view pension flows as income (and perhaps some contributors perceive their contributions as their expense). There is also a need to maintain a link between macro data and micro data, such as in income surveys, where pensions are considered as income. Some have argued that users do not understand the dual recording. This would call for clarifying the *1993 SNA* text.

132. The link with other manuals would also need to be improved, with the provision of information related to pensions' contributions and benefits in the *1993 SNA*, so to be able to obtain other contributions and benefits. Conversely, other manuals should show similar information.[43]

Eligibility criteria for a Review

133. The Moderator's interpretation of the current balance of arguments is that he cannot yet recommend a change. He notes that it is also **unclear as to whether the question is eligible for a review**, as it may not meet the criteria set by the UN Statistical Commission for proposed changes to the *1993 SNA*: this question has been hotly debated in previous SNA drafting, and it is questionable whether the situation changed to a point where a reopening is warranted.

134. Nonetheless, the Moderator observes that the proposed extension of liability recognition will increase the domain of the dual recording, which could be ascribed as a sufficiently important change in circumstances. At the same time, international comparison of distributed social benefits may be distorted if employer schemes and social security schemes were to be recorded radically differently.

Contribution supplement

135. There is a question as to whether the property income receivable by households should be routed as social contributions ("contribution supplement") with an impact on D.8 (as in the *1993 SNA*), or whether those should be exclusively shown as financial transactions (This would be a change in the *1993 SNA*).

G. Pension funds' output

Extension

136. ***The EDG recommends extending output to nonautonomous pension funds and unfunded schemes.*** **This is a change in the *1993 SNA*.**

137. The activity of autonomous pension schemes/funds is financial intermediation (ISIC category J, Division 66), and the output is financial intermediation services (CPC—Division 81). Pension funds engage in financial intermediation, by way of **pooling assets**, as they incur liabilities for the purpose of acquiring assets. By doing so, they transform or repackage (in terms of credit risk, maturity, liquidity, legal characteristics) the funds channeled from lenders to borrowers. This is true for defined benefit as well as for defined contribution

[43] Within the financial accounts possibly.

schemes. For the Moderator, the fact that in the latter, similar to mutual funds, the "shareholder" is indistinguishable from the "lender" is not cause enough to renege the financial intermediation character of their activities. Defined contribution funds resemble mutual funds and there may be a case to group the two under the same category of activity (instead of under ISIC 65 and 66 respectively). The output of contribution defined funds and mutual funds is directly measured (i.e., the commission perceived). It is consumed by the households while the mutual fund unit purchases the same amount from the mutual fund manager (which belongs to the financial auxiliaries sub-sector—S.124).

138. There seems little justification for not recognizing a secondary activity for nonautonomous schemes, and for keeping those activities ancillaries. A similar conceptual position may be taken for unfunded schemes. The output is deemed to be purchased by the policyholder (and not by the employer), even though this may be compulsory rather than by choice.

139. The recording of a secondary output appropriately recognizes that the service is provided to the households (the employees), not to the employers. In a similar way, the system already recognizes that it is the employee that contributes to the pension fund, not the employer. Therefore, in this instance, the proposed recognition of such activity is not tantamount to the recognition of all auxiliary activities (which would not be welcome). However, this supposes accepting that financial services (insurance) could be a secondary activity of institutional units not classified in the S.125 subsector.

140. In practice, unfunded schemes may not allow for an easy measurement of output, and compilers may resort to using coefficients observable for other schemes, or to neglect recording where amounts are not significant.

141. See Appendix VI.

Holding gains/losses

142. ***The EDG recommends by a small majority not to include holding gains and losses in the measurement of output.*** **This is unchanged from the current SNA.** The EDG considers that, in concept, the current SNA guidance is clear and satisfactory: the excess of contributions (inclusive of "contribution supplements"[44]), net of pensions paid during the period, over the changes in *insurance technical reserves* due to transactions, must be positive and is viewed as a fee collected by the scheme for its management.

143. The Moderator considers that the recommendation to measure property income using actuarial estimates for defined benefit schemes is not akin to incorporating holding gains on pension scheme's assets within income, because, for such schemes, the liability to policyholders/households, in the form of a specific instrument: *insurance technical reserves*, is another instrument independent from the accumulated assets, both in terms of property income, holding gains and losses, or total return.

[44] Related to property income payable to policy holders, deemed to be distributed and reinvested.

144. In practice, observed changes in insurance technical reserves (in the books of the insurer or the fund) incorporate all sorts of elements. It may be difficult for compilers to adequately disentangle revaluations, OCV and transactions.

H. Recording of events

145. The *1993 SNA* is silent on the recording of many events that are important in practice to pension funds. Not surprisingly, SPQ respondents tend to be divided as to the adequate recording (see results to the SPQ)[45]. This part is designed to promote clarifications of these questions. The Moderator believes that the EDG will be obligated to satisfactorily address those questions, even though they may be more conceptual than practical issues. Further work for final recommendations may be necessary in 2004.

146. Enforcing in practice such decompositions of events supposes to have information generally originating from detailed actuarial reports/disclosures in business accounting. Part V.B provides an example.

Change in discount rate

147. ***The EDG (unanimously) recommends that changes in insurance technical reserves due to changes in discount rate be booked as revaluations (at time of change)***. **This is a clarification of the *1993 SNA*.** This is akin to changes in prices of bonds due to changes in market yields. The change in balance sheet is not income. However, the flow of property income (and of social contribution/compensation of employee) thereafter is affected, as a new discount rate is used.

Cost of living adjustment (COLA)

148. ***The EDG leans toward recommending that the impact of COLA clauses be recorded as property income when a real discount rate is used—similar to indexed instrument on Consumer Price Index (CPI)—and be recorded as revaluations when a nominal discount rate is used, at least for the part related to changes in inflation expectations.*** **Those are changes/clarification to the *1993 SNA*.**

149. There may be a variety of COLA clauses and it is not completely certain if the many different types of such events ought to be treated similarly. COLA would refer to the fact that pension arrangements foresee the indexation on a price index (consumer price) of pension

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[45] On average only six respondents abstained from answering (29 responses out of 35), showing noticeable interest for these questions. It is worth noting that some questions of the SPQ were deficient in some respects, helping explaining some heterogeneity in answers (notably not specifying whether questions related to the current SNA or the reviewed SNA), which makes the interpretation of answers more difficult.

a) The granting of additional rights (i.e., additional pension entitlements) [Q.3B.1] was predominantly viewed as a transaction (20) but some consider it an OCV (8).
b) Opinions are more divided on the recording of the change in benefit structure [Q.3B.4]: 14 consider it an OCV, 12 a transaction, and four a revaluation.
c) Changes in life expectancy hypothesis [Q.3B.3] were viewed predominantly as an OCV by 17, as a transaction by seven, and a revaluation by five.
d) Cost of living adjustments (COLA) [Q.3B.2] were considered a revaluation by 14, a transaction by 11, and an OCV by three.

payable today or/and all future flows. COLA need not change the actuarial value of outstanding obligations. If they do not, the event does not lead to recordings.

150. COLA will change the actuarial value of outstanding obligations if expected future cash flows (benefits) are changed by the actuary/accountant.

- If the discounting method uses a real discount rate, COLA relates to a change in realized CPI over the past period. It is akin to a consumer price indexing, and the event (change in valuation) is booked as a component of schemes' property income.
- If the discounting method uses a nominal discount rate, the change in obligations outstanding arises if the realized prices' change for the current period (observed inflation) or if the forecasted inflation for future period differ from the previous forecast. It is suggested that:
    - by analogy with indexed securities, the impact due to the difference between the realized change in CPI and the previous forecast for the current period would be recorded as property income. An alternative position is to book this amount as a revaluation, as the difference between the realized inflation and the original expectation is more of the nature of a revaluation; and
    - by symmetry with the change in discount rate, other changes—related to changes in future inflation— be recorded as a revaluation.

  In contrast to observed inflation, future inflation is set freely by the actuary, but in close association with the nominal discount rate: the actuary ought to justify the real discount rate being used.[46]

Change in life expectations

151. ***The EDG recommends that the changes in insurance technical reserves due to changes in life expectation assumptions and calculations by actuaries, using standard technique, be booked as an Other economic flow (Other change in asset), although it is debated whether it is an Other change in volume or a revaluation.*** **This is a change/clarification of the *1993 SNA*.**

152. The event is not an interaction, as it occurs independently of the willingness of the scheme, of the employer, and/or (so to speak) of the employees/pensioners. Therefore, it is not income. It is an Other economic flow (Other change in assets). But is it a **price change** or a **volume change**?

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[46] The suggested distinction within the second case has the advantage of aligning the recording of property income with the first case. The return on the asset is similar to a CPI indexed bond, except that the way to calculate it is different: instead of adding an inflation component to a (predetermined) real coupon, one subtracts (adds) the surprise positive (negative) inflation component from (to) a (predetermined) nominal coupon.
Another way to look at it is to consider, assuming a higher inflation in the current and future periods, that cash flows will be higher in future because they start from a higher end of year base than previously expected (1st effect) and, then, the sequence of increases is, later on, also higher (2nd effect). The second effect results from the sole anticipation of the actuary (of higher inflation) and can be neutralized by selecting a discount rate. The first effect results from the observation of history, whose outcome was not exactly as expected.

Price change

153. Some members (including the EDG Moderator) consider the event a Revaluation, owing to the fact that the changes occur independently from all parties, a characteristic of revaluation (although there are exceptions due to SNA anomalous treatments).

154. In general, changes in the stock of liabilities due to changes in actuarial assumptions, which are not in the hands of the employer, seem to be of a revaluation nature, while consistency with the recording of the reestimation of life and non-life insurance reserves needs to be ensured.

155. However, some find it difficult to see which “price” did change.

156. The Moderator notes that **SNA 12.53 third sentence** may be interpreted as supporting the price change interpretation, as it wishes to distinguish changes in actuarial hypotheses from changes in structure.

Volume change

157. Some members consider the event an OCV, because additional (or reduced) “volumes” of pension payments are expected, as the latter would continue during more years—reflecting for example, the issuance of a new set of approved actuarial tables which defines the number of years in which the pensioners can expect to receive benefits.

158. However, it is questionable to the Moderator whether there is appearance of new rights, while the pension scheme’s rules have not changed. It rather seems a re-estimation of the value of existing rights within a scheme: the performance of the assets.

159. In addition, in the system, some changes in value of the asset (performance) due to unexpected events, possibly involving volume differences, can be captured as price changes. As an example, changes in market value of shares, such as reflecting brisker business activities than expected, with higher volumes of sales and profits, are nonetheless viewed as a revaluation.

Volume—price delineation

160. The Moderator believes that the delineation between volume and price changes can be effectively established, for financial instruments, on the **basis of expectations**. For fixed “coupons” (i.e., **fixed cash flows**) **instruments**, the volume can effectively be based on the expected changes in value (e.g., increases for a zero coupon bond) **at time of issue**. Similarly to wine that matures, whose increases in value are a volume change not a price change, the increase in value of the zero coupon bond over time is a volume change, not a price change (SNA 12.110). In addition, in order for the volume to be equal to the redemption value, there is a need to accrue interest using the debtor principle. See the debates on the EDG on accrual accounting of interest, at: http://www.imf.org/external/np/sta/na/interest/index.htm

161. Along those lines, price changes are changes in value (during an accounting period) that were not expected (at time of creation of the instrument, if applicable). However, the delineation between revaluation and OCV is sometimes tenuous. One consideration may be that:

- **Other changes in volumes** are events that are typically not expected in the sense that they are unlikely to occur, although individuals are aware of the possibility of their occurrence; while
- **Revaluations** refer to changes in values that are different from what was originally expected (the occurrence of the event itself is not surprising).

Granting of new rights and changes in benefit structure

Granting of new rights

162. ***The EDG recommends recording the granting of new rights (entitlements) to employees or pensioners as employer's expenses (i.e., Uses), because the employer's intention is to convey a benefit.*** **This is a clarification to the *1993 SNA* and this is in line with *ESA 1995* (ESA 4.165i).** ***The EDG sees it as a transfer type to policyholders, not to the scheme.*** **This is a clarification to the *1993 SNA* and this is a change to *ESA 1995*.**

163. One issue is whether the expense could be part of compensation of employees. The granting of new rights may involve non-employees. In addition, it may have more the characteristic of a gratuity, while the time of recording of the compensation of employee would be problematic. Under these circumstances, a transfer may be more appropriate.

164. The classification of the transfer itself is not without problem. It could be classified as:

- A current transfer (most likely);
- A social benefit paid by the employer; but there is no specific social insurance scheme involved; or
- A capital transfer, because transferred assets (*insurance technical reserves* from the point of view of recipients) cannot be used at will by policyholders.

Change in benefit structure

165. The EDG is divided on this issue. Some view it as an expense/revenue of the employer, similarly to the granting of new rights (need for symmetry) or to the canceling of debt by mutual agreement (where there is an implicit agreement in a change, it should be a transaction). It is also argued that the system recognizes an implicit agreement in the case of taxes. The reduction in benefits due to changes in the benefit structure of government pension liabilities would be recorded as an employee social contribution; an increase would be recorded as an expense. **This would be a change in the *1993 SNA*.**

166. Some view it (including the EDG Moderator) as an OCV, **unchanged from SNA 12.53 and from *ESA 1995*.** Such a change in benefit structure is akin to a change in scheme (restructuring). It is imposed by a party (the employer) on the others or part of them (the policyholders). In this sense, it is neither like a transaction (bilateral agreement) nor like a revaluation (external to both parties). A change in benefit structure can also be seen as a write-off by policyholders.

Difference between granting of rights and changes in benefit structure

167. *Although, the granting of rights and the change in benefit structure may look similar, the EDG tentatively considers that:*

- *an expense ought to be booked when the <u>intention of the employer is to convey a benefit</u> (that is in some of the cases where there is an increase in liability outstanding); and*
- *otherwise, an OCV is recorded (as the employer is acting to redress the financial imbalance of the scheme and such action is forced on to the policyholders).*

168. Operationally, an asymmetric rule could be used where increases in total liability due to changes in benefit structures would be expensed, on presumption that there is an intention to convey a benefit, while decreases would be recorded as OCV. Some feel uneasy about an asymmetry rule. Some consider that granting of rights and changes in benefit structure are identical events and should be treated the same.

169. The Moderator notes also the arguments that:

- A change in benefit structure is a **change in rules**, which **impacts every body** and **occurs exceptionally**, whereas the granting of additional rights is not, and generally affects only few and occurs regularly;
- A change in benefit structure **can go both ways**: increasing or decreasing the amount of obligations outstanding. In contrast, the granting of rights goes only one way. This gives substance to an intention to convey a benefit;
- In case an employer would regularly use changes in benefit structures to grant *de facto* new rights, **reclassification** of events would be in order, as the intention behind it is clearly to convey a benefit in the latter case; and
- In addition, the booking of changes in benefit structure as income would allow **frontloading** (recording now) large amounts corresponding to relatively small changes in anticipated annual cash outflows but cumulated up to a very distant future, with high risks of manipulation, in particular for civil servant schemes.

Cross products

170. Generally, events need to be recorded when they occur. However, for its calculations, the actuary will change numerous parameters at the same time. Hence, the exact measure of each event will depend on the sequencing of their recording. This is a cross-product issue, arising from the fact that not all events are additive. A convention of the following sequence may be suggested, to be further discussed: (1) change in benefit structure; (2) granting of new rights; (3) change in life expectancy assumptions; and (4) change in discount rate.

171. In practice however, it is likely that statisticians will be dependant on the own rules followed by actuaries.

I. Other issues

Specific types of employer arrangements

172. While employer arrangements are often either unfunded, or funded nonautonomous, or funded autonomous, some arrangements may also involve:

- **Multiemployer schemes**; or
- **Insurance contracts**.

173. When a multiemployer fund keeps the accounts of its bilateral obligations with each employer, the scheme ought to be treated as if it was an autonomous fund (sometimes called "**multiple-employer**"). Otherwise, the scheme ought to be classified as a defined contribution one, it seems. Similarly, policies purchased by an employer from an insurer seem to be of a defined contribution nature.

174. In the unlikely case where the insurance contract is of a defined benefit nature, that is: where the actions by the employer (such as promotions of staff) can engender additional benefits/entitlements to the policyholder and, inevitably, matching additional payments by the employer to the insurer under the contract, it seems the employer would need to maintain a notional "unfunded" scheme in its accounts in addition to the amounts booked under a defined contribution scheme.

Bankruptcies

175. One important consideration to policy holders is the type of guarantee that backs the defined benefit scheme (in addition to any segregated assets). The nature of the arrangement for the provision of a guarantee may also be relevant for statistical recording.

176. In some countries, defined benefit schemes are reinsured via a specialized, perhaps government, agency (e.g., the case of the PBGC[47] in the USA). Autonomous funds may be terminated while underfunded, such as on the occasion of the bankruptcy of the employer. The pension fund's assets and liabilities may be taken over by the agency (which may be a government unit): the household claim does not disappear but may change institutional sector counterpart and may also change in value (as the insurance may involve ceilings).

177. In this respect, such ***reinsurance seems unlikely to be changing the nature of the 1993 SNA classifications*** and recordings. Pension funds' government insurance agencies have a role similar to that of bank deposits' government insurance agencies.

178. Some agencies do not cover underfunding on the "going concern" basis, that is when the fund remains in being and is actuarially sound. Part of the cover when there is premature wind-up reflects a possible shortfall of assets at market value to their actuarial value, and this amount will tend to average to zero over a number of years. The other part of the cover when there is premature wind up reflects underfunding in a more structural sense, that is when the actuarial value of assets falls short of the actuarial value of liabilities. The former element, measured by the difference between actuarial and markets values of assets will attract a low

[47] Information on the Pension Benefit Guaranty Corporation (PBGC) is accessible at: http://www.pbgc.gov/

premium. One dissent questions whether effectively it should be regarded as a liability or asset of the employer (see also Appendix IV paragraph 306).

179. In some other countries, reinsurance may not be common practice and the bankruptcy of the employer may lead to a situation where some households' claims would lose value (perhaps to zero). In those countries, some would argue that the underfunded position of pension funds should be more appropriately allocated to the employees/policyholders instead of to the employer. The Moderator believes this view is unwarranted. The economics at play is that an underfunded defined benefit scheme has a claim on the employer; otherwise it would be defined contribution. ***When such a scheme is terminated following the bankruptcy of the employer and when it is not insured, the scheme becomes de facto defined contribution.*** The value of its claim against the employer thereafter fluctuates and is ultimately determined upon its liquidation.

IV. PROPOSED SNA AND OTHER STATISTICAL STANDARDS

180. The proposed changes to SNA generally align with the recently issued IMF's ***GFSM 2001*** (Recommendations 0, 1, 3, 3.1, 3.2., 3.5, 4.1, 5.1, 5.5 (part), 8.1, 8.3.1, 8.4). In some instances, these would be clarifications of the *GFSM 2001* (Recommendations 1.1, 1.2, 2, 3.3, 3.4, 4.2, 4.3, 4.4(?), 5.2, 5.3, 8.2, 8.3). In a very few circumstances, these would be changes (Recommendations 4.4(?), 7).

181. Other current manuals: *Balance of Payment Manual,* 5th Edition (*BPM5*), *Monetary and Financial Statistics Manual* (*MFSM 2000*), in general have been harmonized with the *1993 SNA*. It is expected they would be adjusted upon its change.

182. However, neither the *BPM5* nor *GFSM 2001* follow the **dual recording** on pensions. If the SNA would be unchanged in this regard, an effort in terms of supplementary information would be needed, to allow bridging SNA based social contributions (D.61) and social benefits (D.62) with their equivalent under each of those systems.

V. Bridge Between the Proposed Reviewed SNA and Business Accounting

A. Accounting standards for employer schemes

Context

183. Business accounting standard setters have long pondered on rules how to best account for the net periodic pension cost borne by the employer as well as its remaining liability—by reference to accrual accounting.

184. For example, the **Financial Accounting Standard Board** (FASB), the US standard setter, reaffirmed in Financial Accounting Standard (FAS) 87 on *Employers' Accounting for Pensions*, published in 1985, "the usefulness of information based on accrual accounting ... (which) goes beyond cash transactions to provide information about assets, liabilities, and earnings." The FASB stated that "the **net pension cost** for a period is not necessarily determined by the amount the employer decides to contribute to the plan for that period, and that many factors (including tax considerations and availability of both cash and alternative investment opportunities) that affect funding decisions should not be allowed to dictate accounting results if the accounting is to provide the most useful information." It further indicated that "recognition of … a **liability** is not a new idea: Accounting Research Bulletin No.47, *Accounting for Costs of Pension Plans*, published in 1956, stated that as a minimum, the accounts and financial statements should reflect accruals which equal the present worth, actuarially calculated, of pension commitments to employees…".

185. Various scandals, the opacity of pension accounting, the lack of comparability that this entails, the substantial fluctuations in called-in contributions (including episodes of "contribution holidays"), the recent appearance of large underfunding positions in numerous employer pension funds, and the general movement to mark-to-market rules have laid the ground for further substantial advances in the way pension obligations are accounted for across the board. As an example, the UK based Financial Reporting Standard (FRS) 17 represents one of the most advanced position developed by standard setters (see below). It is also worth noting a trend out of defined benefit pension schemes in favor of defined contribution schemes, as employers try to shift risks off their balance sheet (including the "accounting risk").

Pension recording in business accounting standards (International, US and UK standards)

General

186. While each national standard setter enforces its own sets of rules, the International Accounting Standard Board (IASB) strives to promote global convergence across standards with the issuing of International Financial Reporting Standards (IFRS—previously known as IAS). IAS 19 *Employee Benefits* illustrates the general thrust of the accounting profession[48]:

[48] See the EDG contribution by Ahmad Hamidi-Ravari.

- The employer books a periodic cost of its pensions obligations, **using actuarial estimates**, which includes among other things: (a) the **cost** of additional entitlements against the **service provided** by employees during the period and (b) the carrying cost of the existing obligations net of "a return" provided on existing plan's assets;
- The employer books a **liability** (or an asset) corresponding to the underfunded (overfunded) position of the pension fund, although many standards allow delayed or smoothed recognition (and possibly a maximum asset position); and
- Those standards are under scrutiny with a view to obtain **immediate** recognition of the liability.

187. In this context, it is worth noting that **accounting standards recognize liabilities whether funded or unfunded.** As an example, the FASB professes in the FAS 87 that "an employer with an unfunded pension obligation has a liability and an employer with an overfunded pension obligation has an asset. The most relevant and reliable information about the liability or asset is based on the fair value of plan assets and a measure of the present value of the obligation using current, explicit assumptions."

International standard: IAS 19

188. In the case of IAS 19, the cost of employment is decomposed in a *current service cost*, which captures the actuarial value of new entitlement rights accrued by staff employed during the period, a *past service cost*, the *interest cost* (interest on pension obligations), the *expected return on (net) assets* minus/plus the *amortization of the cumulated unrecognized actuarial gains/losses*. The expected return on assets is currently reported in income and the difference between the expected return and the actual return is treated as an "**actuarial gain and loss**", the recognition of which is currently allowed to be deferred. Hence, IAS 19 currently allows enterprises to delay the recognition of *net plan assets* on their balance sheet and therefore the impact on their operating statements, by way of imputing an *expected return on plan assets* (IAS 19 Para 105–107) and defining a *cumulated unrecognized actuarial gains/loss* to be amortized gradually over time (outside of a corridor of +/- 10 percent).

189. The IASB has initiated a project on a review of IAS 19. It tentatively agreed that actuarial gains and losses should be **recognized immediately**, i.e., that the corridor and spreading options within IAS 19 should be removed. However, it was accepted that such a proposal could not be taken forward until the proposals for Performance Reporting were finalized. This other **IASB on-going project on Performance Reportin**g explores the promising possibility to present the usual income statement under a three column presentation: **income before "*remeasurements*"**, **"*remeasurements*"** and total—which bears fruitful and encouraging resemblance with the essential transactions versus other economic flows delineation of the *1993 SNA*. The Moderator draws the attention on the unique potential for improving source data provided to statisticians/national accountants that the adoption of such a new reporting format would entail.

US standard: FAS 87

190. Under FAS 87, "the following components shall be included in the **net pension cost** recognized for a period by an employer sponsoring a defined benefit pension plan:

- **Service cost**;

- Interest cost;
- Actual return on plan assets, if any;
- Amortization of unrecognized prior service cost, if any; and
- Gains and losses (including the effects of changes in assumptions) to the extent recognized". (Para 20)

191. "The **service cost** component recognized in the period shall be determined as the actuarial present value of benefits attributed by the pension benefit formula to employee service during the period." (Para 21)

192. "The gain or loss component of net periodic pension cost shall consist of (a) the difference between the actual return on the plan assets and the expected return on plan assets and (b) amortization of the unrecognized net gain and loss from previous periods." (Para 34)

193. "As a minimum, amortization of an unrecognized net gain or loss ... shall be included" when the underfunded position exceeds 10% the outstanding obligations and using an average remaining service period or life expectancy of participants. (Para 32)

194. "A liability (unfunded accrued pension cost) is recognized if net periodic pension cost recognized pursuant to this Statement exceeds amounts the employer has contributed to the plan." (Para 35)

195. Hence, FAS 87 allows delayed recognition of the employer liability, with a view to limit fluctuations of the net periodic pension cost.

UK standard: FRS 17

196. The new UK standard FRS 17 makes two major changes in accounting for defined benefit schemes. It approaches the problem by **concentrating on the measurement of the assets and liabilities** of the scheme and on how the costs are reflected in the revenue statements. The assets of the scheme are to be valued at **fair values**, a major change from the old rules under the previous SSAP 24, which employed an actuarial valuation approach for scheme assets. The liabilities are measured on an actuarial basis, and include both the contracted obligations promised by the scheme and any constructive obligations (see below), where statements or past practice have led to reasonable expectations by employees. The valuation of assets and liabilities gives rise to either a "surplus" or a "deficit" (the difference between the market value of the scheme's assets and the net present value of its liabilities). It must be recognized in the balance sheet of the employer to the extent that a surplus may be recovered by reduced contributions, or a liability reflects its legal or constructive obligations. The profit and loss account recognizes the annual cost estimated by an actuary to provide the promised benefits within the operating costs. Actuarial gains and losses arising from new valuations are to be recognized in the ***Statement of Total Recognized Gains and Losses.***[49] (see below).

[49] John Morley at: http://www.accountancyage.com/Comment/1128102

Public sector accounting standards

197. Governments keep their accounts following national practices that vary considerably across the world.

198. The Public Sector Committee (PSC) of the IFAC (International Federation of Accountants)[50] has started issuing International Public Sector Accounting Standards (IPSASs). IPSASs are based, to the extent appropriate for the public sector, on the IFRSs issued by the IASB.

199. The suite of the twenty existing IPSASs does not currently include a standard which prescribes requirements for financial reporting of pensions provided to government employees as consideration for the services they provide as employees. However, IPSASs do specify a hierarchy of guidance that preparers may refer to in developing their own accounting policies on financial reporting issues for which a specific IPSAS has not been issued (see IPSAS 1 paragraph 42). Accordingly, when developing their own accounting policies for financial reporting of employee benefits including employee pensions, preparers will consider the requirements of IAS 19 *Employee Benefits*, the standard recognized by the IASB (see the EDG contribution by Ahmad Hamidi-Ravari). IAS 19 is being reviewed (see the EDG contribution by Anne McGeachin).

Liability boundary

200. The liability boundary differs between accounting standards and statistical standards (*1993 SNA*) in two main respects:

- The *1993 SNA* does not recognize provisions as liabilities; accountants recognize obligations as liabilities even if they are not legally enforceable but arise from "***constructive obligation***".
- In contrast, the *1993 SNA*, defines economic assets as entities (from which economic benefits may be derived and) whose ownership rights are enforceable.

201. ***Constructive obligations*** are defined in IASs as "obligations that derive from an enterprise's actions where:

- By an established pattern of past practice, published policies or a sufficient specific current statement, the enterprise has indicated to other parties that it will accept certain responsibilities; and
- As a result, the enterprise has created a valid expectation on the part of other parties that is will discharge those responsibilities."

[50] The IFAC (International Federation of Accountants) is the global organization for the accountancy profession (at www.ifac.org). It works with its 155 member organizations in 113 countries to protect the public interest by encouraging high quality practices by the world's accountants. IFAC members represent 2.4 million accountants employed in public practice, industry and commerce, government, and academe.

B. Example of bridge: from FRS 17 to the reviewed SNA

FRS 17[51]

202. FRS 17 sets out the accounting treatment for retirement benefits such as pensions and medical care during retirement. It replaces SSAP 24 'Accounting for pension costs' and UITF Abstract 6 'Accounting for post-retirement benefits other than pensions'.

203. The FRS 17's objectives are that:

a) financial statements reflect at fair value the assets and liabilities arising from an employer's retirement benefit obligations and any related funding; and
b) the operating costs of providing retirement benefits to employees are recognized in the accounting period(s) in which the benefits are earned by the employees, and the related finance costs and any other changes in value of the assets and liabilities are recognized in the accounting periods in which they arise.

204. Regarding defined benefit (funded) schemes, the main requirements of FRS 17 are:

1) pension scheme assets are measured using market values.
2) pension scheme liabilities are measured using a projected unit method and discounted at an AA corporate bond rate.
3) the pension scheme surplus (to the extent it can be recovered) or deficit is recognized in full and without delay on the balance sheet (the surplus/deficit here is a stock concept: it is the difference between the market value of the scheme's assets and the scheme's liabilities).
4) the movement in the scheme surplus/deficit is analyzed into: (a) the current service cost and any past service costs; these are recognized in **operating profit**; (b) the interest cost and expected return on assets; these are recognized as **other finance costs**; and (c) actuarial gains and losses; these are recognized in the ***Statement of total recognized gains and losses***.

The notion of the *Statement of total recognized gains and losses* (FRS 3)

Traditional financial reporting and FRS new presentation

205. Traditionally, financial reporting is structured around two main statements:

- the *balance sheet,* which shows the entity's assets and liabilities at one point in time, and their difference: the shareholders' own funds or equity at that moment;
- the *income statement* (named also: profit and loss account, expense and revenue accounts, etc.), which shows the entity's revenues and expenses during a period, and their difference: the profit or loss of the period.

206. The basic tenet of accounting is that the change observed over a period in the balance sheet must relate to the income statement of the period, that is: **the change in "own funds"**

[51] FRS 17 was graciously provided by the ASB staff for the benefit of EDG participants. It is posted on the EDG at: http://www.imf.org/external/np/sta/ueps/index.htm

must be equal to the profit or loss during the period (before distribution to, or contributions from, shareholders).

207. Retaining this basic tenet, FRS sponsors a promising refinement: it retains an income statement using a broad approach to income, but distinguishes it from another statement using a narrow approach to income. Hence, FRS defines two primary statements summarizing the activity of the period:

- the <u>*Profit and loss account*</u>, which reflects the operating result as well as results from financing costs, costs of termination and extraordinary items (**narrow view of income**);
- the <u>*Statement of total recognized gains and losses*</u> (STRGL), which encompasses—in addition to the result of the profit and loss account—other recognized gains and losses that are specifically permitted or required to be taken directly to reserves (**broad view of income**).

Interplay between FRS 3 and FRS 17

208. The Discussion Paper '*Aspects of Accounting for Pension Costs*', published in July 1998, explained that, as "it was clear that a pensions standard based on actuarial values for assets would be regarded internationally as weak and would not be an approach that other standard-setters would follow", the "Board did not believe that there were sufficient reasons to stand out against the global trend to a market value approach **<u>as long as such an approach could be developed in a way that did not introduce undue volatility into the profit and loss account</u>**." [FRS 17—Appendix IV paragraph 6; emphasis added]

209. In practice, the putting to use of the *Statement of total recognized gains and losses* was the device that allowed marking to market the employer's net exposure to the scheme without creating undue volatility of the profit and loss account.

210. Because of the structure of FRS accounting, **FRS 17 seems to be bridgeable rather remarkably well with a proposed reviewed SNA**, owing to two main reasons:

a. Both FRS and SNA follow an accrual basis: valuation and time of recording will be identical or close, for many entries.
b. FRS distinction between *Profit and loss account* and *Statement of total recognized gains and losses* closely resembles the SNA delineation between transactions and other economic flows (or, alternatively, between volume changes and price changes).

Bridge between FRS 17 and a reviewed SNA

211. Under FRS 17, the costs of pensions is decomposed into:

a. the **current service cost**
b. the interest cost
c. the expected return on assets
d. actuarial gains and losses
    i. the difference between the expected and actual return on assets
    ii. experience gains and losses arising from scheme liabilities
    iii. The changes in demographic and financial assumptions
e. past service costs
f. gains and losses on settlements and curtailments

212. **Past service costs** arise when employers make commitments to provide higher levels of benefits than previously promised, other than those to which the employer statutorily, contractually or implicitly committed to. **Settlements and curtailments** arise where employees retire early or transfer out of the scheme or where specific decisions are made by the employer that are not covered by actuarial assumptions.

213. (a), (b), (c), (d) are periodic costs while (e), (f)[52] are non-periodic. (a), (e), (f) are recorded within operating profit while (b), (c) are recorded within finance costs and (d) is recorded in the **Statement of Total Recognized Gains and Losses (STRGL)**.

214. One can draw a table of correspondence between the various FRS 17 identified entries (notably in paragraphs 50 and 82) and the proposed reviewed SNA categories (account of the employer). The valuation and the time of recording is generally not an issue because both systems follow an accrual basis. The recording differs when the scheme is autonomous or not. In the latter case, it is consolidated with the accounts of the employer.

[52] In rare circumstances, those last two items can be netted in the *profit and loss account* with amounts deducted from previously unrecognized surpluses. See FRS 17, Para 82 and Appendix IV Para 51.

Table 2	FRS 17 Financial Statement	Reviewed SNA Non-autonomous	Reviewed SNA Autonomous
the current service cost	Operating – 82a	D.1	D.1
past service costs	Operating – 82b	D.7	D.7
the interest cost	Finance cost – 84a	D.44	REV
the expected return on assets	Finance cost – 84b	D.4+REV	REV
actuarial gains and losses:			
* the difference between the expected and actual return on assets	STRGL – 85a	REV	REV
* experience gains and losses arising from scheme liabilities	STRGL – 85b	REV	REV
* the changes in demographic and financial assumptions	STRGL – 85c	REV	REV
gains and losses on settlements and curtailments	Operating – 82d	OCV	OCV
Assets at market value	(to the balance sheet) – 88	Balance sheet	
Liability	(to the balance sheet) – 88	Balance sheet	
Net assets	Balance sheet		Balance sheet

Note: REV = revaluation

Numerical example: FRS Appendix I

215. The Appendix I to FRS 17 provides a numerical example. This numerical example is bridged below into the following tables, to sketch the amounts applicable in a reviewed SNA. The accounts of the pension fund in a SNA framework is shown as well as the accounts of the employer. The year in question is “20X2”.

216. The tables below (pages 55-56) show in a systematic manner, and with SNA codes:
   a. The SNA based non financial transactions, uses and resources, with a balance: net lending / net borrowing (B.9).
   b. In a separate bloc, the opening and closing balance sheets, and the articulation with economic flows: transactions, revaluations and OCV.
   c. Assets and liabilities are shown side by side, for various instruments (non financial assets, cash, bonds, equity and *insurance technical reserves*), with a total and a net value: the SNA net worth (B.90) and its changes owing to transactions (B.10.1), to revaluations (B.10.3) and to OCV (B.10.2).

The pension fund

217. The FRS 17 examples provides:
   a. Assets at market value: property (AN), bonds (AF.3) and equity (AF.5).
   b. The present value of schemes liabilities to the households (AF.612).

The scheme is overfunded: the EDG recommendation is to book a liability of the scheme to the employer under the (new) instrument AF.619.

218. FRS 17 provides the amounts to be recorded as revaluations in *insurance technical reserves* liabilities (146+58). The change in market value of assets minus the transactions (to be calculated) will be booked as revaluations.

219. FRS 17 provides the interest attributable to policy holders (53). In addition, the current service cost is 34 (=employer contribution), additional rights granted are 12 (they are recorded as an employee/pensioner contribution, in addition to the contribution supplements = a total of 65). By deduction (with the change in stocks, the revaluation of 204 and the social contribution of 99) one calculates that the pensions paid were 52. Alternatively, the information on pension paid could certainly be made available at little cost.

220. FRS 17 provides an amount for the expected return on assets of 73, but not for the SNA accrued property income or sale of service (rentals on buildings). We therefore invent a split on the basis of plausible ratios: a total of 44.14 is recorded as income (rentals: 1.96, interest: 12.48, dividend: 14.42). Alternatively, the information could perhaps be made available. The difference (73 minus 44.14) is added to the "excess of the actual return less expected return on assets" (480, provided by FRS 17) to constitute the total **SNA revaluation on assets** (524.14).

221. The net cash flow is set at zero:

a. Contributions paid: 25;
b. Pensions paid: -42;
c. Property income received: +28.9 (supposed = to accrual);
d. As a residual: net purchase of bonds (+1.86) is booked so to get zero cash balance.

222. At this stage, the equilibrium of the accounts is achieved. It can be observed that the articulation between the change in stocks of assets and flows, on the one hand, and the net lending / net borrowing from above- and below-the-line, on the other hand, do balance simultaneously.

223. Finally, the position AF.619 is set to obtain a zero net worth of the closing balance sheet. Its increase arises owing to transactions (35 accrued contributions minus 25 in paid contributions, plus 12 additional accrued rights) and, as a residual, to revaluation (296).

224. At this stage, the account of the pension fund is complete.

The employer

225. FRS 17 implies that the wage paid is 312.5 (25/0.08). The granting of additional rights is here booked as a current transfer (D.75). The employer's sales are set so to achieve a change in net assets, other than related to pensions, equal to 50 (as in FRS 17). The employer is supposed to have 600 in non financial assets and 50 in cash: this is consistent with FRS 17 net assets of 650.

226. Consumption of fixed capital is 50. The holding gains on fixed assets are 50.

227. The imputed social contribution is 34.

228. The cash position increases by 50:

a. by the margin of sales over other costs (of 29), net of

b. the increase in accrued liabilities to the pension fund: 21 (again = accrued contributions plus additional entitlements granted minus paid contribution: 34+12-25).

229. Notice a small complication: FRS 17 deducts, from the net assets of the employer against the pension fund, an amount for (future) taxes, which we must disregard in SNA.

Bridge from FRS 17 to a reviewed SNA

Numerical example based on FRS 17 Appendix I

Pension fund

	Uses	Resources	Expected	Difference	
			73	44.14	
P.1		1.96	2.989	1.029	Output
P.2					Intermediate consumption
D.1					Compensation of employees
D.11					*Wages and salaries*
D.122					*Employers' imputed social contributions*
D.4	53	26.9	70.011	43.111	Property income
D.41		*12.48*	*11.52*	-0.96	*Interest*
D.42		*14.42*	*58.491*	44.071	*Dividends*
D.44	*53*				*Property income attributed to insurance policy holders*
D.5					Current taxes on income, wealth, etc.
D.61		99			Social contributions
D.6112		65			*Employees' social contributions*
D.6121		34			*Imputed social contributions*
D.62	52				Social benefits other than social transfers in kind
D.75					Miscellaneous current transfers
D.8	47				Adjustment for the change in net equity of households in pension funds
P.3					Final consumption expenditure
P.51					Gross fixed capital formation
of which K.1					*Consumption of fixed capital*
B.9	-24.14				Net lending / net borrowing
Control:	*0*				
			0		

Transaction	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities			
	Balance Sheet		Transactions		Revaluations		OCV		Balance Sheet				
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	0		-24.14		24.14		0		0		0	0	
Total	962	962	1.86	26	524.14	500	0	0	1488	1488	0	0	
AN	49				25				74		0	0	Non-financial assets
AF.2			0								0	0	Currency and deposits
AF.3	192		1.86		104.14				298		0	0	Securities other than share
AF.5	721		0		395				1116		0	0	Shares and other equity
AF.6	0	962	0	26	0	500	0	0	0	1488	0	0	Insurance technical reserve
AF.612		*758*		*47*		*204*				*1009*	*0*	*0*	*Net equity of households i*
AF.619		*204*		*-21*		*296*				*479*	*0*	*0*	*New instrument*

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Source: The EDG Moderator

Bridge from FRS 17 to a reviewed SNA

Numerical example based on FRS 17 Appendix I

Company

	Uses	Resources	
P.1		387.5	Output
P.2			Intermediate consumption
D.1	346.5		Compensation of employees
D.11	*312.5*		*Wages and salaries*
D.122	*34*		*Employers' imputed social contributions*
D.4			Property income
D.41			*Interest*
D.42			*Dividends*
D.44			*Property income attributed to insurance policy holders*
D.5			Current taxes on income, wealth, etc.
D.61			Social contributions
D.6112			*Employees' social contributions*
D.6121			*Imputed social contributions*
D.62			Social benefits other than social transfers in kind
D.75	12		Miscellaneous current transfers
D.8	0		Adjustment for the change in net equity of households in pension funds
P.3			Final consumption expenditure
P.51			Gross fixed capital formation
of which K.1	*50*		*Consumption of fixed capital*
B.9	29		Net lending / net borrowing
Control:	*0*		

Transaction	Balance Sheet Assets	Balance Sheet Liabilities	Transactions Assets	Transactions Liabilities	Revaluations Assets	Revaluations Liabilities	OCV Assets	OCV Liabilities	Balance Sheet Assets	Balance Sheet Liabilities	Controls:		
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	0		-21		21		0		0		0	0	
Total	854	854	-21	0	346	325	0	0	1179	1179	0	0	
AN	600		-50		50				600		0	0	Non-financial assets
AF.2	50		50						100		0	0	Currency and deposits
AF.3											0	0	Securities other than shares
AF.5		854				325				1179	0	0	Shares and other equity
AF.6	204	0	-21	0	296	0	0	0	479	0	0	0	Insurance technical reserves
AF.612											0	*0*	*Net equity of households in pensio*
AF.619	*204*		*-21*		*296*		*0*		*479*		*0*	*0*	*New instrument*

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Source: The EDG Moderator

VI. NUMERICAL EXAMPLE

230. Two numerical examples are provided to illustrate the functioning of the proposed new SNA recording: an unfunded employer (government as employer) scheme and an autonomous defined benefit employer scheme.

231. A table describes the accounts of government including the recording of its unfunded pension scheme. It allows describing very simply the basic features of the EDG proposal regarding actuarial valuations and the stock-flow articulation.

232. Another set of tables describes a more complex case of a defined benefit pension scheme. It allows showing the role that the fund's net assets allocated to the employer plays. One draws three sets of accounts: the pension fund, the employer, and their consolidated accounts. In case the pension fund is non-autonomous, the two accounts are consolidated into that latter and unique account.

233. As already seen in the previous section, the tables provide a complete and consistent articulation between changes in balance sheets and income accounts.

234. In addition, an equilibrium of the whole economy is provided for illustration purposes (although it requires additional information to close the accounts). Ice on the cake.

A. The unfunded scheme

The case

235. Government pays 50 in wages, purchases 20 in intermediate consumption, has 50 in non financial assets with a consumption of fixed capital of 5 (and 10 in gross fixed capital formation). Government has a debt of 250 in bonds, and a few assets: 20 in cash and 50 in shares. Government collects 50 in income tax. Its interest bill is 15. The dividend received is 2.7.

236. The pension scheme is unfunded. Actuaries calculated that the stock of obligations, **using a 6% discount**, is 100. The service cost is 30% of the wage bill or 15. The amount of pensions paid is 11.

237. Actuaries calculate a financial intermediation service to policy holder of 0.8. The employees contribute 1.5.

Basics of the change

238. In this section, one presents, using the usual national accounts conventions, and in a simplified way, the new proposed treatment of the unfunded scheme. One shows at this stage **only the impact of the scheme**, and **only transactions** (neglecting output in this section).

239. Under the proposal, the pension debt (AF.6) increases over the period by 11.5 (but 10.7 taking into account output):

- 15 in additional employer contributions;
- 1.5 in employee contributions;
- plus 6 of property income;
- minus 11 of pensions paid.

240. In the new SNA sequence of accounts, social contributions of 22.5 (instead of 12.5 using the *1993 SNA* flexibility option—most likely—or 16.5 otherwise) are recorded: 15 of imputed employer contributions, 6 of "contribution supplement" (employee contribution) and 1.5 of employee contributions. 11 in social benefits payable are also recorded. Hence, the net impact (D61 minus D.62) of 11.5 is neutralized at the level of D.8.

241. Separately the perspective from the point of view of cash is unchanged: a decrease of 9.5 is observed in both cases (pensions paid minus employees contributions received).

The New SNA

	uses	resources
D122	15	
D44	6	
D61		22.5
D6112a		1.5
D6112b		6
D6121		15
D62	11	
D8	11.5	
B9A	**-21**	
AF2	-9.5	
AF611		11.5
B9B		**-21**

The *1993 SNA* (flexibility option)

	uses	Resources
D122	11	
D44	0	
D61		12.5
D6112a		1.5
D6112b		0
D6121		11
D62	11	
D8	0	
B9A	**-9.5**	
AF2	-9.5	
AF611		0
B9B		**-9.5**

Analysis of the new impact of the pension scheme

242. Government expense is truly 21: 15 in cost of labor and 6 in cost of capital. It is neither 9.5 booked under the *1993 SNA*, reflecting its net cash costs, nor 11, reflecting its gross cash costs. The impact of the pension scheme on government net lending / net borrowing is therefore 21. It seems clear that, under an accrual system, the EDG proposal is superior.

243. The example is probably a case of scheme maturing rapidly, with substantial increases in debt. An important point though is to observe that the degradation in government balance will much more originate from the durable appearance of a new property income (+6, which will be still existing under a stationary regime) and from a reclassification of employee contributions (as incurrence of debt instead of as revenue +1.5) rather than from an increase in the calculated cost of labor (+4, here probably reflecting a young and rapidly aging scheme, to disappear and possibly be reversed under a stationary regime). Under a stationary regime the net lending / net borrowing deteriorates (because, while the pension debt/GDP ratio is stable, GDP exhibits nominal growth).

244. The following table provides the complete accounts of government, including a full articulation between income/transactions and the changes in balance sheet.

Government

	Uses	Resources	
P.1		90	Output
P.2	20		Intermediate consumption
D.1	65		Compensation of employees
D.11	*50*		*Wages and salaries*
D.122	*15*		*Employers' imputed social contributions*
D.4	21	2.6785714	Property income
D.41	*15*		*Interest*
D.421		*2.6785714*	*Dividends*
D.44	*6*		*Property income attributed to insurance policy holders*
D.5		50	Current taxes on income, wealth, etc.
D.61		21.7	Social contributions
D.6112		*7.5*	*Employees' social contributions*
D.6111			*Employers' actual social contributions*
D.6121		*14.2*	*Imputed social contributions*
D.62	11		Social benefits other than social transfers in kind
D.75			Miscellaneous current transfers
D.8	10.7		Adjustment for the change in net equity of households in pension funds
P.3	89.2		Final consumption expenditure
P.51	10		Gross fixed capital formation
of which K.1	*5*		*Consumption of fixed capital*
B.9	-62.521		Net lending / net borrowing
Control:	*0.0014*		

	Assets	Liabilitie	Assets	Liabilities	Assets	Liabilitie	Assets	Liabilitie	Assets	Liabilities			
Transaction	Balance Sheet		Transactions		Revaluations		OCV		Balance Sheet				
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	-230		-57.52		13.701		0		-273.82			0	0
Total	120	350	-6.82	50.7	-0.7991	-14.5	0	0	112.38	386.2		0	0
AN	50		5		2				57	0	Non-financial as	0	0
memo: B.9			*-62.52*								*Net lending / net borrowing*		
AF.2	20		16.5						36.5	0	Currency and de	0	0
AF.3		250	1.68	40		-14.5			1.68	275.5	Securities other	0	0
AF.5	50		-30		-2.7991				17.201	0	Shares and othe	0	0
AF.6	0	100	0	10.7	0	0	0	0	0	110.7	Insurance techn	0	0
AF.612		*100*		*10.7*					*0*	*110.7*	*Net equity of ho*	0	0
AF.619									*0*	*0*	*New instrument*	0	0

GFSM 2001 Expense	111	
GFSM 2001 Revenue		52.678571
GFSM 2001 Net Operating Balance	-58.321	

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245. The *GFSM 2001* expenses are 111 and revenue 52.68. The contribution of the pension scheme to government expense is 21.

246. Interestingly, the net worth of government finishes at -274 of which 111 derives from its pension obligations, currently not recognized in the *SNA 1993*.

247. Government output is 90 (of which 0.8 is market) and value added 70 under the proposed new rule, instead 86 and 66 respectively under the *1993 SNA* flexibility option

Summing up of the impact of the EDG proposal

248. **The example illustrates the EDG proposal:**

- **The government output is more appropriately measured; and**
- **Its net lending/net borrowing also reflects much more adequately the extent of government expense (the change in pension debt), in particular in terms of property income.**

Conversely the net lending/net borrowing of households is substantially improved, as well as their net worth, which is appropriate.

B. The defined benefit funded scheme

The case

249. An employer runs a defined benefit autonomous scheme and pays to its staff 150 in wage (gross of employee pension contributions: 5%=7.5). A cost of 3 for running the pension scheme comprises: 1 in wages and 2 in fees. It is charged to the employer (we should assume he, in turn, charges it to his cost of employment).

250. The actuary of the pension fund determined that at the beginning of the period, the pension obligations of the scheme were 500. The assets held by the fund is 480, in the form of 30 in cash, 250 in bonds and 200 in shares. The scheme is underfunded.

251. During the period, the interest accrued on the cash, and paid, at 2% is 0.6. The interest accrued on bond is 15 (measured according to the debtor principle), while only 10 of coupons were actually paid, and the price of bonds fell by 4% as market yields moved from 6% to 7%. The dividend paid is 2% (4) and the price of shares fell by 10% during the period.

252. For the period under review, the actuary determined that the additional rights/entitlements due to work done is 30 (this possibly resulted from applying a ratio of 20% of gross wage calculated at the last actuarial revision). 37 were called by actuaries, as the fund is underfunded (actual contribution).

253. The pensions paid by the scheme during the period amount to 20.

254. The scheme purchased 80 in shares, to invest its portfolio.

255. The employer decides to pay a lump sum of 33 to recapitalize the fund, in addition to the regular actual contribution (fiscal incentives). The employer grants additional rights of 2 to selected individuals. The rules are slightly amended which translates into an overall reduction in actuarial obligations of 1. The actuary revises upward the life expectancy from 15 years to 15.75 years (5%). The actuary had previously planned 3% inflation. The realized inflation was 4%. The future inflation is now planned at 3.25%.

256. The **discount rate was 7%** at the beginning of the period. It is adjusted to 7.5%.

257. It is assumed that the market share of the company fully valued its net assets at the beginning of the period. Shares fall during the period by 3%.

258. The employer has 200 of non financial assets and gross investment of 35. Sales are 300, consumption of capital 20, and intermediate consumption 50.

259. A key consideration is to obtain the **same cash flow paid by the employer and received by the pension fund** (part of F.2). Another point is that the **net asset position of the pension fund and its changes arising from transactions and revaluations should be the same in both accounts**: the employer's and the pension fund's (AF.619 and F.619).

Analysis by categories

The pension fund

260. The liability in *insurance technical reserves* increases by 64.775, owing to:

- Transactions: 52 of which: direct cost of labor (30= 22.5 employer+7.5 employee); plus granting of new rights (2); the property income 40 to be reinvested on the instrument: at 7% (35) plus a COLA adjustment of 5 ***[those 5 are to be discussed]***; minus pensions paid (20).
- Revaluations: 13.775 reflecting an upward revision of life expectancy (+5%), an upwards revision due to expected inflation (+0.25%), a downward revision due to the change in discount rate (-0.5%) [a 0.1% change roughly translates into a 1% change in present value of average expected cash flows]. In total, one can pencil in a net effect of +2.5% on the stock of pension debt.
- OCV: -1

261. The change in pension fund's cash of -13.4 results from:

- Receipts from employees (7.5), and from the employer: **67.5** arising from:
    - 29.5+3 in regular **actual** employer contributions [22.5 of service cost + 7 of "amortization" of underfunded pension fund position + 3 corresponding to the reimbursement of cost of running the fund (assimilated to social contribution)].
    - plus 2 in additional rights.
    - plus 33 in recapitalization ("extraordinary" funding).
- Cash receipts from investments of 14.4 (cash: 0.6, bond: 10, shares: 4).
- Payments to pensioners (20).
- Cost of running the fund (3).

Pension Fund

	Uses	Resources	
P.1		3	Output
P.2	2		Intermediate consumption
D.1	1		Compensation of employees
D.11	*1*		*Wages and salaries*
D.122			*Employers' imputed social contributions*
D.4	40	21	Property income
D.41		*17*	*Interest*
D.421		*4*	*Dividends*
D.44	*40*		*Property income attributed to insurance policy holde*
D.5			Current taxes on income, wealth, etc.
D.61		72	Social contributions
D.6112		*49.5*	*Employees' social contributions*
D.6111			*Employers' actual social contributions*
D.6121		*22.5*	*Imputed social contributions*
D.62	20		Social benefits other than social transfers in kind
D.75			Miscellaneous current transfers
D.8	52		Adjustment for the change in net equity of households in pension funds
P.3			Final consumption expenditure
P.51	0		Gross fixed capital formation
of which K.1			*Consumption of fixed capital*
B.9	-19		Net lending / net borrowing
Control:	*0*		

	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities			
Transaction	Balance Sheet		Transactions		Revaluations		OCV		Balance Sheet				
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	0		-19		18		1		0			0	0
Total	500	500	33	52	31.775	13.775	0	-1	564.775	564.775		0	0
AN											Non-financ	0	0
memo: B.9			*-19*								*Net lending / net bo*		
AF.2	30		-13.4		0		0		16.6		Currency a	0	0
AF.3	250		5		-10		0		245		Securities	0	0
AF.5	200		80		-20		0		260		Shares and	0	0
AF.6	20	500	-38.6	52	61.775	13.775	0	-1	43.175	564.775	Insurance t	0	0
AF.612		*500*		*52*		*13.775*		*-1*		*564.775*	*Net equity*	0	0
AF.619	*20*		*-38.6*		*61.775*		*0*		*43.175*		*New instru*	0	0

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Company

	Uses	Resources	
P.1		300	Output
P.2	50		Intermediate consumption
D.1	175.5		Compensation of employees
D.11	*150*		*Wages and salaries*
D.122	*25.5*		*Employers' imputed social contributions*
D.4	16.4	0	Property income
D.41	*1.4*		*Interest*
D.421	*15*		*Dividends*
D.44			*Property income attributed to insurance policy holde*
D.5	0		Current taxes on income, wealth, etc.
D.61			Social contributions
D.6112			*Employees' social contributions*
D.6111			*Employers' actual social contributions*
D.6121			*Imputed social contributions*
D.62			Social benefits other than social transfers in kind
D.75	2		Miscellaneous current transfers
D.8	0		Adjustment for the change in net equity of households in pension funds
P.3			Final consumption expenditure
P.51	35		Gross fixed capital formation
of which K.1	*20*		*Consumption of fixed capital*
B.9	21.1		Net lending / net borrowing
Control:	*-4E-14*		

Transaction	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities			
	Balance Sheet		Transactions		Revaluations		OCV		Balance Sheet				
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	0		36.1		-36.1		0		0			0	0
Total	300	300	-2.5	-38.6	10	46.1	0	0	307.5	307.5		0	0
AN	200		15		10		0		225		Non-finai	0	0
memo: B.9			*21.1*								*Net lending / net boi*		
AF.2	100		-17.5		0		0		82.5		Currency	0	0
AF.3											Securities	0	0
AF.5		280		0		-15.675		0		264.325	Shares an	0	0
AF.6		20		-38.6		61.775		0		43.175	Insurance	0	0
AF.612											*Net equit*	0	0
AF.619		*20*		*-38.6*		*61.775*		*0*		*43.175*	*New instr*	0	0

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Pension fund and Company

	Uses	Resources	
P.1	0	303	Output
P.2	52	0	Intermediate consumption
D.1	176.5	0	Compensation of employees
D.11	*151*	*0*	*Wages and salaries*
D.122	*25.5*	*0*	*Employers' imputed social contributions*
D.4	55	19.6	Property income
D.41	*0*	*15.6*	*Interest*
D.421	*15*	*4*	*Dividends*
D.44	*40*	*0*	*Property income attributed to insurance policy holders*
D.5	0	0	Current taxes on income, wealth, etc.
D.61	0	72	Social contributions
D.6112	*0*	*49.5*	*Employees' social contributions*
D.6111			*Employers' actual social contributions*
D.6121	*0*	*22.5*	*Imputed social contributions*
D.62	20	0	Social benefits other than social transfers in kind
	0	0	
D.75	2	0	Miscellaneous current transfers
	0	0	
D.8	52	0	Adjustment for the change in net equity of households in pension funds
	0	0	
P.3	0	0	Final consumption expenditure
P.51	35	0	Gross fixed capital formation
of which K.1	*20*	*0*	*Consumption of fixed capital*
B.9	2.1		Net lending / net borrowing
Control:	*-5E-14*		

	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities			
Transaction	Balance Sheet		Transactions		Revaluations		OCV		Balance Sheet				
	B.90		B.10.1		B.10.3		B.10.2		B.90				
Net worth	0	0	17.1	0	-18.1	0	1	0	0	0		0	0
Total	800	800	30.5	13.4	41.775	59.875	0	-1	872.275	872.275		0	0
AN	200	0	15	0	10	0	0	0	225	0	Non-financ	0	0
memo: B.9			*2.1*								*Net lending / net borro*		
AF.2	130	0	-30.9	0	0	0	0	0	99.1	0	Currency a	0	0
AF.3	250	0	5	0	-10	0	0	0	245	0	Securities	0	0
AF.5	200	280	80	0	-20	-15.675	0	0	260	264.325	Shares and	0	0
AF.6	20	520	-38.6	13.4	61.775	75.55	0	-1	43.175	607.95	Insurance t	0	0
AF.612	*0*	*500*	*0*	*52*	*0*	*13.775*	*0*	*-1*	*0*	*564.775*	*Net equity*	0	0
											New instru	0	0

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262. The net lending/ net borrowing (B.9) of – 19 results from:

- Property income of 21 on portfolio assets: shares (4), bond (15), cash (0.6), as well as on the net claim against the employer (1.4).
- Property income payable on the pension debt: 35+5=40.

- The costs of running the fund are covered by a sale (to households).

Note that the pension fund generates a negative net savings position (-19) owing to the fact that the measurement of the property income on the assets is not fully appropriate: mainly using dividends for shares (and using the debtor principle on bonds).

263. Movement of assets are due:

- For cash: to the movements above.
- For bonds: to interest accrued (15) minus coupons paid (10), and a holding loss of 10 (4%) (there is zero other purchases, net of disposals).
- For shares: acquisitions of 80. And holding loss of 20 (10%).

264. The net position of the fund against the employer is calculated, **as a residual**, to obtain a zero net worth. The observed change = +23.175 is explained by:

- <u>Transactions</u> (-38.6): interest on the net assets position (1.4) (supposedly accrued) plus the current service costs (22.5+3) minus the actual regular contribution (29.5+3) minus the lumpsum payment of 33 (recapitalization).
- **<u>Revaluations</u>: calculated as a residual (=+61.775). This item can <u>also</u> be measured as the net impact of all revaluations and OCV arising on all other assets/liabilities.**

The employer

265. The employer is an efficient market producer with sale outstripping costs of production. The net lending / net borrowing is 21.1, reflecting:

- Sales of 300.
- Compensation of employees of 175.5.
- Consumption of fixed capital of 20
- Net investments of 15 (gross investments of 35).
- Intermediate consumption of 50.
- Other costs of 3.4: granting of rights (2) and interest payable to the fund (1.4).
- Dividends paid of 15.

266. Compensation of employees of 175.5 reflects:

- Wage to employees of 150 of which 7.5 of employee contributions (possibly directly forwarded to the fund: but this is not relevant).
- Cost for the employer of 25.5:
  - 22.5 corresponding to the actuarial cost (30) minus the employee share (7.5).
  - cost for financing the pension fund operating cost (3).

267. The movement of cash: -17.5 reflects:

- 67.5 paid to the fund.
- 300 in sales.
- 150 in wages (and **<u>not</u>** 175.5).
- 50 in intermediate consumption.
- 35 in investments.
- 15 in dividends.

268. The closing net worth of the company is assumed here to be zero, i.e., efficient markets, (for expositional purposes, but there is no necessity): the fall in shares prices is 5.6% or 15.675. **The company net value (or own funds) of the company falls by 15.675 despite a net operating balance of 36.1 (= profit <u>before</u> distribution of 51.1), because of the pension fund's poor performance**:

- Aside from a distribution of 15 and a revaluation on fixed assets of 10.
- **The obligations to the scheme have increased by way of an other economic flow of 61.775 (as found above)**.

269. In the (current) *1993 SNA*, the net worth of the company increases by 61.775 as the fall in shares is not matched by a similar change in net assets: "there is something that the market knows that the national accountant does not know". Simultaneously, the net operating balance of the company under the *1993 SNA* is much degraded and becomes negative, because 40 (=33+7) of additional payments are expensed: booked as cost of labor.

Summing up of the impact of the EDG proposal

270. **The example illustrates the EDG proposal: the net worth of the pension fund is zero despite being always underfunded. The pension fund distributes a substantial property income to policy holders, with the effect of generating a pension fund's negative saving position. In addition, because the total return of its portfolio is poor owing to falls in prices of assets, the underfunded position increases substantially, despite a sizable recapitalization during the period. The latter is recorded as a financial transaction for the employer, not as a cost of employment: the (market) employer gross operating surplus is therefore more correctly measured. In addition, the current holding loss of the pension fund impacts the employer via a matching holding loss.**

C. Rest of the economy

271. There is interest in observing the accounts of the households, which are, for pensions, the counterparts of most transactions, other economic flows and stocks in *insurance technical reserves*. However, to have meaningful households' accounts, there is a need to close the accounts for the simplified total economy. One therefore creates other sectors.

Institutional sectors and market equilibrium

272. Because the nonfinancial corporate sector is composed of the unique employer and because the pension fund operates substantial transactions, one needs to add a Rest of the world account (ROW), which allows an appropriate closing of the economy (in particular because of the need for counterpart liabilities to the purchased assets).

273. A banking sector is required to issues deposits (against the purchase of bonds or shares).

274. The ROW is used to balance the bond market (AF.3) as well as the equity market (AF.5). This is in practice rather realistic, as international arbitrage across markets triggers substantial crossborder flows. The trade balance is in equilibrium (i.e., there are as much imports as exports).

275. Households have 500 in nonfinancial assets (houses).

276. The good market is in equilibrium as the market output of 251.8 (300+3-50-2+0.8) is consumed by households for 146.8 and by government for 20 and invested for 85. GDP is 321 (69.2 of non market value added). Finally we have:

GDP 321 = private consumption 146.8 + government consumption 89.2
+ gross investment 85 + net trade 0

Wealth

277. The starting net wealth of the economy is 1070, decomposed of 750 in non financial assets and 320 in net claims on the ROW.

278. The pension fund net worth is zero, despite being underfunded, **following the EDG proposal of allocating the net assets to the employer** (20). The market is efficient, and the net worth of both the non financial employer and the bank is zero. The net worth of the nation therefore comprises: 1300 of households' net assets and -230 of government's net assets.

279. The closing domestic net worth is 1183. Hence the change in domestic net worth is +113 over the period. It originates from net domestic saving of +51 and from revaluations of +62 (mostly on nonfinancial assets: +62, and marginally on net claims against the ROW: +0.4).

280. A large fraction of the households' wealth is constituted by its *insurance technical reserves*.

Total Economy

	Uses **S.11**	Uses **S.125**	Uses **S.14**	Uses **S.2**	Uses **S.13**	Uses **S.122**	Resources **S.11**	Resources **S.125**	Resources **S.14**	Resources **S.2**	Resources **S.13**	Resources **S.122**	**Control**
P.1					0		300	3			90		321
P.2	50	2		57	20					57	0		
D.1	175.5	1			65				241.5		0		0
D.11	*150*	*1*			*50*				*201*		*0*		*0*
D.122	*25.5*				*15*				*40.5*		*0*		*0*
B.2	74.5	0			5	0							
					0						0		0
D.4	16.4	40	0	24	21	7	0	21	58.3214	8	2.678571	18.4	0
D.41	*1.4*			*20*	*15*	*7*		*17*	*5*	*3*	*0*	*18.4*	*0*
D.42	*15*			*4*	*0*			*4*	*7.3214*	*5*	*2.67857*		*0*
D.44		*40*			*6*				*46*		*0*		*0*
D.5	0		50		0						50		0
					0						0		0
D.61			93.7		0			72			21.7		0
D.6112			*55*		0			*47.5*			*7.5*		0
D.6121			*38.7*		0			*24.5*			*14.2*		0
D.62		20			11				31		0		0
					0						0		0
D.75	2				0				2		0		0
					0						0		0
D.8	0	52			10.7				62.7		0		0
					0						0		0
P.3			146.8		89.2						0		236
P.51	35	0	40		10						0		85
of which K.1	*20*		*25*		*5*						*0*		*50*
B.9	**21.1**	**-19.0**	**65.0**	**-16.0**	**-62.5**	**11.4**							-0
Control B.9	*0.000*	*0.000*	*0.000*	*-0.001*	*0.001*	*0.000*							0.000

Transaction	Assets	Assets	Assets	Assets	Assets	Assets	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	
B.10.1	36.1	-19.0	80.0	-16.0	-57.5	11.4							35
Total	-2.5	33.0	80.0	44.0	-6.8	14.3	-38.6	52.0	0.0	60.0	50.7	2.9	35
AN	15.0		15.0		5.0								35
AF.2	-17.5	-13.4	2.3	15.0	16.5	0.0				0.0		2.9	0
AF.3		5.0		19.0	1.7	44.3				30.0	40.0		0
AF.5		80.0	0.0	10.0	-30.0	-30.0	0.0			30.0	0.0		0
AF.6		-38.6	62.7		0.0		-38.6	52.0			10.7		0
AF.612			62.7		0.0			52.0			10.7		0
AF.619		-38.6	0.0		0.0		-38.6				0.0		0

Revaluation	Assets	Assets	Assets	Assets	Assets	Assets	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	
B.10.3	-36.1	18.0	65.4	-0.4	13.7	1.4							62
Total	10.0	31.8	65.4	-0.4	-0.8	1.4	46.1	13.8	0.0	0.0	-14.5	0.0	62
AN	10.0		50.0		2.0						0.0		62
AF.2	0.0	0.0			0.0					0.0	0.0	0.0	0
AF.3		-10.0		-2.0	0.0	-2.5					-14.5		0
AF.5		-20.0	1.6	1.6	-2.8	3.9	-15.7				0.0		-0
AF.6		61.8	13.8		0.0		61.8	13.8			0.0		0
AF.612			13.8		0.0			13.8			0.0		0
AF.619		61.8	0.0		0.0		61.8				0.0		0
													0

OCV	Assets	Assets	Assets	Assets	Assets	Assets	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	0
B.10.2	0.0	1.0	-1.0	0.0	0.0	0.0							0
Total	0.0	0.0	-1.0	0.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0	0.0	0
AN	0.0				0.0						0.0		0
AF.2	0.0	0.0			0.0	0.0				0.0	0.0	0.0	0
AF.3		0.0			0.0						0.0		0
AF.5		0.0			0.0		0.0				0.0		0
AF.6		0.0	-1.0		0.0		0.0	-1.0			0.0		0
AF.612			-1.0		0.0			-1.0			0.0		0
AF.619		0.0	0.0		0.0		0.0				0.0		0

Opening BS	Assets	Assets	Assets	Assets	Assets	Assets		Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	0
B.90	0.0	0.0	1300.0	-320.0	-230.0	0.0								750
Total	300	500	1300	130	120	350		300	500	0	450	350	350	750
AN	200		500		50							0		750
AF.2	100	30	150		20	0					0	0	300	0
AF.3		250		100	0	200					300	250		0
AF.5		200	50	30	50	150		280			150	0	50	0
AF.6		20	600		0			20	500			100		0
AF.612			600		0				500			100		0
AF.619		20	0		0			20				0		0
														0

Closing BS	Assets	Assets	Assets	Assets	Assets	Assets		Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	0
B.90	0.0	0.0	1444.4	-336.4	-273.8	12.8								847
Total	307.5	564.8	1444.4	173.6	112.4	365.7		307.5	564.8	0.0	510.0	386.2	352.9	847
AN	225.0		565.0		57.0							0.0		847
AF.2	82.5	16.6	152.3	15.0	36.5	0.0					0.0	0.0	302.9	0
AF.3		245.0	0.0	117.0	1.7	241.8					330.0	275.5		0
AF.5		260.0	51.6	41.6	17.2	123.9		264.3			180.0	0.0	50.0	-0
AF.6		43.2	675.5		0.0			43.2	564.8			110.7		0
AF.612			675.5		0.0				564.8			110.7		0
AF.619		43.2	0.0		0.0			43.2				0.0		0
														0

Controls													
Total	*0*	*0*	*1.7E-13*	*0*	*1E-14*	*2E-14*	*0*	*0*	*0*	*0*	*0*	*0*	*-4E-15*
AN	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
AF.2	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*-4E-15*
AF.3	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
AF.5	*0*	*0*	*-3E-15*	*0*	*0*	*0*	*0*	*-3E-14*	*0*	*0*	*0*	*0*	*0*
AF.6	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
AF.612	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
AF.619	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

APPENDIX I – CHRONOLOGICAL LIST OF PAPERS POSTED ON THE EDG TO DATE (DEC. 23, 2003)

Pitzer, John, *The Treatment of Pension Schemes in Macroeconomic Statistics.* Discussion paper for the Statistics Department of the IMF, posted in November 2002.

Lequiller, François, *Government implicit Liabilities in Respect of their Employee's Unfunded Pension Plans.* Extract of the December 2002 OECD *Statistics Newsletter*. Posted on January 10, 2003.

Donaghue, Brian, *Recognition of Government Pension Obligations.* Posted on January 10, 2003.

Harper, Peter (ABS), *The Treatment of Government Employee Pension Funds in the Australian National Accounts.* Posted on January 23, 2003.

Pritchett, David, *Properly Treating Activities of Nonautonomous Pension Schemes for Government Employees.* Posted on February 13, 2003.

Salou, Jean-Marc and Yermo, Juan (OECD), *Revised Taxonomy for Pension Plans, Pension Funds and Pension Entities* and *Pension Glossary (OECD)*. Posted on February 20, 2003.

Lequiller, François, *International Differences in the Recording of General Government Pension Schemes in the National Accounts.* Posted on March 3, 2003.

de Rougemont, Philippe—EDG Moderator, *Interview of Anne Harrison on Social Insurance in the 1993 SNA.* Posted on April 3, 2003.

O'Hagan, Patrick, *Government Employer-Sponsored Unfunded Pension Plans – Revised Treatment in the Canadian System of National Accounts.* Posted on June 2, 2003.

Steurer, Anton, *Employer's Unfunded Insurance Schemes and GDP – Practical and Conceptual Issues in Estimating Employers' Imputed Social Contributions, Imputed Assets, Liabilities and Property Income.* Posted on June 6, 2003.

Harrison, Anne, *Accounting in Full for Pension Liabilities.* Posted on June 11, 2003.

Walton, John and Harrison, Anne, *Exchange on the Recording of Under and Over Funding of Pension Schemes.* Posted on June 11, 2003.

Pitzer, John, *Recognition of Government Pension Obligations: a Comment.* Posted on June 20, 2003.

McGeachin, Anne, *IASB Post-employment benefits convergence project summary.* Posted on June 24, 2003.

Pitzer, John, *The Definition of a Social Insurance Scheme and its Classification as Defined Benefit or Defined Contribution.* Posted on June 30, 2003.

Harrison, Anne, *Comments on John Pitzer's Paper on the Definition and Classification of a Social Insurance Scheme.* Posted on June 30, 2003.

Walton, John, *Pension Schemes: Social Insurance and Social Protection.* Posted on July 2, 2003.

Eurostat, Unit E.4 *Pension Schemes and "Pillars"* and *Supplementary Protection: "personal provisions"* (extract of the document: *Coverage and Border Problems*), presented during the Working Group "Social Protection" on 18 February 2003. Posted on July 2, 2003

Walton, John, *Pension Funds and Life Insurance Companies.* Posted on July 2, 2003.

Pitzer, John, *Pension Terms.* Posted on June 20, 2003.

Hamidi-Ravari, Ahmad, *IAS 19: Employee benefits – A Summary.* Posted on August 1, 2003.

Sutcliffe, Paul and Hamidi-Ravari, Ahmad, *Background on PSC Standard Program and Note on Pension Accounting Developments.* Posted on August 8, 2003.

Eurostat Unit B.4, *Questionnaire on Recording of Flows and Stocks Relating to Pension Schemes in National Accounts.* Posted on August 12, 2003.

Pitzer, John, *The Valuation of Imputed Contributions to Unfunded Pension Schemes.* Posted on August 19, 2003.

Pitzer, John, *Pension Funds with Securities Issued by the Employer.* Posted on August 19, 2003.

de Vries, Gabe H., *Old Age Provisions and Old Age Institutions.* Posted on August 19, 2003.

Yermo, Juan, *Recent developments in Occupational Pension Plan Accounting.* Posted on September 10, 2003.

Aaron, Henry; Barr, Nicholas; Bosworth, Barry; Disney, Richard; Gramlich, Edwards; Holzmann, Robert; Palacios Robert and Petrie, Murray, *Comments on "Recognition of Government Pension Obligations" by External Fiscal Experts of the Panel of the Fiscal Affairs Department (IMF).* Posted on September 23, 2003.

de Rougemont, Philippe—EDG Moderator, *Interim Report of the Moderator*. Posted on September 24, 2003

Accounting Standards Board (UK) staff, *Financial Reporting Standard (FRS) 17 (UK) on Retirement Benefits*. Posted on November 21, 2003.

Walton, John, *Some Thoughts on the UK FRS 17*. Posted on November 21, 2003.

de Rougemont, Philippe—EDG Moderator, *Notes on the OECD National Accounts Experts Meeting - Session on Pensions (October 7, 2003)*. Posted on November 25, 2003.

Watkins, David, *Treatment of Unfunded Public Sector Employee Pension Schemes in UK Government Accounts*. Posted on November 25, 2003.

de Rougemont, Philippe—EDG Moderator, *Results to the Straw Poll Questionnaire*. Posted on November 25, 2003.

Steurer, Anton, *The Property Income Element in Contributions to Unfunded Schemes and the International Comparability of Labor Costs*. Posted on November 25, 2003.

de Rougemont, Philippe—EDG Moderator, *Draft EDG Position Paper on Employer Retirement Pension Schemes*. Posted on December 1, 2003.

de Rougemont, Philippe—EDG Moderator, *EDG Questionnaire on Employer Pensions Moderator*. Posted on December 16, 2003.

Statistics Department (IMF), *STA Position on Employer Retirement Pension Schemes.* Posted on December 22, 2003.

Lequiller, Francois, *Comments on Draft EDG Position Paper.* Posted on December 23, 2003.

Walton, John, *Comments on Draft EDG Position Paper.* Posted on December 23, 2003.

Steurer, Anton, *Comments on EDG Position Paper on Employer Pension Schemes in its December 1, 2003 version.* Posted on December 23, 2003.

Cotterell, Paul, *Draft Position Paper on Employer Retirement Pension Schemes (December 1, 2003). Comments.* Posted on December 23, 2003.

de Rougemont, Philippe—EDG Moderator, *The Treatment of Employer Retirement Pension Schemes in Macroeconomic Statistics—The December 2003 EDG Report. Draft.* Posted on December 23, 2003.

Harper, Peter, *Comments on The Treatment of Employer Retirement Pension Schemes in Macroeconomic Statistics – December 2003 EDG Report (draft).* Posted on December 23, 2003.

Walton, John, *What are "Actuarial" Contributions and Property Income? (Defined Benefits Schemes).* Posted on December 23, 2003.

Golland, Jeff, *The Treatment of Government Controlled Pension Schemes in National Accounts.* Posted on December 23, 2003.

de Rougemont, Philippe—EDG Moderator. *The Treatment of Employer Retirement Pension Schemes in macroeconomic statistics— the December 2003 EDG Report.* Posted on December 29, 2003.

APPENDIX II – LIST OF EDG ON PENSIONS PARTICIPANTS (DECEMBER 23, 2003)

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APPENDIX IV—TERMINOLOGY ISSUES

281. It has been observed that there is a lack of agreement in the statistical community on the exact meaning of terms such as “funded”, “reserves”, or even “defined contribution”, by a wide margin. This lack of agreement results from the loose wording in the *1993 SNA* and from its interaction with accounting or financial community’s common parlance. This lack of agreement prevents effectively implementing the *1993 SNA* on an equal footing, but also poses, in practice, a considerable impediment to the exchanges of views. However, under the proposed change in the *1993 SNA* recording, those issues would become largely secondary.

A. Funded—unfunded

Are “reserves” assets or liability entries?

282. *The Moderator concludes that the 1993 SNA or ESA 1995 funded/unfunded delineation can be interpreted in substantially different manners* (see the SPQ Question 6.1). The *1993 SNA* indicates that funded schemes are those that maintain “segregated reserves”. Some argue that “reserves” means economic **assets** accumulated by the pension fund (**view 1**). Others argue that “reserves” mean a **liability entry in the own accounts** of the schemes (**view 2**).[53]

283. The former reading corresponds to the common use of the term “funded” in the financial press, in the accounting literature and in many statistical circles. The latter reading corresponds to the meaning of “reserves” in the accounting literature (an entry on the liability side of the balance sheet akin to provisions, although, in accounting, “reserves” tend to be a segregation of “own funds”, while “provisions” tend to be a segregation of “liabilities”) and to various *1993 SNA* statements that “reserves are held/owned by households”.

284. The latter reading also corresponds more closely to the logic of the system insofar as the *1993 SNA* prescribes liability recognition only for funded cases. The recognition of an economic asset (held by households) would suppose that the two criteria of economic asset be met (the entity in question must be a source of future benefits and must be enforceable). In this context, the fact that some other economic assets are set aside to match the scheme’s commitments seems immaterial[54]. What counts is the commitment of the employer as reflected in its own accounts. This reading seems to be closer to the *ESA 1995* perspective (ESA 5.101, as an example).

Pension schemes invested in employer’s liabilities

285. Another consideration is the fact that the pension fund may be obliged to hold its assets in the form of **employer’s liabilities** (bonds, shares).

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[53] Sometimes “funded” is erroneously assimilated to the fact that the functioning of the scheme comprises “flows” of contributions from one party to another, or from one account to another. However, this feature would more indicate a “contributory” character of the scheme.

[54] It is worth noting that the existence of segregated assets may be evidence of an underlying enforceable obligation. Under such circumstances, the existence of segregated assets may become a sufficient condition, instead of a necessary one.

286. Pension schemes may be invested in a variety of assets selected by a money manager whose duty is to maximize a return-to-risk performance (**type 1**). Pension schemes may be invested in the employers' liabilities (bonds and shares) (**type 1b**) [55]. Pension schemes may not accumulate segregated assets, but the employer recognizes a liability on its own balance sheet entry (by way of creating a "provision" or a "reserve") (**type 2**). Other pension schemes may have none of the above (**type 3**).

287. SNA 4.98 is widely interpreted as indicating that schemes whose segregated "reserves"/assets are invested in the liability of the employer (type 1b)[56] are nonautonomous pension funds (**reading A**), **although some would argue that the paragraph was meant to mean that such schemes were unfunded** (**reading B**). Therefore, under reading A, SNA 4.98 would indicate that the autonomous character of pension funds supposes not only that the four SNA criteria characterizing institutional units are met, but also that the fund's manager would have autonomy of decision regarding the management of the funds assets (which seems reasonable).

288. **However, there is no difference between a situation where employer's liabilities, such as bonds or shares, are issued and assigned to the scheme (type 1b), and a situation where the employer directly records a liability entry in its books in recognition of its pension obligations (type 2)**. Both schemes uncover the same economic reality but simply are established under two different legal or organizational set-ups. Under this reasoning, a more logical interpretation of funded (under view 1) is to interpret that species of type 1b are in fact unfunded. Both schemes show identical gross total assets and liabilities (statistical presentation) in all circumstances as internal links within an institutional unit are necessarily eliminated in a statistical presentation (though not necessarily in an accounting presentation)[57].

289. A scheme of type 1b could be invested in all types of instruments (employer's liabilities) such as securities (shares or bonds), loans or deposits; this seems not relevant. The ability or inability for the fund manager to exchange these assets against others is what is important. It is worth noting that view 2 of the funded definition reconciles better with the (logical) reading A of SNA 4.98 and the fact that the existence of instruments is immaterial, when those are not exchangeable. The consolidated presentation of the employer together with the pension scheme will be the same, whatever the circumstances (*Etats de la nature*). Put it another way, being restricted to hold employer's liabilities is equivalent to recognition directly on the employer's balance sheet.

290. By the same token, type 2 would be seen as "funded" under view 2 of the term. Canadian and Australian type 2 systems for civil servants are viewed as unfunded by the respective national statistical institutes, but are treated in their respective national accounts as funded (see respective EDG contributions): these national institutes consider this a

[55] It is assumed that in type 1b, the fund is <u>required</u> to stay invested in those employers' liabilities. Otherwise, if the fund is at liberty to onsell those, the transfer of such liabilities instead of cash is just a modality of funding, which bears no significance for the scheme's classification.
[56] At least for non government employer schemes, as the *1993 SNA* indicates.
[57] This elimination is not even a consolidation in a strict sense, as it takes place at the institutional unit level: non consolidated accounts and consolidated accounts for the institutional sub-sector will show the same amounts.

1993 SNA deviation as well as an extension, while Eurostat may not necessarily see those recordings as deviations in the first place. As an example, the German system of "book reserve" for private employers is a type 2 and is viewed as funded.[58]

291. Hence, we can draw the following table describing whether a given scheme is funded according to: the view (1 or 2) of the "funded" meaning; the type (1, 1b, 2 or 3) of assets; and the reading (A and B) of SNA 4.98 :

Table 1	Type 1 Money manager	Type 1b Holds nonsellable employer's liabilities		Type 2 Recognition of liability entry (employer accounts)	Type 3 Other
		Reading A nonautonomous	Reading B unfunded		
View 1 – segregated assets	Funded	Funded	Unfunded	Unfunded	Unfunded
View 2 – liability entry (employer accounts)	Funded[59]	Funded		Funded	Unfunded

292. Shaded cells, in Table 1, indicate where type 1b and 2 are classified identically, as would be appropriate economically.

Segregation

293. The segregation of assets may be legally enforceable (i.e., the employer *de jure* cannot liquidate the assets in question for its own use) or not. It may also be simply an accounting segregation or even an administrative segregation.

294. The *1993 SNA* is not specific on the issue. Many SPQ respondents agree that an accounting segregation is sufficient, while few believe that an administrative segregation is. It seems that autonomous funds would achieve a legal segregation, but nonautonomous funds may not. To the extent that the pension obligations and the asset backing them are separate entities, the recourse to the economic asset character of "*insurance technical reserves*" sheds no light on the type of segregation envisaged in the *1993 SNA*.

[58] As book provisions are a rather specific German element, the Bundesbank has introduced in its financial accounts tables a separate line: "Claims from company pension commitments". These claims are defined benefit. There is a special insurance mechanism/institution, Pensionssicherungsverein, to cover for the case of insolvency of the firm (for further details see the Bundesbank monthly report dated March 2001, pp. 45). In national accounts the change in claims of households are added to disposable income in order to compile saving.

[59] Assuming the existence of segregated assets indicates the recognition of a liability.

B. Defined contribution—defined benefit

295. *The Moderator considers that the defined contribution/defined benefit delineation can be interpreted in a substantially different manner*. The delineation can be seen in relation to:

- **the way the benefits will be determined (award formula)**: defined contribution schemes suppose that benefits are based on accumulated contributions plus a return that is either fixed[60] or, if variable, that is not determined by the employer, such as a market return (i.e., resulting from the performance of money managers) (**view A**); or
- whether the employer has **retained a financial exposure of any sort** to the employees: defined contribution schemes suppose the employer disposed of all its financial exposure against households (**view B**).

296. View B is widely interpreted as preventing type 2 schemes from being defined contribution (SNA 13.88), while not preventing type 1b. However, again, there is no rational to distinguish between type 1b and type 2 schemes. Hence, this would suggest retaining view A, or amend view B.

297. Some argue that the market performance of the employer's securities determine the value of the liability, helping distinguish type 1b from type 2. However, when the asset cannot be sold, its market value is irrelevant to the owner/creditor. Of sole relevance is its redemption value, the amount that has been promised, as in the case of a loan, or deposit or any other book-keeping entry (reflecting a legal or constructive obligation).

298. SNA 13.79 directly refers to funds' assets (instead of merely reserves). This may suggest that *1993 SNA* writers had more in mind view B. View B is the optic taken by IAS 19, the UK FRS 17 as well as the OECD taxonomy on pensions. FAS 87 seems more to espouse view A, along with the previous UK standard SSAP 24.

299. In the USA, Cash-balance systems are type 1 and involve a market return on contributions: the employee accounts accrue interest determined by reference to market rates. However, they are viewed by regulators as defined benefit, which allows them to be covered by the re-insurance provided by the US governmental agency (PBGC).

300. The two views A and B can be set identical if one would define the employer retained financial exposure as being other amounts than the necessary financial exposure required to fund/finance its obligations on the market, in the first place.

301. This December 2003 Report takes the view that the defined contribution / defined benefit delineation refers to the way benefits are determined. Hence, pure types of notional defined contribution schemes (NDC)[61] can be contribution defined, as long as a

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[60] A fixed return necessarily supposes a promise to pay in future an amount that is fixed; this can in turn be used to estimate the present value of the flow in question using an appropriate discount rate. This amount need not be the nominal amount claimed to be contributed or transferred by the employer.

[61] Notional Defined Contribution schemes involve an award formula based on contributions and a return, while no segregated economic assets exist. In some alleged NDC schemes, the return is

(continued)

fixed return or a return determined by another party than the employer (such as a market return) is irrevocably used (SPQ question 8.2). This question will be further examined by the EDG during 2004.

C. EDG conclusions on terminology for the future SNA (and in this Paper)

302. *For the future SNA, the EDG recommends the term **funded** should be brought closer to the meaning retained in the business community: it should unequivocally mean that economic assets are segregated. This segregation must be enforced by a legal mechanism.* **These are both clarifications of the *1993 SNA*.** *The EDG recommends banning the term "reserve", unless it is clearly explained what this means.*

303. *For the future SNA, the EDG will explore whether or not recommending the term **defined contribution** schemes should refer to an award formula: all schemes where benefits are determined by contributions and a return on those that is either fixed or, if variable, that is not determined by the employer, such as a market return.* **This would be a change (clarification) of the *1993 SNA*.** They cover true NDC schemes. A defined contribution scheme may be unfunded, hence. **This would be a change in the *1993 SNA*.** In the meantime, the moderator will follow this terminology in the rest of this Report.

304. *For the future SNA, the EDG Moderator recommends that schemes obligated to invest in employer's liabilities would not be considered funded.* **This is a change (clarification) in the *1993 SNA*.** Where they are defined contribution, then they are similar to NDC.

*305. For the future SNA, the EDG recommends **underfunded** (over**funded**) schemes be defined as schemes where the market value of economic assets are below (above) the amount of pension liabilities.* **This is unchanged from the 1993 SNA.** *Economic assets exclude employers' liabilities that must be held by the scheme/fund (and do not result from the own choice of the fund's manager)***.**

306. A dissenting view is that a scheme is fully funded when the actuary expects it to be able to meet all liabilities as they fall due, given no change in the policy of the employer, provided that there is also adequate provision for the risk of the market value of assets being insufficient in the event of premature wind-up of the scheme[62]. This could be called the "going concern" basis. This allows for risks arising from premature wind-up to be reinsured and for the funding level then to be based on an actuarial (that is, income based) valuation of the scheme's assets, so that the scheme is regarded as fully funded when the actuarial values of assets and liabilities are equal, and the extent of under- or overfunding is then measured from the comparison between assets an liabilities when both have actuarial values. Actuarial values of assets are arrived at in the same way as actuarial

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variable and is (conveniently) determined by the employer: these are improperly called NDCs. NDC schemes have typically been created in the context of social security reform. There is no reason for employer schemes not to use this method (although they may need reinsurance).

[62] This can be called provision for the insolvency risk. See section 2.8 of Exposure Draft 51 (EXD51) of the UK actuarial profession, headed "solvency", issued on 10 June 2003, and a separate paper issued at the same time entitled "A Review of Principles for Measuring Solvency under Guidance Note No. 9".

values of liabilities, that is by discounting to the present estimates of income and outgoings in the long-term, using the same discount rate for assets as that for liabilities. Actuarial values of assets are less volatile than market values, and in consequence, it seems, could be used as the basis of the actuarial estimates of the current service cost to the employer of the scheme (though this isnot what is recommended in FRS 17, which applies long term assumptions of the rate of return on assets to their current market value), according to the dissent.

307. The Moderator agrees that the term underfunded/overfunded is sometimes used in the manner explained in the dissent, which suggests to him that the term ought to be clearly defined in the SNA. He sees no merit in changing SNA in this regard. As the system emphasizes market valuation, the reference to actuarial valuation of assets seems secondary to the Moderator.

308. *For the future SNA, the EDG recommends schemes operating with (deliberately) insufficient funding of the callable contributions (on current service costs) to be called **partially funded**.* **This is a clarification of the *1993 SNA*.** Partially funded schemes will generally be underfunded although occasionally they could conceivably become overfunded when assets considerably over perform expectations. The partially funded delineation is a classification of schemes by type of funding policy, the over or under-funded delineation is by type of observed net worth. Alternatively, partially funded could also be defined by reference to actuarial value of assets.

APPENDIX V— RESULTS OF THE MODERATOR STRAW POLL QUESTIONNAIRE (9.17.2003)

Questions relate both to your interpretation of the (current) 1993 SNA, and your preferences for a reviewed SNA. Cross-references to the Draft 1 of the Interim Report of the Moderator (as posted on the EDG on August 25, 2003) are indicated in parenthesis: as an example,* (1.IR-101) *indicates its 101th paragraph.

Employer insurance [63](1.IR-101 to 111)

Q.1 The *Government Finance Statistics Manual (GFSM 2001)* recognizes employer unfunded schemes' obligations as liabilities (as if funded), in contrast to SNA.

Q.1.1 In a reviewed SNA, do you support recognizing employer unfunded schemes' obligations as liabilities (as if funded)? (1.IR-101)

23 Strongly support   9 Somewhat support   3 Do not support

Q.1.2 Select below the elements that are main, important, or unimportant considerations for your answer to Q.1.1 (for or against obligation recognition) ? (1.IR-101)[64]	**Main**	**Important**	**Not Important**
Q.1.2.1 Existence of accounting (or actuarial) information on the outstanding obligations	17	14	e
Q.1.2.2 Financial solidity of the claim the household (would) have	13	16	e
Q.1.2.3 The funded/unfunded delineation is artificial and promotes inequality of treatment	16	8	4
Q.1.2.4 Recognition would improve statistical transparency of fiscal accounts	12	14	3
Q.1.2.5 Recognition would improve the statistical recording of lump-sums paid and/or received by schemes, when employees transfer their entitlements from one scheme to another	6	10	11
Q.1.2.6 Recognition would deteriorate the public deficit	e	5	18
Q.1.2.7 Other considerations:			

Q.2 Pension obligations are often not legal obligations. Business accounting nonetheless recognizes such obligations on-balance sheet, even when not legal obligations (constructive obligations). (1.IR-34-35)

Q.2.1 Do you think recognition of pension liabilities does/should suppose a legal obligation exists in current/reviewed SNA? (1.IR-102,57)

	Current SNA	Reviewed[65] SNA
Legal obligation necessary	14	12
Legal obligation not necessary	7	18

Q.2.2 Should the definition of "economic asset" be extended in a Reviewed SNA to cover the equivalent of "constructive obligation" (1.IR-102)

11Strongly support   13 Somewhat support   6 Do not support

Comments:

Q.3 The *1993 SNA* indicates that defined-benefits schemes exhibit a non-zero net worth. Furthermore, in SNA, stocks of pension liabilities are compiled using actuarial estimates while contributions are recorded using actual amounts and property income receivable by policyholders is recorded using property income receivable by the pension fund. This leads to anomalous entries in the Other economic flows. *(1.IR-54,55)*

[63] See in particular EDG posting by ABS (1.IR-73), by Lequiller (1.IR-76), by O'Hagan (1.IR-79), Harrison (1.IR-81-82) and her interview (section 3) (1.IR-78).
[64] More than one "main" reason may be selected.
[65] "Reviewed SNA" means in the forthcoming SNA.

Q.3.0 Some advocate that recognizing unfunded pension obligations implies, for consistency reasons, to change the way transactions are recorded for pension funds. (1.IR-103)

16 Strongly agree 4 Somewhat agree 4 Do not agree

Q.3.1 In a reviewed SNA, should the net worth of the scheme be allocated to the sponsor (i.e., the employer)? (1.IR-104,81,70)

17 Strongly support allocation 13 Somewhat support 3 Do not support

Q.3.2 In a reviewed SNA, should employers' contributions to pension funds be measured using actuarial[66] amounts as in GFSM 2001 and business accounting (at least imputing the difference from actual amounts)? (1.IR-111,81)

18 Strongly support 9 Somewhat support 4 Do not support

Q.3.3 In a reviewed SNA, should the property income receivable by policy holders reflect actuarial amounts as in GFSM 2001 and business accounting (= reflect the effect of the passing of time)? (1.IR-105,106,81)

19 Strongly agree 9 Somewhat agree 4 Do not agree

Q.3.4 Assuming the property income receivable by policy holders will reflect actuarial amounts (see Q.3.3) in a reviewed SNA:

Q.3.4.1 Should property income payable by the scheme be allowed to differ from property income receivable by the scheme? *10* No 18 Yes

Q.3.4.2 ***If no in Q.3.4.1****, who should be the counterpart of that difference in property income: the sponsor or the debtor of assets held by the fund/scheme? (1.IR-105,106,81)*

8 Impute on the sponsor 5 Impute on the scheme assets e Other option

Q.3.5 Assuming the net worth of the scheme would be allocated to the sponsor in a reviewed SNA:

Q.3.5.1 Should the created asset/liability be imputed a property income? *10* No 11 Yes

Q.3.5.2 If yes in Q.3.5.1, what would be its basis: using the discount rate applicable, or as in Q.3.4?

9 Using the discount rate e As in Q.3.4.2 (first answer) e Other method

Comments:

Q.3B The *1993 SNA* is not completely explicit about the treatment of changes of the present value of obligations due to various events. The treatment could be income/financial transactions (FIT) or revaluation (REV) or other changes in the volume of assets (OCV) or not considered (NOC). In your view, the following...... should be treated (in the accounts of the pension scheme) as.....:

Q.3B.1 Granting of additional rights	20 FIT	e REV	8 OCV	e NOC
Q.3B.2 Cost of living adjustment of pensions	11 FIT	14 REV	3 OCV	e NOC
Q.3B.3 Changes in life expectancy assumptions	7 FIT	5 REV	17 OCV	e NOC
Q.3B.4 Changes in benefit structure	12 FIT	4 REV	14 OCV	e NOC

Comments:

Q.4 In SNA, pension schemes are being allocated an output if they are autonomous pension funds. The formula excludes holding gains and losses. In a Reviewed SNA:

Q.4.1 Is the measure of autonomous pension funds' output satisfactory as it is? (1.IR-58)

[66] Actuarial amounts are the values calculated by actuaries for the stocks of obligations as well as for the interest on those obligations and for the additional entitlements due to work done by employees during the period.

7 Fully satisfactory 12 About satisfactory 7 Not satisfactory

Q.4.2 Do you support extending output recording to other pension schemes? (1.IR-109,58)
Q.4.2.1 To non-autonomous pension funds

10 Strongly agree 9 Somewhat agree 10 Do not agree

Q.4.2.2 To unfunded schemes

9 Strongly agree 7 Somewhat agree 12 Do not agree

Q.4.3 It has been suggested holding gains and losses on pension assets be treated as income (1.IR-106)

7 Agree 4 Somewhat agree e Somewhat disagree 15 Disagree

Comments:

Q.5 The *1993 SNA* follows a dual recording for retirement funded schemes: it books flows both as non financial transactions, as well as financial transactions. An adjustment entry (D.8) keeps *net lending / net borrowing* (B.9) balanced.[67] *(1.IR-110,53)*

Q.5.1 In your opinion, should this dual recording kept in a reviewed SNA?

12 Strongly support 7 Somewhat support 11 Do not support

Q.5.2 Where the dual recording is kept, additional information on the elements constituting D.8 should be provided so to allow a bridge with GFSM 2001 government revenue and expense (or in BPM):

18 Strongly support 9 Somewhat support e Do not support

Comments:

Terminology

Q.6 The *1993 SNA* defines funded schemes as those that keep "segregated reserves". In your opinion:[68]

Q.6.1 The interpretation of "reserve" is: the existence of assets held by the scheme, or the existence of liabilities entry in the own accounts of the scheme, or both? (1.IR-43,44,78,91,94)

	Current SNA	Reviewed SNA
Existence of assets	9	8
Existence of a liability entries	5	7
Both	11	12

If other criteria, please explain:

Q.6.2 The interpretation of "segregated" refers to: a legal, an administrative, or an accounting delineation.

	Current SNA	Reviewed SNA
Legal	16	14
Administrative	7	4
Accounting	16	22

If other criteria, please explain:

Comments:

Q.6B SNA indicates that pension schemes can be funded or unfunded. It has also been argued that some schemes are "partially funded". In addition, SNA indicates that while defined contribution

[67] See Lequiller contribution (1.IR-76), ABS paper (1.IR-74), Anne Harrison (1.IR-74)
[68] See Anne Harrison interview (section 3.1) (1.IR-78), Pitzer (1.IR-91), Eurostat (1.IR-94)

schemes net worth is always zero, defined benefits schemes can be underfunded or overfunded. (1.IR-41,47,123)

Q.6B.1 The terms underfunded/overfunded does indicate or should indicate that the scheme's assets measured at market value are below/above liabilities (actuarial estimates)

Q.6B.1.1 Does indicate *22 Agree* *e Disagree*

Q.6B.1.2 Should indicate *27 Agree* *e Disagree*

Q.6B.2 The term partially funded should have a different meaning than the term underfunded

25 *Agree* *7 Disagree*

Q.6B.2 The term partially funded would mean schemes where contributions are calculated in a way that the scheme is <u>structurally</u> underfunded

20 *Agree* *6 Disagree*

<u>Comments:</u>

Q.7 It is argued that the *1993 SNA* emphasizes the financial solidity of the potential claim by households regarding pension entitlements[69]. (See SNA 4.98) (1.IR-45)

Q.7.0 Do you agree with this view?

14 Strongly agree 10 Somewhat agree 5 Do not agree

Q.7.1 On this basis, a 1993 SNA interpretation or change should clearly distinguish the case of government employer schemes from other private company employer because government obligations are more likely to be fulfilled.

Q.7.1.1 In the Current SNA

3 Strongly support 5 Somewhat support 13Do not support

Q.7.1.2 In a Reviewed SNA

e Strongly support 10 Somewhat support 18 Do not support

Q.7.2 Does SNA 4.98 imply that pension "funds" invested in the liabilities issued by the sponsor are unfunded or simply are not autonomous funds? (1.IR-78,96)

e Unfunded 20 Non-autonomous funds

<u>Comments:</u>

<u>Defined-contribution versus defined-benefit schemes.[70]</u>

Q.8 The *1993 SNA* distinguishes between defined-contribution and defined-benefit schemes. ***(1.IR-41)***

Q.8.1 This distinction is useful and the two categories constitute a partition of pension schemes

20 Strongly support 9 Somewhat support 4 Do not support

Q.8.2 Schemes where benefits (will) derive from contributions invested and managed by a money manager are "defined-contribution", whereas schemes that promise to pay benefits as a % of past (last) salaries and depend on the number of years of service or other indicators are "defined-benefits". <u>However:</u>

Q.8.2.1 Schemes where benefits will be paid only from contributions accumulated in individual accounts but invested in a fund managed by <u>government</u> and invested <u>only</u> in the liabilities of government would/should be viewed in the SNA as: (1.IR-125)

[69] See Anne Harrison interview section 3.2 (1.IR-78)

[70] See Anne Harrison interview section 2 (1.IR-78)

	Current SNA	Reviewed SNA
Defined-contribution	20	26
Defined-benefit	e	e

If necessary, please indicate other considerations:

Q.8.2.2 Schemes where benefits will be paid from individual "notional"[71] accounts and where contributions' return is indexed on GDP, on a price index, or on a government bond yield, would be: (1.IR-125,120)

	Current SNA	Reviewed SNA
Defined-contribution	14	17
Defined-benefit	7	9

If necessary, please indicate other considerations:

Comments:

Q.9 The *1993 SNA* indicates (para 13.88) that contribution-defined are always funded. By reference to question Q.6.1 and Q.8.2 above, do you agree? (1.IR-78)

18 Strongly agree   8 Somewhat agree   7 Do not agree

Comments:

Social security schemes.[72]

Q.10 The *1993 SNA* does not recognize retirement obligations of social security schemes in its balance-sheets. Work is being done in the context of IFAC on the issue (Social Policy Obligation Steering Committee).[73] (1.IR-37)

Q.10.1 Do you support liability recognition for social security schemes in a Reviewed SNA (1.IR-112)***?***

12 Strongly support   13 Somewhat support   6 Do not support

Q.10.2 Do you think recognition by the accounting community (work by IFAC PSC on SPO) of a social security/assistance liability would be for your answer to question Q.10.1 (1.IR-114):

5 Decisive   21 Important but not decisive   3 Not important

Comments:

Q.11 Are the elements below main, important, or unimportant considerations for your position for or against liability recognition of social security retirement obligations in Q.10?

	Main	Important	Not important
Q.11.1 Existence of accounting (or actuarial) information on the outstanding obligations (1.IR-114)........	*14*	*10*	*4*
Q.11.2 Presence or absence of legal claims by household………………… ……………………………………......	*8*	*13*	*7*
Q.11.3 Government can in principle change benefits at will……………… ……………………………………......	*7*	*15*	*4*
Q.11.4 Government in practice hardly can change benefits, owing to political considerations……………	*e*	*13*	*9*
Q.11.5 Liability recognition of retirements obligation could be extended to other obligations (health, education)……………………………………………… ……………………………………………………………….. ..	*4*	*14*	*9*
Q.11.6 Liability recognition of retirements obligations is tantamount to asset recognition of future taxes	*e*	*7*	*17*
Q.11.7 A change would improve statistical transparency of fiscal accounts……………………………………	*8*	*11*	*6*

[71] Case of Pay As You Go systems: notional refers to the fact that contributions are not transferred in a segregated fund, but give rise to well determined "contributions-based" entitlements.

[72] The *1993 SNA* distinguishes social security schemes from social assistance schemes on the sole basis of the contributory nature of the former.

[73] See the document by Brian Donaghue (1.IR-72) and Sutcliffe/Hamidi-Ravari (1.IR-93).

Q.11.8 A change would improve the statistical recording of lump-sums paid and/or received by schemes when employees transfer their entitlements from one scheme to another…………………………………………….………… 3 7 14

Q.11.9 A change would deteriorate the public deficit ……..………………… e e 18

Q.11.10 Other considerations:

Q.12 In the *1993 SNA,* can arrangements where individuals invest their contributions via (independent) money-managers be nonetheless classified as social security schemes.

9 Cannot 8 May be in rare circumstances 6 Can

<u>Comments:</u>

Q.13 In some arrangements that cover a large part of the population and are imposed and controlled by government, individuals hold <u>notional accounts</u>[74] from which benefits will be calculated.

Q.13.1 Those arrangements:

	Current SNA	Reviewed SNA
Can/should be social security schemes	23	23
Cannot/should not be social security schemes	e	3

If necessary, please indicate other considerations:

Q.13.2 In those arrangements that are considered social security schemes, retirement obligations:

	Current SNA	Reviewed SNA
Are not to be recognized on balance sheet	19	5
Are to be recognized as securities or loans (liability of the scheme)	e	e
Are to be recognized as insurance technical reserves (liability of the scheme)	e	20

If necessary, please indicate other considerations:

<u>Comments:</u>

Q.14 Social security schemes are collective arrangements designed to provide protection against social risks to large sections of the community, and which are imposed, controlled and financed by government. (1.IR-121,95)

Q.14.1 In this definition, which are the elements that are essential ?

	Essential	Important	Not important
Collective arrangement	22	5	e
Large sections of the community	20	10	e
Imposed by government	18	7	5
Controlled by government	22	6	3
Financed by government	7	4	16

Q.14.2 Does "imposed" necessarily mean that the scheme is compulsory, or could it more flexibility mean: created, set up, or arranged? (1.IR-95)

12 necessarily compulsory 15 generally, but <u>not necessarily</u>, compulsory

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[74] See Q.8.2.2 – Arrangements may encompass:

- "notional assets" systems where the scheme does not accumulate assets but where future payments are paid on the return of actual contribution, as if they had been invested on a fund;
- "notional contributions" systems where contributions (on which benefits will be calculated) are not paid but are booked as a % of wage.

Q.14.3 "Control" means necessarily controlling (direct or indirect):

	Necessary	Not necessary
Contributions	25	e
Benefits	26	3
Assets management	11	18

Please indicate other considerations:

Q.14.3.1 Control of contribution and assets management is sufficient, as it give indirectly control over benefits:

8 *Agree* 21 *Disagree*

Q.14.4 Some argue that the criteria "Financed" is largely circular (1.IR-121)

6 Strongly support 17 Somewhat support 4 Do not support

Comments:

Q.15 Some countries have embarked into social security reforms including involving "privatization". In some cases, government obligations to workers (former contributors) have been recognized in the form of "recognition bonds". (1.IR-115)

Q.15.1 Are such obligations economic assets in SNA, or should there be in a Reviewed SNA?

Q.15.1.1 Current SNA: 5 Economic assets 17 Perhaps economic assets e Not economic assets

Q.15.1.2 Reviewed SNA: 14 Economic assets 15 Perhaps economic assets e Not economic assets

Q.15.2 What would be a main criterion/consideration for economic asset recognition?	**Main**	**Important**	**Not important**
Q.15.2.1 The obligation is recognized by government / accountants…………………………………	*22*	*8*	*e*
Q.15.2.2 "Recognition bond" bears interest… ……………………………………………………………	*3*	*7*	*16*
Q.15.2.3 "Recognition bond" is tradable……. ……………………………………………………………	*e*	*5*	*18*

Other:

Comments:

Social insurance

Q.16 Some argue (such as *GFSM 2001*) that defined contribution schemes are not social insurance because it is not insurance. In contrast, others think that individual pension contracts, which tend to multiply, should be covered by social insurance. (1.IR-116 to 121)

Q.16.0 Should insurance be revisited?

12 Should be revisited 15 May be revisited with marginal changes e Should not be revisited

Q.16.1 Should the notion of social insurance be dropped? 25 No e Yes

Q.16.2 Do you favor extending or reducing in SNA the scope of social insurance?

7 Extending 15 Keep roughly unchanged 4 Reducing

Q.16.3 Should defined contribution schemes be within social insurance? (1.IR-125) 12 No 15 Yes

Q.16.3 Should a second notion be introduced in addition to social insurance to allow for differences in scope—as an example "social protection" ? 10 No 11 Yes

Q.16.3.1 Social protection would include social assistance[75] e No 13 Yes

Q.16.3.2 Social protection would include individual insurance 9 No 7 Yes

Q.16.4 What should be the main criteria for social insurance (old age pension)

	Main	Important	Not important
Q.16.4.1 Scheme is collective (with specific exceptions)	16	9	e
Q.16.4.2 Scheme targets a social risk (old age)	18	9	e
Q.16.4.3 Scheme is compulsory	13	5	7
Q.16.4.4 Scheme is redistributive	6	9	11

Comments:

Q.17 Transfers of pension rights between pension schemes give rise to lump sum payments. In case of transfers in between employer funded schemes, the event is a financial transaction. How to record the event if one of the scheme is not a employer funded schemes? Nonetheless a financial transaction (with appearance and/or disappearance of an asset via the other change in volume account), an other change in volume, a transfer from one scheme to the other, a benefit (liquidation of rights) and a contribution? (1.IR-59,129)

Q.17.1 Between funded and unfunded employer pension schemes

10 Financial transaction 8 Other change in volume e transfer 3 benefit+contribution e Other method

Q.17.2 Between a funded employer and social security/assistance pension schemes

7 Financial transaction 7 Other change in volume 3 transfer e benefit+contribution e Other method

Q.17.3 Between an unfunded employer and social security/assistance pension schemes

6 Financial transaction 3 Other change in volume 4 transfer e benefit+contribution e Other method

Q.17.4 Between social security/assistance schemes

3 Financial transaction 5 Other change in volume 4 transfer 6 benefit+contribution e Other method

Comments:

Q.18 Pension schemes may merge with other pension schemes. This involves the liquidation of all obligations against the transfer of assets. Do you think such events would necessarily be treated similarly as individual transfers, or differently (likely to be an other change in volume):

17 Should be treated generally the same 6 Should be treated generally differently

Comments:

Q.19 In the *1993 SNA* as it is, it is recommended that imputed contributions be calculated using the same actuarial considerations as would be applicable for a funded scheme, but it is accepted that a contribution be set equal to benefits. In case imputed contributions would be measured using actuarial considerations, should one use a discounted flow or an undiscounted flow (the later solution is akin to recording a property income but classifying it as compensation of employee)? (1.IR-56,128)

20 Discounted flow e Undiscounted flow e Other method

[75] Like *GFSM 2001*.

APPENDIX VI—PENSION FUND OUTPUT

By John Walton

There has been some ambiguity about output measurement in the case of defined benefits funds in the *1993 SNA*. If the fund can have a net worth, is it analogous to a mutual life insurance company, where some funds are kept as liabilities (second line "reserves") which are not distributed to policy-holders. Because this is so, a mutual insurance company generates an operating surplus, which is usually undistributed. If so, could a defined benefits pension fund with a net worth have an operating surplus, in the sense of an allocation out of income which is not part of technical reserves?

At first sight, the proposals of the EDG clarify this matter; if a defined benefits autonomous pension fund cannot have a net worth, its total service charge (output) can be measured directly as the sum of costs, in the same way as for a defined contribution fund. The usual top down formula for measuring the output of a life insurance enterprise would give the same result, because all surpluses are allocated to technical (or actuarial) reserves; and it does not matter, then, if holding gains and losses are included in the formula, in total, as both credits and debits, or are excluded. This depends however on a convention that the service charge is incurred entirely for the benefit of the members of the scheme (the present and future pensioners) and so is associated in its entirety with the technical reserves; when an overfunded scheme carries another liability which is an asset of the employer, this does not imply that the employer is a consumer of part of the service charge (and likewise for those assets of an underfunded scheme, which are liabilities of the employer).

Care is needed about the treatment in accounting sources of the management costs of an autonomous defined benefits pension scheme; in the *1993 SNA* and in the proposed SNA these are costs of the scheme, as an institutional unit in S.125, so that the current service costs of the employer, plus employee contributions, should be sufficient to cover them. In employer accounts, however, these costs may be charged directly to the operating account of the employer as either intermediate consumption or labour costs which are associated with mainstream production, and not included within the current service costs to the employer of running the pension fund.