The Definition of a Social Insurance Scheme and its Classification as Defined Benefit or Defined Contribution

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June 30, 2003

I. Introduction

1. In an interview posted on this electronic discussion group, Anne Harrison discusses the distinction between a social insurance scheme with a savings component and a pure saving scheme (section 1 of the interview) and the distinction between defined-contribution and defined-benefit pension schemes (section 2). Her comments raise questions about what characteristics are required for a scheme to be a social insurance scheme. The definitions of social insurance schemes in *System of National Accounts 1993* (*SNA*), *Government Finance Statistics Manual 2001* (*GFSM)*, and *European System of Accounts* (*ESA*) are similar but not identical. All of the definitions are intended, however, to represent the same concept. A unified definition applicable in all macroeconomic statistical manuals should be developed so that they are consistently classified and because social insurance schemes are treated differently than pure saving schemes.

2. Pension schemes can be described as either defined-contribution or defined-benefit schemes. This distinction does not affect the recording of any transactions in the SNA but has consequences for the valuation of liabilities of pension schemes and the corresponding assets of households. The liability associated with defined-contribution schemes is the value of the assets of the scheme. There is not a direct link between the assets and liabilities of a defined-benefit scheme. The liability associated with defined-benefit schemes is the present value of the benefits promised by the scheme, the estimation of which can be complex and require the assistance of actuaries.

II. Discussion

A. A Unified Definition of a Social Insurance Scheme

3. The strategy employed here is to start with the common dictionary meanings of the words "social," "insurance," and "scheme," and then to refer to the definitions of social insurance schemes in SNA, GFS, and ESA for additional details.

1. The meaning of scheme, insurance, and social

4. A *scheme* is a systematic or organized framework to accomplish an objective.[1] For example, GFSM defines social protection schemes as "systematic interventions intended to

[1] Definition adapted from the Merriam-Webster OnLine Dictionary (www.m-w.com).

relieve households and individuals of the burden of a defined set of social risks." [GFSM An2.1[2]] In the SNA all economic flows and stocks are associated with institutional units. The definition of a scheme is intentionally broad because the various flows and stocks associated with a scheme may involve several units. Typically, however, a scheme is a plan organized under the direction of a single unit (the sponsor). One or more other units may carry out the elements of the plan as managers under contract with the sponsor, and innumerable units may be included as members/participants in the scheme. Conversely, a single unit may sponsor or participate in many schemes.

5. *Social* refers either to the interaction of an individual with all or part of society or to the welfare of human beings in general as members of society.[3] When applied to a group of individuals acting cooperatively to achieve an objective, the term collective can be a synonym for social. Collective refers to a group as cohesive and unified rather than as a collection of individuals and to the objective, responsibility, or other item that is shared or has been assumed by all members of the group. In this sense, a social scheme is a systematic or organized framework for a group of individuals to act *collectively* to accomplish an objective. Within the context of macroeconomic statistics, social refers to collective frameworks to protect a group against specified social risks, where social risks are events or circumstances that may adversely affect the welfare of households by imposing additional demands on their resources or reducing their incomes. [SNA 8.55] It is difficult to imagine a group of individuals acting in a social or collective manner without coercion or strong encouragement being supplied by an outside party, such as a government, employer, or trade union. This element of coercion or encouragement is indeed a part of the statistical concept of social (see paragraph 13).

6. *Insurance* is defined in the SNA as an activity "intended to provide individual institutional units exposed to certain risks with financial protection against the consequences of the occurrence of specified events" [SNA 6.135]. It is also stated that the common element of all insurance schemes is spreading risk [SNA An4.2]. Risk is spread when "Insurers receive many (relatively) small regular payments of premiums from policyholders and pay much larger sums to claimants when the contingencies covered by the policy occur." [SNA An4.2] For non-life insurance the risk of the specified event occurring in a given time period is spread among many policyholders. For life insurance, including pensions, the risk of death, retirement, or other insured event is spread over time for the same policyholder as well as among different policyholders.

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[2] References to statistical manuals will identify the manual and state the chapter and paragraph numbers, such as SNA 8.55. "An" will be used to refer to annexes. For *GFSM*, "An2" is the annex to chapter 2. For the *SNA*, "An4" will refer to Annex IV.

[3] Also adapted from the Merriam-Webster OnLine Dictionary.

7. The International Accounting Standards Board defines an insurance contract as a "contract under which one party (the insurer) accepts significant insurance risk by agreeing with another party (the policyholder) to compensate the policyholder or other beneficiary if a specified uncertain future event (the insured event) adversely affects the policyholder or other beneficiary."[4] There must be uncertainty about whether the event will happen, when it will happen, or how much the insurer will need to pay. The financial risk of a change in an interest rate, a security price, a commodity price, a foreign-exchange rate, a credit rating, or similar variables is not considered an insurance risk.

8. Common to these definitions and descriptions of insurance is that risk is spread among policyholders and/or over time by policyholders making many small payments to the insurer and the insurer making a small number of larger payments to policyholders adversely affected by the occurrence of the insured events.

9. The process of spreading risk implies the existence of a large group of participants acting together so that any insurance scheme has some aspects of joint action. The collective aspect of a social insurance scheme means that a group of people agrees or is forced to act jointly to become policyholders of the same insurance policy. In other, non-social insurance schemes, the insurer is responsible for assembling a group of unrelated policyholders who act individually to insure against the same risk. Risk is spread in both cases, but in social insurance the policyholders act as a group and in other insurance they act individually. An insurance scheme with individual policies would, therefore, normally not be a social insurance scheme because the separate policies imply individual rather than collective action. See, however, paragraph 14 below for exceptions.[5]

10. Putting the previous paragraphs together, a common-sense, dictionary definition of a social insurance scheme is *a systematic or organized framework for a group of individuals to act collectively to spread risk.*

2. SOCIAL INSURANCE IN THE SNA

11. The SNA does not provide a succinct definition of social insurance schemes. Instead, the various elements of the definition are provided piecewise in SNA 8.55 through 8.61 and in SNA An4.5 through 4.7. In SNA 8.55, it is stated that "social insurance schemes are schemes in which social contributions are paid by employees or others, or by employers on behalf of

[4] International Accounting Standards Board, *Draft Statement of Principles: Insurance Contracts*, paragraph 1.19 (www.iasc.org.uk).

[5] An individual policy is one that is negotiated directly by the insurer and the policyholder. A social insurance scheme could require individual arrangements between the insurer and the policyholder, but within parameters established by a group agreement with the insurer. The latter case is considered a group policy.

their employees, in order to secure entitlement to social insurance benefits, in the current or subsequent periods, for the employees or other contributors, their dependants or survivors." Social contributions are the many small payments to the insurer required by any insurance scheme. The mention of employees or others as the policyholders is not restrictive, but it suggests that most social insurance schemes involve employees as the collective group. Social benefits are the larger payments by the insurer to the policyholders if a specified insured event occurs. In this case, however, the types of insured events are restricted to social risks, where the most typical social risks are described in SNA 8.56. They will not be reviewed here except to note that the loss of income as a result of retirement is a social risk and a social benefit paid in response to that event is a pension. The restriction that the insured event must be a social risk and the indication that the group of policyholders acting collectively most often will be employees should be added to the tentative definition in paragraph 10.

12. SNA 8.58 reinforces the notion that the payment of social contributions by or on the behalf of the policyholder is required to gain eligibility to receive social benefits within a social insurance context. An important clarification noted in SNA 8.60, however, is that social contributions include imputed as well as actual payments to the insurer in the case of unfunded employer schemes. Imputed payments exist when an employer includes eligibility for social benefits as part of the compensation of its employees, but pays the benefits directly as required rather than set up a formal insurance scheme.

13. The collective aspect of social insurance is specified in SNA 8.59: "Social insurance schemes must be organized collectively for groups of workers or be available by law to all workers or designated categories of workers, possibly including non-employed persons as well as employees…Participation in such schemes may be voluntary for the workers concerned, but it is more common for it to be obligatory." Collective action usually requires an element of coercion or incentive to obtain the agreement of everyone in the group of potential participants. Although not inherent in the meaning of social or collective, it is difficult to imagine a group of individuals being able to form a cohesive group and negotiate a collective insurance contract voluntarily. Moreover, many societies consider governments, employers, and trade unions to have a duty of caring for their citizens, employees, or members that includes protection against social risks. Thus, obligatory or strongly encouraged participation is part of the definition of a social insurance scheme.

14. As stated in paragraph 9, a social insurance scheme normally involves a single policy for all policyholders, although various amounts of contributions and benefits may apply to different policyholders. In SNA 8.60, the possibility of a social insurance scheme with individual policies is introduced: "some social insurance schemes may permit, or even require, participants to take out policies in their own names. In order for an individual policy to be treated as part of a social insurance scheme the eventualities or circumstances against which the participants are insured must be [social risks] of the kind listed in paragraph 8.56 above, and in addition, one or more of the following conditions must be satisfied:

a. Participation in the scheme is obligatory either by law for a specified category of worker, whether employer or non-employed, or under the terms and conditions of employment of an employee, or group of employees;

b. The scheme is a collective one operated for the benefit of a designated group of workers, whether employees or non-employed, participation being restricted to members of that group;

c. An employer makes a contribution (actual or imputed) to the scheme on behalf of an employee, whether or not the employee also makes a contribution."

Thus, the requirement for a single policy is overridden if one or more of these conditions exist. The first two conditions are considered evidence of a collective scheme to spread risk among employees or other workers. The third condition suggests the employer is providing eligibility to social benefits as a part of its employment contract and therefore the group of employees covered can be considered as acting collectively. In other words, it is the scheme that must involve collective action. If there is only one insurance policy, then the policyholders must be acting collectively. In the exceptions listed above, the group is acting collectively but by means of individual policies.

15. The notion of a social insurance scheme is summarized in SNA 8.61 as "schemes in which workers are obliged, or encouraged, by their employers or by general government to take out insurance against certain eventualities or circumstances that may adversely affect their welfare or that of their dependants." The notion of the policyholders being obliged or encouraged to join the scheme was referred to in SNA 8.59, but in passing. Here it is emphasized as a fundamental aspect of the scheme. In addition, it is stated that the unit imposing the requirement or supplying the encouragement is an employer or general government. In practice these types of units are the most likely possibilities, but elsewhere the possibility of trade unions or other units is allowed [SNA An4.5]. Hence, the definition should not restrict the sponsors to employers and general government units. The sponsor must have, however, a legitimate social concern for the particular group.

16. In summary, the essential characteristics of a social insurance scheme as defined in paragraph 10 above and Chapter 8 of the SNA are that it must:

- Be organized collectively for the benefit of a specific group of employees or other policyholders,
- Require contributions by, or on behalf of, the policyholders, that secure entitlement to social benefits,
- Pay social benefits of the nature described in SNA 8.56,
- Spread risk among the policyholders, and
- Involve participation by policyholders that is obligatory or encouraged.

17. Social insurance schemes are also defined in Annex 4 of the SNA. In SNA An4.5, it is stated that “A social insurance scheme is one where the policyholder is obliged or encouraged to insure against certain contingencies by the intervention of a third party,” and that “An insurance scheme is designated as a social insurance scheme in the System:

a. If the benefits received are conditional on participation in the scheme and are as described in the next paragraphs; and

b. At least one of the three conditions following is met:

   i. Participation in the scheme is compulsory either by law or by the conditions of employment; or

   ii. The scheme is operated on behalf of a group and restricted to group members; or

   iii. An employer makes a contribution to the scheme on behalf of an employee.”

18. This definition is slightly different from the definition developed in Chapter 8:

- The collective requirement is not explicitly stated. It is implicit in the requirement that participation is obligatory or encouraged and that in some cases the scheme is restricted to a specified group, but something can be obligatory without being collective.

- The requirement of social contributions is stated only indirectly with the reference to “participation” and the general notion that all insurance requires premiums.

- The three conditions listed under subparagraph (b) are applied to all social insurance schemes in Annex 4 but only to schemes with individual policies in Chapter 8. Applying the conditions to all social insurance schemes is redundant when there is a single policy, but it does not create a different definition.

The definition in Annex IV is clearly describing the same concept as the description in Chapter 8. It is unfortunate that the same words are not used in both places.

3. Social insurance in GFSM

19. Social insurance schemes are also defined in the Annex to Chapter 2 of GFSM. There, a social insurance scheme is defined as a contributory social protection scheme. A social protection scheme is defined as a scheme that provides social benefits in the event of the occurrence of specified social risks [GFSM An2.1 and 2.8], and a contributory scheme is defined as a scheme to which contributions are made, actual or imputed [GFSM An2.8]. Social benefits are described in An2.2 and are identical to those described in SNA 8.56. In An2.4, it is further specified that social benefits are always provided in a collective scheme. The insurance requirement is not stated explicitly, but is implicit in the title, “social insurance,” and by the requirement that contributions are necessary to secure entitlement to the benefits. In addition, there is no statement that participation is obligatory or encouraged.

The possibility of compulsory participation is mentioned, but the requirement for encouraged participation in the absence of obligatory participation is missing. An explicit inclusion of these points would improve the definition.

4. SOCIAL INSURANCE IN ESA

20. *ESA* defines social insurance schemes in Chapter 4 and Annex III. In ESA 4.88: “Social insurance schemes are schemes in which workers are obliged, or encouraged, by their employers or by general government to take out insurance against certain eventualities or circumstances that may adversely affect their welfare or that of their dependants.” This definition lacks a specific collective requirement; the requirement for contributions is only implicit in the notion of insurance; and the benefits are not restricted to social benefits, although the “certain eventualities” can be assumed to refer to social benefits from the text that precedes the definition. As noted previously, the restriction of sponsors to employers and general government is too restrictive.

21. In ESA An3.2, Social insurance schemes are defined as “schemes in which social contributions are paid by employees or other individuals, or by employers on behalf of their employees, in order to secure entitlement to social insurance benefits for the employees or other contributors, their dependents or survivors. Social insurance schemes cover social risks or needs. Unlike social assistance benefits, social insurance benefits are conditional on participation in a scheme.” Here the contributions and benefits are clearly specified, but the notions of collective action and obligatory or encouraged participation are missing.

5. A SYNTHESIS

22. Having reviewed the definitions in several statistical manuals, the characteristics of social insurance schemes listed in paragraph 16 appear to be comprehensive. Thus, we can define social insurance schemes as *collectively organized insurance schemes in which employees and/or others are obliged or encouraged to spread risk by taking out insurance against certain social risks. Such schemes require contributions, actual or imputed, to secure entitlement to social benefits. A scheme is collective if participants either do not take out individual policies or one of the three conditions in paragraph 13 applies.*

B. The Definition of a Pension

23. One type of social benefit enumerated in SNA 8.56 is the replacement of income lost from retirement or other inability to work. This replacement of income is often referred to as a pension, and social insurance schemes are often organized specifically to provide pensions as their only or primary type of social benefit. Replacing income suggests regular payments of an amount specified by some formula. Thus, a pension is *a fixed sum paid regularly to a worker following retirement from service or to surviving beneficiaries.* The sum is fixed in the sense that it is contractually determined. The monetary amount can change if specified events happen, such as a change in the general price level. In some cases it may also be

possible for the person with a claim to the regular pension payments to exchange that claim, or part of it, for a lump-sum payment. The pensions may be payable only to the retiree during his/her lifetime or additional benefits may be payable to spouses, former spouses, and other beneficiaries.

24. A pension scheme can be a social insurance scheme that pays pensions as its primary type of social benefits or a pure saving scheme that is restricted to providing retirement income. A social insurance pension scheme may pay other types of social benefits, such as medical care. Reference will be made here only to retirement pensions.

25. A common aspect of all social insurance or other schemes providing pensions is the need to accumulate assets during the participant's working years to create the resources that will enable payment of the benefit. Such schemes are a form of life insurance as described in Annex IV of the SNA. Any individual accumulation of assets could be viewed as a pension scheme, but normally some type of restriction must be included so that payments can be received only after retirement. Frequently governments provide tax and other incentives for individuals to save for retirement outside of any social insurance scheme and impose restrictions on when withdrawals can be made such schemes.

C. A Comparison of the Treatment of Social Insurance, Other Insurance, and Saving Schemes in the SNA

1. Social insurance versus other insurance

26. Social insurance schemes may provide the same benefits as insurance schemes other than social insurance (referred to as "other insurance"), but social and other insurance schemes are treated differently in the SNA. Hence the differences between them need to be identified so that a proper classification and treatment can be implemented.

27. All types of insurance require (a) premium payments by the policyholders to the insurer to secure entitlement to the insurance benefits, (b) payments of claims by the insurer to the policyholder or another beneficiary when an insured event occurs, and (c) the spreading of risk among the policyholders, three of the five characteristics of social insurance schemes identified in paragraph 16. As a convention, social insurance premiums are called social contributions and social insurance claims are called social benefits in the SNA. Differences between the two types of insurance include:

- Social insurance schemes involve a group of policyholders acting collectively, but other insurance involves policyholders acting individually.

- The only benefits paid by social insurance are social benefits related to the type of social risks specified in SNA 8.56. Other insurance can pay claims with regard to many other kinds of risk.

- Participation in social insurance is obligatory or encouraged by a government, employer, trade union, or other unit with a valid social concern. Participation in other insurance is usually by the free will of the individual policyholder. Some types of other insurance, such as automobile and homeowner's insurance, are mandatory for all practical purposes. The policyholder in these cases is still considered to act individually because the individual contacts the insurance enterprise and negotiates the terms of the contract. Normally there is considerable room for selecting the insurance enterprise, the amount of insurance, and the type of coverage.

28. Determining whether an insurance scheme with individual policies is collective and whether it is encouraged may be difficult. The factors listed in paragraph 14 are decisive in this case. Schemes with participation restricted to a designated group of workers of schemes with contributions by an employer on behalf of its employees are social insurance. Individual policies that are simply encouraged by favorable tax treatment are likely other life insurance.

2. Life insurance versus saving schemes

29. A more difficult distinction may be between insurance schemes in general and non-insurance saving schemes. Insurance involves spreading risk. Individual life insurance spreads risk because it is uncertain when a claim will be made and what the amount of the claim will be. If the claim is an annuity, it is uncertain how long the annuity will be paid. Any pension scheme in which the amount of the pension payments depends on the worker's salary level, age, years of service, and similar factors spreads risk because of the uncertainty about both the amounts and timing of the payments. Death before the start of the pension may result in no payment whatsoever.

30. In contrast, a non-insurance saving scheme does not spread risk. Events related to one person do not affect the amount saved and available to another person. There may be severe restrictions on the saver's flexibility imposed by the financial instruments purchased or by a government in exchange for granting the saving scheme tax-favored treatment. The risk of adverse effects from these restrictions is not, however, an insurance risk. Similarly, the risk from changes in interest rates and security prices is not an insurance risk. Thus, a scheme in which an individual purchases financial assets and the future value of those assets depends solely on their performance—that is, the property income and holding gains received—is a saving scheme.

3. Recording of insurance transactions

31. The recording of flows related to insurance schemes in the SNA is complex. The details are explained in Annex IV and will not be repeated here. Some of the differences between the treatments of social and other insurance are noted in the following paragraphs.

32. Social contributions and social benefits for all social insurance schemes are recorded in the Secondary Distribution of Income Account or the Redistribution of Income In Kind Account as current transfer payments (transaction codes D.61, D.62, or D.63). Premiums and

claims for other non-life insurance are recorded as current transfer payments, but only in the Secondary Distribution of Income Account and with different codes (D.71 and D.72).

33. Life insurance, including pension schemes, is treated differently in the SNA than non-life insurance. These schemes, both social and other life insurance, involve saving and the accumulation of financial assets and liabilities, requiring entries in the financial account. For social insurance only, the contributions and benefits are also recorded as current transfer payments as already mentioned. Because of this dual recording, an Adjustment for the Change in Net Equity of Households in Pension Funds (code D.8) is recorded in the Use of Disposable Income Account that offsets the net effect of the social insurance entries as current transfer payments. In contrast, other life insurance is treated as a pure saving scheme. There are no entries in the Secondary Distribution of Income Account or the Redistribution of Income In Kind Account, which means that no adjustment item is necessary. Premiums and claims are recorded only in the Financial Account.

34. The treatment of pensions provided by social security schemes is problematic. Contributors to social security schemes providing pensions usually believe that they are acquiring a claim against the sponsoring government in exchange for their contributions. In the SNA, however, social security contributions are never treated as generating financial claims. Contributions and payments of pensions are recorded only as current transfer payments as in other non-life social insurance schemes. That is, "even where separate [social security] funds are identified, they remain the property of the government and not of the beneficiaries of the schemes." [SNA An4.13]

D. The Definitions of Defined-Contribution and Defined-Benefit Pension Schemes

35. All pension schemes are classified as either defined-contribution or defined-benefit schemes. The general notions of these two types of schemes are seemingly straight forward, but the implementation is not always obvious. First the various definitions of these schemes will be summarized.

1. Comparative definitions

36. In the OECD pensions glossary posted on this electronic discussion group, a defined-contribution plan is "a pension plan by which benefits to members are based solely on the amount contributed to the plan by the sponsor or member plus the investment return thereon. This does not include plans in which the employer that sponsors the plan guarantees a rate of return." A money purchase plan is "a type of defined contribution plan where the pension benefit has to be paid in the form of an annuity. A defined benefit plan is any pension plan other than a defined contribution plan, including all plans in which the financial or longevity risk are borne by the plan sponsor."

37. The International Accounting Standards Board defines defined-contribution plans from the viewpoint of the plan administrator as "retirement benefit plans under which amounts to be paid as retirement benefits are determined by contributions to a fund together with

investment earnings thereon" [International Accounting Standard (IAS) 26, paragraph 8]. From the viewpoint of the sponsor, defined-contribution plans are "post-retirement benefit plans under which an enterprise pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior period." [IAS 19, paragraph 7] Defined-benefit plans "are retirement benefit plans under which amounts to be paid as retirement benefits are determined by reference to a formula usually based on employees' earnings and/or years of service." [IAS 26, paragraph 8] From the viewpoint of the sponsor, defined-benefit plans "are post-employment benefit plans other than defined contribution plans." [IAS 19, paragraph 7]

38. In the SNA, "defined benefit pension plans are those in which the level of pension benefits promised to participating employees is guaranteed. Benefits are related by some formula to participants' length of service and salary and are not totally dependent on the assets in the fund…The liability of a defined benefit pension plan is equal to the present value of the promised benefits." [SNA 13.78] It is also noted that "Unfunded occupational pension schemes, which include some classified as social security funds, are by definition defined-benefit schemes." [SNA 13.88] The term, "defined contribution" is not used in the SNA; "money purchase" is used for the same concept. "Money purchase plans are those for which the level of contributions to the fund is guaranteed, but benefits are directly dependent on the assets of the fund. The liability of a money purchase plan is the current market value of the funds' assets." [SNA 13.79] Defined-contribution is the more generally used term and should be adopted for use in the SNA as well.[6] A money purchase plan in the OECD glossary is a specialized type of defined-contribution plans. There does not appear to be a need to refer to such plans in the SNA. ESA uses the same definitions for defined benefit and money purchase is the SNA.

39. In GFSM a defined-benefit scheme is one in which "the level of retirement benefits promised by the employer to participating employees is guaranteed and usually is determined by a formula based on participants' length of service and salary. The liability of a defined-benefit scheme is the present value of the promised benefits." A defined-contribution scheme is one in which "the level of contributions to the fund by the employer is guaranteed, but the benefits that will be paid depend on the assets of the fund. The liability of a defined-contribution scheme is the current market value of the fund's assets." [Both citations are from GFS An2.21]

40. Although these definitions differ slightly, there is a reasonable consensus about the characteristics of a defined-contribution scheme. Some definitions of defined-benefit schemes attempt to state their characteristics; others simply define them as schemes other

[6] Defined contribution is preferred only because it is in common use, not because it is descriptive. The contributions to defined-benefit schemes are defined just as well as the contributions to defined-contributions schemes.

than defined-contribution schemes. The latter course is recommended because it eliminates the possibility of a scheme not satisfying the definition of either type. The OECD definition of a defined-contribution plan *a pension plan by which benefits to members are based solely on the amount contributed to the plan by the sponsor or member plus the investment return thereon* is satisfactory and somewhat better than the current definition in the SNA of a money purchase plan.

2. DEFINED-CONTRIBUTIONS CHARACTERISTICS

41. Although the definition of a defined-contribution scheme is succinct, the full ramifications are not necessarily obvious. It is useful to elaborate the characteristics of a defined-contribution scheme in some detail:

- Contributions are made by the participant and/or the participant's employer on behalf of the participant to the operator of the scheme. The operator could be the employer, an autonomous pension fund established and managed by the employer, or a money manager.

- The amounts contributed are deposited in an account in the name of the participant or otherwise identified as an amount over which the participant has a claim. Usually the participant does not have legal title to the assets in this account. Instead the legal owner acts as a trustee with a fiduciary responsibility to the participant.

- The amounts contributed are invested in some manner, usually by purchasing financial assets but investments in nonfinancial assets are also possible. The investments may be specified by the regulations of the scheme or made at the direction of the participants.

- Results from those investments are received and added to (or subtracted from) the participant's account or otherwise identified as subject to claim by the participant. Investment results normally consist of property income and holding gains/losses, but in rare cases net operating surpluses from rental property might be included,

- If the scheme is sponsored by an employer, that employer has no legal or financial responsibility after it has made its contribution in accordance with the employment contract unless it retains control of the funds or has fiduciary and/or legal responsibility for the oversight of the trustee or other third party money manager.

- At some point, legal ownership of the assets is transferred to the participant or the survivors of the participant. The transfer may be at a specified age, at retirement, or some other time. The transfer may be in a lump sum or take place gradually. If the investments receive a favorable tax treatment, then the time and method of transfer may also be subject to tax laws and regulations.

- The amount transferred to the participant (or the participant's beneficiaries) or the amount held by a trustee for the benefit of the participant is always exactly equal to the sum of all contributions plus the sum of all investment results. The employer has no responsibility to make additional contributions in the case of poor investment results.[7] The participant never suffers a loss before obtaining legal ownership of the assets because of death, unemployment, disability, or other reason. Conversely the participant never receives a gain from long life, continued employment, or other reason. Upon gaining ownership of the assets, the participant might be required to use them to purchase an annuity, in which case there is risk involved concerning the amount that will eventually be received by the participant free of any restrictions.

- The liability of the scheme is always exactly equal to the sum of all contributions plus the sum of all investment results, less the sum of all withdrawals by the participant or survivors of the participant.

42. From these characteristics, it is apparent that no insurance risk is involved with defined-contribution schemes. They are always saving schemes; they should not be classified as social insurance or other insurance. Contributions to these schemes are not social contributions and payments by the scheme are not social benefits.

3. Special cases of defined-contribution schemes

43. It is likely that a defined-contribution scheme will be managed by a third-party money manager. A separate money manager is evidence that the scheme is funded and the participant has a claim on the amount in the account. Non-autonomous pension funds may not have such third-party management but are treated in the SNA as funded pension schemes for which the sponsor has a liability. The value of that liability depends on the nature of the benefits promised and not on the autonomy of the management. Thus, a non-autonomous pension scheme that is otherwise identical to a defined-contribution pension scheme managed by an independent insurance or other enterprise should be treated as a defined-contribution scheme.

44. It is possible for the above description of a defined-contribution scheme to be true with the exception of the transfer of the legal ownership of the funds. That is, the participant's claim could be equal to the sum of contributions plus investment results and this amount could be maintained in a separate account in the name of the participant, but the participant may have a right to the funds only to the extent he/she retires and lives long enough to transfer the legal ownership of the funds according to the regulations governing the scheme. If the participant dies before that point, the right to the remaining funds in the account might revert to the employer or money manager. Any such limitation on the rights to the funds in the participant's account would constitute an insurance risk and a reduction in the value of

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[7] A borderline case may result if the employer guarantees some minimum rate of return on the investments, but the rate is so low that the guarantee is unlikely ever to be called.

the participant's claim, which would have to be determined on an actuarial basis. Such a scheme would be treated as a defined-benefit pension scheme.

45. Some pension schemes may be defined-contribution schemes except for some minor restrictions. Most likely is a restriction that an employee must remain an employee for a minimum time before gaining an unconditional claim to the funds in the account. After this initial period passes there would be no doubt about the defined-contribution nature of the scheme, but some employees will not satisfy the condition and lose their rights to some or all of the contributions made by the employer during that conditional period. The scheme could be treated as a defined-contribution scheme, but any forfeited amounts could be recorded as transfers from the participants to the employer.

46. A guarantee by the employer of a minimum investment performance normally would constitute an insurance risk and require treatment as a defined-benefit scheme unless the guarantee is such that it is likely never to be invoked. For example, a range of investment vehicles may be offered to the participant but the employer may guarantee a minimum rate of return regardless of the choices made. In this situation, the employer would retain a liability contingent on the actual performance of the investments and the scheme is a defined-benefit scheme. If the investment vehicles available to the participant include such a minimum performance guarantee, however, the employer would not retain any liability with respect to the scheme. For example, a participant may be able to invest in inflation-adjusted government bonds. There is, however, some room for uncertainly. If the investment instrument were a security issued by the employer only to the participants of the scheme, then it would constitute a guarantee by the employer to the participants.

47. If a nominally funded pension scheme is sponsored by a non-government employer and the only investment possible by the participants is in securities issued by the employer, then the scheme is not treated in the SNA as a separate institutional unit [SNA 4.98]. If the scheme consisted of individual accounts and the liability of the employer is restricted to the market value of the securities in each account, then the scheme would still be treated as defined-contribution scheme.

48. The description of a defined-contribution scheme above suggests that a separate set of assets does not have to exist for each participant; it is possible for the scheme to be "notionally" funded. For example, instead of making an actual contribution to the scheme, the employer could simply recognize a liability to the participant equal to the contribution without segregating its assets in any way. The participant would then have a financial claim against the employer equal to the contribution, but there would be no specific assets subject to a claim.

49. As the SNA is currently written, however, such a scheme would be a defined-benefit scheme: "unfunded occupational pension schemes…are by definition defined benefit schemes" [SNA 13.88]. By implication, all defined-contribution schemes must be funded, which is defined as the existence of assets in the name of the scheme. This interpretation is derived from the current position of the SNA that there is no liability related to an unfunded

pension scheme. GFSM disagrees with this position and recognizes a liability for unfunded pension schemes. Resolving these two positions is one of the central questions of this electronic discussion group. If the GFSM position were to be adopted in the SNA, as this author believes it should be, then unfunded defined-contribution schemes would be admissible.

III. Conclusions

50. From the above discussion, a number of conclusions have evolved. The more important are summarized in the following paragraphs.

51. Social insurance schemes should be defined in all manuals as *collectively organized insurance schemes in which employees and/or others are obliged or encouraged to spread risk by taking out insurance against certain social risks. Such schemes require contributions, actual or imputed, to secure entitlement to social benefits. A scheme is collective if participants either do not take out individual policies or one of the three conditions in paragraph 13 applies.* In the formal statement of this definition in a manual, the three conditions regarding individual policies would, of course, have to be enumerated in detail.

52. The primary differences between the social and other insurance are: (a) social insurance schemes involve a group of policyholders acting collectively, but other insurance involves policyholders acting individually; (b) social insurance pays only social benefits related to the type of social risks specified in SNA 8.56, but other insurance can pay claims with regard to many other kinds of risk; and (c) participation in social insurance is obligatory or encouraged, but participation in other insurance is by the free will of the individual policyholder.

53. A saving scheme that does not spread risk is not an insurance scheme. No insurance risk is involved with defined-contribution schemes. Defined-contribution schemes are saving schemes; they should not be classified as social insurance or other insurance.

54. Social security schemes are social insurance schemes but not saving schemes.

55. The liability of a defined-contribution scheme is always exactly equal to the sum of all contributions plus the sum of all investment results, less the sum of all withdrawals by the participant or survivors of the participant.

56. If the SNA is revised to recognize liabilities with respect to unfunded pension schemes, then defined-contribution schemes could be unfunded. Until then, a pension scheme can be a defined-contribution scheme only if it is funded. GFSM already recognizes these liabilities.