SNA News

Number 11

May 2000

An information service
of the Inter-Secretariat Working
Group on National Accounts
(ISWGNA)

IMPLEMENTING THE 1993 SNA: MILESTONE ASSESSMENT – ISWGNA VIEW ON
FURTHER DEVELOPMENT: CONCEPT AND SCOPE
By Paul McCarthy, OECD (For Information)

Background

At its meeting at the end of February 2000, the UN Statistical Commission discussed the 1993 System of National Accounts (1993 SNA) implementation "milestones". In their current format, the milestones simply indicate the extent to which national accounting tables have been produced rather than the extent to which 1993 SNA has actually been implemented. Therefore, the discussion also considered the issue of how to assess when a country has implemented 1993 SNA. Three main questions were discussed:

- indicators of whether a country compiles its accounts according to 1993 SNA concepts

- determining whether a country produces accounts which cover the major economic activities (ie, the "scope" of the accounts)

- measuring the data quality.

The ISWGNA discussed these issues at its meeting in early April 2000. This note briefly outlines the issues underlying the ISWGNA thinking on the first two of these points (the third point is currently being investigated by the IMF as part of its work on the Special Data Dissemination Standard [SDDS]).

1993 SNA concepts

The main basis for assessment is the extent to which the 1993 SNA conventions, accounting rules and classifications are being used. In practice, this should not just apply to GDP; the whole accounts need to be examined for compliance. However, the ISWGNA thought that compliance with the 1993 SNA could be assessed reasonably by concentrating on the major conceptual differences between the 1993 SNA and the 1968 SNA that affect GDP and GNI. The logic is that if the majority of these changes have been implemented then it is likely that other relevant changes have also been introduced.

The following are the key concepts the ISWGNA thought were relevant in making an assessment.

Elements affecting the level of GDP

Gross capital formation (GCF)/output

Is government defence expenditure on fixed assets that can be used for civilian purposes included in GCF?

Is consumption of fixed capital included on all government fixed assets (roads, dams and breakwaters and other forms of construction except structures)?

Is all mineral exploration (successful and unsuccessful) capitalised?

Is expenditure on computer software purchases included in GCF and on software development included in output?

Is expenditure on entertainment, literary or artistic originals included in GCF and on their development included in output?

Is expenditure on valuables included in GCF?

1993 SNA extends the production boundary of households to include goods that are not made from primary goods – are these goods included in output?

1993 SNA extends the production boundary of households to include goods that are processed from primary goods which are not self-produced – are these goods included in output?

Is the natural growth of cultivated forests included in output and GCF?

Volume estimates

Are volumes estimated using a chaining procedure with annually changing weights?

Social contributions/insurance

Are un-funded social contributions (for sickness, unemployment, retirement etc) by enterprises imputed as compensation of employees and included as contributions to social insurance?

Do life insurance estimates include premium supplements rather than being based just on premiums less claims?

Elements affecting GNI

Are reinvested earnings estimates included in the rest of the world account?

Are foreign workers' remittances excluded?

Elements not affecting the level of GDP/GNI

Final consumption

Is government final consumption expenditure broken down into individual and collective consumption?

Obviously, it is difficult to objectively identify the boundary beyond which a country can be considered to have "implemented the 1993 SNA concepts". It is clear that it is not essential for all the above components to be implemented for a country to comply with the 1993 SNA requirements. However, for a country to not comply with a significant number of them would lead to doubts about the extent to which it has implemented the 1993 SNA in practice.

Scope

The "milestone assessment" was based on the extent to which data from 6 groups of tables were reported to the UN Statistics Division. One unintended side effect was that some countries saw the current milestones as indicating the order in which additions to national accounts had to be approached.

The ISWGNA considers that splitting the milestones into a larger number of items, all of which score one point in assessing the degree

of implementation, would be a practical alternative. An implication is that each "point" is of equal importance or would take the same amount of work to implement (neither of which is true). However, the ISWGNA considered that, by having the potential to score more than 30 points rather than the current scale of only 6, the impact of such differences would be much less marked than is currently the case, thereby addressing the issue of the "non-linearity" of the current milestones, which has been a source of concern to some countries.

The ISWGNA decided that a minimum set of annual data is required for a country before it could be considered as having "implemented the 1993 SNA" and that certain quarterly accounts should be "recommended" because of their importance in assessing where an economy is headed. The data sets identified are shown in the following table, which is presented in terms of the tables collected in the UN questionnaire.

Min req't   Table is required before the 1993 SNA is considered to be implemented

Recomm   Highly recommended for compilation by all countries

Desirable   Useful data which should be compiled if possible

*   Other data sets which would count in assessing the degree of 1993 SNA implementation.

Tables shown without a number are not currently included in the annual SNA questionnaire

Scope of the compilation of 1993 SNA tables and accounts

Numbers of related tables of UN questionnaire on SNA	SNA segments / Name of SNA segment	Annual accounts	Quarterly accounts
Value added, GDP and Employment			
2.1	Value added and GDP in current prices by industry	Min req't	Recomm
2.2	Value added and GDP in constant prices by industry	Min req't	Recomm
1.3	Expenditures of the GDP in current prices	Min req't	Recomm
1.4	Expenditures of the GDP in constant prices	Min req't	Recomm
2.3	Value added components by industry, current prices	Min req't	Desirable
	Employment by industry	Min req't	Recomm
Integrated accounts and tables, including integrated satellite accounts			
1.5/4.1	Accounts for the total economy	Min req't	Recomm
	Supply and use table	Recomm	Desirable
5.1	Cross-classification of output/value added by industries and sectors	Recomm	
	Integrated economic accounts	*	
	Tourism accounts	*	
	Environmental accounts	*	
	Social Accounting Matrices / Other socioeconomic accounts	*	
Purpose classification of expenditures			
3.1	General government final consumption (and other) expenditure by purpose in current prices	Recomm	
	General government final consumption expenditure by purpose at constant prices	*	
3.2	Individual consumption (and other) expenditures by purpose in current prices	Recomm	
	Individual consumption expenditures by purpose at constant prices	*	
	Purpose classification of intermediate and final consumption across all sectors	*	
Sector accounts (until net lending)			
4.2	Rest of the world accounts (until net lending)	Min req't	Recomm
4.3	Non-financial corporations sector accounts (until net lending)	*	
4.4	Financial corporations accounts (until net lending)	Recomm	
4.5	General government sector accounts (until net lending)	Recomm	
4.6	Household sector accounts (until net lending)	*	

SNA segments		Annual accounts	Quarterly accounts
Numbers of related tables of UN questionnaire on SNA	Name of SNA segment		
4.7	Non-profit institutions serving households sector accounts (until net lending)	*	
Financial and capital stock accounts and tables			
4.1-4.7	Financial accounts for all sectors	*	
	Balance sheets, revaluation and volume changes in asset accounts	*	
	Asset accounts for financial assets	*	
	Asset accounts for produced assets	*	
	Asset accounts for non-produced assets	*	

Conclusion

The ISWGNA will discuss the above issues again at its next meeting in September 2000 before deciding on its recommendations to the 2001 meeting of the UN Statistical Commission. Any comments or feedback on anything presented in this note should be sent to OECD (currently Chair of the ISWGNA) by the end of August in time for it to be circulated prior to the September ISWGNA meeting. The e-mail address for comments is **paul.mccarthy@oecd.org**.

IMPLEMENTATION OF THE NEW EUROPEAN SYSTEM OF ACCOUNTS (ESA 1995)
By Brian Newson, Eurostat
(For Information)

Starting in the second quarter of 1999, Eurostat received data on the national accounts of Member States based on the new European System of Accounts (ESA 1995).

ESA 1995 is the European version of the world System of National Accounts (1993 SNA). It is almost totally consistent with 1993 SNA as regards the definitions, accounting rules and classifications. It nevertheless incorporates certain differences, particularly in its presentation, to be more in line with its use within the European Union.

To ensure that the methodological provisions set out in ESA 1995 are strictly applied, the Council of the European Union decided to give a solid legal basis; ESA 1995 was thus adopted in the form of a Council Regulation dated 25 June 1996, applicable to all Member States.

In addition to the changes in methodology, revisions have also been made as a result of work on improving the real comparability in practice of GNP (gross national product). In particular, efforts have been made to ensure better coverage of all economic activities, as part of the work on exhaustiveness carried out on a harmonised basis.

The methodological changes in ESA 1995, as in 1993 SNA, affect the whole range of statistics in the sector and industry accounts and the main concepts of final consumption, gross capital formation, imports and exports. However, they have a limited impact on gross domestic product (GDP), because many of the changes offset each other at the level of the total economy.

Taking 1995 as the reference year, the Table shows the differences between ESA79 data supplied in 1998 and ESA95 data on GDP and the main aggregates.

Differences in % between the data in ESA79 and in ESA95

	GDP			Final consumption expenditure	Gross fixed capital formation	Exports	Imports
	Total	Concepts	Statistical sources and other elements				
Euro-zone	+ 1.9	-	-	+ 1.1	+ 7.2	+ 2.5	+ 4.1
European Union	+ 2.0	-	-	+ 1.1	+ 7.2	+ 2.2	+ 3.4
Belgium	+ 0.8	+ 1.6	- 0.8	- 2.0	+ 14.3	+ 5.7	+ 6.6
Denmark	+ 6.4	+ 4.1	+ 2.3	+ 4.3	+ 17.1	+ 5.3	+ 5.8
Germany	+ 2.3	+ 1.1	+ 1.2	+ 1.3	+ 6.4	+ 5.1	+ 5.5
Greece	+ 1.3	-	-	+ 3.3	-	+ 12.7	+ 1.2
Spain	+ 4.4	+ 1.5	+ 2.9	+ 3.2	+ 10.3	- 0.6	+ 0.6
France	+ 1.2	+ 0.2	+ 1.0	+ 1.2	+ 6.7	- 3.2	+ 1.0
Ireland	+ 0.2	- 3.0	+ 3.2	+ 5.1	+ 5.8	+ 0.3	+ 6.9
Italy	+ 0.9	+ 1.7	- 0.8	- 0.4	+ 7.0	- 1.7	- 1.5
Luxembourg	+ 3.8	-	-	+ 7.2	- 5.7	+ 11.2	+ 12.3
Netherlands	+ 4.1	+ 3.3	+ 0.8	+ 2.7	+ 13.7	+ 12.8	+ 15.8
Austria	+ 2.0	-	-	+ 2.0	+ 3.5	+ 0.3	+ 1.3
Portugal	+ 1.9	-	-	+ 0.3	+ 3.8	+ 0.9	- 1.2
Finland	+ 2.1	-	-	+ 0.5	+ 12.9	+ 1.0	+ 2.2
Sweden	+ 3.4	+2 to +2.5	+1 to +1.5	+ 1.8	+ 11.1	+ 1.6	+ 1.1
United Kingdom	+ 1.6	+ 0.8	+ 0.8	+ 1.0	+ 4.9	+ 0.0	+ 0.0

Source Eurostat

The causes of the differences vary from one Member State to another. Some Member States have gradually incorporated the new statistical sources in recent years, even before the changeover to ESA 1995; in these countries, therefore, the impact has been limited to changes in concepts. In other Member States, however, all the changes were made at the same time as the new system was introduced.

With regard to the main aggregates of GDP, the biggest changes for many countries come from the new, clearer breakdown in SNA and ESA between final consumption expenditure made by households and by government. There is a general decline, sometimes quite significant, in the final consumption expenditure of households, offset by a matching rise in general government consumption.

The most consistent change in GDP stems from a large increase in capital formation, due primarily to the extension of the notion of investment, but also to the use of better statistical sources.

In the EU countries there are also significant increases in imports and exports, although the impact on the external trade balance, and hence on GDP, is limited (see the Table).

The European Commission (Eurostat) has data on the main changes between ESA79 and ESA95 having an influence on the level of GDP or National Income, amongst which the following proved to have the strongest impacts:
- the recording of certain types of intangible assets like computer software in capital formation and no more in intermediate consumption ;
- the new concept of reinvested earnings of foreign direct investment ;
- the new valuation method for the output of non-life insurance which incorporates now the income from the investment of insurance technical reserves
- the recording of a consumption of fixed capital for structures built by government units such as roads. dams or dikes ;
- the recording of military equipment or vehicles similar to those used by civilians in gross fixed capital formation rather than in intermediate consumption ;
- the recording of entertainment, literary, artistic and audiovisual originals in gross fixed capital formation ;
- a slight change to the frontier in ESA between market and non-market output ;
- the recording of interest on an accrual basis ;
- the broadening of the concept of wages and salaries in kind

IMPLEMENTING THE 1993 SNA: HOW TO DEAL WITH REVISIONS?
By Nils Maehle and Sarmad Khawaja, IMF   (For Information)

Implementing the 1993 SNA requires that previously published national accounts data for past years be revised to achieve consistent time series. Further, that a carefully managed revision policy is needed to minimize potential inconvenience for users. Ideally, such a revision policy should be part of an existing policy, and if such a policy were not in place, introduction of the 1993 SNA would be a good occasion to introduce one. Essential features of a well-designed revision and dissemination policy are predictability and openness, advance notice of causes and effects, and explanation, as well as easy access to sufficiently long time series of revised data.

Introduction
Implementing the new concepts, definitions, and classifications of the *1993 SNA* requires revisions of previously published data because most users demand consistent time series. It is important to emphasize that these revisions are undertaken to provide users with the substantial analytical benefits of the new system without introducing breaks in the time series. Consistent time series are essential for most uses of national accounts data, including macroeconomic policy formulations, business cycle analyses, and forecasting. For these uses, any break in the time series will seriously undermine the usefulness of the series.

Despite the added analytical benefits for users of the new system, the revisions to the past data may draw criticism if not properly handled. Revisions to past data are inconvenient to users because they entail revisions to user's data bases and applications. More importantly, frequent revisions, particularly to the data for the most recent periods, may cause users to feel more uncertain about the current economic situation and thus uncertain about what policy actions should be taken. Some of this uncertainty may be unavoidable, merely revealing the fact that the information base for the estimates for the most recent periods is limited, and thus that the numbers should be used with care. However, some of the uncertainty may also be caused unnecessarily by the way the revisions are carried out.

To avoid unnecessary criticism, a carefully managed revision policy is needed. Ideally, the revisions related to implementing the *1993 SNA* should be carried out as part of a well-established revision policy for incorporating

improvements to both source data and estimation methods. If such a revision policy were not in place, introduction of the *1993 SNA* would be a good occasion to introduce one.

Revision policies in general
Revisions are undertaken to provide users with data that are as timely and accurate as possible. Resource constraints, in combination with user needs, cause tension between timeliness of published data; on the one hand, and reliability, accuracy, and comprehensiveness on the other hand. To reduce this tension, typically preliminary data are compiled that later are revised when more and better source data become available. Revision is the vehicle to incorporate new and more accurate information into the estimates without introducing breaks in the time series.[1]

Typically, there are three main revision cycles related to three 'waves' of statistical source data. First, there is a quarterly revision cycle determined by the evolution of the quarterly national accounts source data. Second, there is an annual revision cycle arising from the incorporation of the annual source data. Because of the recurrent nature of these revisions and their frequency, they can be dubbed 'regular' revisions. Third, there may be a revision cycle originating from incorporation of data from 'benchmark censuses' that are conducted with intervals of, say, five or ten years. Because of their significance, these revisions are often dubbed 'major' revisions. These major revisions are usually also used to introduce conceptual changes and changes resulting from improved compilation methods or new international guidelines like the *1993 SNA*, as well as other expansions to the accounting system.

A crucial part of a well-established and transparent revision policy is devising an appropriate production and release schedule. Revisions are not without problems. Large data revisions not related to major conceptual changes can result in mistrust, while frequent but small revisions are inconvenient for users. In addition, constantly revising the estimates is

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[1] For a more comprehensive discussion of revisions and revision policies in general see the draft IMF *Textbook on Quarterly National Accounts Compilation*, which is available on the IMF's Website (**www.IMF.org**).

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costly. The temptation to suppress needed revisions, however, may also lead to criticism from users. Not only may the magnitude of later revisions be increased, but suppressing revisions may also reduce the usefulness and trustworthiness of the data. Unjustified differences between national accounts estimates and their source data may cause users to doubt the competence of the national accounts compilers, with serious, and justified, criticism of the national accounts data as a result.

To minimize the number of revisions needed, without suppressing information, it is advisable to coordinate statistical activities. The revision schedule is, or should be, largely driven by arrival of source data, and coordinating their arrival would help reduce the number of revisions needed substantially. Tying introduction of new concepts and methods, or new international guidelines such as the *1993 SNA* to the time of other planned revisions would also help reduce the number of revisions. Although the timing of censuses and new surveys may not be at the discretion of national accountants, they may have a strong say in this, and they are well advised to use their influence to achieve maximum consistency with their revision policy.

In addition to developing a production and release schedule, other important elements of a well-established revision policy are:

*   An optimal balance between timeliness and accuracy of the initial estimates.
*   Release dates that are well known and published through an advance release calendar, as prescribed by the IMF's Special Data Dissemination Standard (SDDS) and General Data Dissemination System (GDDS).
*   Release and revision dates coordinated with the arrival of major data sources and the timing of preparation important official economic policy documents.
*   Candid and easily available documentation of sources and methods showing the main flows of source data leading to revisions.
*   Provide information on the accuracy of the estimates and the degree of potential future revisions (e.g., through records of past revisions).
*   Provision of sufficiently long, consistent time series
*   Provision of detailed data in an easily accessible format (e.g., electronically).
*   Publication of tables showing the revisions to the data with accompanying text explaining their causes

*   Advance notice and training to users of the national accounts data.

Revision strategies for implementing the 1993 SNA

Implementing major new guidelines like the *1993 SNA* causes particular challenges compared to regular revisions. Ideally, all changes related to the implementation of the *1993 SNA* would be incorporated in one single comprehensive revision. However, for most countries, a full implementation of the *1993 SNA* would involve a substantial expansion of their current national accounting system. Thus, resource and source data constraints may force many countries to adopt a phased implementation process, in which various aspects of the *1993 SNA* are implemented over a range of years. Such a phased process, while admittedly easier to implement, may result in a prolonged period of potentially damaging instability in main national accounts aggregates.

A phased implementation process requires a carefully planned and managed revision policy. Before embarking on a phased implementation process, it is crucial to consult with major users to get their support. To avoid unnecessary instability in the data it is preferable that subsequent phases do not affect the same parts of the system. For instance, the repercussions of introducing income accounts first and financial accounts later may be limited. However, because of the integrated nature of the system, revisions, or additions, to different parts of the system may necessitate revisions to other parts of the system. It is not advisable, however, to try to reduce the number of revisions by not carrying the repercussions of a revision in one part of the accounting system through to other related parts of the system. The resulting inconsistencies between different parts of the accounting system may again significantly increase policy makers' uncertainty regarding the actual economic situation, with justifiable criticism as a result. Introduction of subsequent phases in tandem with a program of undertaking other major revisions to the data will also help reducing the number of revisions needed.

Each time major changes are introduced particular care should be exercised to prepare users in advance. This ensures that they are properly informed of the reasons for the revisions and the quality improvements that they will entail. In that context, it may be useful to develop a program of training and educating users, to make them, as much as possible, appreciative of the advantages of the new data.

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IMPLEMENTING THE 1993 SNA: BACKWARD REVISION OF NATIONAL ACCOUNTS DATA

By Barbro Hexeberg, World Bank (For Information)

To maintain consistent time series, a backward revision of national accounts data is required as a part of the implementation of the 1993 SNA. For the same reason, periodic major backward revisions are required to incorporate data from periodic "benchmark censuses", new source data, as well as to implement new and better estimation methods. These article aims at providing a brief description of some of the technical issues involved in obtaining revised consistent time series within the resource and source data constraints facing most compilers.

Introduction

User needs for long time series require that revised data for several years are compiled and released simultaneously when major revisions are conducted. This is because consistent time series of national accounts data are essential for macroeconomic policy formulation, macro-economic model building, as well as for research and other analytical work on past economic development. For most users access to revised data for one or a few years will only be of limited use, unless they themselves are able to link the revised data to previously published data for the earlier years.

However, compiling long time series of revised detailed national account estimates is a time consuming and expensive task. Thus, initial releases of revised data tend to cover a limited number of the most recent years only, with subsequent compilation and releases of revised data for the earlier years at a later stage. Country practice in this respect differs substantially, depending on domestic user needs and resource constraints. For many users, a minimum time series of 10 years are required in order to carry out meaningful time series analyses.

Recalculating historical series

Ideally, both the revised time series covered in the initial release and the subsequent backward estimates for earlier years should be compiled from scratch based on a set of detailed source data, that for the complete time period are consistent with the 1993 SNA's concepts and classifications. In practice, however, this tends to be impossible since some required source statistics may not be available, or too costly to re-generate, for some or several of the earlier years. Furthermore, if the implemented accounting system covers a substantial part of the integrated institutional sector accounts or integrated annual supply and use tables, the

recalculation process will have to involve a costly and time consuming reconciliation process. Thus, at the most detailed compilation level the revised time series partly or dominantly may have to be constructed using a benchmark-indicator approach combined with a more or less mechanical reconciliation of the accounts.

A major revision may involve establishing new series for newly introduced concepts or parts of the SNA not previously implemented, as well as adjusting previously published data to incorporate:

- Changes to existing concepts, definitions, and bookkeeping conventions arising from new international guidelines
- Changes in classifications
- New estimation methods
- Correcting past known errors
- New source data, incl. new periodic benchmark censuses/surveys

Some of these changes may easily be implemented directly from existing data for the complete time series, or important parts of the time series. For example, some changes to concepts, definitions, or classifications merely involve a regrouping of items that can be separately identified from the existing national accounts data, or from the existing source data. Similarly, changing from constructing aggregated volume measures as fixed base Laspeyres indices/constant price series to annual chain-linked Laspeyres or Fisher indices merely involves changing the higher-level aggregation formula. This change can in principle be implemented without any changes to the underlying detailed data, as long as the corresponding detailed current price data are available. Also past know errors can, for individual series, in most cases be corrected directly. Finally, new source data for the latter part of some series, indicating that the estimated level of the series is wrong, can often be incorporated directly to adjust that part of the series covered by the new source. Revised data for earlier periods may have to be constructed by splicing in the previously compiled data using a benchmark-indicator approach.

Also other changes may in principle be possible to implement directly, however, the cost might be too high. One example is changing the industry classification from ISIC

rev. 2 to ISIC rev. 3. Cost constraints may often render this approach unfeasible in practice. For that reason, the solution might be to recompile data from scratch for one, or a few, "benchmark" year(s). Revised data for the other years will then have to be constructed using a constrained benchmark-indicator approach to assure the same total.

Finally, some changes may only be possible to implement directly for one, or a few, "benchmark" year(s). For instance, data from new periodic benchmark censuses/surveys can by nature only be incorporated directly for those benchmark years. In those circumstances revised data for the other years will have to be constructed using a benchmark-indicator approach.

The benchmark-indicator approach
Generally benchmarking means combining a time series of data (indicator) with more reliable level-data from one or several benchmark years for the same variable. In the benchmarking process the benchmark(s) solely determines the overall level of the series, while the indicator determines the (short-term) movements. Thus, only the movements, and not the overall level, of the indicator are of any importance. In the context of conducting major revisions the indicator may be:

- the old national accounts estimates for the series;
- the original source data for the series;
- recompiled source data for the series; or
- a related series

For annual data, four main benchmarking situations can be distinguished. The first and simplest case arises when benchmark data for only a single year are available. The second, and slightly more complex case, arises when benchmark data for two years separated in time are available. The third case arises when benchmark data for more than two years separated in times are available. The last, and somewhat different case, arises when "benchmark" data for a series of adjacent years are available.

(i) The case of a single benchmark year
Benchmarking with a single benchmark year means to multiply the complete indicator series by a single adjustment factor derived as the ratio between the benchmark and the indicator for that single benchmark year (the Benchmark-to-Indicator (BI) ratio).
Technically this is the same as using the growth rates of the indicator to extrapolate

backward and forward from the given benchmark level. This simple method may yield reasonable historical time series if it is sensible to believe that the indicator and the target variable are moving in parallel. Thus, this method is not recommended if the BI ratio is believed to change significantly over time.

(ii) The case of two separate benchmark years
Two separate benchmark years mean that two different BI ratios can be derived. Assuming that the BI ratio has changed from the first benchmark year to the second benchmark year in a smooth manner, a time series of BI ratios for the intervening years can be constructed by a simple linear interpolation process. That is by using the geometric average change in the BI ratio from the first to the second benchmark year to extrapolate forward from the BI ratio for the first benchmark year. The revised estimates for the intervening years can then be constructed by multiplying the indicator for those years with the interpolated BI ratio series. Revised estimates for years before the first benchmark year can be constructed simply by multiplying with the calculated BI ratio for the first benchmark year, and revised estimates for years after the second benchmark year by multiplying with the calculated BI ratio for the second benchmark year. A critical assumption then is that the BI ratio is stable for the years before the first benchmark year, and for the years following the second benchmark year.

(iii) The case of more than two separate benchmark years
This case differs from the case with two separate benchmark years in two important aspects. First, the BI ratios for the intervening years can no longer be constructed using a simple linear interpolation process. Instead a constrained least-square minimization interpolation process should be used to generate an as smooth as possible time series of BI ratios. Second, the change in the BI ratio from benchmark year to benchmark year may follow an identifiable trend. In that case, it may be preferable to use the identified trend change in the BI ratio to extrapolate backward the first observed BI ratio and to extrapolate forward the last observed BI ratio.

(iv) The case of "benchmark" data for a series of adjacent years
This typically occurs when new source data for the latter part of a series becomes available, indicating that the previously estimated level of the series is wrong or the new data are measured on a new basis. Revised data for

years not covered by the new source series will then have to be constructed by splicing in the previously compiled data. The simplest way of doing this would be to use the growth rates of old data to extrapolate backward from the first year covered by the new source series; that is multiplying all years in the old series up to the first benchmark year covered by the new series with the BI ratio for the first benchmark year. However, since the new and old series overlap for several years, a time series of BI ratios can be calculated, which may reveal that the year-to-year change in the BI ratio for those years have followed an identifiable trend. Then, again it may be better to use the identified trend change in the BI ratio to extrapolate backward from the BI ratio observed for the first overlapping year.

Constrained benchmark-indicator approach assuring the same total

If the benchmark-indicator approach is used to incorporate classification changes backwards, it may be essential to secure that the procedure does not change the total. This can be obtained in several manners. The simplest way would be to use a two-step approach. The first step involves adjusting each individual series, and in the second step the difference between the sum of the adjusted and the original data is removed by simple pro rating. This simple method should provide the best result in the case of a single benchmark year, but may introduce unnecessary disturbances to the year-to-year growth rates in the case of multiple benchmark years. In that case, the constrained least-square interpolation process mentioned above can be augmented by introducing a "keeping the total requirement" as an additional constraint.

EXPRESS YOUR OPINION! IT IS IMPORTANT FOR DEVELOPING FURTHER THE 1993 SNA!

The SNA News and Notes has already announced the way you can express your opinion. Three electronic discussion groups now exist in the areas of
- Treatment of nominal holding gains and interest on financial assets
  (**www.WorldBank.org/data/working/iswgna_background.html**)
- Cost of transferring ownership of assets
  (**www.oecd.org/std/nahome.htm**) - click on the button "Papers under discussion".
- How to treat interest in macroeconomic statistics that record transactions on an accrual basis
  (**www.imf.org/external/np/sta/na/interest**)

The ISWGNA would like to draft a conclusion on the basis of the opinions sent to the discussion groups. It is scheduled that the EDGs will be closed on September 1, 2000. Please send your letter expressing your opinion or the opinion of your organization to the addresses above before that date. Your cooperation is highly appreciated.

FIRST UPDATE OF THE 1993 SNA OFFICIALLY ADOPTED
By Cristina Hannig, UN Statistics Division   (For Information)

The first update of the 1993 SNA regarding the treatment of financial derivatives has been adopted by the United Nations Statistical Commission and it is now being prepared for official publication. In accordance with the procedures set out by the Commission the updated text was circulated in June 1999 to all national statistical offices for their comments and thereafter in October 1999 the final revised text was sent to the 24 members of the Commission for their final approval. In a

letter dated 8 February 2000 to all 24 member of the Commission, the Director of the UNSD, Mr. Hermann Habermann announced that this change of the 1993 SNA was brought to a conclusion in accordance with the update procedures set out by the Commission. Furthermore, the thirty-first session of the Statistical Commission in early March 2000 took note of this update as announced by the Chair of the ISWGNA when introducing the report of the ISWGNA to the Commission.

UP-DATE ON ECONOMIC AND SOCIAL CLASSIFICATION
By Mary Chamie, UN Statistics Division   (For Information)

A newly updated and redesigned UN Website for International Economic and Social Classifications continues to be maintained at the following address:
www.un.org/Depts/unsd/class It provides, through its Registry, access to classifications used in the implementation of the 1993 System of National Accounts, among others.
Classifications presented through the Registry are: the International Standard Industrial Classification of All Economic Activities (ISIC), the Classifications of Expenditure According to Purpose (COFOG, COICOP, COPNI and COPP), the Central Product Classification (CPC), and the Standard International Trade Classification (SITC). Descriptive profiles of these and other classifications are also provided at this Website. The site furnishes on-line access to ISIC in English, Spanish and French. It also provides access to CPC in English and Spanish. The remaining classifications are

presented in English.   Additionally, the registry provides search capabilities for reading explanatory notes, alphabetical indexes, and correspondences with other international classifications, as available.

In addition, the Statistical Classifications Section also provides technical assistance to users of the above classifications through the Classifications Hotline what may be reached at chl@un.org.   In particular, it provides assistance in the interpretation and coding of the above classifications. It also disseminates databases and publications containing these classifications along with relevant tools such as correspondence tables and indexes in English, and where available, in other official UN languages. The Hotline also welcomes comments or requests relating to the content, structure or implementation of these classifications.

MEETINGS, SEMINARS

27-29 June 2000, Workshop on the Link between the Balance of Payment and the 1993 SNA , UN-ESCWA, Beirut Lebanon

10-12 July, 2000: United Nations Expert Group Meeting to Review the Draft Manual on Statistics of International Trade in Services, to be conducted and hosted by UNSD, New York, USA

12-13 July, 2000: Meeting of the Task Force on Statistics of International Trade in Services (convener: OECD), hosted by UNSD, New York, USA

21 September 2000: Workshop on Economically active population, Employment, Unemployment and underemployment, (ESCWA Region), Cairo, Egypt

20 – 24 November 2000: UN Statistics Division and UNECA joint workshop on implementation of the 1993 SNA with special emphasis on the Household Sector, Addis Ababa, Ethiopia

27 November – 1 December 2000: UN Statistics Division and UNECA joint workshop on the International Classification, Addis Ababa, Ethiopia

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Editorial Note