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QUARTERLY INSTITUTIONAL SECTOR ACCOUNTS FOR THE EUROPEAN UNION AND THE EURO ZONE

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1. Introduction

The paper describes, in section 2, the events that led up to the decision to introduce quarterly non-financial sector accounts into the European Union (EU) and euro area (EA). It goes on to describe, in section 3, the discussions that took place in the EU task force and committees that proposed the details of the new system, and a draft EU regulation. The paper then explores, in section 4, some of the key issues that emerged during the development of this new system. Many of these issues relate to the estimation of economic accounts for supra-national areas, based on data from their member states. Section 5, presents some of the early experimental results of the work done so far on *annual* sector accounts. The final section (6) draws some conclusions and discusses the next steps.

2. The political and economic background

For many years, there has been pressure on European statisticians to develop general economic statistics for the EU that match as nearly as possible the range and quality of those available for individual countries. This pressure was intensified after the approval of the Maastricht Treaty that set the timetable for the creation of a single currency area and the European Central Bank (ECB). In 1995, the European Monetary Institute (EMI), the forerunner of the ECB, prepared a paper outlining its needs for general economic statistics. This was discussed with Eurostat, statistical departments of national central banks, and national government statisticians. The latter would need to provide most of these statistics. These discussions led to some important improvements in European economic statistics, notably in the areas of consumer prices, government finances, and services.

In spite of these improvements, there were still concerns about the data deficiencies at the EA (and by implication, the EU) level. In 1998, a French paper to ECOFIN Council raised the political profile of these deficiencies. This led to the creation of a joint "policy/statistical" working group to drive forward the improvement agenda. This working group put its first report to the Monetary Committee (the forerunner of the Economic and Financial Committee) in October 1998. This collaboration between statisticians and policy makers proceeded to identify four priority areas in economic statistics that required improvement – quarterly national accounts, public finance, labour market and short term business statistics. Prominent within the first of these areas was *quarterly sector accounts*. Within two years, this process led to the creation of a European Action Plan for EMU Statistical Requirements, which was adopted by the ECOFIN Council in the autumn of 2000. It included the very important statement: "A limited set of quarterly sector accounts is urgently needed".

The improvement agenda was large, and resources in statistical offices were limited. As a result little progress was made on the development of quarterly sector accounts until 2003. This was in spite of continued pressure from the Economic and Financial Committee and the ECOFIN Council, which expressed their concerns at the lack of progress, in response to the (annual) progress reports on the Action Plan. In summer 2002, a task force was set

up by Eurostat and the ECB to propose the steps necessary to put in place a set of quarterly non-financial institutional sector accounts for EU and EA.

3. The work of the Task Force QSA

The task force's mandate was fourfold. First, it was asked to prepare draft legislation requiring member states to provide the information necessary to produce **quarterly** sector accounts for EU and EA. Second, it should support Eurostat in compiling **annual** sector accounts from data already collected from member states in the ESA transmission programme. Third, it was asked to examine the consistency between member states' balance of payments (BoP) and rest of world (RoW) accounts, (an issue of concern raised in reports to the EFC and ECOFIN). Fourth, the task force should consider the handling of EU institutions in the system of national accounts in EU and EA.

The task force met for the first time in June 2002, and decided to proceed on all aspects of its mandate, but giving priority to the preparation of draft EU legislation.

3.1. A draft regulation on quarterly institutional sector accounts for EU and EA

The task force delivered its draft regulation to the senior EU statistical committees (CMFB – the Committee for Monetary, Financial and BoP Statistics – and SPC – the Statistical Programme Committee) in June 2003. The draft legal act was adopted by the Commission in December 2003 and then transmitted to Council and the European Parliament.
The key aspects of the task force's draft legislation (relevant to this paper) are:

- It seeks information on a limited number of transactions (see the rows in the two annexes). The information sought from member states on a quarterly basis is much less than that required on an annual basis in the ESA transmission programme. It seeks information on five institutional sectors: non-financial corporations, financial corporations, general government, households and Non-profit institutions serving households (NPISH), and the rest of the world.
- The data are sought 90 days (95 for a three-year transition period) after the end of the quarter, starting in 2006. Back data from 1999 are also requested.
- All member states are required to provide the information in relation to the general government and rest of the world sectors. (These data, or their equivalent, are largely required already under existing EU legislation). Only those member states whose GDP exceeds 1% of EU GDP are required to provide data for the other sectors.

The rationale behind these key aspects is to balance the demands by users for these accounts with the burden that is likely to be imposed on national statistical systems to provide the necessary data. So, for example, the number of transactions to be covered in each sector is kept to the minimum consistent with the declared needs of key users, notably ECB and the European Commission (DGEcfin). Similarly, given the difficulty and cost for small countries of setting up new systems to collect data from corporations and households, it was deemed sufficient for this information to be provided only by larger countries. On the basis of current data, all "old" member states except Luxembourg, and

only Poland from the "new" member states must provide the full information. As is shown below (section 4.3), statistical techniques can be used to estimate the missing transactions and sectors of the exempted member states.

3.2. Annual institutional sector accounts for EU and EA

The second role of the task force was to support Eurostat in the compilation of annual sector accounts for EU and EA. Very detailed sector accounts data have been collected from most of the fifteen "old" EU member states since 1999 as part (table 8) of the ESA transmission programme. Because data for some countries were missing (and because of pressure of other priorities), these data have not been fully checked or summed to provide estimates of sector accounts at the EU and EA levels. The task force's work provided the spur to do this. Not only are European annual accounts interesting in their own right – and there are plans in Eurostat to publish them – but they are an important stepping stone and pre-requisite for the compilation of quarterly European sector accounts. They provide compilers with an understanding of the system. Perhaps, more importantly, they provide annual benchmarks for the estimation of quarterly transactions for countries that do and will not provide full quarterly data.

As a result, under the watchful eye of the task force, Eurostat (with the help of ECB and with the agreement of the member states themselves) cleaned the national annual sector accounts data for the years 1999 to 2002. Two small "old" member states have derogation from providing these annual data. Estimates were therefore constructed for these two countries. The cleaned data, together with estimates for the two missing countries, and estimates of the transactions of EU institutions (see below – section 3.4) were summed to give estimates of EU15 and EA sector accounts. Additionally, ECB experimentally removed all inconsistencies and asymmetries (see below) from the data to produce fully balanced sector accounts for the EA. Results of these exercises are presented and briefly discussed in section 5.

3.3. Consistency between national BoP and RoW accounts

SNA93, ESA95, and BPM5 intend that there should be consistency between national BoP and RoW accounts (see SNA 93 14.147). (There are a few small differences, notably in the treatment of FISIM). By extension, this consistency should apply at supra-national levels too i.e. in the EU and EA. Unfortunately, EU member states do not all ensure this consistency at the national level. As a result, through the summation process these national inconsistencies emerge as differences between RoW and BoP in the EU and EA aggregates. This caused the task force added difficulties because it took the view that the BoP accounts already compiled for EU and EA should be used as the first estimate of the RoW account in the compilation of EU and EA sector accounts. (To the extent that the balancing process – see below – makes adjustments to the RoW account, adjustments need to be fed back to the European BoP account.) . This view was supported by CMFB and SPC, largely because it ensured the required ESA (and SNA and BPM) consistency at the EU and EA levels.

The task force investigated the inconsistencies between the published national BoP and RoW accounts. Broadly, it found that there are four causes of differences. The first is an institutional issue. In most (but not all) EU member states, the national central bank compiles BoP accounts, while the national statistical institute compiles national accounts, including RoW accounts. The other three causes largely flow from this one. The second cause is the different revisions timetables used by the different compilers, and therefore the different data vintages used in the comparisons. The third cause is the use of different basic data sources. Typically, RoW accounts are compiled using BoP data as a key data source. However, this key source tends to be supplemented by additional information that the national accountants believe improve the quality of their RoW estimates. It appears that there is limited feedback to the BoP compilers of this additional information. The fourth cause is the use of different concepts in the two data sets. This is a fundamental problem, showing some lack of adherence to the international statistical manuals. (There are some who argue that some of the fault lies in the manuals themselves which are not as co-ordinated as perhaps they should be. This is an issue that should be, and is being addressed in the planned revision of the manuals). Solutions to the second, third and fourth causes lie largely in the hands of the national compilers of the two systems, who should co-ordinate their work and releases more closely.

This issue of consistency of BoP and RoW at the European level is complicated by the fact that national BoP and RoW accounts record transactions with the residents of all other countries in the world, including those inside the EU or EA. The BoP and RoW accounts of EU and EA record only those transactions with residents of countries outside EU or EA. In other words, they exclude intra-EU or intra-EA transactions. Summing the BoP (or RoW) accounts of member states should eliminate these intra-EU/EA flows. Unfortunately, they do not, because of asymmetries caused by different national measurements of the (same) flows between European countries. Inconsistencies caused by these asymmetries only become visible at the supra-national level. This issue is discussed in greater detail in section 4.

The task force's view that the European accounts should display consistency between BoP and RoW accounts has general support in Europe. Work will continue (slowly) at the national level to reduce and eventually eliminate national inconsistencies. Whilst these national inconsistencies persist, they can only be removed from accounts at the European level either manually or by estimation techniques that distribute the errors statistically. It is likely that the asymmetries that only appear at the European level will always need to be removed at that level. (See section 4.3, below).

3.4. The treatment of EU institutions in EU and EA economic accounts

Sector accounts of any economic entity have to include all transactions between the institutional sectors within its boundaries, and between these domestic sectors and the RoW sector which includes all non-resident persons and institutions. Accounts for supra-national economic entities like EU and EA are no different. They therefore have to take account of the transactions of any institution within their boundaries deemed to be resident. The treatment of EU institutions in EU and EA accounts is therefore different

from their treatment in Member States' accounts where they are treated as non-resident institutions.

The task force therefore examined the status of all EU institutions. It came to the conclusion that all EU institutions were resident in the EU, but that only the ECB was resident in the euro area. This view has achieved general support in Europe.

The task force therefore supported Eurostat's and ECB's efforts to construct accounts for these EU institutions, so that their transactions could be accounted for in the EU and EA sector accounts. These institutions are already providing some information for inclusion in estimates of EU and EA BoP accounts. Sector accounts is building on this information. The BoP transactions, and their counterparts in the domestic sectors, of these institutions are likely to be the most significant, because they include, for example, large transfers and interest payments/receipts abroad. Other transactions of their domestic sectors, such as wages and salaries to their employees, tend to be very small. At present, annual sector accounts of the ECB and the other EU institutions are available for the years 1999 to 2002. Work is continuing on the estimation of quarterly accounts.

4. Some major issues for the compilation of quarterly sector accounts for a supra-national region

Although OECD publishes some figures of annual sector accounts for EU, the work of the task force in setting up a system for compiling quarterly sector accounts for supra-national areas is effectively pioneering. In work of this sort, it is inevitable that problems that have not been fully addressed or solved at the national level, and problems that are peculiar to supra-national regions would emerge. The following paragraphs discuss a number of these issues that raise particularly interesting problems to be addressed and solved.

The issues we explore in this paper are harmonisation, consistency, the treatment of asymmetries, and estimation in a system that contains inconsistencies and data of variable quality. They are closely linked to one another. Taken together, they raise a number of strategic issues about consistency at the European levels. These issues are discussed in section 4.4.

4.1 Harmonisation

Although systems can be designed to collect, process and analyse data for the whole areas, EU and EA, this approach is experimental and confined so far to a few areas of statistics such as retail sales where European sampling has been implemented. Most EU and EA macro economic statistics are calculated as the sum of Member States' data transmitted to the Commission (Eurostat). In order to aggregate these estimates, Eurostat, and ECB need to make sure that Member States' figures are sufficiently harmonised, so that like is added to like. This harmonisation has been one of the key European statistical strategies over the last decade or so. There are many examples of this strategy at work including GNI, the ESA system, HICP, banking statistics, and so on.

The task force discovered that the issue of harmonisation comes into closer focus in the case of the estimation of quarterly sector accounts where the matrix structure imposes so many accounting constraints. Rules that have been set up for simpler (one-dimensional) systems may not always be sufficient.

The treatment of sector delineation is an example in case. In a sense, **sector delineation** should be no less important in the presentation of GDP or balance of payments accounts. After all, the income and expenditure components of GDP are, to a large extent, determined by institutional sectoral considerations. For example, household expenditure is confined to the household sector; wages and salaries largely so; imports and exports to the RoW sector; profits to the corporate sectors; general government consumption expenditure to the general government sector; and so on. The main reason that it becomes more acute in sector accounts is that it is brought into closer focus by the inherent analytical nature of a multi-dimensional presentation. In the past, in the GDP accounts, it has been less obvious that European countries A and B apply different delineation between households and enterprise sectors. The differences have been there, both in the income components (wages and salaries and profits), and in the expenditure components (household expenditure, gross fixed capital formation, and intermediate expenditure) but they are not immediately obvious. (This is, of course, not true of the general government sector, where great care is taken in the EU to ensure harmonised treatment of the boundary between the government and other sectors). These differences become far more striking when key macro-economic ratios are calculated – the household savings ratio, and profits ratios, for example. Preliminary investigation by the task force suggests that large parts of the differences in these ratios are due to countries applying the ESA (or SNA) guidelines differently for distinguishing between sectors (mainly between non-financial corporations on the one hand, and households on the other hand). There may be genuine local, cultural differences, but they by no means explain all the differences in the ratios.

This issue shows the value of constructing these more detailed sector accounts, not just for the user but for the producer too. They are a part of the producer's diagnostic tool-kit. Resolving the problem within Europe will not be easy. Sector delineation is often built deeply into countries' statistical systems. It will be difficult to set clear guidelines that ensure harmonisation. It will be even more difficult to get countries to change their systems.

There is no reason to believe that problems in harmonisation are confined to European countries. They have become apparent in the European context because of the development of high frequency, multi-dimensional sector accounts at the supra-national level.

4.2 Consistency

Compiling non-financial sector accounts of supra-national areas has raised a number of key questions about consistency in the set of economic accounts for the area. At the national level, compilers often strive to ensure that the different parts of the accounts are consistent with one another, for example, the GDP accounts and institutional sector accounts. A number of countries (in and outside Europe) also try to ensure consistency

between these accounts and BoP accounts, in some cases by compiling all three accounts simultaneously. For the economic entities EU and EA, there have never been full sets of accounts. Introducing sector accounts moves Europe closer to being in a position of having this full set of accounts. Sector accounts are the link that pulls together the other macro economic accounts – GDP, BoP, and government accounts. In this new environment, Europe has to consider a new set of consistency issues – consistency across EA or EU accounts, and consistency between these accounts and (the sum of) their Member States' accounts.

Consistency is an important quality characteristic in macro-economic statistics. In the IMF's Data Quality Assessment Framework (DQAF), for example, it is a key element, together with relevance, timeliness and revisions in "Serviceability of Statistics". The IMF defines three aspects of consistency – internal consistency, consistency over time, and consistency with statistics from other data sources or statistical systems. All three are very relevant to sector accounts. For the purposes of this paper, we assume that the accounts will be consistent over time, and just consider the other two aspects.

Internal consistency. One of the strengths of sector accounts is that they are (nearly always) constructed in a matrix framework. The matrix framework shows very clearly the whole range of accounting identities to be observed. It requires for each transaction row, total uses to be equal to total resources. Put another way, for each transaction the balance of the domestic sectors must be equal and opposite in sign to the balance of the rest of the world. Also, total uses must be equal to total resources for each given sector. The framework of sector accounts implies internal consistency. The TF took the view that this attribute of internal consistency should not be lost at the European level.

Non-financial sector accounts at the European level are compiled from the accounts of Member States and the transactions of resident EU institutions. A simple summation of this information leads to EU or EA sector accounts that include internal inconsistencies. There are three sources of these internal inconsistencies – missing countries (partial or complete), inconsistencies in Member States' accounts themselves, and asymmetries.

Within the EU (and EA), a few, typically smaller countries do not yet produce non-financial sector accounts at all. Others produce annual, but not quarterly accounts. These numbers have recently increased with the accession of ten new member states, most of them small. A number of other countries produce only part of their non-financial sector accounts. Existing EU legislation requires all EU member states to transmit annual sector accounts data. (The derogations for Luxembourg and Ireland, referred to above, expire in 2005). The planned legislation on quarterly sector accounts will not require full information from the smallest member states. Even some of the larger Member States may seek derogations. Under these circumstances, fully consistent quarterly EU or EA accounts cannot be compiled by the simple addition of Member States' (and EU institutions') data. So, a first step towards internally consistent EU and EA sector accounts is for Eurostat and ECB to have compilation systems that fill in the gaps that Member States are unable to fill.

It could be argued that the long-term solution to this first source of inconsistency is in the hands of Member States. If they would all agree to provide full and timely sector accounts data, estimation at the European level would not be required to meet this problem. Clearly, this is not the intention of the new legislation that requires limited information from smaller Member States. These gaps will always need to be filled at the European level. However, there will be a responsibility on Member States, particularly the larger ones, to do all they can to reduce the gaps by responding fully to the new Regulation.

Member states that produce sector accounts, on a quarterly, or annual basis (or both) usually compile accounts that are internally consistent. Problems do however occur in the translation from domestic to European formulation or in the transmission to Eurostat. These problems should not occur, and Eurostat has recently intensified its efforts to get member states to improve the quality of their transmissions by including more internal checking procedures. Until now the problems are confined to the annual data sets, as quarterly data are as yet unavailable. The process of correction of these errors in the annual data is long and laborious, involving bilateral discussions between Eurostat and the offending Member State. Any residual inconsistencies have to be eliminated in the estimation processes described in section 4.4. After 2005, quarterly data will begin to be regularly transmitted. Eurostat and ECB will want to publish timely quarterly accounts for EU and EA. The transmission of internally consistent accounts will be of even more importance. The availability of a system to eliminate quickly any residual inconsistencies in national data will also be necessary.

Solution to this second source of internal inconsistency is clearly in the hands of Member States. Solution at the European level should always be one of last resort.

The third cause of internal inconsistency in European sector accounts is asymmetries in the RoW account. We have seen above that when two countries each estimates the same transaction between them they do not necessarily produce the same answer. As a result, the sum of flows between Member States that should add to zero appears as a non-zero figure. This is a problem unique to compilation of accounts at a supra-national level that relies upon summation of the accounts of its individual member countries. The debate on how to eliminate or reduce asymmetries has raged within Europe for many years, mostly in the context of European BoP accounts. There is general agreement that eliminating asymmetries at source (i.e. getting each of the many pairs of countries to agree upon single estimates of the many bilateral flows) is a long, probably endless task. In the meantime, European statisticians are left with the choice of leaving asymmetries in European accounts or "balancing them out". How to treat asymmetries in European non-financial sector accounts has not yet been resolved. Indeed, bets have been hedged, and experimental annual accounts on both bases have been produced for further investigation. What is clear is that the solution to this fourth source of inconsistency is not in the hands of Member States, and will not be for many years, probably ever. There has to be a solution at the European level. (The issue of asymmetries is discussed in more detail in section 4.4).

Consistency with statistics from other data sources or statistical systems. Section 3.3 has already looked at inconsistencies between national RoW accounts within sector

accounts and BoP accounts. Estimating European BoP and RoW accounts by summing accounts of Member States (and EU institutions) would obviously lead to inconsistencies at the European level. It is planned to avoid this (external) inconsistency by using European BoP figures as the starting point for estimating the RoW account in European sector accounts. This inevitably leads to internal inconsistencies in the European sector accounts in which the transaction balances between the RoW and the sum of the domestic sectors are lost. To leave these inconsistencies in the European sector accounts would seem to negate their very strength. However, if the EU or EA sector accounts are balanced, adjustments will almost inevitably be applied to transactions in the domestic sectors (as well as in the RoW sector). Inconsistencies will therefore be generated between estimates of transactions in the European domestic sectors and estimates of the same variables in other accounts, such as the European GDP accounts. (Similarly, the balancing process will generate inconsistencies between the (adjusted) European RoW account, and the published European BoP account.) Of course, more constraints can be introduced. The most obvious is to constrain the sector accounts to the estimate of GDP (and/or GNI) that has been compiled elsewhere in the more traditional way. There are dangers of imposing too many constraints on the balancing process, as this could lead to a concentration of any adjustments on a few variables, possibly taking them beyond the point of credibility.

At this stage, no firm conclusions have been reached about how to resolve these issues within European sector accounts. Their resolution will undoubtedly be, in large part, at the European level, though Member States can minimise the differences by ensuring consistency across their economic accounts. The problem would then become one of adjusting for asymmetries alone.

4.3 Estimation

When the new regulation comes into force, in 2005, there will not be a full set of sector accounts data for EU or EA. The regulation itself allows smaller countries to send only a limited amount of quarterly data (for the government and rest of the world sectors only). Systems will be needed to estimate for these missing (albeit small) elements of the accounts. If, in addition, in the early months, some countries seek derogation from providing the data they are required to submit, the estimation system will have to deal with these too. Moreover, as has been discussed, there is likely to be some lack of harmonisation of member states' data, and some inconsistencies and asymmetries in the aggregated data (even after efforts to eliminate them).

In the meantime, European compilers will need to produce sector accounts that are internally consistent, or nearly so. In order to do so, they will have to use estimating and balancing techniques. There are broadly four steps in this process. First, at the annual level, estimates have to be made for transactions of those countries that do not compile full national sector accounts. Second, estimates of European RoW accounts have to be prepared from BoP data as an input. Third, the annual accounts need to be balanced to eliminate the remaining inconsistencies in the accounts, including asymmetries, and the inconsistencies in national BoP and RoW accounts. This balancing will need to include a number of constraints. Fourth, and finally, the procedures will need to be developed for compilation of quarterly estimates. The quarterly procedures will be similar to the annual

ones, but will use the annual estimates as benchmarks, particularly for those countries that provide partial or no data. These four steps are briefly discussed in the following paragraphs.

Annual estimates for missing countries. Within EU15 and the EA, the missing countries are Ireland and Luxembourg. There are likely to be more in EU25.

Making specific estimates for missing countries is thought to be superior to applying a single across-the-board coverage adjustment. Specific coverage adjustments should make use of all relevant national accounting data available for these missing Member States. These include the macro-economic aggregates, government finance and balance of payments statistics. These are all part of the official data transmission to European statistical organisations. They are not sufficient to compile full sector accounts, and secondary data is used to supplement and breakdown further the primary data. Three additional approaches are used. First, a cross-classification of industries against institutional sectors is estimated, to compile the breakdown of value-added across the sectors. Second, coefficients are borrowed from a 'reference' country, and applied to the missing country's data, mainly in the allocation and redistribution of income, to obtain the necessary level of detail. Finally, failing all other sources the EU average savings rate is used for Luxembourg (whereas national estimates are used for the Irish savings rate).

After applying the primary and secondary data, a complete but unbalanced set of sector accounts is obtained for each missing country. These accounts are then reconciled with a manual edit that removes transaction imbalances that exceed 1 billion EUR. Finally, a reconciliation algorithm removes any residual imbalances. Unless primary data sources are themselves inconsistent, the resulting accounts are fully consistent with the primary data sources.

Compilation of European RoW accounts from available BoP and RoW data. As has been discussed above, it is important that the European RoW and BoP accounts (from sector accounts) are fully consistent with each other. EA and EU BoP statistics, covering only extra-EA and extra-EU flows, are based on data from all Member States and institutions, and are published monthly and quarterly. It is therefore appropriate to use these BoP statistics as the source statistic for the compilation of the EA and EU RoW accounts. However, the EA/ EU BoP currently do not provide sufficient transaction detail to allow the compilation of a EA/EU RoW account. On the other hand, national RoW accounts do not provide the breakdown into intra- and extra-EU/EA flows necessary for the compilation of EU or EA RoW account. (It has recently been agreed within the EU to increase the transaction detail in which national BoP statistics are transmitted to Eurostat and ECB to the level of detail required for RoW accounts. This has been arranged specifically to meet the needs of quarterly sector accounts. The new breakdowns are due to be transmitted from 2006).

To compile the EA RoW annual account (the experiment has not yet been extended to the EU), a hybrid approach has been developed that produces a geographical breakdown of the national RoW accounts using (mainly) geographical information from the BoP

accounts. These national extra-EA accounts (including those of the institution ECB) are then aggregated into an EA RoW account.

The benefit of this approach is that the use of the national RoW rather than the national BoP avoids inconsistencies at the national level. However, at the EA level, discrepancies surface that are made up partly of BoP asymmetries, and partly of national BoP/RoW differences. These discrepancies show up in the EA sector accounts as transaction imbalances, i.e. as internal discrepancies.

These discrepancies, at around 1 percent of EA GDP, are not overwhelmingly large. However, some of them do seem to be systemic. The largest discrepancies occur in trade in goods and services, and in property incomes. The discrepancy in trade in goods is the well-known asymmetry emerging from the Intrastat system for collecting statistics of trade in goods within the EU. Since its inception, there has been a growing discrepancy between dispatches (intra-EU exports) and arrivals (intra-EU imports). The discrepancies in property incomes are somewhat smaller, but they have been less stable over the period studied. Part of the problem lies in the treatment of portfolio investment for which the estimation of a geographical breakdown is notoriously difficult. Problems also exist for estimates of re-invested earnings on foreign direct investment.

Balancing the annual sector accounts. Confrontation of the EA RoW account (compiled as explained above) and the aggregated national domestic sectors (plus the institution ECB) leads to discrepancies in the EA sector accounts. These need to be removed if there are to be internally consistent annual EA sector accounts. Such adjustments will immediately result in differences between the sum of Member States' (and ECB's) accounts and the EA aggregates.

The reconciliation of sector accounts at the national level usually takes into account the perceived weaknesses and strengths of the underlying basic data, and adjustments are made where data are thought to be weakest. Often, national systems do not cover all sectors and transactions, and particular items have to be estimated as residuals. At the European level, it is much more difficult for compilers to have a good understanding of the relative strengths and weaknesses of their composite sources that are made up of national sources. It is therefore necessary to use assumptions that imply some element of averaging. Furthermore, the external estimates of certain indicators may be considered so reliable, or so politically sensitive that they should not be adjusted. For example, GDP, GNI, value-added taxes and import duties, and general government net lending are all highly sensitive indicators that are compiled on the basis of other legislation, and this basis is well understood and respected by administrative users. Constraints to the balancing process may therefore need to be applied.

To resolve the discrepancies quickly and efficiently, under different sets of assumptions about the reliability of the underlying data, a balancing strategy has been used following the Stone algorithm as further developed by Byron in 1978. Six different sets of assumptions (or constraints) have been made about reliability of the data:

1. No a-priori assumptions about relative reliabilities
2. No adjustment allowed to GDP
3. No adjustment allowed to General Government (GG)
4. No adjustment allowed to the RoW
5. No adjustment allowed to GDP, General Government and RoW
6. No adjustment allowed to GDP and General Government

(In cases 2. to 6., as appropriate, estimates of EU or EA GDP, GG, and RoW are constrained to the aggregates published elsewhere).

Because the Stone algorithm adjusts cells proportionally to size the adjustments tend to centre on the larger aggregates in the sector accounts. This is to some extent mitigated because it also adjusts cells inversely proportionally to reliability.

It is therefore not surprising to find that most of the adjustments due to the discrepancy in goods and services occurs in GDP and individual final consumption, or in final household consumption if balancing is applied with a constraint on GDP. Adjustments to household savings due to the discrepancy in goods and services are similar in size for all sets of constraints above, and are of a similar size over time. The result is that because of an upward adjustment to household consumption and a downward adjustment to household disposable income, household savings are significantly lower than in the unbalanced set of accounts.

A second impact on household savings comes through property incomes. The composition of the discrepancies in property income across transactions determines the sectoral impact of adjustments. Reinvested income on FDI impacts mostly on non-financial enterprises. Withdrawals of ownership equity have a large effect on households. Therefore the variability of the asymmetries of property income over time, and across detailed transactions noted earlier have a differential effect on the domestic sectors. As is shown in section 5, this leads to adjustments to the EA savings ratio that varies in size from year to year.

Extending the annual methodology to quarterly accounts. The compilation of quarterly European sector accounts needs to address the issues of completion as well as reconciliation of the accounts. As has been explained above, the planned legislation on quarterly sector accounts does not require smaller Member States to transmit full accounts. The transitional arrangements also allow some Member States a three year breathing space before they comply fully with the reporting requirements. The methodology for the European quarterly sector accounts therefore needs to make coverage adjustments. Coverage adjustments in the quarterly compilation system will inevitably be more extensive than those in the annual system.

European quarterly accounts also need to be consistent with annual accounts. It is possible to combine all of these adjustments in a single approach. This approach is similar to the one already used to compile the European quarterly national accounts (QNA) aggregates. The individual QNA series are first adjusted to be consistent with the annual national accounts series for the European aggregate, using either a mathematical quadratic minimization method, or an econometric model. In recognition of the fact that some series

in the quarterly sector accounts will have a lower coverage than others, such algorithms need to be adjusted to take into account different reliabilities of the series. The resulting series are then made consistent with the respective QNA accounting constraints, whilst maintaining time consistency.

4.4 Consistency in European economic accounts

The sections above have discussed some of the most interesting issues that are emerging from this project to compile EU and EA non-financial sector accounts. The key issue that has been highlighted by the project is the variety of inconsistencies that exist in a statistical system that involves twenty-five member states, two supra-national economic entities, and all the key macro-economic accounts for these twenty-seven areas. The introduction of this new set of accounts that links all the accounts together is raising strategic issues that have not needed to be addressed before at the European level. At the heart of these is the treatment of asymmetries. This has been an irritant in European macro-economic statistics so far. Now it is an issue that has to be addressed.

Section 4.2 discussed the distinction between internal and external consistency with regard to sector accounts, both at national and supra-national level. Consistency can be viewed in a number of ways:

1. Accounts should be internally consistent in terms of transactions balances (i.e. for each transaction, uses should equal resources)
2. RoW accounts should be consistent with BoP accounts (external consistency)
3. Non-financial sector accounts should be consistent with GDP accounts (external consistency).
4. Non- financial sector accounts should be consistent with financial sector accounts. This issue is not addressed in this paper.

A fifth objective can be added, concerning the relationship between national figures and supra-national figures:

5. All accounts of the supra-national area should be broadly[3] consistent with the sum of its Member States' accounts plus the transactions of resident supra-national institutions (additivity).

What has become clear in discussions in the task force (and elsewhere) is that it will not be possible to meet all five of these objectives for EU or EA. As the discussion above has shown, there are roles for both the European institutions and Member States.

If all Member States could meet the first four objectives, and transmit the consistent data sets to Eurostat, the problem would dissolve into one where Eurostat and ECB would only have to address the question of asymmetries. (We argued in section 4.3 that it was not possible to resolve asymmetries at the national level). In this case, objective 2 is met, but decisions have to be made at the European level as to where the inconsistencies should be shown. There are a number of options. For example, the sector accounts could be made

[3] Reinvested earnings and FISIM are not necessarily additive.

internally consistent (objective 1 met), but inconsistencies are allowed to exist between the non-financial sector accounts and GDP accounts (objective 3 not met). Objective 5 would be, at most, only partially met. The sum of Member States' GDP accounts would be consistent with those of the EU/EA, similarly for BoP accounts. But differences would be apparent between the sum of Member States' non-financial sector accounts and those of EU or EA[4]. Alternatively, having met objectives 1 and 2, non-financial sector accounts could also be made consistent with GDP accounts (objective 3 met). Now, little of objective 5 would be met because EU and EA GDP accounts estimates would no longer be equal to the sum of Member States' accounts. Additivity would be lost.

This is, of course, a limiting case. Not all Member States will (ever) be in a position to provide full information on all accounts. The legislation on sector accounts does not seek this from smaller Member States. At the very least, the European institutions will have to make estimates for some missing values, as well as addressing asymmetries. In this case, the additivity objective becomes weaker because it can only be applied to national accounts aggregates and BoP. But in other respects, the options remain the same as in the previous paragraph.

Clearly, the role for the institutions expands as Member States provide less consistent data. If, for example, they fail to meet objective 2, and continue to transmit different RoW and BoP data, the institutions have to make adjustments to ensure consistency between BoP and RoW at the EU and EA levels. Adjustments become larger. But the options remain similar.

It appears from this analysis that a decision will have to be made broadly between having some inconsistency in EU/EA accounts but a retention of additivity, or consistent EU/EA economic accounts and a loss of additivity. In the first case, it would be odd to lose the strength of the sector accounts and allow internal inconsistencies to appear there. A decision has been taken to ensure consistency of EU/EA BoP and RoW accounts. So, for the time being, the most likely place for the inconsistency to be shown at the EU/EA level is between sector and GDP accounts (objective 3 would not be met, but the others would). In the second case, only objective 5 would not be met.

5. Some experimental annual sector accounts for Europe

The tables in the annexes give examples of annual non-financial sector accounts for the EU15 and the EA, for the year 2001.

The first table shows, for EU15, the simple summation of Member States' sector accounts (including estimates for the two missing countries), and the transactions of resident EU institutions. The RoW account is the simple summation of Member States' RoW accounts. The accounts are not free of asymmetries.

[4] However, it is possible at the supra national level to achieve a common treatment of asymmetries, notably those on the goods and services account, such that consistency between BoP and sector accounts RoW account and consistency between NA aggregates and the sector accounts are assured. Then full internal consistency and external consistency can be achieved.

This first table estimates the EU15 household saving ratio as 7.9% in 2001.This compares with 7.3% in 1999, and 7.1% in 2000 (Tables for these other years are not included in the annex). Similarly for EA, before balancing, the savings ratio is estimated to be 9.4% in 2001, and 9.2% in 1999, and 8.9% in 2000. (Tables of the unbalanced EA accounts are not included in the annex).

The second table shows, for the EA, a fully balanced set of accounts (including estimates for the two missing countries). In this example, selected from many scenarios tested by the ECB, GDP and transactions of the general government sector have been constrained to the current estimates compiled and published by Eurostat (case 6 in section 4.3). An estimate for ECB, the only EU institution resident in EA, is included. The RoW account has been constructed using geographical information from the national BoP accounts. Inconsistencies (including asymmetries) have been removed using the balancing technique described in section 4.4.

This second table estimates the EA household savings ratio as 8.9% in 2001. This compares with 8.4% in 1999, and 8.2% in 2000. (Tables for these other years are not included in the annex). The adjustments made to the key expenditure and income components are shown in the table below. These show that the main adjustment in each year was made to household expenditure (the largest component), but that these adjustments were of a variable size. They therefore changed the pattern of estimates of savings ratio and did not lead to a stable level shift. The adjustment made to the unbalanced estimate of EA savings ratio falls from 0.8% in 1999 to 0.5% in 2001.

6. Some Conclusions

In about two years, considerable progress has been made on developing non-financial sector accounts for EA and EU. Annual accounts have been compiled for the EU and EA for the period 1999 to 2002. Key statistics like the savings ratio for EU and EA are now available. Methods have been developed and tested to distribute asymmetries and other inconsistencies. Awareness has been raised of the need to work harder at the national level to get greater consistency between BoP and RoW accounts. Legislation requiring EU Member States to provide sufficient data for the compilation of timely quarterly EU/EA non-financial sector accounts is close to agreement. Methods for compiling quarterly accounts from incomplete and inconsistent data are in the process of development and testing (on limited data at this stage). Annual estimates have been made of the transactions of EU institutions, and plans for estimating quarterly accounts are in hand. The question of the treatment of asymmetries has higher profile amongst European statisticians. The strategic questions thereby raised are beginning to be addressed in a serious way for the first time.

For the institutions, Eurostat and ECB, the future work programme is largely continuing with work that has already been started. They will need to take decisions about the preferred way of distributing inconsistencies in annual EU/EA accounts. In particular, they will explore richer formulations of the balancing models that allow differentiation,

transaction by transaction, and in the way adjustments are allocated to institutional sectors (instead of just the latter). The quarterly compilation method needs to be developed, particularly when real quarterly data begin to flow in 2006 from Member States. The strategic consistency issues highlighted by this work on EU/EA sector accounts have also to be addressed, in discussion with users.

For Member States the future is equally challenging, if not more so. Of prime importance will be the development of systems to collect and compile quarterly sector accounts data. This will be a large task for those larger countries that are required by the proposed legislation to provide data for all institutional sectors. (Currently only three Member States operate systems that largely meet the new legal requirements). Smaller countries will have to ensure that their systems will provide the necessary quarterly data for the general government and RoW sectors. These systems, for both large and small countries, have to be up and running by the end of 2005. Member States will also have to set up action plans for creating (greater) consistency between their BoP and RoW accounts. In many countries this will involve greater co-operation between national banks and statistical offices.

Annex 1, EU15 accounts including the resident EU institutions for 2001

Use										EU-ASA 2001		Resources								
Total	GS	S2	S1	S14 & S15	S13	S12	S11	S1N		EU15 + EUI		S1N	S11	S12	S13	S14 & S15	S1	S2	GS	Total
S1+S2	Counterpart to Goods and Services Account	Rest of the World Account	Total Economy	Households and NPISH	General Government	Financial Corporations	Non Financial Corporations	Unspecified Total Economy				Unspecified Total Economy	Non Financial Corporations	Financial Corporations	General Government	Households and NPISH	Total Economy	Rest of the World Account	Counterpart to Goods and Services Account	S1+S2
16,394	16,394	-	-	-	-	-	-	-	P1	Output		-	11,021	834	1,638	2,901	16,394	-	-	16,394
8,474	-	-	8,474	1,004	574	434	6,165	297	P2	Intermediate Consumption		-	-	-	-	-	-	-	8,474	8,474
6,989	-	-	6,989	5,188	1,801	-	-	-	P3	Final Consumption Expenditure		-	-	-	-	-	-	-	6,989	6,989
6,233	-	-	6,233	5,188	1,044	-	-	-	P31	Individual Consumption Expenditure		-	-	-	-	-	-	-	6,233	6,233
756	-	-	756	-	756	-	-	-	P32	Collective Consumption Expenditure		-	-	-	-	-	-	-	756	756
1,790	-	-	1,790	529	205	56	1,001	-	P5	Gross Capital Formation		-	-	-	-	-	-	-	1,790	1,790
1,792	-	-	1,792	526	204	56	1,006	-	P51	Gross Fixed Capital Formation		-	-	-	-	-	-	-	1,792	1,792
- 1	-	-	- 1	3	1	0	- 5	-	P5N	Changes in Inventories + Net Acquisitions of Valuables		-	-	-	-	-	-	-	- 1	- 1
3,195	-	3,195	-	-	-	-	-	-	P6	Exports of Goods and Services		-	-	-	-	-	-	-	3,195	3,195
3,104	3,104	-	-	-	-	-	-	-	P7	Imports of Goods and Services		-	-	-	-	-	-	3,104	-	3,104
4,586	-	22	4,565	452	913	233	2,966	-	D1	Compensation of Employees		-	-	-	-	4,563	4,563	24	-	4,586
1,294	-	48	1,246	43	17	15	136	1,035	D2	Taxes on Production and imports		-	-	-	1,241	-	1,241	53	-	1,294
1,083	-	48	1,035	-	-	-	-	1,035	D21	Taxes on Products		-	-	-	1,030	-	1,030	53	-	1,083
211	-	-	211	43	17	15	136	-	D29	Other Taxes on Production		-	-	-	211	-	211	0	-	211
198	-	42	156	-	156	-	-	-	D3	Subsidies		85	53	1	2	14	156	42	-	198
127	-	34	93	-	93	-	-	-	D31	Subsidies on Products		85	-	-	-	-	85	42	-	127
71	-	8	63	-	63	-	-	-	D39	Other Subsidies on Production		-	53	1	2	14	71	0	-	71
950	950	-	-	-	-	-	-	-	D21-D31	Taxes less Subsidies (on Products)		950	-	-	-	-	950	-	-	950
297	-	-	297	-	-	297	-	-	P119ADJ	Adjustment for FISIM		297	-	-	-	-	297	-	-	297
4,173	-	722	3,450	336	339	1,542	1,232	-	D4	Property Income		-	410	1,812	117	1,096	3,435	738	-	4,173
2,584	-	498	2,086	328	339	1,053	366	-	D41	Interest		-	130	1,570	57	287	2,044	540	-	2,584
1,270	-	191	1,080	0	-	230	849	-	D42	Distributed Income of Corporations		-	253	228	49	555	1,086	184	-	1,270
41	-	31	10	-	-	4	5	-	D43	Reinvested Earnings on Direct Foreign Investment		-	19	13	-	-	32	9	-	41
256	-	1	255	-	-	255	-	-	D44	Property Income Attributes to Policy Insurance Holders		-	5	1	0	247	252	4	-	256
22	-	1	20	8	0	0	12	-	D45	Rent		-	2	0	12	7	21	0	-	22
1,241	-	10	1,230	985	3	59	182	-	D5	Current taxes on income, wealth ...		-	-	-	1,236	-	1,236	5	-	1,241
1,603	-	7	1,596	1,596	-	-	-	-	D61	Social Contributions		-	88	246	1,261	4	1,599	5	-	1,603
1,708	-	5	1,703	5	1,428	201	68	-	D62	Social Benefits		-	-	-	-	1,692	1,692	16	-	1,708
1,597	-	124	1,473	263	921	218	71	-	D7	Other Current Transfers		-	52	219	861	312	1,444	153	-	1,597
212	-	16	196	142	2	5	47	-	D71	Net Premia (non-life insurance)		-	-	207	-	-	207	4	-	212
213	-	4	209	-	-	209	-	-	D72	(Non life) Insurance Claims		-	40	5	1	150	196	17	-	213
1,172	-	105	1,068	121	918	4	24	-	D7N	Other Current transfers, not elsewhere specified		-	12	7	859	163	1,041	131	-	1,172
66	-	-	66	1	1	51	14	-	D8	Adj. for change in net equity of hholds in pens. funds res.		-	-	-	-	66	66	-	-	66
299	-	24	274	31	224	13	6	-	D9	Capital Transfers		-	75	5	137	53	270	28	-	299
23	-	-	23	22	-	1	1	-	D91	Capital Taxes		-	-	-	23	-	23	-	-	23
275	-	24	251	9	224	12	6	-	D9N	Investment Grants and other capital transfers		-	75	5	114	53	247	28	-	275
1,209	-	-	1,209	331	140	42	696	-	K1	Consumption of Fixed Capital		-	696	42	140	331	1,209	-	-	1,209
0	-	- 1	1	- 4	- 4	- 3	12	-	K2	Acq. less Disposals of non-prod. non-fin. assets		-	-	-	-	-	-	-	-	-
0	-	- 32	32	272	- 85	1	- 156	-	B9	Net Lending/ Net Borrowing		-	-	-	-	-	-	-	-	-
59,166	20,448	4,166	34,552	11,033	6,633	3,160	12,394	1,332	Total	Total Current and Capital Accounts		1,332	12,394	3,160	6,633	11,033	34,552	4,166	20,448	59,166
-	-	-	8,870	1,897	1,064	400	4,856	653	B.1G	Gross Value Added										
-	-	-	7,661	1,567	924	358	4,160	653	B.1N	Net Value Added										
-	-	-	2,006	1,085	- 4	111	1,111	- 297	B.2+3N	Operating Surplus (Net)										
-	-	-	7,639	6,408	859	84	288	- 0	B.5N	Balance of Primary Incomes (Net)										
-	-	-	7,607	5,566	1,864	70	106	0	B6N	Disposable Income (Net)										
-	-	-	618	443	62	20	92	0	B8N	Savings (Net)										
-	-	- 32	32	272	- 85	1	- 156	0	B.9	Net Lending/Net Borrowing										
-	-	- 91	-	-	-	-	-	-	B.11	External Balance of Goods & Services										
-	-	- 37	-	-	-	-	-	-	B.12	Current External Balance										

EUR Billion

Annex 2, EA accounts including the ECB for 2001

Use													EA-ASA 2001		Resources										
Total	GS	S2	S22	S21	S1	S14 & S15	S13	S12	S11	S1N			S1N	S11	S12	S13	S14 & S15	S1	S21	S22	S2	GS	Total
S1+S2	Counterpart to Goods and Services Account	Rest of the World Account	Extra Euro Area	Intra Euro Area	Total Economy	Households and NPISH	General Government	Financial Corporations	Non Financial Corporations	Unspecified Total Economy		euro area sector accounts. Reconciled, General Government, GDP constrained	Unspecified Total Economy	Non Financial Corporations	Financial Corporations	General Government	Households and NPISH	Total Economy	Intra Euro Area	Extra Euro Area	Rest of the World Account	Counterpart to Goods and Services Account	S1+S2
12,533	12,533	-	-	-	-	-	-	-	-	-	P1	Output	-	8,435	601	1,170	2,327	12,533	-	-	-	-	12,533
6,401	-	-	-	-	6,401	760	324	294	4,802	222	P2	Intermediate Consumption	-	-	-	-	-	-	-	-	-	6,401	6,401
5,329	-	-	-	-	5,329	3,957	1,371	-	-	-	P3	Final Consumption Expenditure	-	-	-	-	-	-	-	-	-	5,329	5,329
4,769	-	-	-	-	4,769	3,957	812	-	-	-	P31	Individual Consumption Expenditure	-	-	-	-	-	-	-	-	-	4,769	4,769
559	-	-	-	-	559	-	559	-	-	-	P32	Collective Consumption Expenditure	-	-	-	-	-	-	-	-	-	559	559
1,439	-	-	-	-	1,439	444	175	42	778	-	P5	Gross Capital Formation	-	-	-	-	-	-	-	-	-	1,439	1,439
1,447	-	-	-	-	1,447	443	174	42	788	-	P51	Gross Fixed Capital Formation	-	-	-	-	-	-	-	-	-	1,447	1,447
- 8	-	-	-	-	- 8	2	1	- 0	- 10	-	P5N	Changes in Inventories + Net Acquisitions of Valuables	-	-	-	-	-	-	-	-	-	- 8	- 8
1,335	-	1,335	1,335	-	-	-	-	-	-	-	P6	Exports of Goods and Services	-	-	-	-	-	-	-	-	-	1,335	1,335
1,258	1,258	-	-	-	-	-	-	-	-	-	P7	Imports of Goods and Services	-	-	-	-	-	-	-	1,258	1,258	-	1,258
3,428	-	12	12	-	3,416	357	720	176	2,163	-	D1	Compensation of Employees	-	-	-	-	3,421	3,421	-	7	7	-	3,428
950	-	-	-	-	950	41	15	12	101	782	D2	Taxes on Production and imports	-	-	-	908	-	908	-	42	42	-	950
782	-	-	-	-	782	-	-	-	-	782	D21	Taxes on Products	-	-	-	740	-	740	-	42	42	-	782
168	-	-	-	-	168	41	15	12	101	-	D29	Other Taxes on Production	-	-	-	168	-	168	-	0	0	-	168
132	-	36	36	-	96	-	96	-	-	-	D3	Subsidies	70	47	1	2	12	132	-	-	-	-	132
70	-	30	30	-	40	-	40	-	-	-	D31	Subsidies on Products	70	-	-	-	-	70	-	-	-	-	70
63	-	6	6	-	56	-	56	-	-	-	D39	Other Subsidies on Production	-	47	1	2	12	63	-	-	-	-	63
712	712	-	-	-	-	-	-	-	-	-	D21-D31	Taxes less Subsidies (on Products)	712	-	-	-	-	712	-	-	-	-	712
222	-	-	-	-	222	-	-	222	-	-	P119ADJ	Adjustment for FISIM	222	-	-	-	-	222	-	-	-	-	222
2,792	-	250	250	-	2,543	230	277	1,073	963	-	D4	Property Income	-	277	1,293	75	861	2,506	-	286	286	-	2,792
1,732	-	185	185	-	1,547	222	277	765	283	-	D41	Interest	-	103	1,147	35	238	1,523	-	209	209	-	1,732
901	-	75	75	-	826	0	-	155	671	-	D42	Distributed Income of Corporations	-	183	140	33	472	828	-	74	74	-	901
- 7	-	- 12	- 12	-	4	-	-	4	0	-	D43	Reinvested Earnings on Direct Foreign Investment	-	- 16	6	-	-	- 10	-	2	2	-	- 7
149	-	1	1	-	149	-	-	149	0	-	D44	Property Income Attributes to Policy Insurance Holders	-	4	1	0	143	148	-	1	1	-	149
17	-	1	1	-	16	8	0	0	8	-	D45	Rent	-	2	0	8	7	17	-	0	0	-	17
867	-	5	5	-	861	688	2	40	131	-	D5	Current taxes on income, wealth ...	-	0	-	864	-	864	-	3	3	-	867
1,289	-	4	4	-	1,285	1,285	-	-	-	-	D61	Social Contributions	-	80	110	1,094	3	1,287	-	2	2	-	1,289
1,287	-	3	3	-	1,284	4	1,135	86	60	-	D62	Social Benefits	-	-	0	-	1,278	1,278	-	9	9	-	1,287
1,165	-	34	34	-	1,131	218	692	167	55	-	D7	Other Current Transfers	-	39	168	644	242	1,093	-	73	73	-	1,165
161	-	4	4	-	157	118	2	3	34	-	D71	Net Premia (non-life insurance)	-	-	159	-	-	159	-	2	2	-	161
162	-	2	2	-	161	-	-	161	-	-	D72	(Non life) Insurance Claims	-	29	3	1	124	156	-	6	6	-	162
842	-	28	28	-	814	99	690	4	20	-	D7N	Other Current transfers, not elsewhere specified	-	10	6	643	119	778	-	64	64	-	842
46	-	0	0	-	46	1	-	32	14	-	D8	Adj. for change in net equity of hholds in pens. funds res.	-	-	0	-	46	46	-	-	-	-	46
228	-	18	18	-	209	24	170	10	5	-	D9	Capital Transfers	-	66	4	106	43	220	-	7	7	-	228
19	-	-	-	-	19	17	-	1	1	-	D91	Capital Taxes	-	0	-	19	-	19	-	-	-	-	19
209	-	18	18	-	191	7	170	9	5	-	D9N	Investment Grants and other capital transfers	-	66	4	88	43	202	-	7	7	-	209
973	-	-	-	-	973	267	117	34	556	-	K1	Consumption of Fixed Capital	-	556	34	117	267	973	-	-	-	-	973
-	-	- 1	- 1	-	1	- 4	- 2	0	7	-	K2	Acq. less Disposals of non-prod. non-fin. assets	-	-	-	-	-	-	-	-	-	-	-
0	-	- 8	- 8	0	8	230	- 112	23	- 133	-	B9	Net Lending/ Net Borrowing	-	-	-	-	-	-	-	-	-	-	-
42,387	14,504	1,687	1,687	0	26,197	8,501	4,980	2,211	9,500	1,004	Total	Total Current and Capital Accounts	1,004	9,500	2,211	4,980	8,501	26,197	-	1,687	1,687	14,504	42,387
-	-	-	-	-	6,845	1,567	846	307	3,634	490	B.1G	Gross Value Added											
-	-	-	-	-	5,871	1,300	730	273	3,078	490	B.1N	Net Value Added											
-	-	-	-	-	1,637	915	- 4	86	862	- 222	B.2+3N	Operating Surplus (Net)											
-	-	-	-	-	5,833	4,967	606	85	175	0	B.5N	Balance of Primary Incomes (Net)											
-	-	-	-	-	5,793	4,296	1,380	69	48	0	B6N	Disposable Income (Net)											
-	-	-	-	-	464	384	8	37	35	0	B8N	Savings (Net)											
-	-	- 8	- 8	0	8	230	- 112	23	- 133	0	B.9	Net Lending/Net Borrowing											
-	-	- 77	- 77	-	-	-	-	-	-	-	B.11	External Balance of Goods & Services											
-	-	2	2	-	-	-	-	-	-	-	B.12	Current External Balance											

EUR Billion