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**REPORT FROM THE COMMISSION TO THE COUNCIL
AND THE EUROPEAN PARLIAMENT**

**concerning the Allocation of Financial Intermediation Services Indirectly Measured
(FISIM)**

**containing a qualitative and quantitative analysis of the results of the trial calculations
for allocating and calculating FISIM as described in the Council Regulation (EC)
No 448/98 of 16 February 1998**

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1. SUMMARY

Financial intermediaries explicitly charge commissions and fees to their customers. The measurement of the production and consumption of these services poses no special conceptual or practical problems for national accountants.

But financial intermediaries are also able to provide services for which they charge implicitly by paying or charging different rates of interest to borrowers and lenders. They pay lower rates of interest than would otherwise be the case to those that lend them money and charge higher rates of interest to those who borrow from them. The resulting net receipts of interest are used to defray their expenses and provide an operating surplus. This scheme of interest rates avoids the need to charge their customers individually for services provided and leads to the pattern of interest rates observed in practice. However, in this situation, the national accounts must use an indirect measure, called financial intermediation services indirectly measured (FISIM), of the value of the services for which the intermediaries do not charge explicitly.

In principle, FISIM output should be allocated among the various users of the services for which no explicit charge are made, and therefore in national accounts treated as intermediate consumption by enterprises, as final consumption by households, General Government, and Non Profit Institutions Serving Households (NPISHs), or as exports to non residents.

This would ensure that the levels of Gross Domestic Product (GDP) and Gross National Income (GNI) take account of FISIM as for any other type of output.

In practice, however, it may be difficult to find a method of allocating FISIM among different users in a way which is conceptually satisfactory from an economic viewpoint and for which the requisite data are also available.

1.1 Legal Dispositions

Council Regulation (EC) No 448/98 completing and amending Council Regulation (EC) No 2223/96 with respect to the allocation of Financial Intermediation Services Indirectly Measured (FISIM) within the European System of National and Regional Accounts (ESA 95) introduces the principle for allocating FISIM. This Council Regulation presented trial methods of allocating FISIM which were to be tested by Member States for the years 1995 to 2001.

This final report fulfils the requirements of Article 5 of the Regulation : “The Commission, after consulting the Statistical Programme Committee, shall submit before 1 July 2002 a final report to the European Parliament and the Council containing a qualitative and quantitative analysis of the implications of the trial methods for calculating and allocating FISIM”. More detailed technical reports have been made to National Statistical Offices regularly throughout the trial period.

The Regulation also states that, if the findings of the final evaluation report on the reliability of the results obtained during the trial period were positive, FISIM would be allocated in national accounts.

This would involve changes (increases) in the levels of Gross Domestic Product and Gross National Income, which would have an impact on certain community policies. However, the Council Regulation states in its Article 8(1) that “the decision to allocate FISIM for the establishment of the Gross National Product used for the purposes of Community’s budget and its own resources shall be adopted by the Council, acting unanimously, on a proposal from the Commission”.

If the findings of the final evaluation report were negative, none of the trial methods for allocating FISIM being more reliable for the correct measurement of the economic activity than the present zero allocation, the Commission would be required to submit an appropriate proposal to the Council for the modification of Regulation (EC) No 2223/96, in order to eliminate from ESA 95 methodology the principle of allocating FISIM which had been introduced by Regulation (EC) No 448/98.

1.2 Two options

During the trial period, Eurostat set up a FISIM Task Force, consisting of national experts in charge of implementing the trial exercise in each Member State. Candidates countries have been associated in the latter stages of this Task Force and one of them, Slovakia, has conducted the complete exercise.

Meetings of the Task Force have enabled the assessment of common practise for improved comparability and to discuss about data and methodological issues. The work of this FISIM Task Force and the results obtained by Member States have been discussed regularly by the National Accounts Working Party.

The main results of the trial exercise are the following :

- It is broadly recognised that, from a theoretical point of view, allocating FISIM would improve ESA methodology as more accurate GDP levels could be obtained: GDP would include the entire value added generated by financial intermediaries, and not just the part (varying significantly between Member states) corresponding to commissions and fees directly invoiced to customers.
- The impact of allocating FISIM on GDP (and GNI) would correspond, on average, to an increase of 1.3%.
- In the same time, from a practical point of view, the allocation of FISIM requires the use of precise data, as FISIM is calculated as margins. Member States have observed a lack of direct sources for some data, which would question the reliability of national aggregates if they included allocated FISIM.

Two options are possible, depending on the appreciation of the method from both a conceptual and practical point of view:

- **The first option** is that, despite the lack of direct sources for some data, most Member States were able to implement the trial methods and obtained comparable and quite stable results.

It is recognised that the allocation of FISIM, highly desirable from a conceptual point of view, is not perfect from a practical point of view. But it can be considered that the quality of the allocation will be improved through years, in particular through

development of sources for new ECB data requirements, and that a sufficient level of quality has already been obtained.

Therefore, allocating FISIM in national accounts is feasible, which will bring the Member States national accounts in line with those of United States, Canada and Australia, which already allocate FISIM in their national accounts.

A postponement to 2004 or 2005 for the allocation of FISIM is proposed by some Member States as they consider this supplementary delay could be useful to improve the sources and methods used.

Such a positive final decision on the allocation of FISIM is expected to empower National Statistical Offices to obtain better quality information from various sources, particularly the banking system.

This option is favoured by a majority of Member States.

- **The second option** is to consider that conceptual reservations can be raised for the allocation of FISIM, especially on the fact that the remuneration of a financial instrument is connected to economic functions (e.g. production and consumption).

Moreover, even if it appeared useful from a conceptual point of view to allocate FISIM, the testing period is considered as having revealed that the results largely depend on assumptions made in the absence of direct data. In particular, data necessary for the implementation of regional and quarterly accounts would be weak if FISIM was to be allocated.

Therefore, in practise, none of the trial methods as presented in the regulation are satisfactory and it would be more reliable not to allocate FISIM in national accounts. It is recommended to keep the present convention of a zero allocation for treating FISIM in national accounts. However, Member States could, if they wish, present allocated FISIM in satellite accounts.

This option is favoured by a minority of Member States.

It is clear that the first option is suggested by a large majority of Member States: it is broadly considered that allocating FISIM would improve the accuracy of national accounts aggregates.

It is useful to recall the conclusions of the mid term report presented in 2000 by the Commission to the European Parliament and the Council: “Being calculated as margins, allocated FISIM require the use of precise data. Despite the lack of direct sources for some data, most Member States were able to implement the trial methods and obtained quite stable results. Therefore the Commission considers that allocating FISIM is feasible if improvements continue to be made in data sources”.

Member States have in the last two years provided revised results for the first years of the trial period (1995 to 1997), resulting from improvements in data sources and in the methods of estimation used.

The Commission does not wish to understate the practical difficulties encountered in the allocation of FISIM, but considers that the results of the trial period are positive.

The Commission expects that the quality of sources and methods will be further improved in future years, as Member States will benefit from more experience in the compilation of this exercise.

Given these considerations, and according to Council Regulation (EC) No 448/98, the Commission will before the end of 2002 propose a Commission Regulation for the allocation of FISIM in national accounts.

The Commission considers that two additional years could be useful in order to enable Member States to make further improvements in the sources and methods used. From 1 January 2005, data transmitted (related to previous years) according to the Transmission Programme of National Accounts data (Annex B of Council Regulation (EC) No 2223/96) should reflect the allocation of FISIM.

But, according to the Council Regulation (EC) No 448/98 (Article 8), the allocation of FISIM will not be taken into account for the purposes of European Union's budget and its own resources unless the Council, acting unanimously on a proposal of the Commission, takes such a decision.

2. PRESENTATION OF THE ISSUE: THE QUESTION TO BE SOLVED IN THE NATIONAL ACCOUNTS AND ITS IMPACT ON GROSS DOMESTIC PRODUCT (GDP)

Solving the problem of allocating FISIM would lead to major improvements in the methodology of the European system of national and regional accounts (1995 ESA) and in particular to more accurate GDP levels.

The allocation of FISIM is recommended by the System of National Accounts (SNA 93) which was prepared jointly by the United Nations, the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD), the World Bank and the Commission of the European Communities.

The purpose of the Council regulation of 16 February 1998 concerning the allocation of FISIM within the ESA is to define a methodology to be used on a harmonised basis by all Member States.

According to Council Regulation (EC) No 448/98, the allocation of FISIM is to be made on the base of the use of a "reference" rate of interest.

In the trial calculations the allocation of FISIM among users is based on the difference between the actual rates of interest payable and receivable, and a "reference" rate of interest.

This reference rate represents the pure cost of borrowing funds – that is, a rate from which the risk premium has been eliminated to the greatest extent possible and which does not include any intermediation services.

To illustrate the FISIM calculations, let us take two examples :

- A loan of 100:
 - Interest receivable by the financial intermediary 5%
 - Reference rate 2 %

- $\text{FISIM} = 100 \times (5\% - 2\%) = 3$
- A deposit of 100:
 - Interest payable by the financial intermediary 1.5 %
 - Reference rate 2 %
 - $\text{FISIM} = 100 \times (2\% - 1.5\%) = 0.5$

Total FISIM = 3.5

In the ESA adopted in 1995 (before the amendments introduced by Council Regulation No 448/98) and the data supplied by Member States, by convention, FISIM output is not allocated among users but is treated as absorbed by the intermediate consumption of a nominal sector and, therefore, the GDP is invariant to the size of the FISIM output, in contrast to commissions and fees charged directly by financial intermediaries to users. But the relative importance of the part which is explicitly charged for as commissions and fees, to the part implicitly charged for as FISIM, is different from country to country.

The shares of FISIM and of commissions and fees in the output of financial intermediaries (last year for which data are available):

	Nether-lands	Finland	Spain	Ger-many	Denmark	UK	France	Italy	Luxem-bourg
FISIM	70%	70%	68%	67%	53%	50%	44%	34%	23%
Commissions and fees	30%	30%	32%	33%	47%	50%	56%	66%	77%
Output	100%	100%	100%	100%	100%	100%	100%	100%	100%

This table shows that the existing method leads to unharmonised methodology.

3. THE METHODOLOGY OF ALLOCATING FISIM

FISIM has to be calculated and allocated only on loans and deposits granted by financial intermediaries (belonging to sectors S.122 other monetary financial institutions and S.123 other financial intermediaries, except insurance corporations and pension funds) to user sectors. This is because only the interest rates of those loans and deposits are controlled by the financial intermediaries (FIs).

The output of The Central Bank (S121) is measured as the sum of its costs. The Central Bank is not taken into account in the calculation of FISIM output and its allocation among user sectors.

FISIM is only allocated on loans and deposits: FISIM is not allocated on securities other than shares (for example bonds), because when financial intermediaries buy or sell securities on the open market they are price takers who cannot control the prices at which they buy or sell and hence the interest rates they receive or pay. Securities other than shares are only used to calculate the reference rate according to methods 2 and 4c (as described later).

The calculation of FISIM on loans and deposits is based on the difference between the actual interest payable and receivable and a “reference” rate of interest.

Annex III of the Council Regulation 448/98 presents the required statistical data for the calculation and allocation of the FISIM produced. It is stated that, “it is necessary to use the table of average stocks of loans, deposits (split by user sectors) and the securities other than shares issued by FIs for the period (average of four quarters) and the accrued interest, after reallocation of interest rate subsidies to their actual recipients as defined by the 1995 ESA.”

These statistical data will allow the test calculation of six internal reference rates, and of one external reference rate for the exports and imports of FISIM:

Methods of calculating the reference interest rate

Method 1	Interest receivable on resident interbank loans, divided by stock of resident interbank loans.
Method 2	Interest receivable on resident interbank loans and on securities other than shares issued by FIs, divided by stock of resident interbank loans and of securities other than shares issued by FIs.
Method 3	Method 1 applied to short-term transactions. Published rates for securities other than shares applied to long-term transactions.
Method 4a	Average of the average rates of credit and deposit interest applied to resident user institutional sectors (other than central banks)
Method 4b	Average of Methods 4a and 1.
Method 4c	Average of Methods 4a and 2.
Method for exports and imports	Weighted average interbank rate on loans and deposits between resident FIs and non resident FIs.

Stocks and interest on loans and deposits have to be broken down by user sectors.

The households sector in national accounts includes households as consumers and as producers to the extent they operate unincorporated enterprises.

In order to identify the part of the FISIM to be allocated to final consumption, and thus to evaluate the impact on the GDP, it is also necessary to have a further decomposition of the stocks and interest on loans granted to the households sector by distinguishing:

- Dwelling loans (intermediate consumption, as owners occupiers are treated in the system as the owners of enterprises engaged in the production of housing services for their own final consumption).
- Loans to households as owners of unincorporated enterprises (intermediate consumption).
- Other loans to households (final consumption).

Stocks and interest on deposits from households have also to be broken down by distinguishing:

- Deposits from households as owners of unincorporated enterprises (intermediate consumption).
- Deposits from households as consumers (final consumption).

4. DATA SOURCES

4.1 Coverage of S122 and S123 sectors

FISIM to be allocated is produced by other monetary financial institutions (sector S122, which does not include the central bank) and by other financial intermediaries, except insurance corporations and pension funds (sector S123), depending on the characteristics of the entities included in this sector.

Information is more reliable for S122 than for S123 sector, but the latter sector is much smaller.

4.2 Data available on stocks of loans and deposits, and interest flows

Information on the stock of loans and deposits is available from direct sources, with a breakdown by user sectors. In general, less detailed information is available on interest flows than on stocks. In a majority of countries, information on interest flows is available from direct sources, but with no breakdown between institutional sectors, and it is therefore necessary to estimate interest flows for each institutional sector by applying estimated interest rates to the known corresponding stocks.

A major problem is the breakdown of households' deposits and loans in order to determine the part corresponding to final consumption (which impacts GDP) and the part corresponding to intermediate consumption (which does not impact GDP). This split is particularly difficult on the deposits side, for which it is necessary to distinguish, on the basis of estimates, deposits of households as owners of unincorporated enterprises and deposits of individuals (the latter having the main impact on the increase of GDP generated by the allocation of FISIM).

Difficulties are met in the calculation of imports (exports being better known) as there is an imperfect knowledge of loans and deposits made by resident institutional sectors in non-resident financial institutions.

The implementation of "Method 3" as defined by the Regulation requires a distinction between long term and short term loans and deposits, eight Member States could not apply such a split.

5. MAIN RESULTS

5.1 Comparison between non allocated FISIM as defined now and allocated FISIM

There are generally small differences in the results of the methods used to calculate the total (non-allocated to users) FISIM as defined now and the sum of allocated FISIM output. Those differences – positive or negative in Member States – depend

on interest payable less receivable by financial intermediaries on securities other than shares, because securities other than shares are included in the calculation of the total FISIM, whereas the calculation of allocated FISIM is confined to loans and deposits (the reason being that only interest rates on loans and deposits are controlled by the FIs).

5.2 Output of the Central Bank

According to the FISIM regulation, the output of the Central Bank should not be calculated as for other financial intermediaries, but should be calculated as the sum of costs. Most Member States in their reports are in favour of this method.

5.3 Occurrence of negative FISIM

Negative FISIM can occur as allocated FISIM are calculated on the basis of the difference between interest receivable by FIs and the reference interest (for loans), and of the difference between the reference interest and interest payable by FIs (for deposits).

The fact that the reference rate changes quickly, whereas the rates of some loans or deposits are more stable, can explain the occurrence of negative FISIM.

Most Members states are reluctant to have negative FISIM, putting forward the difficulty of presenting a service with a negative value. Other Member States admit the possible existence of negative FISIM, arguing that revenues of the S122/S123 sectors are not generated only by the differential of interest receivable/payable, but also by the fees and commissions.

Negative FISIM have been observed occasionally in the allocation of FISIM by user sectors, however FISIM results are almost always positive using all methods, and overall FISIM results for banking as a whole are always positive.

Only rare and sporadic negative results were obtained with all sectors, the sector towards which negative FISIM occur most often being the insurance corporations and pension funds sector (on the deposits side).

5.4 FISIM by industry

Eurostat proposed two alternative methods of allocating FISIM by industry:

- Method A: based on the estimation of stocks of loans and deposits for each industry
- Method B: based on the output for each industry.

Both methods are conceptually weak, but were proposed due to the lack of basic data. Method A was considered more precise than method B, however stocks only roughly reflect the levels of FISIM. Only a minority of Member States are able to calculate the allocation with method A. Method B was used by most Member States to calculate the allocation by industry, at the NACE 60 level.

5.5 Analysis of the impact on GDP

5.5.1 Average impact on GDP by country

The comparison of average impact on GDP by country of allocating FISIM only gives a partial view of the importance of FIs in the economy, as FIs also directly charge commissions and fees which are already allocated to user sectors and therefore already taken into account in the GDP calculation.

In the countries which have provided a comparison between FISIM and commissions and fees, a decreasing trend of FISIM can be observed in the period, because directly charged commissions and fees make up an increasing part of financial intermediation output.

FISIM produced divided by total commissions and fees charges by S122 and S123

	Denmark	Germany	Spain	France	Italy	Luxembourg	Netherlands	Finland	UK
1995	1,77	2,88	2,93	1,35	0,90	1,70	3,44	4,57	1,47
1996	1,47	2,80	2,74	1,28	0,71	1,61	3,12	2,79	1,31
1997	1,33	2,42	2,47	1,07	0,64	0,62	2,59	2,70	1,32
1998	1,11	2,01	2,17	0,95	0,52	0,44	2,33	2,75	1,32
1999	-	-	2,04	0,87	0,51	0,61	2,32	2,32	1,06
2000	-	-	1,97	0,79	-	0,30	-	2,36	1,00

For the average of all years and for all methods, the allocation of FISIM would increase GDP by about 1,3% (weighed average of the countries).

More precisely the impact on GDP (weighted average of the countries) has been the following through years:

1995: 1.43 %
1996: 1.37 %
1997: 1.34 %
1998: 1.32 %
1999: 1.27 %
2000: 1.34 %

The volatility of this impact is examined, country by country, in section 5.5.4.

The following table shows, by country, the impact on GDP, based on the average of the different methods on the trial period. This impact is split into:

- the increase of final consumption of households (including the non-profit institutions when this sector cannot be presented separately) corresponding to services produced by resident FIs.

- the increase of final consumption of non-market services provided by the sectors General Government and NPISHs (when this last sector is presented separately) corresponding to services produced by resident FIs
- the exports of FISIM less the imports of FISIM for intermediate consumption of market producers (as FISIM imported for final consumption is neutral on GDP). Exports and imports of FISIM are not only calculated on the basis of loans and deposits between FIs and non FIs units, but also on interbank loans and deposits between resident FIs and non resident FIs which are treated as exports or imports depending on the sign of the net result.

Country	Impact on GDP (%)	Of which increase of final consumption of households	Of which increase of final consumption of non-market services	Of which exports less imports for intermediate consumption
Belgium	1,6	1,1	0,2	0,3
Denmark	1,5	1,3	0,1	0,1
Germany	1,4	1,5	0,2	-0,3 (1)
Greece	1,6	1,1	0,5	(2)
Spain	1,3	1,2	0,1	0
France	1,1	0,8	0,2	0,1
Ireland	0,9	0,6	0,3	(2)
Italy	1,1	1	0,1	0
Luxembourg	8,2	0,8	0,2	7,2 (1)
The Netherlands	1,4	1,1	0,1	0,2
Austria	1,2	0,4	0,4	0,4
Portugal	2,0	1,7	0,4	-0,1
Finland	1,2	0,9	0,1	0,2 (1)
Sweden	1,1	1	0,1	0 (1)
United Kingdom	1,7	1,6	0,1	0
Weighted Average EU	1,3	1,2	0,1	0
Slovakia	1,5	0,9	0,6	0

(1) The country has not yet implemented calculations on imports of FISIM

(2) The country has not yet implemented calculations on imports and exports of FISIM

About 90% of this impact is explained by an increase of final consumption of households, corresponding to FISIM allocated on loans and deposits of households as final consumers.

This demonstrates that the breakdown of the households sector in order to determine loans and deposits of households as final consumers is crucial for the reliability of the results.

It should be noticed that the impact on GDP is similar in the Member States – apart the case of Luxembourg which exports a large proportion of FISIM produced.

5.5.2 Average impact on GNI by country

If FISIM was allocated, exports less imports of FISIM would, in the transition from GDP to GNI, be counterbalanced, for the same amount, by the change in interest payable less receivable from the rest of the world.

This impact would be quite low (between – 0.3 % and + 0.4 % of GDP), except the case of Luxembourg where the exports of FISIM (7.2 % of GDP) would be counterbalanced by an important increase of interest payable less receivable from the rest of the world. This would lead for this country to an impact on GNI of 1 %, rather than 8.2 % on GDP.

It can be observed, from a statistical point of view, that the impact of allocating FISIM is quite similar on GNI in all Member States (around 1.3 %), including the Luxembourg case.

5.5.3 Average impact on GDP by method and country

The methods of calculating the reference interest rate were described in Chapter III. The impacts on GDP are quite similar whatever the internal reference rate used

	Method 1	Method 2	Method 3	Method 4a	Method 4b	Method 4c	Average of methods
Belgium	1,44%	1,75%	1,69%	1,57%	1,50%	1,66%	1,60%
Denmark	1,44%	1,45%	1,42%	1,64%	1,54%	1,55%	1,51%
Germany	1,23%	1,41%	-	1,60%	1,42%	1,51%	1,43%
Greece	1,76%	1,27%	1,93%	1,60%	1,68%	1,43%	1,61%
Spain	1,26%	1,48%	1,40%	1,27%	1,26%	1,38%	1,34%
France	1,03%	1,14%	-	1,06%	1,05%	1,09%	1,07%
Italy	1,07%	1,25%	0,89%	1,14%	1,10%	1,19%	1,11%
Luxembourg	8,23%	8,81%	-	7,80%	8,02%	8,40%	8,24%
The Netherlands	1,31%	1,50%	1,28%	1,30%	1,31%	1,40%	1,35%
Austria	1,20%	1,16%	1,19%	1,19%	1,20%	1,16%	1,18%
Portugal	1,51%	1,62%	-	2,80%	2,16%	2,21%	2,06%
Finland	1,22%	1,29%	-	1,16%	1,19%	1,23%	1,22%
Sweden	1,08%	1,20%	-	1,01%	1,04%	1,10%	1,09%
The United Kingdom	1,60%	1,62%	-	1,79%	1,70%	1,71%	1,69%
Weighted average of EU	1,26%	1,38%	1,21%		1,34%	1,40%	1,35%

This table expresses the average of all years.

Method 1 based on the inter-bank rate corresponds in average to an increase of 1.26 % of GDP.

Method 2, which also includes the rate of bonds, has on average a slightly higher effect (1.38 % of GDP) for the years under study.

Since, for the years under study, the long term rates were higher than the inter-bank rates, the reference rate in method 2 is generally higher than the reference rate in method 1. As the stocks having an impact on GDP (mainly loans and deposits of households as consumers) are higher on the deposits side than on the loans side, the impact on GDP of allocating FISIM increases when the reference rate is higher.

Method 3 has a lower impact, but cannot be implemented by several Member States as they cannot break down loans and deposits according to their maturity. Moreover, as it introduces two reference rates (one for long term transactions, another for short term transactions) this method has the drawback of systematically eliminating the “matching benefits”, which is the use by FIs of short term deposits to finance loans with longer maturity. Method 3 should be dropped, according to the opinion of most Member States.

Method 4a measures only the gap between loan and deposit interest rates, neither of which has any measurable relationship to the pure interest concept (both include an element of service charge, but the size of this service element within each is unknown). Several Member States questioned the relevance of this convention.

Methods 4b and 4c are a mixture of method 4a and of methods 1 and 2, respectively.

From a methodological point of view, the reference rate should measure the pure cost of funds appropriate to a borrowing or lending transaction, without any element of service charge or of risk. Therefore, methods 1 and 2 are conceptually better than methods 4, but methods 4 were introduced in the regulation because it was supposed they would bring more stable results, as the proportion of FISIM allocated to loans and deposits respectively should be more stable.

5.5.4 *Index of “volatility”*

To test the stability of the results, the “volatility” in the results of each method has been measured as follows:

Index of “volatility” of the allocation of FISIM, based on the results by country and by method

$$= \frac{\left| \text{impact on GDP year } n+1 - \text{impact on GDP year } n \right|}{\text{impact on GDP year } n}$$

The average index of “volatility” by method and country (average of all years, in %) is the following:

	Method 1	Method 2	Method 3	Method 4a	Method 4b	Method 4c	Average of methods (*)
Belgium	16,7%	9,8%	10,6%	8,6%	12,4%	9,2%	11,3%
Denmark	8,3%	7,9%	8,6%	5,9%	7,0%	6,8%	7,2%
Germany	2,6%	4,9%	-	5,3%	4,1%	5,1%	4,4%
Greece	25,8%	30,1%	27,5%	10,9%	18,4%	13,0%	19,6%
Spain	21,9%	17,9%	21,6%	13,7%	17,7%	16,0%	17,4%
France	4,4%	4,1%	-	6,0%	4,5%	4,4%	4,7%
Italy	11,9%	8,9%	18,9%	5,1%	7,2%	5,3%	7,7%
The Netherlands	7,6%	6,8%	10,5%	8,7%	7,2%	7,2%	7,5%
Austria	4,9%	8,7%	4,4%	4,2%	4,5%	8,7%	6,2%
Portugal	16,7%	21%	-	15,7%	13,1%	12,8%	15,9%
Finland	18,1%	11,7%	-	11,9%	14,4%	11,2%	13,5%
Sweden	9,3%	12,7%	-	14,4%	10,9%	12,4%	11,9%
United Kingdom	4,6%	3,4%	-	4,5%	4,0%	3,9%	4,1%
Weighed Average of the EU	7,6%	7,3%	16,2%	6,7%	6,7%	6,4%	6,9%

(*) Excluding method 3

Not surprisingly, method 4a is, on average, less volatile. However, the difference with methods 1 and 2 is not significant: about 1% on average. However, the above table shows that the levels of volatility of the different methods are quite different among Member States, and generally among methods in the same Member State.

It needs to be clear that the level of volatility of FISIM (7 %) is comparable to the volatility of other industries. For example, agriculture (including agriculture, hunting, forestry and fishing) which is a large industry representing, in average, 2 % of GDP at the European Union level has on the same period an index of volatility of 5 %. Some other series in the accounts demonstrate a level of volatility close to the level of volatility of FISIM. It should therefore be noted that the volatility of FISIM should not preclude its inclusion on a properly allocated basis.

It would be important to know if the average volatility of FISIM comes from stock changes (expressed in % of GDP) or from interest rates changes.

An index of “volatility” based on the total of resident stocks of loans and deposits (in % of GDP), plus the total exported stocks of loans and deposits (in % of GDP), minus the total imported stocks of loans and deposits (for intermediate consumption, in % of GDP) has been calculated:

$$= \left| \frac{(\text{stocks of loans + deposits year } n + 1) - (\text{stocks of loans + deposits year } n)}{\text{stocks of loans + deposits year } n} \right|$$

These amounts were expressed in terms of GDP, to be consistent with the general index of volatility previously presented.

The result of the index of volatility of the stocks having an impact on the GDP is 4,5%. This means that – if interest rates remained unchanged – the volatility of FISIM having an impact on GDP would be 4,5% and not 7,6% (result obtained with method 1 for current prices). In any case, it should be taken into account that the result of the index of volatility likewise depends on the financial structure of the countries.

The weighted EU average of volatility of stocks is quite low, and this means quite stable FISIM at constant prices.

5.5.5 *FISIM at constant prices*

The evolution of FISIM at current prices depends of the changes of two components of the calculation: the volume component (changes in deflated stocks of loans and deposits) and the price component (changes in the levels of the difference between interest on loans and the reference rate, and of the difference between the reference rate and interest on deposits).

The FISIM regulation includes a formula to allocate FISIM at constant prices. This formula can be presented in an simple way:

$$\begin{aligned} & \text{FISIM on the loans to the institutional sector at constant prices of 1995} \\ & = \\ & \text{Stock of loans at constant 1995 prices} \quad \times \quad \text{base year (1995) FISIM margin} \end{aligned}$$

The same formula would apply to deposits.

Most Member States have chosen the implicit price deflator for domestic final demand as price index.

It is clear from this formula that FISIM at constant prices only includes the evolution of stocks of loans and deposits, deflated by a general price index.

As already explained in the previous section, the volatility of FISIM due to the volume component is quite low in average. This conclusion can also be drawn from the analysis of FISIM at constant prices and in particular from the analysis of the impact of allocating FISIM on the growth of GDP at constant prices.

Starting from the calculations of FISIM at constant prices, provided by Member States, a weighted average volatility of this impact of FISIM on GDP has been calculated: it corresponds to 4.4%.

The average volatility of constant prices FISIM corresponding to the households final consumption is low (3.0%), it is also the case for constant prices FISIM corresponding to the final consumption of general government and non profit institutions serving households (1.8%). But the higher volatility of exports and imports explains the global result obtained (4.4%) and means more stability for GNI at constant prices than for GDP at constant prices.

One can conclude from these calculations that the average volatility of FISIM at constant prices (4.4%) and the proportion of FISIM on total GDP (1.3%) are too low to significantly disturb the rate of growth of GDP at constant prices.

6. CHOICE OF A METHOD OF ALLOCATION OF FISIM

The regulation introduced six trial methods (see part III) for the choice of a reference rate. In the trial period, Member States were required to compare the results on the allocation of FISIM by using the internal reference rate calculated according to each of these six methods.

Which is the best method to allocate FISIM ?

Method 3 which introduces two reference rates (one for long term transactions, another for short term transactions) is difficult to implement and has the conceptual inconvenient to systematically eliminate the “matching benefits”, which is the use by FIs of short term deposits to finance loans with longer maturity. It should be eliminated.

Methods 4 (4a, 4b and 4c) are based on the average of lending and deposits rates which are undertaken with the resident institutional sectors. Defined as an average, the reference rate is therefore supposed to produce more stable results, as a situation in which the reference rate is close to loans rates in one year and close to deposits rates the following year would be avoided.

But the volatility calculations have demonstrated that the volatility of methods 4 are not significantly lower than the volatility of methods 1 and 2. Therefore, these latter two methods are to be preferred because they better reflect the pure cost of funds appropriate to a borrowing or lending transaction, excluding any element of service charge or risk, which is from a methodological point of view the definition of a good reference rate.

The choice to be made is therefore between methods 1 and 2.

Method 1 is based on the inter bank rate.

Method 2 is based on the inter bank rate, but also includes the rate of bonds in order to apply to transactions over a wider maturity band.

The reference rate under both methods can be considered free of service charge and risk and gives quite stable results. Both methods satisfy the preferences expressed by Member States, which have put forward two criteria for the identification of a relevant reference interest rate. These criteria are the need of having an interest rate fairly close to the concept of “pure interest rate” and giving the most reliable results with regard to available data.

During the trial period, method 2 generally gave a higher reference rate than method 1, as long term rates were higher than inter bank rates. But the difference between the two methods was not significant.

Eurostat recommends the use of method 1, based on the inter bank rate, which is the most straightforward to calculate and the most easily understood by users of national accounts. The choice of method 1 is fully consistent with the 1993 SNA (System of National Accounts) which recommends (paragraph 6.128) the inter bank rate as representing the pure cost of borrowing funds – that is the rate from which the risk premium has been eliminated to the greatest possible extent and which does not include any intermediation services.

The trial exercise has shown that this method gave quite stable and similar results among Member States, despite certain data problems which are common to all methods.

7. CONCLUSION

The Council Regulation (EC) No 448/98 has defined different methods of allocating FISIM in national accounts and has introduced a trial period in order to test these methods.

Member States have implemented the test exercise for the allocation of FISIM for the period 1995 to 2001.

The Commission considers that the results of the trial period are positive. According to Regulation (EC) NO 448/98, the Commission will therefore before the end of 2002 issue a Commission Regulation for the allocation of FISIM in national accounts, using method 1.

According to this draft Commission Regulation, Member States would have to allocate FISIM in their national accounts from calendar year 2005.

The Commission will discuss with Member States the possible period for which backwards calculations could be made. Further discussions will take place inside the FISIM Task Force, concerning the allocation of FISIM in regional and quarterly accounts.

The Commission recommends that to avoid confusion new figures should be used for budgetary purposes, GNI being approximately 1% higher for all Member States. However, according to Regulation (EC) 448/98, the allocation of FISIM will not be taken into account for the European Union budget and its own resources unless the Council, acting unanimously, on the proposal of the Commission, takes such a decision.