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## **Spanish National Accounts (SNA). 2000 Base**

### **Informative note**

The National Statistics Institute presents the Spanish National Accounts, 2000 base, which congregate a series of modifications with regard to the methods for measurement of the accounting aggregates valid until present.

Among the new elements, the most important are the implementation of a new price adjustment method; the introduction of Financial Intermediation Services Indirectly Measured (FISIM), which supposes a relevant methodological change in the compilation of annual and quarterly accounts; and the incorporation of new sources of information from different surveys, such as those focusing on Population (2001 Census), Employment (2005 APS), Services, Industry and Public Administrations.

### **Implementation of a new price adjustment method**

The Spanish National Accounts, 2000 base (SNA-2000), introduce a relevant change as regards the measurement of the growth of the accounting aggregates in real terms, or to be more precise, in volume. **In the SNA-2000, growth no longer refers to a fixed base year, as occurred in the 1995 base and in previous years, and instead refers to the previous year (mobile base).** Consequently, the growth corresponding to each period is linked to the growths corresponding to the previous accounting years, thereby forming a time series of chain-linked volume measures, which will be presented as index numbers (*chain-linked index*).

As of 2005, European Union Member States will progressively implement this modification in their annual and quarterly accounts, in compliance with Commission Decision 98/715. This methodology has already been implemented in the US, Canada, Australia and Japan, and will therefore allow the complete comparability of European results and those of these other economies.

The essential reason for **this methodological modification** is that it **allows the continuous updating of the structures of the different supply and demand aggregates that compose the GDP. Consequently, the measurement of the growth of said aggregates is as reliable and precise as possible.**

### **Methodology using a mobile base for prices with chain-linked indices**

In the SNA 1995 Base and in accounts prior to this year, the measurement of the evolution in volume of an aggregate between two moments in time (t-1 and t) was performed by valuing the aggregate in both

periods using the price levels for one same year (constant prices), that usually coincided with the base year used in national accounts. Consequently, this procedure eliminated the component price of the value of the different aggregates in both periods (t-1 and t) and the resulting comparison offered the growth estimate in real terms or in volume.

The drawback of this method is that the structure of the base year becomes progressively less relevant over time, and therefore in a dynamic price scenario, the values of the macro-magnitudes for the base year lose their relevance very quickly.

The use of the methodology supporting chain-linked volume measurement means that the estimate of growth in volume of an aggregate between t-1 and t will be performed by valuing said aggregate using the price levels for t-1 (mobile base). Consequently, **the price structures will be completely updated in each accounting year, thus providing a more precise growth estimate**. This estimate will constitute the link of a chain which - after repeating the same procedure for all the years- will determine a time series in the form of *chain-linked index numbers*.

## Mobile base and quarterly accounts

As regards quarterly accounts, the estimate of volume chain-linked indices is substantially more complicated. In principle, estimating the links follows the same procedure as the annual case, but chaining-linking all the information without losing the coherence between the annual and quarterly data is more complicated. There are three different techniques that can be used to perform this operation. The Quarterly Spanish National Accounts has selected the process known as annual overlap, which takes average values for the four quarters of the previous year as references for the quarterly estimates in volume.

## Pros and cons of the new method

As aforementioned, the most important advantage of the methodology used to deflate national accounts at prices from the previous year is the fact that it facilitates obtaining more updated and specific, and therefore more reliable, aggregated growth estimates.

It is important for users to be aware of the main drawback of the methodology. Specifically, this refers to the *additivity* of the data, which can only be guaranteed for estimates for periods t-1 and t. Therefore, the estimates for the GDP aggregate for periods t-2, t-3 and previous, for example, do not coincide with the addition of the estimates of the aggregates that compose said GDP from the supply and demand perspective. Likewise, spatial additivity is not fulfilled in said periods, and therefore the sum of the EU Member States' GDP will not add up to the same amount as the EU's GDP, published by EUROSTAT, in t-2 and previous periods. Non-additivity appears solely due to the strict technical application of the *chain-linking* methodology. Consequently, discrepancies should not be interpreted as indications of lack of quality in the results.

A more detailed explanation of the characteristics of this methodology and its effects can be found in the document *Introduction to chain-linked volume measurements in Spanish National Accounts*, available on the INE website.

### Introduction of the FISIMs

Broadly, **Financial Intermediation Services Indirectly Measured (FISIM)** could be defined as the indirect income obtained by financial institutions from transactions involving deposits and loans performed with their clients.

The FISIMs are determined on the basis of a model. Thus, when a financial institutions user performs a deposit (or takes out a loan), he/she receives (or pays) an amount in interests that does not explicitly include any amounts linked to the payment of the financial intermediation services provided by the institution. Considering that a specific reference interest rate can be established in the market for each financial instrument (deposits and loans), the difference between the interest rate actually paid (or received) and the reference rate would be the financial intermediation service which, given the nature of its estimate, is said to be measured indirectly.

	Deposits	Loans
Amount	X	Y
Nominal interest rate	a	b
<b>Nominal interest</b>	<b>aX</b>	<b>bY</b>
Reference interest rate	c	c
<b>FISIM</b>	<b>(c - a) X</b>	<b>(b - c) Y</b>
	Nominal interest	Nominal interest
<b>Real interest</b>	+	+
	<b>FISIM</b>	<b>FISIM</b>

### Treatment of the FISIMs in SNA 1995 Base

In the Spanish National Accounts Base 1995 and in accordance with the ESA-95 Regulation, FISIMs were produced by financial institutions and were not allocated to the sectors/branches of activity using said services, but were consumed as intermediate elements in their totality by a fictional sector/branch of activity.

Said fictional sector/branch of activity was characterised by having zero output and a negative added value that was equal to, but with a contrasting sign, the aforementioned intermediate consumption. Consequently, the global added value of all sectors/branches of activity was reduced in the amount of said negative added value. In other words, **in the SNA 1995 base the FISIM production did not have a bearing on the economy's Gross Domestic Product (GDP) level.**

### Treatment of the FISIMs in SNA 2000 Base

Regulations 448/98 and 1889/2002 establish that, as from 2005, the use of FISIMs should be allocated to user sectors/branches of activity, instead of to a fictional sector/branch of activity. Consequently, the use of FISIMs will no longer be recorded entirely as intermediate consumption (as established in the ESA-95 agreement), but also as final consumption and exports/imports of said services, which will affect the economy's GDP level.

Thus, in general and according to the new methodology, when using these services, companies will perform an intermediate consumption, whilst households, public administrations and non-profit-making institutions serving households (NPISH) will perform expenditure on final consumption of FISIMs, which will affect the economy's GDP level accordingly.

### Effects on the GDP and its components

In the SNA-2000, the global increase that this methodological change has implemented in the GDP for the base year amounts to 7,472 million euros, which equals an approximate 1.2 per cent increment. The following chart shows the distribution of said effect on different transactions:

2000	Millions of euros	Percentage
Total FISIM	18 958	
Intermediate demand	11 486	
<b>Final demand</b>	<b>7 472</b>	<b>1.19</b>
Household final consumption expenditure	7 413	1.18
NPISH final consumption expenditure	160	0.03
Final consumption expenditure of public	347	0.05
Net exports	-448	-0.07
<b>Gross Domestic Product mn</b>	<b>630 263</b>	

The table presented hereunder includes the value of the FISIMs destined to the final demand for the 2000-2004 period.

Year	Final FISIM demand (millions of euros)	GDP (millions of euros)	Percentage regarding the GDP
2000	7 472	630 26	1.19
2001	7 947	679 84	1.17
2002	6 972	729 00	0.96
2003	5 936	780 55	0.76
2004	5 452	837 55	0.65

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### **Effects on institutional sectors' accounting balances**

Including the so-called Adjusted FISIM interests in the sector accounts instead of the nominal interests that were recorded in previous accounting series results in the immediate modification of the disposable income in the Households, Public Administrations and Non-profit institutions serving household sectors. The disposable income for the Non-financial companies and for the Financial institutions sectors remains invariable.

The increase of disposable income will compensate greater expenses in the sectors' final consumption, and will show no modification either in terms of savings or in the lending/borrowing capacity of the corresponding sectors.

### **Implementation of the methodological change in the heart of the EU**

As aforementioned, this change is implemented as a consequence of the application of Regulations 448/98 and 1889/2002 modifying the ESA-95 Regulation. Except Luxembourg, in which financial activities are extremely relevant for the economy, in the rest of the European Union Member States, the effects on the respective GDPs fall between 1% and 1.5%. Consequently the implementation does not show major differences between countries.

On the other hand, said modification will not be considered in the calculation of the EU's own resources, since it is thus established in the corresponding legal documents (European Union Decision on Own Resources and Regulation on Gross National Income).

For further information on this methodological change, the INE website includes Council Regulation 448/98 which completes and amends Regulation 2223/96 in terms of the allocation of financial intermediation services indirectly measured (FISIM) in the European System of National and Regional Accounts (ESA-95) and its Implementation Regulation, number 1889/2002.

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For further information see **INEbase-[www.ine.es](http://www.ine.es)** All press releases at: **[www.ine.es/prensa/prensa.htm](http://www.ine.es/prensa/prensa.htm)**

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