

# BULLETIN

## EU & US INFLATION AND MACROECONOMIC ANALYSIS

INSTITUTO  
FLORES  
DE LEMUS



Instituto Flores de Lemus de Estudios Avanzados en Economía N. 95 August 2002

MAIN POINTS

**“The expectations for the annual average rate of total inflation in the EMU are 2.3% in 2002 and 2.0% in 2003, but with differences between countries”.**

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ANNUAL AVERAGE RATES OF GROWTH IN THE EMU				
	Observed		Forecasts	
	2000	2001	2002	2003
Spain HICP – 10.34%	3.5	2.8	3.6	3.4
Germany HICP – 30.56%	2.1	2.4	1.4	0.8
France HICP – 20.41%	1.8	1.8	1.9	1.2
Italy HICP – 19.34%	2.6	2.3	2.5	2.7
EMU HICP – 100%	2.3	2.5	2.3	2.0

Source: Eurostat & I. Flores de Lemus/ Date: August 27, 2002.

# N. 95

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CONSEJERÍA DE ECONOMÍA  
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## I. MAIN POINTS AND NEW RESULTS

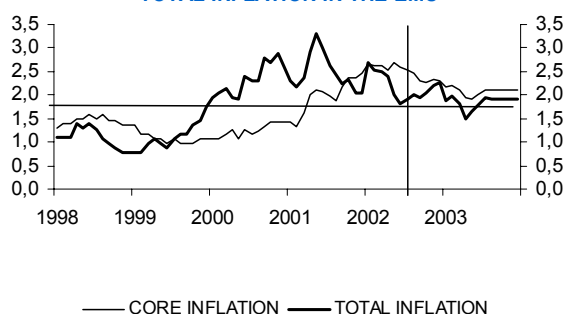
### I.1. MONETARY AND EUROPEAN UNIONS

- The August monthly inflation rate in the EMU is forecasted at a null value. The corresponding year-on-year rate will increase to 2.0%, compared to the 1.9% observed in July (graph R1).
- The monthly rate registered in July was a negative value of 0.18%, below our prediction -0.05%. The downward innovation in core inflation came in prices of non-energy industrial goods. The upward surprise in residual inflation derives from prices of energy (tables R1 and A2 in the appendix).
- Prices of non-energy industrial goods decreased more than was forecasted. This fact reflects a different behaviour of sales prices in 2001 and 2002. The seasonality due to the sales periods in prices of commodities is changing annually, and it is important to obtain adequate estimates.

Harmonized Indices of Consumer Prices	Observed growth July 2002	Forecast	Confidence interval at 80%
Total Inflation	-0.18	-0.05	± 0.09
Core inflation (83,25%)	-0.09	0.03	± 0.08
Residual inflation (16,75%)	-0.34	-0.49	± 0.39

(\*) Al 80% de significación  
Source : EUROSTAT & IFL / Date: August 19, 2002.

Graph R1  
YEAR-ON-YEAR RATES OF CORE AND TOTAL INFLATION IN THE EMU



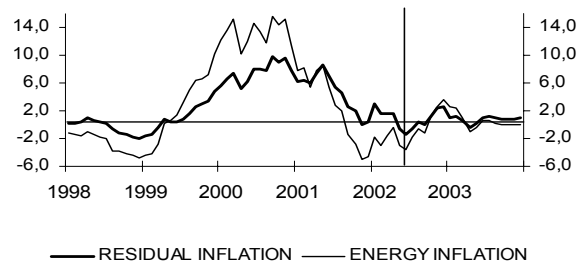
Source : Eurostat & IFL / Date: August 21, 2002.

- The expectations for the average annual rate of **core inflation** in the EMU are 2.6% in 2002 and 2.3% in 2003. In the USA, the mean annual rate for core inflation is predicted to reach 2.3% in 2002 and 2003. (graph R1).
- The differential between core inflation in goods and services increased in July by 1.3 percentage points, with respect to the 1.2 percentage points observed in June, and it is expected to grow again in the remaining months of 2002, as a consequence of a better expected behaviour in prices of non-energy processed goods and a worse evolution in prices of services. The average annual rates of prices of non-energy processed goods for 2002 and 2003 are forecasted at 2.0% and 1.6%, respectively. In the services market the expectations for the average annual rates are 3.2% in 2002 and 2003 (table R2).
- The incorporation of sales prices in different countries of the EMU came in an oscillating evolution of commodity prices, whose year-on-year rate of inflation will change from 2.0% in February 2002 to 1.4% in August 2002. Consequently, the evolution of core inflation also shows important oscillations. It is forecasted that its average annual rate will reach 2.6% in 2002 to decrease at 2.3% in 2003, as a consequence of improved behaviour of prices of processed goods.
- The forecasted average annual rate in **total inflation** for 2002 stays at 2.3 % in 2002 and increases to 2.0% in 2003, compared with the predictions in the previous bulletin (see table R2).



- The worse evolution in the prices of energy (see graph R2) come also in an oscillating evolution of total inflation, which from the 1.8% registered in June 2002, is expected to increase to 2.5 % in December, and to decrease around 2.0% in 2003; overcoming the objective of 2% in 2002 . The probability of reaching it in 2003 is just 50%, with a low probability that core inflation does not stay over 2%.

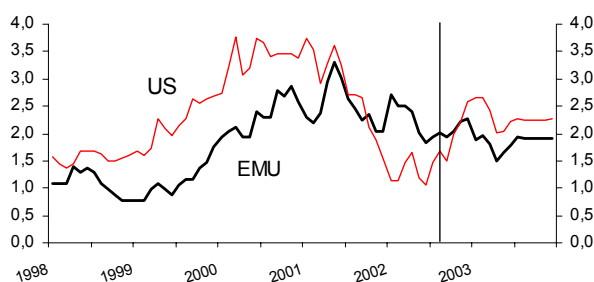
Graph R2  
YEAR-ON-YEAR RATES OF RESIDUAL AND ENERGY INFLATION IN THE EMU



Source: Eurostat, BLS & IFL/ Date: August 21, 2002

Graph R3

YEAR-ON-YEAR RATES OF GLOBAL INFLATION IN THE MU AND US



Source : Eurostat, BLS & IFL / Date: August 21, 2002.

- The inflation differential of the European Monetary Union with the United States has systematically been a percentage point in favour of the EMU, as can be observed in the accompanying graph. The annual rate of growth in July in the USA was 1.5%, 0.4 percentage point below the corresponding rate in the EMU, 1.9% (graph R3). It is expected that this inflation differential will remain favourable for the US until December 2002 but at the end of 2002 and in 2003, inflation in the EMU will again be lower than in the USA.

- This differential is favourable for the EMU in services, and for the USA in goods. The different behaviour of commodity prices are noticeable, for while the expectations for the average annual rate in the US decrease to -1.1 % in 2002 and -0.6% in 2003, in the EMU they are 1.6% in 2002 and 1.4% in 2003, reflecting less technology incorporation.

Table R2

**FORECASTS FOR THE MEAN ANNUAL RATES IN THE HICP OF THE EMU**

Harmonised Indices of Consumer Prices (HICP)	2000*	2001*	Forecasts	
			2002	2003
<b>TOTAL INFLATION (100%)</b>	2.3	2.5	<b>2.3</b>	<b>2.0</b>
<b>CORE INFLATION (83,25%)</b>	1.3	2.0	<b>2.6</b>	<b>2.3</b>
Non energy processed goods HICP ( 44,35%)	0.8	1.6	2.0	1.6
Services HICP (38,90%)	1.7	2.5	3.2	3.2
<b>RESIDUAL INFLATION (16.75%)</b>	7.6	4.8	<b>0.8</b>	<b>0.7</b>
Non Processed Food HICP(8.11%)	1.7	7.2	2.7	0.9
Energy HICP (8.64%)	13.3	2.8	-0.8	0.5

• Observed Values

(1) Monthly and annual rates can be found in tables A5A and A5B in the appendix.

Source: EUROSTAT & IFL/ Date: August 21; 2002



## I.2 MACROECONOMIC TABLE OF EURO-ZONE

	ANNUAL AVERAGES GROWTHS		
	Forecasts BIAM (*)		
	2001	2002	2003
<b>GDP pm</b>	1.5	1.1	2.4
<b>Demand</b>			
Final Consumption	1.9	1.0	2.0
Gross Investment	-0.5	-0.7	1.7
Domestic Demand	0.8	0.4	1.9
Exports of Goods and Services	2.5	0.8	6.0
Imports of Goods and Services	0.8	0.1	5.5
<b>Supply</b>			
Gross Value Added Total (market prices)	1.5	1.1	2.4
Net Taxes	-2.4	-2.8	1.9
Gross Value Added Total (basic prices)	1.7	1.4	2.4
Gross Value Added Agriculture	-0.7	1.3	1.7
Gross Value Added Industry	0.7	0.4	1.6
Gross Value Added Construction	-0.5	-0.1	0.9
Gross Value Added Services	2.3	1.9	2.6
<b>Prices</b>			
CPI harmonized, annual average	2.5	2.3	2.0
CPI harmonized, dec./dec.	2.0	2.5	2.1
<b>Employment</b>			
Unemployment rate	8.1	8.7	8.4
<b>Others Economic Indicators</b>			
Production Index of Industry (excluding construction)	-0.1	0.4	1.5

Source: EUROSTAT & I. FLORES DE LEMUS / Date: August, 28 of 2002.

(\*) Boletín Inflación y Análisis Macroeconómico.

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### I.3. UNITED STATES

- In **August**, the overall CPI is forecasted to increase 0.21%, leaving the annual rate at 1.68%, two tenths more than in July. This increase in the year-on-year rate is entirely due to energy prices, specially to motor-fuel prices, which will rise 0.03% compared to its drop of 2.95% last year. Core inflation is expected to increase 0.24%, which would maintain the annual rate at 2.2%. Without the owner's equivalent rent of primary residence index, the expected increase is of 0.20%, which would make the year-on-year rate rise one tenth up to 1.56%.

**Table R3**

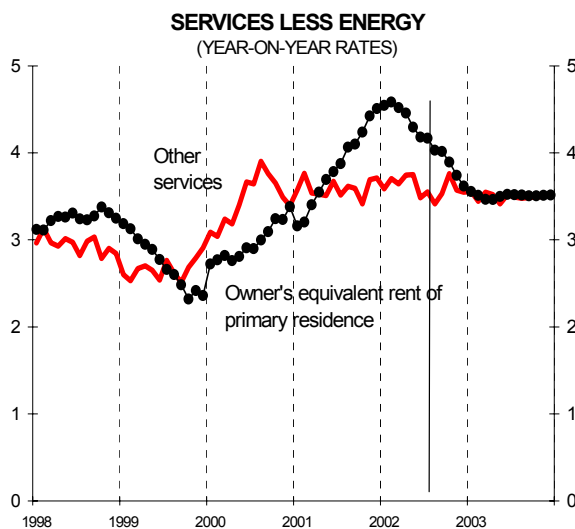
OBSERVED VALUES AND FORECAST ON CONSUMER PRICE FIGURES IN US July 2002			
CONSUMER PRICES INDEX (CPI)	Monthly Growth (T <sup>1</sup> ,)		Confidence Intervals at 80% level (+ -)
	observed (a)	forecasts (b)	
Residual Inflation	0.22	0.50	0.54
Core Inflation	0.11	0.16	0.10
All items	0.11	0.23	0.15

Source: BLS & INSTITUTO FLORES DE LEMUS  
Data: August 16, 2002

- US CPI in **July** rose 0.11% compared to the previous month, as opposed to the forecasted 0.23%, increasing the annual rate from 1.07% to 1.46%. If owner's equivalent rent of primary residence is omitted, the year-on-year rate passes from 0.27% to 0.77%. These important increases in the annual rate have been due to strong drops of energy prices in July 2001. The prediction error is explained mostly by non-durable goods prices, tobacco and apparel indexes indeed (see **Table R3** and detailed ones).

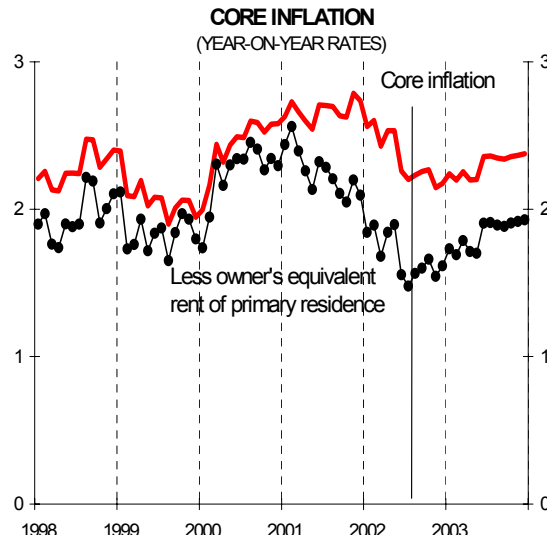
- Core inflation registered an increase of 0.11% instead of the foreseen 0.16%, lowering the annual rate from 2.26% to 2.20%. This deviation has been completely due to non-durable goods prices, specially by apparel and tobacco prices. The other core inflation parts have behaved as expected. Core inflation, excluding the owner's equivalent rent of primary residence and tobacco prices, has registered a very similar increase to the predicted, 0.04% as opposed to the forecasted 0.05%, the year-on-year rate rises from 1.39% up to 1.43%. **Graph R5** shows the important deceleration registered by the core inflation since one year and a half ago (without the owner's equivalent rent of primary residence and the tobacco prices). However, previsions show slight accelerations during the next months.

Graph R4



Source: IFL & BLS / Date: August 16, 2002

Graph R5



Source: IFL & BLS / Date: August 16, 2002

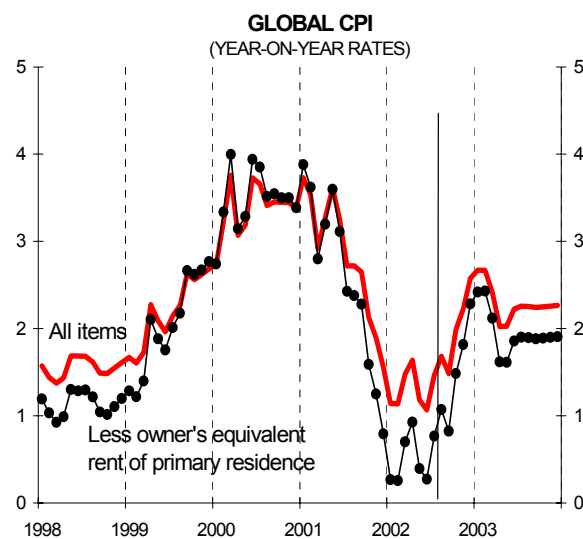
- In fact, non-energy industrial goods prices decreased more than forecasted, 0.63% instead of 0.31%, which is explained by non-durable goods, since durable goods prices have behaved exactly as predicted, the annual rate passes from -1.04% to -1.32%. On the other hand, non-durable goods prices have registered a 1.27% decrease, as opposed to the 0.45% foreseen, passing the annual rate from 0.61% to -0.21%. This



index, without tobacco prices, the observed decrease is  $-1.39\%$  instead of the predicted  $-0.87\%$ , which is mostly explained by apparel prices. The tobacco index has been the great surprise, with a slight  $0.04\%$  decrease, instead of the forecasted increase of  $3.97\%$ , making the annual rate drop from  $11.02\%$  to  $5.89\%$ .

- Service prices have behaved exactly as expected, both in the owner's equivalent rent of primary residence index and in the rest of the service prices index as a whole. The service prices annual rate rises from  $3.72\%$  to  $3.76\%$ . The owner's equivalent rent of primary residence prices have registered a  $0.28\%$  variation, as expected. On the other hand, the rest of the non-energy service prices, altogether, has registered a very similar variation to the expected one,  $0.43\%$  as opposed to the forecasted  $0.41\%$  (see **Graph R4**).
- For **2002**, expectations stay the same, decreasing one tenth for **2003**, with mean annual rates of  $1.6\%$  and  $2.3\%$  respectively. This improvement is linked to positive behaviour of some non-durable goods. From August to December of 2002, forecasts show an ascendant line up to  $2.6\%$  (see **Table R4**).

Graph R6



Source: IFL & BLS / Date: August 16, 2002

Table R4

**AVERAGE ANNUAL RATE OF GROWTH IN US (\*)**

CONSUMER PRICES INDEX (CPI)	1998	1999	2000	2001	2002 (forecasts)	2003 (forecasts)
<b>Food</b>	2.2	2.1	2.3	3.1	<b>1.9</b>	<b>2.3</b>
<b>Energy</b>	-7.7	3.6	16.9	3.8	<b>-6.4</b>	<b>2.2</b>
<b>Non-food and non-energy goods</b>	0.6	0.7	0.5	0.3	<b>-1.1</b>	<b>-0.6</b>
-less tobacco	-0.1	-0.5	-0.1	-0.2	<b>-1.5</b>	<b>-0.8</b>
-Durable Goods	-0.9	-1.2	-0.5	-0.6	<b>-2.4</b>	<b>-1.4</b>
-Nondurable goods less energy	2.3	2.4	1.4	1.1	<b>0.3</b>	<b>0.2</b>
<b>Non-energy services</b>	3.1	2.7	3.3	3.7	<b>3.8</b>	<b>3.5</b>
-less owner's equivalent rent of primary residence	2.9	2.7	3.5	3.6	<b>3.6</b>	<b>3.5</b>
<b>Core Inflation</b>	<b>2.3</b>	<b>2.1</b>	<b>2.4</b>	<b>2.7</b>	<b>2.3</b>	<b>2.3</b>
-less owner's equivalent rent of primary residence	<b>2.0</b>	<b>1.8</b>	<b>2.2</b>	<b>2.3</b>	<b>1.7</b>	<b>1.8</b>
-less owner's equivalent rent of primary residence and tobacco	<b>1.8</b>	<b>1.4</b>	<b>2.1</b>	<b>2.1</b>	<b>1.6</b>	<b>1.8</b>
<b>All items</b>	<b>1.6</b>	<b>2.2</b>	<b>3.4</b>	<b>2.8</b>	<b>1.6</b>	<b>2.3</b>
-less owner's equivalent rent of primary residence	<b>1.1</b>	<b>2.0</b>	<b>3.5</b>	<b>2.6</b>	<b>0.9</b>	<b>2.0</b>

(\*) Monthly and annual growth rates can be found in tables A6A and A6B in Appendix

Source: BLS & INSTITUTO FLORES DE LEVIUS

Data: August 16, 2002



## I.4. SPAIN

- Monthly inflation in August is expected to have a value of 0.1%. The year-on-year rate of 3.4% observed in June and July, will increase to 3.5% in August (graph R7).
- The monthly rate observed in July, a negative value of 0.7%, decreased less than was forecasted, -0.8%, and registered a practically null innovation in trend inflation, due to the compensation of the upward innovation in goods markets with the downward surprise in services market. Residual inflation registered an upward innovation derived from prices of non-processed food and energy (table R5).
- As was mentioned in our previous Bulletins the later entry of new fashion articles comes in a different behaviour of sales effects in 2001 and 2002. So, we modified the sales coefficients of 2001, published by the INE, in order to capture in a correct way the sales evolution in 2002. So, we have been able to pick the decrease up in the monthly rate of commodities prices registered last June, from the 0.44% observed in May, it decreases to -0.02% in June, and also the decrease produced in July of -3.2%, slightly greater than the -3.4% forecasted.
- **Trend inflation** in July decreased by 3.4%, respect to the 3.7% observed in June. Most components in trend inflation in services showed annual rates near or greater than 5%, for example prices of transport, postal services, university, restaurants, hotels, housing and medicine services. Trend inflation in food in July stayed at 3.1% with respect to the 5.1% observed in the last quarter of 2001. Taking into account commodities prices, its year-on-year rate decreased in July to 2.3% compared to the 3.0% registered in June, and it is expected that the mean annual rate will stay at 2.3% in 2002 to reduce to 2.1% in 2003. Nevertheless, there is an important differential with the EMU, with annual average rates of 1.6% in 2002 and 1.4% in 2003; and above all with the USA, with negative annual average rates of 1.1% and 0.6%, respectively, reflecting less technology incorporation.

Consumer Price Index (CPI)	Observed growth July 2002	Forecast	Confidence interval at 80%
<b>Total Inflation(100%)</b>	-0.69	-0.83	± 0.15
<b>Trend inflation (77,23%)</b>	-1.11	-1.15	± 0.13
<b>Residual Inflation (22,77%)</b>	0.72	0.25	± 0.22

(\*) Al 80% de significación  
Source : INE & IFL / Date: August 13, 2002.

Consumer Prices Index (CPI)	2000*	2001*	Forecasts	
			2002	2003
<b>TOTAL INFLATION (100%)</b>	3.4	3.6	<b>3.5</b>	<b>3.3</b>
<b>TREND INFLATION (77.23%)</b>	2.5	3.5	<b>3.3</b>	<b>3.2</b>
Non energy processed goods, excluding tobacco, oils and fats CPI ( 44.28%)	1.9	3.1	<b>2.4</b>	<b>2.3</b>
Services excluding tourism CPI (32,95%)	3.5	4.1	<b>4.4</b>	<b>4.4</b>
<b>RESIDUAL INFLATION (22.77%)</b>	6.5	3.7	<b>3.4</b>	<b>3.6</b>
Non processed food CPI (9.07%)	4.2	8.7	<b>6.0</b>	<b>5.6</b>
Energy CPI (9.41%)	13.3	-1.0	<b>-0.3</b>	<b>1.2</b>

\* Observed Values

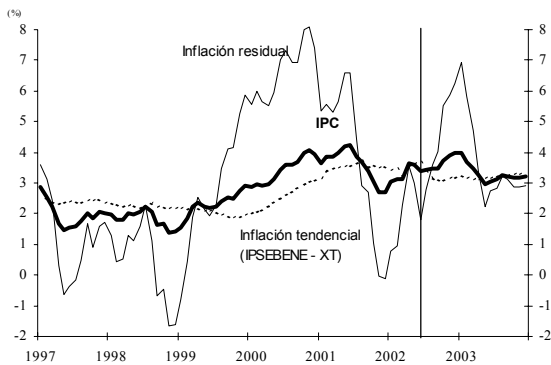
- Monthly and annual rates can be found in tables A7A and A7B in the appendix
- Source: INE & .IFL / Date: August 23, 2002.





Graph R7

**YEAR ON YEAR RATES OF GROWTH OF TREND, RESIDUAL AND TOTAL INFLATION**



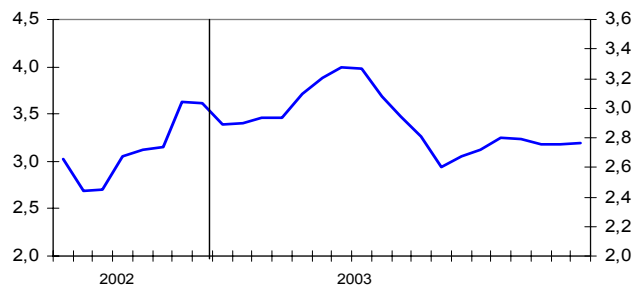
Source: INE and IFL / Date: August 23 , 2002.

- It is expected that trend inflation will decrease in August to 3.2%, less than the expected mean annual rate in 2002, 3.3%, as a consequence of the slightly better behaviour of rates of growth of prices in non-energy processed goods, excluding fats, oils and tobacco that will continue in 2003, decreasing the average annual rate of trend inflation to 3.2% (table R6).
- Core inflation in the EMU decreased to 2.5% in July and the expectations for the average annual rate for core inflation are 2.6% in 2002 and 2.3% in 2003, so there remains a consolidated inflation differential between Spain and the EMU of around one percentage point.
- Taking into account **residual inflation**, prices of non-processed food show a worse evolution. The expectations of the average annual rates of inflation are 6.0% for 2002 and 5.6% in 2003. On the other hand, it is expected that energy prices will register average annual rates of inflation of -0.3% in 2002 and 1.2% in 2003

- Due to the oscillations in energy and non-processed food prices, a more erratic evolution of commodities prices due to the incorporation of sales prices, and the especially worrisome evolution in services, with a weight of 33% and expected annual rates of growth in 2002 near of 5%, the year-on-year rate of growth of **total inflation** will relevant oscillation. Therefore, the annual inflation, from the 3.4% registered in June and July will increase at the end of 2002 to reach 4%, so the average annual rates of growth will stay at 3.5% in 2002 and 3.3% in 2003 (table R6 and graph R8).

Graph R8

**ANNUAL RATES OF TOTAL INFLATION IN SPAIN**



Source: INE and IFL / Date: August 23, 2002.



## I.5. MACROECONOMIC TABLE OF SPANISH ECONOMY

MACROECONOMIC TABLE AND INDICATORS			
	Annual Rates		
	Forecasts BIMA (*)		
	2001	2002	2003
Private Final Consumption Expenditure	2.7	2.1	2.6
Public Final Consumption Expenditure	3.1	3.4	3.1
Gross Fixed Capital Formation	2.5	1.8	3.5
Equipment	-2.2	-1.9	3.4
Building	5.7	4.2	3.6
Other products	0.8	0.9	1.7
Inventory change (1)	0.1	0.0	0.0
Domestic Demand	2.8	1.8	2.9
Exports of Goods and Services	3.4	1.5	5.6
Imports of Goods and Services	3.7	1.3	6.0
Net Exports (1)	-0.1	0.1	-0.2
<b>GDP</b>	<b>2.8</b>	<b>1.9</b>	<b>2.7</b>
GDP, current prices	6.5	5.1	5.8
<b>Prices and Costs</b>			
CPI, annual average	3.6	3.5	3.3
CPI, dec./dec.	2.7	4.0	3.2
Average earning per worker	4.3	3.5	3.6
Unit labour cost	3.9	2.6	2.5
<b>Labour Market (Data poll labour force)</b>			
Labour Force (% variation)	2.0	2.1	2.2
Employment:			
Data adjusted from changes in the employment survey			
Annual average variation in %	3.7	2.1	2.6
Annual average variation in thousands	575.9	335.0	423.2
Unemployment rate	10.6	11.5	11.2
<b>Basic balances</b>			
Foreing sector			
Current Account (m. ε.)	-18.564	-21.290	-20.126
Net lending or borrowing (% GDP) (2)	-2.0	-1.6	-1.8
AA.PP. (Total) / Public Administration			
Net lending or borrowing (% GDP) (2)	0.0	-0.3	-0.3
<b>Other Economic Indicators</b>			
Industrial Production Index	-1.1	0.3	1.3

Source: INE & I. FLORES DE LEMUS  
Date: August 28, 2002.

(\*) Bulletin EU & US Inflation and Macroeconomic Analysis.

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## I.6 FORECAST SUMMARY

INFLATION FORECASTS AND EVOLUTION IN THE EMU AND USA (1998-2003)						
	1998	1999	2000	2001	Forecasts	
					2002	2003
<b>GLOBAL INFLATION</b>						
<b>less owner's equivalent rent of primary residence</b>						
Euro-zone (100%).	1.1	1.1	2.3	2.5	2.3	2.0
USA (81.5%).	1.1	2.0	3.5	2.6	0.9	2.0
<b>CORE INFLATION</b>						
<b>Services less owner's equivalent rent of primary residence and Non-energy industrial goods excluding food and tobacco.</b>						
Euro-zone (70.97%).	1.4	1.1	1.3	1.9	2.5	2.4
USA (56.4%).	1.8	1.4	2.1	2.1	1.6	1.8
<b>DIFFERENT COMPONENTS OF CORE INFLATION</b>						
<b>(1) Services less owner's equivalent rent of primary residence.</b>						
Euro-zone (38.90%).	1.9	1.5	1.7	2.5	3.2	3.2
USA (27.4%).	2.9	2.7	3.5	3.6	3.6	3.5
<b>(2) Non-energy industrial goods excluding food and tobacco.</b>						
Euro-zone (32.07%).	0.9	0.7	0.7	1.1	1.6	1.4
USA (29.0%).	-0.1	-0.5	-0.1	-0.2	-1.5	-0.8
<b>INFLATION IN EXCLUDED COMPONENTS FROM CORE INFLATION</b>						
<b>(1) Food.</b>						
Euro-zone (20.39%).	1.6	0.6	1.3	4.5	2.9	1.6
USA (14.9%).	2.2	2.1	2.3	3.1	1.9	2.3
<b>(2) Energy.</b>						
Euro-zone (8.64%).	-2.6	2.4	13.3	2.7	-0.8	0.5
USA (9.90%).	-7.7	3.6	16.9	3.8	-6.4	2.2

Source: EUROSTAT & BLS & IFL  
Date: August 21, 2002.



INFLATION FORECASTS AND EVOLUTION IN THE EMU AND SPAIN (1998-2003)						
	1998	1999	2000	2001	Forecasts	
					2002	2003
<b>GLOBAL INFLATION</b>						
Spain (100%).	1.8	2.3	3.4	3.6	<b>3.5</b>	<b>3.3</b>
Euro-zone (100%).	1.1	1.1	2.3	2.5	<b>2.3</b>	<b>2.0</b>
<b>CORE INFLATION</b>						
<b>Services and Non-energy industrial goods.</b>						
Spain (81.51%).	2.2	2.3	2.4	3.4	<b>3.6</b>	<b>3.3</b>
Euro-zone (83.25%).	1.5	1.1	1.2	2.0	<b>2.6</b>	<b>2.3</b>
<b>DIFFERENT COMPONENTS OF CORE INFLATION</b>						
<b>(1) Services.</b>						
Spain (34.10%).	3.6	3.4	3.8	4.2	<b>4.5</b>	<b>4.5</b>
Euro-zone (38.90%).	1.9	1.5	1.7	2.5	<b>3.2</b>	<b>3.2</b>
<b>(2) Non-energy industrial goods.</b>						
Spain (47.41%).	1.4	1.7	1.7	2.9	<b>2.9</b>	<b>2.4</b>
Euro-zone (44.35%).	1.1	0.7	0.8	1.6	<b>2.0</b>	<b>1.6</b>
<b>INFLATION IN EXCLUDED COMPONENTS FROM CORE INFLATION</b>						
<b>1) Non-processed food.</b>						
Spain (9.07%).	2.1	1.2	4.2	8.7	<b>6.0</b>	<b>5.6</b>
Euro-zone (8.11%).	2.0	0.0	1.7	7.0	<b>2.7</b>	<b>0.9</b>
<b>(2) Energy.</b>						
Spain (9.41%).	-3.8	3.2	13.3	-1.0	<b>-0.3</b>	<b>1.2</b>
Euro-zone (8.64%).	-2.6	2.4	13.3	2.7	<b>-0.8</b>	<b>0.5</b>

Source: EUROSTAT & INE & IFL. / Date: August 23, 2002.



## II. ANALYSIS OF INFLATION, MONETARY POLICY AND INTERNATIONAL ANALYSIS

### II.1 Monetary and European Unions

In July 2002, inflation in the Monetary Union registered a monthly rate of -0.2% with a year-on-year rate of 1.9%.

In July 2002, inflation in the Monetary Union registered a negative monthly rate of 0.18%; with a year-on-year rate of 1.9%, with respect to the 1.8% observed in June.

Table 1 summarises the discrepancies between observed and forecasted values for the different basic aggregations in the Euro- Zone.

Harmonized Consumer Price Index (HICP)	Current growth July 02	Forecast	Confidence intervals (*)
(1) Processed Food - AE (12.281%)	0.09	0.08	± 0.14
(2) Commodities - MAN (32.072%)	-1.23	-0.75	± 0.10
Non-Energy Manufactured Goods - BENE [1+2] (44.353%)	-0.86	-0.52	± 0.09
(3) Services - SERV (38.901%)	0.79	0.65	± 0.14
<b>Core Inflation:</b>			
Non-Energy Manufactured Goods and Services, (excluding fats, oils, tobacco and tourist packages) - IPSEBENE [1+2+3] (83.253%)	-0.09	0.03	± 0.08
Non-Processed Food - ANE (8.109%)	-0.77	-0.57	± 0.46
(5) Energy Goods - ENE (8.638%)	0.08	-0.41	± 0.60
<b>Residual Inflation:</b>			
Fats, Oils, Tobacco, Tourist Packages, Non-Processed Food and Energy - R [4+5] (16.747%)	-0.34	-0.49	± 0.39
<b>Total Inflation:</b>			
<b>HICP [1+2+3+4+5] (100%)</b>	<b>-0.18</b>	<b>-0.05</b>	<b>± 0.09</b>

(\*) At 80% confidence level

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: August 19, 2002.

As shown in table 1, the month on month rate registered in July was a negative value of 0.18%, below our prediction, -0.05%. The downward innovation in core inflation come in prices of non-energy industrial goods.

It is important to note the existence of rounding errors in the aggregation of different sectors of HICP in the EMU. Eurostat publishes data with one decimal point and apparently they use more decimals in obtaining the aggregate indexes. The question is whether the aggregate values can be exactly reproduced by the users of Eurostat data. For this reason, in the forecast errors tables in the appendix (table A2) the errors in the aggregation are pointed out.

Core inflation registered a downward innovation.

The breakdown of the harmonised consumer price index into basic market groups shows that the prices of processed food (the AE index) increased as was predicted (0.09%). The prices of the remaining processed goods excluding energy prices (the MAN index) decreased more than was forecasted (-1.23 % observed instead of -0.75% forecasted ). With this, core inflation in goods calculated on the basis of the aggregation of the previous indexes, (the BENE index) registered a negative monthly rate of 0.86% below was foreseen, -0.52%. The services prices (the SERV index) increased more than was forecasted (0.79% observed instead of 0.65%



forecasted), so that finally core inflation registered a downward innovation.

*Residual inflation registered an upward surprise*

In Residual inflation (non-processed food and energy), the upward innovation came in prices of energy.

Table 2 shows annual observed HICP rates for energy and those corresponding to the remainder of goods and services – denominated HICP excluding energy

	HICP excluding Energy					HICP energy				
	Observed			Forecasts		Observed			Forecasts	
	July 02	Average 2000	Average 2001	Average 2002	Average 2003	July 02	Average 2000	Average 2001	Average 2002	Average 2003
<b>Germany</b>	1.2	0.7	1.9	<b>1.6</b>	<b>0.9</b>	-1.0	14.4	6.4	<b>-0.1</b>	<b>0.0</b>
<b>Spain</b>	3.8	2.6	4.0	<b>3.7</b>	<b>3.6</b>	-1.6	13.3	-1.0	<b>-0.3</b>	<b>1.2</b>
<b>France</b>	2.1	0.8	2.1	<b>2.1</b>	<b>1.3</b>	-3.9	12.1	-1.5	<b>-1.8</b>	<b>0.5</b>
<b>Italy</b>	2.8	1.9	2.4	<b>2.9</b>	<b>2.8</b>	-2.7	11.6	1.6	<b>-2.8</b>	<b>0.4</b>
<b>Monetary Union</b>	2.4	1.3	2.4	<b>2.6</b>	<b>2.2</b>	-1.7	13.3	2.7	<b>-0.8</b>	<b>0.5</b>

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: August 27, 2002.

*There is an important inflation differential excluding energy among countries. Italy and Spain show similar behaviour and on the other hand France and Germany also present a similar evolution.*

Annual energy rates are registering negative values in July 2002, as shown in table 2. This contrasts with the different behaviour of the other non-energy prices (HICP excluding energy). For the mentioned non-energy prices, Germany registered in July a year on year rate of 1.2%; forecasts for the annual average rates will be around 1.6% in 2002 to decrease to 0.9% in 2003. France registered for the HICP excluding energy an annual rate of 2.1% in July and the forecasts for the annual average rate are 2.1% in 2002 and 1.3% in 2003 (slightly greater than Germany). On the other hand, observed values in Italy were 2.8% and forecasts are 2.9% in 2002 and 2.8% in 2003. In the case of Spain, the annual rate was 3.8% in July and a mean annual rate of 3.7% is expected in 2002 and 3.6% in 2003. Therefore, in the HICP excluding energy, Germany and France show a similar evolution, with annual average rates around 2% on one hand, and on the other, Italy and Spain present greater annual mean rates of 3% and 4%, respectively.

	Fuels					Electricity and gas				
	Observed			Forecasts		Observed			Forecasts	
	July 02	Average 2000	Average 2001	Average 2002	Average 2003	July 02	Average 2000	Average 2001	Average 2002	Average 2003
<b>Germany</b>	-1.4	24.4	-0.4	0.0	0.6	-0.6	5.8	13.2	-0.2	-0.5
<b>Spain</b>	-1.2	18.1	-2.1	0.4	1.1	-1.7	0.2	2.4	-1.2	1.3
<b>France</b>	-6.7	20.8	-5.7	-3.6	1.2	-0.2	1.1	4.7	0.5	-0.4
<b>Monetary Union</b>	-2.6	20.9	-2.5	-1.5	0.4	-0.7	5.3	8.9	-0.1	0.5

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: August 27, 2002.

As shown in table 3, the differential in gas and electricity prices is greater than in fuel prices as a consequence of the strong dependency of gas and electricity prices on domestic regulations. prices.



The forecast for annual inflation in August 2002 is 2.0%.

The inflation forecast for August 2002 in the Monetary Union is a null value. The year-on-year rate will increase to 2.0 %, with respect to the 1.9% registered in July. The expectations for the average annual rate are 2.3 % for 2002, and 2.0% for 2003.

By countries, the expectation for monthly inflation for next August is a positive rate of 0.2% for France and 0.1% for Spain and a negative value of 0.1% in Germany and 0.2% in Italy.

Table 4 summarises the forecasts for the different components in the Monetary Union. Monthly and annual rates may be found in tables A5A and A5B in the appendix.

	Observed				Forecasts	
	1998	1999	2000	2001	2002	2003
<b>16.747%</b> <b>Residual Inflation</b>	-0.3	1.2	7.6	4.7	<b>0.8</b>	<b>0.7</b>
8.109% Non-Processed Food	2.0	0.0	1.7	7.0	2.7	0.9
8.638% Energy	-2.6	2.4	13.3	2.7	-0.8	0.5
<b>83.253%</b> <b>Core Inflation</b>	1.5	1.1	1.2	2.0	<b>2.6</b>	<b>2.3</b>
12.281% Processed Food	1.4	0.9	1.1	2.8	3.0	2.1
32.072% Non-Energy Commodities	0.9	0.7	0.7	1.1	1.6	1.4
38.901% Non-Energy Services	1.9	1.5	1.7	2.5	3.2	3.2
<b>100%</b> <b>Total Inflation</b>	1.1	1.1	2.3	2.5	<b>2.3</b>	<b>2.0</b>

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: August 21, 2002.

The year-on-year rate for next July, 2.0%, will be composed of a rate of 2.5% in core inflation and of 0.1% in residual inflation. The expectations of the average annual rate in 2002, 2.3%, will be achieved through increments in core inflation in 2002 to 2.6% and, decreases in residual inflation, due to the decrease in prices of non-processed food and energy, compared with the values registered in 2001.

It seems unlikely that in the short-term the EMU inflation rate could be systematically below 2%. But the probability of it being within a range between 1 and 3% is reasonably high. With a redefinition of the inflation target adopting the mentioned range the ECB will not tend to move the interest rates for the time being. But keeping the target as it is, the ECB will tend to increase interest rates before too long.

Table 5 summarises average annual growth rates for the main countries. Monthly and annual forecasts for all the countries can be found in tables A4A, A4B, A4C and A4D in the appendix.

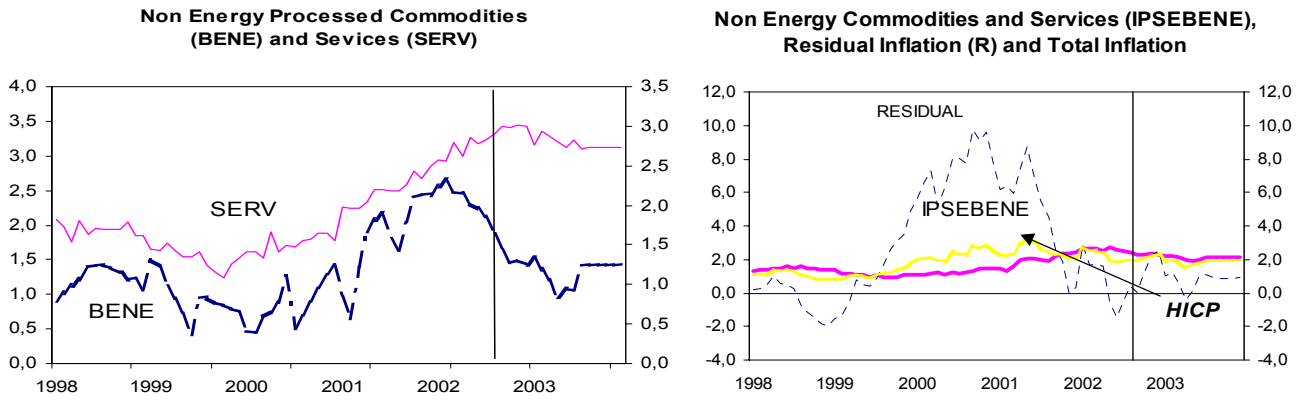
	Observed			Forecasts	
	1999	2000	2001	2002	2003
<b>Spain HICP – 10.34%</b>	2.2	3.5	2.8	3.6	3.4
<b>Germany HICP – 30.56%</b>	0.6	2.1	2.4	1.4	0.8
<b>France HICP – 20.41%</b>	0.6	1.8	1.8	1.9	1.2
<b>Italy HICP – 19.34%</b>	1.6	2.6	2.3	2.5	2.7
<b>EMU HICP – 100%</b>	1.1	2.3	2.5	2.3	2.0

Source: Eurostat & I. Flores de Lemus / Date: August 27, 2002.



Graph 1

### HICP ANNUAL GROWTH RATES IN EMU



Source: EUROSTAT & I. FLORES DE LEMUS / August 21, 2002.





## II.2 United States

*In July, the year-on-year rate increased, as expected, from 1.07% up to 1.46% due to energy prices drops last year.*

US CPI in **July** rose 0.11% compared to the previous month, as opposed to the forecasted 0.23%, increasing the annual rate from 1.07% to 1.46%. If owner's equivalent rent of primary residence is omitted, the year-on-year rate passes from 0.27% to 0.77%. These important increases in the annual rate have been due to strong drops of energy prices in July 2001. The prediction error is explained mostly by non-durable goods prices, tobacco and apparel indexes indeed (see **Table 7**).

In **Table 6** we can see the breakdown scheme following in our US CPI analysis.

Table 6									ALL CPI		
									100,00%		
RESIDUAL CPI				CORE CPI							
24,72%				75,28%							
Energy			Food	Commodities less food and energy			Services less energy				
9,86%				29,37%			45,91%				
Gas	Electricity	Motor fuel and fuel oil		Durables	Nondurables less tobacco	Tobacco	Less owner' equivalent rent of primary residence	Owners' equivalent rent of primary residence			
1,27%	3,42%	5,18%	14,86%	17,19%	11,81%	0,38%	27,44%	18,47%			

Source: **BLS & INSTITUTO FLORES DE LEMUS**

Data: August 16, 2002



**OBSERVED VALUES AND FORECAST ON CPI IN US**  
**July 2002**

CONSUMER PRICES INDEX (CPI)	Weights (%)	Annual Growth (T <sup>1</sup> <sub>12</sub> ) observed	Monthly Growth (T <sup>1</sup> <sub>1</sub> )		Confidence Intervals at 80% level (+ -)
			observed (a)	forecasts (b)	
<b>Food</b>	14.9	1.4	0.09	<b>0.27</b>	0.35
<b>Energy</b>	9.9	-5.2	0.48	<b>0.99</b>	1.28
<b>Non-food and non-energy goods</b>	<b>29.4</b>	<b>-1.3</b>	<b>-0.63</b>	<b>-0.31</b>	<b>0.20</b>
<b>-less tobacco</b>	29.0	-1.6	-0.65	<b>-0.50</b>	0.20
-Durable Goods	17.2	-2.5	-0.16	<b>-0.16</b>	0.26
-Nondurable goods less energy	12.2	-0.2	-1.27	<b>-0.45</b>	0.30
-Non-durable goods less tobacco and energy	11.8	-0.6	-1.39	<b>-0.87</b>	0.31
-Tobacco	0.4	5.9	-0.04	<b>3.97</b>	1.37
<b>Non-energy services</b>	<b>45.9</b>	<b>3.8</b>	<b>0.37</b>	<b>0.36</b>	<b>0.10</b>
-less owner's equivalent rent of primary residence	27.4	3.6	0.43	<b>0.41</b>	0.13
-owner's equivalent rent of primary residence	18.5	4.2	0.28	<b>0.28</b>	0.15
<b>Core Inflation</b>	<b>75.3</b>	<b>2.2</b>	<b>0.11</b>	<b>0.16</b>	<b>0.10</b>
-less owner's equivalent rent of primary residence	56.8	1.5	0.04	<b>0.12</b>	0.12
-less owner's equivalent rent of primary residence and tobacco	56.4	1.4	0.04	<b>0.05</b>	0.12
<b>All items</b>	<b>100.0</b>	<b>1.5</b>	<b>0.11</b>	<b>0.23</b>	<b>0.15</b>
-less owner's equivalent rent of primary residence	81.5	0.8	0.06	<b>0.22</b>	<b>0.18</b>

Source: BLS & INSTITUTO FLORES DE LEMUS

Data: August 16, 2002

*The prediction error is explained mostly by non-durable goods prices, tobacco and apparel indeed*

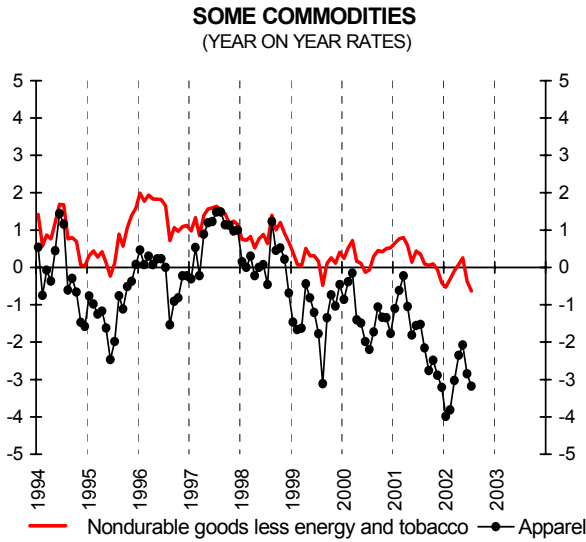
Core inflation registered an increase of 0.11% instead of the foreseen 0.16%, lowering the annual rate from 2.26% to 2.20%. This deviation has been completely due to non-durable goods prices, specially by apparel and tobacco prices. The other core inflation parts have behaved as expected. Core inflation, excluding the owner's equivalent rent of primary residence and tobacco prices, has registered a very similar increase to the predicted, 0.04% as opposed to the forecasted 0.05%, the year-on-year rate rises from 1.39% up to 1.43%.

*Core inflation, excluding the owner's equivalent rent of primary residence and tobacco prices, behaved as expected and leaves the annual rate at 1.43%.*

In fact, non-energy goods prices decreased more than forecasted, 0.63% instead of 0.31%, which is explained by non-durable goods, since durable goods prices have behaved exactly as predicted, the annual rate passes from -1.04% to -1.32%. Durable goods have registered a 0.16% drop, as expected, increasing the annual rate from -2.57 to -2.50. On the other hand, non-durable goods prices have registered a 1.27% decrease, as opposed to the 0.45% foreseen, passing the annual rate from 0.61% to -0.21%. This index without tobacco prices the observed decrease is -1.39% instead of the predicted -0.87%, which is mostly explained by apparel prices. The tobacco index has been the great surprise, with a slight 0.04% decrease, instead of the forecasted increase of 3.97%, making the annual rate drop from 11.02% to 5.89% (see **Graphs 2 and 3**).

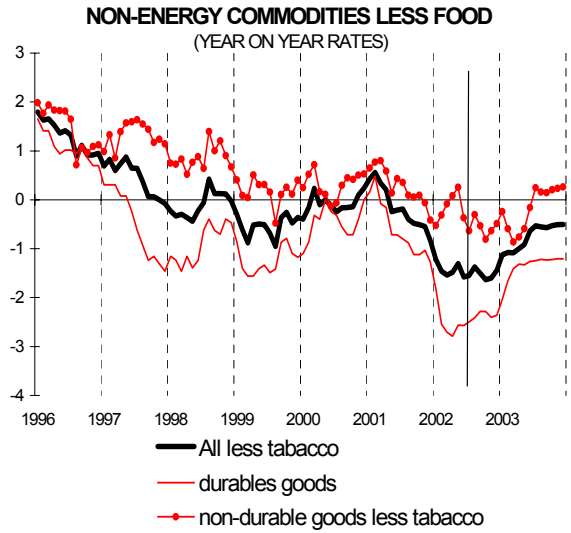


Graph 2



Source: BLS & IFL / Date: August 16, 2002.

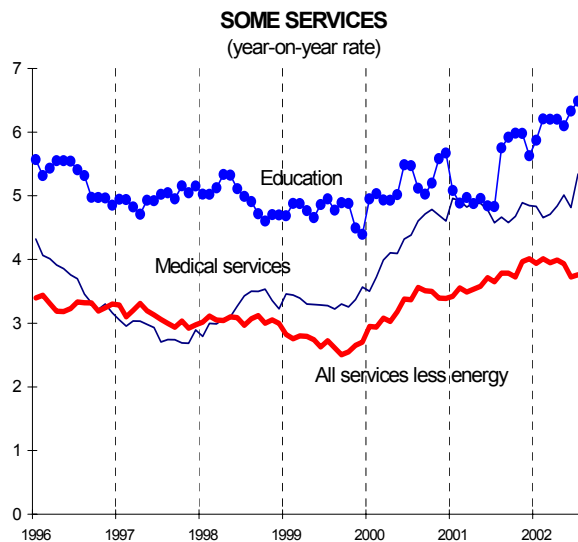
Graph



Source: BLS & IFL / Date: August 16, 2002.

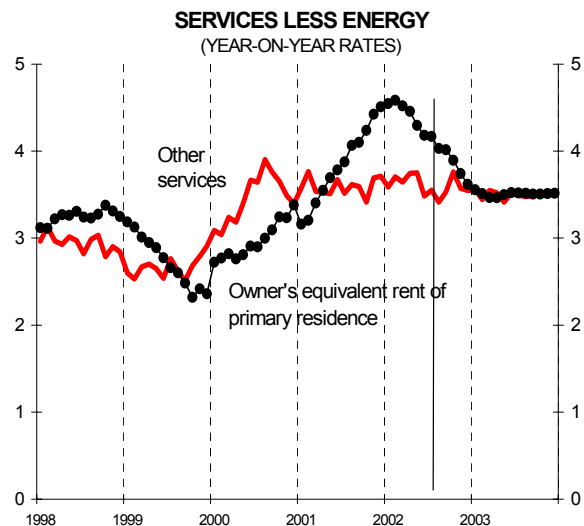
Service prices have behaved exactly as expected, both in the owner's equivalent rent of primary residence index and in the rest of the service prices index as a whole. The service prices annual rate rises from 3.72% to 3.76%. The owner's equivalent rent of primary residence prices have registered a 0.28% variation, as expected. On the other hand, the rest of the non-energy service prices, altogether, has registered a very similar variation to the expected one, 0.43% as opposed to the forecasted 0.41%. However, by components, there have been deviations which have got balanced. More precisely, medical and the communication services have shown greater increases than forecasted (see **Graphs 4 and 5**).

Graph 4



Source: BLS & IFL / Date: August 16, 2002.

Graph 4



Source: BLS & IFL / Date: August 16, 2002.



The differential between services prices- without the owner's equivalent rent of primary residence index - and non-food and non-energy goods - without tobacco – has increased significantly over the last months due to the goods prices drop.

Residual inflation registered a 0.22% increase, slightly under the previsions (0.50%), increasing the annual rate from -2.97% to -0.28%. By components, both energy and food prices have behaved better than expected. Energy, 0.48% instead of 0.99%, and food, 0.09% instead of 0.27%. The strong increase in the overall CPI has been due to energy prices, and more precisely to motor-fuel prices, which have risen the year-on-year rate 11.6 points because of their strong drops last year.

*In August, the overall CPI is forecasted to rise 0.21%, increasing the annual rate two tenths, up to 1.68%, due to the decreases of energy prices last year.*

**In August**, the overall CPI is forecasted to increase 0.21%, leaving the annual rate at 1.68%, two tenths more than in July. This increase in the year-on-year rate is entirely due to energy prices, specially to motor-fuel prices, which will rise 0.03% compared to its drop of 2.95% last year. Core inflation is expected to increase 0.24%, which would maintain the annual rate at 2.2%. Without the owner's equivalent rent of primary residence index, the expected increase is of 0.20%, which would make the year-on-year rate rise one tenth up to 1.56%.

*Core inflation is not expected to change its annual rate.*

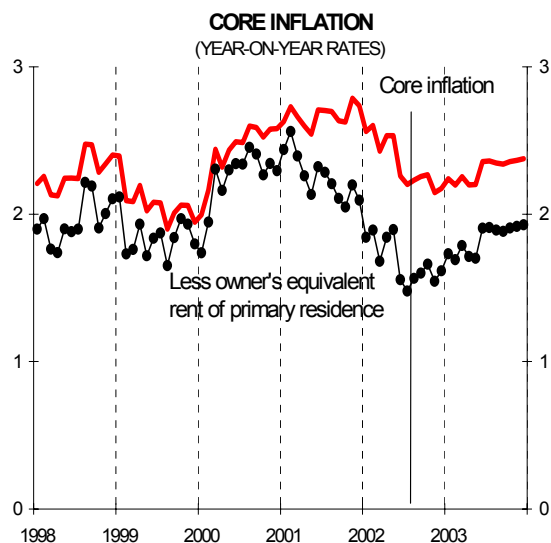
By components, the expected increase for the service prices is 0.39% (0.35% for the owner's equivalent rent of primary residence index and 0.41% for the rest), this would cut 0.14 points both indexes. Non-food and non-energy goods prices are forecasted to decrease 0.10%, which would make the year-on-year rate increase three tenths up to -1.01%. Without tobacco, the expected decrease is of 0.01% and would leave the annual rate -1.37%, two tenths over last month's. Durable goods prices are expected to decrease 0.40%, increasing the annual rate one tenth up to -2.42%. Non-durable goods prices are forecasted to increase 0.19%, which would increase the year-on-year rate from -0.21% up to 0.34%. Tobacco prices are predicted to decrease 2.32%, compared to the 3.76% drop last year.

Forecasts for residual inflation show a rise of 0.11%, which would increase the year-on-year rate 0.7 points, up to -0.22%. Within residual inflation, disparate activity is expected for its components, with an important acceleration in energy prices, while food prices are expected to stay around at July's annual rate.

*For 2003, expectations improve one tenth and leave the mean annual rate at 2.3%.*

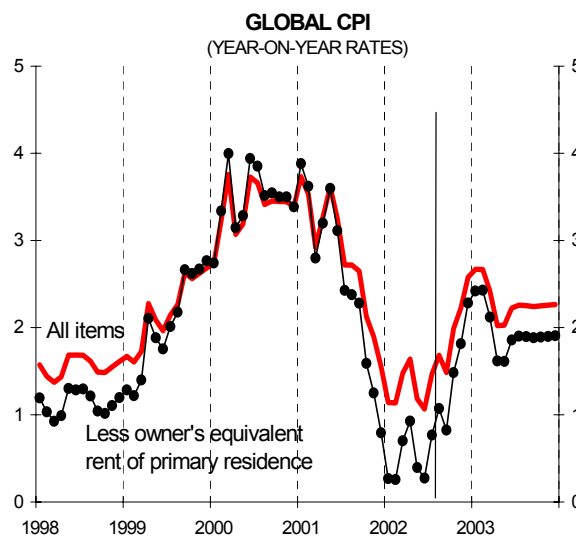
For 2002, expectations stay the same, decreasing one tenth for 2003, with mean annual rates of 1.6% and 2.3% respectively. This improvement is linked to positive behaviour of some non-durable goods. From August to December of 2002, forecasts show an ascendant line up to 2.6% (see **Graph 7**).

Graph 6



Source: BLS & IFL / Date: August 16, 2002.

Graph 7



Source: BLS & IFL / Date: August 16, 2002.



**Graph 6** shows the important deceleration registered by the core inflation since one year and a half ago (without the owner's equivalent rent of primary residence and the tobacco indexes). However, previsions show slight accelerations during the next months.

**Table 8** shows the average annual growth rates forecasts for 2002 and 2003 for the different components of the US Consumer Price Index (monthly and annual rates can be found in Tables A6A and A6B in the Appendix).

Table 8

**AVERAGE ANNUAL RATE OF GROWTH IN US (\*)**

CONSUMER PRICES INDEX (CPI)	1998	1999	2000	2001	2002 (forecasts)	2003 (forecasts)
<b>Food</b>	2.2	2.1	2.3	3.1	<b>1.9</b>	<b>2.3</b>
<b>Energy</b>	-7.7	3.6	16.9	3.8	<b>-6.4</b>	<b>2.2</b>
<b>Non-food and non-energy goods</b>	0.6	0.7	0.5	0.3	<b>-1.1</b>	<b>-0.6</b>
-less tobacco	-0.1	-0.5	-0.1	-0.2	<b>-1.5</b>	<b>-0.8</b>
-Durable Goods	-0.9	-1.2	-0.5	-0.6	<b>-2.4</b>	<b>-1.4</b>
-Nondurable goods less energy	2.3	2.4	1.4	1.1	<b>0.3</b>	<b>0.2</b>
<b>Non-energy services</b>	3.1	2.7	3.3	3.7	<b>3.8</b>	<b>3.5</b>
-less owner's equivalent rent of primary residence	2.9	2.7	3.5	3.6	<b>3.6</b>	<b>3.5</b>
<b>Core Inflation</b>	<b>2.3</b>	<b>2.1</b>	<b>2.4</b>	<b>2.7</b>	<b>2.3</b>	<b>2.3</b>
-less owner's equivalent rent of primary residence	<b>2.0</b>	<b>1.8</b>	<b>2.2</b>	<b>2.3</b>	<b>1.7</b>	<b>1.8</b>
-less owner's equivalent rent of primary residence and tobacco	<b>1.8</b>	<b>1.4</b>	<b>2.1</b>	<b>2.1</b>	<b>1.6</b>	<b>1.8</b>
<b>All items</b>	<b>1.6</b>	<b>2.2</b>	<b>3.4</b>	<b>2.8</b>	<b>1.6</b>	<b>2.3</b>
-less owner's equivalent rent of primary residence	<b>1.1</b>	<b>2.0</b>	<b>3.5</b>	<b>2.6</b>	<b>0.9</b>	<b>2.0</b>

(\*) Monthly and annual growth rates can be found in tables A6A and A6B in Appendix

Source: BLS & INSTITUTO FLORES DE LEMUS

Data: August 16, 2002



## II.3 Spain

The CPI for July 2002 showed a negative monthly rate of 0.7% with a year-on-year rate of 3.4%.

The CPI for July 2002 showed a negative monthly rate of 0.69%, above our predicted -0.83%, with a year-on-year rate of 3.4%, also registered in June.

Trend inflation, calculated on the basis of the IPSEBENE-XT index, registered a year-on-year rate of 3.4% in July, the same that corresponding to total inflation. Since July 2001, residual inflation has been 2.8%.

Trend inflation registered a null innovation and residual inflation an upward surprise came in prices of non-processed food and energy.

The null innovation in trend inflation came in the compensation of the upward innovation in goods markets with the downward surprise in services market. Regarding residual inflation, it registered an upward surprise, arising from prices of non-processed food and energy.

In order to analyse this in greater detail, it is necessary to refer to tables 9 and 10. Table 9 shows the breakdown used in this Bulletin to study inflation behaviour (there is a more detailed version in table A1 at the end of the document) and table 10 summarises prediction errors made for different components.

1. Processed Foods CPI (excluding Fats and Tobacco)	AE-X (12.87%)	Trend Inflation (1+2+3) IPSEBENE-XT (77.23%)	CPI  (100%)
2. Non Energy Commodities CPI	MAN (31.41%)		
3. Non Energy Services CPI (excluding Tourism)	SERV-T (32.95%)		
4. Fats, Tobacco and Tourism	XT (4.28%)	Residual Inflation (4+5+6) R (22.77%)	
5. Non Processed Foods CPI	ANE (9.07%)		
6. Energy CPI	ENE (9.41%)		

(\*) More detailed information can be found in table A1 in Appendix.

Consumer Price Index (CPI)	Current growth July 02	Forecast	Confidence Intervals (*)
(1) AE-X (12.87%)	0.15	0.15	± 0.18%
(2) MAN (31.41%)	-3.20	-3.40	± 0.16%
BENE-X [1+2] (44.28%)	-2.23	-2.37	± 0.14%
(3) SERV-T (32.95%)	0.37	0.46	± 0.17%
<b>IPSEBENE-X-T [1+2+3] (77.23%)</b>	<b>-1.11</b>	<b>-1.15</b>	<b>± 0.13%</b>
(4) X+T (4.28%)	1.43	2.04	
(5) ANE (9.07%)	0.79	-0.42	± 1.09%
(6) ENE (9.41%)	0.27	0.01	
<b>R [4+5+6] (22.77%)</b>	<b>0.72</b>	<b>0.25</b>	<b>± 0.22%</b>
<b>IPC [1+2+3+4+5+6] (100%)</b>	<b>-0.69</b>	<b>-0.83</b>	<b>± 0.15%</b>

(\*) At 80% confidence level.

Source: INE & INSTITUTO FLORES DE LEMUS Date: : August 13, 2002.



**Trend inflation in goods** (measured by the BENE-X index) was -2.23%, slightly above our prediction, -2.37%, as a consequence of the soft upward innovation in prices of non-energy commodities. Prices of **non-energy commodities** registered a monthly rate of -3.20% in July, instead of the -3.40% forecasted. As was mentioned in our previous Bulletins the later entry of new fashion articles comes in a different behaviour of sales effects in 2001 and 2002. So, we modified the sales coefficients of 2001, published by the INE, in order to capture in a correct way the sales evolution in 2002. So, we have been able to pick the decrease up in the monthly rate of commodities prices registered last June, from the 0.44% observed in May, it decreases to -0.02% in June, and also the decrease produced in July of -3.2%. Nevertheless, as was aforementioned, prices of non-energy industrial goods registered an upward innovation due to the less decrease than forecasted in prices of apparel.

*The annual inflation differential in commodities market with the EMU has decreased in July 2002 to 0.8% respect the 1.5% observed in June 2002.*

The year-on-year rate registered in July was 2.3%, respect the 3.0% observed in June. This contrasts with these prices in the Euro-zone, with a year-on-year rate of growth of 1.5% in July. Nevertheless, in July 2002 the inflation differential in the commodities market with the EMU has decreased to 0.8%, compared with the 1.5% observed in June 2002. The year-on-year rates of growth in apparel and footwear are 4.7% and 6.1%, respectively. If these increases in prices are not reflected in improved quality of corresponding goods, the Spanish economy will suffer a loss of competitiveness in relation to Europe, which will translate to lower economic growth. The predictions for mean rates in commodity prices stay at 2.3% for 2002 and have been updated downwards to 2.1% in 2003, with respect to the 2.6% registered in 2001.

*The offers picked up by the INE derive in a more erratic evolution of trend inflation in food.*

The monthly rate of **trend inflation in food** in July stayed at 0.15%, coinciding with our prediction. Prices of processed food are now affected by offers that the National Statistics Institute (INE) picks up; this fact derives a more erratic evolution of this kind of prices. The year-on-year rate in July stayed at 3.1%, registered since April and respect to the 5.1% observed in the last quarter of 2001. The mean growth expectations of trend inflation in food for 2002 and 2003 are 3.1% and 2.8%, respectively, with respect to the 4.1% observed in 2001.

*The mean growth expectations for trend inflation in goods for 2002 and 2003 will stay at 2.4% and 2.3%, respectively.*

**Trend inflation expectations for goods** (measured by the BENE-X index) have been updated downwards in 2002 to 2.4% and 2003 to 2.3%.

Table 11 shows a summary of average annual predictions for the different components that make up core and residual inflation (more detailed information may be found in tables A7A and A7B at the end of the document.)

Table 11						
SPANISH AVERAGE RATES OF GROWTH						
	1998	1999	2000	2001	Forecasts	
					2002	2003
Residual Inflation	0.6	3.0	6.5	3.7	3.4	3.6
Fats	-11.1	14.9	-7.6	-7.3	15.6	5.2
Tobacco	7.9	4.3	2.5	4.9	7.4	2.3
Tourism	15.4	7.2	12.3	7.1	7.8	6.7
Non Processed Foods	2.1	1.2	4.2	8.7	6.0	5.6
Energy	-3.8	3.2	13.3	-1.0	-0.3	1.2
Trend Inflation	2.2	2.1	2.5	3.5	3.3	3.2
BENE-X	1.4	1.3	1.9	3.1	2.4	2.3
SERV-T	3.3	3.3	3.5	4.1	4.4	4.4
CPI Inflation	1.8	2.3	3.4	3.6	3.5	3.3

(<sup>1</sup>) More detailed information can be found in tables A6A and A6B in Appendix.

Source: INE & Institute Flores of Lemus / Date: August 23, 2002.



The worrisome evolution of prices of services derives from an inflation differential between trend inflation in services and trend inflation in goods of 1.9% in July, greater than the corresponding to the EMU, 1.3%.

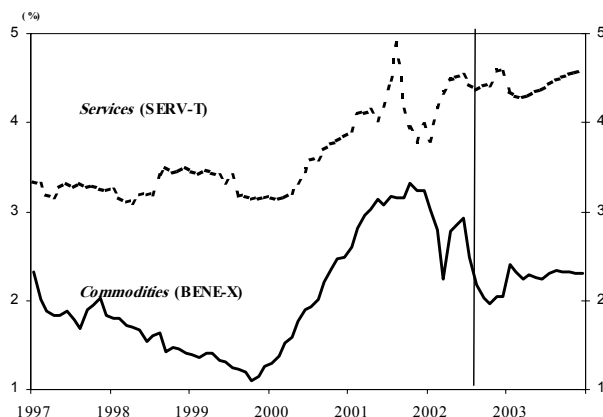
With regards to the **services sector, excluding those components known as tourist packages** (the SERV-T index), monthly inflation, 0.37%, behaved below as was foreseen, 0.46%. The evolution of prices of services is especially worrisome in transport, postal services, university, restaurants, hotels, housing, medicine and culture which show annual rates of growth near or greater than 5%. So, the inflation differential between the market of non-energy processed goods, excluding fats and tobacco, and the services market, excluding tourism, increased in July to 1.9 percentage points, respect the 1.6% registered in June. This differential is greater than that of the EMU (1.3%); the year-on-year rate of growth of services in July was 4.6%, while that corresponding to the Euro-zone was 3.2%. The year-on-year trend inflation in services (SERV-T) decreased to 4.4% in July, compared to 4.5% registered from April. Mean growth expectations decreased to 4.4% for 2002 and 2003, compare to the prediction of the previous Bulletin.

The mean annual rate of trend inflation will stay at 3.3% in 2002 and 3.2% in 2003.

With the aforementioned innovations in the goods and the services market, trend inflation, calculated on the IPSEBENE-XT index, registered an annual rate of 3.4%, respect to the 3.7% registered last June. It is predicted that **trend inflation** will stay at 3.3% in 2002 and 3.2% 2003, compared to 3.5% observed in 2001.

Graph 8

#### AVERAGE RATES OF GROWTH OF CPI INFLATION IN GOODS AND IN SERVICES



Source : INE & INSTITUTO FLORES DE LEMUS / Date: August 23, 2002.





Residual inflation registered an upward innovation in prices of non-processed food and energy.

Those prices which serve as a basis for calculating **residual inflation** have registered a downward innovation in prices of tourism; an upward innovation in prices of non-processed food and in energy; and finally a null surprise in prices of tobacco and fats and oils. In the non-processed food groups (the ANE index) there were upward innovations in prices of most of all components. Prices of tourist packages increased by 5.3% in July with respect to June 2002. Finally, energy prices increased by 0.3% with respect to June 2002.

With all of this, residual inflation registered a year-on-year growth rate of 2.8% in July, respect to the 1.8% observed in June. An increasing evolution is forecasted for residual inflation, from 2.8% in July to 6.3% in December, due to the erratic behaviour of non-processed and energy prices, as with the rest of the EMU.

As a consequence of the uncertainty in prices of crude, with an estimation of a mean price of Brent around 27\$, the expectations of average growth in consumer energy prices are of -0.3% and 1.2% for 2002 and 2003, respectively, compared to the -1.0% observed in 2001. Average annual variation rates for oils and fats are expected to increase by 15.6% in 2002 and to reduce to 5.2% in 2003. As far as average growth of non-processed foods, expectations are 6.0% for 2002 and 5.6% in 2003. Lastly, tourist package prices will reach average values of 7.8% in 2002 and 6.7% in 2003. Therefore, **the estimated average growth of residual inflation** is 3.4% in 2002 and 3.6% in 2003.

The monthly inflation prediction for August 2002 is a value of 0.1%; the annual rate will increase to 3.5%.

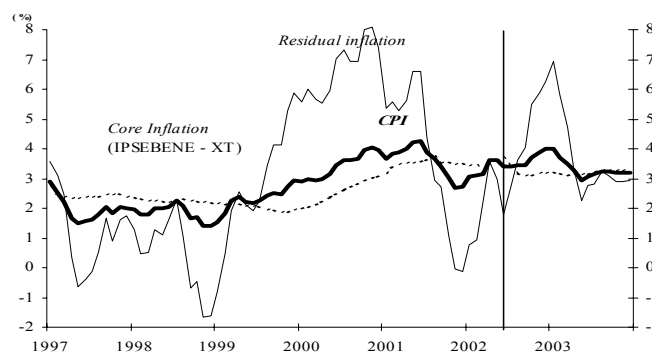
As a result, the monthly inflation prediction for August 2002 is for a growth of 0.1%; which will increase annual growth to 3.5% in August, respect to the 3.4% observed in June and July. Monthly trend inflation will be -0.1% and residual inflation will be 0.7%. The average inflation rate within the overall CPI is placed at 3.5% in 2002 and 3.3% in 2003. The average rate of trend inflation will be 3.3% in 2002 and 3.2% in 2003.

The expectations of total inflation at the end of 2002 stay around 4%.

The expectations of total inflation at the end of 2002 stay around 4%, as a consequence of a high year-on-year rate of trend inflation that will reach 3.2% in December 2002, and the worse behaviour of non-processed food and energy prices. The year-on-year rates of total inflation in November and December 2002 are used in order to review wages, contracts, .... These year-on-year rates show an extremely variable evolution. For example, in 2001 they moved from 2.7% in November and December to 4.2% in June, in contrast to the average annual rate of 3.6%. Nevertheless, forecasts in 2002 point to a year-on-year rate in December of 4.0%, greater than the average annual rate of 3.5%

Graph 9

**AVERAGE RATES OF GROWTH OF TOTAL INFLATION, CORE AND RESIDUAL INFLATION**



Source : INE & INSTITUTO FLORES DE LEMUS / Date: August 23, 2002.

Table 12 shows the average annual rates for 2000, 2001, 2002 and 2003 of the different sectors in the EMU and Spain, where the relevant differential in non-energy industrial goods and services can be observed.



Table 12

**HARMONIZED ICP ANNUAL GROWTH BY SECTORS  
IN THE EMU AND SPAIN 2000-2001-2002**

		Forecasts			
		2000	2001	2002	2003
<b>AE</b>	<b>EMU</b>	<b>1.1</b>	<b>2.8</b>	<b>3.0</b>	<b>2.1</b>
<b>AE-X</b>	<b>SPAIN</b>	<b>1.4</b>	<b>4.1</b>	<b>3.1</b>	<b>2.8</b>
<b>MAN</b>	<b>EMU</b>	<b>0.7</b>	<b>1.1</b>	<b>1.6</b>	<b>1.4</b>
	<b>SPAIN</b>	<b>2.1</b>	<b>2.6</b>	<b>2.3</b>	<b>2.1</b>
<b>BENE</b>	<b>EMU</b>	<b>0.8</b>	<b>1.6</b>	<b>2.0</b>	<b>1.6</b>
<b>BENE-X</b>	<b>SPAIN</b>	<b>1.9</b>	<b>3.1</b>	<b>2.4</b>	<b>2.3</b>
<b>SERV</b>	<b>EMU</b>	<b>1.7</b>	<b>2.5</b>	<b>3.2</b>	<b>3.2</b>
<b>SERV-T</b>	<b>SPAIN</b>	<b>3.5</b>	<b>4.1</b>	<b>4.4</b>	<b>4.4</b>
<b>IPSEBENE</b>	<b>EMU</b>	<b>1.3</b>	<b>2.0</b>	<b>2.6</b>	<b>2.3</b>
<b>IPSEBENE-XT</b>	<b>SPAIN</b>	<b>2.5</b>	<b>3.5</b>	<b>3.3</b>	<b>3.2</b>
<b>ANE</b>	<b>EMU</b>	<b>1.7</b>	<b>7.0</b>	<b>2.7</b>	<b>0.9</b>
	<b>SPAIN</b>	<b>4.2</b>	<b>8.7</b>	<b>6.0</b>	<b>5.6</b>
<b>ENE</b>	<b>EMU</b>	<b>13.3</b>	<b>2.7</b>	<b>-0.8</b>	<b>0.5</b>
	<b>SPAIN</b>	<b>13.3</b>	<b>-1.0</b>	<b>-0.3</b>	<b>1.2</b>
<b>RESIDUAL</b>	<b>EMU</b>	<b>7.6</b>	<b>4.7</b>	<b>0.8</b>	<b>0.7</b>
	<b>SPAIN</b>	<b>6.5</b>	<b>3.7</b>	<b>3.4</b>	<b>3.6</b>
<b>HICP</b>	<b>EMU</b>	<b>2.3</b>	<b>2.5</b>	<b>2.3</b>	<b>2.0</b>
<b>CPI</b>	<b>SPAIN</b>	<b>3.4</b>	<b>3.6</b>	<b>3.5</b>	<b>3.3</b>

Source: INE, EUROSTAT & Instituto Flores de Lemus / Date: August 23, 2002.

