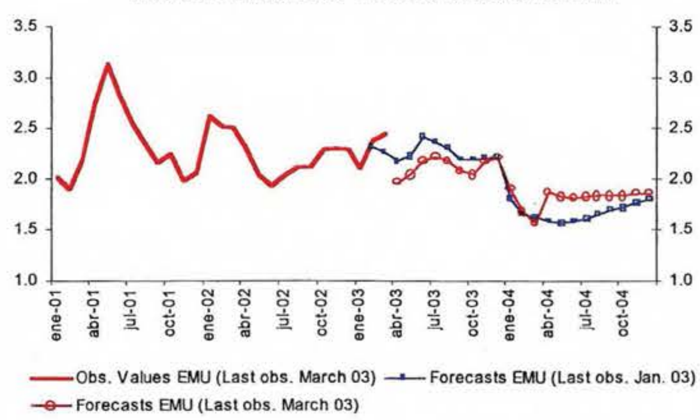
BULLETIN

OF E.U. AND U.S INFLATION AND MACROECONOMIC ANALYSIS

Instituto Flores de Lemus de Estudios Avanzados en Economía Nº 103, April 2003

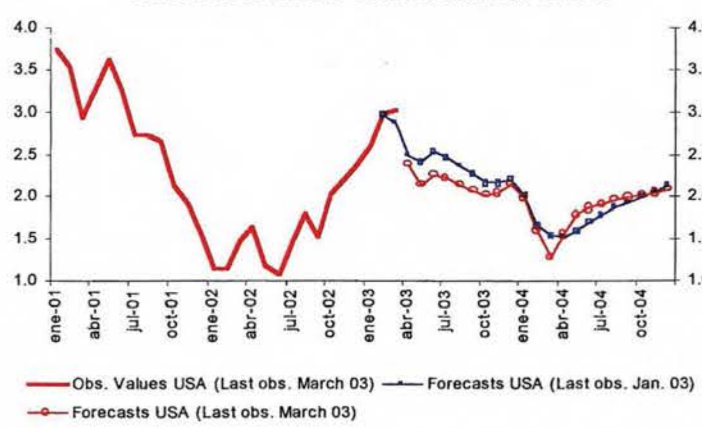
Improved International Crude Price Expectations Decrease Total Inflation Forecasts in the EMU and the US for 2003.

YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU



Source: Eurostat & IFL / Date: April 22 , 2003

YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE USA



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CONTENTS

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BULLETIN
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TERMINOLOGY USED:

In inflation analysis it is advisable to break down a consumer price index for a country or an economic area in price indexes corresponding to homogenous markets. An initial basic breakdown used in this publication is 1) Non-processed Food price index (ANE) 2) Energy price index (ENE), 3) Processed Food (AE), 4) Other commodities (MAN), 5) Other services (SERV). The first two are more volatile than the others, and in Espasa et al. (1987) a **core inflation** measure exclusively based on the latter ones was proposed; the Spanish Statistical Institute and Eurostat proceed in the same way. Later, in the BULLETIN EU & US INFLATION AND MACROECONOMIC ANALYSIS was proposed to eliminate from components of core inflation those indexes which are excessively volatile. Thus, the previous basic breakdown has been amplified in the following manner: a) ANE, b) ENE, c) Tobacco, Oils and Fats, and Tourist Packages, d) Processed Foods excluding Tobacco, Oils and Fats, (AEX).ge) Other Goods (MAN), and f) Other ervices, excluding Tourist Packages (SERT). The measure of inflation obtained with the AEX, MAN, and SERVT indexes we term **trend inflation**, as an alternative indicator similar to core inflation, but termed trend inflation to indicate a slightly different construction. The measure of inflation established with the price indexes excluded from the CPI to calculate trend inflation or core inflation, depending on the case, is termed **residual inflation**.

For the United States the breakdown by markets is principally based on four components: Food, Energy, Services, and Commodities. **Trend inflation** or **core inflation** is based in this case as the aggregation of services and non-energy commodities.

I. MAIN POINTS AND NEW RESULTS

I.1. MONETARY AND EUROPEAN UNIONS

- The April month-on-month inflation rate in the EMU is forecast at a null value. The corresponding year-on-year rate will decrease to 1.9%, compared to the 2.4% registered since February (graph R1).

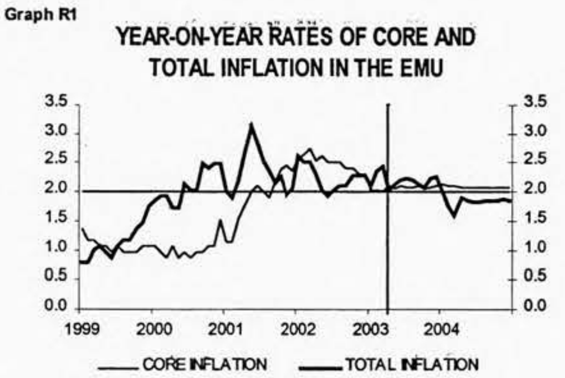
- The month-on-month rate registered in March was 0,62% less than the 0,70% forecasted. In core inflation, the slight upward innovation was due to non-energy industrial goods prices. Residual inflation registered a downward innovation due to the prices of non-processed food and energy. (tables R1 and A2 in the appendix). Eurostat has revised data and weights for Germany since 2000, which also involved a revision of EMU and EU HICP series as a result of the updated HICP sample and revised weighting in Germany for the period starting January 2000.

Table R1
OBSERVED VALUES AND FORECASTS IN THE MONTH-ON-MONTH RATE OF GROWTH IN THE COMPONENTS OF THE HICP IN THE EMU

Harmonized Indices of Consumer Prices	Observed growth March 2003	Forecast	*Confidence interval at 80%*
Total Inflation (100%)	0.62	0.70	± 0.09
Core inflation (84.172%)	0.54	0.49	± 0.08
Residual inflation (15.828%)	0.91	1.80	± 0.39

(*) Al 80% de significación
Source : EUROSTAT & IFL / Date: April 16/ 2003.

Graph R1



Source: EUROSTAT & INSTITUTO FLORES DE LEMUS
Date: April 22/ 2003

- The expectations for the average annual rate of **core inflation** in the EMU increase to 2.1% in 2003 and 2004 (graph R1), compared to the 2.5% observed in 2002. In order to obtain a homogeneous measure of core inflation in the EMU and the USA, we have excluded the prices of processed food from the usual measure of core inflation in the EMU. The expectations for the average rate of growth of this homogeneous core inflation measure in the EMU are 1.9% in 2003 and 2.0% in 2004, compared to the 2.4% observed in 2002 and below 2%; therefore prices of processed goods put upwards pressure on total inflation in the EMU. Prices of tobacco compose prices of processed food and the mean annual rate for prices of tobacco is expected to reach 6.7% in 2003 and 2.5% in 2004. And the average annual rate for prices of processed food excluding tobacco is expected to stay at 2.5% in 2003 and 2.6% in 2004. The mean annual rate of the homogeneous core inflation in the USA is expected to reach 1.2% in 2003 and 1.8% in 2004, due to the improved evolution expected in non-energy industrial goods prices.

- The differential between core inflation in goods and services decreased to 1.2 percentage points in March, and it is expected to remain at this value in 2003 and 2004. The average annual rates of prices of non-energy processed goods are forecast at 1.5% for 2003 and 2004. In the services market the expectations for the average annual rates are 2.7% in 2003 and 2004 (table R2).

- The incorporation of sales prices in different EMU countries led to a variable evolution of non-energy industrial goods prices, the month-on-month rate of inflation for which will go from a negative value of 1.5% observed in January to an observed positive value of 1.1% in March and it is expected to decrease to a –1.2% in July and to increase to 1.0% in September 2003. Consequently, the evolution of core inflation will also show important variations, from a negative value of 0.5% registered in January to a positive value of 0.5% in March and also expected in December 2003.

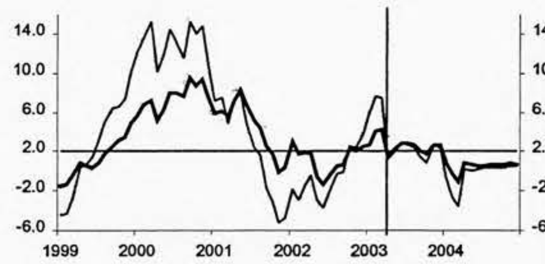
- The forecast average annual **total inflation** rate for 2003 increases to 2.2% and will fall to 1.8% in 2004, (see table R2).

- The erratic evolution of energy prices (see graph R2) also leads to variations in total inflation evolution, which from the 2.4% observed in February and March 2003, is now expected to decrease to 1.9% in April and to increase again around 2.2% in the second half of 2003. The probability of reaching this target in 2003 is just 50% and depends in a great way on the evolution of energy prices.

- The inflation differential of the Economic Monetary Union with the United States has systematically been a percentage point in favour of the EMU before 2002, as can be observed in graph R3. The year-on-year rate of growth in March in the USA was 3.0%, above the corresponding rate in the EMU, 2,4%, as was foreseen (graph R3). From August 2003 it is expected that inflation in the EMU will be greater than in the USA but in 2004, inflation in the EMU will again be lower than in the USA. If owner´s equivalent rents are excluded from total inflation in the USA in order to obtain a homogenous measure of total inflation in the EMU and in the USA, we would expect this homogeneous measure of total USA inflation to perform better in 2004.

Graph R2

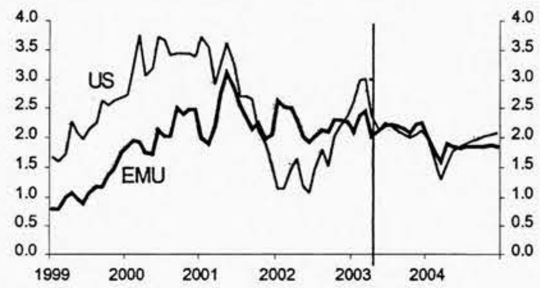
YEAR-ON-YEAR RATES OF RESIDUAL AND ENERGY INFLATION IN THE EMU



Source: EUROSTAT & INSTITUTO FLORES DE LEMUS
Date: April 22 /2003

Graph R3

YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU AND THE USA



Source: BLS, EUROSTAT & IFL
Date: April 22 / 2003

- This differential is favourable for the EMU in services, and for the USA in goods. The performance of non-energy industrial goods prices, excluding tobacco in the US, is noticeably different, with expectations for the average annual rate in the US falling to -1.2% in 2003 and –0.1% in 2004; and rates of 0.8% in 2003 and 1.0% in 2004 for the EMU, showing a lower level of technological implantation in the EMU.

- The results derived from the causality analysis, elaborated in our previous Bulletin number 100, show that the strong upwards pressure on inflation derived from the monetary policy implemented by the ECB is compensated by the downwards pressure derived from the output gap and unit labour cost trends. Therefore, in these economic conditions, it appears that in the short-term, the ECB will have scope to reduce again interest rates.

Table R2

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

Harmonised Indices of Consumer Prices (HICP)	2000*	2001*	2002*	Forecasts	
				2003	2004
TOTAL INFLATION (100%)	2.1	2.3	2.3	2.2	1.8
CORE INFLATION (84,17%)	1.0	1.9	2.5	2.1	2.1
Non energy processed goods HICP (43,27%)	0.6	1.5	1.9	1.5	1.5
Services HICP (40,91%)	1.5	2.5	3.1	2.7	2.7
RESIDUAL INFLATION (15,83%)	7.5	4.4	1.2	2.7	0.5
Non Processed Food HICP(7,58%)	1.7	7.0	3.1	2.0	1.4
Energy HICP (8,25%)	13.0	2.3	-0.6	3.3	-0.3

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

Source: Eurostat & IFL / Date: April 22, 2003

I.2 MACROECONOMIC TABLE OF EURO-ZONE

	Annual Averages Growths			
	2001	2002	Forecasts BIAM (*) 2003	Forecasts BIAM (*) 2004
GDP p m	**1.5**	**0.8**	**1.2**	**2.2**
Demand				
Final Consumption	1.9	1.0	1.3	1.9
Capital Investment	-0.7	-2.9	0.3	1.5
Domestic Demand	0.9	0.2	1.1	1.9
Exports of Goods and Services	2.8	1.2	4.4	5.8
Imports of Goods and Services	1.5	-0.3	4.2	5.4
Contribution Foreign Demand	0.5	0.6	0.2	0.3
Supply				
Gross Value Added Total (market prices)	1.4	0.8	1.2	2.2
Net Taxes	-3.3	-0.7	-3.5	4.1
Gross Value Added Total (basic prices)	1.7	0.9	1.5	1.9
Gross Value Added Agriculture	-1.2	-1.4	1.8	-0.3
Gross Value Added Industry	1.0	-0.1	1.7	1.9
Gross Value Added Construction	-0.6	-1.6	-0.3	0.5
Gross Value Added Services	2.3	1.4	1.6	2.3
Prices				
CPI harmonized, annual average	2.3	2.3	2.2	1.8
CPI harmonized, dec./dec.	2.1	2.3	2.2	1.8
Employment				
Unemployment rate	8.1	8.3	8.9	8.5
Others Economic Indicators				
Production Index of Industry (excluding construction)	0.4	-0.8	1.7	2.1

Source: EUROSTAT & I. FLORES DE LEMUS
Date: April 23 / 2003

(*) Boletín Inflación y Análisis Macroeconómico

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With the release of the figures related to February, Eurostat has revised the historical time series of the different IPI not seasonally adjusted components. Due to these revisions and last innovations, the expectations of annual average rate of growth of IPI in 2003 has improved to 1,7%, and remains in 2,1% for 2004. US expectations have been downwards revised due to two downward forecast errors in February and March. The expected growth of US IPI in 2003 is 0,5%, and 2,4% for 2004.

I.3. UNITED STATES

- For **April,** the forecast for the general index is a decrease of 0.08%, with the annual rate falling by seven tenths from 3.02% to 2.37%. This is fully explained by energy prices, which are expected to fall by 3.86% compared with last month, whereas they increased 5.71% in April last year. However, the expected increase in the index for core inflation is 0.25% with the annual rate remaining at 1.68%.

Table R3

OBSERVED VALUES AND FORECAST ON CONSUMER PRICE FIGURES IN US
-March 2003-

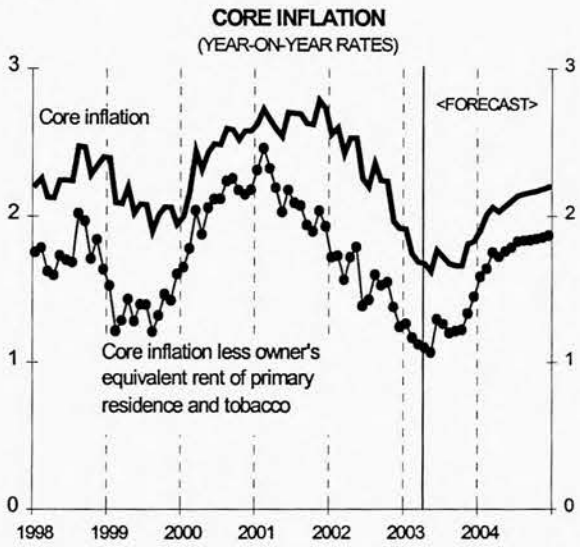
CONSUMER PRICES INDEX (CPI)	Monthly Growth (T^1_1)		Confidence Intervals at 80% level (+ -)
	observed (a)	forecasts (b)	
Residual Inflation	1.89	1.36	0.33
Core Inflation	0.26	0.42	0.14
All items	**0.60**	**0.63**	0.13

Source: BLS & INSTITUTO FLORES DE LEMUS
Data: April 22, 2003

- During **March,** the U.S. CPI increased by 0.60% over the previous month, similar to the forecast, 0.63% (see **Table R3**1), with the year-on-year rate going from the 2.98% observed in February to 3.02%. Although the general CPI annual rate has hardly changed, inflation in services has fallen, reducing its growth rate from 3.16% to 3.01%, whereas energy prices increase their annual rate from 21.98% to 23.36%. The annual core inflation growth rate has reached a new minimum record.

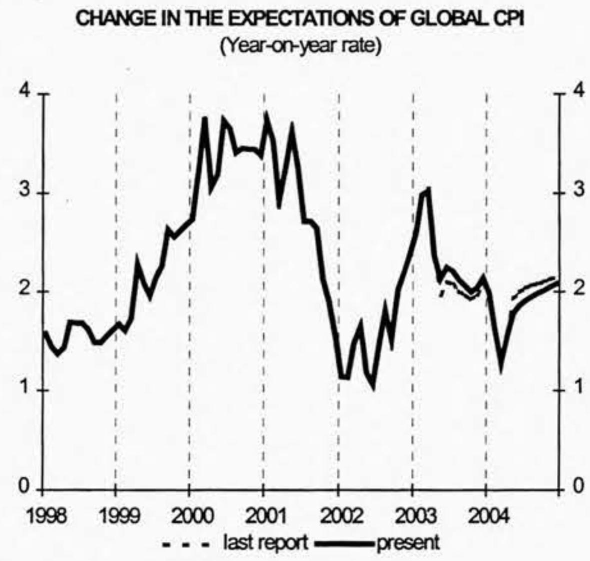
- Although the value observed was similar to the forecast in aggregate terms, by component there are several relevant figures. There have been decreases in some services, specifically long-distance phone calls, hospital services, lodging away from home and equivalent rent of primary residence. However, they have been compensated by the unexpected and heavy increase in gas prices, 13.32% instead of the 2.56% forecast. We must remember, nevertheless, that the increase in gas prices has a transient effect, whereas the impact of service price changes is longer lasting.

Graph R4



Source: IFL & BLS / Date: April 22, 2003

Graph R5



Source: IFL & BLS / Date: April 22, 2003

- The **core** rate increased by 0.26% over the previous month, compared with the 0.42% expected, with the annual rate falling from 1.74% to 1.69%. This considerable deviation from the forecast is explained both by service prices and the price of some goods. The core index not including equivalent rent of primary residence and tobacco, which is comparable with the underlying index in Europe, increased by 0.35% compared with the 0.52% expected, with the annual rate falling from 1.17% to 1.12%, an all-time low (see **Graph R4**).

1 The official information provided is with one decimal aggregation error

- By components, the index for commodities less food and energy without tobacco increased by 0.42% instead of the 0.53% expected, with the annual rate going from –1.74% to –1.76%. Durable goods prices declined 0.17% as opposed to the forecast -0.09%, with the annual rate going from –2.44% to –2.13%. Within durable goods, the annual rate of the used car index has picked up from the previous month, -3.57% to –2.37%. Non-durable goods prices excluding the index for tobacco increased by 1.08%, less than expected (1.20%), with the annual rate going from –0.98% to –1.36%. And the index for tobacco decreased by 1.16% opposed to the forecast 0.14%, with the annual rate increasing from 5.21% to 7.80%.

- The index for services grew 0.23%, less than expected (0.39%). The annual rate fell by 1.5 tenths from 3.16% to 3.01%. This considerable deviation from the forecast is explained specifically by long-distance phone calls, hospital services, lodging away from home and equivalent rent of primary residence. The index for services excluding owner's equivalent rent of primary residence increased by 0.31%, less than expected (0.52%), with the annual rate going from 3.23% to 3.10%. The index for owners' equivalent rent of primary residence increased 0.09% instead of the 0.19% expected.

- For **2003** and **2004,** we forecast mean annual total inflation rates of 2.32% and 1.84% respectively, representing an increase of 0.07 points for 2003, and a decrease of 0.06 for 2004, compared with last month's report. In April, the price of West Texas is expected to hover around 29$ per barrel, followed by a gradual decrease to 26$ per barrel for December 2003 (see **Table R4** and **Graph R5**).

Table R4

AVERAGE ANNUAL RATE OF GROWTH IN US

CONSUMER PRICES INDEX (CPI)	1999	2000	2001	2002	2003 (forecasts)	2004 (forecasts)
Food (1)	2.1	2.3	3.1	1.8	1.9	2.5
Energy (2)	3.6	16.9	3.8	-5.9	10.1	-2.3
Residual Inflation (3=2+1)	**0.8**	**6.8**	**3.3**	**-0.9**	4.5	0.9
Non-food and non-energy goods (4)	0.7	0.5	0.3	-1.1	-0.8	0.3
Less tobacco	-0.5	-0.1	-0.2	-1.5	-1.2	-0.1
-Durable goods	-1.2	-0.5	-0.6	-2.6	-1.5	0.1
-Nondurable goods	2.4	1.4	1.1	0.5	-0.1	0.6
Non-energy services (5)	2.7	3.3	3.7	3.8	2.8	2.8
-Services less owner's equivalent rent of primary residence (5-a)	2.7	3.5	3.6	3.6	2.9	3.0
-Owner's equivalent rent of primary residence (a)	2.7	3.0	3.8	4.1	2.7	2.6
Core Inflation (6=4+5)	**2.1**	**2.4**	**2.7**	**2.3**	1.7	2.1
Core inflation less owner's equivalent rent of primary residence (6-a)	1.8	2.2	2.3	1.7	1.3	1.9
Core inflatión less owner's equivalent rent of primary residence and tobacco	1.4	2.1	2.1	1.6	1.2	1.8
All items (7=6+3)	**2.2**	**3.4**	**2.8**	**1.6**	**2.3**	**1.8**
All items less owner's equivalent rent of primary residence (7-a)	2.1	3.5	2.6	0.9	2.2	1.6

Source: **BLS & INSTITUTO FLORES DE LEMUS**
Data: April 22, 2003

I.4. SPAIN

- The month-on-month inflation rate in April is expected to have a value of 1.0%. The year-on-year rate will decrease to 3.3%, respect to the 3.7% observed last March (graph R6).

- The month-on-month rate observed in March, a value of 0.69%, was less than was forecast, 0.82%. The upward innovation in trend inflation derived from prices of non-energy industrial goods; and residual inflation registered a downward innovation, derived mainly from prices of unprocessed food and tourist packages (table R5).

Table R5
OBSERVED VALUES AND FORECASTS IN THE MONTH-ON-MONTH RATE OF GROWTH IN THE COMPONENTS OF THE CPI IN SPAIN

Consumer Price Index (CPI)	Observed growth March 2003	Forecast	*Confidence interval at 80%*
Total Inflation(100%)	0.69	0.82	± 0.15
Trend inflation (77.49%)	0.69	0.56	± 0.13
Residual inflation (22.51%)	0.78	1.68	± 0.22

(*) Al 80% de significación
Source : INE & IFL / Date: April 11, 2003.

- **Trend inflation** in March stayed at 3.0%. Most components in trend inflation in services showed year-on-year rates above or around 4% for example prices of transports, universities, restaurants, education, housing and medicine services. Trend inflation in food in March decreased to 3.4%, respect to the 3.5% registered in February. Taking prices of non-energy industrial goods into account, the year-on-year rate increased to 2.2% in March, compared to the 2.1% registered in February, and the mean annual rate is expected to reach a 2.4% in 2003 and increase to 2.9% in 2004. Therefore, there is an important differential with the EMU, with annual average rates of 0.8% in 2003 and 1.0% in 2004; and above all with the USA, with negative annual average rates of 1.2% and 0.1%, respectively, reflecting less technology incorporation in Spain and the EMU.

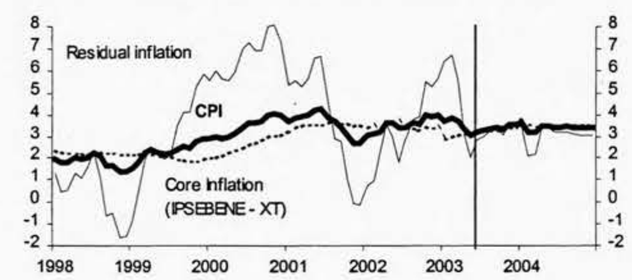
Table R6
FORECASTS FOR THE MEAN ANNUAL RATES OF GROWTH IN THE CPI IN SPAIN

Consumer Prices Index (CPI)	2000*	2001*	2002*	Forecasts	
				2003	2004
TOTAL INFLATION (100%)	3.4	3.6	3.5	**3.4**	**3.4**
TREND INFLATION (77.49%)	2.5	3.5	3.4	**3.2**	**3.5**
Non energy processed goods, excluding tobacco, oils and fats CPI (44.34%)	1.9	3.1	2.6	**2.7**	**3.1**
Services excluding tourism CPI (33.15%)	3.5	4.1	4.3	**3.8**	**4.1**
RESIDUAL INFLATION (22.51%)	6.7	3.7	3.3	**3.8**	**3.0**
Non processed food CPI (9.05%)	4.2	8.7	5.6	**4.2**	**5.7**
Energy CPI (9.26%)	13.3	-1.0	-0.2	**2.9**	**-0.1**

* Observed Values
- Monthly and annual rates can be found in tables A7A and A7B in the appendix
Source: INE & .IFL / Date: April 24, 2003

Graph R7

AVERAGE RATES OF GROWTH OF TOTAL INFLATION, TREND AND RESIDUAL INFLATION IN SPAIN



Source: INE & IFL / Date: April 24 / 2003

- Trend inflation is expected to increase to 3.1% in April, compared to the 3.0% observed in March, as the result of the expected increase in non-energy processed goods prices, excluding tobacco and fat and oils. The mean annual rate will reach a 3.2% in 2003, and increase to 3.5% in 2004 as a result of the worse performance of growth rates in prices of non-energy processed goods, excluding fats, oils and tobacco and in prices of services excluding tourist packages (table R6).

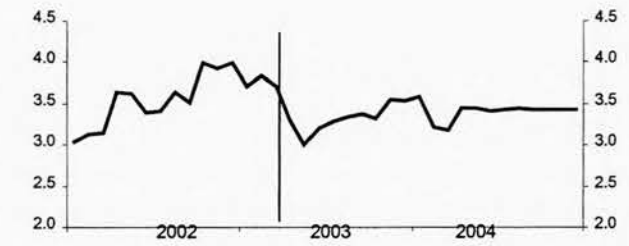
- Core inflation in the EMU stayed at 2.0% in March, and the expectations for the average annual rate are around 2.1% in 2003 and 2004, so there is still a consolidated inflation differential between Spain and the EMU of around one percentage point.

- With regards to **residual inflation,** the forecast for the average annual rates of inflation of prices of non-processed food are updated downwards to 4.2% for 2003 and upwards 5.7% in 2004.

- Considering the new expectations for crude oil prices, the year-on-year rate of energy prices in April 2003 will reach a value of 1.4%, compared to the negative value of 0.4% observed in April 2002. Average annual rates of growth are forecast to increase to 2.9% in 2003 and fall to –0.1% in 2004.

Graph R8

ANNUAL RATES OF TOTAL INFLATION IN SPAIN



Source: INE & IFL / Date: April 24 / 2003

- Due to energy and non-processed food price fluctuations, 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 at the end of 2003 and 2004 around 4.0%, the year-on-year rate of growth of **total inflation** will fluctuate significantly. From the 3.7% observed in March 2003, it will fall to 3.0% in May, and increase again to 3.5% at the end of 2003.

- Average annual rates of growth will decrease to 3.4% in 2003 and increase to 3.4% in 2004, compared to the previous forecasts (table R6 and graph R7).

I.5. MACROECONOMIC TABLE OF SPANISH ECONOMY

MACROECONOMIC TABLE AND INDICATORS (*)

	Annual Rates			
	2001	**2002**	**Forecasts BIMA (*)**	
			2003	**2004**
Private Final Consumption Expenditure	2.7	1.9	2.6	3.1
Public Final Consumption Expenditure	3.1	3.8	3.3	3.2
Gross Fixed Capital Formation	3.2	1.4	3.6	3.7
Equipment	-1.2	-4.1	3.9	6.2
Building	5.8	4.5	3.6	2.5
Other products	3.4	1.5	2.7	3.3
Inventary change (1)	0.1	0.1	0.0	0.0
Domestic Demand	2.8	2.2	2.7	3.3
Exports of Goods and Services	3.4	1.4	4.9	5.7
Imports of Goods and Services	3.5	2.2	5.4	6.3
Net Exports (1)	-0.1	-0.3	-0.3	-0.3
GDP	**2.7**	**2.0**	**2.4**	**3.0**
GDP, current prices	6.5	5.5	5.6	6.3
Prices and Costs				
CPI, annual average	3.6	3.5	3.4	3.4
CPI, dec./dec.	2.7	4.0	3.5	3.4
Average earning per worker	4.1	3.8	3.7	3.5
Unit labour cost	3.8	3.1	2.6	2.8
Labour Market (Data poll labour force)				
Labour Force (% variation)	2.0	3.0	2.5	1.8
Employment:				
Data adjusted from changes in the employment survey				
Annual average variation in %	3.7	1.9	2.0	2.4
Annual average variation in thousands	575.9	312.5	324.0	350.0
Unemployment rate	10.6	11.4	11.0	10.1
Basic balances				
Foreing sector				
Current Account (m. €.)	-18.564	-16.014	-19.438	-21.317
Net lending or borrowing (% GDP) (2)	-2.0	-1.6	-2.0	-2.2
AA.PP. (Total) / Public Administration				
Net lending or borrowing (% GDP) (2)	0.0	-0.3	-0.4	-0.3
Other Economic Indicators				
Industrial Production Index	-1.1	0.2	1.6	2.7

(1) Contribución al crecimiento del PIB, en puntos porcentuales.
(2) En términos de Contabilidad Nacional.

Source: INE & I. FLORES DE LEMUS
Date: April 23/ 2003.

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

Section Sponsorship:
Cátedra Fundación Universidad Carlos III de Predicción y Análisis Macroeconómico.

Last year foreign trade recovered considerably both in nominal and real terms, especially in the second quarter. Exports of goods and services registered an annual growth rate of 6.0% in the fourth quarter, and imports 7.4%, in real terms, whereas a year earlier these rates were –2.1% and 0.4%, respectively. The only information available for 2003 consists of Customs records and the Bank of Spain figures for January, revealing that **foreign trade in goods has slowed down considerable in the first month of the year.** This was due to the geopolitical conflict in the Middle East and will probably continue in February and March. Now the war is over, foreign trade is expected to return to the dynamism registered towards the end of last year.

I.6 FORECAST SUMMARY

INFLATION FORECASTS AND EVOLUTION IN THE EMU AND USA (1998-2004)

	1998	1999	2000	2001	2002	Forecasts 2003	Forecasts 2004
TOTAL INFLATION							
Euro-zone (100%).	1.1	1.1	2.1	2.3	2.3	**2.2**	**1.8**
USA (81.5%). (1)	1.1	2.1	3.5	2.6	0.9	**2.2**	**1.6**
A HOMOGENEOUS MEASURE OF CORE INFLATION (2)							
Services and Non-energy industrial goods excluding food and tobacco.							
Euro-zone (72.46%).	1.4	1.1	1.0	1.8	2.4	**1.9**	**2.0**
USA (55.6%).(1)	1.8	1.4	2.1	2.1	1.6	**1.2**	**1.8**
DIFFERENT COMPONENTS OF THE HOMOGENEOUS MEASURE OF CORE INFLATION							
(1) Services.							
Euro-zone (40.91%).	1.9	1.5	1.5	2.5	3.1	**2.7**	**2.7**
USA (27.4%).(1)	2.9	2.7	3.5	3.6	3.6	**2.9**	**3.0**
(2) Non-energy industrial goods excluding food and tobacco.							
Euro-zone (31.55%).	0.9	0.7	0.4	0.9	1.5	**0.8**	**1.0**
USA (29.0%).	-0.1	-0.5	-0.1	-0.2	-1.5	**-1.2**	**-0.1**
INFLATION IN EXCLUDED COMPONENTS FROM THE HOMOGENEOUS MEASURE OF CORE INFLATION							
(1) Food.							
Euro-zone (19.30%).	1.6	0.6	1.4	4.5	3.1	**2.8**	**2.1**
USA (14.9%).	2.2	2.1	2.3	3.1	1.8	**1.9**	**2.5**
(2) Energy.							
Euro-zone (8.25%).	-2.6	2.4	13.0	2.3	-0.6	**3.3**	**-0.3**
USA (9.90%).	-7.7	3.6	16.9	3.8	-5.9	**10.1**	**-2.3**

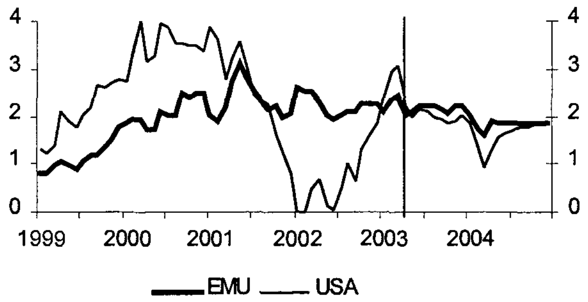
(1) less owner's equivalent rent of primary residence.

(2) This homogeneous measure of underlying inflation does not coincide with the usual measure of core inflation for the EMU nor for the USA. It has been constructed in order to compare the data in the EMU and in the USA.

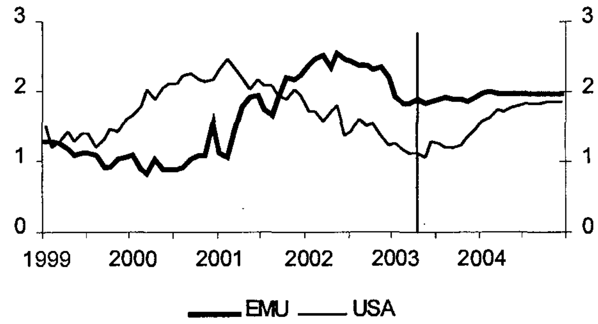
Source: EUROSTAT & BLS & IFL.
Date: April 22 / 2003

YEAR-ON-YEAR RATES OF INFLATION IN THE EMU AND USA

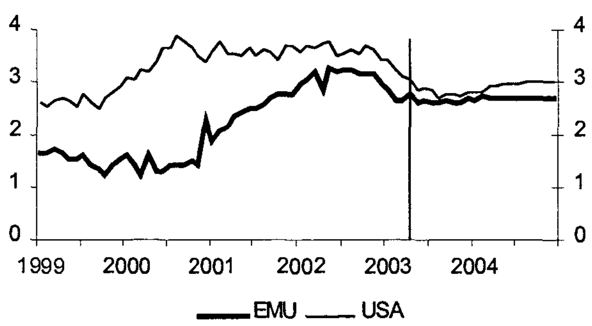
YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU AND TOTAL INFATION LESS OWNER´S EQUIVALENT RENT OF PRIMARY RESIDENCE IN USA



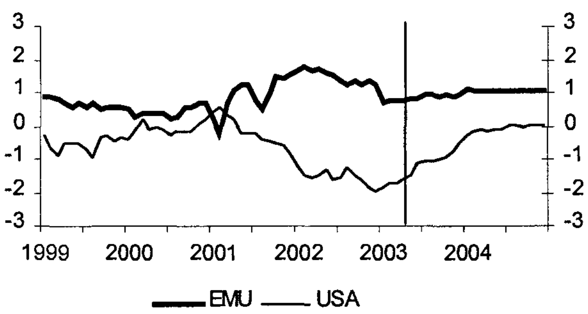
YEAR-ON-YEAR RATES OF HOMOGENEOUS CORE INFLATION IN THE EMU AND THE USA



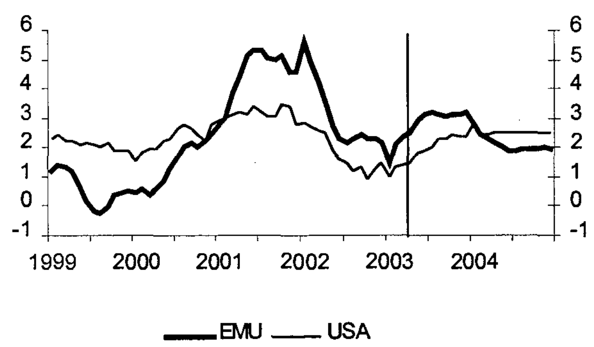
YEAR-ON-YEAR RATES OF SERVICES INFLATION IN THE EMU AND THE USA



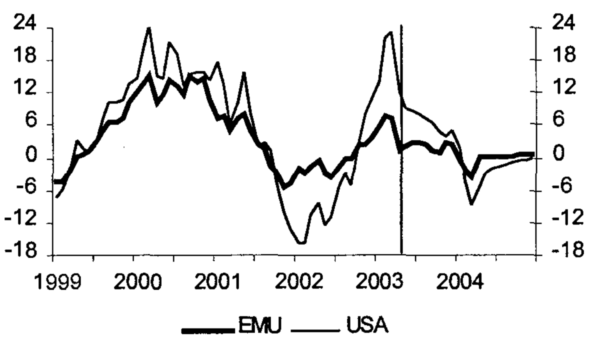
YEAR-ON-YEAR RATES OF NON-ENERGY INDUSTRIAL GOODS INFLATION IN THE EMU AND THE USA (EXCLUDING TOBACCO)



YEAR-ON-YEAR RATES OF FOOD INFLATION IN THE EMU AND THE USA



YEAR-ON-YEAR RATES OF ENERGY INFLATION IN THE EMU AND THE USA



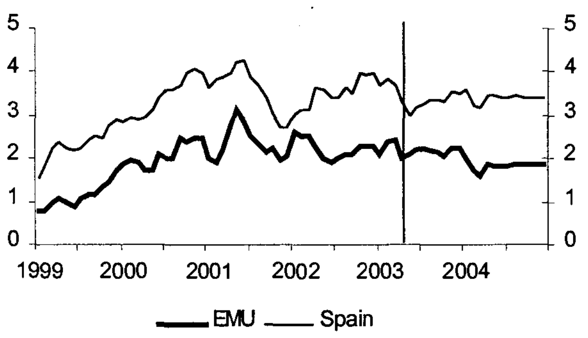
Source: EUROSTAT & BLS & IFL.
Date: April 22 / 2003

INFLATION FORECASTS AND EVOLUTION IN THE EMU AND SPAIN (1998-2004)	1998	1999	2000	2001	2002	Forecasts 2003	Forecasts 2004
TOTAL INFLATION							
Spain (100%).	1.8	2.3	3.4	3.6	3.5	3.4	3.4
Euro-zone (100%).	1.1	1.1	2.1	2.3	2.3	2.2	1.8
CORE INFLATION							
Services and Non-energy processed goods.							
Spain (81.70%).	2.2	2.3	2.4	3.4	3.8	3.3	3.5
Euro-zone (84.17%).	1.4	1.1	1.0	1.9	2.5	2.1	2.1
DIFFERENT COMPONENTS OF CORE INFLATION							
(1) Services.							
Spain (34.32%).	3.6	3.4	3.8	4.2	4.5	3.9	4.2
Euro-zone (40.91%)	1.9	1.5	1.5	2.5	3.1	2.7	2.7
(2) Non-energy processed goods.							
Spain (47.38%).	1.4	1.7	1.7	2.9	3.1	2.7	3.0
Euro-zone (43.27%).	1.1	0.8	0.6	1.5	1.9	1.5	1.5
INFLATION IN EXCLUDED COMPONENTS FROM CORE INFLATION							
1) Non-processed food.							
Spain (9.05%).	2.1	1.2	4.2	8.7	5.6	4.2	5.7
Euro-zone (7.58%).	2.0	0.0	1.7	7.0	3.1	2.0	1.4
(2) Energy.							
Spain (9.26%).	-3.8	3.2	13.3	-1.0	-0.2	2.9	-0.1
Euro-zone (8.25%).	-2.6	2.4	13.0	2.3	-0.6	3.3	-0.3

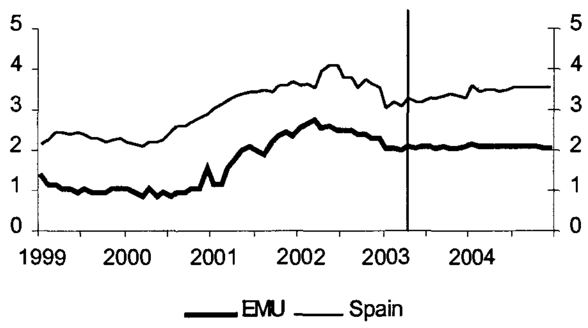
Source: EUROSTAT & INE & IFL.
Date: April 24 / 2003

YEAR-ON-YEAR RATES OF INFLATION IN THE EMU AND SPAIN

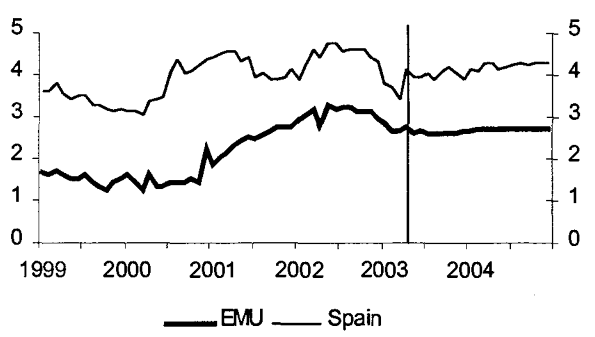
YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU AND SPAIN



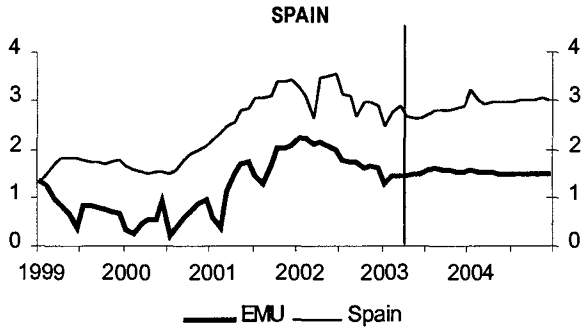
YEAR-ON-YEAR RATES OF SERVICES AND NON-ENERGY PROCESSED GOOS IN THE EMU AND SPAIN



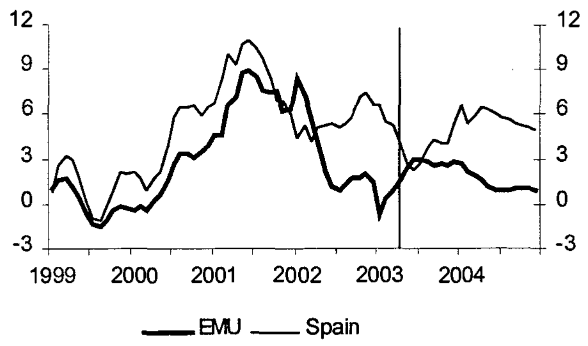
YEAR-ON-YEAR RATES OF SERVICES INFLATION IN THE EMU AND SPAIN



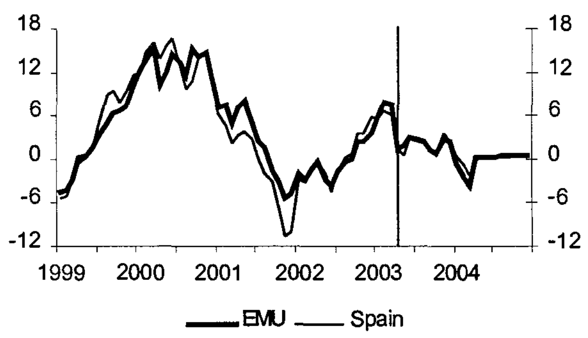
YEAR-ON-YEAR RATES OF NON-ENERGY PROCESSED GOODS INFLATION IN THE EMU AND SPAIN



YEAR-ON-YEAR RATES OF NON-PROCESSED FOOD IN THE EMU AND SPAIN



YEAR-ON-YEAR RATES OF ENERGY INFLATION IN THE EMU AND SPAIN



Source: EUROSTAT & INE & IFL.
Date: April 24 / 2003

I.7 INFLATION FORECASTS OF DIFFERENT INSTITUTIONS

INFLATION FORECASTS OF DIFFERENT INSTITUTIONS[1]										
	BIAM[2]		CONSENSUS FORECASTS[3]		IMF[4]		*ECB*[5]		*OCDE*[6,7]	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
UME	2.2	1.8	1.9	1.6	2.0	1.5	1.8	1.8	1.9	1.7
EE.UU.	2.3	1.8	2.4	2.0	2.3	2.3	-	-	1.6	1.3
ESPAÑA	3.4	3.4	3.1	2.7	3.2	2.8	-	-	3.0	2.4

1. The forecasts are based on CPI in USA and Spain and on HICP in the EMU.
2. Bulletin EU & US Inflation and Macroeconomic Analysis , April 2003
3. 7 April, 2003.
4. IMF. World Economic Outlook. April 2003
5. ECB. Monthly Bulletin. February 2003. Survey of Professional Forecasters (SPF)
6. OECD. Economic Outlook. April 2003.
7. Based on GDP deflator.

Our forecasts for total inflation in the EMU and Spain are slightly greater than the previsions derived from other institutions because with the methodology applied in our Bulletin, total inflation is breaking down in core and residual inflation. Last one is composed by inflation in non-processed food and energy prices.

The innovations come in different components are transferred in future thorough different multipliers. The innovations derived from residual inflation are less persistent.

Core inflation in the EMU and Spain is expected to be quite stable, around 2.1% in 2003 and 2004 in the EMU and 3.2% and 3.5%, respectively in the case of Spain, due to the fact that rounding effects will not influence any more the year-on-year rates and a better expected evolution in prices of goods and services, compared to the observed values in 2002. Total inflation in 2003 will also be benefit from an expected lower inflation rate in non-processed food prices but energy prices are expected to increase due to the evolution of crude prices.

II. ANALYSIS OF INFLATION, MONETARY POLICY AND INTERNATIONAL ANALYSIS

In March 2003, inflation in the Monetary Union registered a monthly rate of 0.6% with a year-on-year rate of 2.4%..

II.1 Monetary and European Unions

In March 2003, inflation in the Monetary Union registered a monthly rate of 0.6%; with a year-on-year rate of 2.4%, registered since February.

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

Table 1

OBSERVED AND FORECAST VALUES ON CONSUMER PRICE FIGURES IN THE EMU

Consumer Price Index (HICP)	Current growth March 03	Forecast	Confidence intervals (*)
(1) Processed Food - AE (11.718%)	0.18	**0.25**	± 0.14
(2) Commodities - MAN (31.549%)	1.15	**1.03**	± 0.10
Non-Energy Manufactured Goods - BENE [1+2] (43.267%)	0.88	**0.81**	± 0.09
(3) Services - SERV (40.905%)	0.17	**0.15**	± 0.14
Core Inflation:			
Non-Energy Manufactured Goods and Services, (excluding fats, oils, tobacco and tourist packages) - **IPSEBENE [1+2+3] (84.172%)**	**0.54**	**0.49**	**± 0.08**
Non-Processed Food - ANE (7.580%)	0.60	**0.97**	± 0.46
(5) Energy Goods - ENE (8.249%)	1.05	**2.53**	± 0.60
Residual Inflation:			
Fats, Oils, Tobacco, Tourist Packages, Non-Processed Food and Energy - **R [4+5] (15.828%)**	**0.91**	**1.80**	**± 0.39**
Total Inflation: HICP [1+2+3+4+5] (100%)	**0.62**	**0.70**	**± 0.09**

(*) At 80% confidence level

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: April 16 / 2003.

The downward innovation in total inflation derived from prices of unprocessed food and energy.

As shown in table 1, the month-on-month rate registered in March was 0,62% less than the 0,70% forecasted. In core inflation, the slight upward innovation was due to non-energy industrial goods prices. Residual inflation registered a downward innovation due to the prices of non-processed food and energy.

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.

Eurostat has revised data and weights for Germany since 2000, which also involved a revision of EMU and EU HICP series as a result of the updated HICP sample and revised weighting in Germany for the period starting January 2000.

The breakdown of the harmonised consumer price index into basic market groups shows that the prices of processed food (the AE index) registered a monthly growth of 0.18% instead of 0.25% forecast. The prices of the remaining processed goods excluding energy prices (the MAN index) registered a growth of 1.15% instead of 1.03% forecast. With this, core inflation in

MAN index) registered a growth of 1.15% instead of 1.03% forecast. With this, core inflation in goods calculated on the basis of the aggregation of the previous indexes, (the BENE index) registered a monthly rate of 0.88%, instead of 0.81% forecast. The services prices (the SERV index) registered a monthly growth of 0.17%, slightly above was forecasted, 0.15%, so that finally core inflation registered an upward innovation.

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

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

Table 2

ANNUAL GROWTH HICP

	HICP excluding Energy						HICP energy					
	Observed				Forecasts		Observed				Forecasts	
	March 2003	Average 2000	Average 2001	Average 2002	Average 2003	Average 2004	March 2003	Average 2000	Average 2001	Average 2002	Average 2003	Average 2004
Germany	0.6	0.1	1.5	1.4	**0.7**	**0.6**	7.4	13.9	5.7	0.3	**3.6**	**-0.1**
Spain	3.3	2.6	4.0	3.4	**3.3**	**3.8**	6.1	13.3	-1.0	-0.2	**2.9**	**-0.1**
France	2.0	0.8	2.1	2.3	**2.0**	**1.6**	8.6	12.1	-1.5	-1.5	**3.2**	**-0.1**
Italy	2.7	1.9	2.4	3.0	**2.5**	**2.4**	6.4	11.6	1.6	-2.6	**2.9**	**0.4**
Monetary Union	2.0	1.1	2.3	2.6	**2.1**	**2.0**	7.5	13.0	2.3	-0.6	**3.3**	**-0.3**

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: 24 April , 2003.

There is an important inflation differential excluding energy among countries. Germany presents rates below 1%, France shows mean annual rates around 2%, Italy around 2,5% and Spain above 3%.

Year-on-year rates of energy prices are registering positive values in February 2003, as shown in table 2. This relatively homogenous evolution in energy prices contrasts with the different behaviour of the other non-energy prices (HICP excluding energy). For the mentioned non-energy prices, Germany registered in March a year-on-year rate of 0.6%; forecasts for the annual average rates will be around 0.7% in 2003 and 0.6% in 2004. France registered for the HICP excluding energy a year-on-year rates of 2.0% in March and the forecasts for the annual average rate are 2.0% in 2003 and 1.6% in 2004. Observed values in Italy were 2.7% and forecasts are 2.5% in 2003 and 2.4% in 2004. In the case of Spain, the annual rate was 3.3% in February and a mean annual rate of 3.3% is expected in 2003 and 3.8% in 2004. Therefore, in the HICP excluding energy, now on one hand; on the other, Germany registers annual average rates below 1%, France shows annual average rates around 2%, Italy around 2,5% and finally Spain presents greater annual mean rates above 3%.

Table 3

ANNUAL GROWTH IN ENERGY HICP

	HICP Fuels						HICP Elgas					
	Observed				Forecasts		Observed				Forecasts	
	March 2003	Average 2000	Average 2001	Average 2002	Average 2003	Average 2004	March 2003	Average 2000	Average 2001	Average 2002	Average 2003	Average 2004
Germany	13.2	24.2	-0.3	0.3	**3.9**	**-1.6**	1.9	4.9	12.1	0.3	**3.2**	**1.3**
Spain	9.0	18.1	-2.1	0.5	**3.6**	**-0.5**	-0.7	0.2	2.4	-1.4	**1.4**	**1.3**
France	15.7	20.7	-5.7	-3.1	**5.2**	**-0.5**	0.2	1.1	4.7	0.7	**0.9**	**0.4**
EMU	12.6	20.8	-2.5	-1.1	**3.7**	**-1.8**	1.7	4.8	8.2	0.1	**2.8**	**1.4**

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: April 24, 2003.

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 the year-on-year rate of inflation in April 2003 is 1.9%.

The inflation forecast for April 2003 in the Monetary Union is a null value. The year-on-year rate will decrease to 1.9%, with respect to the 2.4% registered since February. The expectations for the average annual rate are 2.2% for 2003 and 1.8% in 2004.

By countries, the expectation for month-on-month inflation for next April is a rate of 0.5% for Italy, 1.0% for Spain, and negatives of 0.2% in France, and 0.6% in Germany.

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.

Table 4.

AVERAGE ANNUAL RATE OF GROWTH IN MONETARY UNION

	Observed				Forecasts	
	1999	**2000**	**2001**	**2002**	**2003**	**2004**
15.828% Residual Inflation	1.2	7.5	4.4	1.2	**2.7**	**0.5**
7.580% Non-Processed Food	0.0	1.7	7.0	3.1	**2.0**	**1.4**
8.249% Energy	2.4	13.0	2.3	-0.6	**3.3**	**-0.3**
84.172% Core Inflation	1.1	1.0	1.9	2.5	**2.1**	**2.1**
11.718% Processed Food	0.9	1.1	2.9	3.1	**3.3**	**2.6**
31.549% Non-Energy Commodities	0.7	0.4	0.9	1.5	**0.8**	**1.0**
40.905% Non-Energy Services	1.5	1.5	2.5	3.1	**2.7**	**2.7**
100% Total Inflation	1.1	2.1	2.3	2.3	**2.2**	**1.8**

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS / Date: April 22 / 2003.

The year-on-year rate for next March, 1.9%, will be composed of a rate of 2.1% in core inflation and of 1.4% in residual inflation. The expectations of the average annual rate in 2003, 2.2%, will be achieved through decreases in core inflation in 2003 to 2.1% and increases in residual inflation, due to prices of energy, compared with the values registered in 2002.

It seems difficult that in the short-term the EMU inflation rate could be systematically below 2% because core inflation it is expected to reach around this value in 2003, so to obtain total inflation rates below 2% rests on the evolution of residual inflation. But the probability of it being within a range between 1 and 3% is reasonably high.

The results derived from the causality analysis, elaborated in our previous Bulletin number 100, show that the strong upwards pressure on inflation derived from the monetary policy implemented by the ECB is compensated by the downwards pressure derived from the output gap and unit labour cost trends. Therefore, in these economic conditions, it appears that in the short-term, the ECB will have scope to reduce again interest rates.

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.

Table 5						
	ANNUAL AVERAGE RATES OF GROWTH					
	Observed				Forecasts	
	1999	2000	2001	2002	2003	2004
Spain HICP – 10.87%	2.2	3.5	2.8	3.6	**3.4**	**3.4**
Germany HICP – 29.87%	0.6	1.4	1.9	1.3	**1.0**	**0.5**
France HICP – 20.46%	0.6	1.8	1.8	1.9	**2.1**	**1.5**
Italy HICP – 19.164%	1.7	2.6	2.3	2.6	**2.5**	**2.2**
EMU HICP – 100%	1.1	2.1	2.3	2.3	**2.2**	**1.8**

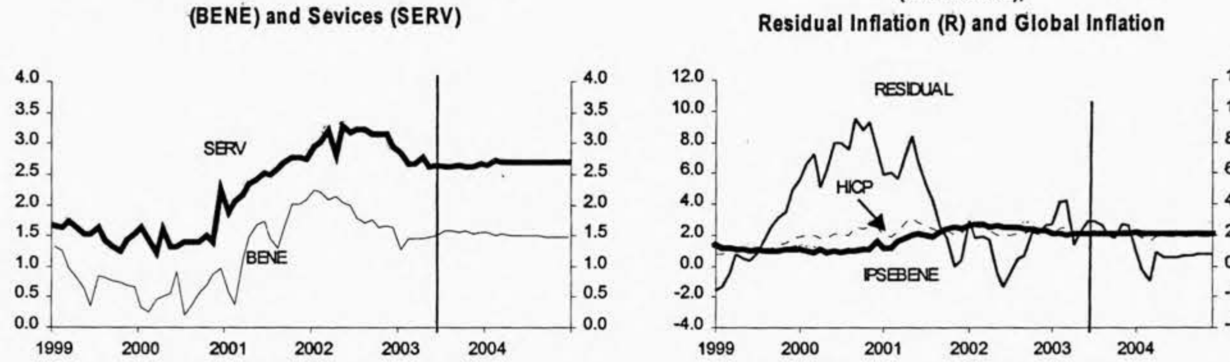
Source: Eurostat & I. Flores de Lemus / Date: April 24 / 2003.

HICP YEAR-ON-YEAR RATES OF GROWTH IN THE EMU

Graph 1

Non Energy Processed Commodities (BENE) and Sevices (SERV)

Non Energy Commodities and Services (IPSEBENE), Residual Inflation (R) and Global Inflation



Source: EUROSTAT & I. FLORES DE LEMUS / April 22, 2002.

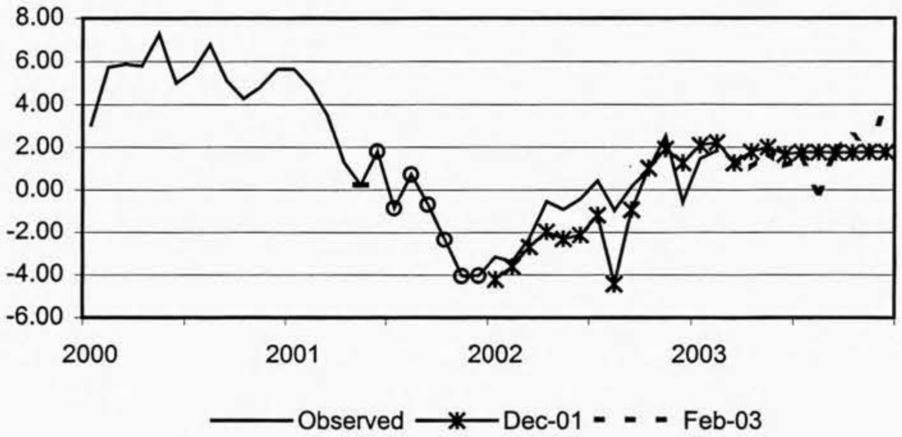
Industrial production in Eurozone.

With the release of the figures related to February, Eurostat has revised the historical time series of the different IPI not seasonally adjusted components. As an illustration of the changes, table 6 shows the annual (one month over the same month of the previous year) rates for January 2003 published in March with those published in April for the same month.

Tabla 6		
	IPI in EMU revisions	
	18/03/2003	16/04/2003
Total	0.7	1.5
Capital	1.7	1.5
Durable	-2.9	-3.8
Intermediate	1.5	2.6
Non-Durable	-0.7	-0.5
Energy	-0.7	1.1

Some of the components have been upwards revised while some other have been changed in the opposite direction. These revisions make quite difficult to evaluate the forecast errors, but most significant is the revision in energy that is going to be the main cause of the change in the forecasts. In any case, figure 2 shows the updates in annual rates forecasts for IPI EMU, and there it can be seen that important changes did not happened in the last months.

Figure 2: Updates in annual rates forecasts for EMU.



Date: April 21st 2003. Source: Eurostat and IFL.

Table 7 shows the monthly trend rates of growth and, as stated in the previous reports, it can be seen how the forecasts of positive values for 2003 announced in previous reports have happened and keep this trend for the rest of the year 2003 and 2004.

Table 7. Monthly trend* rates of growth

	1	2	3	4	5	6	7	8	9	10	11	12
2002	0.14	0.18	0.19	0.15	0.17	0.22	0.18	0.08	-0.05	-0.08	-0.08	-0.01
2003	0.22	0.32	**0.25**	**0.20**	**0.16**	**0.12**	**0.09**	**0.16**	**0.30**	**0.34**	**0.26**	**0.16**
2004	**0.08**	**0.09**	**0.16**	**0.20**	**0.17**	**0.12**	**0.09**	**0.16**	**0.31**	**0.35**	**0.29**	**0.26**

*Trends have been obtained with TRAMO/SEATS applied to our forecasts for the original Industria Production Index not seasonally adjusted. Date 21st, April 2003. Source: Eurostat & IFL.

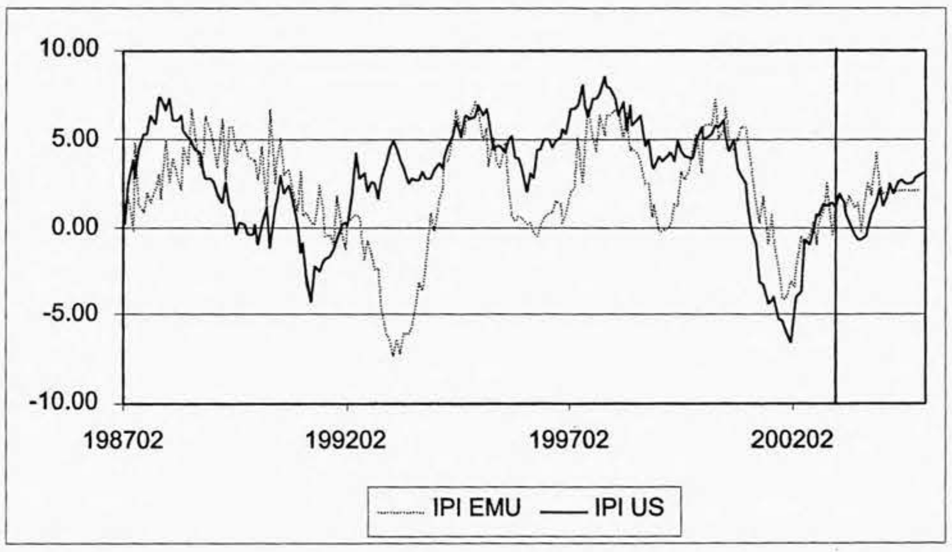
Due to the revisions and last innovations, the annual average rate of growth of IPI in 2003 has worsened in capital and durable consumer goods, and improved in intermediate, non-durable and energy. The consequence has been an improvement in the expectations for 2003 in Total IPI in EMU. For year 2004, the forecasts remain mainly unchanged. The US and the EMU economies are following a similar cyclical pattern, as it can be seen in figure 2, but US expectations have been downwards revised due to two downward forecast errors in February and March that, as they have happened at the very beginning of the year, produce sensitive variations in annual rates for 2003 with respect to previous reports.

Table 8. Annual average rates for industrial production in EMU and US[1].

	1998	1999	2000	2001	2002	2003	2004
Capital goods	7.8	2.5	9.0	1.5	-2.2	**2.6**	**3.6**
Durable consumer goods	4.7	1.4	6.2	-1.7	-5.5	**-2.5**	**0.3**
Intermediate goods	4.0	1.9	5.9	-0.7	0.2	**1.9**	**2.1**
Non Durable consumer goods	2.4	1.6	1.2	0.7	0.1	**0.2**	**0.9**
Energy	1.1	1.0	2.1	1.0	0.8	**2.4**	**1.3**
TOTAL EMU	4.3	1.9	5.5	0.4	-0.8	**1.7**	**2.1**
TOTAL US	5.6	4.3	4.7	-3.5	-0.7	**0.5**	**2.4**

Bold figures are forecasts. Source: Eurostat and IFL.

Figure 3: Observed and forecasted annual rates for industrial production in EMU.



II.2 United States

During March the US CPI increased by 0.60%, as expected (0.63).

During **March,** the U.S. CPI increased by 0.60% over the previous month, similar to the forecast, 0.63% (see **Table 9**), with the year-on-year rate going from the 2.98% observed in February to 3.02%. Although the general CPI annual rate has hardly changed, inflation in services has fallen, reducing its growth rate from 3.16% to 3.01%, whereas energy prices increase their annual rate from 21.98% to 23.36%. The annual core inflation growth rate has reached a new minimum record.

Table 9

OBSERVED VALUES AND FORECAST ON CPI IN US
March 2003

CONSUMER PRICES INDEX (CPI)	Relative importance Dec. 2002	Annual Growth (T^1_{12}) observed	Monthly Growth (T^1_1) observed (a)	Monthly Growth (T^1_1) forecasts (b)	Confidence Intervals at 80% level (+ -)
Food (1)	14.6	1.42	0.17	0.27	0.34
Energy (2)	6.7	23.36	5.32	3.51	0.70
Residual Inflation (3=2+1)	**21.3**	**8.08**	**1.89**	**1.36**	**0.33**
Non-food and non-energy goods (4)	**22.9**	**-1.38**	**0.35**	**0.51**	**0.33**
Less tobacco	22.0	-1.76	0.42	0.53	0.15
-Durable goods	11.4	-2.13	-0.17	-0.09	0.26
-Nondurable goods	11.5	-0.65	0.88	1.11	0.55
-Non-durable goods less tabacco	10.5	-1.36	1.08	1.20	0.18
-Tobacco	1.0	7.80	-1.16	0.14	3.01
Non-energy services (5)	**55.8**	**3.01**	**0.23**	**0.39**	**0.08**
-Services less owner's equivalent rent of primary residence (5-a)	33.5	3.10	0.31	0.52	0.15
-Owner's equivalent rent of primary residence (a)	22.2	2.87	0.09	0.19	0.08
Core Inflation (6=4+5)	**78.7**	**1.69**	**0.26**	**0.42**	**0.14**
Core inflation less owner's equivalent rent of primary residence (6-a)	56.5	1.23	0.33	0.52	0.17
Core inflatión less owner's equivalent rent of primary residence and tobacco	55.5	1.12	0.35	0.52	0.12
All items (7=6+3)	**100.0**	**3.02**	**0.60**	**0.63**	**0.13**
All items less owner's equivalent rent of primary residence (7-a)	77.8	3.06	0.74	0.75	0.12

Source: **BLS & INSTITUTO FLORES DE LEMUS**
Data: April 22, 2003

In general, the most stable components have evolved better than expected, compensated by a worse than expected performance by energy.

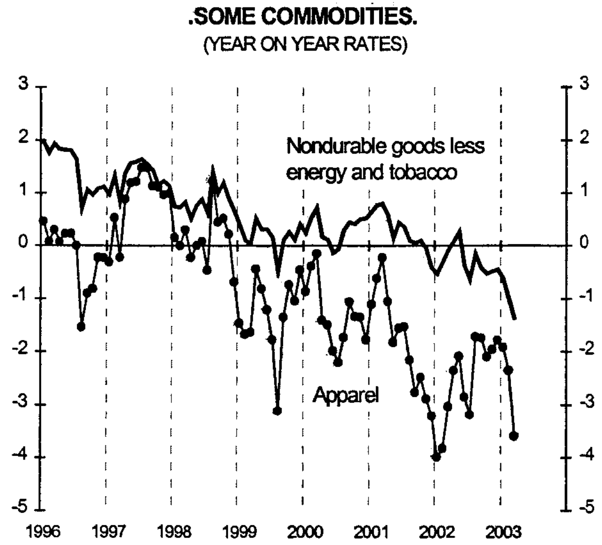
Although the value observed was similar to the forecast in aggregate terms, by component there are several relevant figures. There have been decreases in some services, specifically long-distance phone calls, hospital services, lodging away from home and equivalent rent of primary residence. However, they have been compensated by the unexpected and heavy increase in gas prices, 13.32% instead of the 2.56% forecast. We must remember, nevertheless, that the increase in gas prices has a transient effect, whereas the impact of service price changes is longer lasting.

The **core** rate increased by 0.26% over the previous month, compared with the 0.42%

expected, with the annual rate falling from 1.74% to 1.69%. This considerable deviation from the forecast is explained both by service prices and the price of some goods. The core index not including equivalent rent of primary residence and tobacco, which is comparable with the underlying index in Europe, increased by 0.35% compared with the 0.52% expected, with the annual rate falling from 1.17% to 1.12%, an all-time low.

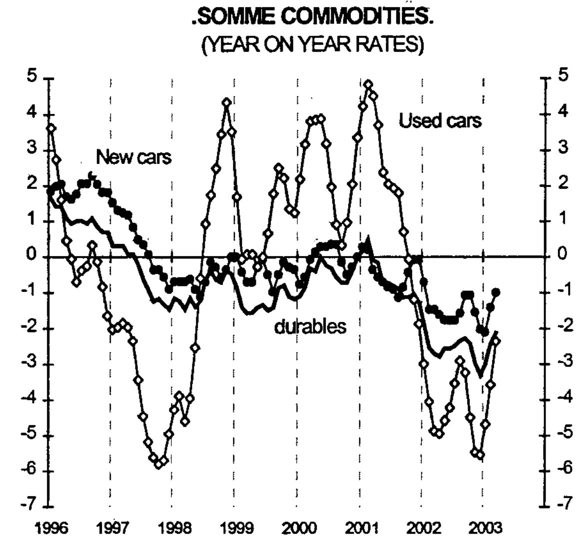
By components, the index for commodities less food and energy without tobacco increased by 0.42% instead of the 0.53% expected, with the annual rate going from –1.74% to –1.76%. Durable goods prices declined 0.17% as opposed to the forecast -0.09%, with the annual rate going from –2.44% to –2.13%. Within durable goods, the annual rate of the used car index has picked up from the previous month, -3.57% to –2.37% **(see Graphs 4 and 5)**. Non-durable goods prices excluding the index for tobacco increased by 1.08%, less than expected (1.20%), with the annual rate going from –0.98% to –1.36%. And the index for tobacco decreased by 1.16% opposed to the forecast 0.14%, with the annual rate increasing from 5.21% to 7.80%.

Graph 4



Source: **BLS & IFL** / Date: April 22, 2003.

Graph 5



Source: **BLS & IFL** / Date: April 22, 2003.

The index for services grew 0.23%, less than expected (0.39%). The annual rate fell by 1.5 tenths from 3.16% to 3.01%. This considerable deviation from the forecast is explained specifically by long-distance phone calls, hospital services, lodging away from home and equivalent rent of primary residence. The index for services excluding owner's equivalent rent of primary residence increased by 0.31%, less than expected (0.52%), with the annual rate going from 3.23% to 3.10%. The index for owners' equivalent rent of primary residence increased 0.09% instead of the 0.19% expected (see **Graph 6).**

The differential between the index for services (excluding the index for owner's equivalent rent of primary residence) and the index for commodities less food and energy (excluding tobacco prices) fell by one tenth, from the previous month, to 4.9 points. This is explained by the 0.12 point decrease in the annual rate of the index for services less owner's equivalent rent of primary residence and the decrease of 0.02 points in the year-on-year rate of the index for commodities less food, energy and tobacco.

Residual inflation increased by 1.89%, as opposed to the forecast 1.36%, increasing the annual rate from 7.45% to 8.08%. By components, food prices have increased less than expected, 0.17% as opposed to the forecast 0.27%, increasing the annual rate from 1.36% to 1.42%. The index for energy has performed worse than forecast, with an increase of 5.32% as opposed to the forecast 3.51%. Its annual rate climbs 1.37 points, mostly because of gas prices, which increased this month by 13.32% as opposed to 2.23% last year.

For April the forecast for the general index is a decrease of

For **April,** the forecast for the general index is a decrease of 0.08%, with the annual rate falling by seven tenths from 3.02% to 2.37%. This is fully explained by energy prices, which

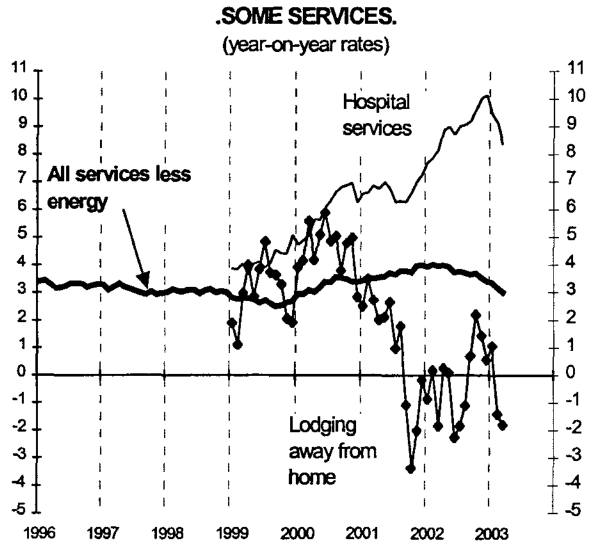
0.08% and the annual rate will decrease from 3.02% to 2.37%.

are expected to fall by 3.86% compared with last month, whereas they increased 5.71% in April last year. However, the expected increase in the index for core inflation is 0.25% with the annual rate remaining at 1.68%.

The forecast for core inflation is an increase of 0.25%, with the annual rate remaining at 1.68%.

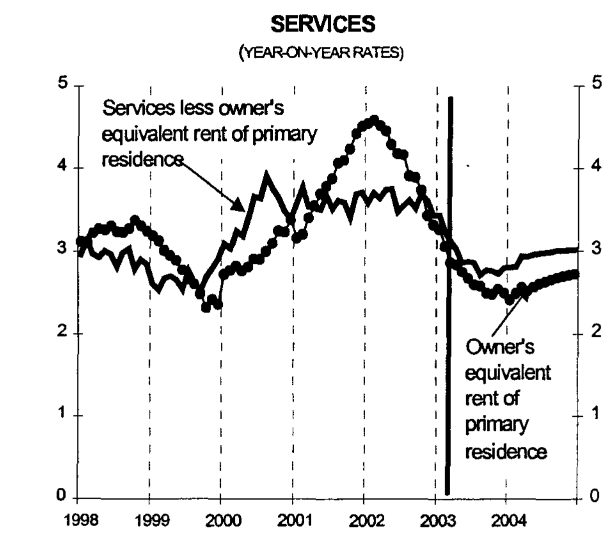
By components, the expected increase in the index for services is 0.12%, 0.20% for the index for owner's equivalent rent of primary residence and 0.07% for the rest. The annual rate of the index for owner's equivalent rent of primary residence will fall by 0.3 tenths to 2.83%. The year-on-year rate for the index for the other services, on the whole, will decrease from 3.10% to 3.02% (see **Graph 7**).

Graph 6



Source: **BLS & IFL** / Date: April 22, 2003.

Graph 7



Source: **BLS & IFL** / Date: April 22, 2003.

Taking commodities less food and energy into consideration, the expected increase is 0.57%, with the annual rate going from –1.76% to –1.58%. Excluding the index for tobacco, the predicted rise is 0.28%, which would leave the year-on-year rate at –1.58%, as opposed to last month's –1.76%. Durable goods prices are expected to increase 0.15%, leaving the annual rate at –1.82%. Non-durable goods prices are forecast to rise 0.98%, bringing the annual rate from –0.65% to –0.48%. Within the index of non-durable goods, tobacco prices are predicted to rise 7.16%, which would leave the year-on-year rate at 8.51%.

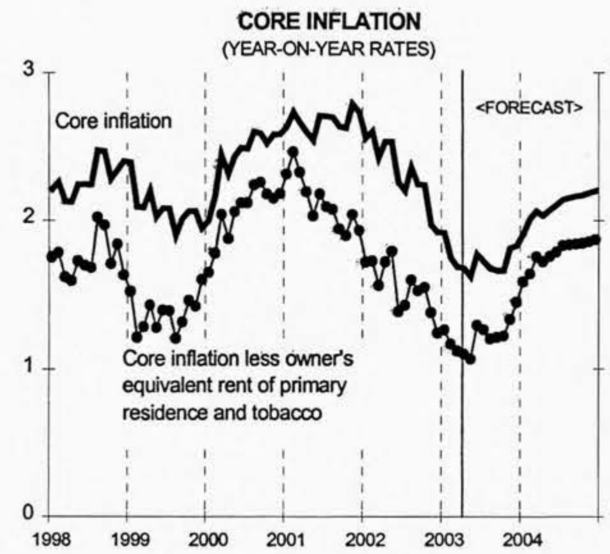
The expected decrease in residual inflation is 1.25%, which would leave the year-on-year rate at 4.87%. Within residual inflation, the expected increase for the food index is 0.14%. Energy prices are expected to decrease by 3.86%. Within the index for energy, the evolution of motor fuel prices is especially significant, with these prices expected to decrease 5.47% as opposed to the increase 12.72% of April of last year.

For 2003 and 2004 mean total inflation rates of 2.32% and 1.84% respectively are predicted, which compared with last month's report represents an increase of 0.07 points for 2003, and a decrease of 0.06 for 2004.

For **2003** and **2004,** we forecast mean annual total inflation rates of 2.32% and 1.84% respectively, representing an increase of 0.07 points for 2003, and a decrease of 0.06 for 2004, compared with last month's report. In April, the price of West Texas is expected to hover around 29$ per barrel, followed by a gradual decrease to 26$ per barrel for December 2003 (see **Graph 9**).

Core inflation in the US excluding the index for owner's equivalent rent of primary residence and tobacco, which would be equivalent to core inflation in the EMU and Spain, is expected to accelerate slightly in the coming months to rates of under 1.7%, from the current 1.12%, as opposed to the slow-down registered during the last 23 months (see **Graph 9**).

Graph 8



Source: **BLS & IFL** / Date: April 22, 2003.

Graph 9

Source: **BLS & IFL** / Date: April 22, 2003.

Table 10 shows the average annual growth rate forecasts for 2003 and 2004 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 10

AVERAGE ANNUAL RATE OF GROWTH IN US (*)

CONSUMER PRICES INDEX (CPI)	1998	1999	2000	2001	2002	2003 (forecasts)	2004 (forecasts)
Food (1)	2.2	2.1	2.3	3.1	1.8	1.9	2.5
Energy (2)	-7.7	3.6	16.9	3.8	-5.9	10.1	-2.3
Residual Inflation (3=2+1)	**0.1**	**0.8**	**6.8**	**3.3**	**-0.9**	4.5	0.9
Non-food and non-energy goods (4)	0.6	0.7	0.5	0.3	-1.1	-0.8	0.3
Less tobacco	-0.1	-0.5	-0.1	-0.2	-1.5	-1.2	-0.1
-Durable goods	-0.9	-1.2	-0.5	-0.6	-2.6	-1.5	0.1
-Nondurable goods	2.3	2.4	1.4	1.1	0.5	-0.1	0.6
Non-energy services (5)	3.1	2.7	3.3	3.7	3.8	2.8	2.8
-Services less owner's equivalent rent of primary residence (5-a)	2.9	2.7	3.5	3.6	3.6	2.9	3.0
-Owner's equivalent rent of primary residence (a)	3.2	2.7	3.0	3.8	4.1	2.7	2.6
Core Inflation (6=4+5)	**2.3**	**2.1**	**2.4**	**2.7**	**2.3**	1.7	2.1
Core inflation less owner's equivalent rent of primary residence (6-a)	2.0	1.8	2.2	2.3	1.7	1.3	1.9
Core inflatión less owner's equivalent rent of primary residence and tobacco	1.8	1.4	2.1	2.1	1.6	1.2	1.8
All items (7=6+3)	**1.6**	**2.2**	**3.4**	**2.8**	**1.6**	2.3	1.8
All items less owner's equivalent rent of primary residence (7-a)	1.1	2.1	3.5	2.6	0.9	2.2	1.6

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

Source: **BLS & INSTITUTO FLORES DE LEMUS**
Data: April 22, 2003

II.3 Spain

The CPI for March 2003 showed a monthly rate of 0.7% with a year-on-year rate of 3.7%.

The CPI for March 2003 showed a monthly-on-monthly rate of 0.69%, below our predicted 0.82%, with a year-on-year rate of 3.7%, compared to the 3.8% registered in February.

Trend inflation registered an upward innovation came in prices of non-energy industrial goods.

Trend inflation, calculated on the basis of the IPSEBENE-XT index, registered a year-on-year rate of 3.0% in March, below that corresponding to total inflation, 3.0%. Since March 2002, residual inflation has been 5.5%.

The upward innovation in trend inflation came in the prices of non-energy industrial goods.

In order to analyse this in greater detail, it is necessary to refer to tables 11 and 12. Table 11 shows the breakdown used in this Bulletin to study inflation behaviour (there is a more detailed version in table A1A at the end of the document) and table 12 summarises prediction errors made for different components.

Table 11

SPANISH CPI DISAGGREGATION (*)

1. Processed Foods CPI (excluding Fats and Tobacco)	AE-X (13.03%)	*Trend Inflation* (1+2+3) IPSEBENE-XT (77.49%)	*CPI* (100%)
2. Non Energy Commodities CPI	MAN (31.31%)		
3. Non Energy Services CPI (excluding Tourism)	SERV-T (33.15%)		
4. Fats, Tobacco and Tourism	XT (4.20%)	*Residual Inflation* (4+5+6) R (22.51%)	
5. Non Processed Foods CPI	ANE (9.05%)		
6. Energy CPI	ENE (9.26%)		

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

Table 12

OBSERVED VALUES AND FORECASTS ON CONSUMER PRICE FIGURES IN SPAIN

Consumer Price Index (CPI)	Current growth March 03	*Forecast*	Confidence Intervals (*)
(1) AE-X (13.03%)	0.33	0.39	± 0.18%
(2) MAN (31.31%)	1.08	0.79	± 0.16%
BENE-X [1+2] (44.34%)	0.86	0.67	± 0.14%
(3) SERV-T (33.15%)	0.47	0.43	± 0.17%
IPSEBENE-X-T [1+2+3] (77.49%)	0.69	0.56	± 0.13%
(4) X+T (4.20%)	0.34	2.69	
(5) ANE (9.05%)	0.37	1.14	± 1.09%
(6) ENE (9.26%)	1.40	1.72	
R [4+5+6] (22.51%)	0.78	1.68	± 0.22%
IPC [1+2+3+4+5+6] (100%)	0.69	0.82	± 0.15%

(*) At 80% confidence level.

Source: INE & INSTITUTO FLORES DE LEMUS Date: April 11, 2003.

Trend inflation in goods (measured by the BENE-X index) registered a growth of 0.86%, above our prediction, 0.67%, as a consequence of the upward innovation in prices of non-energy industrial goods.

The annual inflation differential in commodities market with the EMU stayed at 1.4%.

Prices of **non-energy industrial goods** registered a monthly-on-monthly rate of 1.08% in March, above our predicted 0.79%. The year-on-year rate registered in March was 2.2%, compared to the 2.1% observed in February. This contrasts with these prices in the Euro-zone, with a year-on-year rate of growth of 0.8% in March. The inflation differential in the commodities market with the EMU stayed at 1.4 percentage points. The year-on-year rates of growth in apparel and footwear are 3.7% and 4.3%, 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 average annual rates in commodity prices are 2.4% in 2003 and 2.9% in 2004 with respect to the 2.6% registered in 2002.

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

The month-on-month rate of **trend inflation in food** in March stayed at 0.33%, slightly below our prediction, 0.39%. 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 March decreased to 3.4%, compared to the 3.5% observed in February. The mean growth expectations of trend inflation in food increase to 3.4% in 2003 and 3.5% in 2004, with respect to the 3.1% observed in 2002.

The mean growth expectations for trend inflation in goods will stay at 2.7% and 3.1%, in 2003 and 2004 respectively.

Trend inflation expectations **for goods** (measured by the BENE-X index) increase to 2.7% in 2003, and 3.1% in 2004, compared to the 2.6% observed in 2002.

Table 13 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 13

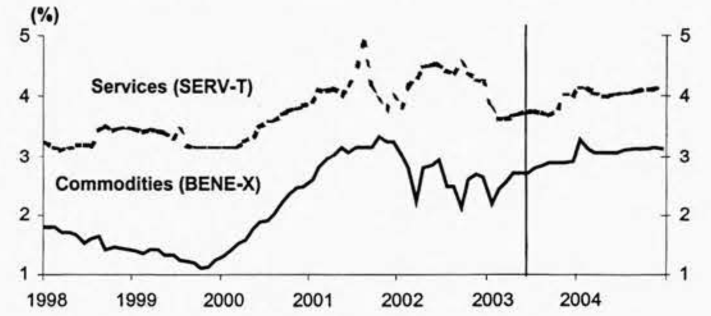
SPANISH AVERAGE RATES OF GROWTH

	1998	1999	2000	2001	2002	Forecasts 2003	Forecasts 2004
Residual Inflation	**0.4**	**2.8**	**6.7**	**3.7**	**3.3**	**3.8**	**3.0**
Fats	-11.1	14.9	-7.6	-7.3	15.2	3.3	5.3
Tobacco	7.9	4.3	2.5	4.9	7.4	3.3	0.2
Tourism	15.4	7.2	12.3	7.1	8.7	8.6	8.1
Non Processed Foods	2.1	1.2	4.2	8.7	5.6	4.2	5.7
Energy	-3.8	3.2	13.3	-1.0	-0.2	2.9	-0.1
Trend Inflation	**2.3**	**2.1**	**2.5**	**3.5**	**3.4**	**3.2**	**3.5**
BENE-X	1.6	1.3	1.9	3.1	2.6	2.7	3.1
SERV-T	3.3	3.3	3.5	4.1	4.3	3.8	4.1
CPI Inflation	**1.8**	**2.3**	**3.4**	**3.6**	**3.5**	**3.4**	**3.4**

(*) More detailed information can be found in tables A6A and A6B in Appendix.

Source: INE & Institute Flores of Lemus / Date: April 24 / 2003.

Graph 10 **AVERAGE RATES OF GROWTH OF CPI INFLATION IN GOODS (BENE-X) AND IN SERVICES (SERV-T)**



Source: INE & IFL / Date: April 24 / 2003

The worrisome evolution of prices of services derives from an inflation differential between trend inflation in services and trend inflation in goods of 1.0% in March.

With regards to the **services sector, excluding those components known as tourist packages** (the SERV-T index), registered a month-on-month rate of inflation of 0.47%, slightly greater than was foreseen, 0.43%. The evolution of prices of services is especially worrisome in university, restaurants, education, housing and medicine, which show annual rates of growth greater than 4%. The inflation differential between the market of non-energy processed goods, excluding fats and tobacco, and the services market, excluding tourism, decreases in March to one percentage point, compared to the 1.2 observed in February. This differential is similar to the corresponding of the EMU, 1.2%. The year-on-year rate of growth of services in March was 3.4%, while that corresponding to the Euro-zone was 2.7%. The year-on-year trend inflation in services (SERV-T) stayed in March to 3.6%. Mean growth expectations stay at 3.8% in 2003 and 4.1% in 2004, compared to the 4.3% observed in 2002.

The mean annual rate of trend inflation will stay at 3.2% in 2003 and3.5% in 2004.

With the aforementioned innovations in the goods and the services market, trend inflation, calculated on the IPSEBENE-XT index, registered an annual rate of 3.0% in March, the same registered in February. It is predicted that **trend inflation** will reduce to 3.2% in 2003 due to the better evolution in prices of goods and services and euro-rounding effects will cease to have an impact on the year-on-year rates, compared to 3.4% observed in 2002.

Residual inflation registered a downward innovation mainly in prices of unprocessed food and tourism.

Those prices which serve as a basis for calculating **residual inflation** have registered a downward innovation in all components excluding prices of tobacco that registered an upward innovation. In the non-processed food groups (the ANE index) there were downward innovations in prices of fish, shellfish, eggs and potatoes. Prices of tourist packages increased by 0.9% in March with respect to February. Finally, energy prices increased by 1.4% with respect to February.

With all of this, residual inflation registered a year-on-year growth rate of 5.5% in March, respect to the 6.7% registered in February. The expectations for the average annual rate of growth are 3.8% in 2003 and 3.0% in 2004, 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, the expectations of average growth in consumer energy prices decrease to 2.9% in 2003 and a negative value of 0.1% in 2004, compared to the –0.2% observed in 2002. Average annual variation rates for oils and fats are expected to increase by 3.3% in 2003 and to increase to 5.3% in 2004, compared to the 15.2% observed in 2002. As far as average growth of non-processed foods, expectations are 4.2% for 2003 and 5.7% in 2004, compared to the 5.6% observed in 2002. Lastly, tourist package prices will reach average values of 8.6% in 2003 and 8.1% in 2004, compared to the 8.7% observed in 2002. Therefore, **the estimated average growth of residual inflation** is 3.8% in 2003 and 3.0% in 2004, compared to the 3.3% observed in 2002.

The monthly inflation prediction for April

As a result, **the monthly inflation prediction for April 2003** is for a rate of 1.0%; the year-on-year rate will decrease to 3.3%, compared to the 3.7% observed in February. The month-on-month trend inflation rate will be 1.3% and residual inflation will be negative of 0.2%. The average inflation rate within the overall CPI is placed at 3.4% in 2003 and 2004, compared to

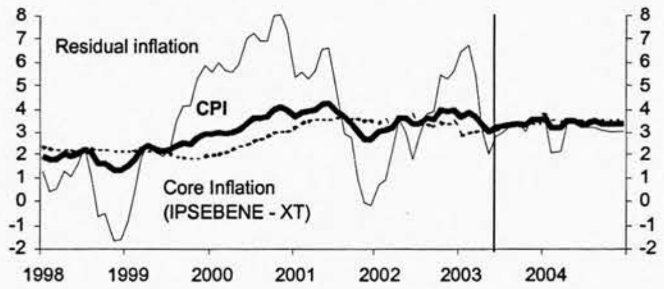
2003 is a value of 1.0%; the annual rate will decrease to 3.3%

average inflation rate within the overall CPI is placed at 3.4% in 2003 and 2004, compared to 3.5% observed in 2002. The average rate of trend inflation will be 3.2% in 2003 and 3.5% in 2004.

The year-on-year rates of total inflation in November and December are used in order to review wages, contracts, and other type of 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, the year-on-year rate in November 2002 was 3.9% and in December 4.0%, greater than the average annual rate of 3.5%

Graph 11

AVERAGE RATES OF GROWTH OF TOTAL INFLATION, TREND AND RESIDUAL INFLATION IN SPAIN



Source: INE & IFL / Date: April 24 / 2003

Table 14 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 14

HARMONIZED ICP ANNUAL GROWTH BY SECTORS IN THE EMU AND SPAIN 2000-2001-2002-2003-2004

		2000	2001	2002	Forecasts 2003	Forecasts 2004
AE	EMU	1.1	2.9	3.1	3.3	2.6
	SPAIN	0.9	3.4	4.4	3.3	3.1
MAN	EMU	0.4	0.9	1.5	0.8	1.0
	SPAIN	2.1	2.6	2.6	2.4	2.9
BENE	EMU	0.6	1.5	1.9	1.5	1.5
	SPAIN	1.7	2.9	3.1	2.7	3.0
SERV	EMU	1.5	2.5	3.1	2.7	2.7
	SPAIN	3.8	4.2	4.5	3.9	4.2
IPSEBENE	EMU	1.0	1.9	2.5	2.1	2.1
	SPAIN	2.4	3.4	3.8	3.3	3.5
ANE	EMU	1.7	7.0	3.1	2.0	1.4
	SPAIN	4.2	8.7	5.6	4.2	5.7
ENE	EMU	13.0	2.3	-0.6	3.3	-0.3
	SPAIN	13.3	-1.0	-0.2	2.9	-0.1
RESIDUAL	EMU	7.5	4.4	1.2	2.7	0.5
	SPAIN	6.7	3.7	3.3	3.8	3.0
HICP	EMU	2.1	2.3	2.3	2.2	1.8
CPI	SPAIN	3.4	3.6	3.5	3.4	3.4

Source: INE, EUROSTAT & Instituto Flores de Lemus / Date: April 24 /2003.

According to CNTR figures, **last year, external demand again represented a negative contribution to the GDP growth rate (0.3 pp) in the Spanish economy,** for the fifth consecutive year. In this respect, the foreign trade sector continues to act as a restraint on growth, since rarely is its contribution positive. This, moreover, does not only occur in the present economic cycle, since similar growth patterns were observed in previous cycles.

In 2002 overall, both exports and imports of goods and services registered a mean annual growth rate, in real terms, that was lower than that of the previous year. The former grew by 1.4%, two percentage points less than a year earlier, and the latter by 2.2%, 1,3 pp less. This deceleration of our foreign trade flows was the result of a recession in world trade, and particularly of the weak internal demand in European economies, the destination of most of our exports. **In the disaggregate exports of goods and services, the worst performer was tourism, with an annual decrease of – 4.0%.**

Although imports and exports were sluggish in the terms of the overall annual mean, **after the first quarter exports clearly started to recover, following by imports just one quarter later.** Exports ended the year with a year-on-year rate of variation of 6.0%, and imports with 7.4%, according to the corrected version provided by the CNTR, when these variables registered notably lower year-on-year growth rates in the first quarter, –2.9% and –1.1%, respectively.

According to information provided by Customs, **the principal boost to exports in 2002 was recorded for destinations outside the euro zone,** with overall figures registering a year-on-year growth rate of 5.0%, 7.8 pp more than a year earlier, and in the fourth quarter of the year, this rate applied to volume was 12.2%. This recovery in the volume of exports outside the euro zone was clearly due to a notable fall in prices, more than compensating the revaluation of the euro against the dollar. Exports to the euro zone fell overall in the year (-1.1%) although on a quarterly basis they recovered somewhat, less than for other destinations, which is evidence that economic activity and internal demand is weaker in the euro economies, but may also have been influenced by the increase in our inflation differential with the euro zone.

The recovery recorded by imports in the second quarter of last year is largely explained by a more dynamic internal demand in that quarter, particularly investments in capital goods, but it may also have been influenced by the boost to exports and the lower prices derived from the increasing strength of the euro compared with the dollar, especially when exporting in the latter.

The trade deficit, according to Bank of Spain records, totalled 34,712 million euros last year, an improvement of 4.6% over 2001. This decrease occurred in a context with export and import flows recovering, with exports registering a slight annual growth (1.2%) and imports falling back slightly (-0.1%), both in nominal terms. **This correction of the trade deficit was due to an improvement in the exchange ratio,** since in real terms imports grew at a faster rate than exports. As usual, this trade deficit was compensated by a superavit in service operations (28,524 million euros).

For the Spanish economy to cease to fall so easily into trade deficits that are reason for concern, competitiveness should be increased to boost exports. As the Bulletin has repeatedly mentioned, this requires more intense structural reforms aimed at controlling inflation and the reinforcement of policies aimed at increasing productivity, such as better infrastructures, technological development and innovation.

The information available on foreign trade this year is still limited and not very significant. The only data available consists of Customs cargo traffic records and the January balance of payments. **The month registered a considerable slow-down in foreign trade flows both in terms of value and in terms of volume, when deflated for the relevant UVIs**. In fact, the volume of exports reduced its annual growth rate to 1.0%, and imports to –0.1%, when these year-on-year growth rates were 12.2% and 16.2%, respectively, in the previous month. These lower foreign trade flows were due to the geopolitical conflict in the Middle East and the figures for February and March will probably continue along the same lines. However, now the war is over, foreign trade is expected to return to the more dynamic status registered towards the end of 2002. Our forecast for exports and imports this year, presented two months ago, continues to be valid, subject to the availability of further information on how the foreign trade sector is performing in 2003. The mean annual growth rate predicted was 4.9% for exports and 5.4% for imports.

TABLES & PLOTS

TABLES:

- A1A: Spanish CPI desaggregation.
- A1B: MU HICP desaggregation.
- A1C: USA HICP desaggregation
- A2: Europe forecast errors for esuro-zone and Monetary Union countries.
- A3: HICP europe forecast errors by sectors in Monetary Union.
- A4A: Hamonized Consumer Price Index (HICP) Annual Growth Rates for 200,2001, and 2002 for MU countries.
- A4B: Hamonized Consumer Price Index (HICP) Annual Growth Rates for 200,2001, and 2002 for UE countries.
- A4C: Hamonized Consumer Price Index (HICP) Monthly Growth Rates for 200,2001, and 2002 for MU countries.
- A4D: Hamonized Consumer Price Index (HICP) Monthly Growth Rates for 200,2001, and 2002 for EU countries.
- A5A: Hamonized Consumer Price Index (HICP) Annual Growth Rates by sectors for 200,2001, and 2002 for MU.
- A5B: Hamonized Consumer Price Index (HICP) Monthly Growth Rates for 200,2001, and 2002 for MU.
- A6A: US CPI Annual Growth Rates for 200,2001 and 2002.
- A6B: US CPI Monthly Growth Rates for 200,2001 and 2002.
- A7A: Spanish CPI Annual Growth rates for 200,2001 and 2002.
- A7B: Spanish CPI Monthly Growth rates for 200,2001 and 2002.
- A8A: Madrid Region CPI Annual growth Rates for 2000,2001 and 2002.
- A8B: Madrid Region CPI Monthly growth Rates for 2000,2001 and 2002.

GRÀFICOS / PLOTS:

- A1A: HICP monthly growth rates in MU.
- A1B: CPI monthly growth rates in US.
- A1C: CPI monthly growth rates in Spain
- A2A: Annual Forecast For The MU Inflation
- A2B: Annual Forecast For The USA Inflation
- A2C: Annual Forecast For The Spanish Inflation

TABLE A1A

METHODOLOGY: ANALYSIS OF SPANISH INFLATION BY SECTORS

BASIC COMPONENTS AGGREGATES	BASIC COMPONENTES	BASIC COMPONENTS AGGREGATES
IPSEBENE *81.696%* **1 + 2 +3 +4 + 5** **BENE** *47.377%* **1 + 2 + 4** **AE** *16.065%* **1 + 4** CORE INFLATION IT IS CALCULATED ON THE IPSEBENE INDEX	**(1) AE-X** *13.029%* processed food excluding fats and tobacco CPI. **(2) MAN** *31.312%* non-energy industrial goods CPI **(3) SERV-T** *33.15%* services excluding packages tourist CPI **(4) X** *3.036%* fats and tobacco CPI **(5) T** *1.169%* tourist packages CPI **(6) ANE** *9.048%* non-processed food CPI **(7) ENE** *9.256%* energy CPI	**BENE-X** *44.341%* **1 + 2** **IPSEBENE-X-T** *77.491%* **1 + 2 + 3** **R** *22.508%* **4 + 5 + 6 + 7** **IPC** **1 + 2 + 3 + 4 + 5 + 6 + 7** **RESIDUAL INFLATION** IT IS CALCULATED ON THE R INDEX **TREND INFLATION** IT IS CALCULATED ON THE IPSEBENE-X-T INDEX **GLOBAL INFLATION** IT IS CALCULATED ON THE IPC INDEX

IPC = 0.13029 **AE-X** + 0.31312 **MAN** + 0.3315 **SERV- T** + 0.03036 **X** + 0.01169 **T** + 0.09048 **ANE** + 0.09256 **ENE** **(weights 03)**

Source: INE & Instituto Flores de Lemus, Universidad Carlos III

Methodology: *Analysis of MU inflation by SECTORS*

BASIC COMPONENTS AGGREGATES		*BASIC COMPONENTS*
IPSEBENE *84.172%* **1 + 2 +3**	**BENE** *43.267%* **1 + 2**	**(1) AE** *11.718%* *HICP Processed Food*
		(2) MAN *31.549%* *HICP Non Energy Industrial Goods*
		(3) SERV *40.905%* *HICP Services*
	RESIDUAL INFLATION *15.828%* **4 + 5**	**(4) ANE** *7.580%* *HICP Non processed Food*
		(5) ENE *8.249%* *HICP Energy*
CORE INFLATION *(IT IS CALCULATED ON THE IPSEBENE INDEX)*		
IPCA = 0.11718 **AE** + 0.31549 **MAN** + 0.40905 **SERV** + 0.0758 **ANE** + 0.08249 **ENE**		

Fuente / *Source*: EUROSTAT & Instituto Flores de Lemus, Universidad Carlos III

TABLE A1C

Methodology: *Analysis of USA inflation by SECTORS*

BASIC COMPONENTS AGGREGATES		*BASICS COMPONENTS*
CORE CPI *75.28%* **1 + 2 +3+4+5**	**SERVICES LESS ENERGY** *45.91%* 1+2	**(1) OWNERS' EQUIVALENT RENT OF PRIMARY RESIDENCE** *18.47%* **(2) SERVICES LESS OWNER' EQUIVALENT RENT OF PRIMARY RESIDENCE** *27.44%*
	COMMODITIES LESS FOOD AND ENERGY 29.37% 3+4+5	**(3) TOBACCO** *0.38%* **(4) NON DURABLES LESS TOBACCO** *11.81%* **(5) DURABLES** *17.19%*
RESIDUAL CPI *24.72%* **6 +7 +8 +9**		**(6) FOOD** *14.86%*
	ENERGY *9.86%* **7 + 8+9**	**(7) GAS** *1.27%* **(8) ELECTRICITY** *3.42%* **(9) MOTOR FUEL AND FUEL OIL** *5.18%*
HIPC =0.4591(SERV. – ENERGY) + 0.2937(COMM. - FOOD AND ENERGY) + 0.1486FOOD + 0.0986ENERGY		

Fuente / *Source*: EUROSTAT & Instituto Flores de Lemus, Universidad Carlos III

Cuadro A2 *Table A2*

ERRORES DE PREDICCIÓN EN LA TASA DE INFLACIÓN MENSUAL DE MARZO DE 2003 EN LA ZONA EURO Y EN LA UNIÓN EUROPEA

FORECAST ERRORS IN THE MONTHLY INFLATION RATE FOR MARCH 2003 IN THE EUROZONE AND IN THE EUROPEAN UNION

	Pesos 2003 UM *Weights 2003 MU*	Pesos 2003 UE *Weights 2003 EU*	Crecimiento Mensual Observado *Observed Monthly Rate*	Predicción *Forecast*	Crecimiento Anual Observado *Observed Annual Rate*	Intervalos de Confianza al 80% *Confidence Intervals at 80%*
España / Spain	*108.72*		0.76	0.82	3.73	± 0.15
Alemania / Germany	*298.68*		0.18	0.23	1.21	± 0.29
Austria	*31.52*		0.18	0.19	1.76	± 0.37
Bélgica / Belgium	*33.47*		0.27	0.24	1.72	± 0.32
Finlandia / Finland	*15.66*		0.35	0.38	1.88	± 0.37
Francia / France	*204.58*		0.45	0.68	2.60	± 0.20
Grecia / Greece	*25.66*		2.54	2.78	3.86	± 0.78
Holanda / Netherlands	*53.70*		0.91	1.07	3.05	± 0.33
Irlanda / Irland	*12.71*		0.72	0.90	4.91	± 0.30
Italia / Italy	*191.62*		1.22	0.80	2.93	± 0.23
Luxemburgo / Luxembourg	*2.60*		0.52	0.05	3.69	± 0.32
Portugal	*21.07*		0.08	0.39	3.78	± 0.66
Dinamarca / Denmark		*13.08*	0.78	0.61	2.83	± 0.27
Reino Unido / United Kingdom		*167.61*	0.37	0.37	1.58	± 0.33
Suecia / Sweden		*17.82*	0.62	0.68	2.92	± 0.50

Fuente: / Source: EUROSTAT & IFL

Fecha: 16 de abril de 2003. / Date: April 16, 2003

Elaboración / Elaborated by: Rebeca Albacete
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ERRORES DE PREDICCIÓN EN LA TASA DE INFLACIÓN MENSUAL DE MARZO DE 2003 POR SECTORES EN LA UME
FORECAST ERRORS IN THE MONTHLY INFLATION RATE FOR MARCH 2003 BY SECTORS IN THE EMU

	Pesos 2003 *Weights 2003*	Crecimiento mensual observado *Observed Monthly Growth*	Predicción *Forecast*	Crecimiento anual observado *Annual Growth Observed*	Intervalo de confianza al 80% *Confidence interval at 80%*
IPCA Alimentos elaborados / HICP Processed Food	*117.18*	0.18	0.25	3.35	± 0.14
IPCA Manufacturas / HICP Non Energy Industrial Goods	*315.49*	1.15	1.03	0.76	± 0.10
IPCA Bienes elaborados no energéticos /HICP Non Energy Processed Goods	*432.67*	0.88	0.81	1.46	± 0.09
IPCA Servicios / HICP Services	*409.05*	0.17	0.15	2.66	± 0.14
INFLACIÓN SUBYACENTE / CORE INFLATION (1)	*841.72*	0.54	0.49	2.01	± 0.08
IPCA Alimentos no elaborados / HICP Unprocessed Food	*75.80*	0.60	0.97	0.85	± 0.46
IPCA Energía / HICP Energy (2)	*82.49*	1.05	2.53	7.46	± 0.60
INFLACIÓN RESIDUAL / RESIDUAL INFLATION (3)	*158.28*	0.91	1.80	4.19	± 0.39
INFLACIÓN GLOBAL / GLOBAL INFLATION (4)	*1000*	0.62	0.70	2.45	± 0.09

(1) error de agregación de 0,01% / aggregation error 0.01%
(2) error de agregación de -0,03% / aggregation error -0.03%
(3) error de agregación de 0,07% / aggregation error 0.07%
(4) error de agregación de 0,04% / aggregation error 0.04%

Fuente / *Source*: EUROSTAT & IFL
Fecha: 16 de abril de 2003 / Date: April 16 2003

Elaborated by: Rebeca Albacete
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HARMONIZED CPI (HICP) ANNUAL GROWTH FOR EMU COUNTRIES (1) — **Table A4A**

	Weight EMU12	Weight EU15	Rates	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Average Rates (2) 02/01	03/02	04/03
Spain HICP	10.87%		2002	3.1	3.2	3.2	3.7	3.7	3.4	3.5	3.7	3.5	4.0	3.9	4.0	3.6		
			2003	3.8	3.8	3.7	**3.3**	**3.0**	**3.2**	**3.3**	**3.3**	**3.4**	**3.4**	**3.6**	**3.5**		**3.4**	
			2004	**3.6**	**3.3**	**3.2**	**3.4**	**3.5**	**3.4**	**3.5**	**3.5**	**3.4**	**3.3**	**3.3**	**3.2**			**3.4**
Germany HICP	29.87%		2002	2.2	1.8	2.0	1.5	1.1	0.8	1.0	1.1	1.0	1.3	1.1	1.1	1.3		
			2003	0.9	1.2	1.2	**0.7**	**0.8**	**1.0**	**1.0**	**0.9**	**0.9**	**0.9**	**1.2**	**1.1**		**1.0**	
			2004	**0.5**	**0.3**	**0.1**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**			**0.5**
Austria HICP	3.15%		2002	2.0	1.7	1.7	1.7	1.7	1.5	1.5	2.1	1.6	1.7	1.7	1.7	1.7		
			2003	1.7	1.8	1.8	**1.7**	**1.7**	**1.8**	**1.8**	**1.6**	**1.7**	**1.7**	**1.8**	**1.8**		**1.7**	
			2004	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**			**1.7**
Belgium HICP	3.35%		2002	2.6	2.5	2.5	1.7	1.4	0.8	1.1	1.3	1.2	1.3	1.1	1.3	1.6		
			2003	1.2	1.6	1.7	**1.9**	**2.2**	**2.6**	**2.9**	**2.4**	**2.6**	**2.5**	**2.9**	**2.8**		**2.3**	
			2004	**2.9**	**2.5**	**2.5**	**2.6**	**2.5**	**2.4**	**2.3**	**2.4**	**2.4**	**2.4**	**2.3**	**2.2**			**2.4**
Finland HICP	1.57%		2002	2.9	2.5	2.6	2.6	1.8	1.5	2.0	1.8	1.4	1.7	1.7	1.7	2.0		
			2003	1.4	2.1	1.9	**1.8**	**1.7**	**1.9**	**2.1**	**2.1**	**2.0**	**2.0**	**2.2**	**2.2**		**2.0**	
			2004	**2.2**	**1.9**	**1.8**	**1.8**	**1.8**	**1.8**	**2.0**	**2.0**	**1.9**	**1.9**	**2.0**	**2.1**			**1.9**
France HICP	20.46%		2002	2.5	2.3	2.2	2.1	1.5	1.5	1.6	1.8	1.8	1.9	2.1	2.2	1.9		
			2003	1.9	2.5	2.6	**1.9**	**2.2**	**2.2**	**2.1**	**2.1**	**2.0**	**1.9**	**2.0**	**2.0**		**2.1**	
			2004	**1.6**	**1.2**	**1.1**	**1.6**	**1.4**	**1.5**	**1.5**	**1.6**	**1.5**	**1.6**	**1.6**	**1.6**			**1.5**
Netherlands HICP	5.37%		2002	4.9	4.5	4.3	4.2	3.8	3.9	3.8	3.8	3.7	3.6	3.4	3.5	3.9		
			2003	2.9	3.2	3.1	**3.0**	**3.2**	**3.1**	**3.1**	**3.1**	**3.1**	**3.2**	**3.4**	**3.3**		**3.1**	
			2004	**3.3**	**3.2**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**			**3.3**
Ireland HICP	1.27%		2002	5.2	4.9	5.1	5.0	5.0	4.5	4.2	4.5	4.5	4.4	4.7	4.6	4.7		
			2003	4.7	5.1	4.9	**4.9**	**4.9**	**5.1**	**5.2**	**5.1**	**5.1**	**5.1**	**5.0**	**5.0**		**5.0**	
			2004	**4.8**	**4.7**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**	**4.8**			**4.8**
Italy HICP	19.16%		2002	2.3	2.7	2.5	2.5	2.4	2.2	2.4	2.6	2.8	2.8	2.9	3.0	2.6		
			2003	2.9	2.6	2.9	**2.7**	**2.6**	**2.5**	**2.5**	**2.4**	**2.3**	**2.2**	**2.2**	**2.1**		**2.5**	
			2004	**2.3**	**2.2**	**1.8**	**2.0**	**2.1**	**2.2**	**2.3**	**2.3**	**2.3**	**2.4**	**2.4**	**2.4**			**2.2**
Luxembourg HICP	0.26%		2002	2.1	2.2	1.7	1.9	1.3	1.3	1.9	2.0	2.2	2.5	2.7	2.8	2.1		
			2003	3.3	3.2	3.7	**3.4**	**3.1**	**3.2**	**3.9**	**3.4**	**3.4**	**3.2**	**3.3**	**3.6**		**3.4**	
			2004	**3.9**	**3.2**	**3.0**	**2.9**	**3.0**	**2.8**	**3.0**	**2.8**	**2.7**	**2.6**	**2.6**	**2.6**			**2.9**
Portugal HICP	2.11%		2002	3.7	3.3	3.3	3.5	3.4	3.5	3.6	3.9	3.8	4.1	4.1	4.0	3.7		
			2003	4.0	4.1	3.8	**3.6**	**3.5**	**3.5**	**3.5**	**3.3**	**3.4**	**3.2**	**3.2**	**3.3**		**3.5**	
			2004	**3.3**	**3.2**	**3.4**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**			**3.5**
Greece HICP	2.57%		2002	4.8	3.8	4.4	4.1	3.8	3.6	3.6	3.8	3.8	3.9	3.9	3.5	3.9		
			2003	3.3	4.2	3.9	**3.7**	**3.7**	**3.7**	**3.9**	**3.9**	**3.7**	**3.6**	**3.6**	**3.6**		**3.7**	
			2004	**3.6**	**3.7**	**3.4**	**3.3**	**3.3**	**3.3**	**3.5**	**3.5**	**3.3**	**3.3**	**3.3**	**3.2**			**3.4**

* The annual rate of growth reflects fundamental changes in prices with respect to monthly growth rates
(1) Figures in bold type are forecasted values.
(2) Annual average rate of growth.

Source: EUROSTAT & INSTITUTO FLORES DE LEMUS
Date: April 24, 2002

Table A4E

HARMONIZED CPI (HICP) ANNUAL GROWTH FOR EU COUNTRIES (1)

	Weight		Rate	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Average Rates (2)		
	EMU12	EU15														02/01	03/02	04/03
Denmark HICP		1.31%	2002	2.5	2.4	2.5	2.3	1.9	2.2	2.2	2.4	2.5	2.7	2.8	2.6	2.4		
			2003	2.6	2.9	2.8	**2.8**	**3.2**	**3.2**	**3.2**	**3.1**	**3.0**	**2.9**	**3.0**	**3.0**		**3.0**	
			2004	**2.9**	**2.7**	**2.6**	**2.5**	**2.5**	**2.5**	**2.5**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**			**2.5**
UK HICP		16.76%	2002	1.6	1.5	1.5	1.3	0.8	0.6	1.1	1.0	1.0	1.4	1.6	1.7	1.3		
			2003	1.4	1.6	1.6	**1.7**	**1.8**	**1.9**	**1.7**	**1.7**	**1.8**	**1.6**	**1.6**	**1.5**		**1.7**	
			2004	**1.6**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**			**1.5**
Sweden HICP		1.78%	2002	2.9	2.7	3.0	2.2	1.7	1.7	1.8	1.7	1.2	1.7	1.4	1.7	2.0		
			2003	2.6	3.3	2.9	**3.0**	**3.1**	**3.2**	**3.4**	**3.4**	**3.3**	**3.1**	**3.3**	**3.2**		**3.2**	
			2004	**2.9**	**2.5**	**2.4**	**2.4**	**2.4**	**2.4**	**2.5**	**2.5**	**2.4**	**2.4**	**2.4**	**2.4**			**2.5**

* The annual rate of growth reflects fundamental changes in prices with 6 months lags with respect to monthly growth rates.
(1) Figures in bold type are forecasted values.
(2) Annual average rate of growth.

Source:
EUROSTAT & INSTITUTO FLORES DE LEMUS
Date: April 24, 2003

Elaborated by: Rebeca Albacete
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Table A4C

HARMONIZED CPI (HICP) MONTHLY GROWTH FOR EMU COUNTRIES (1)

	Weight MU	Weight EU15	Rate	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual Rates (2) D02/D01	D03/D02	D04/D03
Spain HICP	10.87%		2002	-0.2	0.1	0.9	1.4	0.3	0.0	-0.7	0.3	0.3	0.9	0.2	0.3	4.0		
			2003	-0.4	0.2	0.8	1.0	0.1	0.2	-0.6	0.3	0.4	0.9	0.4	0.3		3.5	
			2004	-0.4	-0.2	0.7	1.2	0.1	0.1	-0.6	0.3	0.4	0.9	0.3	0.3			3.2
Germany HICP	29.87%		2002	0.1	0.3	0.2	-0.1	0.1	-0.1	0.4	-0.2	-0.2	-0.1	-0.4	1.1	1.1		
			2003	-0.1	0.6	0.2	-0.6	0.2	0.1	0.4	-0.2	-0.2	-0.1	-0.1	1.1		1.1	
			2004	-0.7	0.3	0.0	-0.1	0.2	0.1	0.4	-0.2	-0.2	-0.1	-0.1	1.1			0.6
Austria HICP	3.15%		2002	0.2	0.1	0.2	0.5	0.2	-0.1	-0.1	0.3	-0.1	0.3	0.0	0.3	1.7		
			2003	0.2	0.2	0.2	0.4	0.2	0.0	-0.1	0.2	0.0	0.3	0.0	0.3		1.8	
			2004	0.2	0.2	0.2	0.4	0.2	0.0	-0.1	0.2	0.0	0.3	0.0	0.3			1.7
Belgium HICP	3.35%		2002	-0.9	1.7	0.2	0.1	0.2	-0.3	-1.0	1.5	0.1	-0.1	-0.2	0.1	1.3		
			2003	-1.0	2.1	0.3	0.3	0.4	0.1	-0.7	1.0	0.2	-0.1	0.1	0.0		2.8	
			2004	-0.9	1.7	0.3	0.4	0.3	0.0	-0.8	1.0	0.2	-0.1	0.0	0.0			2.2
Finland HICP	1.57%		2002	0.5	0.3	0.5	0.4	0.2	-0.2	-0.4	0.0	0.4	0.3	-0.4	0.0	1.7		
			2003	0.2	0.9	0.4	0.3	0.2	0.0	-0.2	0.1	0.3	0.2	-0.2	0.1		2.2	
			2004	0.2	0.6	0.3	0.3	0.2	0.0	0.0	0.1	0.3	0.2	0.0	0.1			2.1
France HICP	20.46%		2002	0.6	0.1	0.4	0.5	0.1	0.0	-0.1	0.2	0.2	0.2	-0.1	0.2	2.2		
			2003	0.3	0.7	0.5	-0.2	0.4	-0.1	-0.1	0.1	0.1	0.1	0.0	0.2		2.0	
			2004	-0.1	0.4	0.4	0.3	0.2	0.0	-0.1	0.2	0.1	0.1	0.0	0.2			1.6
Netherlands HICP	5.37%		2002	1.1	0.5	1.0	0.7	-0.2	-0.3	-0.2	0.3	1.0	-0.1	-0.4	-0.1	3.5		
			2003	0.6	0.8	0.9	0.6	0.0	-0.3	-0.2	0.3	1.0	0.1	-0.2	-0.2		3.3	
			2004	0.6	0.7	1.0	0.6	0.0	-0.3	-0.2	0.3	1.0	0.1	-0.2	-0.2			3.3
Ireland HICP	1.27%		2002	-0.2	0.6	0.9	0.7	0.6	0.2	-0.5	0.6	0.3	0.4	0.1	0.7	4.6		
			2003	0.0	1.0	0.7	0.7	0.6	0.3	-0.4	0.5	0.3	0.4	0.0	0.7		5.0	
			2004	-0.1	0.9	0.8	0.7	0.6	0.3	-0.4	0.5	0.3	0.4	0.0	0.7			4.8
Italy HICP	19.16%		2002	-0.1	-0.2	0.9	0.7	0.3	0.1	-0.1	-0.2	0.5	0.5	0.3	0.3	3.0		
			2003	-0.3	-0.4	1.2	0.5	0.2	0.0	-0.1	-0.3	0.5	0.4	0.3	0.1		2.1	
			2004	-0.1	-0.5	0.8	0.7	0.3	0.1	-0.1	-0.2	0.5	0.5	0.3	0.2			2.4
Luxembourg HICP	0.26%		2002	-0.7	1.2	0.1	0.5	0.4	0.3	-0.6	0.8	0.4	0.4	0.2	-0.2	2.8		
			2003	-0.3	1.1	0.5	0.3	0.2	0.3	0.0	0.4	0.3	0.3	0.2	0.1		3.6	
			2004	0.0	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2			2.6
Portugal HICP	2.11%		2002	0.1	-0.2	0.4	0.9	0.8	0.3	0.3	0.2	-0.1	0.6	0.6	0.1	4.0		
			2003	0.1	0.0	0.1	0.7	0.7	0.3	0.2	0.0	-0.1	0.4	0.6	0.2		3.3	
			2004	0.1	0.0	0.3	0.8	0.7	0.3	0.2	0.0	-0.1	0.4	0.6	0.2			3.5
Greece HICP	2.57%		2002	-0.6	-1.1	2.9	0.8	0.2	-0.2	-2.0	0.2	2.1	0.5	0.1	0.7	3.5		
			2003	-0.8	-0.2	2.5	0.7	0.2	-0.2	-1.8	0.1	1.9	0.4	0.1	0.6		3.6	
			2004	-0.7	-0.2	2.3	0.6	0.2	-0.2	-1.6	0.1	1.7	0.4	0.1	0.6			3.2

(1) Figures in bold type are forecasted values.
(2) December over December rate of growth.

Source:

EUROSTAT & INSTITUTO FLORES DE LEMUS

Date: April 24, 2003

Table A4D

HARMONIZED CPI (HICP) **MONTHLY** GROWTH FOR **EU COUNTRIES** (1)

	Weight MU	Weight EU15	Rate	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual Rates (2) D02/D01	D03/D02	D04/D03
Denmark HICP		1.31%	2002	0.2	0.4	0.8	0.4	0.1	0.1	-0.4	0.2	0.6	0.3	-0.1	0.0	2.6		
			2003	0.2	0.7	0.8	0.4	0.4	0.1	-0.4	0.1	0.5	0.1	0.0	0.0		3.0	
			2004	0.1	0.5	0.6	0.3	0.4	0.1	-0.4	0.1	0.5	0.1	0.0	0.0			2.4
UK HICP		16.76%	2002	-0.4	0.2	0.4	0.4	0.3	0.0	-0.3	0.3	0.3	0.2	0.0	0.4	1.7		
			2003	-0.6	0.4	0.4	0.4	0.4	0.1	-0.5	0.3	0.4	0.0	0.0	0.3		1.5	
			2004	-0.6	0.3	0.4	0.4	0.4	0.1	-0.5	0.3	0.4	0.0	0.0	0.3			1.5
Sweden HICP		1.78%	2002	-0.6	0.3	1.0	0.3	0.2	-0.2	-0.5	0.1	0.7	0.4	-0.3	0.4	1.7		
			2003	0.3	1.0	0.6	0.3	0.3	-0.1	-0.4	0.1	0.7	0.2	-0.1	0.2		3.2	
			2004	0.0	0.6	0.6	0.3	0.3	0.0	-0.3	0.1	0.6	0.2	0.0	0.2			2.4

(1) Figures in bold type are forecasted values.
(2) Annual average rate of growth.

Source:
EUROSTAT & INSTITUTO FLORES DE LEMUS

Date: April 24, 2003

Elaborated by: Rebeca Albacete
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Table A5A

HARMONIZED CPI (HICP) **ANNUAL** GROWTH BY **SECTORS IN THE MU** 2002-2003-2004 (a)

	Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Average rates(b) 02/01	03/02	04/03
(1) AE (11.718%)	2002	3.8	3.5	3.3	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.7	3.1		
	2003	2.9	3.3	3.3	**3.2**	**3.3**	**3.2**	**3.3**	**3.3**	**3.4**	**3.4**	**3.5**	**3.4**		**3.3**	
	2004	**2.8**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**			**2.6**
(2) MAN (31.549.%)	2002	1.7	1.8	1.6	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.3	1.2	1.5		
	2003	0.7	0.8	0.8	**0.8**	**0.8**	**0.8**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**		**0.8**	
	2004	**1.1**	**1.0**	**1.1**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**			**1.0**
BENE [(1)+(2)] (43.267%)	2002	2.2	2.2	2.1	2.1	2.0	2.0	1.8	1.7	1.8	1.6	1.7	1.6	1.9		
	2003	1.3	1.4	1.5	**1.4**	**1.5**	**1.5**	**1.6**	**1.6**	**1.6**	**1.6**	**1.6**	**1.6**		**1.5**	
	2004	**1.6**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**			**1.5**
(3) SERV (40.905%)	2002	2.9	3.0	3.2	2.8	3.3	3.2	3.2	3.2	3.2	3.2	3.2	2.9	3.1		
	2003	2.9	2.7	2.7	**2.8**	**2.6**	**2.7**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.7**		**2.7**	
	2004	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**	**2.7**			**2.7**
IPSEBENE [(1)+(2)+(3)] (84.172%)	2002	2.6	2.6	2.7	2.5	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.5		
	2003	2.0	2.0	2.0	**2.1**	**2.0**	**2.0**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**		**2.1**	
	2004	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**			**2.1**
(4) ANE (7.580%)	2002	8.4	7.1	5.6	4.2	2.1	1.1	1.0	1.3	1.8	1.7	2.0	1.4	3.1		
	2003	-0.7	0.3	0.9	**1.4**	**2.4**	**2.9**	**3.0**	**2.8**	**2.6**	**2.7**	**2.5**	**2.8**		**2.0**	
	2004	**2.7**	**2.1**	**1.9**	**1.6**	**1.1**	**0.9**	**0.9**	**1.0**	**1.1**	**1.0**	**1.1**	**1.0**			**1.4**
(5) ENE (8.249%)	2002	-1.9	-2.9	-1.5	-0.4	-2.9	-3.6	-1.6	-0.3	-0.2	2.6	2.3	3.7	-0.6		
	2003	5.9	7.6	7.5	**1.3**	**1.9**	**2.9**	**2.7**	**2.3**	**1.4**	**0.9**	**2.6**	**2.4**		**3.3**	
	2004	**-0.7**	**-2.5**	**-3.5**	**0.2**	**0.1**	**0.2**	**0.3**	**0.4**	**0.4**	**0.4**	**0.5**	**0.5**			**-0.3**
R [(4)+(5)] (15.828%)	2002	2.9	1.8	1.9	1.7	-0.5	-1.4	-0.3	0.4	0.7	2.2	2.1	2.5	1.2		
	2003	2.7	4.1	4.2	**1.4**	**2.2**	**2.9**	**2.9**	**2.6**	**2.0**	**1.7**	**2.7**	**2.6**		**2.7**	
	2004	**0.9**	**-0.3**	**-1.0**	**0.9**	**0.6**	**0.6**	**0.6**	**0.7**	**0.7**	**0.7**	**0.8**	**0.7**			**0.5**
IPCA (100%)	2002	2.6	2.5	2.5	2.3	2.0	1.9	2.0	2.1	2.1	2.3	2.3	2.3	2.3		
	2003	2.1	2.4	2.4	**1.9**	**2.0**	**2.2**	**2.2**	**2.2**	**2.1**	**2.0**	**2.2**	**2.2**		**2.2**	
	2004	**1.9**	**1.7**	**1.6**	**1.9**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.9**	**1.8**			**1.8**

* T1,12 growth rate lags fundamental changes in prices 6 months whit respect to monthly growth rates. It is necesary to evaluate forecasts to anannyze current situation.

** Weights on Global HICP are shown in brackets

(a) Figures in bold type are forecasts

(b) Annual average rate of growth

Source:

EUROSTAT & INSTITUTO FLORES DE LEMUS

Date: April 22, 2003

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Table A5B

HARMONIZED CPI (HICP) **MONTHLY** GROWTH RATES BY **SECTORS IN THE MU** 2002-2003-2004 (a)

	Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual Rates (b) D02/D01	D03/D02	D04/D03
(1) AE (11.718%)	2002	0.8	0.1	0.1	0.4	0.2	0.3	0.1	0.3	0.1	0.1	0.1	0.2	2.7		
	2003	1.1	0.4	0.2	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**		**3.4**	
	2004	**0.5**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**			**2.6**
(2) MAN (31.549.%)	2002	-1.0	-0.1	1.2	0.6	0.1	-0.1	-1.3	0.0	1.1	0.6	0.3	0.0	1.2		
	2003	-1.5	0.0	1.1	**0.6**	**0.1**	**-0.1**	**-1.2**	**0.0**	**1.0**	**0.6**	**0.2**	**0.0**		**0.9**	
	2004	**-1.3**	**-0.1**	**1.2**	**0.5**	**0.1**	**-0.1**	**-1.2**	**0.0**	**1.0**	**0.6**	**0.2**	**0.0**			**1.0**
BENE [(1)+(2)] (43.267%)	2002	-0.5	0.0	0.9	0.5	0.1	0.0	-0.9	0.1	0.8	0.4	0.2	0.0	1.6		
	2003	-0.8	0.1	0.9	**0.5**	**0.2**	**0.0**	**-0.8**	**0.1**	**0.8**	**0.5**	**0.2**	**0.0**		**1.6**	
	2004	**-0.8**	**0.0**	**0.9**	**0.5**	**0.2**	**0.0**	**-0.8**	**0.1**	**0.8**	**0.5**	**0.2**	**0.0**			**1.5**
(3) SERV (40.905%)	2002	-0.1	0.5	0.2	0.1	0.4	0.3	0.9	0.1	-0.3	0.0	0.0	0.9	2.9		
	2003	-0.2	0.3	0.2	**0.2**	**0.3**	**0.3**	**0.9**	**0.1**	**-0.3**	**0.0**	**0.0**	**0.9**		**2.7**	
	2004	**-0.2**	**0.4**	**0.2**	**0.2**	**0.3**	**0.3**	**0.9**	**0.1**	**-0.3**	**0.0**	**0.0**	**0.9**			**2.7**
IPSEBENE [(1)+(2)+(3)] (84.172%)	2002	-0.3	0.3	0.6	0.3	0.3	0.1	0.0	0.1	0.2	0.3	0.1	0.5	2.3		
	2003	-0.5	0.3	0.5	**0.3**	**0.2**	**0.1**	**0.0**	**0.1**	**0.2**	**0.2**	**0.1**	**0.5**		**2.1**	
	2004	**-0.5**	**0.2**	**0.5**	**0.3**	**0.2**	**0.1**	**0.0**	**0.1**	**0.2**	**0.2**	**0.1**	**0.5**			**2.1**
(4) ANE (7.580%)	2002	3.5	-0.7	0.1	0.3	0.0	-0.9	-0.7	-1.0	0.3	0.1	-0.2	0.5	1.4		
	2003	1.4	0.3	0.6	**0.9**	**1.0**	**-0.4**	**-0.6**	**-1.2**	**0.1**	**0.1**	**-0.3**	**0.8**		**2.8**	
	2004	**1.2**	**-0.2**	**0.4**	**0.6**	**0.5**	**-0.6**	**-0.6**	**-1.1**	**0.2**	**0.1**	**-0.2**	**0.7**			**1.0**
(5) ENE (8.249%)	2002	1.0	0.3	1.2	2.1	-0.5	-1.0	0.2	0.3	1.0	0.5	-1.7	0.3	3.7		
	2003	3.1	1.9	1.0	**-3.7**	**0.1**	**-0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**		**2.4**	
	2004	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**			**0.5**
R [(4)+(5)] (15.828%)	2002	2.2	-0.3	0.8	1.2	-0.3	-0.9	-0.3	-0.3	0.7	0.3	-1.0	0.4	2.5		
	2003	2.3	1.1	0.9	**-1.5**	**0.5**	**-0.2**	**-0.3**	**-0.6**	**0.1**	**0.1**	**-0.1**	**0.4**		**2.6**	
	2004	**0.6**	**-0.1**	**0.2**	**0.3**	**0.3**	**-0.3**	**-0.3**	**-0.5**	**0.2**	**0.1**	**-0.1**	**0.4**			**0.7**
IPCA (100%)	2002	0.1	0.2	0.5	0.5	0.2	0.0	-0.1	0.0	0.3	0.3	-0.1	0.4	2.3		
	2003	-0.1	0.4	0.6	**0.0**	**0.3**	**0.1**	**-0.1**	**0.0**	**0.2**	**0.2**	**0.1**	**0.5**		**2.2**	
	2004	**-0.3**	**0.2**	**0.5**	**0.3**	**0.2**	**0.1**	**-0.1**	**0.0**	**0.2**	**0.2**	**0.1**	**0.5**			**1.8**

** Weights on Global HICP are shown in brackets

(a) Figures in bold type are forecasts

(b)December over December rate of growth

Source:

EUROSTAT & INSTITUTO FLORES DE LEMUS

Date: April 22, 2003

Table A6A

US ANNUAL RATES OF GROWTH ON CPI AND ITS COMPONENTS(1)

		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Avrg 02/ 01 (2)	Avrg 03/ 02 (3)	Avrg 04/ 03 (4)
Non energy commodities less food (1)	2002	-0.8	-0.9	-1.1	-1.0	-0.9	-1.0	-1.3	-0.7	-1.1	-1.2	-1.6	-1.5	-1.1		
	2003	-1.4	-1.5	-1.4	**-1.2**	**-1.1**	**-0.7**	**-0.7**	**-0.7**	**-0.6**	**-0.6**	**-0.2**	**-0.1**		**-0.8**	
	2004	**0.1**	**0.4**	**0.3**	**0.2**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**			**0.3**
Non energy services (2)	2002	3.9	4.0	3.9	4.0	3.9	3.7	3.8	3.7	3.6	3.7	3.5	3.4	3.8		
	2003	3.4	3.2	3.0	**2.9**	**2.8**	**2.8**	**2.8**	**2.7**	**2.7**	**2.6**	**2.7**	**2.7**		**2.8**	
	2004	**2.6**	**2.7**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.9**	**2.9**	**2.9**	**2.9**	**2.9**			**2.8**
Core inflation (3=1+2)	2002	2.6	2.6	2.4	2.5	2.5	2.3	2.2	2.4	2.2	2.2	2.0	1.9	2.3		
	2003	1.9	1.7	1.7	**1.7**	**1.6**	**1.8**	**1.7**	**1.7**	**1.7**	**1.7**	**1.8**	**1.8**		**1.7**	
	2004	**1.9**	**2.0**	**2.1**	**2.0**	**2.1**	**2.1**	**2.1**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**			**2.1**
Core inflation less owner's equivalent rent of primary residence	2002	1.8	1.9	1.7	1.8	1.9	1.6	1.5	1.8	1.6	1.7	1.4	1.4	1.7		
	2003	1.4	1.2	1.2	**1.2**	**1.2**	**1.4**	**1.4**	**1.3**	**1.3**	**1.3**	**1.5**	**1.6**		**1.3**	
	2004	**1.7**	**1.8**	**1.9**	**1.8**	**1.9**	**1.9**	**1.9**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**			**1.9**
Food (4)	2002	2.9	2.7	2.6	2.5	1.9	1.6	1.4	1.2	1.3	0.9	1.3	1.5	1.8		
	2003	1.0	1.4	1.4	**1.5**	**1.8**	**1.9**	**2.0**	**2.3**	**2.3**	**2.5**	**2.4**	**2.4**		**1.9**	
	2004	**2.8**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**			**2.5**
Energy (5)	2002	-15.7	-15.9	-10.7	-8.2	-12.3	-11.1	-5.2	-2.8	-4.8	3.0	8.0	10.7	-5.9		
	2003	14.1	22.0	23.4	**12.2**	**9.1**	**8.7**	**8.0**	**7.1**	**6.4**	**4.6**	**3.8**	**5.2**		**10.1**	
	2004	**1.5**	**-4.3**	**-8.9**	**-5.3**	**-2.7**	**-2.0**	**-1.7**	**-1.3**	**-1.0**	**-0.7**	**-0.4**	**-0.1**			**-2.3**
All items (6=3+4+5)	2002	1.1	1.1	1.5	1.6	1.2	1.1	1.5	1.8	1.5	2.0	2.2	2.4	1.6		
	2003	2.6	3.0	3.0	**2.4**	**2.1**	**2.2**	**2.2**	**2.1**	**2.1**	**2.0**	**2.0**	**2.1**		**2.3**	
	2004	**2.0**	**1.6**	**1.3**	**1.6**	**1.8**	**1.9**	**1.9**	**1.9**	**2.0**	**2.0**	**2.0**	**2.1**			**1.8**
All items less owner's equivalent rent of primary residence	2002	0.3	0.3	0.7	0.9	0.4	0.3	0.8	1.3	0.9	1.6	1.9	2.1	0.9		
	2003	2.4	3.0	3.1	**2.2**	**2.0**	**2.1**	**2.1**	**2.0**	**1.9**	**1.9**	**1.9**	**2.0**		**2.2**	
	2004	**1.9**	**1.4**	**0.9**	**1.3**	**1.6**	**1.6**	**1.7**	**1.7**	**1.8**	**1.8**	**1.9**	**1.9**			**1.6**

(1) Figures in bold type are forecasted values.
(2) Mean level of 2002 over 2001growth rate.
(3) Mean level of 2003 over 2002 growth rate.
(4) Mean level of 2004 over 2003 growth rate.

Source: BLS & INSTITUTO FLORES DE LEMUS
Data: April 22, 2003

Table A6B

US MONTHLY RATES OF GROWTH ON CPI AND ITS COMPONENTS [1]

		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	02(XII)/ 01(XII) (*)	03(XII)/ 02(XII) (*)	04(XII)/ 03(XII) (*)
Non energy commodities less food (1)	2002	-0.7	0.3	0.3	0.3	-0.5	-0.7	-0.6	0.2	0.6	0.2	-0.2	-0.8	-1.5		
	2003	-0.6	0.3	0.4	**0.6**	**-0.4**	**-0.3**	**-0.6**	**0.2**	**0.6**	**0.3**	**0.2**	**-0.7**		**-0.1**	
	2004	**-0.3**	**0.5**	**0.3**	**0.5**	**-0.3**	**-0.3**	**-0.5**	**0.2**	**0.6**	**0.3**	**0.2**	**-0.7**			**0.4**
Non energy services (2)	2002	0.6	0.6	0.4	0.2	0.1	0.3	0.4	0.5	0.0	0.3	0.1	0.0	3.4		
	2003	0.5	0.4	0.2	**0.1**	**0.0**	**0.3**	**0.3**	**0.4**	**0.0**	**0.3**	**0.1**	**0.0**		**2.7**	
	2004	**0.5**	**0.4**	**0.3**	**0.1**	**0.0**	**0.3**	**0.3**	**0.4**	**0.0**	**0.3**	**0.1**	**0.0**			**2.9**
Core inflation (3=1+2)	2002	0.2	0.5	0.3	0.3	-0.1	-0.1	0.1	0.4	0.2	0.3	0.0	-0.2	1.9		
	2003	0.2	0.4	0.3	**0.3**	**-0.1**	**0.1**	**0.1**	**0.3**	**0.1**	**0.3**	**0.1**	**-0.2**		**1.8**	
	2004	**0.3**	**0.5**	**0.3**	**0.2**	**-0.1**	**0.1**	**0.1**	**0.3**	**0.2**	**0.3**	**0.2**	**-0.2**			**2.2**
Core inflation less owner's equivalent rent of primary residence	2002	0.2	0.6	0.3	0.3	-0.1	-0.2	0.0	0.4	0.1	0.3	-0.1	-0.4	1.4		
	2003	0.2	0.5	0.3	**0.3**	**-0.2**	**0.0**	**0.0**	**0.4**	**0.1**	**0.3**	**0.1**	**-0.4**		**1.6**	
	2004	**0.3**	**0.6**	**0.4**	**0.3**	**-0.2**	**0.1**	**0.0**	**0.4**	**0.1**	**0.3**	**0.1**	**-0.3**			**2.0**
Food (4)	2002	0.6	0.1	0.1	0.1	-0.2	0.0	0.1	0.0	0.2	0.1	0.2	0.3	1.5		
	2003	0.1	0.5	0.2	**0.1**	**0.1**	**0.1**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.3**		**2.4**	
	2004	**0.5**	**0.1**	**0.2**	**0.2**	**0.1**	**0.1**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.3**			**2.5**
Energy (5)	2002	0.3	-0.6	4.1	5.7	0.6	1.6	0.5	0.2	0.2	-0.2	-0.4	-1.6	10.7		
	2003	3.4	6.2	5.3	**-3.9**	**-2.2**	**1.3**	**-0.2**	**-0.6**	**-0.5**	**-1.9**	**-1.2**	**-0.3**		**5.2**	
	2004	**-0.2**	**0.2**	**0.3**	**-0.1**	**0.5**	**2.0**	**0.1**	**-0.2**	**-0.1**	**-1.6**	**-0.9**	**0.0**			**-0.1**
All items (6=3+4+5)	2002	0.2	0.4	0.6	0.6	0.0	0.1	0.1	0.3	0.2	0.2	0.0	-0.2	2.4		
	2003	0.4	0.8	0.6	**-0.1**	**-0.2**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.0**	**-0.1**		**2.1**	
	2004	**0.3**	**0.4**	**0.3**	**0.2**	**0.0**	**0.2**	**0.1**	**0.3**	**0.1**	**0.1**	**0.1**	**-0.1**			**2.1**
All items less owner's equivalent rent of primary residence	2002	0.2	0.4	0.6	0.7	-0.1	0.0	0.1	0.4	0.1	0.1	-0.1	-0.4	2.1		
	2003	0.5	1.0	0.7	**-0.2**	**-0.3**	**0.2**	**0.0**	**0.3**	**0.1**	**0.1**	**0.0**	**-0.2**		**2.0**	
	2004	**0.3**	**0.5**	**0.3**	**0.2**	**0.0**	**0.2**	**0.1**	**0.3**	**0.1**	**0.1**	**0.0**	**-0.2**			**1.9**

(1) Figures in bold type are forecasted values.
(2) December 2002 over December 2001 growth rate.
(3) December 2003over December 2002growth rate.
(4) December 2004 over December 2003 growth rate.

Source: BLS & INSTITUTO FLORES DE LEMUS
Data: April 22, 2003

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Table A7A

"CONSUMER PRICE INDEX, **ANNUAL** GROWTH RATES IN **SPAIN** 2002-2003-2004 (a)

(**) Concept	Rate	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Avr 02/01(b)	Avr 03/02(c)	Avr 04/03(d)
(1) AE-X	2002	3.8	3.4	3.3	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.8	2.8	3.1		
(13,03%)	2003	3.1	3.5	3.4	**3.6**	**3.5**	**3.5**	**3.5**	**3.6**	**3.5**	**3.4**	**3.4**	**3.4**		**3.4**	
	2004	**3.7**	**3.5**	**3.5**	**3.6**	**3.5**	**3.5**	**3.5**	**3.6**	**3.5**	**3.4**	**3.4**	**3.3**			**3.5**
(2) MAN	2002	2.8	2.7	1.9	2.8	2.9	3.0	2.3	2.4	1.9	2.5	2.8	2.7	2.6		
(31,31%)	2003	1.9	2.1	2.2	**2.4**	**2.4**	**2.4**	**2.5**	**2.6**	**2.6**	**2.7**	**2.7**	**2.7**		**2.4**	
	2004	**3.1**	**2.9**	**2.8**	**2.9**	**2.9**	**2.9**	**2.9**	**2.9**	**3.0**	**3.0**	**3.0**	**3.0**			**2.9**
BENE - X	2002	3.0	2.8	2.2	2.8	2.8	2.9	2.5	2.5	2.1	2.6	2.7	2.6	2.6		
[(1)+(2)] = (44,34%)	2003	2.2	2.4	2.6	**2.7**	**2.7**	**2.7**	**2.8**	**2.9**	**2.9**	**2.9**	**2.9**	**2.9**		**2.7**	
	2004	**3.3**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**			**3.1**
(3) SERV-T	2002	3.8	4.2	4.3	4.5	4.5	4.5	4.4	4.4	4.5	4.4	4.3	4.2	4.3		
(33.15%)	2003	3.8	3.6	3.6	**3.7**	**3.7**	**3.7**	**3.8**	**3.7**	**3.7**	**3.8**	**4.0**	**4.0**		**3.8**	
	2004	**4.2**	**4.1**	**4.1**	**4.0**	**4.0**	**4.0**	**4.0**	**4.1**	**4.1**	**4.1**	**4.1**	**4.1**			**4.1**
IPSEBENE-XT	2002	3.4	3.5	3.2	3.6	3.6	3.7	3.4	3.4	3.2	3.4	3.4	3.4	3.4		
[(1)+(2)+(3)]=(77,49%)	2003	2.9	3.0	3.0	**3.1**	**3.1**	**3.1**	**3.2**	**3.2**	**3.2**	**3.3**	**3.4**	**3.4**		**3.2**	
	2004	**3.7**	**3.6**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.6**	**3.6**	**3.6**			**3.5**
(4) XT	2002	6.4	6.9	9.4	10.3	12.5	11.8	10.7	11.0	9.4	8.9	7.4	6.6	9.3		
(4,20%)	2003	5.9	7.1	4.7	**6.0**	**4.2**	**4.2**	**4.6**	**4.0**	**5.8**	**5.6**	**3.0**	**2.0**		**4.7**	
	2004	**2.7**	**1.6**	**3.7**	**4.2**	**3.4**	**3.3**	**3.8**	**3.8**	**3.6**	**3.6**	**3.5**	**3.5**			**3.4**
(5) ANE	2002	4.5	5.3	4.1	5.2	5.3	5.3	5.1	5.3	5.8	7.1	7.4	6.5	5.6		
(9,05%)	2003	6.6	5.5	5.2	**4.2**	**2.6**	**2.3**	**2.6**	**3.8**	**4.3**	**4.0**	**4.0**	**5.2**		**4.2**	
	2004	**6.5**	**5.3**	**5.9**	**6.5**	**6.3**	**6.0**	**5.8**	**5.6**	**5.4**	**5.3**	**5.1**	**5.0**			**5.7**
(6) ENE	2002	-2.9	-3.2	-1.2	-0.4	-1.9	-4.4	-1.6	0.2	0.9	3.7	3.5	5.7	-0.2		
(9,26%)	2003	5.4	6.6	6.1	**1.4**	**0.4**	**2.7**	**2.5**	**2.2**	**1.3**	**0.7**	**3.4**	**2.5**		**2.9**	
	2004	**0.4**	**-1.0**	**-2.4**	**-0.3**	**0.4**	**0.3**	**0.2**	**0.2**	**0.3**	**0.4**	**0.4**	**0.5**			**-0.1**
R	2002	0.8	1.0	2.3	3.6	3.0	1.8	2.8	3.7	3.9	5.5	5.2	5.6	3.3		
[(4)+(5)+(6)]=(22,51%)	2003	6.4	6.7	5.5	**3.0**	**2.0**	**2.8**	**3.0**	**3.2**	**3.4**	**3.0**	**3.6**	**3.5**		**3.8**	
	2004	**3.4**	**2.1**	**2.2**	**3.4**	**3.4**	**3.2**	**3.2**	**3.2**	**3.1**	**3.0**	**3.0**	**3.0**			**3.0**
IPC	2002	3.0	3.1	3.1	3.6	3.6	3.4	3.4	3.6	3.5	4.0	3.9	4.0	3.5		
(100%)	2003	3.7	3.8	3.7	**3.3**	**3.0**	**3.2**	**3.3**	**3.3**	**3.4**	**3.3**	**3.5**	**3.5**		**3.4**	
	2004	**3.6**	**3.2**	**3.2**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**			**3.4**

" T1,12 growth rate logs fundamental changes in prices 6 months with respect to monthly growth rates. It is necessary to evaluate forecast in order to analyze current situation.

*** Weights on General CPI are shown in brackets*

(a) Figures in bold type are foreasted values
(b) 2002 over 2001 mean growth
(c) 2003 over 2002 mean grawth
(d) 2004 over 2003 mean growth

Source: INE & INSTITUTO FLORES DE LEMUS

Date: April 15, 2003.

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CONSUMER PRICE INDEX, **MONTHLY** GROWTH RATES IN **SPAIN** 2002-2003-2004 (a)

(*) Concept	Rate	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	D02/ D01(b)	D03/ D02(c)	D04/ D03(d)
(1) AE-X	2002	0.3	0.1	0.4	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.3	2.8		
(13,03%)	2003	0.6	0.4	0.3	**0.4**	**0.3**	**0.3**	**0.2**	**0.3**	**0.1**	**0.0**	**0.1**	**0.3**		**3.4**	
	2004	**0.9**	**0.2**	**0.3**	**0.4**	**0.3**	**0.3**	**0.2**	**0.3**	**0.0**	**-0.1**	**0.1**	**0.2**			**3.3**
(2) MAN	2002	-2.5	-0.3	0.9	2.4	0.4	0.0	-3.2	-0.2	1.0	2.9	1.4	-0.1	2.7		
(31,31%)	2003	-3.2	-0.1	1.1	**2.6**	**0.5**	**0.0**	**-3.1**	**-0.1**	**1.0**	**3.0**	**1.4**	**-0.1**		**2.7**	
	2004	**-2.9**	**-0.2**	**1.0**	**2.6**	**0.5**	**0.0**	**-3.1**	**-0.1**	**1.1**	**3.0**	**1.4**	**-0.1**			**3.0**
BENE - X	2002	-1.7	-0.2	0.7	1.8	0.4	0.1	-2.2	0.0	0.7	2.1	1.0	0.0	2.6		
[(1)+(2)] = (44,34%)	2003	-2.1	0.1	0.9	**1.9**	**0.4**	**0.1**	**-2.1**	**0.0**	**0.8**	**2.1**	**1.0**	**0.0**		**2.9**	
	2004	**-1.8**	**-0.1**	**0.8**	**1.9**	**0.4**	**0.1**	**-2.1**	**0.0**	0.7	**2.1**	**1.0**	**0.0**			**3.1**
(3) SERV-T	2002	1.3	0.5	0.5	0.5	0.2	0.3	0.4	0.3	0.0	0.2	-0.2	0.2	4.2		
(33.15%)	2003	0.9	0.4	0.5	**0.5**	**0.2**	**0.3**	**0.4**	**0.3**	**-0.1**	**0.3**	**0.1**	**0.2**		**4.0**	
	2004	**1.0**	**0.4**	**0.4**	**0.4**	**0.2**	**0.3**	**0.4**	**0.3**	**-0.1**	**0.3**	**0.1**	**0.2**			**4.1**
IPSEBENE-XT	2002	-0.4	0.1	0.6	1.2	0.3	0.2	-1.1	0.1	0.4	1.3	0.5	0.1	3.4		
[(1)+(2)+(3)]=(77,49%)	2003	-0.9	0.2	0.7	**1.3**	**0.3**	**0.2**	**-1.0**	**0.1**	0.4	**1.3**	**0.6**	**0.1**		**3.4**	
	2004	**-0.6**	**0.1**	**0.6**	**1.3**	**0.3**	**0.2**	**-1.0**	**0.2**	0.4	**1.3**	**0.6**	**0.1**			**3.6**
(4) XT	2002	-1.4	-0.2	2.6	2.5	1.1	0.8	1.4	1.8	-2.4	-1.0	-0.6	1.9	6.6		
(4,20%)	2003	-2.1	1.0	0.3	**3.8**	**-0.6**	**0.8**	**1.8**	**1.2**	**-0.7**	**-1.2**	**-3.1**	**1.0**		**2.0**	
	2004	**-1.4**	**-0.1**	**2.5**	**4.3**	**-1.5**	**0.8**	**2.2**	**1.2**	**-0.8**	**-1.3**	**-3.1**	**1.0**			**3.5**
(5) ANE	2002	0.3	-0.1	0.7	1.0	0.4	0.1	0.8	0.8	1.0	0.3	0.3	1.1	6.5		
(9,05%)	2003	0.3	-1.3	0.4	**-0.1**	**-1.0**	**-0.2**	**1.1**	**2.0**	**1.5**	**0.0**	**0.3**	**2.2**		**5.2**	
	2004	**1.6**	**-2.5**	**0.9**	**0.5**	**-1.2**	**-0.5**	**0.9**	**1.8**	**1.2**	**-0.1**	**0.2**	**2.1**			**5.0**
(6) ENE	2002	2.5	0.2	1.9	2.5	0.2	-1.9	0.3	0.3	0.8	0.5	-2.6	0.9	5.7		
(9,26%)	2003	2.2	1.4	1.4	**-2.1**	**-0.7**	**0.4**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**2.5**	
	2004	**0.1**	**0.0**	**0.0**	**-0.1**	**0.0**	0.2	**0.0**	**0.0**	**0.0**	0.0	**0.1**	**0.0**			**0.5**
R	2002	0.8	0.0	1.6	1.9	0.5	-0.6	0.7	0.8	0.2	0.1	-1.0	1.2	5.6		
[(4)+(5)+(6)]=(22,51%)	2003	0.6	0.2	0.8	**-0.2**	**-0.8**	**0.2**	**0.8**	**1.0**	**0.5**	**-0.3**	**-0.5**	**1.1**		**3.5**	
	2004	**0.5**	**-1.1**	**0.9**	**1.0**	**-0.8**	**0.0**	**0.8**	**1.0**	**0.4**	**-0.3**	**-0.5**	**1.1**			**3.0**
IPC	2002	-0.1	0.1	0.8	1.3	0.4	0.0	-0.7	0.3	0.4	1.0	0.2	0.3	4.0		
(100%)	2003	-0.4	0.2	0.7	**1.0**	**0.1**	**0.2**	**-0.6**	**0.3**	**0.4**	**0.9**	**0.4**	**0.3**		**3.5**	
	2004	**-0.4**	**-0.2**	**0.7**	**1.2**	**0.1**	**0.2**	**-0.6**	0.4	**0.4**	0.9	**0.4**	**0.3**			**3.4**

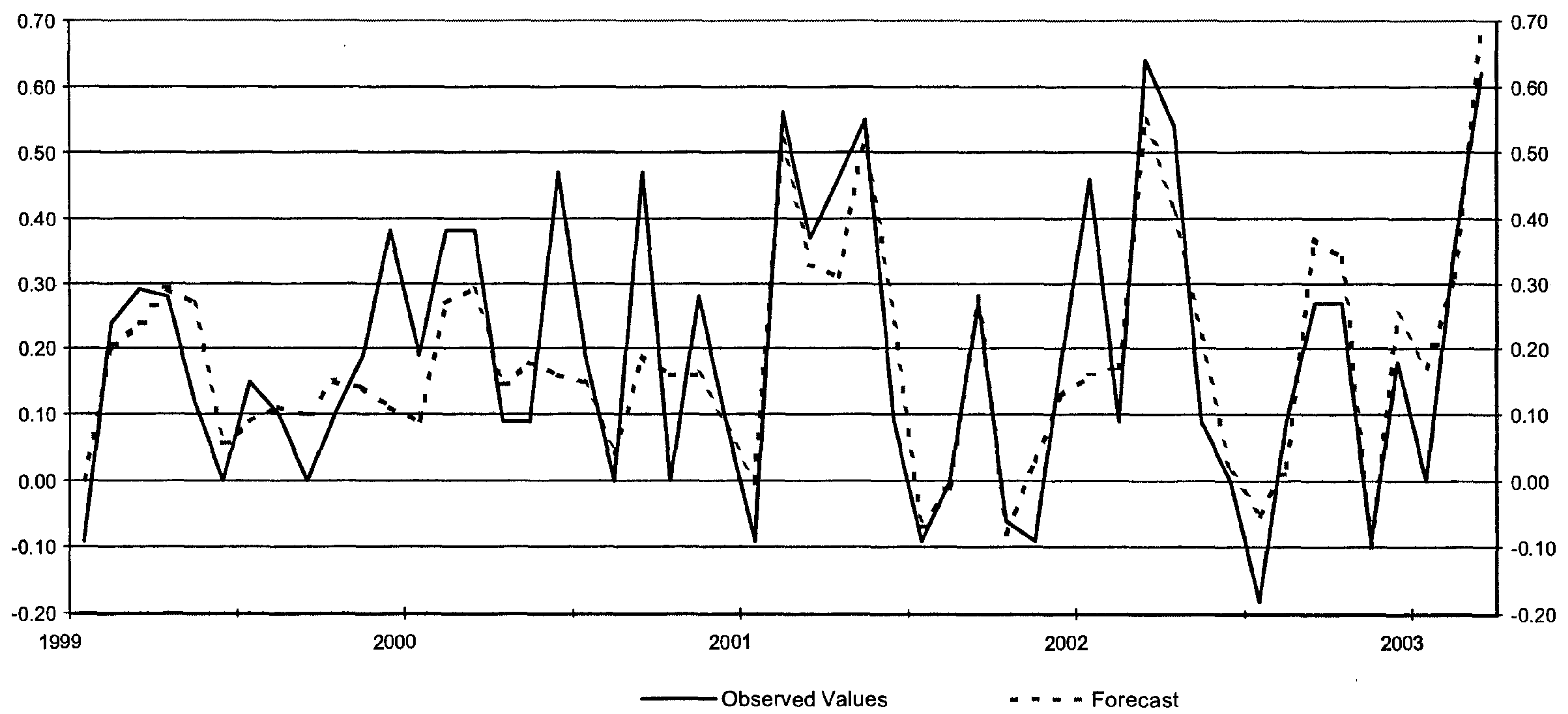
*** Weights on General CPI are shown in brackets.*
(a) Figures in bold type are forecasted values
(b) December 2002 over December 2001.
(c) December 2003 over December 2002.
(d) December 2004 over December 2003.

Source: INE & INSTITUTO FLORES DE LEMUS

Date: April 15, 2003.

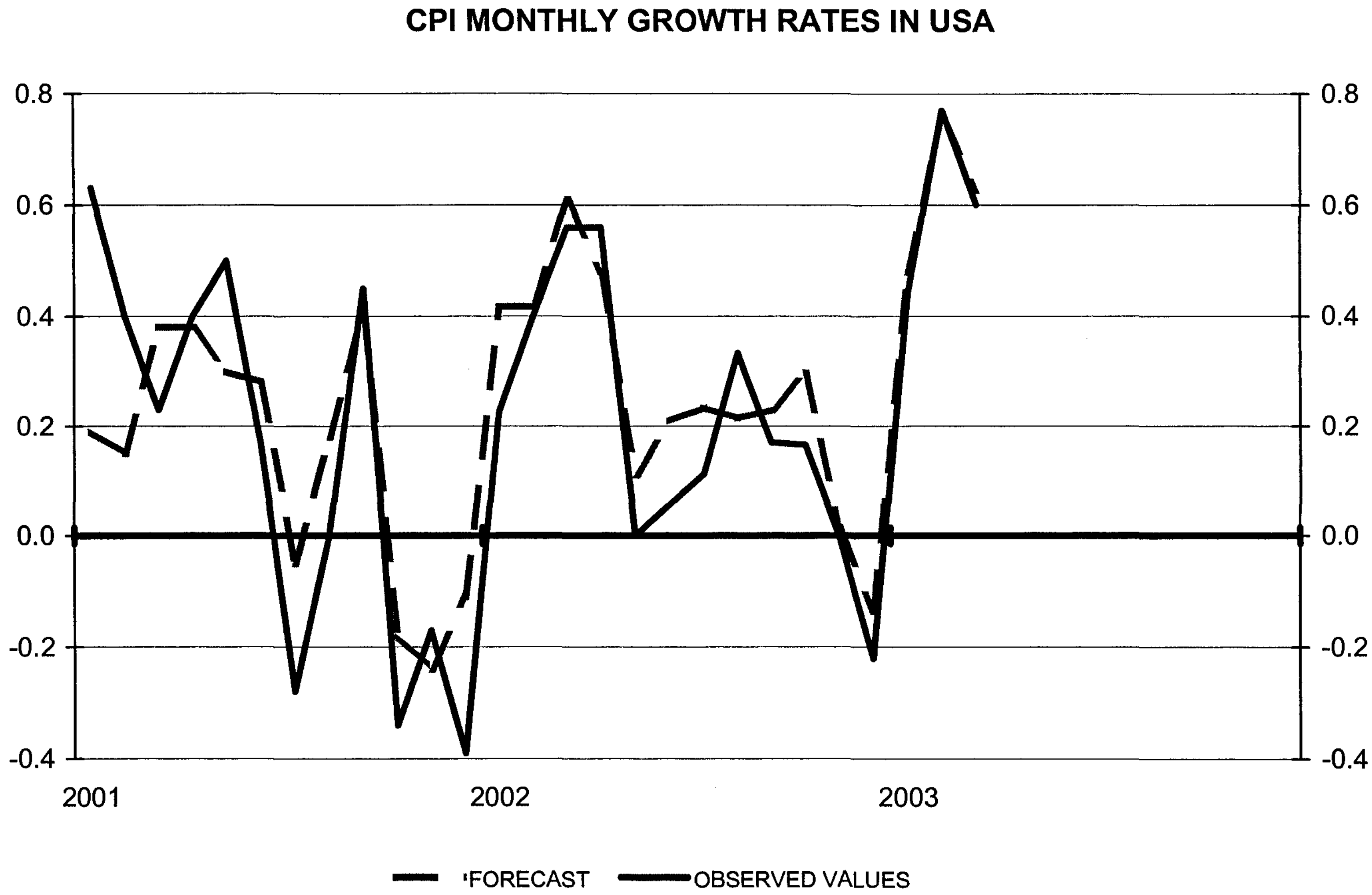
Graph A1A

HCPI MONTH-ON-MONTH RATES OF GROWTH IN THE EMU



Source: I. FLORES DE LEMUS
Date: April 16, 2003

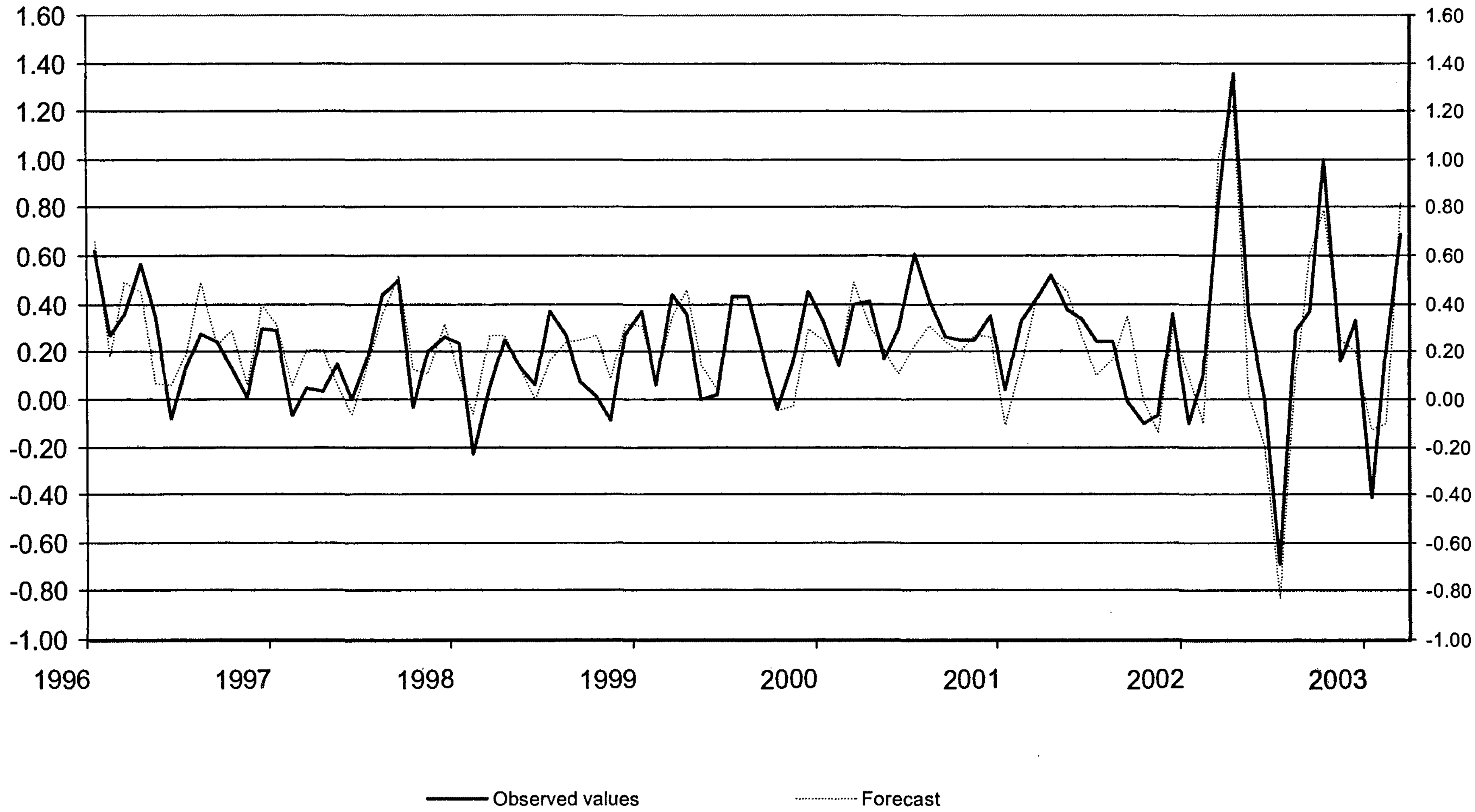
Graph A1B



Source: I.Flores de Lemus
Date: 16/04/2003

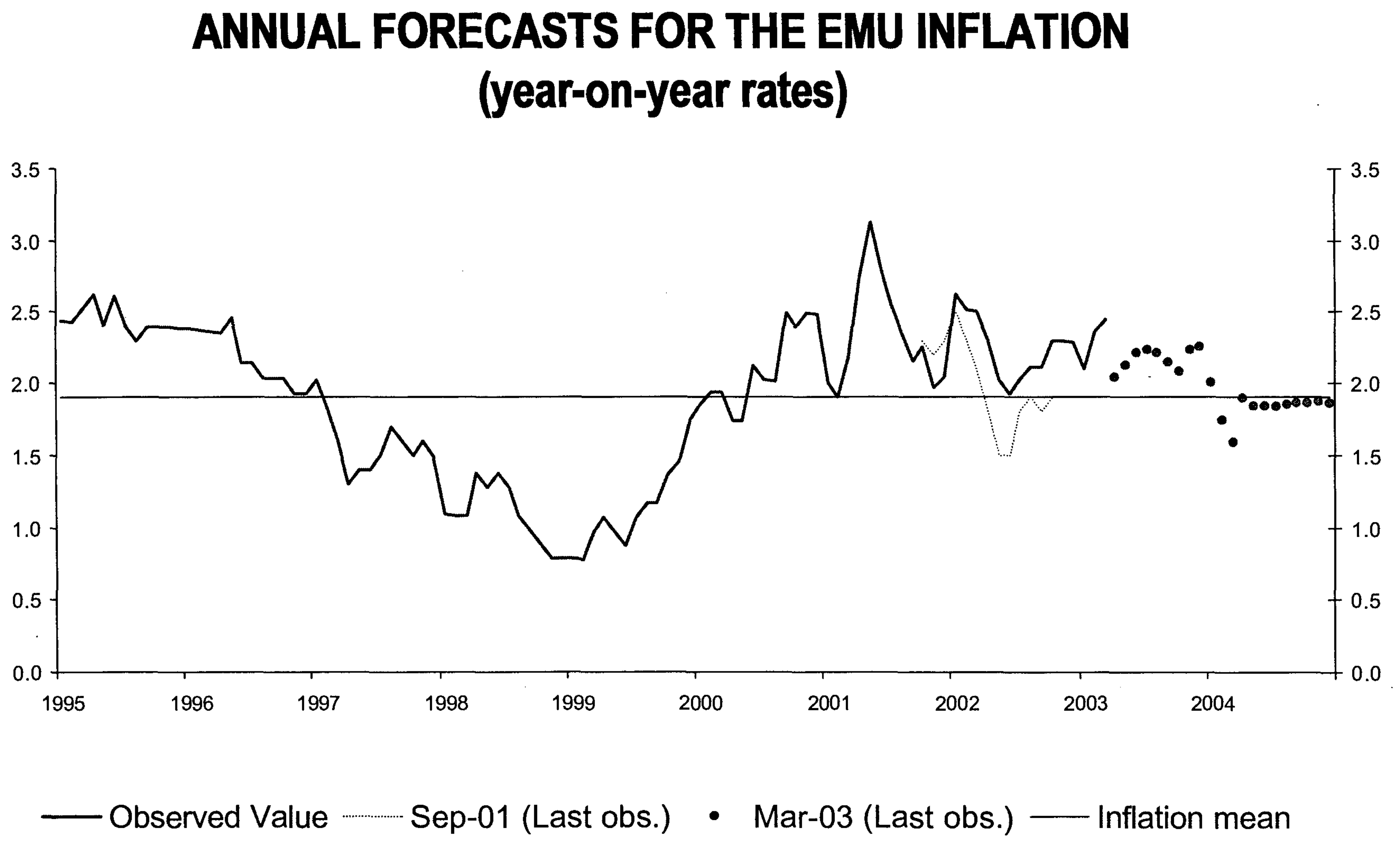
Graph A1C

CPI MONTH-ON-MONTH RATES OF GROWTH IN SPAIN



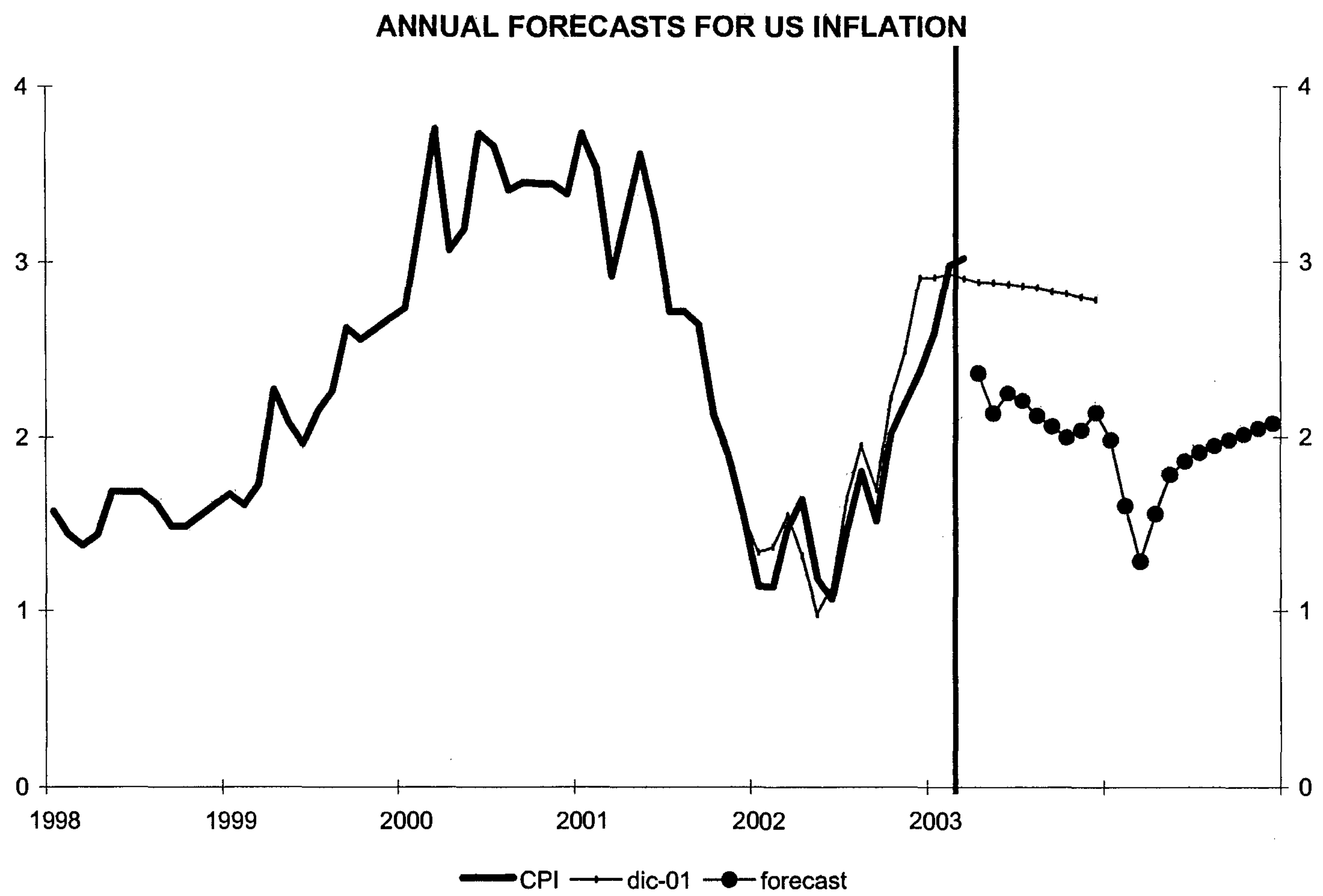
Fuente: I. FLORES DE LEMUS.
Fecha: April 11, 2003

Graph A2A



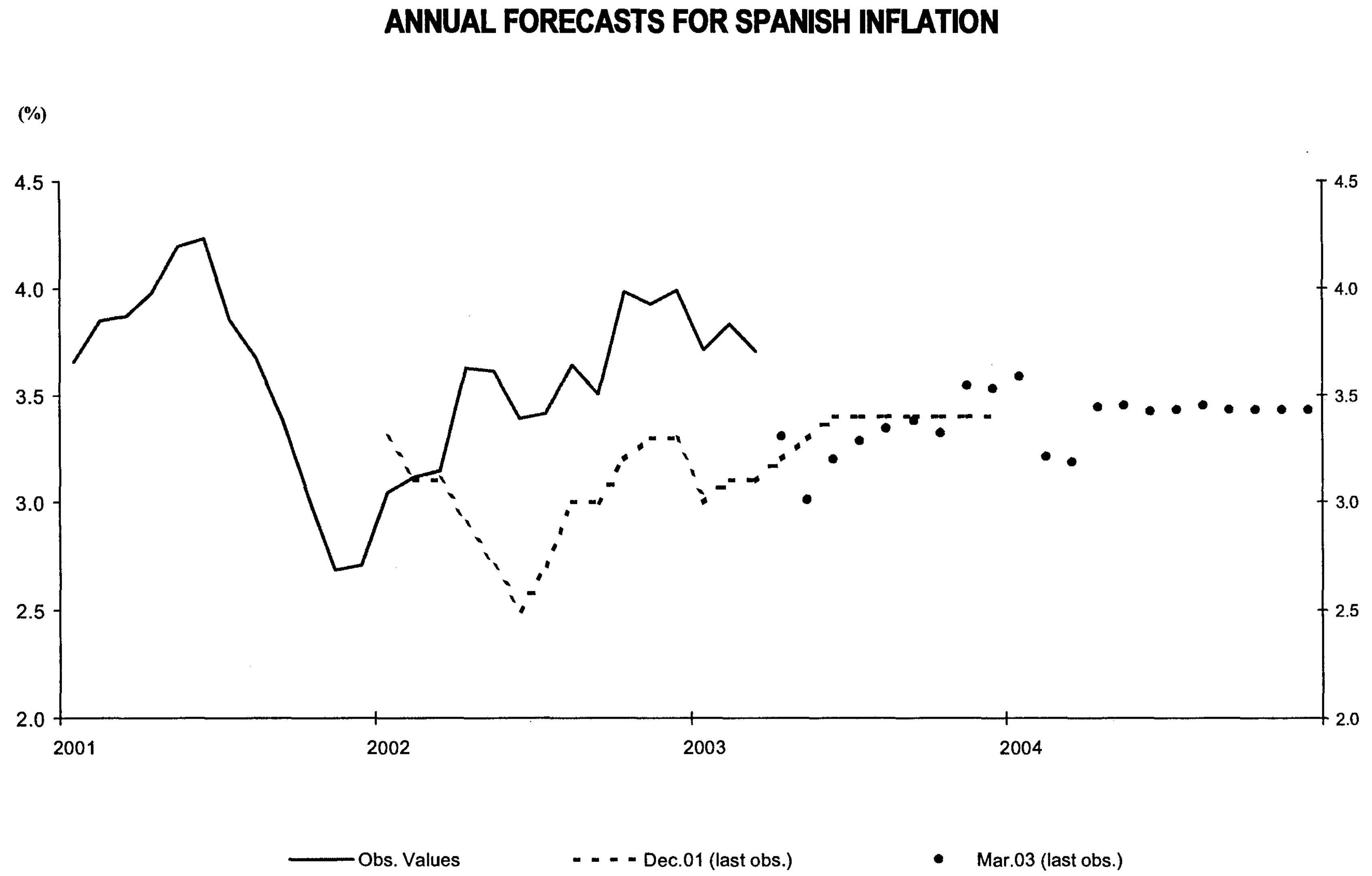
Source: Eurostat & EFN
Date: April 22, 2003

Graph A2B



Source: I.Flores de Lemus
Date: 22/04/2003

Graph A2C



Source: INE & IFL
Date: April 24, 2003

MONTHLY DEBATES IN PREVIOUS BULLETINS

- Espasa A., Albacete R., "Innovations in core inflation are more persistent than innovations in other prices". (nº 96, p. 35)
- Mario Izquierdo (Banco de España), Omar Licandro (Instituto Universitario Europeo y FEDEA) y Alberto Maydeu (Universitat de Barcelona) "Mejoras De Calidad E Índices De Precios Del Automóvil En España".
- Mayo Burgos, Ivan, "Building a more dynamic Europe November 27th , 2001",(nº 89)
- Fernando Garcia-Belenguer Universidad Carlos III and Manuel S. Santos Arizona State University "Convergence in the OECD" (nº 88)
- Oxley, Les , "Earthquakes and volcanoes: the international conference on modelling and forecasting financial volatility, Perth, 7-9th September 2001" (nº 87)
- Espasa, A., Poncela, P. and Senra, E.," A disaggregated analysis of us consumer price indexes" (Bulletin nº 86)
- Pérez Pereira, María ," II Jornadas Sobre Derecho Del Comercio Electrónico. Una Crónica" (Bulletin nº 85).
- Nieto, María J., "Reflections on the regulatory approach to e finance"(Bulletin nº 84)
- Veredas, David, "Estacionalidad Intra diaria de datos financieros de alta frecuencia" nº 81, pp54-60)
- Quilis, Enrique M., "Algunas consideraciones sobre los indicadores cíclicos" (nº 79, pp. 73-80)
- Jimeno, Juan F., "Empleo y salarios públicos: una aproximación a partir de la teoría de los incentivos" (nº 78, pp. 57-64)
- Herce, José A., "¿Existe una solución demográfica al problema de las pensiones?" (nº 77, pp. 71-83)
- González Veiga, I., "El cambio de sistema del Índice de Precios de Consumo", (nº 76, pp. 60-76)
- Astolfi, R. D. Ladiray y G.L. Mazzi, "Business cycle statstics for the Euro-zone: Situation and prospectives", (nº 75, pp. 58-86)
- Gutiérrez, I. y C. Delgado, "Empresa y comercio electrónico: algunas reflexiones", (nº 75, pp. 87-91)
- Prades Sierra, F., "El Proyecto de Presupuestos Generales del Estado 2001: rasgos básicos y valoración", (nº 74, pp. 62-72)

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● ● ● BULLETIN

OF E.U. AND U.S INFLATION AND MACROECONOMIC ANALYSIS

Instituto Flores de Lemus de Estudios Avanzados en Economía Nº 103 April 2003

ANALYSIS OF INFLATION IN THE ECONOMIC AND MONETARY UNION

The inflation forecast for April 2003 in the Monetary Union is a null value; the year-on-year rate will decrease to 1.9%, with respect to the 2.4% observed since February. Mean annual rate expectations are 2.2% for 2003 and 1.8% for 2004.

- In March 2003, inflation registered a monthly rate of 0.62%, below our predicted 0.70%. This downward innovation is due to prices of unprocessed food and energy. The annual rate in total inflation increased stayed at 2.4% registered last February.

- Core inflation in goods in the Economic and Monetary Union is expected to remain at the 1.5%, registered in March, in 2003 and 2004. Services inflation is expected to increase to 2.8% in April with respect to the 2.7% observed since February and will stay at 2.7% in 2003 and 2004. Consequently, the forecast average annual rate of core inflation will decrease from the 2.5% observed in 2002, to remain stable at 2.1% in 2003 and 2004.

- Based on these results, expected average total inflation rates are 2.2% in 2003 and 1.8% in 2004. Consequently, the fulfilment of the inflation objective in 2003 relies considerably on the evolution of prices of unprocessed food and energy.

- The results derived from the causality analysis, elaborated in our previous Bulletin number 100, show that the strong upwards pressure on inflation derived from the monetary policy implemented by the ECB is compensated by the downwards pressure derived from the output gap and unit labour cost trends. Therefore, in these economic conditions, it appears that in the short-term, the ECB will have scope to reduce again interest rates.

AVERAGE ANNUAL RATES OF GROWTH

					FORECASTS	
	1999	2000	2001	2002	**2003**	**2004**
CORE INFLATION	1.1	1.0	1.9	2.5	2.1	2.1
CORE INFLATION IN GOODS	0.8	0.6	1.5	1.9	1.5	1.5
CORE INFLATION IN SERVICES	1.5	1.5	2.5	3.1	2.7	2.7
TOTAL INFLATION	1.1	2.1	2.3	2.3	2.2	1.8

Source: Eurostat & IFL
Date: April 22, 2003

For further information see Main Points in Bulletin n. 103

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●●● BULLETIN

OF E.U. AND U.S INFLATION AND MACROECONOMIC ANALYSIS

Instituto Flores de Lemus de Estudios Avanzados en Economía Nº 103 April, 2003

ANALYSIS OF US INFLATION

For **April,** the forecast for the general index is a decrease of 0.08%, with the annual rate falling by seven tenths from 3.02% to 2.37%. This is fully explained by energy prices, which are expected to fall by 3.86% compared with last month, whereas they increased 5.71% in April last year. However, the expected increase in the index for core inflation is 0.25% with the annual rate remaining at 1.68%.

During **March,** the U.S. CPI increased by 0.60% over the previous month, similar to the forecast, 0.63%, with the year-on-year rate going from the 2.98% observed in February to 3.02%. Although the general CPI annual rate has hardly changed, inflation in services has fallen, reducing its growth rate from 3.16% to 3.01%, whereas energy prices increase their annual rate from 21.98% to 23.36%. Although the value observed was similar to the forecast in aggregate terms, by component there are several relevant figures. There have been decreases in some services, specifically long-distance phone calls, hospital services, lodging away from home and equivalent rent of primary residence. However, they have been compensated by the unexpected and heavy increase in gas prices, 13.32% instead of the 2.56% forecast. The core index not including equivalent rent of primary residence and tobacco, which is comparable with the underlying index in Europe, increased by 0.35% compared with the 0.52% expected, with the annual rate falling from 1.17% to 1.12%, an all-time low.

✓ For **2003** and **2004,** we forecast mean annual total inflation rates of 2.32% and 1.84% respectively, representing an increase of 0.07 points for 2003, and a decrease of 0.06 for 2004, compared with last month's report. In April, the price of West Texas is expected to hover around 29$ per barrel, followed by a gradual decrease to 26$ per barrel for December 2003.

AVERAGE ANNUAL RATE OF GROWTH IN US

CONSUMER PRICES INDEX (CPI)	1998	1999	2000	2001	2002	2003 (forecasts)	2004 (forecasts)
Food (1)	2.2	2.1	2.3	3.1	1.8	1.9	2.5
Energy (2)	-7.7	3.6	16.9	3.8	-5.9	10.1	-2.3
Residual Inflation (3=2+1)	**0.1**	**0.8**	**6.8**	**3.3**	**-0.9**	4.5	0.9
Non-food and non-energy goods (4)	0.6	0.7	0.5	0.3	-1.1	-0.8	0.3
Less tobacco	-0.1	-0.5	-0.1	-0.2	-1.5	-1.2	-0.1
-Durable goods	-0.9	-1.2	-0.5	-0.6	-2.6	-1.5	0.1
-Nondurable goods	2.3	2.4	1.4	1.1	0.5	-0.1	0.6
Non-energy services (5)	3.1	2.7	3.3	3.7	3.8	2.8	2.8
-Services less owner's equivalent rent of primary residence (5-a)	2.9	2.7	3.5	3.6	3.6	2.9	3.0
-Owner's equivalent rent of primary residence (a)	3.2	2.7	3.0	3.8	4.1	2.7	2.6
Core Inflation (6=4+5)	**2.3**	**2.1**	**2.4**	**2.7**	**2.3**	1.7	2.1
Core inflation less owner's equivalent rent of primary residence (6-a)	2.0	1.8	2.2	2.3	1.7	1.3	1.9
Core inflatión less owner's equivalent rent of primary residence and tobacco	1.8	1.4	2.1	2.1	1.6	1.2	1.8
All items (7=6+3)	**1.6**	**2.2**	**3.4**	**2.8**	**1.6**	2.3	1.8
All items less owner's equivalent rent of primary residence (7-a)	1.1	2.1	3.5	2.6	0.9	2.2	1.6

For further information see Main Points in Bulletin n. 103

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BULLETIN

OF E.U. AND U.S INFLATION AND MACROECONOMIC ANALYSIS

Instituto Flores de Lemus de Estudios Avanzados en Economía Nº 103 April 2003

ANALYSIS OF SPANISH INFLATION

The forecast for inflation in April 2003 in Spain is a month-on-month rate of 1.0%. The year-on-year rate will decrease to 3.3%, compared to the 3.7% registered last March. The expectations for the mean annual rate are 3.4% for 2003 and 2004.

- In March 2003, Spanish inflation registered a month-on-month rate of 0.7%, below our predicted 0.8%. The year-on-year rate decreased to 3.7% compared to the 3.8% registered in February.
- This figure is characterised by: (a) the year-on-year rate in processed food prices increased to 3.4%; (b) the current evolution of non-energy industrial goods prices implies a considerable increase in relative terms with respect to Europe, with expected average rates of growth of 2.4% in 2003 and 2.9% in 2004, respect to the 0.8% and 1.0%, respectively, expected in the EMU; (c) many components of services show year-on-year rates of growth near to or greater than 4%. Core inflation stayed at 3.0% in March, and is higher than the equivalent core inflation of the Economic Monetary Union, which was 2.0%.

- Due to the expectations for 2003 in non-energy processed goods prices with an average annual rate of 2.7% and services with a mean annual rate around 3.8%, the expectations for the mean annual rate for core inflation decrease to 3.2% in 2003, compared to the 3.4% observed in 2002.
- The expectations for the average annual rate of inflation in prices for energy and unprocessed food have increased to 3.8% in 2003, compared to the 3.3% observed in 2002, due largely to the expected evolution of energy prices.

SPANISH INFLATION AVERAGE ANNUAL RATES OF GROWTH

	1998	1999	2000	2001	2002	Forecasts 2003	Forecasts 2004
RESIDUAL INFLATION (Fats, Tobacco, Tourist Packages, Non Processed Food and Energy)	0.4	2.8	6.7	3.7	3.3	**3.8**	**3.0**
CORE INFLATION	2.3	2.1	2.5	3.5	3.4	**3.2**	**3.5**
Core inflation in goods	1.6	1.3	1.9	3.1	2.6	**2.7**	**3.1**
Core inflation in services	3.3	3.3	3.5	4.1	4.3	**3.8**	**4.1**
TOTAL INFLATION	1.8	2.3	3.4	3.6	3.5	**3.4**	**3.4**

Source: INE & IFL
Date: April 24, 2003

For further information see Main Points in Bulletin n. 103

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Bulletin EU & US Inflation and Macroeconomic Analysis
INSTITUTO FLORES DE LEMUS
Universidad Carlos III de Madrid

INTERNATIONAL INFLATION FORECASTS

	APRIL 2003		AVERAGE ANNUAL RATES				
	Monthly Rate	Annual Rate	2000*	2001*	2002*	2003	2004
ECONOMIC MONETARY UNION							
Total Inflation	0.0	1.9	2.1	2.3	2.3	2.2	1.8
Core Inflation	0.3	2.1	1.0	1.9	2.5	2.1	2.1
Goods	0.5	1.4	0.6	1.5	1.9	1.5	1.5
Services	0.2	2.8	1.5	2.5	3.1	2.7	2.7
GDP				1.4	0.8	1.2	2.2
Private Final Consumption Expenditure				1.9	1.0	1.3	1.9
Gross Fixed Capital Formation				-0.7	-2.9	0.3	1.5
Exports of Goods and Services				2.8	1.2	4.4	5.8
Imports of Goods and Services				1.5	-0.3	4.2	5.4
Gross Value Added Total				1.4	0.8	1.2	2.2
Gross Value Added Agriculture				-1.2	-1.4	1.8	-0.3
Gross Value Added Industry				1.0	-0.1	1.7	1.9
Gross Value Added Construction				-0.6	-1.6	-0.3	0.5
Gross Value Added Services				2.3	1.4	1.6	2.3
OTHER ECONOMIC INDICATOR							
Industrial Production Index (excluding construction)				0.4	-0.7	1.6	2.1
UNITED STATES							
Total Inflation	-0.1	2.4	3.4	2.8	1.6	2.3	1.8
Core Inflation	0.3	1.7	2.4	2.7	2.3	1.7	2.1
Goods	0.6	-1.2	0.5	0.3	-1.1	-0.8	0.3
Services	0.1	2.9	3.3	3.7	3.8	2.8	2.8

*Observed values.

SPANISH ECONOMY FORECASTS

	APRIL 2003		AVERAGE ANNUAL RATES				
	Monthly Rate	Annual Rate	2000*	2001*	2002*	2003	2004
Total Inflation	1.0	3.3	3.4	3.6	3.5	3.4	3.4
Trend Inflation	1.3	3.1	2.5	3.5	3.4	3.2	3.5
Goods	1.9	2.7	1.9	3.1	2.6	2.7	3.1
Services	0.5	3.7	3.5	4.1	4.3	3.8	4.1

*Observed values.