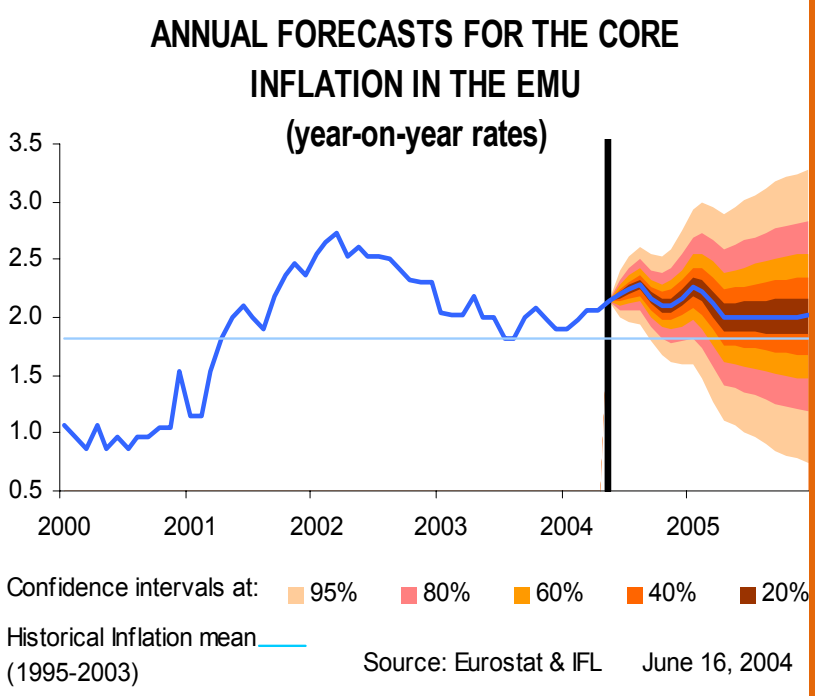
BULLETIN

OF E.U. AND US INFLATION AND MACROECONOMIC ANALYSIS

Universidad Carlos III de Madrid

Macroeconomic Forecast and Analysis Laboratory, IFL, Nº 117, June, 2004.

The forecast for core inflation in the euro zone remains at 2.1% for 2004 and 2005



The forecast for GDP growth in the euro zone in 2004 rises due to enhanced capital investment, although this last variable is not expected to accelerate in 2005

ANNUAL AVERAGE GROWTH RATES:				
	2002	2003	2004	2005
GDP	0.9%	0.5%	1.7%	2.0%
FINAL CONSUMPTION	1.2%	1.2%	1.6%	1.9%
CAPITAL INVESTMENT	-2.8%	-0.8%	2.2%	2.1%
CONTRIBUTIONS TO THE ANNUAL AVERAGE GROWTH RATES:				
	2002	2003	2004	2005
DOMESTIC DEMAND	0.4%	1.1%	1.7%	1.8%
NET EXPORTS	0.5%	-0.6%	0.0%	0.2%
GROSS VALUE ADDED ROM SERVICES	1.4%	1.0%	1.9%	2.2%

Source: IFL & Eurostat — Date: June 21, 2004

Monthly Debate

The Capitalism to Come:
Transaction costs and information problems.
by Juan Urrutia. See Page. 31

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Transaction costs and information problems.
By: Juan Urrutia Elejalde
Catedrático de Fundamentos del Análisis económico

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Nº117

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OF E.U. AND US INFLATION AND MACROECONOMIC ANALYSIS

Universidad Carlos III de Madrid

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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 for Spain 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 services, 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**.

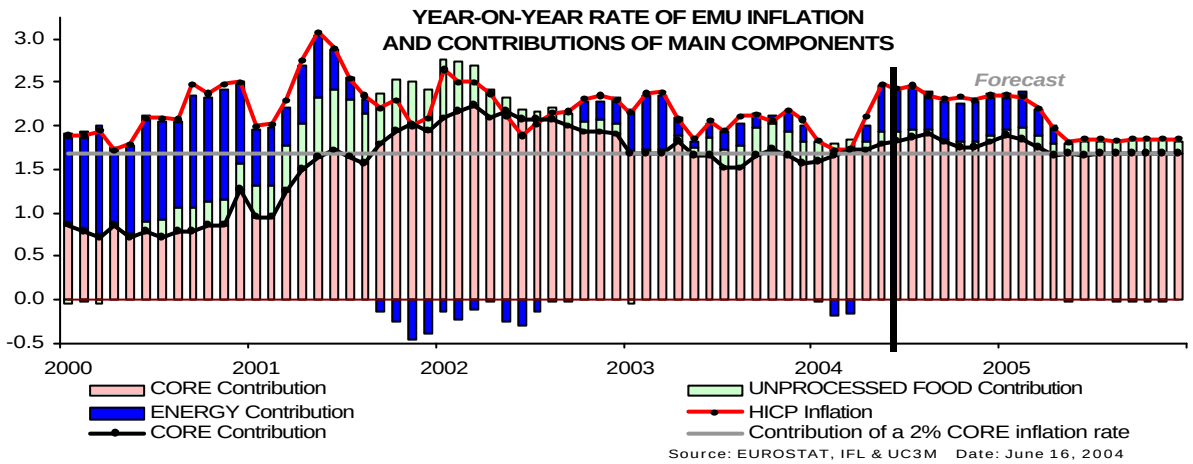
For the United States the breakdown by markets is principally based on four components: Food, Energy, Services, and Commodities. **Trend inflation** or **core inflation** is based in this case as the aggregation of services and non-energy commodities.

I. MAIN POINTS AND NEW RESULTS

I.1. ECONOMIC AND MONETARY UNION

- For this month, we are forecasting a monthly inflation rate of 0.1%, without increasing annual inflation in the euro zone from last month's figure, 2.5%.

- Inflation in the euro zone in May performed much as expected, with a growth of 0.35% in the monthly rate, similar to the forecast 0.34%, bringing May's annual rate up to 2.48%. The annual inflation rate in the EMU has been constantly on the increase since the beginning of the year. The main innovations in the monthly rate occurred in energy, which performed slightly worse than expected, 2.50% compared with the 2.17% forecast, and non-processed food, which also performed slightly worse than expected, 0.42% instead of the forecast 0.15%. Core inflation increased slightly. In May, the annual rate of core inflation was 2.14%, whereas inflation in non-processed foods and energy was 1.77% and 6.71%, respectively (tables 2.1.1 of section II.1 and A2 in the appendix).

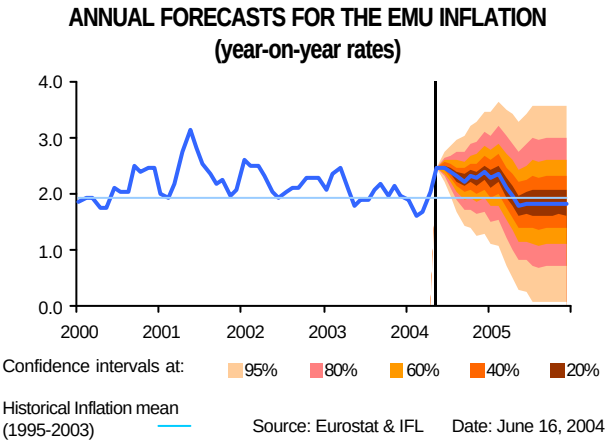


- The expected performance of inflation in the euro zone in 2004 is characterised by the stability of annual core inflation, with rates of around 2.1% for the remaining months of the year, and the marked volatility of annual inflation in energy. Thus, the total annual inflation rate has been on the increase from the 1.6% registered in February to the 2.5% observed in May, but annual rates are expected to stabilise at around 2.3% starting in July. This difference between the evolution of total and core inflation is caused by the performance of energy prices, which started to grow in March and are not expected to decrease until March, 2005, so their effect on the annual rate of total inflation will continue until mid-2005 (see graph I.1.1 on the contributions of components to European inflation). The last few energy price growth forecasts have fallen, but we are still expecting rates of around 5% for the end of the year.

- For 2004, we forecast a mean total inflation rate of 2.2%, with which the probability of the mean annual inflation rate exceeding 2% is over 60% – as we can see from fan chart 1.1 2 of the forecasting intervals for 2004. On the other hand, the risk of deflation in the EMU disappeared several months ago.

- The differential between total inflation in the EMU and the US prior to 2002 was systematically one percentage point, in favour of the Economic and Monetary Union. The annual inflation rate last year and in the first months of this year in the two economies appears to converge at values of around 2%, but due to the rapid rise in crude oil prices, which influenced energy prices in both economies starting in March, this situation has changed. Since March, the two inflation rates have again diverged because of the greater sensitivity of U.S. inflation to crude oil market fluctuations. We thus expect the differential between the two economies for June and July to be around one percentage point in favour of

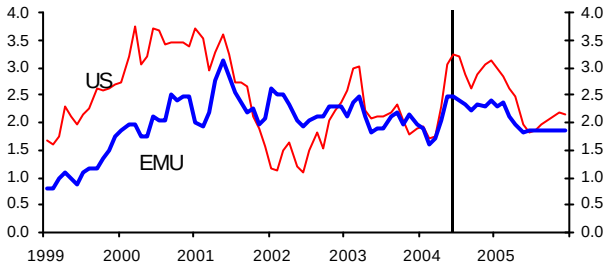
Graph I.1.2



the EMU, and this situation should remain unaltered until mid-2005 (see page 16).

Graph I.1.3

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



Source: BLS, EUROSTAT, IFL & UC3M
Date: June 16 / 2004

- Independently from the above, the inflation differential in services continues to be in favour of the EMU, in non-energy industrial goods in favour of the U.S. Whereas expectations for the mean annual rates of service prices, excluding owner's equivalent rents in the U.S., are 3.4% in 2004 and 3.5% in 2005, compared to the 3.2% observed in 2003, in the EMU they are 2.6% in 2004 and 2005, compared to the 2.6% also observed in 2003. In non-energy industrial goods, the corresponding rates for the U.S. have a negative value of 0.9% in 2004 and a positive value of 0.3% in 2005, and 0.9% in 2004 and 1.0% in 2005 in the EMU (Graphs I.1.3).

Table I.1.1

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

Harmonised Indices of Consumer Prices (HICP)	2000*	2001*	2002*	2003*	Forecasts	
					2004	2005
TOTAL INFLATION (100%)	2.1	2.3	2.3	2.1	**2.2**	**1.9**
CORE INFLATION (84,17%)	1.0	1.9	2.5	2.0	**2.1**	**2.1**
Non energy processed goods HICP (42,85%)	0.6	1.5	1.9	1.5	**1.7**	**1.5**
Services HICP (41,33%)	1.5	2.5	3.1	2.6	**2.6**	**2.6**
RESIDUAL INFLATION (15,82%)	7.5	4.4	1.1	2.6	**2.5**	**1.5**
Non Processed Food HICP (7,69%)	1.7	7.0	3.1	2.2	**1.3**	**1.8**
Energy HICP (8,13%)	13.0	2.3	-0.6	3.0	**3.6**	**1.2**

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

Source: Eurostat & UC3M/ Date: June 16, 2004

I.2 MACROECONOMIC TABLE OF EURO-ZONE

	Annual Averages Growths				
	2001	2002	2003	Forecasts BIMA (*)	
				2004	2005
GDP p m	**1.6**	**0.9**	**0.5**	**1.7**	**2.0**
Demand					
Final Consumption	2.0	1.2	1.2	1.6	1.9
Capital Investment	-0.3	-2.8	-0.8	2.2	2.1
Contribution Domestic Demand	0.9	0.4	1.1	1.7	1.8
Exports of Goods and Services	3.4	1.5	0.1	4.1	4.7
Imports of Goods and Services	1.7	0.3	1.9	4.2	4.6
Contribution Foreign Demand	0.7	0.5	-0.6	0.0	0.2
Supply					
Gross Value Added Total (market prices)	1.6	0.9	0.5	1.7	2.0
Net Taxes	-2.9	-1.0	-0.9	0.9	1.9
Gross Value Added Total (basic prices)	1.9	1.0	0.6	1.8	2.0
Gross Value Added Agriculture	-1.2	0.8	-3.4	1.1	1.2
Gross Value Added Industry	0.5	0.3	0.0	1.8	1.8
Gross Value Added Construction	-0.6	-1.0	-0.5	0.8	0.3
Gross Value Added Services	2.7	1.4	1.0	1.9	2.2
Private	3.1	1.1	0.9	2.2	2.4
Public	1.7	2.1	1.1	1.3	1.6
Prices					
CPI harmonized, annual average	2.3	2.3	2.1	2.2	1.9
CPI harmonized, dec./dec.	2.1	2.3	2.0	2.4	1.8
Employment					
Unemployment rate	8.0	8.4	8.9	8.9	9.0
Others Economic Indicators					
Production Index of Industry (excluding construction)	0.4	-0.5	0.3	2.0	1.9

Source: EUROSTAT & UC3M
Date: June 21, 2004

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

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I.3. UNITED STATES

- The general index forecast for **June** is a 0.29% increase, with the annual rate rising from 3.05% to 3.24%. All the major groups are expected to increase their annual rates. For core inflation, we forecast a 0.05% increase, with its annual rate growing from 1.71% to 1.85% (chapter II shows the details).

Table I.3.1

OBSERVED VALUES AND FORECAST ON CONSUMER PRICE FIGURES IN US
-May 2004-

CONSUMER PRICES INDEX (CPI)	Monthly Growth (T^1_1)		Confidence Intervals at 80% level (+ -)
	observed (a)	forecasts (b)	
Residual Inflation	2.54	2.06	0.39
Core Inflation	0.00	-0.01	0.15
Total inflation	**0.59**	**0.44**	0.13

Source: BLS & Universidad Carlos III Madrid
Data: June 15, 2004

- In **May**, the U.S. CPI rose by 0.59% from the previous month's figure, over one tenth more than expected: 0.44%, with the annual rate rising from 2.29% to 3.05% (see **Table I.3.1**1).

- The deviation from our forecast is largely due to the price of milk. Indeed, milk prices grew by 14.2% over the previous month's figures in May, the highest increase since July 1946, which has abruptly increased the annual rate from 7.25% to 22.82% (see **Graph I.3.1**).

- Core inflation maintained the same prices as last month, exactly as forecast, with a slight fall in the annual rate from 1.76% to 1.71%. The fall registered in non-energy manufactured goods was 0.21%, somewhat less than the 0.28% forecast, with the annual rate rising from -1.40% to -1.06%. On the other hand, service prices rose by 0.09%, exactly as expected, with the annual rate falling from 3.10% to 2.91%. Core inflation, not including owner's equivalent rent of primary residence and tobacco, and therefore comparable with the underlying rate in Europe excluding food, rose by -0.08%, less than the -0.14% forecast, with the annual rate growing from 1.58% to 1.45% (chapter II shows the details).

- For **2004** and **2005,** we forecast mean total annual inflation rates of 2.6% and 2.2%, respectively, which means that we maintain the last month's forecast for 2004 and increase the forecast for 2005 by two tenths (see **Table I.3.2** and **Graph I.3.2**).

- During the first few months of the year, there have been increases in the forecasts for core inflation, although not in May, which performed exactly as expected.

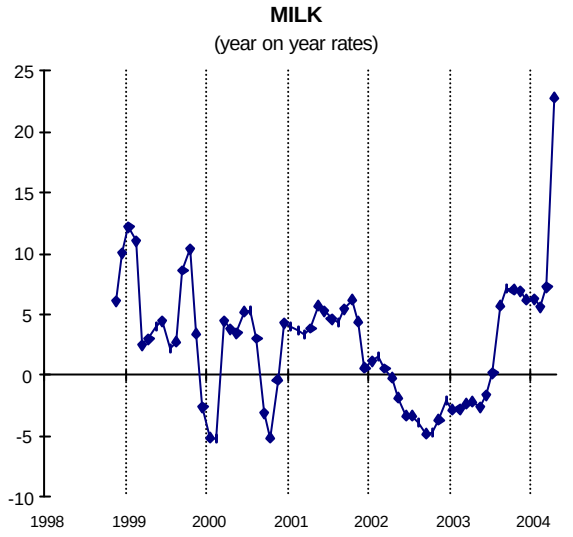
- The forecast for the general CPI is maintained with the increase in milk prices compensated by a more moderate performance of crude oil prices.

- We expect the annual core rate to grow rapidly this year from today's 1.71% to the 2.42% forecast for December. It should then become stable at a somewhat higher level throughout 2005. This forecast is the same as the one presented in last month's report.

- In 2004, when we add food and energy prices to this context of rapid core inflation growth, this generates a general CPI annual mean growth rate of around 2.6%, with the lowest level in September (2.6%) and the highest in July (3.2%). This is explained by the evolution of energy prices.

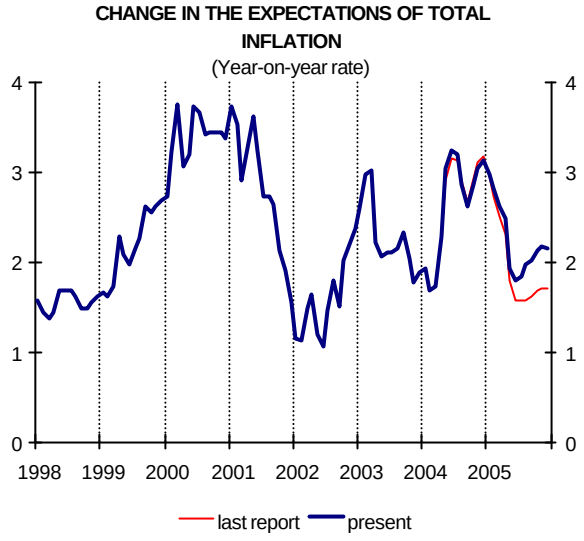
1 The official information provided is with one decimal aggregation error

Graph I.3.1



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Graph I.3.2



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Table I.3.2

AVERAGE ANNUAL RATE OF GROWTH IN US

CONSUMER PRICES INDEX (CPI)	2000	2001	2002	2003	2004 (forecasts)	2005 (forecasts)
Food (1)	2.3	3.1	1.8	2.1	**3.7**	**3.1**
Energy (2)	16.9	3.8	-5.9	12.2	**8.5**	**-1.6**
Residual Inflation (3=2+1)	**6.8**	**3.3**	**-0.8**	**5.3**	**5.4**	**1.5**
Non-food and non-energy goods (4)	0.5	0.3	-1.1	-2.0	**-0.9**	**0.3**
Less tobacco	-0.1	-0.2	-1.5	-2.1	**-1.0**	**0.3**
-Durable goods	-0.5	-0.6	-2.6	-3.2	**-2.2**	**0.3**
-Nondurable goods	1.4	1.1	0.4	-0.7	**0.5**	**0.3**
Non-energy services (5)	3.3	3.7	3.8	2.9	**3.0**	**3.3**
-Services less owner's equivalent rent of primary residence (5-a)	3.5	3.6	3.6	3.2	**3.4**	**3.5**
-Owner's equivalent rent of primary residence (a)	3.0	3.8	4.1	2.4	**2.4**	**3.0**
Core Inflation (6=4+5)	**2.4**	**2.7**	**2.3**	**1.5**	**1.9**	**2.4**
Core inflation less owner's equivalent rent of primary residence (6-a)	2.2	2.3	1.7	1.1	1.7	2.2
Core inflatión less owner's equivalent rent of primary residence and tobacco	2.1	2.1	1.5	1.1	1.7	2.2
Total inflation (7=6+3)	**3.4**	**2.8**	**1.6**	**2.3**	**2.6**	**2.2**
All items less owner's equivalent rent of primary residence (7-a)	3.5	2.6	1.0	2.2	2.7	2.0

Source: BLS & Universidad Carlos III Madrid
Data: June 15, 2004

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

I.4. SPAIN

- The total monthly inflation rate forecast for June is 0.1%, and the expected annual rate is 3.4%, the same observed in May (graph I.4.1).

- The monthly rate of total inflation in May, 0.59%, was slightly higher than our forecast, 0.58%. Core inflation (processed food, industrial goods and services) registered a downward innovation derived especially from processed food. Residual inflation (non-processed food and energy) rose, largely due to non-processed food (table I.4.1)

Table I.4.1
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 May 2004	Forecast	*Confidence interval at 80%*
Total Inflation(100%)	0.59	0.58	± 0.15
Core inflation (82.28%)	0.36	0.48	± 0.13
Residual inflation (17.72%)	1.66	1.02	± 0.22

(*) At 80% confidence level.
Source : INE & UC3M / Date: June 11, 2004

- The annual rate of **core inflation** (processed food, non-energy industrial goods and services) was 2.7% in May 2004, greater than the 2.4% observed in April of the same year. This increase is largely explained by the evolution of processed food prices, which registered a monthly rate of 0.96%, the highest this year although less than the expected 1.31%, due to the fact that the 5.65% increase in tobacco prices was lower than the expected 7.6%. Non-energy industrial goods performed worse than expected, with a monthly rate of 0.61% instead of the forecast 0.50%. As for services, there was decrease of -0.14% compared with our forecast of 0.05%, largely due to a larger fall in tourism prices, -7.62%, than our forecast -2.65%. Most service components, such as transport, restaurants and housing, continue to have annual rates of over 4%, whereas university expenses have an annual rate of over 5% (5.05).

- In May 2004, the annual rate of inflation in non-energy industrial goods in Spain, 0.9% was above the annual rate observed in the EMU, 0.8% and the annual rate in Spain is expected to be around 1.3% at the end of 2004, above the 1.0% expected for the EMU. Likewise, the mean annual rate expected for non-energy industrial goods in Spain is 0.9%, the same as the mean annual rate forecast for the EMU. In the U.S. negative expectations are maintained for the mean annual rate of growth, -0.9% for 2004 and 0.3% for 2005, compared with a negative 2.0% value observed in 2003.

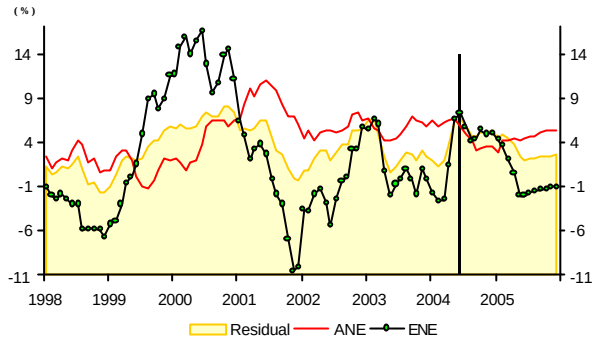
Table I.4.2
FORECASTS FOR THE MEAN ANNUAL RATES OF GROWTH IN THE CPI IN SPAIN

Consumer Prices Index (CPI)	2002	2003	Forecasts	
			2004	2005
TOTAL INFLATION (100%)	3.1	3.0	**2.9**	**2.7**
CORE INFLATIÓN (82,28%)	3.7	2.9	**2.7**	**2.9**
TREND INFLACIÓN (77,21%)	3.4	2.9	**2.5**	**2.8**
Non energy industrial goods (30,05%)	2.5	2.0	**0.9**	**1.5**
Services CPI (35,05%)	4.6	3.7	**3.7**	**4.0**
Processed food CPI (17,17%)	4.3	3.0	**3.5**	**3.1**
RESIDUAL INFLATION (17,72%)	2.6	3.6	**4.1**	**2.1**
Non processed food CPI (8,60%)	5.8	6.0	**5.0**	**4.6**
Energy CPI (9,12%)	-0.2	1.4	**3.1**	**-0.1**

Monthly and annual rates can be found in tables A7A and A7B in the appendix
Source: INE. IFL & .UC3M / Date: June 25 , 2004

Graph I.4.1

ANNUAL RATES OF RESIDUAL INFLATION AND ITS COMPONENTS IN SPAIN



Source: INE, IFL & UC3M / Date: June 25, 2004

- For this month, the annual rate of core inflation is forecast to increase to 2.7%, the same level observed in May, with a forecast annual rate of 3.9% in processed food, 0.9% in non-energy industrial good prices, and 3.7% in services. The mean annual rate of core inflation in 2004 will be around 2.7%, beneath the 2.9% registered in 2003, and the same as forecast last month. The worst performance will be due to processed food, with a mean rate of 3.5% compared with 3.0% in 2003, especially due to tobacco prices and higher prices of fats and oils (table I.4.2).

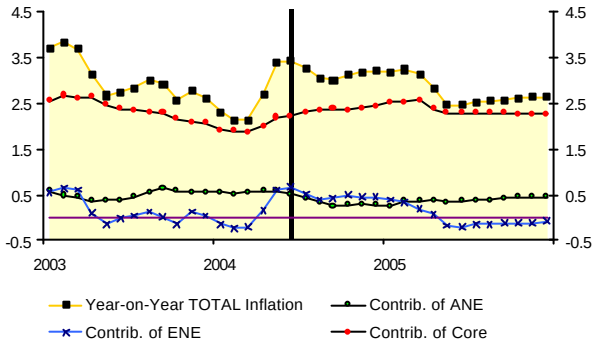
- In the EMU, the annual rate of core inflation in May 2004 was 2.1%, the same as in March. The forecast for the mean annual rate of core inflation in the EMU remain at around 2.1% in 2004 and 2005, compared with the 2.7% and 2.9% forecast in Spain for the same years. Therefore, the differential between Spain and the euro zone for 2004 is expected to be more than half a percentage point in favour of the EMU.

- As for the evolution of residual inflation components, the mean annual rate of non-processed food prices was 6.0% in 2003 and a mean annual rate of 5.0% is expected for 2004, and 4.6% for 2005.

- Total inflation in Spain for the remaining months of 2004 and the first few months of 2005 will have an annual rate of over 3.0%. The contribution of core inflation and non-processed food is expected to remain stable until 2005. The fall in the contribution of energy for the second half of 2005 will make total annual inflation return to levels close to those observed in 2003 (see graph I.4.2).

Graph I.4.2

CONTRIBUTIONS TO TOTAL INFLATION IN SPAIN (YEAR-ON-YEAR RATES)

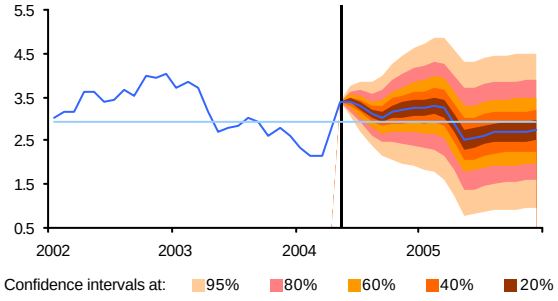


Source: INE & UC3M Date: June 25, 2004

- Respect to the energy prices, the international oil prices has diminished somewhat in comparison to last month. In June, we expect the annual energy rate to reach its highest value this year, 7.3%, falling to around 5% at the end of the year. The mean annual rate forecast for 2004 is 3.1%, higher than the 1.4% observed in 2003 but lower than the 5.2% published in May's Bulletin.

Graph I.4.3

ANNUAL FORECASTS FOR TOTAL INFLATION IN SPAIN (year-on-year rates)



Source: INE & UC3M Date: June 25, 2004

- The mean annual total inflation rate in Spain was 3.0% in 2003, and will be 2.9% in 2004 and 2.7% in 2005, lower than the rates forecast in last month's bulletin (table I.4.2). Graph I.4.3 shows the high probability of the total annual inflation rate in 2004 exceeding its historic mean of 2.9%.

I.5. MACROECONOMIC TABLE OF SPANISH ECONOMY

MACROECONOMIC TABLE AND INDICATORS (*)					
	Annual Rates				
	2002	2003	Forecasts BIMA(*)		Budget
			2004	2005	2004
Private Final Consumption Expenditure	2.6	3.0	3.3	3.4	3.1
1. Public Final Consumption Expenditure	4.4	4.6	4.1	3.4	2.9
Gross Fixed Capital Formation	1.0	3.0	3.4	3.8	3.8
Equipment	-5.4	1.9	4.0	5.8	(3)
Building	4.2	3.7	3.0	2.2	3.0
Other products	2.6	2.8	3.5	5.8	(3)
2. Inventary change (1)	0.0	0.1	0.0	0.0	0.0
Domestic Demand	2.6	3.3	3.4	3.5	3.3
Exports of Goods and Services	0.0	4.0	5.5	7.1	6.3
Imports of Goods and Services	1.8	6.7	6.8	7.4	7.0
Net Exports (1)	-0.6	-1.0	-0.6	-0.4	-0.4
GDP	**2.0**	**2.4**	**2.9**	**3.2**	**3.0**
GDP, current prices	6.6	6.7	6.4	6.5	5.9
Prices and Costs					
CPI, annual average	3.1	3.0	2.9	2.7	
CPI, dec./dec.	4.0	2.6	3.2	2.7	
Average earning per worker	3.8	3.9	3.5	3.4	
Unit labour cost	3.1	2.9	2.6	2.6	
Labour Market (Data poll labour force)					
Labour Force (% variation)	3.0	2.6	2.3	2.0	
Employment: Data adjusted from changes in the employment survey					
Annual average variation in %	2.0	2.7	3.0	3.0	
Annual average variation in thousands	312.5	437.0	500.8	515.9	
Unemployment rate	11.4	11.3	10.7	9.9	11.0
Basic balances					
Foreign sector					
Current Account (m. €.)	-18.691	-23.660	-20.247	-19.023	
Net lending or borrowing (% GDP) (2)	-1.6	-2.0	-2.6	-2.3	-2.6
AA.PP. (Total) / Public Administration					
Net lending or borrowing (% GDP) (2)	-0.1	0.0	-0.1	-0.1	
Other Economic Indicators					
Industrial Production Index	0.1	1.6	2.1	2.5	

(1) Contributions to GDP growth
(2) In term of national accounts
(3) Equipment goods and other goods: Forecast PGE, 5.0; Forecast BIAM, 5.2.

Source: INE & UC3M
Date: June 25, 2004.

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

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

I.6 FORECAST SUMMARY

INFLATION FORECASTS AND EVOLUTION IN THE EMU AND USA (1998-2005)								
	1998	1999	2000	2001	2002	2003	Forecasts	
							2004	2005
TOTAL INFLATION								
Euro-zone (100%).	1.1	1.1	2.1	2.3	2.3	2.1	**2.2**	**1.9**
USA (81.5%). [1]	1.1	2.1	3.5	2.6	1.0	2.2	**2.7**	**2.0**
A HOMOGENEOUS MEASURE OF CORE INFLATION [2]								
Services and Non-energy industrial goods excluding food and tobacco.								
Euro-zone (72.34%).	1.4	1.1	1.0	1.8	2.4	1.8	**1.9**	**1.9**
USA (55.6%).[1]	1.8	1.4	2.1	2.1	1.5	1.1	**1.7**	**2.2**
DIFFERENT COMPONENTS OF THE HOMOGENEOUS MEASURE OF CORE INFLATION								
(1) Services.								
Euro-zone (41.33%).	1.9	1.5	1.5	2.5	3.1	2.6	**2.6**	**2.6**
USA (27.4%).[1]	2.9	2.7	3.5	3.6	3.6	3.2	**3.4**	**3.5**
(2) Non-energy industrial goods excluding food and tobacco.								
Euro-zone (31.01%).	0.9	0.7	0.4	0.9	1.5	0.8	**0.9**	**1.0**
USA (29.0%).	-0.1	-0.5	-0.1	-0.2	-1.5	-2.1	**-1.0**	**0.3**
INFLATION IN EXCLUDED COMPONENTS FROM THE HOMOGENEOUS MEASURE OF CORE INFLATION								
(1) Food.								
Euro-zone (19.53%).	1.6	0.6	1.4	4.5	3.1	2.8	**2.9**	**2.5**
USA (14.9%).	2.2	2.1	2.3	3.1	1.8	2.1	**3.7**	**3.1**
(2) Energy.								
Euro-zone (8.13%).	-2.6	2.4	13.0	2.3	-0.6	3.0	**3.6**	**1.2**
USA (9.90%).	-7.7	3.6	16.9	3.8	-5.9	12.2	**8.5**	**-1.6**

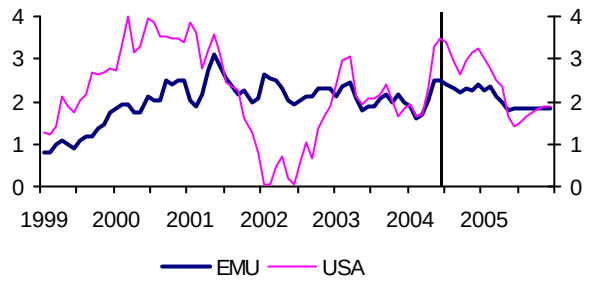
[1] less owner´s equivalent rent of primary residence.

[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.

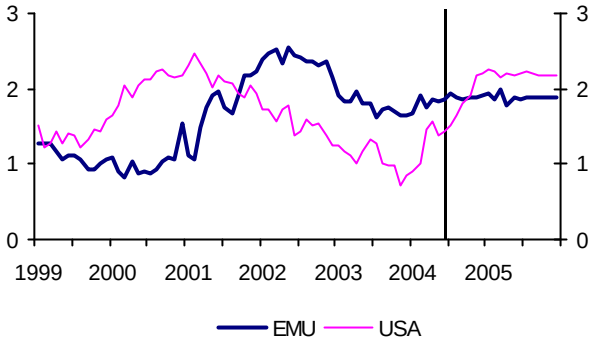
Source: EUROSTAT, BLS, IFL & UC3M.
Date: June 16 / 2004

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

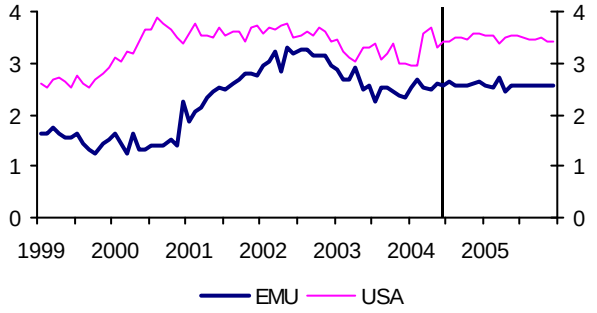
YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU AND TOTAL INFATION LESS OWNER´S EQUIVALENT RENT OF PRIMARY RESIDENCE IN USA



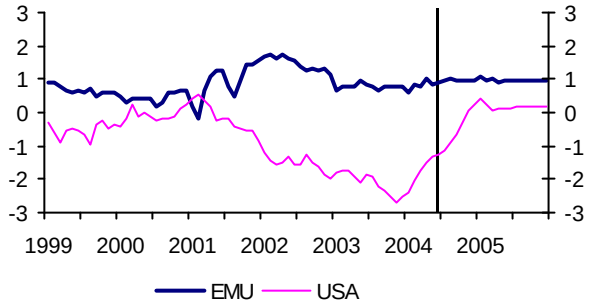
YEAR-ON-YEAR RATES OF HOMOGENEOUS CORE INFLATION IN THE EMU AND THE USA



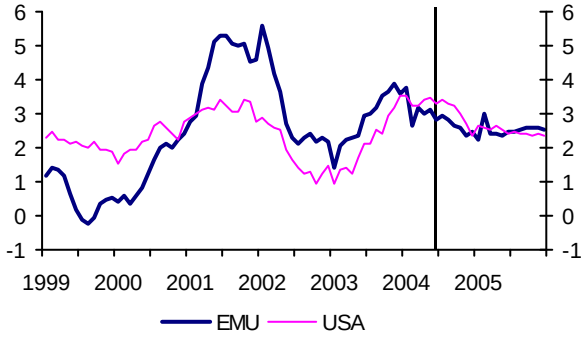
YEAR-ON-YEAR RATES OF SERVICES INFLATION IN THE EMU AND THE USA



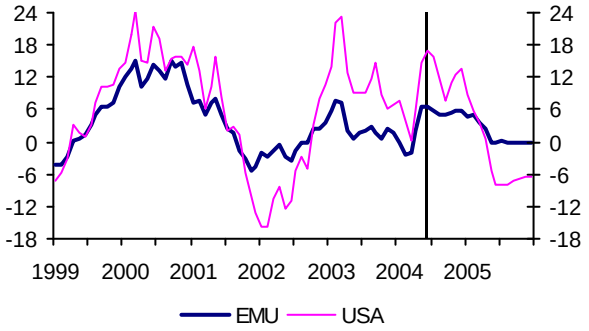
YEAR-ON-YEAR RATES OF NON-ENERGY INDUSTRIAL GOODS INFLATION IN THE EMU AND THE USA (EXCLUDING TOBACCO)



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



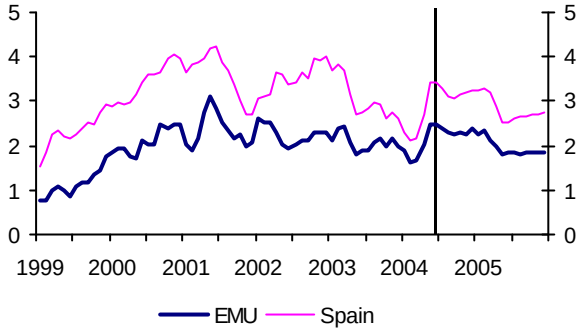
Source: EUROSTAT, BEA, IFL & UC3M
Date: June 16, 2004

INFLATION FORECASTS AND EVOLUTION IN THE EMU AND SPAIN (1998-2005)								
	1998	1999	2000	2001	2002	2003	Forecasts	
							2004	2005
TOTAL INFLATION								
Spain (100%).	1.8	2.3	3.4	3.6	3.1	3.0	**2.9**	**2.7**
Euro-zone (100%).	1.1	1.1	2.1	2.3	2.3	2.1	**2.2**	**1.9**
CORE INFLATION								
Services and Non-energy processed goods.								
Spain (81.40%).	2.2	2.2	2.5	3.4	3.7	2.9	**2.7**	**2.9**
Euro-zone (84.18%).	1.4	1.1	1.0	1.9	2.5	2.0	**2.1**	**2.1**
DIFFERENT COMPONENTS OF CORE INFLATION								
(1) Services.								
Spain (34.87%).	3.6	3.4	3.7	4.2	4.6	3.7	**3.7**	**4.0**
Euro-zone (41.33%)	1.9	1.5	1.5	2.5	3.1	2.6	**2.6**	**2.6**
(2) Non-energy processed goods.								
Spain (46.53%).	1.4	1.7	1.7	2.9	3.1	2.4	**2.2**	**2.1**
Euro-zone (43.26%).	1.1	0.7	0.6	1.5	1.9	1.5	**1.7**	**1.5**
INFLATION IN EXCLUDED COMPONENTS FROM CORE INFLATION								
1) Non-processed food.								
Spain (9.40%).	2.1	1.2	4.2	8.7	5.6	5.6	**5.0**	**4.6**
Euro-zone (7.69%).	2.0	0.0	1.7	7.0	3.1	2.2	**1.3**	**1.8**
(2) Energy.								
Spain (9.14%).	-3.8	3.2	13.3	-1.0	-0.2	1.4	**3.1**	**-0.1**
Euro-zone (8.13%).	-2.6	2.4	13.0	2.3	-0.6	3.0	**3.6**	**1.2**

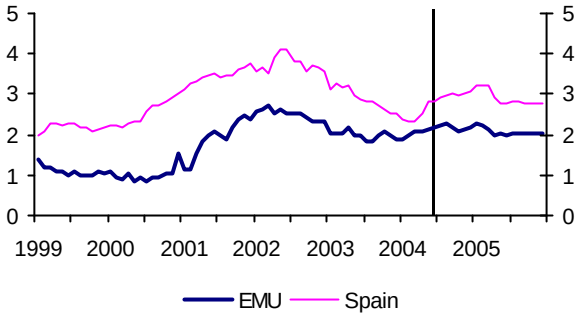
Source: EUROSTAT, BLS, IFL & UC3M.
Date: June 25 / 2004.

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

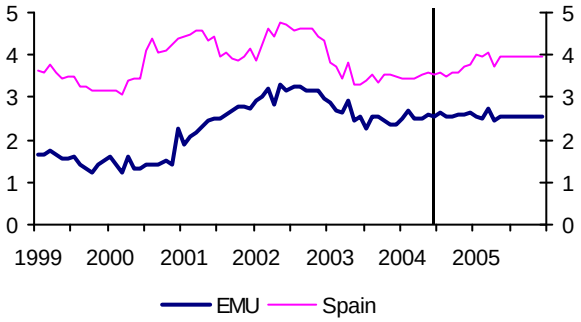
YEAR-ON-YEAR RATES OF TOTAL INFLATION IN THE EMU AND SPAIN



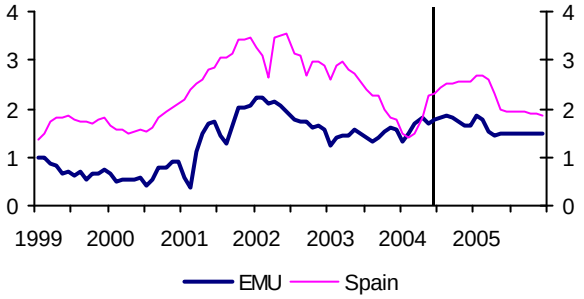
YEAR-ON-YEAR RATES OF SERVICES AND NON-ENERGY PROCESSED GOOS IN THE EMU AND SPAIN



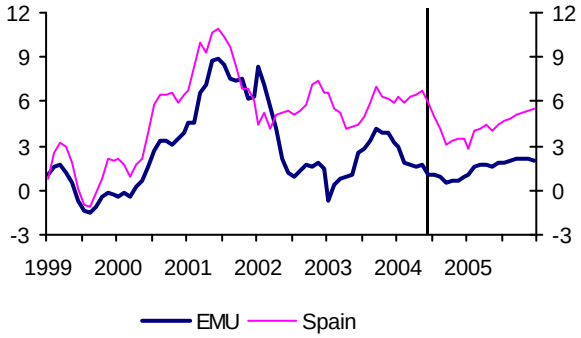
YEAR-ON-YEAR RATES OF SERVICES INFLATION IN THE EMU AND SPAIN



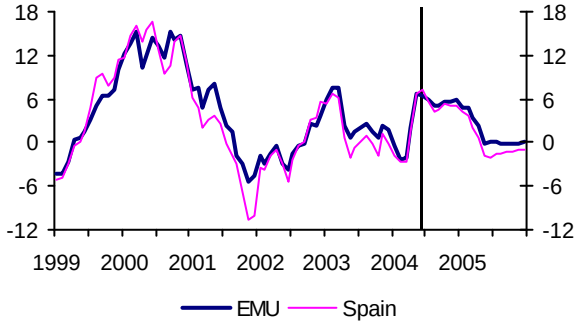
YEAR-ON-YEAR RATES OF NON-ENERGY PROCESSED GOODS INFLATION IN THE EMU AND SPAIN



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, BEA, IFL & UC3M
Date: June 25, 2004

I.7 INFLATION FORECASTS OF DIFFERENT INSTITUTIONS

INFLATION FORECASTS OF DIFFERENT INSTITUTIONS[1]										
	BIAM[2]		CONSENSUS FORECASTS[3]		IMF[4]		ECB[5]		OCDE[6]	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
UME	2.2	1.9	2.0	1.7	1.7	1.6	1.8	1.8	1.7	1.7
EE.UU.	2.6	2.2	2.4	2.3	2.3	2.2	-	-	1.7	1.6
ESPAÑA	2.9	2.7	2.8	2.5	2.7	2.7	-	-	2.3	2.6

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 , June 2004
3 June 14, 2004.
4 IMF. World Economic Outlook. April 2004.
5 ECB. Monthly Bulletin. Survey of Professional Forecasters. May 2004
6 OECD Economic Outlook 75. May 2004.

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, at 2.1% in 2004 and 2005 in the EMU and 2.7% for 2004 and 2.9% in 2005, in the case of Spain. Non-processed foods inflation expectations for 2004 for EMU and Spain are 1.3% and 5.0% respectively. Total inflation in 2004 and 2005 will be benefit from an expected lower inflation rate in non-energy industrial goods but energy prices are expected to increase due to the evolution of crude prices. The expected average inflation rate for 2004 is 3.5%.

II. ANALYSIS OF INFLATION, MONETARY POLICY AND INTERNATIONAL ANALYSIS

II.1 Economic and Monetary Union

In May2004, inflation in the EMU registered a monthly rate of 0.3% with a year-on-year rate of 2.5%.

In May 2004 inflation in the Monetary Union registered a month-on-month rate of 0.35% instead of the 0.34% expected; with a year-on-year rate of 2.48%, respect 2,03% registered in April. The main monthly rate innovations occurred in the energy, which performed slightly worse than expected, 2.50% instead of the forecast 2.17%, and non-processed food, slightly worse than expected, 0.42% instead of the forecast 0.15%. The performance was slightly worse than expected in core inflation. Core inflation in May was 2.14%, whereas inflation in processed food and energy was 1.77% and 6.71%, respectively. (Tables 1 and A2 in the appendix).

Table 1 summarises the discrepancies between observed and forecast values for the different basic aggregations in the Euro-Zone (see table A1B in the appendix for the disaggregation scheme followed in this Bulletin).

Table II.1.1

OBSERVED AND FORECAST VALUES ON CONSUMER PRICE FIGURES IN THE EMU

Consumer Price Index (HICP)	Current growth May 04	Forecast	Confidence intervals (a)
(1) Processed food - AE (9.463%)[(b)]	0.15	**0.20**	± 0.09
(2) Tobacco (2.373%)	0.64	**0.95**	± 0.13
(3) Commodities - MAN (31.009%)	0.09	**0.22**	± 0.10
Non-Energy Manufactured Goods - BENE **[1+2+3]** (42.845%)	0.14	**0.26**	± 0.09
(4) Services - SERV (41.334%)	0.08	**0.03**	± 0.14
Core Inflation:			
Non-Energy Manufactured Goods and Services, (excluding fats, oils, tobacco and tourist packages**) - IPSEBENE [1+2+3+4] (84.178%)**	0.18	**0.15**	± 0.08
(5) Non-Processed Food - ANE (7.689%)	0.42	**0.15**	± 0.46
(6) Energy Goods - ENE (8.133%)	2.50	**2.43**	± 0.60
Residual Inflation:			
Fats, Oils, Tobacco, Tourist Packages, Non-Processed Food and Energy **- R [5+6] (15.822%)**	1.39	**1.33**	± 0.39
Total Inflation: HICP [1+2+3+4+5+6] (100%)	0.35	**0.34**	± 0.09

(a) At 80% confidence level
(b) Excluding tobacco prices
Source: EUROSTAT, IFL & UC3M/ Date: June 16, 2004

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 that the aggregate values can not be exactly reproduced up to a decimal point by the users of Eurostat data. For this reason, aggregation errors are marked in the forecast errors tables in the appendix (table A2).

The total inflation innovation was null.

The breakdown of the harmonised consumer price index into basic market groups shows that the prices of processed food, excluding tobacco (the AE index), registered a monthly growth of 0.1% instead of the 0.20% growth predicted. The prices of tobacco registered a rate of 0.64%, lower than the 0.95% forecast. The prices of the remaining processed goods excluding energy prices (the MAN index) registered a rate of 0.14%, instead of the 0.26% forecast. With this,

core inflation registered a monthly growth of 0.08%, very close to 0.03% expected. Finally, in Residual inflation (non-processed food and energy), there was a upward innovation, 1.39% instead of 1.33% (see table A5A and A5B)..

The forecast for the year-on-year rate of inflation in June 2004 is 2.48%.

Total European expected inflation will stay at 2.48% in June. The expected monthly inflation rate is a positive value of 0.1%. The expectations for the average annual rate are 2.2% in 2004 and 1.9% in 2005, compared to the 2.1% registered in 2003.

Table 2 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 II.1.2

AVERAGE ANNUAL RATE OF GROWTH IN MONETARY UNION

	Observed					Forecasts	
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Residual Inflation 15.822%	1.2	7.5	4.4	1.1	2.6	**2.5**	**1.5**
Non-Processed Food 7.689%	0.0	1.7	7.0	3.1	2.2	**1.3**	**1.8**
Energy 8.133%	2.4	13.0	2.3	-0.6	3.0	**3.6**	**1.2**
Core Inflation 84.178%	1.1	1.0	1.9	2.5	2.0	**2.1**	**2.1**
Processed Food[(a)] 9.463%	0.5	0.6	2.7	2.4	2.1	**1.8**	**2.1**
Tobacco 2.373%	3.1	3.4	3.8	5.9	8.4	**12.0**	**6.5**
Non-Energy Commodities 31.009%	0.7	0.4	0.9	1.5	0.8	**0.9**	**1.0**
Non-Energy Services 41.334%	1.5	1.5	2.5	3.1	2.6	**2.6**	**2.6**
Total Inflation 100%	1.1	2.1	2.3	2.3	2.1	**2.2**	**1.9**

(a) Excluding tobacco prices
Source: EUROSTAT, IFL & UC3M/ Date: June 16, 2004

The average annual rate in 2003, 2.1%, is achieved through decreases in core inflation in 2003 to 2.0% in relation to the 2.5% observed in 2002, due to the favourable evolution of prices of non-energy industrial goods and services and the absence of the euro-rounding effect in the year-on-year rates of 2003, and increases in residual inflation, due to prices of energy compared with the values registered in 2002. The expected evolution of core inflation will be similar to last year; energy is the component that is increasing the performance of total inflation during 2004 from March, and this trend is not expected to change until March, 2005.

By country, the expectations for month-on-month inflation for next March is 0.1% for Germany, 0.1% in Spain, 0.1% in Italy and 0.1% in France.

Table 3 summarises average annual growth rates for the main countries. Monthly and annual forecasts for all countries can be found in tables A4A, A4B, A4C and A4D in the appendix.

Table II.1.3

ANNUAL AVERAGE RATES OF GROWTH

	Observed					Forecasts	
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Spain HICP (11.11%) *	2.2	3.5	2.8	3.6	3.1	**2.9**	**2.8**
Germany HICP (29.26%)	0.6	1.4	1.9	1.3	1.0	**1.7**	**1.1**
France HICP (20.70%)	0.6	1.8	1.8	1.9	2.2	**2.3**	**1.8**
Italy HICP (19.26%)	1.7	2.6	2.3	2.6	2.8	**2.3**	**2.6**
EMU HICP (100%)	1.1	2.1	2.3	2.3	2.1	**2.2**	**1.9**
United kingdom HICP	2.1	0.8	1.2	1.3	1.4	**1.4**	**1.5**

* country weights in the total HICP for the EMU

Source: EUROSTAT, IFL & UC3M/ Date: June 25 / 2004

Inflation expectations vary considerably among countries (see table II.1.3). For one year ahead these expectations go from 1.15% for Germany to values around 3.0% for Portugal, Spain, Italy and Greece. Consequently, the corresponding actual real interest rates are negative for these countries. On the other hand these rates are higher than 1% for Germany and Finland. These differentials are indicative of the different investment situations that the countries of the Euro-area face.

Table II.1.4	**INFLATION EXPECTATIONS**		**ACTUAL REAL INTEREST RATES**	
	Three Months	**One Year**	**Three Months**	**One Year**
Italy	2.47	2.61	-0.36	-0.20
France	1.99	1.82	0.12	0.59
Germany	1.42	1.15	0.69	1.26
Belgium	2.34	2.29	-0.23	0.12
Netherlands	2.33	2.45	-0.22	-0.05
Portugal	3.11	3.18	-1.00	-0.77
Austria	1.84	1.80	0.27	0.61
Finland	0.30	0.41	1.81	2.00
Ireland	2.65	2.82	-0.54	-0.41
Luxembourg	3.10	2.95	-0.99	-0.55
Spain	2.98	2.85	-0.87	-0.44
Greece	2.96	2.85	-0.85	-0.45

Source: ECB, Eurostat & EFN

Date:June 25, 2004

Table 5 shows annual observed HICP rates for energy and those corresponding to the remainder of goods and services – denominated HICP excluding energy.

Table II.1.5

ANNUAL GROWTH HICP

	HICP excluding Energy						HICP energy					
	Observed				Forecasts		Observed				Forecasts	
	May. 2004	Media 2001	Media 2002	Media 2003	Media 2004	Media 2005	May. 2004	Media 2001	Media 2002	Media 2003	Media 2004	Media 2005
Germany	1.6	1.5	1.4	0.8	**1.5**	**1.1**	7.3	5.7	0.3	4.0	**3.5**	**2.0**
Spain	3.2	4.0	3.4	3.2	**3.0**	**3.1**	6.6	-1.0	-0.2	1.3	**3.1**	**-0.1**
France	2.5	2.1	2.3	2.2	**2.3**	**1.8**	7.0	-1.5	-1.5	2.3	**3.2**	**2.3**
Italy	2.4	2.4	3.0	2.8	**2.4**	**2.5**	1.9	1.6	-2.6	3.2	**1.9**	**4.0**
Monetary Union	2.1	2.3	2.6	2.0	**2.0**	**2.0**	6.7	2.3	-0.6	3.0	**3.6**	**1.2**

Source: EUROSTAT, IFL & UC3M/ Date: June 25, 2004

There is an important inflation differential among countries.

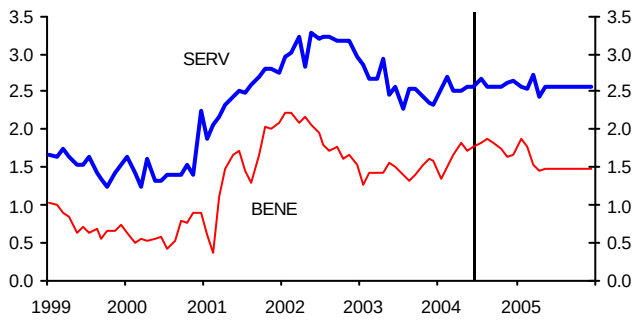
Year-on-year rates of energy prices in May, 2004 registered values higher than 1% in these four countries, as shown in table 5. For non-energy prices, Germany registered in May a year-on-year rate of 1.5%; forecasts for the annual average rates will be around 1.5% in 2004 and 1.1% in 2005. France registered for the HICP excluding energy a year-on-year rate of 2.54% in May and the forecasts for the annual average rate are 2.3% in 2004 and 1.8% in 2005. The observed value for the annual rate in Italy was 2.39% and forecasts are 2.4% in 2004 and 2.5% in 2005. In the case of Spain, the annual rate was 3.2% in May and a mean annual rate of 3.0% is expected in 2004 and 3.1% in 2005. Therefore, in the HICP excluding energy, German inflation will perform better than French and Italian inflation, which will in turn perform better than Spanish inflation.

In order to obtain a causal explanation for the inflation forecasts derived from this Bulletin – see BIMA Nº 113 -, a regression between these forecasts and the forecasts resulting from the macroeconomic model shown in Dreger (2002)[2] is performed. With regards to inflation expectations, inflation pressure has been compensated, especially from the second quarter of 2004 onwards, by the increase in the output gap and the favorable performance of import prices, confirming comments made in previous bulletins that given the expected evolution of the output gap and other variables affecting inflation, the ECB could go some way further in applying a loose monetary policy. Nevertheless, in the last quarter of 2005, when the compensation will come to an end the ECB could then change its monetary policy

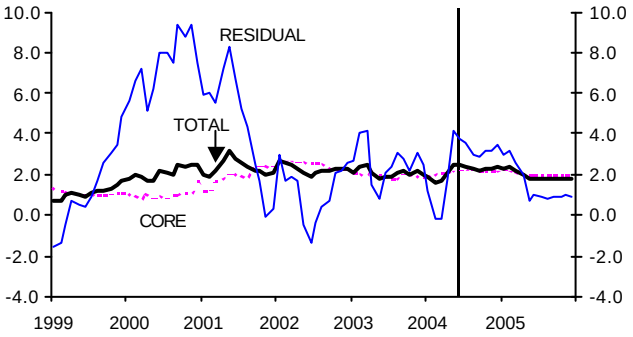
HICP YEAR-ON-YEAR RATES OF GROWTH IN THE EMU

Graph II.1.1

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



CORE, Residual and total inflation



Source: EUROSTAT, IFL & UC3M/ Date: June 16, 2004

2 Dreger, C. (2002) "A macroeconometric model for the Euro economy". Institute for Economic Research Halle (IWH).

II.2 Industrial Production in the EMU and USA.

The Industrial Production Index published for April 2004 has been an upwards innovation in the global index and in all the components analysed in this publication., as it can be seen in table II.2.1.

Table II.2.1
FORECASTS AND OBSERVED DATA IN THE ANNUAL RATE OF GROWTH OF THE DIFFERENT EMU IPI COMPONENTS CORRESPONDING TO APRIL

	Forecast for April	Observed in April(*)
Capital	0.69	2.51
Durable	1.47	2.13
Intermediate	0.94	2.20
Non Durable	-0.57	0.50
Energy	1.70	1.98
Total	**0.67**	**1.72**

Working day adjusted data.
Source: Eurostat and UC3M.

The expectations now are a more optimistic than in the last report with an average rate of growth of 1.98 and 1.89% for 2004 and 2005 respectively instead of the 1.3 and 1.7% previously forecasted. The expectations of growth for the different sectors are shown in table II.2.2.

Table II.2.2
ANNUAL AVERAGE RATES FOR INDUSTRIAL PRODUCTION IN EMU(***)

	1998	1999	2000	2001	2002	2003	2004	2005
Capital	6.7	2.4	8.1	1.6	-1.5	0.0	**2.5**	**3.1**
Durable	4.2	1.3	6.1	-2.1	-5.7	-4.1	**0.8**	**-0.1**
Intermediate	3.7	1.9	6.2	-0.5	0.0	0.4	**1.9**	**1.8**
Non Durable	2.1	1.2	0.9	0.8	0.5	-0.1	**1.3**	**0.9**
Energy	1.6	0.8	1.9	1.4	1.0	3.0	**2.7**	**1.6**
Total EMU	3.8	1.8	5.2	0.4	-0.5	0.3	**2.0**	**1.9**

(***)Bold figures are forecasts. Working day adjusted data.
Source: Eurostat and UC3M.
Date: June, 18th2004

In US, the last published data corresponds to May and has also been an upwards innovation in all the components analyzed in this publication except in Non Durable Consumer Goods, as it can be seen in table II.2.3.

Table II.2.3
FORECASTS AND OBSERVED DATA IN THE ANNUAL RATE OF GROWTH OF THE DIFFERENT EMU IPI COMPONENTS CORRESPONDING TO MAY

	Forecast for May	Observed in May
Durable Consumer Goods	7.59	5.85
Non Durable Consumer Goods	2.48	3.68
Equipment and Supplies	4.93	6.12
Materials	5.34	6.98
TOTAL US	**4.66**	**6.15**

Source: Federal Reserve and UC3M

Table II.2.4 shows the updated forecasts. The average rate of growth for IP in 2004 has been upwards revised from 4.4% to 6.1% and in 2005 from 3.6% to 5.2%.

Table II.2.4

ANNUAL AVERAGE RATES FOR INDUSTRIAL PRODUCTION IN US(1)

	1998	1999	2000	2001	2002	**2003**	**2004**	**2005**
Durable Consumer goods	7.2	6.9	3.9	-5.8	4.7	2.3	**5.9**	**5.0**
Non Durable Consumer Goods	2.3	-0.1	1.7	0.4	-0.6	-1.7	**3.9**	**2.3**
Equipment and Supplies	8.1	4.8	5.9	-4.1	-0.6	0.4	**6.1**	**5.0**
Materials	5.2	5.7	5.3	-4.5	0.4	0.5	**6.6**	**5.9**
TOTAL US	5.6	4.3	4.7	-3.5	-0.6	0.2	**6.1**	**5.2**

(1) Bold figures are forecasts.
Source: Federal Reserve and IFL.
Date: June 18th, 2004

II.3 United States

In May, the U.S. CPI rose by 0.59% from the previous month's figure, over one tenth more than expected: 0.44%, with the annual rate rising from 2.29% to 3.05%.

In **May**, the U.S. CPI rose by 0.59% from the previous month's figure, over one tenth more than expected: 0.44% (see **Table II.3.1)**, with the annual rate rising from 2.29% to 3.05%. The deviation from our forecast is largely due to the price of milk. Indeed, milk prices grew by 14.2% over the previous month's figures in May, the highest increase since July 1946, which has abruptly increased the annual rate from 7.25% to 22.82% (see **Graph II.3.2**).

Table II.3.1

OBSERVED VALUES AND FORECAST ON CPI IN US
May 2004

CONSUMER PRICES INDEX (CPI)	Relative importance Dec. 2003	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)	14.4	4.08	0.87	**0.28**	0.34
Energy (2)	7.1	15.00	5.62	**5.35**	1.06
Residual Inflation (3=2+1)	**21.5**	**7.82**	**2.54**	**2.06**	**0.39**
Non-food and non-energy goods (4)	**22.3**	**-1.06**	**-0.21**	**-0.28**	**0.31**
Less tobacco	21.4	-1.18	-0.22	**-0.37**	0.20
-Durable goods	11.3	-3.12	-0.17	**-0.19**	0.31
-Nondurable goods	11.0	1.02	-0.29	**-0.38**	0.45
-Non-durable goods less tabacco	10.2	0.94	-0.32	**-0.58**	0.30
Non-energy services (5)	**56.3**	**2.91**	**0.09**	**0.09**	**0.15**
-Services less owner's equivalent rent of primary residence (5-a)	32.9	3.31	0.02	**0.01**	0.24
-Owner's equivalent rent of primary residence (a)	23.4	2.37	0.18	**0.21**	0.13
Core Inflation (6=4+5)	**78.5**	**1.71**	**0.00**	**-0.01**	**0.15**
Core inflation less owner's equivalent rent of primary residence (6-a)	55.2	1.46	-0.07	**-0.11**	0.19
Core inflatión less owner's equivalent rent of primary residence and tobacco	54.3	1.45	-0.08	**-0.14**	0.17
Total inflation (7=6+3)	**100.0**	**3.05**	**0.59**	**0.44**	**0.13**
All items less owner's equivalent rent of primary residence (7-a)	76.6	3.28	0.71	**0.51**	**0.14**

Source: BLS & Universidad Carlos III Madrid

Data: June 15, 2004

The milk prices grew by 14.2% over the previous month's figures in May, the highest increase since July 1946, which has abruptly increased the annual rate from 7.25% to 22.82% Core inflation

Core inflation maintained the same prices as last month, exactly as forecast, with a slight fall in the annual rate from 1.76% to 1.71%. The fall registered in non-energy manufactured goods was 0.21%, somewhat less than the 0.28% forecast, with the annual rate rising from -1.40% to -1.06%. On the other hand, service prices rose by 0.09%, exactly as expected, with the annual rate falling from 3.10% to 2.91%. Core inflation, not including owner's equivalent rent of primary residence and tobacco, and therefore comparable with the underlying rate in Europe excluding food, rose by -0.08%, less than the -0.14% forecast, with the annual rate growing from 1.58% to 1.45%.

maintained the same prices as last month, exactly as forecast, with a slight fall in the annual rate from 1.76% to 1.71%.

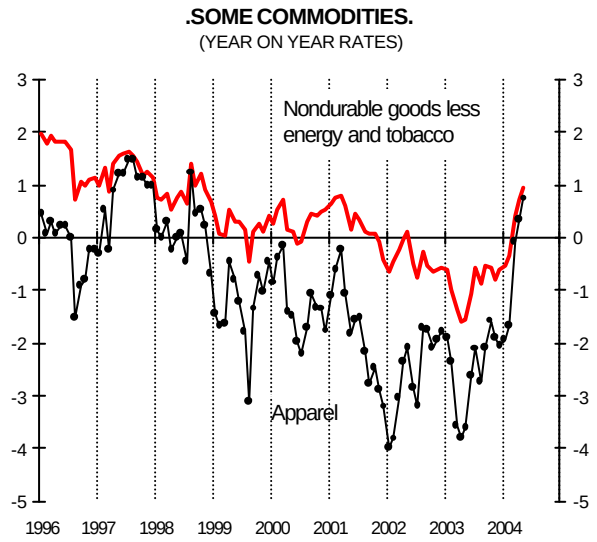
By components, the index for commodities less food and energy without tobacco decreased by 0.22% instead of the 0.37% expected, with the annual rate going from –1.52% to –1.18%. Non-durable goods prices, excluding the index for tobacco, decreased by 0.29%, instead of the 0.38% expected, with the annual rate going from 0.77% to 1.02%. Regarding non-durable goods, the annual rate of the apparel index went from 0.32% to 0.73% (see Graph II.3.1). And the index for tobacco increased by 0.04% as opposed to the increase forecast of 2.13%, with the annual rate going from 1.15% to 1.70%. Durable goods prices decreased by 0.17% as opposed to the forecast 0.19%, with the annual rate going from –3.52% to 3.12%. With regards to durable goods, the annual rate of the new car index went from the previous month's –0.58% to –0.51%.

The index for services excluding owner's equivalent rent of primary residence shows an increase of 0.02%, exactly as forecast, with the annual rate going from 3.69% to 3.31%. The index for owner's equivalent rent of primary residence increased by 0.18%, instead of the forecast of 0.21%, with the annual rate going from 2.28% to 2.37% (see Graph II.3.4).

The difference 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) decreased by seven tenths to 4.5 points, from the previous month's figure.

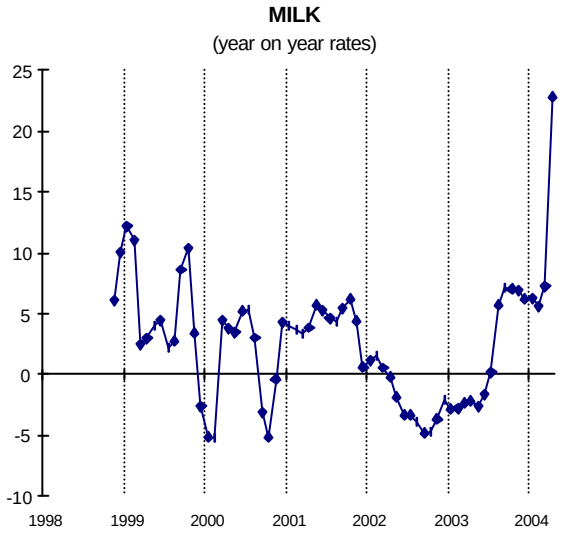
Residual inflation increased by 2.54%, more than expected: 2.06%, with the annual rate rising from 4.25% to 7.82%. By components, food prices have increased by 0.87%, more than expected: 0.28%, due to the price of milk, as we mentioned earlier, with the annual rate going from 3.42% to 4.08%. The index for energy performed a little worse than expected, with an increase of 5.62% as opposed to the forecast 5.35%. Its annual rate has gone from 5.65% to 15.00%.

Graph II.3.1



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Graph II.3.2



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

The general index forecast for June is a 0.29% increase, with the annual rate rising from 3.05% to 3.24%.

The general index forecast for **June** is a 0.29% increase, with the annual rate rising from 3.05% to 3.24%. All the major groups are expected to increase their annual rates. For core inflation, we forecast a 0.05% increase, with its annual rate growing from 1.71% to 1.85%.

By components, the expected increase in the index for services is 0.29%, 0.20% for the index for owner's equivalent rent of primary residence and 0.35% for the rest. The annual rate of the index for owner's equivalent rent of primary residence will increase to 2.58%. The year-on-year rate for the index for all other services, on the whole, will increase from 3.31% to 3.40% (see Graph II.3.4).

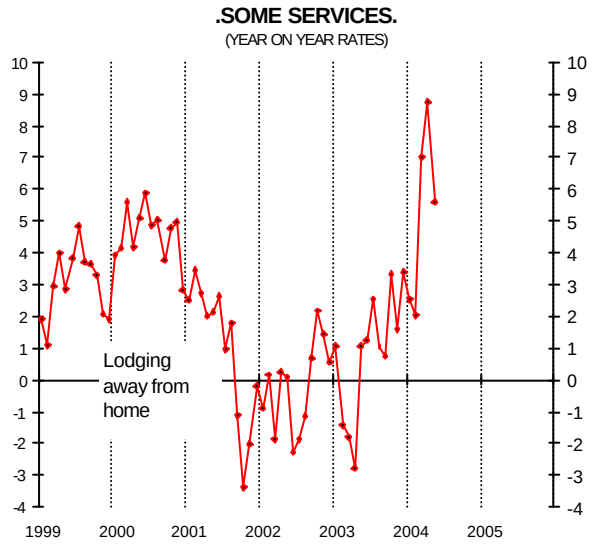
Taking commodities less food and energy into consideration, the expected decrease is 0.54%, with the annual rate going from –1.06% to –0.94%. Excluding the index for tobacco, the predicted rise is -0.54%, which would leave the year-on-year rate at –1.06%, as opposed to last month's –1.18%. Durable goods prices are expected to decrease 0.07%, leaving the annual rate at –2.78%. Non-durable goods prices are forecast to rise –1.02%, bringing the annual rate from 1.02% to 0.88%. Within the index of non-durable goods, tobacco prices are predicted to decrease by 0.67%, which would leave the year-on-year rate at 1.47%.

For 2004 and 2005, we forecast mean total annual inflation rates of 2.6% and 2.2%, respectively, which means that we maintain the last month's forecast for 2004 and increase the forecast for 2005 by two tenths

The expected increase in residual inflation is 1.14%, which would leave the year-on-year rate at 8.06%, as opposed to last month's 7.82%. With regards to residual inflation, the expected increase for the food index is 0.33%. Energy prices are expected to increase by 2.56%, which would leave the year-on-year rate at 15.79%, as opposed to last month's 15.00%.

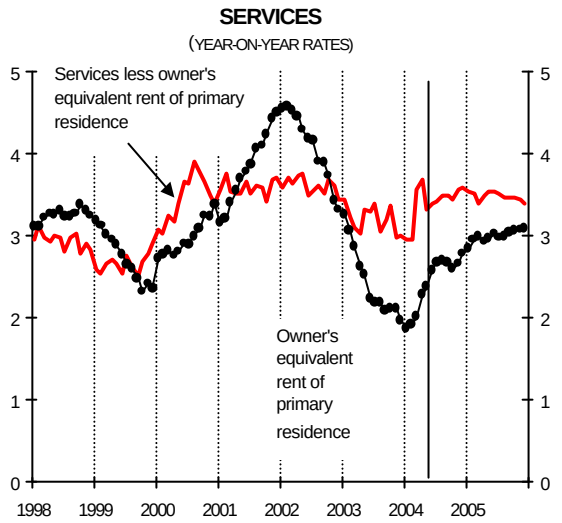
For **2004** and **2005,** we forecast mean total annual inflation rates of 2.6% and 2.2%, respectively, which means that we maintain the last month's forecast for 2004 and increase the forecast for 2005 by two tenths (see **Graph II.3.6**).

Graph II.3.3



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Graph II.3.4



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

During the first few months of the year, there have been increases in the forecasts for core inflation, although not in May, which performed exactly as expected

During the first few months of the year, there have been increases in the forecasts for core inflation, although not in May, which performed exactly as expected.

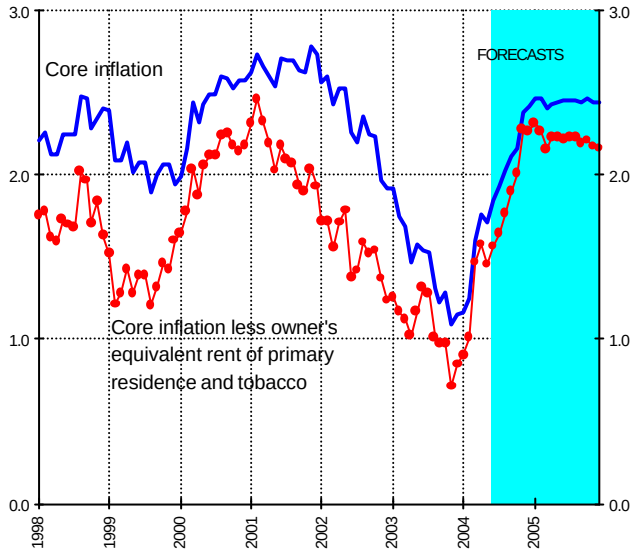
The forecast for the general CPI is maintained with the increase in milk prices compensated by a more moderate performance of crude oil prices.

We expect the annual core rate to grow rapidly this year from today's 1.71% to the 2.42% forecast for December. It should then become stable at a somewhat higher level throughout 2005. This forecast is the same as the one presented in last month's report (see **Graph II.3.5**).

In 2004, when we add food and energy prices to this context of rapid core inflation growth, this generates a general CPI annual mean growth rate of around 2.6%, with the lowest level in September (2.6%) and the highest in July (3.2%). This is explained by the evolution of energy prices (see **Graph II.3.6**).

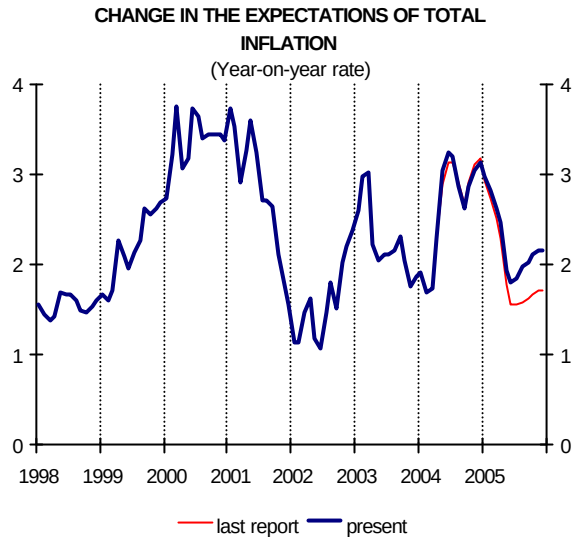
Graph II.3.5

(year-on-year rate)



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Graph II.3.6



Source: Universidad C.III Madrid & BLS / Date: June 15, 2004

Table II.3.2 shows the average annual growth rate forecasts for 2004 and 2005 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 II.3.2

AVERAGE ANNUAL RATE OF GROWTH IN US (*)

CONSUMER PRICES INDEX (CPI)	2000	2001	2002	2003	2004 (forecasts)	2005 (forecasts)
Food (1)	2.3	3.1	1.8	2.1	**3.7**	**3.1**
Energy (2)	16.9	3.8	-5.9	12.2	**8.5**	**-1.6**
Residual Inflation (3=2+1)	**6.8**	**3.3**	**-0.8**	**5.3**	**5.4**	**1.5**
Non-food and non-energy goods (4)	0.5	0.3	-1.1	-2.0	**-0.9**	**0.3**
Less tobacco	-0.1	-0.2	-1.5	-2.1	**-1.0**	**0.3**
-Durable goods	-0.5	-0.6	-2.6	-3.2	**-2.2**	**0.3**
-Nondurable goods	1.4	1.1	0.4	-0.7	**0.5**	**0.3**
Non-energy services (5)	3.3	3.7	3.8	2.9	**3.0**	**3.3**
-Services less owner's equivalent rent of primary residence (5-a)	3.5	3.6	3.6	3.2	**3.4**	**3.5**
-Owner's equivalent rent of primary residence (a)	3.0	3.8	4.1	2.4	**2.4**	**3.0**
Core Inflation (6=4+5)	**2.4**	**2.7**	**2.3**	**1.5**	**1.9**	**2.4**
Core inflation less owner's equivalent rent of primary residence (6-a)	2.2	2.3	1.7	1.1	**1.7**	**2.2**
Core inflatión less owner's equivalent rent of primary residence and tobacco	2.1	2.1	1.5	1.1	**1.7**	**2.2**
Total inflation (7=6+3)	**3.4**	**2.8**	**1.6**	**2.3**	**2.6**	**2.2**
All items less owner's equivalent rent of primary residence (7-a)	3.5	2.6	1.0	2.2	**2.7**	**2.0**

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

Source: BLS & Universidad Carlos III Madrid
Data: June 15, 2004

II.4 Spain

The CPI for May 2004 showed a monthly rate of 0.59% with a year-on-year rate of 3.4%.

The CPI for May 2004 showed a month-on-month rate of 0.59%, slightly higher than our predicted 0.58%, with a year-on-year rate of 3.4%, compared to the 2.7% registered in April.

Core inflation, calculated on the basis of the IPSEBENE index, registered a year-on-year rate of 2.69% in May, lower than total inflation.

Residual inflation registered an upward innovation.

Core inflation registered a downward innovation derived specially from prices of services; residual inflation registered an upward innovation, derived specially from prices of non-processed food.

To analyse this in greater detail, please refer to tables II.4.1 and II.4.2. Table II.4.1 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 II.4.2 summarises prediction errors made for different components.

Table II.4.1

SPANISH CPI DISAGGREGATION (*)

1. Processed Foods CPI	AE (17.17%)	*Trend Inflation* (1+2+3) IPSEBENE (82.28%)	*CPI* (100%)
2. Non Energy Commodities CPI	MAN (30.05%)		
3. Non Energy Services CPI (excluding Tourism)	SERV (35.05%)		
4. Non Processed Foods CPI	ANE (8.60%)		
5. Energy CPI	ENE (9.12%)		

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

Source: IFL & UC3M

Table II.4.2

OBSERVED VALUES AND FORECASTS ON CONSUMER PRICE FIGURES IN SPAIN

Consumer Price Index (CPI)	Current growth May 04	Forecast	Confidence Intervals (*)
(1) AE (17,17%)	0.96	1.31	± 0.18%
(2) MAN (30,05%)	0.61	0.50	± 0.16%
(3) SER (35,05%)	-0.14	0.05	± 0.17%
IPSEBENE [1+2+3] (82,28%)	0.36	0.48	
IPSEBENE-X-T (77,21%)	0.33	0.43	± 0.13%
(5) ANE (8,60%)	0.78	-0.44	± 1.09%
(6) ENE (9,12%)	2.46	2.35	
R [5+6] (17.72%)	1.66	1.02	± 0.22%
IPC (100%)	0.59	0.58	± 0.15%

(*) At 80% confidence level.

Source: INE, IFL & UC3M Date: June 11, 2004

The annual inflation differential in the commodities market with the EMU has decreased below 0.5% from February.

Prices of **non-energy industrial goods,** MAN registered a month-on-month rate of 0.61% in May, higher than our prediction of 0.50%. The year-on-year rate registered in May was 0.88%, higher than the value registered in April. The inflation differential in the commodities market with the EMU has stayed below 0.5 percentage points in the last few months and we expect it to narrow in the second half of the year. The year-on-year rates of growth in apparel and footwear were 1.85% and 2.41%, respectively. If these increases in prices are not reflected in

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

The mean growth expectations in non-energy industrial goods will stay at 0.9% and 1.5% in 2004 and 2005 respectively.

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 average annual rate in non-energy industrial goods prices was 2.0% in 2003 and the predictions are 0.9% in 2004, and 1.5% in 2005.

The month-on-month rate of **inflation in processed food,** AE in May was 0.96%, below our prediction, 1.31%. Prices of processed food are now affected by offers that the National Statistics Institute (INE) picks up; this fact leads to a more erratic evolution of these kinds of prices. The year-on-year rate in May grew to 3..7%, compared to the 2.9% registered in April. The mean growth expectations for inflation in processed food is 3.5% in 2004, and 3.1% in 2005, with respect to the 3.0% observed in 2003.

Table II.4.3 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 II.4.3

SPANISH AVERAGE RATES OF GROWTH

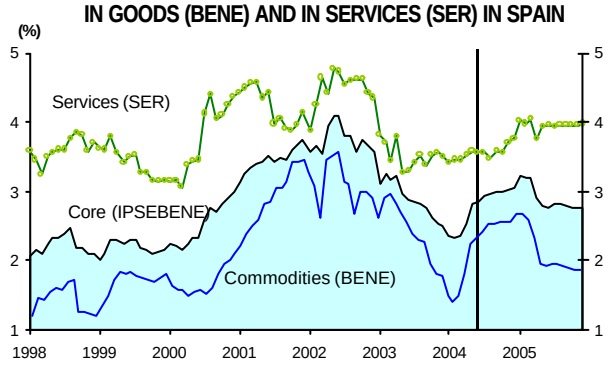
	1998	1999	2000	2001	2002	2003	Forecasts	
							2004	2005
Residual Inflation	**0.4**	**2.8**	**6.7**	**3.7**	**2.6**	**3.6**	**4.1**	**2.1**
Fats	-11.1	14.9	-7.6	-7.3	15.2	3.4	**17.9**	**11.2**
Tobacco	7.9	4.3	2.5	4.9	7.4	3.8	**4.9**	**1.9**
Tourism	15.4	7.2	12.3	7.1	8.7	3.1	**1.0**	**5.9**
Non Processed Foods	2.1	1.2	4.2	8.7	5.8	6.0	**5.0**	**4.6**
Energy	-3.8	3.2	13.3	-1.0	-0.2	1.4	**3.1**	**-0.1**
Core Inflation	**2.2**	**2.2**	**2.5**	**3.4**	**3.7**	**2.9**	**2.7**	**2.9**
BENE-X	1.6	1.5	1.9	3.1	2.6	2.3	**1.7**	**1.9**
Processed Food excluding fats and tobacco	1.4	0.8	1.4	4.1	3.1	2.9	**2.6**	**2.7**
Non-energy industrial goods	1.5	1.5	2.1	2.6	2.5	2.0	**0.9**	**1.5**
SERV-T	3.3	3.3	3.5	4.1	4.3	3.5	**3.7**	**3.9**
CPI Inflation	**1.8**	**2.3**	**3.4**	**3.6**	**3.1**	**3.0**	**2.9**	**2.7**

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

Source: INE, IFL & UC3M / Date: June 25 / 2004

Graph II.4.1

AVERAGE RATES OF GROWTH OF CPI INFLATION IN GOODS (BENE) AND IN SERVICES (SER) IN SPAIN



Source: INE, IFL & UC3M / Date: June 25 / 2004

The inflation differential between inflation in services and inflation in non energy industrial goods is 2.9 p.p. In May.

With regards to the **services sector,** including the components known as tourist packages (the SER index), it registered a month-on-month rate of inflation of -0.14%, less than our forecast, 0.05%. The evolution of service prices is especially worrisome in universities, restaurants, education, housing and medicine, which show annual rates of growth greater than 4%. The inflation differential between the annual rates of non-energy industrial goods market and the services market, was 2.9 percentage points in May, compared to the 3.0 p.p. observed y April and 1.7 p.p. observed last February. This differential is greater than the corresponding figure in May in the EMU, 1.8 p.p. The year-on-year rate of growth of services in May was 3.8%, while in the Euro-zone it was 2.6%**.** Mean growth expectations will increase in Spain to 3.7 % in 2004 and 4.0% in 2005, compared to the 3.7% observed in 2003.

The mean annual rate of core inflation will be 2.7% in 2004 and 2.9% in 2005.

With the aforementioned innovations in the goods and the services market, **core inflation**, calculated on the IPSEBENE index, registered a year-on-year rate of 2.7% in May, greater than the figure registered last month, 2.4%. It is predicted that the average rate of growth of core inflation will be 2.7% in 2004, rising to 2.9% in 2005, compared to the 2.9% observed in 2003.

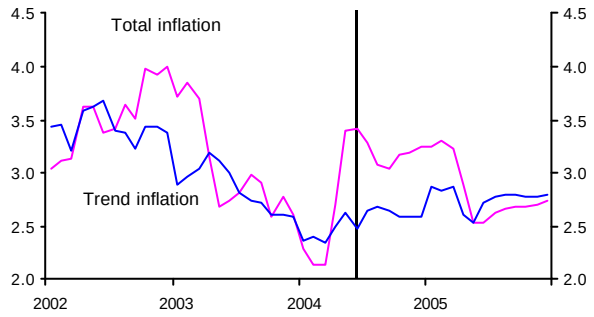
Residual inflation registered an upward innovation.

The prices which serve as a basis for calculating **residual inflation** have registered an upward innovation in the energy sector and a strong upward innovation in non-processed foods and energy.

As a consequence of the current evolution in crude oil prices and the exchange rate, the expectations of average growth in consumer energy prices are a positive value of 3.1% in 2004, and –0.1% in 2005, compared to the 1.4% observed in 2003. As far as average growth of non-processed foods is concerned, expectations are 5.0% in 2004 and 4.6% in 2005, compared to the 6.0% observed in 2003.

Graph II.4.2

ANNUAL RATES OF TOTAL AND CORE INFLATION IN SPAIN



Source: INE, IFL & UC3M / Date: June 25, 2004

The monthly inflation prediction for June 2004 is 0.1%; the annual rate will increase to 3.4%.

As a result, **the prediction of the month-on-month inflation rate for June 2004** is a value of 0.1%; the year-on-year rate will increase to 3.4%, the same observed in May. The month-on-month core inflation rate will be a positive value of 0.1%. The average inflation rate within the overall CPI is placed at 2.9% in 2004 and 2.7% in 2005, compared to the 3.0% observed in 2003. The average rate of core inflation will be 2.7% in 2004 and 2.9% in 2005, compared to the 2.9% observed in 2003.

Table II.4.4 shows the average annual rates between 2000 and 2005 of the different sectors in the EMU and Spain, where the relevant differential in non-energy industrial goods and services can be observed.

Table II.4.4

HARMONIZED CPI ANNUAL GROWTH BY SECTORS
IN THE EMU AND SPAIN 2000-2001-2002-2003-2004-2005

		2000	2001	2002	2003	Forecasts	
						2004	2005
AE[(a)]	**EMU**	**1.1**	**2.9**	**3.0**	**3.3**	**3.8**	**3.0**
	SPAIN	0.9	3.4	4.3	3.0	3.5	3.1
MAN	**EMU**	**0.4**	**0.9**	**1.5**	**0.8**	**0.9**	**1.0**
	SPAIN	2.1	2.6	2.5	2.0	0.9	1.5
BENE	**EMU**	**0.6**	**1.5**	**1.9**	**1.5**	**1.7**	**1.5**
	SPAIN	1.7	2.9	3.1	2.4	2.2	2.1
SERV	**EMU**	**1.5**	**2.5**	**3.1**	**2.6**	**2.6**	**2.6**
	SPAIN	3.7	4.2	4.6	3.7	3.7	4.0
IPSEBENE	**EMU**	**1.0**	**1.9**	**2.5**	**2.0**	**2.1**	**2.1**
	SPAIN	2.5	3.4	3.7	2.9	2.7	2.9
ANE	**EMU**	**1.7**	**7.0**	**3.1**	**2.2**	**1.3**	**1.8**
	SPAIN	4.2	8.7	5.8	6.0	5.0	4.6
ENE	**EMU**	**13.0**	**2.3**	**-0.6**	**3.0**	**3.6**	**1.2**
	SPAIN	13.3	-1.0	-0.2	1.4	3.1	-0.1
RESIDUAL	**EMU**	**7.5**	**4.4**	**1.1**	**2.6**	**2.5**	**1.5**
	SPAIN	2.5	3.5	2.6	3.6	4.1	2.1
HICP	**EMU**	**2.1**	**2.3**	**2.3**	**2.1**	**2.2**	**1.9**
CPI	**SPAIN**	3.4	3.6	3.1	3.0	2.9	2.7

(a) Including tobacco prices
Source: INE, EUROSTAT, IFL & UC3M / Date: June 25, 2004

THE CAPITALISM TO COME:

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Junio 2004

CHAPTER II.2.: TRANSACTION COSTS AND INFORMATION PROBLEMS

II.2.0 Introduction

II.2.1. Transaction costs

II.2.1.A. Incomplete markets
II.2.1.B. Outsourcing

II.2.2. Information problems

II.2.2.A. Incomplete markets again
II.2.2.B. Transparency

Summary

SUMMARY

In this chapter, we have examined the consequences that the evolution of transaction costs and the proliferation of asymmetric information can have for the CAPITALISM TO COME. Both notions are rich in implications so the chapter did not place much emphasis on the changes that this evolution and proliferation may experience due to the development both of ICTs and the information society and market globalisation and associated emigration phenomena. In this summary, I will, albeit briefly, attempt to make up of this lack of emphasis.

If we start this summary with the Economics of Transaction Costs associated to the name of Nobel Prize winner R. Coase, we must remember that with no transaction costs, social costs and private costs are the same, and that the continuous improvement of ICTs will foster reduction of these transaction costs so that, following Stigler and totally in line with the Chicago school, it will be increasingly certain that monopolies will be forced to act as if they were really perfect competitors[1]. In general, transaction costs are positive, because they respond to the need to compensate for a lack of mutual trust, and

it is not easy to see how ICTs will be able to increase this factor. As globalisation progresses, there are greater possibilities of different identity-based networks proliferating and mutual trust is not easy to guarantee; ICTs will rather provide the possibility of creating and undoing networks with different degrees of mutual trust and more or less transaction costs between their members. We therefore have to hope that the creation of markets is not an irreversible movement. The outsourcing phenomenon will thus not be irreversible. Once again, this coming and going of the markets is like weaving and undoing networks, as I explained in the article quoted in the last footnote.

ICTs will be playing a very important role in the context of the Economics of Information, a very important field inaugurated by the three 2001 Nobel Prize winners: Akerlof, Spence and Stiglitz. The signalling to which Spence referred will become less important and the screening identified by Stiglitz to mitigate the problem of asymmetry arising from signalling, will become less necessary. This double movement will bring significant changes in what are now familiar institutions such as rating agencies, for instance. Similarly, the adverse selection phenomenon, promoted by the asymmetry of information between buyer and seller, will tend to be less severe, and the institutions mitigating this phenomenon, such as specialised dealers or quality certifiers, will become less important. On the other hand, the advantages occasionally associated to the lack of transparency will continue to exist however much ICTs improve. And they will never be able to provide information that is not available.

II.2.0. INTRODUCTION

In the previous chapter, we were able to realise, even though it was not explicitly mentioned, that the capitalist economic system is not fully defined in all its details. We saw how the conceptual advance known as the Incentive Revolution was necessary for us to realise that private ownership is essential for markets, and therefore the capitalist system, to operate correctly. Likewise, many of the experiments, some successful and some not, which keep capitalism alive and kicking have to do with extensions or reductions of the scope of ownership rights, as we showed in the different sections of the previous chapter when we referred to intellectual property or science. The rebellious, experimental and innovative nature of capitalism also owes a great deal to another two conceptual revolutions, the Transaction Cost Revolution and the Information Revolution, both of which have opened many interesting roads in the exploration of the characteristics providing capitalism with eternal youth, something that will never combine well with conservative trends.

Each of the two sections in this chapter is related to one of these revolutions, or rather with aspects of them which help us to underline what appear to be the most striking features of the CAPITALISM TO COME. On the one hand, both transaction costs and information problems are the source of the constant evolution of capitalism, since they determine, or help to determine, the changing border between business activity and market activity, the distribution of work and the number of markets operating.

Since the future of firms, the market and the State will be examined in detail in the third part of THE CAPITALISM TO COME, this chapter will only consider some partial aspects of this future, related to the power of ICTs or the availability of information. Information and technology will eventually smooth out some of the features derived either from lack of information, or its asymmetry (in as much as ICTs will mitigate these shortcomings), or from the existence of transaction costs (in as much as ICTs will alter their impact on different activities in unpredictable ways).

In the first section, we will be studying some problems related to transaction costs, which have to do with aspects contemplated in the previous chapter: the creation or closure of markets, or the interminable game of outsourcing and insourcing. In the second section, we will be considering how information problems can present paradoxes that have to be clarified if we are to obtain a more accurate idea of what the economic system in which we are going to live will bring.

II.2.1. TRANSACTION COSTS

As it is not usually included in conventional syllabi, and it is not explicitly referred to in most economic policy discussions, even though it is a central aspect, the notion of transaction costs is not much used, although we cannot escape from it, as shown when we referred to Hart in our remarks on the economic theory of ownership in the previous chapter[1].

It is therefore worth mentioning the origin of what came to be known as the Coase Theorem, from which the importance of transaction costs is derived by omission. According to Coase: *Whether a newly discovered cave belongs to the man who discovered it, the man on whose land the entrance to the cave is located, or the man who owns the surface under which the cave is situated is no doubt dependent on the law of property*[2]. Who it should belong to, that is the ultimate justification of rights of ownership, is something that Hart studies in Coase's wake. Coase continues: *But the law merely determines the person with whom it is necessary to make a contract to obtain the use of the cave. Whether the cave is used for storing bank records, as a natural gas reservoir, or for growing mushrooms, depends not on the law of property, but on whether the bank, the natural gas corporation or the mushroom concern will pay the most in order to be able to use the cave*[3].

In Chapter 7 of the book he published in 1988[4], Coase explains that he used this argument in the same article to analyse the Sturges v. Bridgman case in which a doctor was complaining about the noise and vibrations from a confectioner's machinery next door. According to Coase: *whether or not the confectioner has the right to produce noise or vibrations, that right will finally be acquired by the party for whom it is the most valuable.* Quoting himself, he concludes that: *the delimitation of rights is an essential prelude for market transactions… the ultimate result (which maximises the value of production) is independent of the legal decision*[5]. This is what, following Stigler[6], we have learnt to call the Coase Theorem. For generations of students, it means that it is irrelevant who has to pay for a negative externality because, whoever is responsible, production will eventually reach an appropriate level. Whoever is legally liable for the noise affecting the homes near an airport, whether it is the airline or the owner who built the house at that location (this is a canonical kind of example), influences the equity of distribution, but is irrelevant for efficiency. If there are no transaction costs, the allocation of noise (its production) will be optimal, independent of the allocation of rights, so in familiar terminology the social cost will be equal to the private cost. Coase's is a classic argument and makes exemplary use of one of the most important conceptual categories of economic theory, opportunity cost. *Social cost is the greatest value that production factors will generate in an alternative use* (opportunity cost*). Producers, who are normally only interested in maximising their own incomes, are not concerned with social cost and will only undertake an activity if the value of the product of the factors employed is greater than their private cost (the amount that these factors will generate in their best alternative use* – opportunity cost again-). *But if private cost is equal to social cost, it follows that they will only engage in an activity if the value of the product of the factors employed is greater than the value that they would yield in their best alternative use* (opportunity cost). *That is to say, with zero transaction costs, the value of production would be maximised*[7] (the underlining is mine). However, when transaction costs are not zero, allocation of rights is important for efficiency and its level and evolution are at the origin of the history of economic institutions. Bearing all this in mind, we will now consider how we can expect the market to evolve.

II.2.1.A. Incomplete markets:

What happens when the market system is not complete, and this is a notion we will need to define, will be analysed in detail in the third part of THE CAPITALISM TO COME. Here, I will merely be providing some introductory ideas.

i.- I will begin by showing, in view of relatively recent events, that the market is

not a natural phenomenon, but has developed over time as transaction costs have evolved[8].

For twenty odd years or more, widespread public opinion appears to see the market as a nature park recovering after an environmental disaster. This has doubtlessly been reinforced by the gradual development of the EU to its present 25-member status, and the forces that the perestroika once released in what was the Soviet Union and continue to operate in what is now Russia. In both cases, the saving force of nature would put an end to the destructive force of civilisation, either as rusty borders or obsolete centralism. But the institution that we call market, as the briefest look at history will tell us, is a phenomenon of civilisation, and not a natural phenomenon. In fact, in simple terms much like a parabola, we can describe history up to market economy as the history of the replacement of instruments correcting a lack of vertical trust by other instruments correcting a lack of horizontal trust. We will now see that what we call transaction costs are the costs we have to incur to mitigate the harmful effects of the absence of that mutual trust that we called fraternity in the third chapter of Part I.

At the beginning of this parabola, the allocation of goods and services is basically vertical, with the feudal lord providing his subjects with what we would now call social services (merely physical protection at the time), with those subjects in turn providing the lord with luxuries and the lord and themselves with necessities with highly limited horizontal (or market) trading, since family units were practically self-sufficient. The costs of this vertical system (which we would describe as regulated) are very large in relation to the output and they consist of the maintenance of an army, without which the vertical trading we have described would probably not be possible, since the lord would not trust its subject's enthusiasm for taxes and the subjects would have no faith in the lord's promise of protection.

The situation changes at the end of my parabola. Most goods and services are traded horizontally (via the market) based on a fine distribution of labour, with relatively little vertical trading limited to the provision of social services. The costs of this horizontal system (which we would call a free or market system) are small in relation to the output and consist of the resources required for the judicial system to allow trading to take place, in spite of each individual's limited confidence in receiving payment, and to mitigate somewhat the most striking and extreme forms of poverty.

Even though the costs of the horizontal system are, as a percentage of the output, lower than those of the vertical system, they are enormous in absolute terms, clearly showing that the market, or the market economy and, or course, CAPITALISM, is not natural, but something that has been achieved with effort. As a corollary, this also explains why international markets are much more sophisticated and specialised, but less developed, than domestic markets. The reason is that, either because of irrational prejudice or the lack of information to which I will be referring in the following section, mutual trust between nations is much more limited than within a nation and, consequently, international markets are much more expensive to maintain than domestic ones, so they tend to concentrate on easily identifiable products, and are operated by highly specialised economic agents.

This way of contemplating transaction costs as the costs involved in mitigating a lack of mutual trust, is not only an introduction to the ideas associated to incomplete markets, but also a revealing way of interpreting the relatively recent events to which I have just referred.

In fact, in my opinion these elementary ideas bring some light on the discussions that took place on the construction of Europe or the "deconstruction" of the Soviet Union, or even Russia itself. In the latter case, the administrative imitations of the market made no distinction between nations (Republics) and domestic trading. Although this could be due to a well intended desire to create a single new Soviet citizen, it results in the cost of these market imitations being greater than they would have been if trading between nations had been limited to specific well-defined products. If I am right, the solution to the

Soviet Union should not have consisted of merely allocating property and allowing the market to operate, but should have distinguished between markets inside Republics, still to be developed, and markets between Republics created as imitations of international markets. Events do not seem to have contradicted this analysis.

Let us now turn to Europe and the desired construction of the EU and its single market. Although powerful and long-seated nationalisms make it difficult to refer to European citizens, in spite of the coming Constitution, the international markets have been perfecting themselves for so long that the situation is just the opposite to the Soviet Union or Russia. These international markets are so highly developed in Europe that, even without a complete single judicial system, which is still under development, the cost of mitigating distrust has fallen so much as a percentage of the value of the products traded, that they can hardly be distinguished from domestic markets. If this analysis is correct, although the famous cost of a Non-Europe that was so much discussed could have been large in absolute terms, it was not a good argument for the rapid construction of Europe. It was more like political propaganda intended to fulfil other purposes.

Let us also consider the construction of Europe with 25 members, and more specifically the enlargement process involving ten Eastern European countries which, to a certain extent, are the point of contact between Europe, Russia and what is left of the Soviet Union. In view of these ideas, the development of these countries should not be based on trade with Europe, Russia or other ex-Soviet nations, but on strengthening their respective internal markets. Otherwise, we will soon be talking about the cost of a 25-member Europe, and not in rhetorical discussions but as an actual economic cost, required to mitigate the distrust that clearly continues to exist both between these countries themselves and between them and the previous 15 members of the Union.

ii.- Leaving this excursus on one side, and returning to our primary concern, after our remarks on transaction costs and the lack of mutual trust, it will not be surprising to find that markets are gradually emerging, that one will disappear every now and then and that we will be contemplating the problems of incomplete markets and the influence of ICTs on all this. We will begin with a more or less formal consideration of the issue of incomplete markets, which we already looked at briefly in the first part. Indeed, in Chapter I.3: Users as intermediaries, I attempted to approach the concept of fraternity based on some simple models revealing some characteristics possibly associated to that notion. They included mutual assurance, that is the optimal distribution of risk among economic agents. We saw then that when there were three products (wheat today, wheat tomorrow if it rains, and wheat tomorrow if it doesn't rain) and they could all be traded today on the market, allocation was optimal and the risk (of receiving less wheat tomorrow if it rains than if it doesn't) was optimally distributed between the two agents in the economic system. We also saw that this optimality would disappear if there were only two spot markets, today and tomorrow. I will now attempt to consider more general aspects of this market structure issue, distinguishing between complete and incomplete versions of this market structure

The set of problems arising from incomplete markets can be fully appreciated in a trading economy, without the additional complications derived from production. We will be referring to this in the second part, but what we want to emphasise now are some of the conceptual difficulties that the lack of markets, presumably due to excessive transaction costs, generate for individual decisions and the notion of equilibrium. In general, we are used to thinking that a commodity is a physical good that will be delivered on a certain date in a certain "state of nature". An umbrella of a certain quality is a good (of which there are, say, L) that is to be delivered on date t (of which we consider from 1 to T, besides taking moment t = 0 as the decision-making date) if it rains (raining being a "state of nature",a notion which can be considered as all encompassing and of which there are, say, S). Therefore, n = LTS is the number of commodities. We therefore consider that each individual, i = 1….I, has a utility function defined on the n-dimensional Euclidean space which also contains the initial endowments of each individual i, her or his consumption decision and prices. When transaction costs are zero, we can imagine that today, t = 0, all[9] the markets are open, both spot and futures , so that today, t = 0, an individual can make all his consumption decisions given his initial endowment and all

prices. However, when transaction costs are not zero the situation is very different, because not all the markets are operating today (t= 0) and there will typically be some futures markets which are closed so I, as consumer, will have to wait for date t, and decide whether to buy an umbrella or not according to the "state of nature".

When market structure is complete, in the sense that n markets are operating on t = 0, consumer i has the same problem as usual: he has to maximise his utility function subject to a single budget constraint which imposes that the value of his initial allocation at the prices known today be no greater than the value of his consumption decisions at those prices. This way of expressing the only budget constraint can be summarised by saying that, when the market structure is complete, the individual can move purchasing power over time (forwards, saving today, or backwards, consuming today more than he can afford) and between states of nature (thus insuring against certain risks, such as rain tomorrow for instance).

Let us now assume that market structure is completely incomplete in the sense that, on each date, there are only spot markets when the state of nature is known. In this case, today (t=0) we have an expected price vector in the n-dimensional Euclidean space according to which we have to make decisions as consumers. Since it is impossible to transfer purchasing power over time or between states of nature, the individual decision now consists of maximising the same utility function as before but now subject not to a single but to TS independent budget constraints.

These two different market structures give rise to two alternative notions of equilibrium. In the first case, we are referring to an Arrow-Debreu equilibrium, which consists of an allocation and a price vector such that each individual is performing the maximisation programme of a complete market structure, and the markets are emptied. In the latter case, equilibrium is periodical, a notion showing that each budget constraint has to be satisfied without them collapsing into one, and this has to be with rational expectations in the sense that prices at t have to coincide with expectations formed at t=0 when programming consumption. In this equilibrium, besides the markets emptying, each individual carries out his own maximisation programme.

We now have to consider how ICTs will influence the evolution of the number of markets. This will immediately lead us to the problem of outsourcing that we mentioned briefly in the previous chapter; but first we should remind ourselves (and we will return to this in Part III), that with incomplete market structure, of which the completely incomplete structure is an extreme example, existence of equilibrium is not guaranteed even in the artificial conditions of the Arrow-Debreu model, and if it were to exist, it would not be Pareto optimal[10]. This sub-optimality has obvious implications for insurance. Risk is not optimally distributed precisely because there are no contingent markets allowing agents to protect themselves against unpleasant contingencies. These markets may arise as the new technologies reduce transaction costs.

II.2.1.B Outsourcing

In view of our remarks in the previous section and the introduction to this part, the outsourcing phenomenon is easy to understand. It refers to when companies cease performing certain functions in their value chain and these functions are performed by another economic agent, usually another company; in other words, they use the market instead of internal production. The reason is obviously that it is more expensive to perform the function internally than to buy it on the market, which only happens when the market exists, possibly because the transaction costs concerned have diminished in relation to the cost of the internal process. A domestic example will be sufficiently explanatory. After the Spanish Civil War it was very common for middle-class families to make use of a seamstress to make routine alterations or children's clothes. Nowadays, there are shops that make alterations and children's clothing is on sale everywhere. The fact is that, following the war, the transaction cost associated to the seamstress was practically zero because of precarious nature of the job; nowadays no-one could afford it.

This example could lead us to think that market proliferation always moves in the same direction, but this is not necessarily the case. We may observe what we would call insourcing phenomena when the market's transaction costs rise due, for example, to the non-guaranteed quality of certain products, in which case it is worth while to go back to performing the function within the productive unit. Continuing with our example, the shops which make alterations could diminish the quality of their work and the immigration associated to globalisation may once again lead to the use of seamstresses in the home.

What should we think of these phenomena? In the first place, that the evolution of ICTs and globalisation will change the relative transaction costs of alternative activities, so we cannot be sure that outsourcing will last for ever, as shown in our domestic example. Secondly, it is by no means clear that the emergence of a new market, as could be the case when there is outsourcing, is a Pareto improvement, with everybody better-off. If we could go from an incomplete market structure to a complete one, the movement would be acceptable because we would be going from a suboptimum to the optimum. However, as some examples show[11], and according to the elementary notions of the second best notion, it is not evident by any means that the appearance of a new market due to changing transaction costs will be a Pareto improvement; everyone could possibly end up worse off. In spite of this theoretical possibility, what we can expect in the immediate future is the proliferation of new general financial markets (including markets for different types of insurance), increasing the possibilities of transferring purchasing power and, therefore, managing risk. When we analyse how ICTs and the abundance of information enable the emergence of markets in further detail in the third part of THE CAPITALISM TO COME, we will pay more attention of the historic opportunity to eliminate much of the risk we support as economic agents in the capitalist system. We will not be referring now to the ideas contained in Schiller's latest book, but we should at least mention how this author sees the emergence of some financial markets which, surprisingly, enable us to cover risks such as, for instance, a certain degree of inequality in the distribution of a country's income, or the market value of a home, the asset which normally exhausts people's ability to save, or even bankruptcy.

II.2.2. INFORMATION PROBLEMS

The Information Revolution is better known than the Transaction Costs Revolution and it has given rise to a booming field of economic thinking, called the Economics of Information, for which three of its founders, Akerlof, Spence and Stiglitz received the Nobel Prize in 2001. It is impossible to do justice here to all its derivations, but we should at least include a few general remarks. Stiglitz provides the following summary of the Economics of Information: "In the field of economics, perhaps the most important break with the past – one that leaves open huge areas for future work – lies in the economics of information. It is now recognised that information is imperfect, obtaining information can be costly, there are important asymmetries of information, and the extent of information asymmetries is affected by actions of firms and individuals. This recognition deeply affects the understanding of wisdom inherited from the past, such as the fundamental welfare theorem and some of the basic characterisation of a market economy, and provides explanations of economic and social phenomena that otherwise would be hard to understand"[12].

To obtain an approximate idea of some of the new perspectives arising from the Economics of Information, it is sufficient to summarise the contribution of these three Nobel Prize laureates, one of which will now be examined in more detail.

Akerlof is the precursor because as early as 1970 he wrote a famous article in the Q.J.E. on the "Market for Lemons"[13] in which he shows how, when the information that the seller has about the qualities of a good is better than the information that the buyer has, as on the second-hand car market when there are no intermediaries, the buyer will only pay the price that corresponds to medium quality, a price that does not satisfy sellers offering a good quality vehicle. So there are no good quality vehicles on the market or

such a market will cease to exist without intermediaries or appraisal experts. Spence[14] expanded on his doctoral thesis in a book in which he dazzled us by showing how there are decisions and institutions that can be understood as a way of overcoming the difficulties caused by asymmetric information. The formal education that I acquire can be considered as a way of showing an employer how productive I am since otherwise he could not distinguish me from other less productive individuals. In 1972, Stiglitz (again in the Q.J.E.) explored the operative problems associated to the securities market when it is incomplete[15]. But it was in 1974 when he published his article on the sharecropping contract (in the REStud this time), the third leg in the Economics of Information revolution[16]. From there on, Stiglitz develops practically the entire field himself, touching all the aspects now recognised as relevant and emphasising the break with the previous paradigm. From his many articles, I would select two which I found particularly illuminating. The first was written with Grossman in the AER in 1980[17], in which they explain the paradox of obtaining information in a stock exchange assumed to be informationally efficient, meaning that all existing information is available through the market. The second was published with Weiss in the AER in 1981[18], in which they show how, with asymmetric information, it is perfectly understandable for banks to ration loans (quantity) instead of increasing interest rates (price), and this was something unprecedented in 1981 for all those who had studied how the market system worked before the information revolution revolution.

Moreover, and besides many other applications including those written with Rothschild on the insurance market[19], he has shown how the introduction of information problems in economic analysis questions the very basics, from the existence of equilibrium to its efficiency properties, and the separation between efficiency and distribution.

II.2.2.A.- Incomplete markets again

We have already seen how non-zero transaction costs can be responsible for the non-existence of some markets and how this can cause serious problems in the allocation of resources. The Economics of Information is another classic example of the non-existence of a market, not because of transaction costs, but because of asymmetric information, as we were shown by Akerlof 25 years ago in the article I have just mentioned and which I will now attempt to summarise.

Akerlof's famous article can be understood in the context of the used car market for which it was designed, but it can also be applied to many other situations or markets. I will attempt to present it here in the context of education, on all its levels, which will also allow me to express some opinions of a sector in which debates between the socialist government and the recently defeated Popular Party may well be bitter indeed. With the new socialist government in power, the issue of education will come to the political forefront, with all the tension between the government and the opposition, between different educational sectors and between civil society and the public sector converging on the issue[20].

Although it may seem irrelevant here, I will start with the first paragraph of chapter 17 of the text by D. Kreps which introduces an idea which, as you will see, is very fruitful: "Imagine an economy in which the currency consists of gold coins. The holder of a coin is able to shave a bit of gold from it in a way that is undetectable without careful measurement; the gold so obtained can then be used to produce new coins. Imagine that some of the coins have been shaved in this fashion, while others have not. Then someone taking a coin in trade for goods will assess positive probability that the coin being given her has been shaved, and thus less will be given for it than if it was certain not to be shaved. The holder of an unshaved coin will therefore withhold the coin from trade; only shaved coins will circulate. This unhappy situation is known as Gresham's law –bad money drives out good".

This well-known Gresham's Law is an example, avant la lettre of what economists now know as episodes of Adverse Selection, a notion which in its modern

version (underlining the asymmetry in the information: only the bearer knows that gold coin that has been shaved) was discussed in Akerlof's work on the second-hand car market. The owner of a used car is familiar with the specific quality of the vehicle, whereas the possible buyer is not, and therefore estimates that there is a positive probability that it is not in good condition, offering a lower price than a similar vehicle in good condition would be worth. The owner of such a car will therefore not take it to the market where only "lemons" will be there for sale. .

In these two examples, we could have gone even further and considered that the possible buyers of coins (used cars) know Gresham's Law (Akerlof's law) and would not approach the market, so the only trading would be barter and the second-hand car market would disappear, thus wasting social resources.

It is precisely the asymmetry of information which is at the origin of social institutions or private business which, with their functions or lucrative activities, can mitigate the waste of social resources. In the case of currency, many States have delegated the monopoly of issuing currency (or "shaving it" by inflationary tax) in a Central Bank (more or less independent from political power) to avoid the race to issue a "worse" currency that would put an end to the fluid trading of goods and services. In the case of second hand cars, some entrepreneurs have seen an opportunity to trade information and have established themselves as dealers who, working on their own account, guarantee or independently certify quality, thus preventing the market from disappearing.

The possibility of brokering information is behind a great many institutions and before we go on to talk about education, it is worth considering another market with obvious asymmetric information, catering. A restaurant owner does the cooking but we eat the food. Since we don't know how he does it, only "poisoners" would remain in the sector, which would eventually disappear. Since there are more restaurants than used car markets, we would not expect to find dealers guaranteeing their quality, or even expert tasters guaranteeing the quality of today's menu, but we would expect to find independent firms classifying restaurants based on a random sample of their culinary services.

To apply Akerlof's ideas to education I suggest we contemplate university education as a means of exchange allowing for fluid trading, secondary schools as used car markets and primary schools as restaurants of uncertain quality. What would we expect if these analogies were correct? What could we do to improve the situation? To continue with the triple analogy, we would expect a devaluated university education, a secondary education with false mileage studying Campoamor as modern literature and primary schools providing trash education.

This may not be a good description of the present situation on the different educational levels, but it does give a good idea of many of the complaints published in the press. I seems time that something positive was done. Let's take a look at how the ideas we have been discussing can help us in our search for solutions. We should start by considering that <u>assessment, inspection and classification</u> are always necessary, although in different degrees for different levels; second, these functions do not have to be performed by the public authorities themselves but by independent agencies or even the market; third, we should wish for competitors in all these fields, all the more the lower the level. This can be achieved in two stages. In the first place, we could pass ministerial or regional functions to an independent agency, at least as independent as a Central Bank, which would be responsible for assessing quality, particularly in universities, inspecting and certifying the current status of teaching, especially in secondary schools, and edit a "Michelin" guide applicable to primary schools. In a second stage, many functions could be privatised just like sworn account auditors were gradually replaced by private firms. There does not necessarily have to be a single National Assessment Agency and it does not have to be public. Official inspectors could co-exist with private auditors and public and private companies could compete in the publication of alternative school guides.

These or other similar institutions arise as substitutes of markets which cannot exit because of the asymmetry of information. This is like the lesson we learned in the previous chapter, in which transaction costs prohibited the existence of some markets leading to interesting social phenomena such as outsourcing, for instance. This is what I wanted to transmit here, but since we are talking about education, I will end by defining some of the advantages of the proposal I have just presented. To start with, it would release a considerable part of the public budget and generate jobs with true added value. This proposal would also possibly give Regional Ministers of Education time to think instead of spending all day solving the educational community's immediate problems. I believe that they would then realise that this initiative has eliminated the incentive for centres on all levels to issue false signals. This is precisely the great advantage of this Independent Agency and its possible dissipation, that the costly signals issued today by schools in order to deceive parents would be reduced given the impossibility of deceiving experts, and they could spend their time improving the aspects of schools which are subject to assessment, inspection or classification.

There are more advantages still. The political cost of classifying universities or university departments would not fall upon the State or Regional Ministry or the University in question. The public/private debate would lose lots of the old virulence that continues to characterise it today. The body of inspectors would no longer have to contemporise with their colleagues and parents would be able to choose a school for good reasons.

II.2.2.B. Transparency

No other concept is more closely related to the information society, ICTs or globalisation than this concept (or even phenomenon) of transparency. As the economic system becomes global, we discover new markets in which it is not clear who the buyers and sellers are and what they are like and it is not even clear how the regulator works in the case of more or less regulated markets such as, among others, the stock market that is so close to the heart of popular capitalism. Fund managers would like to be as familiar with Japan, Latin America or the U.S. as well as they are familiar with Europe and its stock markets. They only invest in these markets as they learn more about the firms concerned; in the meantime, they either invest in other funds that they assume are familiar with these markets, or they do not start by investing in variable income funds but in public bonds, since it is easier to learn about a country's economic situation. Countries are observed by the IMF and their reports are public. It is easier to harmonise accounting differences between countries than between the firms established in those countries.

If globalisation presents the problem of transparency, ICTs could apparently help to solve it, but they are unable to respond to the difficulties mentioned in the previous paragraph, because all they do is publish what is already known. Since information can never be complete, when we refer to transparency we are expressing a well-intended desire for the publication of a great deal of information. This desire has increased considerably in view of the corporate scandals at the turn of the century, all of which were related to the lack of information on certain corporate aspects making it impossible to know the precise situation of the firms involved. This is clearly a very important aspect of capitalism, which is why the reactions were especially related to harmonised accounting and corporate report quality.

All these difficulties affecting popular capitalism have to do with transparency; but the defence and salvation of popular capitalism does not depend on transparency alone. Within the economics of information, this notion gives rise to the question of its possible harmful consequences. However, before examining concrete examples in which an excess of transparency is not good, it is worth contemplating a few general considerations, both economic and cultural in nature, which appear to be pertinent to obtain a correct idea of the capitalism to which we are galloping on the back of the ICT horse, and the greed for information which is behind the demand for transparency.

More information is better than less. This may seem like common sense, but in this case it is deceitful, just like the argument, also based on common sense, according to which a centralised economic system is better than a decentralised one because it can always operate in the same way as the latter. In this case, common sense was wrong because it did not consider the problem of the incentives of the people in charge of the centralised system, who may be more interested in themselves than in the common good. Something similar may occur with transparency.

The specific demand for transparency to which I am referring arose at a specific time and in a specific way. A long list of North American firms, generally associated to the *New Economy,* including Enron, Xerox, Tycho, Worldcom and a few others, succumbed to a varied range of temptations to be creative (fraud, minor changes to the accounts, questionable expenses associated to stock options, etc.), leading to the immediate dismissal of their executives, widespread distrust of the ethics of boards of directors, doubts concerning the technical skills of analysts, auditors accused of connivance and the ultimate confirmation of the danger of conflicts of interest in investment banking. And all this occurred in the birthplace of capitalism, the United States, and the collapse of its stock market infected stock markets all over the world. But if we are to obtain an in-depth understanding of this specific origin, it has to be seen in an overall cultural framework.

To start with, the emphasis on transparency in collective life forms part of postmodern sensitivity. In modernity, the interrelated activity of the individuals in a society is contained by the State, as an external shell preventing disorder, and individual psychological structure is in turn ordered by a super ego (an imitation of the State) which smoothes the tensions between contradictory trends and can also be seen as an outer shell preventing chaos. In postmodernity, however, neither the State nor the super ego are acceptable life controllers; instead of shells we want to develop bone structures capable of both preventing overspill and avoiding authoritarianism from outside. Internally, we reach compromises between our contradictory desires and establish simple rules of thumb, and externally we establish institutions conditioning our choice and activities, institutions that are accepted by everyone until other more useful institutions arise. The substitution of the shell by the skeleton is merely a metaphor representing how we overcome the separation between the outside and the inside, perfectly understandable when there is a shell separating the two, but less so when the complexity of life is not stored in a shell but sustained by a backbone. Show business society, so clearly characterised by Guy Debord a few years ago, transparencies in female apparel which, rather than revealing curves, uncover the bones of anorexic models, and the success of the reality show Big Brother, in which home is no longer the last refuge for privacy, are only three postmodern examples of the problems arising from the relationship between inside and outside, private and public. All three of them can be seen as the live dramatisation of the skeleton-forming process, the creation of rules of thumb and the institutions keeping order in social life without the need for a higher authority[21]. I have anchored the demand for transparency against a postmodern cultural background in order to better understand some of the manifestations of that demand that are of most interest when relating transparency to popular capitalism.

Let us now consider three very important fields in which transparency has been totally lacking. In the political world, the real relationships between the three levels of power are not known in all their details. In the Economic Policy field, some believe that the legal autonomy of a Central Bank is merely a way of disguising the usual dependence, so it would be a good idea to publish the minutes of each meeting with the individual opinions of the members of the Central Bank's governing body. In the business world, practically nobody continues to believe that annual reports or shareholders' meetings explain how decisions are reached and who are the shareholders who really control, and we are beginning to appreciate the details which some firms provide by presenting their results to investment bank analysts. The driving force behind these three manifestations of the demand for transparency is praiseworthy, but is transparency really useful? Is it useful for everyone?

We can start to answer these questions if we examine a series of institutional arrangements which are very close to transparency, allowing for the application of a

minimally sophisticated economic analysis. We will first consider the two aspects of what is been given the name of *unbundling*. In its political aspect, the idea is to *unbundled* the programmes of political parties and consider concrete issues, to avoid having to vote for a group of issues, some of which we favour and some of which we don't . It is as if I were forced to buy groups of goods without giving me the opportunity to buy each one separately. In fact, the economic aspect of *unbundling* is associated to this problem and prefers each good being sold separately, not only because of freedom of choice but especially because it would be more efficient, meaning better for everyone. Why do I have to buy shares in a motorway instead of separately buying shares in a building firm, a maintenance company, a toll management concern, a bank and an associated recreational area management enterprise? Certainly I should be able to organise the risk associated to my portfolio, but it is no less certain that, on the one hand, *unbundling* knows no limits (the construction firm, for instance, is a team of people, heavy machinery and a series of influences, and each of these in turn…) and, on the other, having ready-made risk packages may be as desirable as the success of investment funds appears to confirm. Similarly, it is perfectly conceivable that political programmes exhibit this particular characteristic of rebalancing the risks derived from separately approving issues which may turn out to be contradictory.

Secondly, consider the assemblyism typical of political movements which aim at being more than bureaucratic parties. Here again, we must doubt the correct initial impulse and restrict it. What economic analysis tells us in this case is that assemblyism is one of the easiest decision-making mechanisms for a potential dictator to manipulate: despotism and populism are found together too often for us to question the virtues of assemblyism. I would dare to insinuate that this strange impulse that arises in some assemblies, which end up treating generals like emperors and the latter like gods, is at the origin of the elevation of Central Banks to the category of seats of wisdom. It is only later that we realise that the members of their governing bodies may have personal, regional or state interests and demand transparency by publishing the minutes of their meetings. But once again, economic analysis demands a serious consideration of this issue, because if the members of the governing body know that their opinions are to be published, they may not be completely frank and end up by generating an opinion backing an unfortunate monetary policy.

Transparency, *unbundling* and assemblyism share an impulse which appears to be at the origin of a double and simultaneous renewal, of both capitalism and democracy. For capitalism to preserve the market's enormous creativity, it is necessary to unbundled packages, as prudently as is required, improving the information provided by firms and defining the technical skills of the regulators. Only in this way will a popular capitalism flourish to foster new growth by the massive channelling of popular savings to more promising projects than merely financing the public deficit. For this capitalism to keep on track, there are some issues, besides ideological or purely party aspects, which regular citizens can decide without the need for intermediaries, prudently refraining from seeing regulators as above all suspicion. But this has to be put into practice gradually, in order and studying each individual case. From what we have said so far, it is clear that the issues usually related to transparency are important, but questionable. It is by no means clear that Central Banks need to go from hermetism to exhibitionism; it is not clear that company reports have to disclose intimate details; it is not clear that auditors should specify ridiculously minor reserves; it is not clear that political parties have to be replaced by NGOs or become movements. What should be quite clear is that these are all open problems that we cannot ignore. If we do not face them with courage, entrenched in old attitudes, we will fall into the hands of well-intentioned righteousness or obsessive purists who, although there is a place for them in the renewal of society, are neither essential nor the saviors of civilisation. There should be no call for action until ideas have been carefully pondered.

Let us consider, for instance, the major efforts made to improve accounting systems and increase transparency. Accounting is like cartography; neither are capable of simultaneously showing all the details in which we are interested. In cartography, this is obvious. Depending on the type of projection used to represent a sphere in two

dimensions, some of its properties will be shown but others will not. We can decide to represent distances correctly or disguise them in order to provide a true representation of the relative size of countries. I suspect that in the end, the maps used are those chosen by the most powerful countries as, for instance, we are used to seeing maps on which the U.S. is much larger than Brazil. The case of accounting is similar. In many cases, we can choose how we record certain operations and the final choice will depend on the use to be made of the information. I fear that the use to be made of the available alternatives, all of them possibly legal, will depend on who the boss is. If the executives have their way, stock options will not appear as expenses, whereas shareholders would prefer them to be recorded as such.

But let's leave maps on one side and concentrate on accounts. Let us consider the possible practical impact of accounting practices by examining how goodwill is managed. In Europe, and certainly in Spain, it is entered as an asset valued at purchase price, and gradually depreciated, although this can be a one-off operation. In the U.S. it is not depreciated; each year it is entered in the accounts according to the market price of the corresponding asset, with the fall or growth in the market price concerned being classified as a loss or a gain. There was a time when Spanish firms could have done with the US GAAP, but they were later pleased with the European accounting convention. According to the latter, Telefónica, for instance, earned a profit in 2001; according to the American rules, it operated at a loss. The saviours of capitalism who appear in large numbers to change things when things are not going so well for them, appear to be unaware of the fact that it is impossible to guarantee objective accounting and they attempt to pass legislation penalizing the lack of objectiveness which so systematically ails them.

Let us consider a disturbing example of how good will is handled with generally accepted U.S. accounting principles. According to these principles, the accounts of firm A should reflect the market value of its share in firm B, so that the stock market value of the second company has an impact on the stock market value of the first. Let us now imagine that they each hold shares in each other. It is easy to see that they could both fall together in a recessive non-converging movement: A is worth less because its shares in B have fallen for some reason, but this reduction in the value of A reinforces the initial fall in the value of B which, in turn, diminishes the value of A. This has nothing to do with the objective value of either of the two firms and it is precisely because it is only the effect caused by an accounting practice that investors will eventually detect the bargain and put an end to the downward process. Indeed, in a capitalist market system, corporations are worth what their shares are worth and no accounting system is capable of reflecting such a value. If a CEO finds an attractive way of "laundering" accounts, compatible with auditing criteria and transparent for analysts (presumably), the value of the corporation may rise and no-one can claim that this is not its true value. What is the difference between marketing and account laundering? The search for objectiveness is as crazy as the search for the absolute. Self-regulation can and must establish standards; but there will always be new account management systems and new marketing ideas. To penalise creativity in either of these two fields is plain wishful thinking. It is surprising, then, to find that the self-appointed saviours of the system aim, as more than a few political leaders seem to show, at a capitalism with clearly defined rules and no tricks. Those of us who believe in the market, however, know that capitalism is the best available system <u>because</u> we are creative and like tricks. If this were not the case, and if we did not give in to greed, nearly any economic system would be as efficient as capitalism and some of them would be much fairer.

If there is any difference at all between the right and the left it is that the latter continues to think that man is good, whereas the former has accepted some time ago that man is a fallen angel who lies and deceives quite blatantly. It is not surprising to find, in the field of economics, that the right has been quicker to accept the incentive revolution; but this right involves a series of very different trends. The first corresponds to those who trust in voluntary changes to market freedom and the second to those who trust in the prophylactic power of markets if we would just let them operate. Today's left and the activist right will join forces to impose standards, toughen penalties, invent new crimes, establish exemplary punishments and do penitence the best they can, attempting to save

capitalism. But these heroic saviours mistake the system's pre-requisites with its essence and, in their enthusiasm, they do not realise that the competition and creativeness which characterise capitalism are also applicable to the pre-requisites themselves. It is true that no market system can work properly without rules and legal security; but the essence of the system consists of incentives to break the rules and change even the morals. Did the Church not finally accept agitate?

The problem facing the defenders of capitalism is how to handle incentives in order to become wealthy without at the same time closing the doors on creativity; this is a genuine problem for which these saviours offer no more than hurried and simplistic solutions like transparency. That this is no trivial problem should be quite clear; but to make things worse, it may be interesting to pay attention to three interesting economic situations: the formation of monetary policy, the agency relationship and the stock market.

Let us begin with a Central Bank's monetary policy. We know that the dynamic inconsistency of the discretionary monetary policy of a government which wishes to improve the economy to create employment generates an inflationary bias that can only be reduced by leaving monetary policy to an independent Central Bank in which anti-inflationary policy is a dominant strategy. However, since the public is not sure of the Central Bank's preferences, it has to earn a reputation of being decidedly anti-inflationist, and this is no easy task. The firmer this reputation, the lower the inflationary bias; but how solid a reputation is can be influenced by transparency, as Petra Geraats has recently shown. If the Central Bank publishes its forecasts based on the observable economic policy variable, that is the interest rate, this signal becomes more precise in relation to the Central Bank's preferences, which thus enhances its reputation and therefore reduces inflationary bias. If the Central Bank only publishes forecasts, without basing them on interest rate values, this variable will be a less precise signal and both the Bank's reputation and its ability to reduce inflationary bias will suffer. We can therefore conclude that although transparency (identified here as the publication of the Central Bank's forecasts) is good, if the inflation rate and output forecasts do not indicate explicitly the interest rate values intended to engineer , this variable is no longer capable of influencing the Bank's reputation and, therefore, its ability to reduce inflationary bias. The moral of this story, informally expressed, is that if a Central Bank is going to be transparent, it has to really inform of its nature, preferences and intentions in an unambiguous manner.

Now let us consider the agency relationship which, with reference to transparency, Andrea Pratt has examined in an article rich in implications, but which we can only examine here with a view to insisting on the idea that transparency is a delicate question in which we cannot categorically affirm that the more transparency the better, although this would appear to be common sense. As the principal in an agency relationship, by transparency we are able to learn both what action the agent has taken and the result obtained. The principal would prefer only to learn of the result, without knowing what has been done to obtain it. Intuitively, the reason is that if he is also aware of the action and the agent knows this, the agent will only act as a conformist to avoid being penalised for operating otherwise. This will lead him to fail to process some signals and finally, the principal will not know who the agent is, in which case there will not be an appropriate contract and, consequently, this will reduce the efforts of the agent as demanded in such a contract.

Finally, we will examine a surprising result due to M. A. de Frutos and C. Manzano in their work on transparency in a stock market which can be centralised (transparent) or fragmented (opaque). In the first case, which would be a variable income market such as the Madrid Stock Exchange, for instance, trading prices are public so that intermediaries are aware of the prices offered by their competitors. In the second case, an example of which could be the American treasury bond market, agreements are often bilateral, so intermediaries have no way of knowing whether they are in line with their competitors or not. From the investor's perspective, it is easy to see that fragmentation, or lack of transparency, holds more advantages. The reason is that market makers are interested in not making mistakes relating to the transactions they expect to perform

because this diminishes their operating costs. This is simple when the market is centralised and therefore transparent, because it is easy to improve conditions only marginally when more operations are required to balance the accounts. However, if more orders are needed and the market is fragmented, and therefore less transparent, the market maker can only succeed by offering the investor aggressively better conditions.

These three examples end this chapter. They are a sample of the many paradoxes arising when we open Pandora's box of information-related problems. We should no longer be surprised to find that more information may do more harm than good.

NOTES

[1] We were referring to the book published by O. Hart in Oxford University Press in 1995
[2] See Coase (1959)
[3] This quote is taken from chapter 7 of his 1988 book, translated into Spanish in 1994, as mentioned in the bibliography
[4] See Coase (1988)
[5] See Coase (1988)
[6] See Stigler (1966)
[7] See Coase (1988)
[8] See Urrutia (1992)
[9] It is interesting to note that when this is the case there are no externalities and the social cost is the same as the private cost.
[10] See the examples provided in Hart (1975)
[11] The examples to which the previous note refers.
[12] See Stiglitz, I. (2000)
[13] See Akerlof (1970)
[14] See Spence (1974) which contains his prevous 1973 article where there is an article prior to 1973
[15] See Stiglitz (1972)
[16] See Stiglitz (1974). We should also mention, since it is important for the development of Economics of Information, his 1975 work on Screening, a kind of response to Spence's Signalling, with which workers, whose productivity is unknown, choose one of another contract from the Screening mechanism.
[17] See Grossman and Stiglitz (1980)
[18] See Stiglitz and Weis (1981)
[19] See Rothschild and Stiglitz (1976), as the most important of them.
[20] The following is an adaptation of an article published in El Correo in 1991.
[21] This is particularly true of Big Brother, a television reality show which is fascinating precisely because it allows us to observe how sense emerges from an incomprehensible initial "primal soup".

REFERENCES

Akerlof , G.A. (1970): "The Market for Lemons: Quality Uncertainty and the Market Mechanism", Quarterly Journal of Economics

Coase, R.H. (1959): "The Federal Communications Commission", The Journal of Law and Economics, 25, October.

Coase, R.H. (1988): The Firm, the Market and the Law, University of Chicago Press. Translated into Spanish as La Empresa, el Mercado y la Ley, Alianza Editorial, 1994.

Frutos, M. A. and C. Manzano (2002): "Risk Aversion, Transparency and Market Performance". Journal of Finance.

Geraats, P. M. (2000): "Why adopt transparency? The publication of Central Bank Forecasts" CEPR Discussion Paper Series. Nº 2582

Grossman, S. J. and J. E. Stiglitz (1980): "On the Impossibility of Informationally Efficient Markets", American Economic Review.

Hart, O. (1975): "On the Optimality of Equilibrium when markets are incomplete", Journal of Economic Theory.

Hart, O. (1995): Firms, Contracts and Financial Structure, Oxford University Press

Kreps, D. M. (1990): A Course in Microeconomic Theory, Harvester Wheatsheaf

Pratt, A (2003): "The wrong kind of transparency", CEPR Discussion Paper Series, nº 3859.

Rothschild, M and J. E. Stiglitz (1976): "Equilibrium in Competitive Insurance Markets; An Essay on the Economics of Imperfect Information", Quarterly Journal of Economics

Shiller, R. J. (2003) The New Financial Order. Risk in the 21st Century. Princeton University Press

Spence, A. M. (1974): Market Signalling: Information Transfer in hiring and related processes, Harvard University Press.

Stiglitz J. E. (1972): "On the Optimality of Stock Market Allocation of Investment", Quarterly Journal of Economics.ç

Stiglitz J. E. (1974): "Incentives and Risk Sharing in Sharecropping". Review of Economic Studies.

Stiglitz J. E. (1975): "The Theory of Screening, Education and the Distribution of Income". American Economic Review.

Stiglitz J. E. and A. W. Weiss (1981): "Credit Rationing in Markets with Imperfect Information", American Economic Review

Stiglitz J. E. (2000): "The Contributions of the Economics of Information to Twentieth Century Economics," Quarterly Journal of Economics

Stigler, G. J. (1966): The Theory of Price, 3rd edition, McMillan

Urrutia (1991): "Sobre Universidades, Ikastolas y otros cacharros". El Correo

Urrutia (1992): "El mercado como fenómeno de civilización", El Correo

Urrutia (2003): "La lógica de la abundancia I: La Potencia de Internet" en Economía en Porciones, Prentice-Hall.

TABLES & PLOTS

TABLES:

- A1A: Spanish CPI desaggregation.
- A1B: EMU HICP desaggregation.
- A1C: USA HICP desaggregation
- A2: Europe forecast errors for euro-zone and Monetary Union countries.
- A3: HICP Europe forecast errors by sectors in Monetary Union.
- A4A: Harmonized Consumer Price Index (HICP) Annual Growth Rates for 2003,2004, and 2005 for EMU. countries.
- A4B: Harmonized Consumer Price Index (HICP) Annual Growth Rates for 2003,2004, and 2005 for EMU countries.
- A4C: Harmonized Consumer Price Index (HICP) Monthly Growth Rates for 2003,2004, and 2005 for EMU countries.
- A4D: Harmonized Consumer Price Index (HICP) Monthly Growth Rates for 2003,2004, and 2005 for EMU countries.
- A5A: Harmonized Consumer Price Index (HICP) Annual Growth Rates by sectors for 2003,2004, and 2005 for EMU.
- A5B: Harmonized Consumer Price Index (HICP) Monthly Growth Rates for 2003,2004, and 2005 for EMU.
- A6A: US CPI Annual Growth Rates for 2003,2004, and 2005.
- A6B: US CPI Monthly Growth Rates for 2003,2004, and 2005.
- A7A: Spanish CPI Annual Growth rates for 2003,2004, and 2005.
- A7B: Spanish CPI Monthly Growth rates for 2003,2004, and 2005.

PLOTS:

- A1A: HICP monthly growth rates in EMU.
- A1B: CPI monthly growth rates in US.
- A1C: CPI monthly growth rates in Spain
- A2A: Annual Forecast For The EMU Inflation
- A2B: Annual Forecast For The USA Inflation
- A2C: Annual Forecast For The Spanish Inflation
- A3A: Year-on-year rate of EMU inflation and contributions of main components.

TABLE A1A

METHODOLOGY: ANALYSIS OF SPANISH INFLATION BY SECTORS

BASIC COMPONENTS AGGREGATES	BASIC COMPONENTES	BASIC COMPONENTS AGGREGATES
IPSEBENE *82.284%* **1 + 2 +3 +4 + 5** **BENE** *48.230%* **1 + 2 + 4** **AE** *17.175%* **1 + 4** CORE INFLATION IT IS CALCULATED ON THE IPSEBENE INDEX	**(1) AE-X** *13.731%* processed food excluding fats and tobacco CPI. **(2) MAN** *30.053%* non-energy industrial goods CPI **(3) SERV-T** *33.815%* services excluding packages tourist CPI **(4) X** *3.046%* fats and tobacco CPI **(5) T** *1.149%* tourist packages CPI **(6) ANE** *9.398%* non-processed food CPI **(7) ENE** *9.142%* energy CPI	**BENE-X** *43.784%* **1 + 2** **IPSEBENE-X-T** *77.599%* **1 + 2 + 3** **R** *22.404%* **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 = 0.13731 **AE-X** + 0.30153 **MAN** + 0.33725 **SERV- T** + 0.03046 **X** + 0.01149 **T** + 0.09398 **ANE** + 0.09142 **ENE**		**(weights 03)**

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

Methodology: *Analysis of EMU inflation by SECTORS*

BASIC COMPONENTS AGGREGATES		***BASIC COMPONENTS***
IPSEBENE *84.178%* **1 + 2 +3 + 4**	**BENE** *42.845%* **1 + 2 + 3**	**(1) AE** [(a)] *9.463%* *HICP Processed Food* **(2) TOBACCO** *2.373%* *HICP Tobacco* **(3) MAN** *31.009%* *HICP Non Energy Industrial Goods* **(4) SERV** *41.334%* *HICP Services*
CORE INFLATION *(IT IS CALCULATED ON THE IPSEBENE INDEX)*	RESIDUAL INFLATION *15.822%* **5 + 6**	**(5) ANE** *7.689%* *HICP Non processed Food* **(6) ENE** *8.133%* *HICP Energy*
IPCA = 0.09463 **AE** + 0.02373 **TOBACCO** + 0.31009 **MAN** + 0.41334 **SERV** + 0.07689 **ANE** + 0.08133 **ENE**		

(a) To date the aggregate AE, following Eurostat methodology, included tobacco prices. From now on, our definition of AE, processed food, is more accurate and does therefore not include tobacco prices.

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

Methodology: *Analysis of USA inflation by SECTORS*

BASIC COMPONENTS AGGREGATES		*BASICS COMPONENTS*
CORE CPI *78.54%* **1 + 2 +3+4+5**	**SERVICES LESS ENERGY** *56.28%* 1+2	**(1) OWNERS' EQUIVALENT RENT OF PRIMARY RESIDENCE** *23.38%* **(2) SERVICES LESS OWNER' EQUIVALENT RENT OF PRIMARY RESIDENCE** *32.90%*
	COMMODITIES LESS FOOD AND ENERGY 22.25% 3+4+5	**(3) TOBACCO** *0.81%* **(4) NON DURABLES LESS TOBACCO** *10.17%* **(5) DURABLES** *11.28%*
RESIDUAL CPI *21.46%* **6 +7 +8 +9**	ENERGY *7.08%* **7 + 8+9**	**(6) FOOD** *14.38%* **(7) GAS** *1.17%* **(8) ELECTRICITY** *2.43%* **(9) MOTOR FUEL AND FUEL OIL** *3.48%*
HIPC =0.5628(SERV. – ENERGY) + 0.2225(COMM. - FOOD AND ENERGY) + 0.1438FOOD + 0.0708ENERGY		

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

Table A2

FORECAST ERRORS IN THE MONTHLY INFLATION RATE FOR MAY IN THE EUROPEAN UNION

	Weights 2004 MU	Weights 2004 EU	Observed Monthly Rate	Forecast	Observed Annual Rate	Confidence Intervals at 80%
Spain	111.07		0.56	0.49	3.40	± 0.15
Germany	292.58		0.18	0.22	2.12	± 0.29
Austria	31.43		0.36	-0.09	2.09	± 0.37
Belgium	33.18		0.35	0.32	2.41	± 0.32
Finland	15.65		0.18	-0.01	-0.09	± 0.37
France	206.97		0.35	0.31	2.81	± 0.20
Greece	26.55		0.45	0.42	3.07	± 0.78
Netherlands	52.90		0.16	-0.02	1.73	± 0.33
Ireland	12.86		0.23	0.06	2.06	± 0.30
Italy	192.65		0.17	0.37	2.30	± 0.23
Luxembourg	2.73		0.51	0.04	3.40	± 0.32
Portugal	21.43		0.80	0.76	2.44	± 0.66
Denmark		11.78	0.34	0.09	1.12	± 0.27
United Kingdom		181.92	0.36	0.00	1.55	± 0.33
Sweden		18.65	0.35	0.89	1.51	± 0.50

(1) aggregation error -0.03%
(2)aggregation error -0.08%

Source: EUROSTAT, IFL & UC3M
Date: June 16, 2004

Table A3

FORECAST ERRORS IN THE MONTHLY INFLATION RATE FOR MAY 2004 BY SECTORS IN THE EMU

	Weights 2004	Observed Monthly Growth	Forecast	Annual Growth Observed	Confidence interval at 80%
HICP Processed Food	118.36	0.25	0.36	4.01	± 0.14
HICP Processed Food excluding tobacco	94.63	0.15	0.20	1.61	± 0.09
HICP Tobacco	23.73	0.64	0.95	13.77	± 0.13
HICP Non Energy Industrial Goods	310.09	0.09	0.22	0.84	± 0.10
HICP Non Energy Processed Goods	428.45	0.14	0.26	1.71	± 0.09
HICP Services	413.34	0.08	0.03	2.59	± 0.14
CORE INFLATION (1)	841.78	0.18	0.15	2.14	± 0.08
HICP Unprocessed Food	76.89	0.42	0.15	1.77	± 0.46
HICP Energy (2)	81.33	2.50	2.17	6.71	± 0.60
RESIDUAL INFLATION (3)	158.22	1.39	1.20	4.20	± 0.39
GLOBAL INFLATION (4)	1000.00	0.35	0.32	2.48	± 0.09

(1) aggregation error 0.02%
(2) aggregation error -0.03%
(3) aggregation error 0.04%
(4) aggregation error -0.09%

Source: EUROSTAT , IFL & UC3M
Date: June 16, 2004

Table A4A

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

	EMU12		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	*Avr* 03/02(b)	*Avr* 04/03(b)	*Avr* 05/04(b)
		2003	3.8	4.2	4.1	3.1	2.8	2.6	2.5	2.5	2.4	2.6	2.8	2.7	3.1		
Spain HICP	**11.11%**	2004	2.3	2.2	2.2	2.7	3.4	**3.4**	**3.2**	**3.0**	**3.0**	**3.1**	**3.2**	**3.2**		**2.9**	
		2005	**3.3**	**3.3**	**3.2**	**2.9**	**2.5**	**2.6**	**2.6**	**2.7**	**2.7**	**2.7**	**2.8**	**2.8**			**2.8**
		2003	0.9	1.2	1.2	1.0	0.6	0.9	0.8	1.1	1.1	1.1	1.3	1.1	1.0		
Germany HICP	**29.26%**	2004	1.2	0.8	1.1	1.7	2.1	**2.0**	**2.0**	**1.8**	**1.8**	**1.9**	**1.9**	**1.9**		**1.7**	
		2005	**1.5**	**1.5**	**1.3**	**1.1**	**0.9**	**1.0**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**			**1.1**
		2003	1.7	1.8	1.8	1.3	0.9	1.0	1.0	1.0	1.4	1.1	1.3	1.3	1.3		
Austria HICP	**3.14%**	2004	1.2	1.5	1.5	1.5	2.1	**2.0**	**2.0**	**2.0**	**1.9**	**1.9**	**1.9**	**1.9**		**1.8**	
		2005	**1.9**	**1.9**	**1.8**	**1.9**	**1.7**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**			**1.8**
		2003	1.2	1.6	1.7	1.4	0.9	1.5	1.4	1.6	1.7	1.4	1.8	1.7	1.5		
Belgium HICP	**3.32%**	2004	1.4	1.2	1.0	1.7	2.4	**2.3**	**2.4**	**2.2**	**2.2**	**2.3**	**2.3**	**2.2**		**2.0**	
		2005	**2.6**	**2.5**	**2.6**	**2.4**	**2.2**	**2.2**	**2.2**	**2.2**	**2.1**	**2.2**	**2.1**	**2.1**			**2.3**
		2003	2.6	1.8	1.5	2.0	1.8	1.4	1.7	1.7	1.7	1.4	2.1	1.9	1.8		
Finland HICP	**1.57%**	2004	1.3	1.1	1.2	1.0	1.2	**1.2**	**0.9**	**1.2**	**1.2**	**0.8**	**0.4**	**-0.4**		**0.9**	
		2005	**-0.4**	**-0.1**	**0.1**	**0.4**	**0.4**	**0.3**	**0.4**	**0.5**	**0.6**	**0.8**	**0.7**	**1.0**			**0.4**
		2003	1.9	2.5	2.6	1.9	1.8	1.9	1.9	2.0	2.3	2.3	2.5	2.4	2.2		
France HICP	**20.70%**	2004	2.2	1.9	1.9	2.4	2.8	**2.7**	**2.6**	**2.5**	**2.3**	**2.3**	**2.2**	**2.4**		**2.3**	
		2005	**2.0**	**2.0**	**1.9**	**1.9**	**1.6**	**1.7**	**1.7**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**			**1.8**
		2003	2.7	2.9	2.8	2.2	2.3	2.1	2.1	2.2	2.0	1.9	2.0	1.6	2.2		
Netherlands HICP	**5.29%**	2004	1.5	1.3	1.2	1.5	1.7	**1.8**	**1.8**	**1.8**	**1.9**	**2.0**	**2.1**	**2.3**		**1.8**	
		2005	**2.3**	**2.4**	**2.5**	**2.6**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**			**2.4**
		2003	4.7	5.1	4.9	4.6	3.9	3.8	3.9	3.9	3.8	3.3	3.3	2.9	4.0		
Ireland HICP	**1.29%**	2004	2.3	2.2	1.8	1.7	2.1	**2.2**	**2.2**	**2.1**	**2.2**	**2.4**	**2.4**	**2.5**		**2.2**	
		2005	**2.7**	**2.7**	**2.8**	**2.9**	**2.9**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**			**2.8**
		2003	2.9	2.6	2.9	3.0	2.9	2.9	2.9	2.7	3.0	2.8	2.8	2.5	2.8		
Italy HICP	**19.26%**	2004	2.2	2.4	2.3	2.3	2.3	**2.3**	**2.3**	**2.3**	**2.1**	**2.2**	**2.3**	**2.4**		**2.3**	
		2005	**2.9**	**2.6**	**2.4**	**2.4**	**2.5**	**2.6**	**2.6**	**2.6**	**2.6**	**2.7**	**2.7**	**2.7**			**2.6**
		2003	3.3	3.2	3.7	3.0	2.3	2.0	1.9	2.3	2.7	1.8	2.0	2.4	2.5		
Luxembourg HICP	**0.27%**	2004	2.3	2.4	2.0	2.7	3.4	**3.5**	**4.2**	**3.5**	**3.1**	**3.5**	**3.3**	**3.4**		**3.1**	
		2005	**3.7**	**2.8**	**3.0**	**2.9**	**2.7**	**2.9**	**3.2**	**2.8**	**2.7**	**3.0**	**2.9**	**2.9**			**3.0**
		2003	4.0	4.1	3.8	3.7	3.7	3.4	2.9	2.9	3.2	2.8	2.3	2.3	3.3		
Portugal HICP	**2.14%**	2004	2.2	2.1	2.2	2.4	2.4	**2.6**	**2.9**	**2.9**	**2.7**	**2.8**	**3.1**	**3.2**		**2.6**	
		2005	**3.2**	**3.3**	**3.3**	**3.2**	**3.2**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**			**3.2**
		2003	3.3	4.2	3.9	3.3	3.5	3.6	3.5	3.3	3.3	3.2	3.5	3.1	3.5		
Greece HICP	**2.65%**	2004	3.1	2.6	2.9	3.1	3.1	**3.1**	**3.3**	**3.3**	**3.1**	**3.1**	**3.0**	**3.0**		**3.1**	
		2005	**3.1**	**3.1**	**2.8**	**2.8**	**2.8**	**2.8**	**3.0**	**3.0**	**2.8**	**2.7**	**2.7**	**2.7**			**2.9**

* 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, IFL & UC3M

Date: June 16, 2004

Table A4B

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

	EU15		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	*Avr 03/02(b)*	*Avr 04/03(b)*	*Avr 05/04(b)*
		2003	2.6	2.9	2.8	2.5	2.1	2.0	1.8	1.5	1.7	1.1	1.4	1.2	2.0		
Denmark HICP	**1.18%**	2004	1.0	0.7	0.0	0.5	1.1	**1.1**	**1.4**	**1.5**	**1.3**	**1.6**	**1.5**	**1.6**		**1.1**	
		2005	**1.8**	**1.8**	**2.2**	**2.0**	**1.9**	**2.0**	**2.0**	**1.9**	**2.0**	**2.0**	**1.9**	**2.0**			**2.0**
		2003	1.4	1.6	1.6	1.5	1.2	1.1	1.3	1.4	1.4	1.4	1.3	1.3	1.4		
UK HICP	**18.19%**	2004	1.4	1.3	0.9	1.2	1.5	**1.7**	**1.5**	**1.5**	**1.6**	**1.4**	**1.5**	**1.5**		**1.4**	
		2005	**1.4**	**1.4**	**1.7**	**1.5**	**1.5**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**			**1.5**
		2003	2.6	3.3	2.9	2.3	2.0	2.0	2.4	2.2	2.3	2.0	2.0	1.8	2.3		
Sweden HICP	**1.87%**	2004	1.3	0.2	0.4	1.1	1.5	**1.6**	**1.6**	**1.7**	**1.5**	**1.6**	**1.7**	**1.7**		**1.3**	
		2005	**1.9**	**2.2**	**1.9**	**1.8**	**1.7**	**1.7**	**1.7**	**1.8**	**1.7**	**1.7**	**1.7**	**1.7**			**1.8**

* 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, IFL & UC3M
Date: June 16, 2004

Table A4C

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

	EMU12		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	D03 / D02	D04 / D03	D05 / D04
		2003	-0.4	0.2	0.8	0.8	-0.1	0.1	-0.6	0.5	0.2	0.7	0.3	0.2	2.7		
Spain HICP	**11,11%**	2004	-0.8	0.1	0.7	1.4	0.6	**0.1**	**-0.7**	**0.3**	**0.3**	**0.8**	**0.4**	**0.2**		**3.2**	
		2005	**-0.7**	**0.1**	**0.6**	**1.1**	**0.2**	**0.1**	**-0.7**	**0.3**	**0.3**	**0.8**	**0.4**	**0.3**			**2.8**
		2003	-0.1	0.6	0.2	-0.3	-0.3	0.2	0.3	0.1	-0.2	-0.1	-0.2	0.9	1.1		
Germany HICP	**29.26%**	2004	0.0	0.2	0.5	0.3	0.2	**0.1**	**0.2**	**-0.1**	**-0.1**	**-0.1**	**-0.2**	**1.0**		**1.9**	
		2005	**-0.4**	**0.2**	**0.2**	**0.1**	**0.0**	**0.2**	**0.3**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**1.0**			**1.1**
		2003	0.2	0.2	0.3	-0.1	-0.2	0.0	-0.1	0.3	0.3	0.0	0.2	0.3	1.3		
Austria HICP	**3.14%**	2004	0.1	0.5	0.4	-0.1	0.4	**0.0**	**-0.1**	**0.3**	**0.1**	**0.1**	**0.1**	**0.3**		**1.9**	
		2005	**0.1**	**0.4**	**0.3**	**-0.1**	**0.3**	**0.0**	**-0.1**	**0.3**	**0.2**	**0.1**	**0.1**	**0.3**			**1.8**
		2003	-1.0	2.1	0.3	-0.2	-0.4	0.4	-1.2	1.7	0.2	-0.4	0.2	0.0	1.7		
Belgium HICP	**3.32%**	2004	-1.3	1.9	0.1	0.5	0.3	**0.3**	**-1.1**	**1.5**	**0.3**	**-0.3**	**0.1**	**0.0**		**2.2**	
		2005	**-1.0**	**1.8**	**0.2**	**0.3**	**0.2**	**0.2**	**-1.0**	**1.4**	**0.2**	**-0.2**	**0.1**	**0.0**			**2.1**
		2003	0.4	0.2	-0.2	-0.4	0.0	0.4	0.3	-0.4	0.0	0.2	0.9	0.4	1.9		
Finland HICP	**1.57%**	2004	-0.1	-0.1	-0.1	-0.5	0.2	**0.5**	**-0.1**	**-0.1**	**0.1**	**-0.3**	**0.4**	**-0.4**		**-0.4**	
		2005	**0.0**	**0.2**	**0.1**	**-0.2**	**0.2**	**0.4**	**0.1**	**0.1**	**0.1**	**0.0**	**0.3**	**-0.1**			**1.0**
		2003	0.3	0.7	0.5	-0.2	-0.1	0.2	-0.1	0.3	0.5	0.2	0.1	0.1	2.4		
France HICP	**20.70%**	2004	0.1	0.4	0.4	0.3	0.4	**0.1**	**-0.1**	**0.1**	**0.2**	**0.2**	**0.0**	**0.2**		**2.4**	
		2005	**-0.2**	**0.4**	**0.3**	**0.2**	**0.2**	**0.1**	**-0.1**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**			**1.8**
		2003	0.6	0.8	0.9	0.1	-0.1	-0.5	-0.1	0.2	0.8	-0.2	-0.4	-0.6	1.6		
Netherlands HICP	**5.29%**	2004	0.5	0.6	0.8	0.3	0.2	**-0.4**	**-0.1**	**0.3**	**0.9**	**0.0**	**-0.3**	**-0.4**		**2.3**	
		2005	**0.5**	**0.6**	**0.9**	**0.4**	**0.1**	**-0.4**	**-0.1**	**0.3**	**0.9**	**0.0**	**-0.3**	**-0.4**			**2.4**
		2003	0.0	1.0	0.7	0.5	-0.2	0.1	-0.4	0.6	0.2	0.0	0.0	0.4	2.9		
Ireland HICP	**1.29%**	2004	-0.6	0.9	0.4	0.3	0.2	**0.2**	**-0.4**	**0.6**	**0.2**	**0.2**	**0.0**	**0.5**		**2.5**	
		2005	**-0.4**	**0.9**	**0.5**	**0.4**	**0.2**	**0.2**	**-0.4**	**0.6**	**0.2**	**0.2**	**0.0**	**0.5**			**2.8**
		2003	-0.3	-0.4	1.2	0.8	0.2	0.1	-0.1	-0.3	0.8	0.3	0.3	0.0	2.5		
Italy HICP	**19.27%**	2004	-0.6	-0.2	1.1	0.8	0.2	**0.1**	**-0.1**	**-0.3**	**0.5**	**0.5**	**0.4**	**0.1**		**2.4**	
		2005	**-0.1**	**-0.5**	**0.9**	**0.7**	**0.3**	**0.1**	**-0.1**	**-0.2**	**0.5**	**0.5**	**0.3**	**0.1**			**2.7**
		2003	-0.3	1.1	0.5	-0.2	-0.2	0.0	-0.8	1.2	0.7	-0.4	0.4	0.2	2.4		
Luxembourg HICP	**0.27%**	2004	-0.3	1.3	0.1	0.5	0.5	**0.1**	**-0.1**	**0.6**	**0.4**	**-0.1**	**0.3**	**0.2**		**3.4**	
		2005	**0.0**	**0.3**	**0.3**	**0.4**	**0.4**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**			**2.9**
		2003	0.1	0.0	0.1	0.8	0.7	0.0	-0.2	0.1	0.2	0.2	0.1	0.1	2.3		
Portugal HICP	**2.14%**	2004	0.0	-0.2	0.2	1.0	0.8	**0.2**	**0.1**	**0.1**	**0.1**	**0.3**	**0.4**	**0.1**		**3.2**	
		2005	**0.1**	**-0.1**	**0.3**	**0.9**	**0.7**	**0.2**	**0.1**	**0.1**	**0.1**	**0.3**	**0.4**	**0.1**			**3.1**
		2003	-0.8	-0.2	2.5	0.2	0.5	-0.2	-2.1	0.0	2.0	0.4	0.4	0.4	3.1		
Greece HICP	**2.67%**	2004	-0.8	-0.7	2.9	0.4	0.4	**-0.1**	**-1.9**	**0.0**	**1.8**	**0.3**	**0.3**	**0.3**		**3.0**	
		2005	**-0.8**	**-0.6**	**2.6**	**0.3**	**0.4**	**-0.1**	**-1.7**	**0.0**	**1.6**	**0.3**	**0.3**	**0.3**			**2.7**

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

Source: EUROSTAT, IFL & UC3M
Date: June 16, 2004

Table A4D

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

	EU15		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	D03 / D02	D04 / D03	D05 / D04
		2003	0.2	0.7	0.8	0.0	-0.3	0.0	-0.6	-0.1	0.8	-0.3	0.2	-0.2	1.2		
Denmark HICP	**1.18%**	2004	-0.1	0.4	0.1	0.5	0.3	**0.0**	**-0.4**	**0.0**	**0.6**	**0.1**	**0.1**	**-0.1**		**1.6**	
		2005	**0.0**	**0.5**	**0.5**	**0.3**	**0.3**	**0.1**	**-0.4**	**0.0**	**0.6**	**0.1**	**0.1**	**-0.1**			**2.0**
		2003	-0.6	0.4	0.4	0.3	0.0	-0.1	-0.1	0.4	0.3	0.2	-0.1	0.4	1.3		
UK HICP	**18.19%**	2004	-0.5	0.3	0.0	0.5	0.4	**0.1**	**-0.3**	**0.3**	**0.3**	**0.1**	**0.0**	**0.3**		**1.5**	
		2005	**-0.6**	**0.3**	**0.2**	**0.4**	**0.3**	**0.0**	**-0.3**	**0.3**	**0.3**	**0.1**	**0.0**	**0.3**			**1.4**
		2003	0.3	1.0	0.6	-0.4	-0.1	-0.2	-0.2	-0.1	0.8	0.1	-0.3	0.2	1.8		
Sweden HICP	**1.87%**	2004	-0.3	-0.1	0.9	0.3	0.4	**-0.1**	**-0.2**	**0.0**	**0.6**	**0.1**	**-0.1**	**0.2**		**1.7**	
		2005	**-0.1**	**0.2**	**0.6**	**0.1**	**0.2**	**-0.1**	**-0.1**	**0.0**	**0.5**	**0.1**	**-0.1**	**0.2**			**1.7**

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

Source: EUROSTAT, IFL & UC3M
Date: June 16, 2004

Table A5A

HARMONIZED CPI (HICP) ANNUAL GROWTH BY SECTORS IN THE EMU 2003-2004-2005 (a)

			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Avr 03/02(b)	Avr 04/03(b)	Avr 05/04(b)
		2003	1.9	2.1	2.2	2.1	2.1	2.2	2.0	2.0	2.0	2.2	2.1	1.9	2.1		
AE	**9.46%**	2004	1.9	1.9	1.7	1.7	1.6	**1.6**	**1.7**	**1.8**	**1.8**	**1.7**	**1.8**	**1.9**		**1.8**	
		2005	**1.9**	**1.9**	**2.0**	**2.1**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**			**2.1**
		2003	6.7	7.7	7.5	7.9	7.9	7.6	7.7	7.5	7.8	9.3	11.7	11.7	8.4		
TOBACCO	**2.37%**	2004	9.0	8.3	13.9	13.1	13.8	**13.7**	**13.8**	**13.7**	**13.5**	**12.1**	**9.7**	**9.4**		**12.0**	
		2005	**12.1**	**11.8**	**6.3**	**5.9**	**5.4**	**5.4**	**5.4**	**5.4**	**5.4**	**5.4**	**5.4**	**5.4**			**6.5**
		2003	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8		
MAN	**31.01%**	2004	0.6	0.9	0.8	1.0	0.8	**0.9**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**		**0.9**	
		2005	**1.1**	**1.0**	**1.0**	**0.9**	**1.0**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**			**1.0**
		2003	1.3	1.4	1.4	1.4	1.6	1.5	1.4	1.3	1.4	1.5	1.6	1.6	1.5		
BENE	**42.85%**	2004	1.3	1.5	1.7	1.8	1.7	**1.8**	**1.8**	**1.9**	**1.8**	**1.7**	**1.6**	**1.6**		**1.7**	
		2005	**1.9**	**1.8**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**			**1.5**
		2003	2.9	2.7	2.7	2.9	2.5	2.6	2.3	2.5	2.5	2.5	2.4	2.3	2.6		
SER	**41.33%**	2004	2.5	2.7	2.5	2.5	2.6	**2.6**	**2.7**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**		**2.6**	
		2005	**2.6**	**2.5**	**2.7**	**2.4**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**			**2.6**
		2003	2.0	2.0	2.0	2.2	2.0	2.0	1.8	1.8	2.0	2.1	2.0	1.9	2.0		
IPSEBENE	**84.18%**	2004	1.9	2.0	2.1	2.1	2.1	**2.2**	**2.2**	**2.3**	**2.2**	**2.1**	**2.1**	**2.2**		**2.1**	
		2005	**2.3**	**2.2**	**2.1**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**			**2.1**
		2003	-0.7	0.3	0.8	0.9	1.1	2.6	2.8	3.3	4.2	3.8	3.8	3.2	2.2		
ANE	**7.69%**	2004	2.9	1.9	1.7	1.6	1.8	**1.1**	**1.1**	**0.9**	**0.5**	**0.7**	**0.7**	**1.0**		**1.3**	
		2005	**1.1**	**1.6**	**1.7**	**1.7**	**1.6**	**1.9**	**1.9**	**2.0**	**2.2**	**2.1**	**2.1**	**1.9**			**1.8**
		2003	5.9	7.6	7.5	2.2	0.6	1.6	2.0	2.7	1.6	0.8	2.3	1.8	3.0		
ENE	**8.13%**	2004	-0.3	-2.3	-2.0	2.0	6.7	**6.4**	**5.9**	**5.1**	**5.2**	**5.5**	**5.7**	**5.9**		**3.6**	
		2005	**4.8**	**4.9**	**3.4**	**2.3**	**-0.2**	**0.0**	**0.0**	**-0.2**	**-0.2**	**-0.2**	**-0.1**	**0.0**			**1.2**
		2003	2.1	2.4	2.4	2.1	1.8	1.9	1.9	2.1	2.2	2.0	2.2	2.0	2.1		
HICP	**100.00%**	2004	1.9	1.6	1.7	2.0	2.5	**2.5**	**2.4**	**2.3**	**2.2**	**2.3**	**2.3**	**2.4**		**2.2**	
		2005	**2.3**	**2.4**	**2.1**	**2.0**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**			**1.9**

Source: EUROSTAT, IFL & UC3M
Date: June 16, 2004

Table A5B

HARMONIZED CPI (HICP) MONTHLY GROWTH RATES BY SECTORS IN THE EMU 2003-2004-2005 (a)

			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	D03 / D02	D04 / D03	D05 / D04
		2003	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.0	1.9		
AE	**9.46%**	2004	0.2	0.2	0.0	0.1	0.1	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.1**		**1.9**	
		2005	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.1**			**2.2**
		2003	4.2	1.0	0.1	1.2	0.1	0.1	0.1	0.1	0.3	1.4	2.3	0.3	11.7		
TOBACCO	**2.37%**	2004	1.7	0.3	5.3	0.4	0.6	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**		**9.4**	
		2005	**4.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**			**5.4**
		2003	-1.4	0.0	1.1	0.6	0.3	-0.2	-1.4	-0.1	1.1	0.6	0.3	-0.1	0.8		
MAN	**31.01%**	2004	-1.6	0.3	1.0	0.8	0.1	**-0.1**	**-1.4**	**-0.1**	**1.1**	**0.6**	**0.3**	**-0.1**		**1.0**	
		2005	**-1.5**	**0.2**	**1.1**	**0.7**	**0.1**	**-0.1**	**-1.4**	**-0.1**	**1.1**	**0.6**	**0.3**	**-0.1**			**0.9**
		2003	-0.8	0.1	0.9	0.5	0.3	-0.1	-1.0	0.0	0.9	0.5	0.3	0.0	1.6		
BENE	**42.85%**	2004	-1.0	0.3	1.1	0.7	0.1	**0.0**	**-0.9**	**0.0**	**0.8**	**0.5**	**0.2**	**0.0**		**1.6**	
		2005	**-0.8**	**0.2**	**0.8**	**0.6**	**0.2**	**0.0**	**-0.9**	**0.0**	**0.8**	**0.5**	**0.2**	**0.0**			**1.5**
		2003	-0.2	0.3	0.2	0.3	0.0	0.3	0.6	0.3	-0.3	-0.1	-0.1	0.9	2.3		
SER	**41.33%**	2004	0.0	0.5	0.0	0.3	0.1	**0.3**	**0.7**	**0.2**	**-0.3**	**-0.1**	**-0.1**	**0.9**		**2.6**	
		2005	**-0.1**	**0.5**	**0.2**	**0.1**	**0.2**	**0.3**	**0.7**	**0.2**	**-0.3**	**-0.1**	**-0.1**	**0.9**			**2.6**
		2003	-0.5	0.3	0.5	0.4	0.1	0.1	-0.2	0.1	0.4	0.3	0.1	0.4	1.9		
IPSEBENE	**84.18%**	2004	-0.5	0.4	0.6	0.4	0.2	**0.1**	**-0.1**	**0.1**	**0.2**	**0.2**	**0.1**	**0.4**		**2.2**	
		2005	**-0.4**	**0.3**	**0.5**	**0.3**	**0.2**	**0.1**	**-0.1**	**0.1**	**0.3**	**0.2**	**0.1**	**0.4**			**2.0**
		2003	1.4	0.3	0.5	0.4	0.3	0.6	-0.6	-0.4	1.2	-0.3	-0.2	0.0	3.2		
ANE	**7.69%**	2004	1.1	-0.7	0.3	0.3	0.4	**-0.1**	**-0.6**	**-0.6**	**0.8**	**-0.2**	**-0.2**	**0.3**		**1.0**	
		2005	**1.2**	**-0.2**	**0.4**	**0.4**	**0.3**	**0.3**	**-0.6**	**-0.5**	**1.0**	**-0.3**	**-0.2**	**0.1**			**1.9**
		2003	3.1	1.9	1.0	-2.9	-2.1	0.0	0.5	1.1	-0.1	-0.3	-0.2	-0.2	1.8		
ENE	**8.13%**	2004	1.0	-0.1	1.3	1.1	2.5	**-0.2**	**0.0**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**		**5.9**	
		2005	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**			**0.0**
		2003	-0.1	0.4	0.6	0.1	-0.1	0.1	-0.1	0.2	0.4	0.1	0.1	0.3	2.0		
HICP	**100.00%**	2004	-0.2	0.2	0.7	0.4	0.3	**0.1**	**-0.2**	**0.1**	**0.3**	**0.2**	**0.1**	**0.4**		**2.4**	
		2005	**-0.3**	**0.3**	**0.5**	**0.3**	**0.2**	**0.1**	**-0.2**	**0.1**	**0.3**	**0.2**	**0.1**	**0.4**			**1.8**

Source: EUROSTAT, IFL & UC3M
Date: June 16, 2004

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	Avr 03/02(b)	Avr 04/03(b)	Avr 05/04(b)
	2003	-1.4	-1.5	-1.4	-1.8	-1.9	-1.8	-1.8	-2.2	-2.4	-2.4	-2.6	-2.5	-2.0		
Non energy commodities	2004	-2.3	-2.0	-1.6	-1.4	-1.1	**-0.9**	**-0.9**	**-0.7**	**-0.4**	**-0.1**	**0.3**	**0.5**		**-0.9**	
less food (1)	2005	**0.6**	**0.5**	**0.3**	**0.3**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**			**0.3**
	2003	3.4	3.2	3.0	2.9	3.0	2.9	2.9	2.7	2.8	2.9	2.6	2.6	2.9		
Non energy services (2)	2004	2.5	2.5	2.9	3.1	2.9	**3.0**	**3.1**	**3.1**	**3.1**	**3.1**	**3.2**	**3.3**		**3.0**	
	2005	**3.3**	**3.3**	**3.2**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**			**3.3**
	2003	1.9	1.7	1.7	1.5	1.6	1.5	1.5	1.3	1.2	1.3	1.1	1.1	1.5		
Core inflation (3=1+2)	2004	1.2	1.2	1.6	1.8	1.7	**1.8**	**1.9**	**2.0**	**2.1**	**2.2**	**2.4**	**2.4**		**1.9**	
	2005	**2.5**	**2.5**	**2.4**	**2.4**	**2.4**	**2.5**	**2.5**	**2.5**	**2.4**	**2.5**	**2.4**	**2.4**			**2.4**
	2003	1.4	1.2	1.2	1.0	1.2	1.3	1.3	1.0	0.9	1.0	0.7	0.8	1.1		
Core inflation less owner's equivalent	2004	0.9	1.0	1.5	1.6	1.5	**1.6**	**1.6**	**1.8**	**1.9**	**2.0**	**2.3**	**2.3**		**1.7**	
rent of primary residence	2005	**2.3**	**2.3**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**			**2.2**
	2003	1.0	1.4	1.4	1.2	1.7	2.1	2.1	2.5	2.4	2.9	3.2	3.6	2.1		
Food (4)	2004	3.5	3.3	3.2	3.4	4.1	**4.0**	**4.2**	**4.1**	**4.1**	**3.9**	**3.5**	**3.3**		**3.7**	
	2005	**3.6**	**3.5**	**3.5**	**3.6**	**3.0**	**2.9**	**2.9**	**2.8**	**2.8**	**2.8**	**2.9**	**2.8**			**3.1**
	2003	14.1	22.0	23.4	13.0	9.0	9.3	9.1	11.8	14.7	8.8	6.2	6.9	12.2		
Energy (5)	2004	7.8	3.8	0.4	5.6	15.0	**15.8**	**14.0**	**8.6**	**4.7**	**7.8**	**9.0**	**10.3**		**8.5**	
	2005	**6.7**	**4.6**	**2.8**	**0.5**	**-4.8**	**-6.3**	**-5.7**	**-4.3**	**-3.6**	**-2.7**	**-1.9**	**-2.1**			**-1.6**
	2003	2.6	3.0	3.0	2.2	2.1	2.1	2.1	2.2	2.3	2.0	1.8	1.9	2.3		
All items (6=3+4+5)	2004	1.9	1.7	1.7	2.3	3.1	**3.2**	**3.2**	**2.9**	**2.6**	**2.9**	**3.0**	**3.1**		**2.6**	
	2005	**3.0**	**2.8**	**2.6**	**2.5**	**1.9**	**1.8**	**1.8**	**2.0**	**2.0**	**2.1**	**2.2**	**2.2**			**2.2**
	2003	2.4	3.0	3.1	2.1	1.9	2.1	2.1	2.2	2.4	2.0	1.7	1.9	2.2		
All items less owner's equivalent	2004	1.9	1.6	1.7	2.3	3.3	**3.5**	**3.4**	**2.9**	**2.6**	**3.0**	**3.2**	**3.2**		**2.7**	
rent of primary residence	2005	**3.0**	**2.8**	**2.5**	**2.4**	**1.6**	**1.4**	**1.5**	**1.7**	**1.7**	**1.8**	**1.9**	**1.9**			**2.0**

(1) Figures in bold type are forecasted values.
(2) Mean level of 2003 over 2002 growth rate.
(3) Mean level of 2004 over 2003 growth rate.
(4) Mean level of 2005 over 2004 growth rate.

Source: BLS & Universidad Carlos III Madrid
Data: June 15, 2004

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	D03 / D02	D04 / D03	D05 / D04
	2003	-0.6	0.3	0.4	-0.1	-0.6	-0.7	-0.6	-0.1	0.4	0.1	-0.4	-0.6	-2.5		
Non energy commodities	2004	-0.4	0.6	0.7	0.1	-0.2	**-0.5**	**-0.5**	**0.1**	**0.6**	**0.5**	**0.1**	**-0.5**		**0.5**	
less food (1)	2005	**-0.2**	**0.4**	**0.6**	**0.2**	**-0.3**	**-0.6**	**-0.5**	**0.1**	**0.6**	**0.5**	**0.0**	**-0.5**			**0.3**
	2003	0.5	0.4	0.2	0.0	0.3	0.2	0.4	0.3	0.0	0.4	-0.1	0.0	2.6		
Non energy services (2)	2004	0.5	0.4	0.6	0.2	0.1	**0.3**	**0.4**	**0.3**	**0.0**	**0.3**	**0.0**	**0.0**		**3.3**	
	2005	**0.5**	**0.5**	**0.6**	**0.3**	**0.1**	**0.3**	**0.4**	**0.3**	**0.0**	**0.4**	**0.0**	**0.0**			**3.3**
	2003	0.2	0.4	0.3	0.1	0.1	-0.1	0.1	0.2	0.1	0.3	-0.2	-0.2	1.1		
Core inflation (3=1+2)	2004	0.2	0.4	0.6	0.2	0.0	**0.1**	**0.2**	**0.2**	**0.2**	**0.4**	**0.0**	**-0.1**		**2.4**	
	2005	**0.3**	**0.4**	**0.6**	**0.2**	**0.0**	**0.1**	**0.2**	**0.2**	**0.2**	**0.4**	**0.0**	**-0.1**			**2.4**
	2003	0.2	0.5	0.3	0.1	0.0	-0.1	0.0	0.1	0.0	0.3	-0.3	-0.3	0.8		
Core inflation less owner's equivalent	2004	0.2	0.6	0.8	0.2	-0.1	**0.0**	**0.1**	**0.2**	**0.1**	**0.4**	**-0.1**	**-0.3**		**2.3**	
rent of primary residence	2005	**0.3**	**0.5**	**0.7**	**0.2**	**-0.1**	**0.0**	**0.1**	**0.2**	**0.1**	**0.4**	**-0.1**	**-0.3**			**2.2**
	2003	0.1	0.5	0.2	-0.1	0.2	0.4	0.1	0.4	0.2	0.6	0.4	0.7	3.6		
Food (4)	2004	0.1	0.2	0.2	0.1	0.9	**0.3**	**0.3**	**0.3**	**0.2**	**0.3**	**0.1**	**0.4**		**3.3**	
	2005	**0.4**	**0.2**	**0.1**	**0.2**	**0.3**	**0.2**	**0.3**	**0.2**	**0.2**	**0.3**	**0.1**	**0.3**			**2.8**
	2003	3.4	6.2	5.3	-3.2	-3.0	1.9	0.3	2.7	2.8	-5.3	-2.8	-1.0	6.9		
Energy (5)	2004	4.2	2.3	1.8	2.0	5.6	**2.6**	**-1.3**	**-2.1**	**-0.8**	**-2.6**	**-1.7**	**0.2**		**10.3**	
	2005	**0.9**	**0.3**	**0.0**	**-0.3**	**0.0**	**1.0**	**-0.7**	**-0.6**	**-0.1**	**-1.7**	**-0.9**	**0.1**			**-2.1**
	2003	0.4	0.8	0.6	-0.2	-0.2	0.1	0.1	0.4	0.3	-0.1	-0.3	-0.1	1.9		
All items (6=3+4+5)	2004	0.5	0.5	0.6	0.3	0.6	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**-0.1**	**0.0**		**3.1**	
	2005	**0.3**	**0.4**	**0.4**	**0.2**	**0.0**	**0.2**	**0.1**	**0.2**	**0.1**	**0.2**	**0.0**	**0.0**			**2.2**
	2003	0.5	1.0	0.7	-0.3	-0.2	0.1	0.1	0.4	0.3	-0.2	-0.4	-0.2	1.9		
All items less owner's equivalent	2004	0.6	0.7	0.8	0.3	0.7	**0.3**	**0.0**	**0.0**	**0.0**	**0.1**	**-0.2**	**-0.1**		**3.2**	
rent of primary residence	2005	**0.4**	**0.4**	**0.5**	**0.2**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**-0.2**	**-0.1**			**1.9**

(1) Figures in bold type are forecasted values.
(2) December 2003 over December 2002 growth rate.
(3) December 2004 over December 2003 growth rate.
(4) December 2005 over December 2004 growth rate.

Source: BLS & Universidad Carlos III Madrid
Data: June 15, 2004

Table A7A

"CONSUMER PRICE INDEX, ANNUAL GROWTH RATES IN SPAIN 2003-2004-2005 (a)

			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Avr 03/02(b)	Avr 04/03(b)	Avr 05/04(b)
		2003	3.7	4.2	4.1	3.1	2.8	2.6	2.5	2.5	2.4	2.6	2.8	2.7	3.0		
(1) AE	**17.17%**	2004	2.5	2.4	2.4	2.9	3.7	**3.9**	**4.0**	**4.0**	**4.1**	**3.9**	**3.9**	**3.9**		**3.5**	
		2005	**4.0**	**3.9**	**4.0**	**3.6**	**2.8**	**2.8**	**2.7**	**2.7**	**2.7**	**2.6**	**2.5**	**2.5**			**3.1**
		2003	2.0	2.2	2.3	2.6	2.6	2.5	2.2	2.0	2.1	1.5	1.2	1.2	2.0		
(2) MAN	**30.05%**	2004	0.7	0.5	0.5	0.7	0.9	**0.9**	**0.9**	**1.0**	**1.0**	**1.3**	**1.3**	**1.4**		**0.9**	
		2005	**1.5**	**1.5**	**1.7**	**1.5**	**1.5**	**1.4**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**			**1.5**
		2003	4.0	3.9	3.6	4.0	3.5	3.5	3.6	3.7	3.5	3.7	3.7	3.6	3.7		
(3) SER	**35.05%**	2004	3.6	3.6	3.6	3.7	3.8	**3.7**	**3.7**	**3.7**	**3.8**	**3.7**	**3.9**	**3.9**		**3.7**	
		2005	**4.0**	**4.0**	**4.1**	**3.8**	**3.9**	**4.0**	**3.9**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**			**4.0**
IPSEBENE		2003	3.2	3.3	3.2	3.3	3.0	2.9	2.9	2.8	2.8	2.6	2.6	2.5	2.9		
(4)=(1)+(2)+(3)	**82.28%**	2004	2.3	2.3	2.2	2.4	2.7	**2.7**	**2.8**	**2.8**	**2.9**	**2.9**	**2.9**	**3.0**		**2.7**	
		2005	**3.1**	**3.1**	**3.2**	**2.9**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**			**2.9**
		2003	2.9	3.0	3.0	3.2	3.1	3.0	2.8	2.8	2.7	2.6	2.6	2.6	2.9		
IPSEBENE-XT	**77.21%**	2004	2.4	2.4	2.3	2.5	2.6	**2.5**	**2.7**	**2.7**	**2.7**	**2.6**	**2.6**	**2.6**		**2.5**	
		2005	**2.9**	**2.8**	**2.9**	**2.6**	**2.5**	**2.7**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**			**2.8**
		2003	7.2	5.9	5.6	4.5	4.6	4.8	5.5	6.5	7.7	7.0	6.7	6.4	6.0		
(5) ANE	**8.60%**	2004	6.5	6.1	6.5	6.8	7.0	**6.2**	**5.0**	**4.0**	**2.7**	**3.2**	**3.4**	**3.4**		**5.0**	
		2005	**2.9**	**4.3**	**4.3**	**4.5**	**4.1**	**4.5**	**4.7**	**4.8**	**5.1**	**5.3**	**5.4**	**5.4**			**4.6**
		2003	5.5	6.7	6.1	0.8	-1.9	-0.6	0.0	1.1	-0.2	-1.8	1.1	-0.1	1.4		
(6) ENE	**9.12%**	2004	-1.7	-2.5	-2.5	1.4	6.6	**7.3**	**5.7**	**4.1**	**4.4**	**5.4**	**5.0**	**5.1**		**3.1**	
		2005	**4.3**	**3.7**	**2.0**	**0.6**	**-1.9**	**-2.1**	**-1.6**	**-1.5**	**-1.3**	**-1.2**	**-1.1**	**-0.9**			**-0.1**
		2003	3.7	3.8	3.7	3.1	2.7	2.7	2.8	3.0	2.9	2.6	2.8	2.6	3.0		
IPC	**100%**	2004	2.3	2.1	2.1	2.7	3.4	**3.4**	**3.3**	**3.1**	**3.0**	**3.1**	**3.2**	**3.2**		**2.9**	
		2005	**3.2**	**3.2**	**3.2**	**2.8**	**2.5**	**2.5**	**2.5**	**2.6**	**2.6**	**2.6**	**2.6**	**2.7**			**2.7**

'* T1,12 growth rate lags 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 forecasted values
(b) 2003 over 2002 mean growth
(c) 2004 over 2003 mean growth
(d) 2005 over 2004 mean growth

Source: INE, IFL & UC3M
Date: June 25, 2004

Table A7B

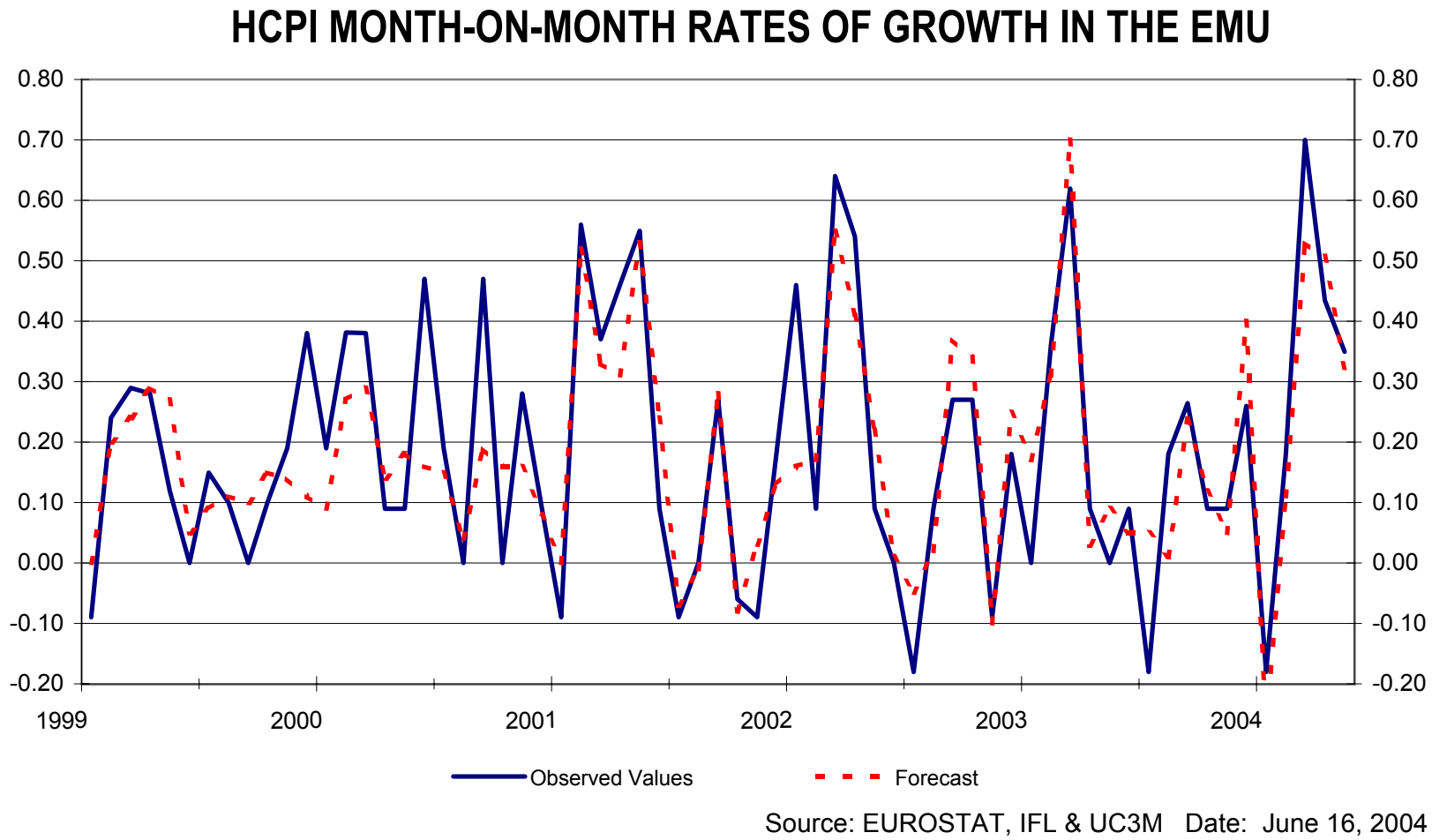
CONSUMER PRICE INDEX, MONTHLY GROWTH RATES IN SPAIN 2003-2004-2005 (a)

			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	D03 / D02	D04 / D03	D05 / D04
		2003	0.5	0.6	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	2.7		
(1) AE	**17.17%**	2004	0.4	0.5	0.3	0.5	1.0	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**		**3.9**	
		2005	**0.5**	**0.4**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**			**2.5**
		2003	-3.1	0.0	1.0	2.7	0.5	-0.2	-3.5	-0.3	1.0	2.3	1.1	-0.1	1.2		
(2) MAN	**30.05%**	2004	-3.6	-0.2	0.9	3.0	0.6	**-0.2**	**-3.4**	**-0.2**	**1.0**	**2.5**	**1.2**	**-0.1**		**1.4**	
		2005	**-3.5**	**-0.1**	**1.0**	**2.8**	**0.6**	**-0.2**	**-3.4**	**-0.2**	**1.0**	**2.5**	**1.2**	**-0.1**			**1.5**
		2003	0.6	0.4	0.5	0.7	-0.2	0.4	0.7	0.7	-0.5	0.2	-0.2	0.4	3.6		
(3) SER	**35.05%**	2004	0.6	0.4	0.5	0.7	-0.1	**0.3**	**0.7**	**0.6**	**-0.4**	**0.1**	**-0.1**	**0.4**		**3.9**	
		2005	**0.7**	**0.4**	**0.5**	**0.4**	**0.0**	**0.4**	**0.7**	**0.6**	**-0.4**	**0.1**	**-0.1**	**0.5**			**4.0**
IPSEBENE		2003	-0.8	0.3	0.6	1.3	0.1	0.1	-1.0	0.2	0.2	1.0	0.4	0.1	2.5		
(4)=(1)+(2)+(3)	**82.28%**	2004	-1.0	0.2	0.6	1.5	0.4	**0.1**	**-0.9**	**0.2**	**0.2**	**1.0**	**0.4**	**0.2**		**3.0**	
		2005	**-0.9**	**0.2**	**0.7**	**1.2**	**0.3**	**0.1**	**-0.9**	**0.2**	**0.2**	**1.0**	**0.4**	**0.2**			**2.8**
		2003	-0.9	0.2	0.7	1.3	0.3	0.1	-1.3	0.1	0.4	1.1	0.5	0.1	2.6		
IPSEBENE-XT	**77.21%**	2004	-1.1	0.2	0.6	1.5	0.4	**-0.1**	**-1.1**	**0.1**	**0.4**	**1.1**	**0.5**	**0.1**		**2.6**	
		2005	**-0.8**	**0.2**	**0.7**	**1.2**	**0.3**	**0.1**	**-1.1**	**0.1**	**0.4**	**1.1**	**0.5**	**0.1**			**2.8**
		2003	0.4	-1.5	0.5	0.0	0.6	0.3	1.5	1.9	2.2	-0.4	0.0	0.9	6.4		
(5) ANE	**8.60%**	2004	0.6	-1.9	0.8	0.3	0.8	**-0.5**	**0.4**	**0.9**	**0.9**	**0.0**	**0.3**	**0.9**		**3.4**	
		2005	**0.1**	**-0.5**	**0.8**	**0.5**	**0.3**	**-0.2**	**0.6**	**1.0**	**1.1**	**0.2**	**0.4**	**0.9**			**5.4**
		2003	2.2	1.3	1.4	-2.6	-2.5	-0.6	0.9	1.4	-0.4	-1.1	0.3	-0.3	-0.1		
(6) ENE	**9.12%**	2004	0.6	0.4	1.5	1.3	2.5	**0.1**	**-0.6**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.2**		**5.1**	
		2005	**-0.2**	**-0.2**	**-0.1**	**-0.2**	**-0.1**	**-0.1**	**-0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**			**-0.9**
		2003	-0.4	0.2	0.7	0.8	-0.1	0.1	-0.6	0.5	0.3	0.7	0.3	0.2	2.6		
IPC	**100.00%**	2004	-0.7	0.0	0.7	1.4	0.6	**0.1**	**-0.8**	**0.3**	**0.2**	**0.8**	**0.4**	**0.2**		**3.2**	
		2005	**-0.7**	**0.1**	**0.6**	**1.0**	**0.2**	**0.1**	**-0.7**	**0.3**	**0.3**	**0.8**	**0.4**	**0.2**			**2.7**

** Weights on General CPI are shown in brackets.
(a) Figures in bold type are forecasted values
(b) December 2003 over December 2002.
(c) December 2004 over December 2003.
(d) December 2005 over December 2004.

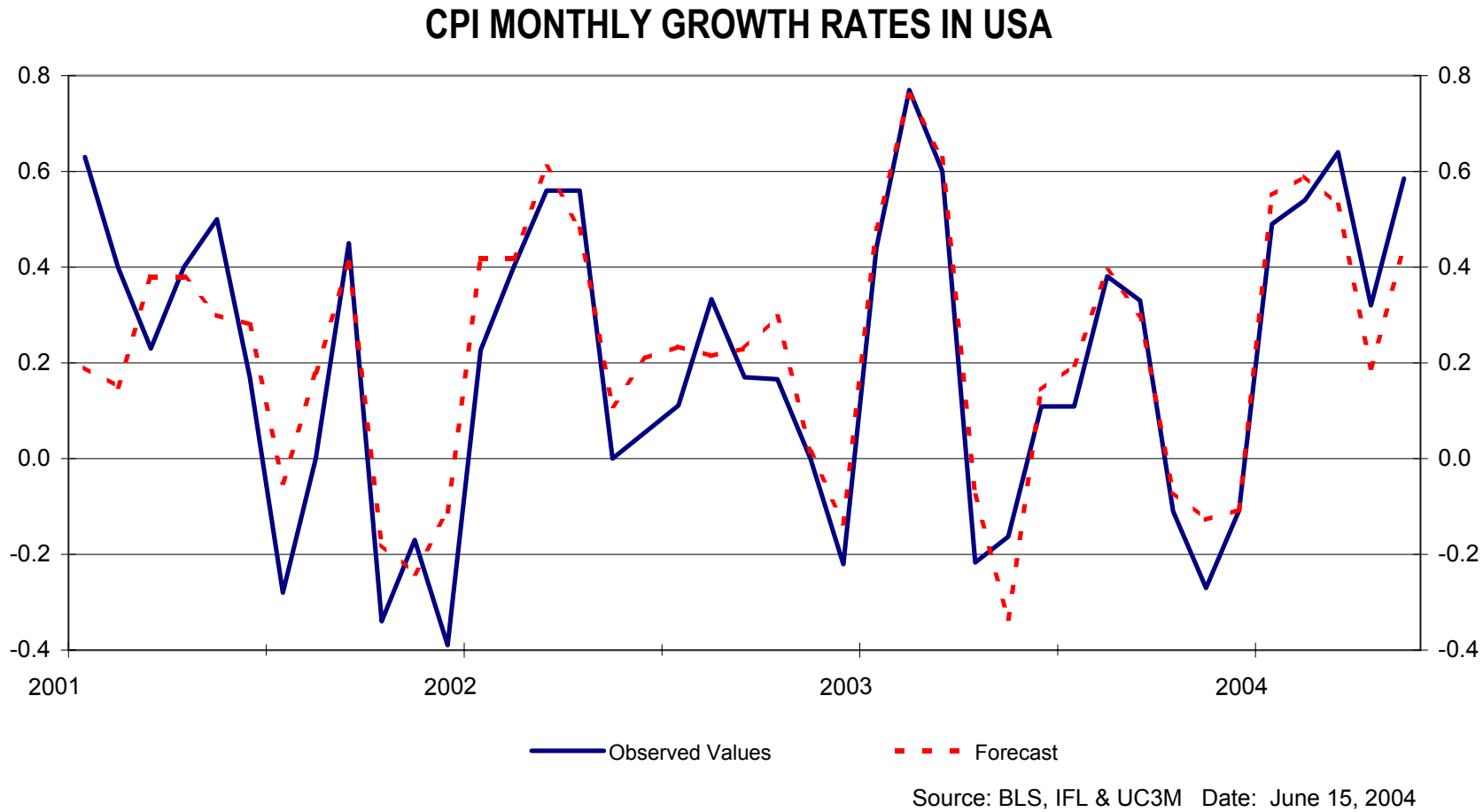
Source: INE, IFL & UC3M
Date: June 25, 2004

Graph A1A



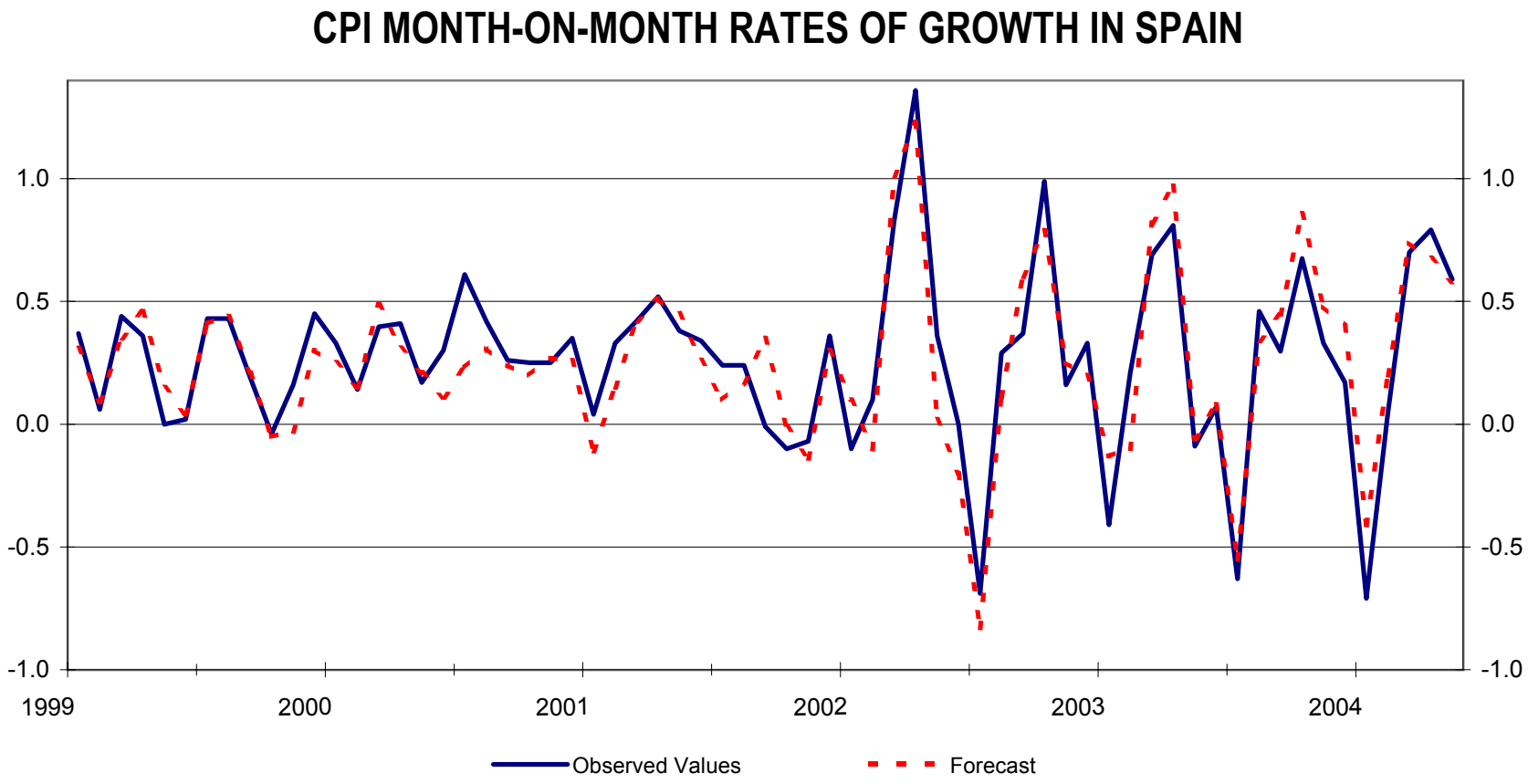
Source: EUROSTAT, IFL & UC3M Date: June 16, 2004

Graph A1B



Source: BLS, IFL & UC3M Date: June 15, 2004

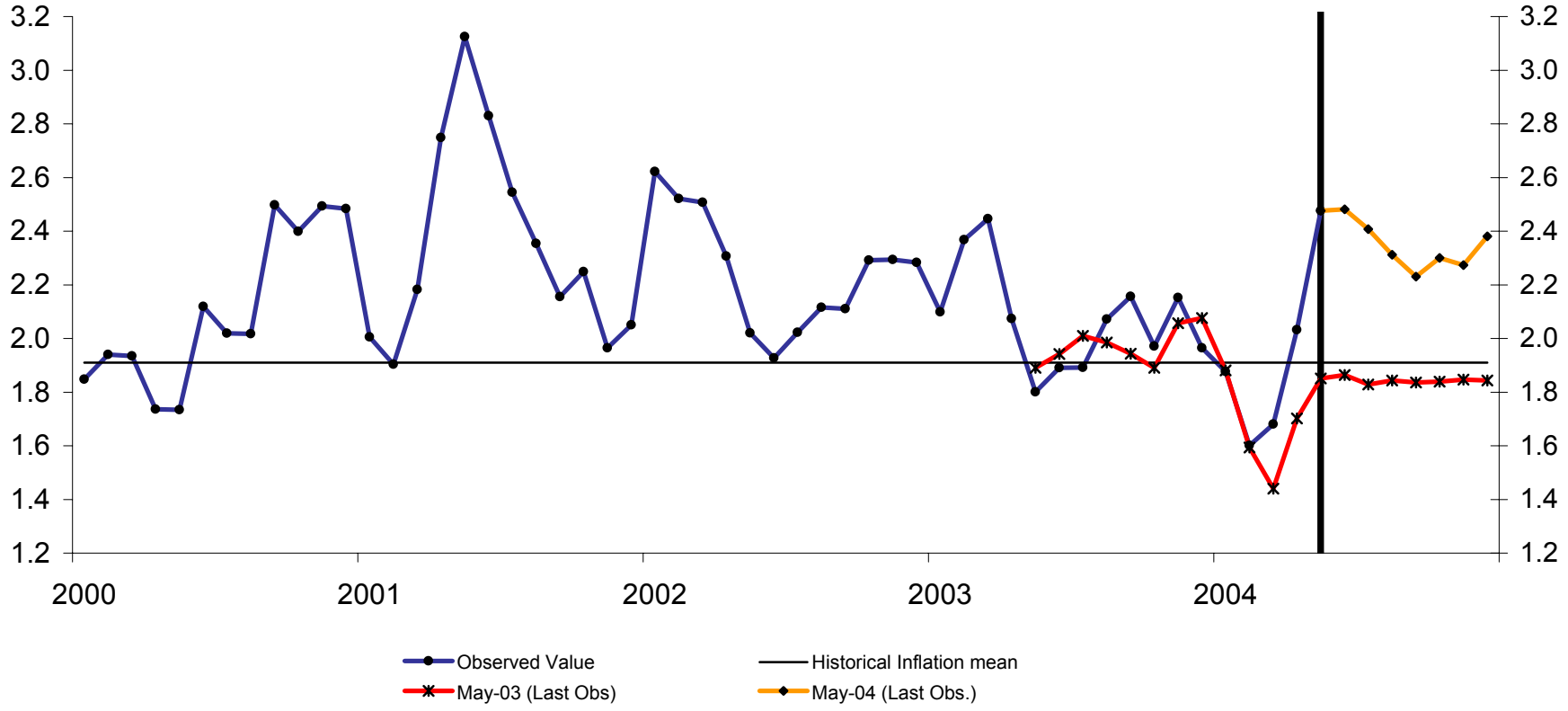
Graph A1C



Source: INE, IFL & UC3M Date: June 11 , 2004

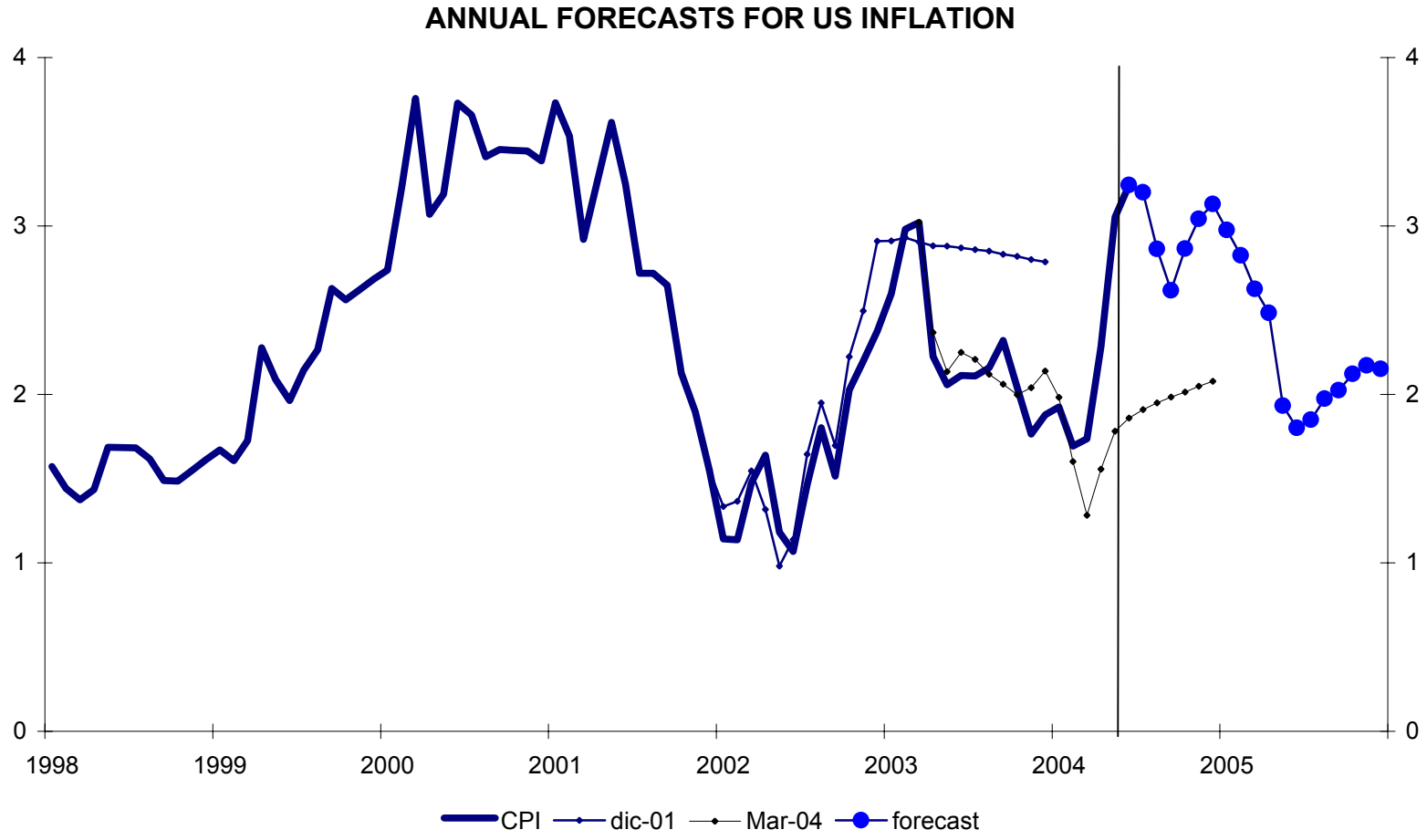
Graph A2A

ANNUAL FORECASTS FOR THE EMU INFLATION
(year-on-year rates)



Source: Eurostat & EFN Date: June 16, 2004

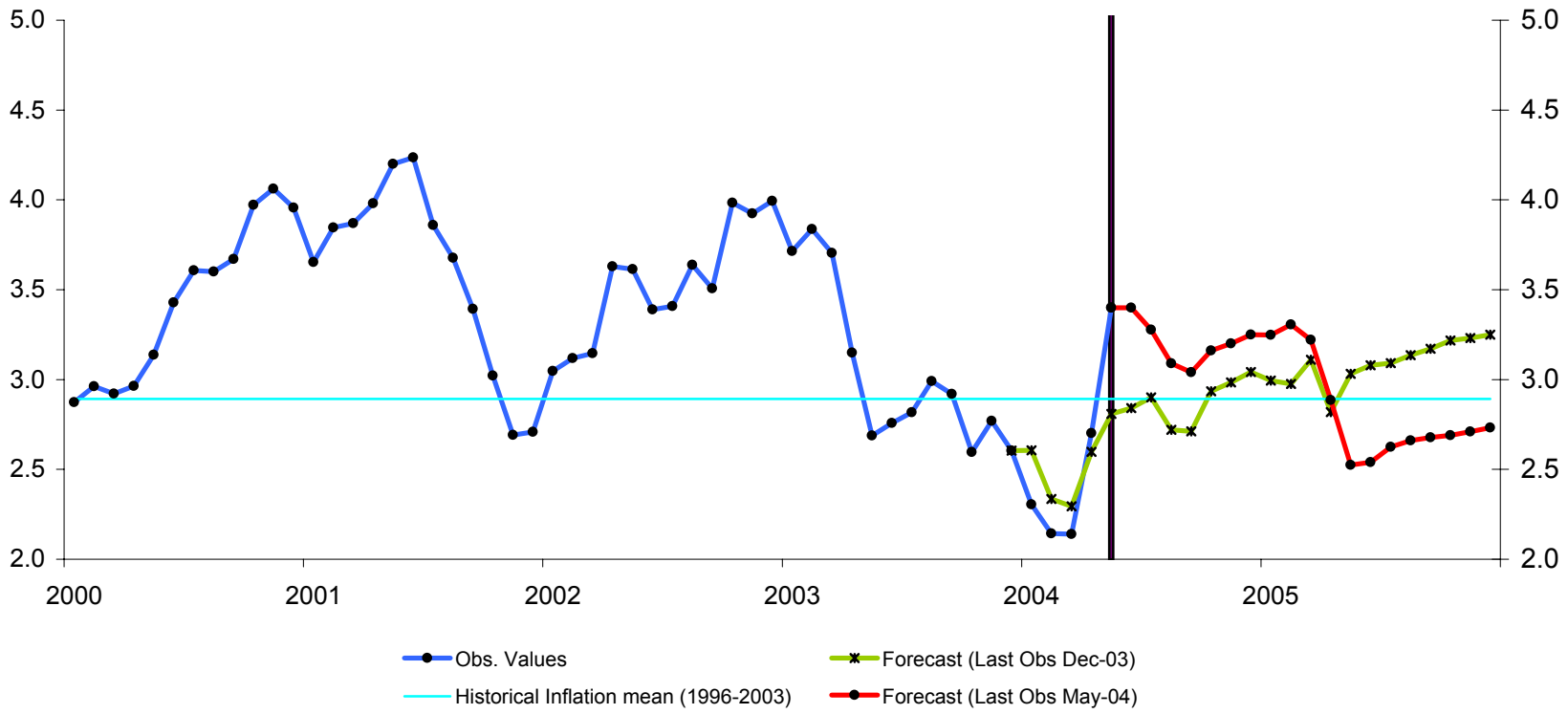
Graph A2B



Source: Universidad Carlos III, Madrid
Date: 15/06/2004

Graph A2C

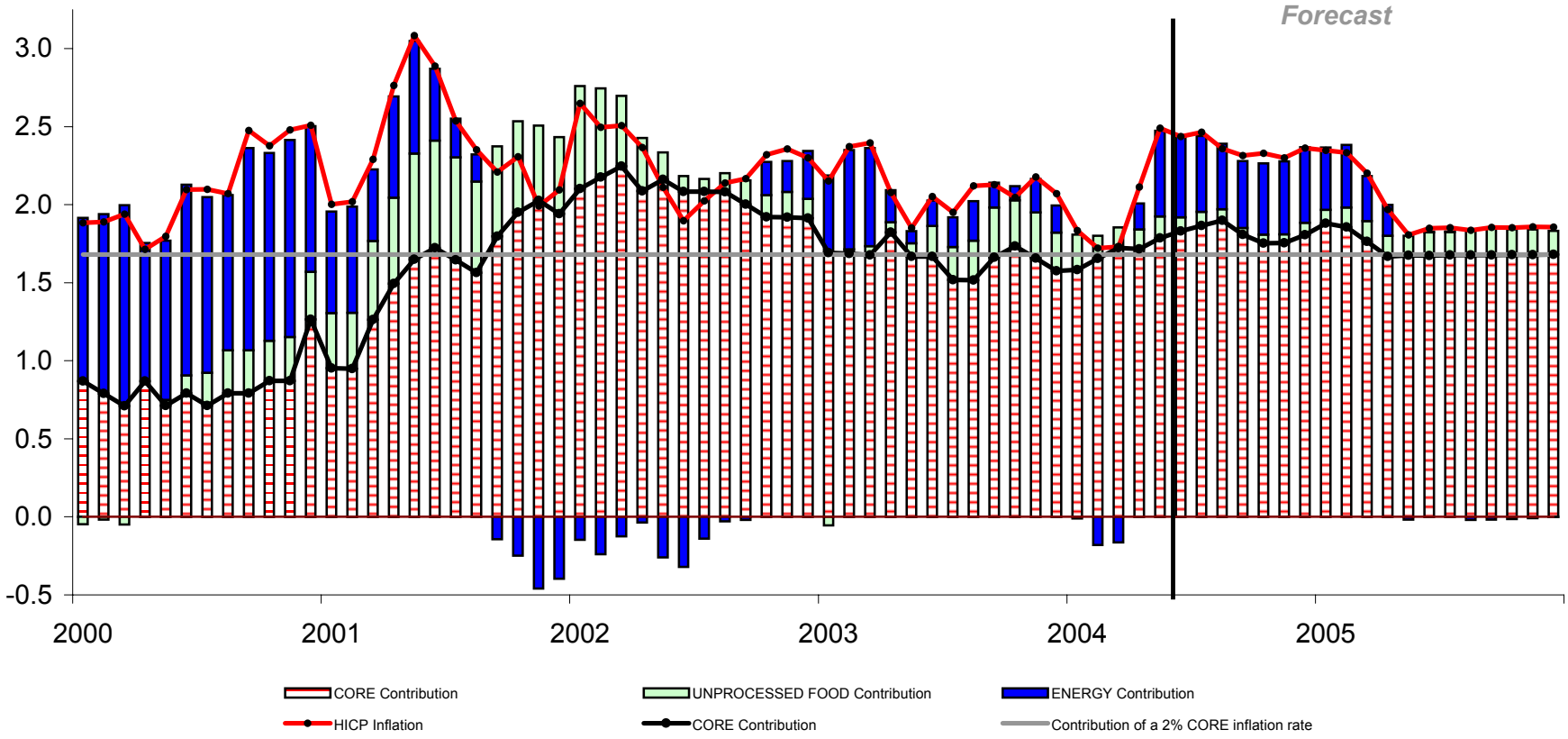
ANNUAL FORECASTS FOR TOTAL INFLATION IN SPAIN
(year-on-year rates)



Source: INE, IFL & UC3M Date: June 25, 2004

Graph A3A

YEAR-ON-YEAR RATE OF EMU INFLATION AND CONTRIBUTIONS OF MAIN COMPONENTS



Source: EUROSTAT, IFL & UC3M Date: June 16, 2004

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- Juan Urrutia “The Capitalism to come” Users as intermediaries (nº115)
- Juan Urrutia “The Capitalism to come” Users as producers (nº114)
- Juan Urrutia “The Capitalism to come” Homo Posteconomicus (nº113)
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- Astolfi, R. D. Ladiray y G.L. Mazzi, "Business cycle statistics for the Euro-zone: Situation and prospective", (nº 75, pp. 58-86)

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INTERNATIONAL INFLATION FORECASTS

	JUNE 2004		AVERAGE ANNUAL RATES				
	Monthly Rate	Annual Rate	2001*	2002*	2003*	2004	2005
ECONOMIC MONETARY UNION							
Total Inflation	0.1	2.5	2.3	2.3	2.1	2.2	1.9
Core Inflation	0.1	2.2	1.9	2.5	2.0	2.1	2.1
Goods	-0.1	0.9	0.9	1.5	0.8	0.9	1.0
Services	0.3	2.6	2.5	3.1	2.6	2.6	2.6
GDP			1.6	0.9	0.5	1.7	2.0
Private Final Consumption Expenditure			2.0	1.2	1.2	1.6	1.9
Gross Fixed Capital Formation			-0.3	-2.8	-0.8	2.2	2.1
Exports of Goods and Services			3.4	1.5	0.1	4.1	4.7
Imports of Goods and Services			1.7	0.3	1.9	4.2	4.6
Gross Value Added Total			1.6	0.9	0.5	1.7	2.0
Gross Value Added Agriculture			-1.2	0.8	-3.4	1.1	1.2
Gross Value Added Industry			0.5	0.3	0.0	1.8	1.8
Gross Value Added Construction			-0.6	-1.0	-0.5	0.8	0.3
Gross Value Added Services			2.7	1.4	1.0	1.9	2.2
OTHER ECONOMIC INDICATOR							
Industrial Production Index (excluding construction)			0.4	-0.5	0.3	2.0	1.9
UNITED STATES							
Total Inflation	0.6	3.2	2.8	1.6	2.3	2.6	2.2
Core Inflation	0.0	1.8	2.7	2.3	1.5	1.9	2.4
Goods	-0.2	-0.9	0.3	-1.1	-2.0	-0.9	0.3
Services	0.1	3.0	3.7	3.8	2.9	3.0	3.3

*Observed values.

SPANISH ECONOMY FORECASTS

	JUNE 2004		AVERAGE ANNUAL RATES				
	Monthly Rate	Annual Rate	2001*	2002*	2003*	2004	2005
Total Inflation	0.1	3.4	3.6	3.1	3.0	2.9	2.7
Trend Inflation	0.1	2.7	3.4	3.7	2.9	2.7	2.9
Goods	-0.2	0.9	3.1	2.5	2.0	0.9	1.5
Services	0.3	3.7	7.1	4.6	3.7	3.7	4.0

*Observed values.

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