

THE IBERIAN MACRO OBSERVER

Spanish Productivity (Part 2)

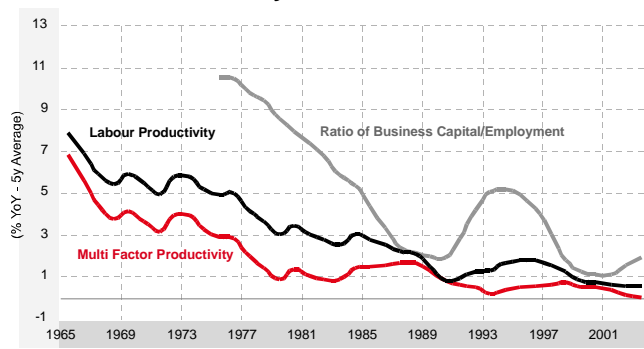
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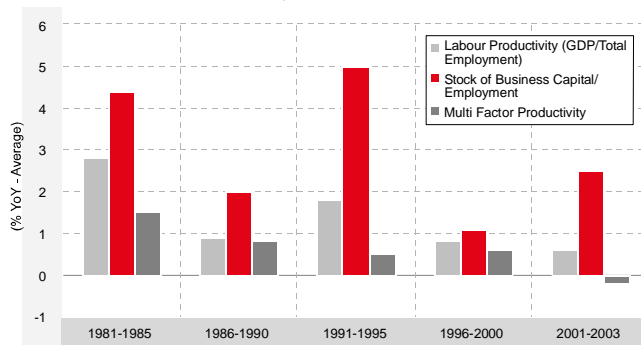
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Spain – Ratio of Business Capital / Employment vs MFP and Labour Productivity



Source: BoS, AMECO, FUNCAS, OECD and SCH Bolsa.

Spain – Ratio of Business Capital / Employment vs MFP and Labour Productivity



Source: BoS, AMECO, FUNCAS, OECD and SCH Bolsa.

Things to Watch during the Week

In the US:

- (1) The housing market should start decelerating in April.
- (2) The Empire manufacturing index could fall slightly in May.
- (3) The Philadelphia Fed index could fall.
- (4) Leading indicators should rise slightly in April.

In the Euro Zone:

- (1) German IPI and factory orders could be revised upwards.
- (2) The ZEW survey should go up in May.
- (3) Euro zone CPI to reflect higher oil prices and weaker euro.
- (4) Euro zone trade balance to improve in March.
- (5) Italian consumer confidence should go up in May.

■ We now believe the Fed will begin hiking rates in June 2004. We expect it to lift rates by 100bp in 2004E and by another 175bp in 2005F, leaving the Fed funds rate at 3.75% in December 2005F. Such a move would leave the Fed with a nearly 'neutral' stance at the end of 2005F, with real Fed funds at 1.68% from -0.36% in 2Q04E.

■ In the US, retail sales were slightly weaker than expected, but still consistent with private consumption growth of around 3.0% in 2Q04E. Headline producer prices rose sharply (0.7% MoM), but the rise in the core index was more modest (0.2% MoM). The trade balance deficit surprised on the upside, driven mainly by the increase in oil prices, although the fact is that the strength of internal demand in the US is keeping import growth rates at high levels.

■ In the Euro zone, preliminary 1Q04 GDP data surprised on the upside. In Spain, the economy grew 0.6% QoQ and German GDP rose 0.4% QoQ. French GDP growth was 0.8% QoQ and Italian GDP advanced 0.4% QoQ. Combined Euro zone GDP increased 0.6% QoQ. These numbers are slightly better than our estimate of Euro zone 1Q04 GDP growth of 0.5% QoQ.

■ In the *Macro Corner*, we include the second part of the Spanish productivity study initiated two weeks ago. The main conclusions for future balanced growth in Spain are: (1) productivity needs to rise; (2) this should be done through an increase in MFP (multifactor productivity); and (3) Spain needs to focus on R&D investment and in human capital (education). In both, Spain is still far behind European standards.

THE WEEK BEHIND

Macro Data Published Last Week

Day	Time*	Country	Indicator/Event	Period	Reference Data	Forecast	Actual
TUESDAY	8:00	Germany	Current Account	Mar	5.0bnr	7.0bn	11.3bn
11-May	8:00	Germany	Trade Balance	Mar	12.1bnr	12.3bn	16.5bn
	8:00	Germany	Exports (m)	Mar	-2.6r	1.1	0.8
	8:00	Germany	Imports (m)	Mar	1.2r	0.8	-3.1
	8:45	France	Industrial Production (m/y)	Mar	1.2r/0.9	0.4/1.5	0.1/1.2
	8:45	France	Manufacturing Production (m/y)	Mar	1.1r/1.1r	0.3/1.4	-0.3/0.2
WEDNESDAY	8:00	Germany	CPI (m/y)	Apr F	0.3/1.1	-	0.3/1.6
12-May	8:00	Germany	Wholesale Price Index (m/y)	Apr	1.0r/1.3r	0.4/2.4	2.4/0.4
	8:45	France	Trade Balance	Mar	-73mn	200mn	827mn
	8:45	France	GDP (q)	1Q E	0.6r	0.5	0.8
	0:30	US	ABC Consumer Confidence	May 9	-11	-	-13
	13:00	US	MBA Mortgage Applications	May 7	4.4	-	-5.0
	14:30	US	Trade Balance	Mar	-42.1bn	-42.7bn	-46.0bn
	14:30	US	Import Price Index (m/y)	Apr	0.8r/1.1	0.4/-	0.2/4.6
	20:00	US	Monthly Budget Statement	Apr	51.1bn	25.0bn	17.6bn
THURSDAY	8:00	Germany	GDP (sa/nsa) (q/y)	1Q 1	0.3/0.2	0.3/1.1	0.4/1.5
13-May	8:45	France	CPI (m/y)	Apr P	0.4/1.7	0.2/2.1	0.3/2.4
	9:30	Italy	Industrial Production (sa/nsa) (m/y)	Mar	-0.1/1.2r	0.2/0.9	-0.4/4.8
	10:00	Euro Zone	ECB to Release May Monthly Report	-	-	-	-
	10:30	Italy	GDP (sa/wda) (q/y)	1Q P	0.0/0.1	0.2/0.5	0.4/0.8
	14:30	US	PPI (m/y)	Apr	0.5/1.4	0.2/-	0.7/3.7
	14:30	US	PPI Ex Food & Energy (m/y)	Apr	0.2/0.7	0.3/-	0.2/1.5
	14:30	US	Retail Sales	Apr	2.0r	-0.2	-0.5
	14:30	US	Retail Sales Less Autos	Apr	1.8r	-0.2	-0.1
	14:30	US	Initial Jobless Claims	May 8	318kr	325k	331k
	14:30	US	Continuing Claims	May 1	2,921kr	2,900k	2,974k
FRIDAY	8:45	France	Non-Farm Payrolls (q)	1Q P	0.3	0.5	0.8
14-May	8:45	France	Wages (q)	1Q P	0.2	0.1	-0.1
	9:00	Spain	CPI (m/y)	Apr	0.7/2.1	1.3/2.6	1.4/2.7
	9:30	Italy	CPI (Nic incl Tobacco) (m/y)	Apr F	0.3/2.3	-	0.2/2.3
	11:00	Euro Zone	GDP sa (m/y)	1Q E	0.4/0.6r	0.4/1.0	0.6/1.3
	11:00	Euro Zone	Eur. Com. Publishes 2Q & 3Q GDP Forecasts	-	-	-	-
	14:30	US	CPI (m/y)	Apr	0.5/1.7	0.3/2.4	-
	14:30	US	CPI Ex Food & Energy (m/y)	Apr	0.4/1.6	0.2/1.7	-
	14:30	US	Business Inventories	Mar	0.7	0.5	-
	15:15	US	Industrial Production	Apr	-0.2	0.5	-
	15:15	US	Capacity Utilization	Apr	76.5	76.7	-

(m) % MoM; (y) % YoY; (q) % QoQ; (a) annualised; (I) Index; (k) thousands; (mn) millions; (bn) billions; (r) revised; (F) final; (P) preliminary; (sa) seasonally adjusted; (nsa) non-seasonally adjusted. (*) CET.

Source: Bank of Spain, Ministry of Economy, Datastream, Bloomberg, Reuters and Santander Central Hispano Bolsa estimates and forecasts.

EURO ZONE GDP STRONG; OIL PRICE CONTINUES HIGHER

Higher-than-expected GDP growth in the Euro zone and oil prices

The most important issues of the week were the higher-than-expected GDP growth rates in the Euro zone and the increase in oil prices. The release of crude inventory data (to May 7) showed crude inventories declined -2.1% and gasoline stocks fell 1.6%. Distillate stocks were the only ones to increase (+1.0%). The main concern for the market should be the petrol inventories, since crude inventories are still recovering trend. Moreover, the upcoming 'driving season' is expected to contribute the pressure on the petrol prices. We expect oil prices to remain high in the short run.



Fed to Start Raising Rates in June

In November 2003 we saw many reasons for the Fed to hold rates until Jan 2005

Since November 2003, we have held the view that the Federal Reserve would not raise interest rates until January 2005F. Our forecast was based on the belief that: (1) there was significant slack in the economy; (2) structural inflationary pressures were inexistent; (3) consumers still had to redress their balance sheets; (4) it was the best way to control a possible sharp increase in long-term interest rates; and (5) the risks from raising interest rates sooner than necessary were higher than the possible problems created from being behind the curve. Moreover, we believed the government elections scheduled for November were likely to delay any decision on monetary policy.

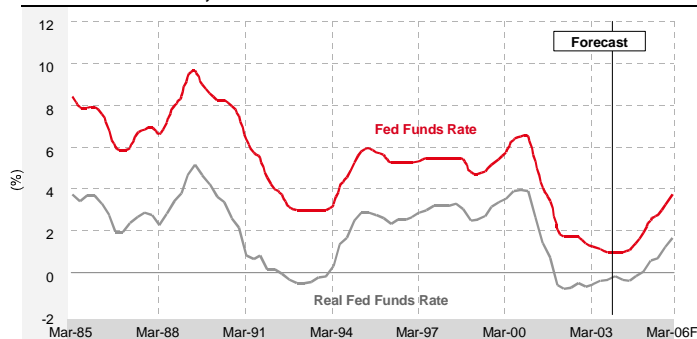
Recent economic data and Fed's comments point to an imminent rate hike

Since then, the Eurodollar market has priced in several rises in Fed funds, sparked mostly by the release of a single monthly economic indicator. Up until now, we had not found any significant reasons (supported by macro economic data) to change our view. However, the release of the last two months' employment figures, and the upward revision of the previous employment data have led us to change our forecasts. Based on the higher-than-expected employment numbers (non-farm payrolls have gone up 217k per month on average in the first four months of 2004), we now believe that the normalisation process of the economy is likely to consolidate. The higher employment levels should lead to higher ULC, which could result in a build-up of inflationary pressures in the years ahead. We believe the Fed will have to raise interest rates sooner rather than later.

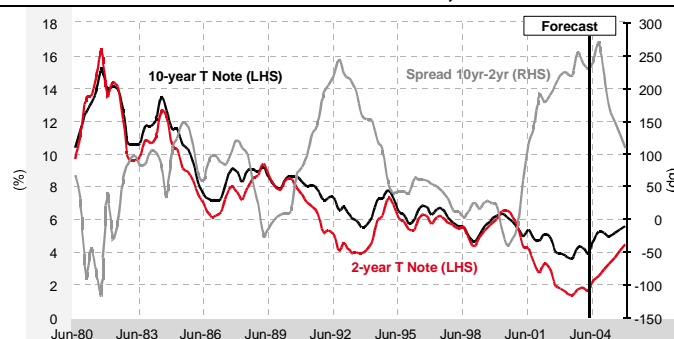
100bp in 2004E and 175bp more in 2005F

We think the Fed will begin raising rates in June 2004. We now expect it to lift rates by 100bp in 2004E and by another 175bp in 2005F, leaving the Fed funds rate at 3.75% in December 2005F. Such a move would leave the Fed with a nearly 'neutral' stance at the end of 2005F, with real Fed funds at 1.68% from -0.36% in 2Q04E.

US – Fed Funds, 1985-2005F



US – 2-Year and 10-Year T-Note Yields, 1980-2005F



Source: Datastream and Santander Central Hispano Bolsa estimates and forecasts.

US – Interest Rates and Exchange Rate Forecasts, 2001-05F

	2001	2002	2003	2004E	2005F
Fed funds rate	3.73 (1.75)	1.67 (1.25)	1.10 (1.00)	1.35 (2.00)	3.06 (3.75)
3-month T-bill yield	3.54 (1.79)	1.72 (1.29)	1.14 (1.09)	1.53 (2.30)	3.38 (4.00)
2-year Treasury note yield	3.70 (3.03)	2.55 (1.60)	1.64 (1.82)	2.39 (3.00)	3.90 (4.50)
10-year Treasury note yield	4.96 (5.05)	4.53 (3.81)	3.99 (4.24)	4.79 (5.20)	5.30 (5.60)
€/ \$ exchange rate	0.89 (0.89)	0.95 (1.05)	1.14 (1.26)	1.18 (1.13)	1.10 (1.12)

Note: All figures are annual averages. Figures in parentheses are year-end.

Source: Datastream and Santander Central Hispano Bolsa estimates and forecasts.

US – Interest Rates and Exchange Rate Forecasts, 2003-05F

	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04E	3Q04E	4Q04E	1Q05F	2Q05F	3Q05F	4Q05F
Fed funds rate	1.25	1.17	1.00	1.00	1.00	1.08	1.42	1.92	2.50	2.75	3.25	3.75
3-month T-bill yield	1.24	1.15	1.08	1.11	1.06	1.11	1.65	2.30	2.80	3.10	3.65	4.00
2-year Treasury note yield	1.56	1.37	1.72	1.89	1.68	2.32	2.55	3.00	3.30	3.70	4.10	4.50
10-year Treasury note yield	3.82	3.57	4.27	4.29	3.98	4.72	5.25	5.20	5.00	5.20	5.42	5.60
€/ \$ exchange rate	1.08	1.15	1.13	1.20	1.24	1.20	1.14	1.13	1.10	1.07	1.10	1.12

Note: All figures are quarterly averages

Source: Datastream and Santander Central Hispano Bolsa estimates and forecasts.

The week in the US: In the US, retail sales were slightly weaker than expected, but still consistent with private consumption growth of around 3.0% in 2Q04E. Headline producer prices rose sharply (0.7% MoM), but gains in the core index were more modest (0.2% MoM). Even though, the upward trend in prices continues at the producer level, we do not see significant risks of a sharp increase in the core figures in the months ahead. The trade balance deficit surprised on the upside, driven largely by the increase in oil prices, although the strength of US internal demand is likely to keep imports at high levels. Also, despite the increase in initial jobless claims last week, we believe the positive momentum in the labour market is still alive.

The Euro zone economy growing

The week in the Euro zone: Preliminary releases of 1Q04 GDP estimates in Euro zone countries surprised on the upside. German GDP rose 0.4% QoQ, French GDP was up 0.8% QoQ and Italy posted an increase of 0.4% QoQ. In Spain (data released the previous week), GDP rose 0.6% QoQ. The combined Euro zone GDP growth reflected these positive numbers, going up 0.6% QoQ in 1Q04. These numbers are slightly better than our estimate for 1Q04 Euro zone GDP growth of 0.5% QoQ.

EC sees 2Q04 GDP up 0.3%-0.6%; 3Q04 rise at 0.4%-0.8%

The European Commission has released its GDP estimates for 2Q04 and 3Q04. It estimates that 2Q04 GDP will rise between 0.3%-0.7% QoQ, while growth in 3Q04 should increase by 0.4%-0.8% QoQ. The European Commission clearly maintains its positive view about a recovery in the Euro zone economy.

Growth is coming from the external sector

In our view, and also according to comments from some economy ministers after the release of the preliminary GDP numbers, GDP growth in 1Q04 mainly came from the strong positive contribution from the external sector. Although we do not as yet have the GDP breakdown, we believe internal demand remains weak. However, 1Q04 trade figures in countries like Germany have performed very well.

March industrial production in Italy and France was weak

The only negative news in the week came from the worse-than-expected French and Italian industrial production numbers for March. We believe this is not the beginning of a downward trend in industrial production, and we maintain our view that the improvements seen in the business confidence indicators should be maintained in the months ahead.



THE WEEK AHEAD

Macro Data to Be Published This Week

Day	Time*	Country	Indicator/Event	Period	Reference Data	Forecast
DURING THE WEEK	18-19	Germany	PPI (m/y)	Apr	0.6/0.3	0.4/0.8
	18-29	Germany	Factory Orders (BBK) (m/y)	Mar F	0.5/-	-
	18-29	Germany	Industrial Production (m/y)	Mar F	-0.4/1.9	-
MONDAY 17-May	14:30	US	Empire Manufacturing	May	36.05	34.80
	19:00	US	NAHB Housing Market Index	May	69	69
TUESDAY 18-May	11:00	Euro Zone	CPI (m/y)	Apr	0.7/1.7	0.4/2.0
	11:00	Euro Zone	Industrial Production (sa/wda) (m/y)	Mar	0.1/0.6	-0.5/0.5
	11:00	Germany	Zew Survey (Current Situation)	May	-72.5	-70.9
	11:00	Germany	Zew Survey (Economic Sentiment)	May	49.7	49.5
	14:30	US	Housing Starts	Apr	2,007k	2,000k
	14:30	US	Building Permits	Apr	1,976kr	1,946k
WEDNESDAY 19-May	8:45	France	GDP (q/y)	1Q P	-	0.8/1.7
	9:30	Italy	Trade Balance (total)	Mar	-788mn	700mn
	9:30	Italy	Trade Balance Eu	Mar	-802mn	-600mn
	11:00	Euro Zone	Trade Balance	Mar	5,433mn	6,900mn
	0:30	US	ABC Consumer Confidence	May 16	-13	-
	13:00	US	MBA Mortgage Applications	May 14	-5.0	-
THURSDAY 20-May	9:00	Spain	Factory Orders (y)	Mar	7.2	-
	9:30	Italy	Consumer Confidence Ind (sa/nsa)	May	101.7/101.7	102.0/102.5
	9:30	Italy	Industrial Orders (m/y)	Mar	4.1/3.5	-1.0/4.6
	9:30	Italy	Industrial Sales sa/nsa (m/y)	Mar	2.4/1.7	0.1/1.4
	14:30	US	Initial Jobless Claims	May 15	331k	328k
	14:30	US	Continuing Claims	May 8	2,974k	-
	16:00	US	Leading Indicators	Apr	0.3	0.2
	18:00	US	Philadelphia Fed	May	32.5	30.0
FRIDAY 21-May	9:30	Italy	Retail Sales (m/y)	Mar	-0.4/0.1	0.3/1.6

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Source: Bank of Spain, Ministry of Economy, Datastream, Bloomberg, Reuters and Santander Central Hispano Bolsa estimates and forecasts.

THINGS TO LOOK OUT FOR

In the US: (1) The housing market should start decelerating. Building permits will probably start reflecting that slowdown in April. (2) The Empire manufacturing index should decline in May, anticipating lower growth rates in 2H04E. (3) The Philadelphia Fed index should show a fall. (4) Leading indicators should rise slightly in April, supported by better labour market data.

In the Euro Zone: (1) Final numbers for both German industrial production and factory orders could be revised upwards (in line with comments from the country's economy minister). (2) The German ZEW survey should recover somewhat, after the positive performance of the IFO and PMI indices. (3) Euro zone CPI should start reflecting the oil price increase and the depreciation of the euro against the dollar in recent months. Headline CPI should rise 2.0% YoY. (4) The Euro zone trade balance should improve in March, in line with the positive performance seen in the main Euro zone countries. (5) Italian consumer confidence could go up slightly in May.

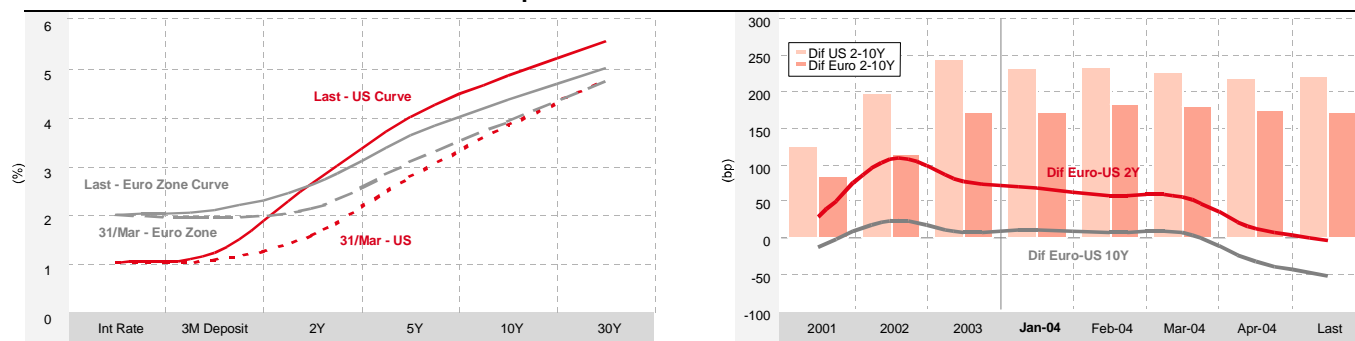
RATES AND CURRENCIES

US and Euro Zone – Interest Rates and Currencies

		Annual ¹			Quarterly ¹				Monthly				Weekly			
		2001	2002	2003	Jun-03	Sep-03	Dec-03	Mar-04	Jan-04	Feb-04	Mar-04	Apr-04	30-abr	07-may	14-may	Last ²
ST Interest Rates																
	ECB repo rate	4.2	3.2	2.2	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.00	2.00	2.00
	Fed funds	3.7	1.7	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.00	1.00	1.00	1.00
	Euribor 3M	4.1	3.3	2.2	2.3	2.1	2.1	2.0	2.1	2.0	1.9	2.0	2.05	2.06	2.09	2.09
	US dep 3M	3.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.11	1.16	1.22	1.22
LT Interest Rates																
Euro	2Y	4.0	3.6	2.4	2.2	2.5	2.7	2.3	2.5	2.2	2.1	2.4	2.45	2.59	2.62	2.62
	5Y	4.4	4.2	3.3	3.0	3.3	3.6	3.2	3.4	3.2	3.1	3.4	3.43	3.57	3.63	3.63
	10Y	4.8	4.8	4.2	3.9	4.1	4.4	4.1	4.2	4.0	3.9	4.2	4.19	4.31	4.35	4.35
	30Y	5.4	5.2	4.8	4.7	4.9	5.0	4.8	4.9	4.8	4.7	4.9	4.91	5.00	5.02	5.02
US	2Y	3.7	2.5	1.6	1.4	1.7	1.9	1.7	1.8	1.6	1.6	2.3	2.32	2.62	2.65	2.65
	5Y	4.4	3.7	2.9	2.5	3.2	3.3	3.0	3.1	2.9	2.8	3.6	3.62	3.94	4.02	4.02
	10Y	5.0	4.5	4.1	3.6	4.3	4.3	4.0	4.1	4.0	3.8	4.5	4.51	4.77	4.86	4.86
	30Y	5.5	5.3	4.9	4.6	5.2	5.1	4.9	5.0	4.8	4.8	5.3	5.28	5.47	5.57	5.57
Spreads																
Dif-Euro	3M-30Y	128	195	262	243	279	289	283	287	283	280	287	287	293	294	294
	2Y-10Y	84	115	173	165	166	166	178	173	183	179	174	174	172	173	173
Dif US	3M-30Y	191	354	377	342	407	401	380	389	379	371	417	417	431	435	435
	2Y-10Y	126	198	244	221	255	240	230	231	233	226	219	219	215	222	222
Dif-Euro-US Int		50	154	110	117	100	100	100	100	100	100	100	100	100	100	100
	2Y	29	107	78	85	74	82	61	70	58	56	13	13	-2	-2	-2
	10Y	-13	24	7	29	-14	8	9	11	7	8	-31	-31	-46	-51	-51
Currencies																
	€/US\$	0.95	1.14	1.18	1.15	1.13	1.20	1.24	1.246	1.248	1.229	1.198	1.198	1.190	1.181	1.181
	€/¥	118	132	133	137	131	131	132	132	136	128	132	132	133	135	135
	US\$/¥	125	116	113	119	116	109	106	106	109	104	111	111	112	115	115

(1) Figures represent the average for the period; (2) May 14, 2004.
Source: Santander Central Hispano Bolsa estimates and forecasts.

US and Euro Zone – Debt Curve & 2Y-10Y Spreads



Source: Bloomberg.



MACRO CORNER: SPANISH PRODUCTIVITY (Part 2)

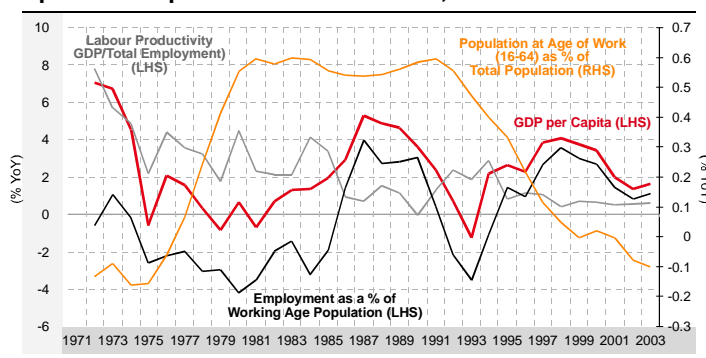
In the *Iberian Macro Observer* dated May 3, our Macro Corner covered the first part of a study on the evolution of productivity and the composition of Spanish economic growth. In this Macro Corner, we present the second part of the study.

Low productivity in Spain due to strong job creation

As we explained two weeks ago, in recent years Spain has seen modest growth in productivity mainly due to strong job creation (employment is currently growing at 3.0% in annual terms). In comparison with the other main Euro zone countries, Spain posted much lower growth rates for productivity, but considerably stronger job creation.

Analysing the Spanish growth model, it is clear that growth has basically been driven by job creation, at least over the past eight years.

Spain – Composition of GDP Growth, 1971-2003



Source: Mineco, Bank of Spain and Santander Central Hispano Bolsa.

Long term, Spain needs more balanced growth

In the short run, this growth model has proven successful. Moreover, it has allowed the Spanish economy to outperform the other main Euro zone economies in recent years. However, in the longer run and taking population growth trends into account, we believe the economy should shift towards a more balanced growth model, with productivity gains representing a larger share of GDP growth. Investments in technology, better education and managing immigration to control population growth dynamics should be key.

MOVING TOWARDS MORE BALANCED ECONOMIC GROWTH

The table below shows our calculation of the Spanish growth model of the past 20 years. While job creation has been the main driver of GDP growth in the past eight years, Spain should move towards a more balanced composition going forward.

Spanish Growth Model – Contribution to GDP per Capita, 1981-2003

% YoY)	Labour Productivity (GDP/Total Employment)	Working Age Pop as % of Total	% of Working Age Pop Employed	GDP per Capita
1981-1985	2.8	0.6	-2.4	1.0
1986-1990	0.9	0.6	2.8	4.2
1991-1995	1.8	0.5	-1.0	1.3
1996-2000	0.8	0.1	2.6	3.5
2001-2003	0.6	-0.1	1.1	1.6

Note: Working age population = 16-64 years.

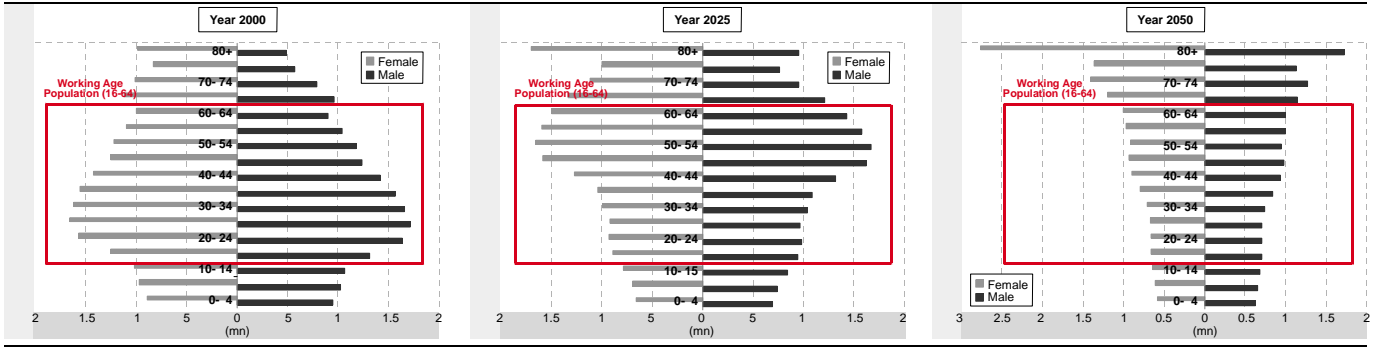
Source: Mineco, OECD and Santander Central Hispano Bolsa.

Negative Population Trends Going Forward

One of the main pillars of Spanish economic growth in the 1980s to the mid 1990s was the increase in the working age population (16-64 years) as a percentage of the total population. In 1981-1995, this population segment contributed around 0.5pp to the annual GDP per capita growth. However, the average annual contribution dropped to zero in 1996-2003.

Looking ahead, we find that population trends will continue to contribute negatively to GDP per capita growth unless measures are taken.

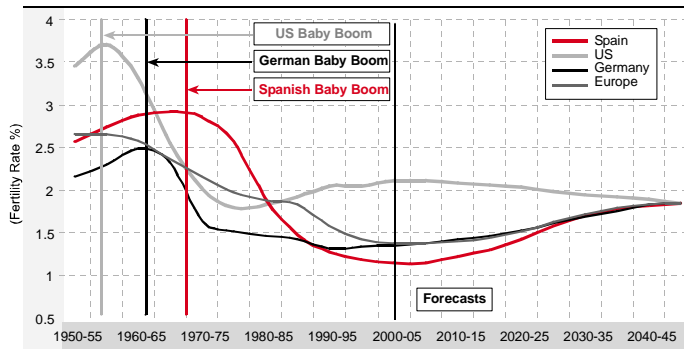
Spain – Population Pyramids, 2000-50F



Note: Working age population = 16-64 years.
Source: US Bureau of the Census.

As shown in the population pyramids, the working age segment (16-64 years) represented 68.3% of the total population in 2000. In 2025, this segment is expected to account for around 65.0% of the total, while this percentage should drop to just 51.4% in 2050. The negative trend is basically due to the low birth rates seen in Spain in recent years relative to the other main Euro zone economies.

Fertility Rates and Baby Booms, 1950-2050F



Source: UN Statistics Division and Santander Central Hispano Bolsa.

The quickest and easiest solution is immigration. Spain’s treatment of immigration flows will be key to offsetting the lack of natural population growth. If immigration flows are well managed, the future contribution of the working age segment as a percentage of the total population to GDP per capita should at least be neutral; otherwise, it will clearly be negative.

Employment Could Keep Growing

The percentage of working age population employed should continue to contribute to GDP per capita, as we expect relatively high rates of job creation (probably around 3.0% YoY) going forward. Strong GDP growth (around 3.0% in annual terms) should help sustain healthy job creation.



Higher Productivity Is Key to Future Growth

Looking at future scenarios for population and employment, we believe that higher productivity growth rates will be necessary to sustain, or even improve, growth rates in Spain.

As labour productivity depends on the capital/employment ratio and on multi factor productivity (MFP), we should look at these variables to determine the future of productivity.

Spanish Growth Model – Composition of Labour Productivity, 1981-2003

% YoY)	Labour Productivity (GDP/Total Employment)	Stock of Business Capital/Employment	Multi Facto Productivit
1981-1985	2.8	4.4	1.5
1986-1990	0.9	2.0	0.8
1991-1995	1.8	5.0	0.5
1996-2000	0.8	1.1	0.6
2001-2003	0.6	2.5	-0.2

Source: BoS, AMECO, FUNCAS, OECD and Santander Central Hispano Bolsa.

Spain – Ratio of Business Capital/Employment vs Multi Factor Productivity and Labour Productivity



Source: BoS, AMECO, FUNCAS, OECD, and Santander Central Hispano Bolsa.

As shown above, over the past twenty years labour productivity has mainly been driven by increases in the ratio of stock of business capital-to-employment rather than by higher MFP. This does not represent balanced productivity growth, since the rise in labour productivity and, consequently, in GDP per capita has been driven by replacing employment with capital. Business investment growth rates have outperformed those of MFP plus population and the depletion rate of the stock of capital. To achieve balanced growth, the rise in GDP per capita should be equal to that in MFP, while the increase in capital should be equal to that in population plus MFP growth plus the depletion rate of the stock of capital (consequently, we would see stable relative participation rates of capital and employment to GDP growth).

Having said that, improving or increasing MFP growth rates should prove to be a longer-term way of achieving greater productivity and balanced GDP growth. Note that MFP depends on the human and technology capital, so we need to see greater investment in technology and education to drive higher MFP.

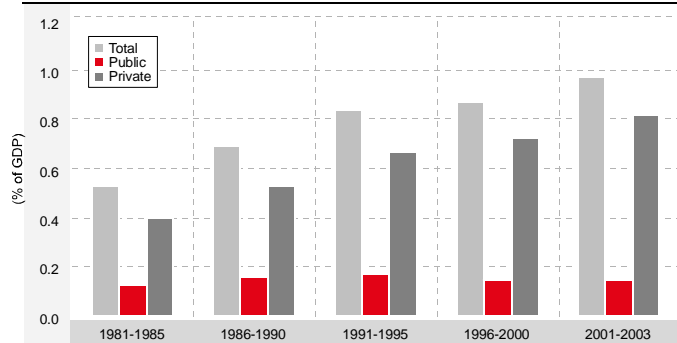
Spanish Growth Model, Multi Factor Productivity, 1981-2003

% YoY)	MFP	Human Capital		Technology Capital			Patents Requested/Pop (Units per mn)
		Public Expenditure on Education	Expenditure in R&D as % of GDP				
Period			Total	Public	Private	Infrastructure Non-Res Constr Investment (% GDP)	
1981-1985	1.5	0.63	0.53	0.13	0.40	7.80	-
1986-1990	0.8	0.77	0.69	0.16	0.53	7.50	6.50
1991-1995	0.5	0.93	0.84	0.17	0.67	6.52	10.25
1996-2000	0.6	1.01	0.87	0.15	0.72	8.12	19.79
2001-2003	-0.2	1.10	0.97	0.15	0.82	9.36	24.11

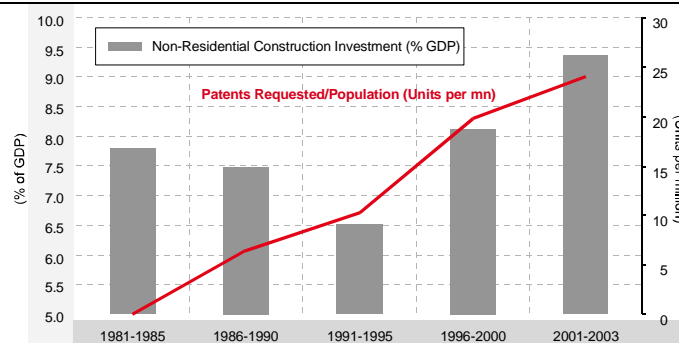
Public expenditure on education in thousands of purchasing power parities (PPP) euro.

Source: BoS, AMECO, FUNCAS, OECD and Santander Central Hispano Bolsa.

Spain – Expenditure in R&D, 1981-2003



Spain – Other Investment in Capital Technology, 1981-2003



Source: BoS, AMECO, FUNCAS, OECD, and Santander Central Hispano Bolsa.

In our view, a clear increase in investment in R&D and education is needed to boost MFP. If we compare the amount Spain and the rest of the EU invest in both human and technology capital (see below), we can see that Spain falls considerably short of the European standard in practically all the components, apart from infrastructure.

Spanish Growth Model vs EU (EU=100) – MFP, 1981-2003.

% YoY	Human Capital		Technology Capital				
	MFP	Public Expenditure on Education	Expenditure in R&D as % of GDP			Infrastructure Non-Res Constr Investment (% GDP)	Patent Requested/Pop (Units per mn)
			Total	Public	Private		
1981-1985	104.2	56.6	31.1	40.9	28.9	110.6	7.6
1986-1990	104.5	64.7	38.5	52.5	35.6	130.4	12.1
1991-1995	101.1	69.4	47.9	56.8	46.1	151.4	15.5
1996-2000	98.8	70.6	50.9	56.9	49.8	153.1	14.9
2001-2003	96.7	73.0	54.2	60.4	53.2	170.8	7.5

Public expenditure on education in thousands of purchasing power parities (PPP) euro.

Source: BoS, AMECO, FUNCAS, OECD and Santander Central Hispano Bolsa.

In conclusion, Spain should focus on boosting productivity through higher MFP growth rates to change the growth model, in our view. This would require a sizeable increase in investment in R&D and in human capital (education) given that Spain still falls considerably short of the rest of the EU in this respect.



MACROECONOMIC ESTIMATES AND FORECASTS

Europe, the US and Japan – Estimates and Forecasts, 2001-05F

GDP (*)	2001	2002	2003	2004E	Cons	2005F	Cons
Germany	1.0	0.2	-0.1	1.7	1.6	2.1	1.7
France	2.1	1.3	0.5	1.8	1.7	2.2	2.1
Italy	1.7	0.4	0.4	1.8	1.1	2.4	1.9
Spain	2.8	2.0	2.4	2.9	2.9	3.2	3.1
Portugal	1.7	0.4	-1.0	1.0	1.2	2.2	2.3
Euro-12	1.6	0.9	0.4	1.9	1.6	2.3	2.0
UK	2.1	1.7	-	-	3.1	-	2.6
Argentina	-4.4	-10.9	8.7	6.8	6.7	3.0	4.1
Brazil	1.3	1.9	-0.2	3.8	3.4	4.0	3.6
Mexico	-0.3	0.9	1.3	3.2	3.2	4.0	3.6
Japan	0.4	0.2	-	-	3.0	-	1.7
US	0.5	2.2	3.1	4.4	4.6	3.3	3.7

CPI	2001	2002	2003	2004E	Cons	2005F	Cons
Germany	2.0	1.3	1.1	0.8	1.2	1.2	1.2
France	1.6	2.0	2.1	1.3	1.8	1.5	1.6
Italy	2.7	2.5	2.8	1.9	2.1	2.0	2.1
Spain	3.6	3.5	3.1	2.8	2.5	2.5	2.5
Portugal	4.4	3.6	3.3	2.6	2.2	2.5	2.2
Euro-12	2.4	2.2	2.1	1.3	1.7	1.5	1.6
UK	2.1	2.2	-	-	1.5	-	1.8
Argentina	-1.5	41.0	3.7	6.0	6.9	9.0	6.7
Brazil	7.7	12.5	9.3	5.8	6.1	5.0	5.2
Mexico	4.4	5.7	4.0	3.9	4.2	3.5	3.8
Japan	-0.7	-0.9	-	-	-0.2	-	-0.2
US	2.8	1.6	2.3	1.9	2.2	1.5	1.9

Financial (*)	2001	2002	2003	2004E	Cons	2005F	Cons
Intervention rates							
Euro-zone	3.25 (4.23)	2.75 (3.21)	2.00 (2.25)	2.00 (2.00)	2.445	3.00 (2.81)	3.04
US	1.75 (3.73)	1.25 (1.67)	1.00 (1.10)	2.00 (1.35)	1.75	3.75 (3.06)	3.25
10-year bond yields							
Euro-zone	5.00 (4.83)	4.20 (4.77)	4.29 (4.09)	4.50 (4.46)	4.69	4.50 (4.57)	4.89
US	5.05 (4.96)	3.81 (4.53)	4.24 (3.99)	5.20 (4.79)	4.90	5.60 (5.30)	5.10
Currencies							
Euro-dollar	0.89 (0.89)	1.05 (0.95)	1.26 (1.14)	1.13 (1.18)	1.25	1.12 (1.10)	1.25

(*) Annual averages in brackets. Source: Consensus forecasts (April 2004). Euro Zone Barometer (April 2004). Santander Central Hispano Investment and SCH Bolsa estimates and forecasts.

APPENDIX 1

Summary of Euro Zone Figures, 2001-03

GDP Components	Annual Growth			YoY Rates				QoQ Annualised Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	4Q02	1Q03	2Q03	3Q03	4Q03	1Q04
Private consumption	1.7	0.1	1.0	1.1	0.9	0.6	-	1.2	1.9	0.1	0.5	0.1	-
Public consumption	2.5	2.9	2.0	1.8	1.9	2.2	-	0.4	2.0	2.4	2.8	1.8	-
Business investment	-0.3	-2.8	-1.0	-0.6	-1.0	-0.7	-	1.2	-3.2	-1.2	-0.7	2.2	-
Inventory (contribution)	0.0	-0.4	-0.1	0.1	0.0	0.4	-	0.7	0.7	-0.2	-1.0	2.3	-
Internal demand (contribution)	1.0	0.3	1.1	1.0	0.7	1.1	-	1.7	1.5	0.1	-0.4	3.2	-
Exports	3.4	1.5	0.1	-1.3	-0.3	0.3	-	-1.2	-5.3	-3.1	9.1	1.0	-
Imports	1.7	-0.1	1.8	1.0	1.0	1.8	-	3.4	-1.5	-2.0	4.4	6.5	-
Net exports (contribution)	0.6	0.6	-0.7	-0.9	-0.5	-0.6	-	-1.7	-1.6	-0.5	1.9	-2.0	-
GDP	1.6	0.9	0.4	0.1	0.3	0.6	-	0.0	-0.1	-0.4	1.5	1.2	-
Nominal GDP (€ bn)	6842.6	7073.3	7251.9										
Activity indicators	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Industrial production	0.4	-0.5	0.2	-0.6	-0.3	1.1	-	0.4	2.2	0.4	0.7	-	-
- Ex construction	0.4	-0.5	0.3	-0.9	-0.2	1.5	-	0.9	2.2	0.7	0.6	-	-
Manufacturing production	0.3	-0.8	0.1	-1.1	-0.5	1.4	-	0.9	2.2	0.7	1.2	-	-
Retail sales	1.7	0.0	0.2	0.8	-0.4	-0.5	0.6	-2.0	-0.3	0.9	-0.1	0.9	-
New car registrations	0.1	-2.4											
Capacity utilisation	83.4	81.4	81.0	80.8	80.7	81.2	80.6						
Confidence indicators	Annual Average			Quarterly Average				Index					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Economic confidence	97.0	95.6	95.1	94.7	95.0	95.7	96.0	96.0	95.6	96.0	95.9	96.1	96.6
Business climate	-0.18	-0.51	-0.40	-0.60	-0.56	-0.05	0.01	0.05	-0.01	0.10	0.01	-0.07	0.04
Industrial confidence	-9	-11	-10	-12	-11	-7	-7	-6	-8	-6	-7	-7	-5
Construction confidence	-11	-19	-21	-21	-22	-20	-20	-20	-19	-19	-21	-19	-17
Retail trade survey	-7	-16	-14	-15	-13	-10	-10	-10	-12	-10	-11	-10	-8
Services confidence	15	1	2	-2	5	10	11	11	11	10	11	11	10
Consumer confidence	-5	-11	-18	-19	-17	-16	-14	-15	-16	-15	-14	-14	-14
PMI	48	50	49	47.0	49.1	52.0	52.8	51.3	52.2	52.5	52.5	52.4	53.3
- Output	49	52	51	48.7	50.3	54.0	54.5	53.1	54.4	54.5	54.6	54.3	54.7
- New orders	47	51	50	46.0	50.3	54.4	55.0	53.2	55.0	55.1	55.4	54.6	55.1
- Employment	49	47	47	45.7	46.6	48.3	48.4	47.9	48.5	48.4	48.4	48.1	48.7
- Stock purchases	47	46	46	46.2	46.0	46.5	46.9	47.2	46.1	46.2	46.3	47.2	47.3
- Delivery times	53	50	50	51.2	50.0	47.8	45.0	48.2	48.0	47.2	47.0	45.3	42.7
- Prices	48	52	52	49.6	46.0	52.9	59.8	52.3	52.9	53.6	54.6	59.4	65.3
Prices	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
CPI	2.4	2.3	2.1	2.0	2.0	2.1	1.7	0.0	0.4	-0.3	0.3	0.6	-
Core CPI	1.8	2.4	1.8	1.8	1.7	1.7	1.8	0.1	0.4	-0.7	0.4	0.5	-
PPI (ex construction)	2.1	-0.1	1.6	1.5	1.2	1.1	0.2	0.1	-0.1	0.3	0.2	0.6	-
GDP deflator	2.4	2.5	2.1	2.2	2.2	2.1	-						
Domestic demand deflator	2.3	2.1	1.9	1.8	1.9	1.8	-						
Costs and salaries	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Unit labour costs	2.6	2.2	2.2	2.7	2.4	1.7	-						
Salaries	2.8	2.5	2.4	2.6	2.5	2.1	-						
Productivity	0.2	0.4	0.2	-0.1	0.1	0.3	-						
Employment market	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Unemployment rate	8.0	8.4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	-
Employment index ex constr	0.1	-2.6	-	-2.0	-2.3	-	-	0.0	0.0	0.0	0.0	0.0	0
Money supply	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
M3	10.9	6.6	6.3	8.0	7.0	6.3	5.7	0.0	0.1	0.4	0.6	0.2	-
M3 mov. average 3m (YoY)	7.9	7.1	7.0	8.6	8.0	7.0	-	7.5	7.0	6.6	6.4	-	-
Loans to the private sector	7.0	4.0	4.6	3.8	4.0	4.6	4.6	0.7	0.3	0.2	0.5	0.4	-
Currency (YoY rates)	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
€ effective exchange rate	1.5	3.0	11.4	14.0	10.1	10.3	7.6	9.4	11.2	9.7	7.8	5.3	2.6
Real effective exch rate € (CPI)	2.5	4.4	12.2	14.8	10.9	11.3	8.4	10.5	12.1	10.5	8.6	6.1	3.4
Real effective exch rate € (PPI)	3.1	3.9	10.9	13.7	9.2	9.6	7.1	9.0	10.2	8.7	7.1	5.5	3.1
Real effective exch rate € (ULC)	1.3	4.1	12.5	15.6	11.0	12.3	-						
External sector	Annual Growth			YoY Rates				MoM Rates					
	2001	2002	2003	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
CA Balance (% GDP)	-0.2	0.8	0.4	-0.4	0.6	1.0	-	0.0	0.0	0.0	0.0	-	-
- € bn (1)	-17	55	26	42	28	25	29	25	26	26	29	-	-
Public accounts (% GDP)	Annual Growth			YoY Rates				MoM Rates					
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Government receipts (% GDP)	46.5	47.5	48.1	47.6	47.2	48.0	48.2	47.6	48.1	47.8	47.1	46.5	46.6
Government expenditures	51	52.4	53.9	52.7	52.3	52.3	50.9	49.9	49.4	48.7	48.8	48.8	49.4
Deficit/Surplus	-4.8	-4.9	-5.7	-5.1	-5.1	-4.3	-2.6	-2.3	-1.3	-0.9	-1.7	-2.3	-2.7

Sources: Bloomberg; Datastream; Reuters and Santander Central Hispano Bolsa.



APPENDIX 2

Summary of US Figures, 2001-03

GDP	2001	2002	YoY Rates				QoQ Annualised Rates			
			2Q03	3Q03	4Q03	1Q04	2Q03	3Q03	4Q03	1Q04
Private consumption	2.5	3.4	2.5	3.7	4.0	4.3	3.3	6.9	3.2	3.8
Government consumption	2.8	3.8	4.1	3.9	2.1	2.7	7.4	1.8	-0.1	2.0
Business investment	-8.4	-1.2	2.8	3.6	7.4	10.3	4.7	14.8	14.9	7.2
- Equipment & software	-5.2	-2.8	3.4	6.8	10.1	12.9	8.0	17.6	14.9	11.4
- Construction	-0.8	-4.6	1.4	5.4	6.0	5.4	4.3	13.7	4.9	-0.7
Internal demand	0.7	2.8	2.9	3.8	4.2	4.9	4.3	7.0	4.3	3.9
Exports	-5.2	-2.4	-0.7	0.6	6.5	7.8	-1.1	9.9	20.5	3.2
Imports	-2.6	3.3	3.5	2.7	4.5	6.9	9.1	0.8	16.4	2.0
GDP	0.5	2.2	2.4	3.6	4.3	4.9	3.1	8.2	4.1	4.2
Nominal GDP (US\$ bn)	10101	10481								
General Activity	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Leading indicator	0.2	2.2	3.1	4.0	2.9	3.1	3.6	4.0	4.4	-
Coincident indicator	-0.1	0.4	1.1	1.7	1.1	1.4	1.3	1.8	1.9	-
Stocks to sales ratio	1.37	1.33	1.29	1.26	1.28	1.26	1.26	1.27	1.23	-
Industrial production	-1.0	-0.4	1.5	2.9	1.5	2.3	2.4	2.9	3.4	-
Capacity utilisation (1)	74.1	74.5	75.0	76.2	75.7	75.8	76.2	76.7	76.5	-
ISM index	-11.2	5.9	19.1	25.8	23.6	19.0	20.0	24.3	34.1	35.1
ISM index (1)	50.0	55.0	57.1	63.6	61.3	63.4	63.6	61.4	62.5	62.4
Private consumption	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Real hourly earnings	0.8	0.5	0.4	0.3	0.7	0.1	0.2	0.2	0.4	-
Retail sales	4.5	6.1	6.7	7.8	7.3	6.4	6.3	8.5	8.5	8.0
- Less autos	3.4	6.3	6.8	8.2	6.9	6.9	7.6	8.2	8.7	9.4
Personal spending	2.5	3.7	4.0	4.3	4.1	4.0	4.1	4.5	4.3	-
Consumer confidence (1)	83.6	81.7	81.7	97.7	92.5	94.8	97.7	88.5	88.5	92.9
- Expectations (1)	94.5	94.9	91.5	105.3	100.1	107.4	105.3	91.9	91.3	94.5
Savings rate (1)	2.4	2.7	1.9	1.8	1.8	1.4	1.8	1.9	1.9	-
Consumer credit	4.1	4.5	5.0	5.2	4.7	5.0	5.3	4.8	5.2	-
Business investment	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
New orders	1.4	3.3	7.4	8.3	6.6	8.8	6.1	7.8	10.8	-
- Less autos	1.1	5.0	6.9	8.7	6.4	7.8	7.1	8.2	10.7	-
Non-defense cap orders less aircraft	-0.4	3.3	7.7	11.0	5.6	12.2	9.4	10.8	12.8	-
ISM: production index	-13.1	6.4	24.4	29.5	23.8	27.7	28.1	22.2	39.4	37.3
ISM: new orders	-16.3	15.1	28.1	28.9	39.7	21.8	21.3	27.9	39.5	41.6
	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	1Q04
After-tax profits	-5.3	-1.4	4.9	17.8	24.1	16.9	7.4	13.9	20.7	-
Construction	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Housing starts	3.3	10.7	16.5	11.9	16.7	13.6	6.0	15.1	15.2	-
New home sales	15.0	13.8	9.1	18.5	6.1	7.1	13.1	20.6	21.8	-
Construction spending	1.6	5.7	6.9	6.3	6.7	6.6	4.9	6.1	7.9	-
Building permits	4.3	6.2	5.7	10.8	5.6	2.4	8.7	6.9	17.1	-
Employment, wages and salaries	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Pool of available workers	1.3	1.0	1.2	0.6	1.4	1.2	0.7	0.4	0.6	0.3
Total employment	0.9	0.6	1.2	0.8	1.5	1.5	0.8	0.7	0.7	0.7
Unemployment rate (1)	6.1	6.1	6.0	5.6	5.9	5.7	5.6	5.6	5.7	5.6
Unemp avg duration (weeks) (1)	19.2	19.2	19.4	19.8	20.0	19.6	19.8	20.3	20.1	19.7
Avg working hours per week (1)	33.7	33.6	33.7	33.8	33.8	33.6	33.8	33.8	33.7	33.7
Avg hourly earnings	2.9	2.7	2.1	1.8	2.2	1.8	2.0	1.6	1.8	2.2
	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	1Q04
Employment cost index	4.1	3.9	4.0	3.7	3.6	3.9	3.8	4.0	3.9	3.8
Prices	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
CPI	2.1	2.2	1.9	1.8	1.8	1.9	1.9	1.7	1.7	-
Core CPI	1.5	1.3	1.2	1.3	1.1	1.2	1.2	1.3	1.6	-
PPI	2.6	3.4	3.6	2.3	3.4	4.0	3.3	2.1	1.4	3.7
Core PPI	-0.2	0.3	0.7	0.9	0.5	1.0	0.9	1.0	0.7	1.5
Import prices	1.7	1.7	1.9	1.4	2.3	2.4	2.2	0.9	1.1	4.6
Export prices	1.6	1.0	1.8	2.9	1.7	2.2	2.6	2.7	3.4	4.1
External sector	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Balance of goods & services (3)	-464.0	-479.0	-490.0	-497.0	-490	-490	-493	-497	-500	-
Balance of goods & serv (3) (% GDP)	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-
Trade balance (3)	-553.2	-567.6	-580.4	-589.9	-580	-581	-586	-590	-594	-
Trade balance (3) as a % of GDP	-5.1	-5.1	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2	-
Nominal effective exchange rate	-12.2	-8.3	-13.8	-12.3	-13.0	-14.4	-13.8	-12.7	-10.4	-9.5
Monetary policy and public accts	YoY Rates				YoY Rates					
	2Q03	3Q03	4Q03	1Q04	Nov03	Dec03	Jan04	Feb04	Mar04	Apr04
Money supply (M2)	7.9	7.8	5.3	4.3	5.2	4.6	4.1	4.2	4.5	4.6
Federal funds rate (1)	1.27	1.01	1.02	1.00	1.00	0.99	1.00	1.01	1.00	1.01
Federal receipts (2)	528	429	441	410	118	187	185	92	132	220
Federal expenditures (2)	544	534	569	580	161	203	187	189	205	202
Federal public deficit (2)	-17	-105	-129	-171	-43	-16	-1	-97	-73	18

(1) Levels. (2) Cumulative change in fiscal year, billion dollars. (3) Annual cumulative, billion dollars.

Source: Datastream.

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Key to Investment Codes¹

Buy	Upside of more than 20%.
Hold	Upside of 15%-20%.
Underweight	Upside of less than 15%.

(1) Target prices set from January to June are for December 31 of the current year. Target prices set from July to December are for December 31 of the following year.

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