

## PORTUGUESE ECONOMY IN THE FIRST HALF OF 2000

## 1. INTRODUCTION

The evolution of the Portuguese economy in the first half of 2000 was in line with the forecasts published in the March *Economic Bulletin*, which pointed to an increase of Gross Domestic Product (GDP) between 2¾ and 3¼ per cent for the year as a whole (Table 1.1).

According to information available, in the first half of the year, the real rate of change of GDP seems to have stabilised vis-à-vis 1999. The composition of economic growth continued to change, characterised by a slowdown of private consumption and an acceleration of exports. This upturn is synthetically illustrated by the different developments of industrial confidence — in clear recovery from the second half of 1999, particularly reflecting a more favourable improvement of external demand — and consumer confidence — that underwent a sharp reduction in the first half of 2000 (Chart 1.1).

The external framework of Portuguese economy in the first half of 2000 continued to evince an acceleration of activity in most developed economies, which was reflected in a rise in world-wide trade of goods and services. The acceleration of economic activity in the euro area — an economic area in which approximately 2/3 of Portuguese trade relations are concentrated — was regularly pursued in the course of 1999 and in early 2000. The trend of economic activity in the euro area is reflected in the trend of consumer and industrial confidence indicators which, in the second quarter of 2000, stood at historically high levels (Chart 1.2). As a result of this more favourable external framework, Portuguese exports continued to accelerate in the first quarter of 2000.

The slowdown in private consumption in the first half of 2000 may be due, to a considerable ex-

Table 1.1

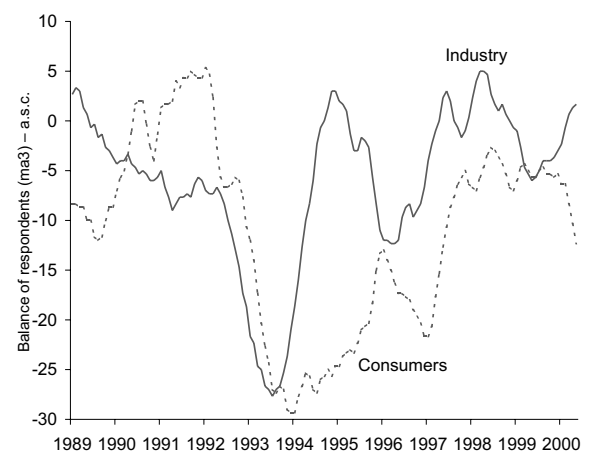
## MAIN ECONOMIC INDICATORS

## Percentage rates of change

	1999	2000
Private consumption.....	4.9	3 ¼ - 3 ¾
Public consumption .....	3.4	2 - 2 ½
GFCF .....	5.3	3 ¾ - 4 ¾
Domestic demand .....	4.8	3 ¼ - 3 ¾
Exports .....	4.6	7 ½ - 8 ½
Overall demand.....	4.8	4 ¼ - 4 ¾
Imports .....	9.0	8 - 9
GDP .....	3.0	2¾ - 3 ¼
Current + capital account balance (as a percentage of GDP) .....	-6.6	-9 ½; -8 ½

Note: Figures appearing in this table were published in the March *Economic Bulletin* of 2000.

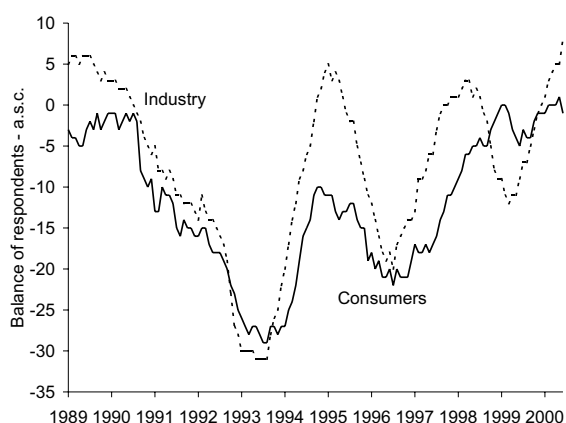
Chart 1.1  
PORTUGAL  
CONFIDENCE INDICATORS



Source: European Commission.

tent, to a change in consumer expectations which, as already mentioned, was reflected in a sharp decline of the confidence indicator. In the first half of

Chart 1.2  
EURO AREA  
CONFIDENCE INDICATORS



Source: European Commission.

2000, this indicator stood at levels clearly below those recorded in the two previous years. In Portugal, the trend of the consumer confidence indicator was markedly different from that observed in the euro area.

Given the present labour market conditions — unemployment rate below the respective natural rate, regular employment growth, higher participation in the labour market and real wage increases — the reduction of consumer confidence was probably due, at least in part, to the interest rate increase. The reversal of the downward trend of banking interest rates that began in the second half of 1999 is likely to have contributed to a change in the economic agents' expectations regarding the trend of these rates in the medium term. This was probably reinforced by the monetary policy decisions taken by the European Central Bank (ECB) in the first half of the current year. The gradual increase in the cost of credit — implying an increase in debt servicing — may have been an important factor behind the reduction of consumer confidence in Portugal, particularly after a period of a sharp increase in the levels of indebtedness of Portuguese households.

Up to June 2000, lending and deposit rates increased by approximately 1 percentage point (p.p.) vis-à-vis the minimum levels attained in 1999, with a slightly higher increase in lending rates than in deposit rates. Despite the trend of the cost of credit, the growth rates of the aggregates of do-

mestic credit to the non-monetary resident sector (excluding the general government) continued to be high, above 20 per cent. In May, the year-on-year rate of change of the stock of credit to households stood at 23.6 per cent (34.8 and 27.9 per cent, in June and December 1999, respectively), while credit to non-financial corporations grew by 28.8 per cent (24.1 per cent in December 1999). The acceleration of credit to non-financial corporations reflects, to a large extent, the financing of corporate restructuring operations.

The analysis of the consolidated balance sheet of monetary financial institutions reveals that the high growth of credit to the private sector of the economy has chiefly been financed through funds raised abroad. The increase in foreign net liabilities of banks in the first five months of 2000 was significantly higher than in the same period of 1999. Domestically raised funds (through deposits or through the issue of securities) remained relatively stable, not moving in line with the changes in credit and in foreign liabilities.

In the first half of 2000, the year-on-year rate of change of the Consumer Price Index (CPI) registered a strong increase, of 0.9 p.p. (2.9 per cent in June 2000, compared with 2.0 per cent in December 1999). A significant factor behind this trend was the rise in fuel prices in late March. This change in fuel prices seems to have had an impact of approximately 0.45 p.p. in the increase in the year-on-year rate of change of the CPI in April. Subsequently, there were adjustments in prices of other services particularly sensitive to fuel prices, such as gas distribution and transports. Behind the acceleration of the CPI was also the trend of food prices. The price behaviour of these goods determined the irregular profile of the CPI over the first half of the year, reflecting particularly base effects from the previous year.

The year-on-year inflation trend indicator, a 10 per cent trimmed mean, also increased considerably from December 1999 to June 2000 (from 2.0 per cent to 2.8 per cent). In fact, the major factors explaining inflation did not display a favourable trend in the first half of 2000. As regards domestic conditions, it should be noted that, despite the slowdown in private consumption, the labour market continued to show some strains. In turn, the external framework was marked by a rise in oil prices and in most commodities as well as by the

continued nominal effective depreciation of the euro, which implied a sharp acceleration of import prices.

Export prices accelerated also in the first months of 2000, although less sharply than import prices. Against this background, there was a strong loss in terms of trade. This, combined with a growth in the volume of imports still above that of exports, determined a new deterioration of the Current plus Capital Account deficit.

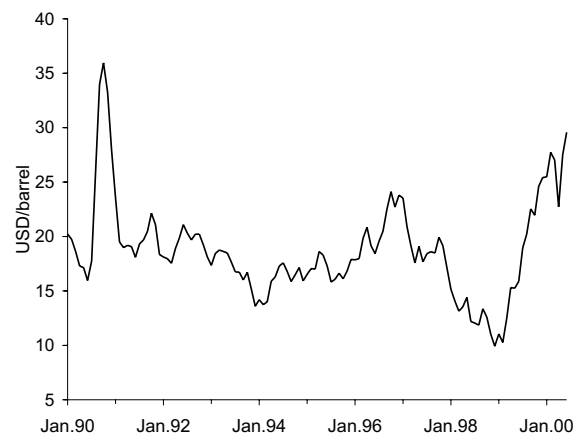
## 2. EXTERNAL ENVIRONMENT OF THE PORTUGUESE ECONOMY

In the first half of 2000, the external framework of the Portuguese economy continued to be characterised by the high buoyancy of several economies in both developed and emerging markets, which, according to the most recent projections, is expected to continue this year. The United States of America (USA) maintained a strong growth in the first quarter, despite some signs of a possible moderation in recent months. In the United Kingdom, the economic activity continued to grow at a good pace. Activity in the euro area, benefiting from the favourable external situation, grew again at a significant pace early in the year, and the latest indications point to a sustained high growth.

The behaviour of prices in major developed economies continued to be rather influenced by the behaviour of the international price of oil, which remained at high levels over recent months. The latest projections point to some acceleration of consumer prices in 2000 in most of these countries, largely associated with the increase in energy prices.

In the first half of 2000, the official interest rates in the USA and in the euro area were increased further, with the purpose of countering risks to price stability in the medium term. The 10-year interest rates interrupted the clear upward trend observed throughout the previous year. As regards the development of foreign exchange markets, the depreciating trend of the euro vis-à-vis the US dollar continued up to May, albeit appreciating in June (by approximately 5 per cent, from the previous month level). In June, the euro had depreciated by around 6 per cent vis-à-vis the dollar (3 per cent in nominal effective terms) from December 1999.

Chart 2.1  
INTERNATIONAL OIL PRICE  
Brent, in USD



Source: Financial Times.

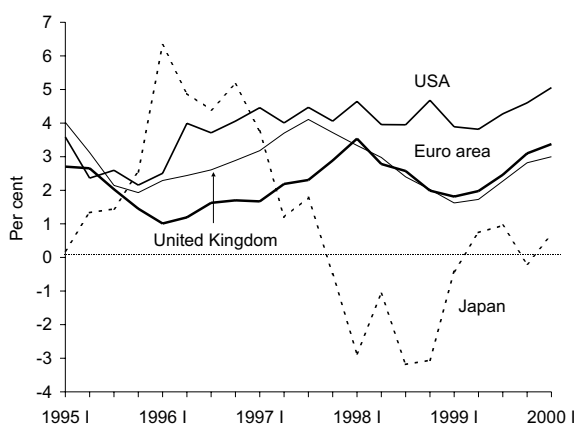
### 2.1 External environment of the euro area

The world economy continued to grow at a remarkable pace in the first half of 2000. According to the most recent projections of the Organisation for Economic Co-operation and Development (OECD), the growth of OECD economies as a whole will probably reach 4.0 per cent in 2000, slowing down to 3.1 per cent in 2001 (3.0 per cent in 1999), which corresponds to an upward revision of 1.1 and 0.5 percentage points, respectively, from the December 1999 forecasts. In turn, the economies of several emerging markets not members of the OECD are expected to grow strongly in 2000 and 2001. Together with the fast economic growth world-wide in 2000, there will probably be a marked acceleration of trade, followed by some moderation in 2001.

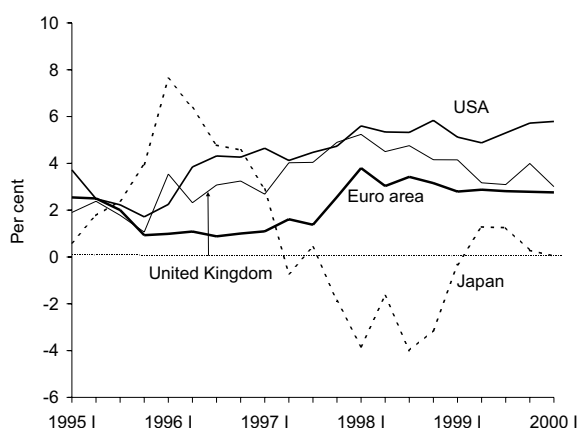
Projections for the behaviour of prices point to some rise in inflation in 2000. In most economies, consumer prices are expected to accelerate over the current year (from 2.8 to 3.2 per cent in the OECD countries, according to the private consumption deflator), largely reflecting the effect of the increase in energy prices. The international price of oil, after some reduction in March and April, following the Organisation of the Petroleum Exporting Countries (OPEC) decision to increase the production quotas, resumed an upward trend in the two following months, reaching again very high levels (Chart 2.1). Thus, in June, the price of

Chart 2.2

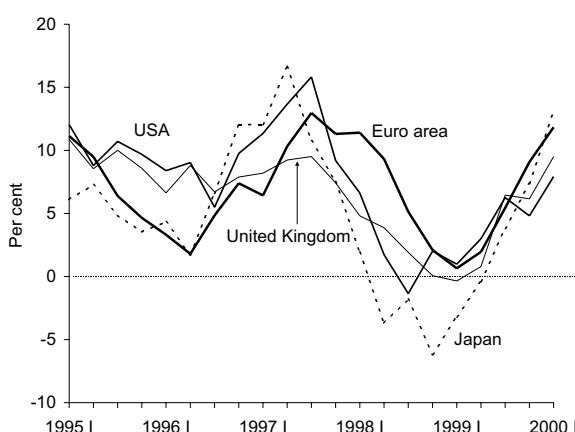
**GROSS DOMESTIC PRODUCT**  
Real year-on-year rate of change



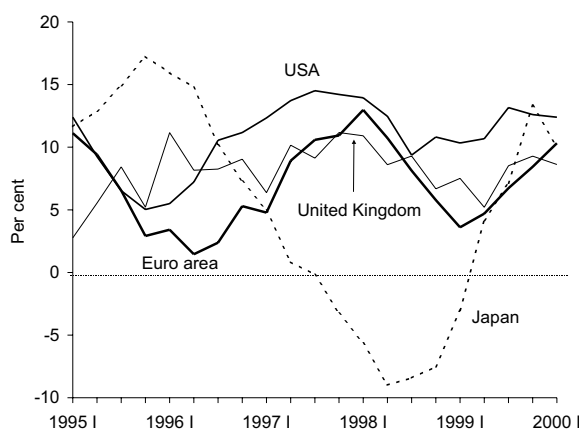
**DOMESTIC DEMAND**  
Real year-on-year rate of change



**EXPORTS**  
Real year-on-year rate of change



**IMPORTS**  
Real year-on-year rate of change



Sources: Eurostat and Datastream.

Brent in USD stood 9.4 per cent above the level recorded in March and 16.4 per cent above the level recorded in December 1999. Given the maintenance of the oil price at very high levels, OPEC decided, on 21 June, to raise production quotas again, effective as of the 1<sup>st</sup> July. Up to 12 July, the oil price stood at around 30 USD/barrel. In the first half of the year, the prices of other industrial commodities, in USD, continued to stand well above the levels recorded in the corresponding period of the previous year (4.9 per cent increase, against -2.3 per cent in the previous half-year, according to the HWWA<sup>(1)</sup> index), despite some moderation of the pace of growth in the latest months. According to the OECD, the overall eco-

nomical growth may be stronger than expected, as a result of the sustained high buoyancy of most economies, which may be reflected in further increases in international prices of commodities, with possible risks for inflation.

In 2000, the USA economy maintained a dynamic pace of growth, reflecting the sustained remarkable momentum of domestic demand (Chart 2.2). GDP accelerated from 4.6 per cent in the fourth quarter of 1999, year-on-year, to 5.1 per cent in the first quarter of 2000. Domestic demand re-

(1) Commodity price index developed by the *Institut für Wirtschaftsforschung* (Hamburg), which includes food and industrial commodities.

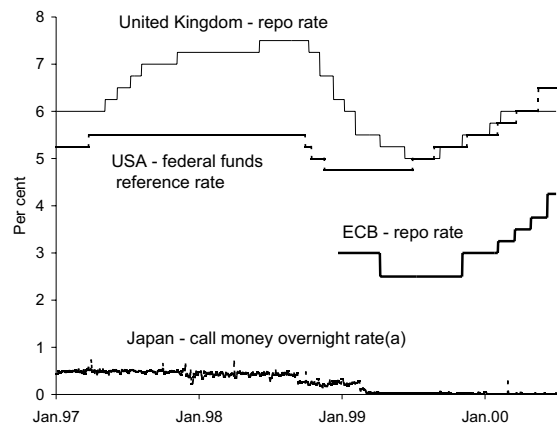
corded a pace of growth similar to that of the previous quarter (5.8 per cent), stress being laid on the strong increase of private consumption (5.9 per cent). The contribution of net exports to GDP growth showed a favourable evolution in this quarter. Exports accelerated from 4.8 to 7.9 per cent and imports continued to grow at a high pace (12.4 per cent), very close to that observed in the previous quarter (12.6 per cent).

Most recent indicators continue to reveal a marked buoyancy in the second quarter, although the pace of growth vis-à-vis the previous quarter seems to have been less marked than in the beginning of the year. Industrial production continued to grow strongly (5.9 per cent in the second quarter, year-on-year, against 5.3 per cent in the previous quarter), despite some reduction in industrial confidence over recent months. The construction sector, which showed some slowdown in the course of 1999 and in early 2000, seems to have continued to record a sluggish behaviour in the second quarter. According to the OECD, in the year as a whole the USA economy is expected to grow by nearly 5 per cent, which, if recorded, will be the highest growth of the present economic cycle. This largely reflects the strong growth observed early in the year, since a deceleration is expected in the second half of 2000.

Turning to labour market developments in the USA, together with the strong buoyancy of activity early in the year, there seems to have been a stronger wage increase, although not all indicators point in the same direction. The hourly compensation indicator (including wages and other benefits) accelerated in the first quarter from 3.4 to 4.3 per cent, year-on-year. In the second quarter of the year, the unemployment rate continued to stand at a rather low level (4.0 per cent) while job creation remained high (2.4 per cent). Inflation continued to be strongly influenced by the evolution of the energy component. The year-on-year rate of change of CPI stood at 3.7 per cent in June, compared with 3.1 per cent in May and 2.7 per cent in December 1999. In June, excluding the energy component, CPI increased by 2.4 per cent (2.3 per cent in May), to stand above the rise observed at the end of 1999 (2.0 per cent).

On 16 May, the Federal Reserve increased again the federal funds reference rate, as it considered that the risks were weighted mainly towards

Chart 2.3  
OFFICIAL INTEREST RATES

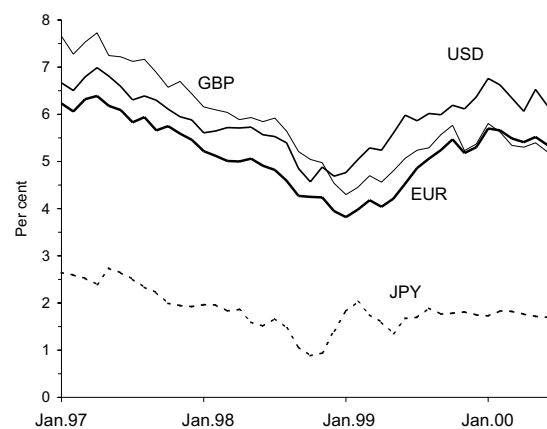


Source: Bloomberg.

Note:

(a) On 12 February 1999, the Bank of Japan decided to change the call money reference rate from 0.25 to 0.15 per cent initially; and subsequently induce a further reduction to levels close to zero per cent.

Chart 2.4  
TEN-YEAR GOVERNMENT BOND YIELD



Sources: Reuters and European Central Bank.

conditions that may generate heightened inflationary pressures in the near future. The increase was of 0.5 p.p., thus raising the reference rate to 6.5 per cent, i.e., 1.0 p.p. above the level recorded immediately before the period of international financial instability in the Summer of 1998 (Chart 2.3). The 3-month interest rates evolved in line with the intervention rates, recording some stabilisation in June. In this month, the ten-year government bond yield stood at 6.2 per cent (6.4 per cent in December 1999), despite a temporary discontinuance, in

May, of the downward trend recorded since February (Chart 2.4).

In the first quarter of 2000, GDP in Japan increased by 2.4 per cent from the previous quarter, after having decreased for two consecutive quarters, partly as a result of a favourable working days effect in this quarter (data for the national accounts are not adjusted for the working days effect). Year-on-year growth stood at 0.7 per cent, compared with a fall of 0.2 per cent in the fourth quarter of 1999 (Chart 2.2). Private sector domestic demand strengthened again, continuing the trend observed in the course of the previous year. Private consumption accelerated from 0.1 per cent to 1.0 per cent and the Gross Fixed Capital Formation (GFCF) of the private sector increased by 4.8 per cent (2.2 per cent in the fourth quarter of 1999). However, the recovery of domestic demand of the private sector did not fully offset the reduction in public expenditure. The contribution of net exports to growth turned positive, for the first time since late 1998, having increased from -0.5 to 0.6 p.p., reflecting not only the acceleration in exports (from 7.4 per cent to 13.1 per cent) but also the lower increase in imports (10.0 per cent, against 13.3 per cent in late 1999).

Available indicators for the second quarter seem to point to the continued buoyancy of GFCF in the private sector, when taking into consideration the trend of private sector domestic machinery orders (12.5 per cent year-on-year growth in the three months to May, compared with 6.2 and 12.9 per cent in the fourth quarter of 1999 and in the first quarter of 2000, respectively), in parallel with an improvement in business confidence and the favourable behaviour expected for sales and profits. In fact, entrepreneurs anticipate an improvement of investment in the present fiscal year, particularly significant in manufacturing industry. As regards private consumption, prospects remain somewhat uncertain, despite some increase in consumer confidence. In the first five months of 2000, the unemployment rate remained at historically high levels (4.6 per cent in May, compared with 4.7 per cent in December 1999) and employment continued to fall, in year-on-year terms, albeit slightly. According to OECD projections, GDP is expected to strengthen in 2000, resulting in a 1.7 per cent increase in the year (0.3 per cent in 1999), chiefly reflecting the continued recovery of exports and of GFCF.

Consumer prices in the Japanese economy continued to record negative year-on-year changes up to May, albeit not deteriorating. In May, the CPI fell by 0.7 per cent, year-on-year, compared with a 1.1 per cent decline in December 1999.

Economic activity in the United Kingdom increased by 3.0 per cent in the first quarter, year-on-year, compared with 2.8 per cent in the last quarter of 1999 (Chart 2.2). Domestic demand decelerated from 4.0 per cent to 3.0 per cent, largely reflecting the deceleration of GFCF (from 5.4 to 1.7 per cent) and of private consumption (from 4.9 to 3.9 per cent). The less dynamic behaviour of domestic demand was offset by a much less negative contribution of net exports (-0.2 p.p. against -1.3 p.p. in the fourth quarter). Exports of goods and services grew at a higher pace than in the previous quarter (9.5 per cent from 6.2 per cent in the previous quarter), despite a 7.4 per cent nominal effective appreciation of the pound sterling from the same quarter of the previous year. Imports decelerated slightly to 8.6 per cent, against 9.3 per cent in the previous quarter.

Industrial production, after some moderation in the first quarter (year-on-year growth of 1.5 per cent vis-à-vis 1.8 per cent in late 1999), increased by 2.1 per cent in the three months to May. However, survey information available for the first half of 2000 points to a less favourable development of the sector than before. Industrial confidence declined in the second quarter, with some deterioration of production expectations in recent months.

In 2000 as a whole, according to the OECD, GDP growth is expected to increase to 2.9 per cent (approximately 2 per cent in 1999). Domestic demand is forecast to remain relatively buoyant and net exports, despite their continued negative contribution to GDP growth, are expected to evolve more favourably than in the previous year.

Turning to the labour market, unemployment rate<sup>(2)</sup> remained at rather low levels — in June, it stood at 3.8 per cent, unchanged from the two previous months, compared with 4.1 per cent in the last quarter of 1999 — and the number of unemployed continued to fall up to May, from the level recorded in the same period of the previous year.

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(2) Based on the number of persons applying for unemployment benefits.

Earnings, after having recorded an acceleration in late 1999 and in early 2000, partly due to special factors<sup>(3)</sup>, decelerated somewhat in the three months to May (4.6 per cent, year-on-year, compared with 5.5 and 5.7 per cent in the fourth quarter of 1999 and in the first quarter of 2000, respectively). Inflation, measured by the year-on-year rate of change of consumer prices excluding mortgage interest payments, remained relatively stable up to June, standing at 2.2 per cent in this month<sup>(4)</sup>.

## 2.2 Euro area

Economic activity in the euro area continued to grow at a significant pace in the first quarter of 2000, 3.4 per cent year-on-year growth rate (3.1 per cent in the previous quarter), according to revised data of the Eurostat, after having strengthened throughout 1999 (Chart 2.2). In this quarter, both private consumption and GFCF grew at rates similar to those recorded at the end of 1999 (2.3 and 8.4 per cent, respectively). The contribution of net exports to GDP growth increased, given the acceleration of exports<sup>(5)</sup> (from 9.1 per cent to 11.8 per cent). Imports<sup>(6)</sup> also recorded a higher growth (10.3 per cent against 8.4 per cent in the previous quarter), in line with the acceleration of global demand (from 4.4 per cent to 5.1 per cent).

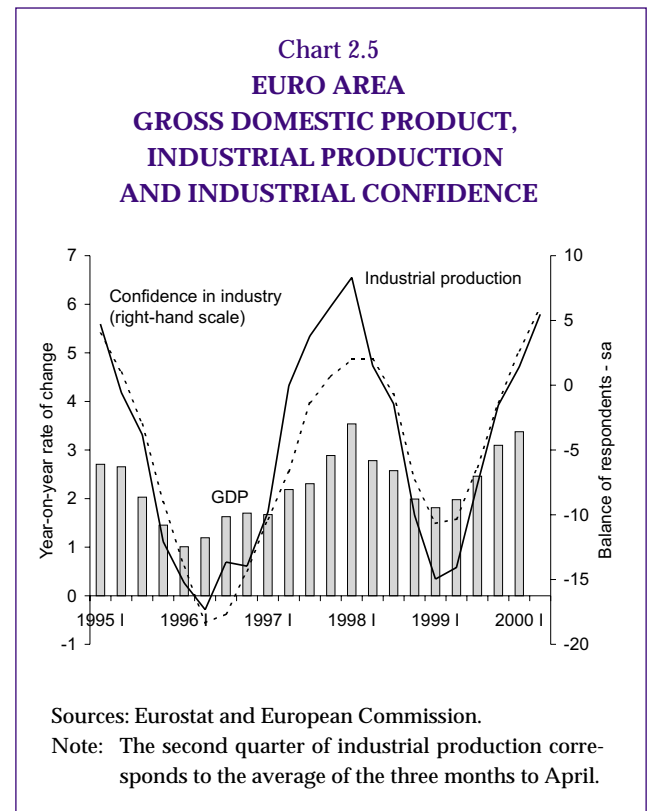
Recent indicators point to a sustained high economic growth in the euro area during the second quarter. Up to April, industrial production maintained the accelerating trend, increasing by 5.8 per cent, year-on-year, in the three months to April, against 3.9 per cent and 4.7 per cent in the fourth quarter of 1999 and in the first quarter of 2000, respectively (Chart 2.5). Capacity utilisation in manufacturing industry increased further in April, to 83.7 per cent (from 83.0 per cent in January), practically returning to the levels observed in mid-1998. Survey data also point to a high buoyancy of activity in the industrial sector. Industrial confidence increased again in the second quarter,

(3) Related with additional bonuses paid around the turn of the year.

(4) Since April 1999, inflation in the United Kingdom is below the 2.5 per cent official target set by the Bank of England.

(5) Includes trade among countries participating in the euro area.

(6) See footnote 5.



standing at a historically high level in June, largely reflecting a more positive evaluation of order books. In particular, the sector will likely continue to benefit from the improvement of the euro area external environment, given the more favourable evaluation of the export order books in this quarter. Consumer confidence remained unchanged in the second quarter of 2000, at historically high levels. In this quarter, stress should be laid on the continued improvement of the evaluation of the past and future general economic situation. However, consumers were again less willing to make major purchases. Consumer confidence has benefited from the favourable evolution of the labour market. The unemployment rate maintained a downward trend, to stand at 9.2 per cent in May (9.6 per cent at the end of 1999).

According to the OECD, the prospects for the development of the euro area economy in the short run are rather favourable. Projections for the current year point to an acceleration of activity from 2.3 per cent to 3.5 per cent, broadly in line with most of other recent projections. According to the OECD, the high confidence level of the economic agents should favour business investment and private consumption, while positive developments within the external environment of the area,

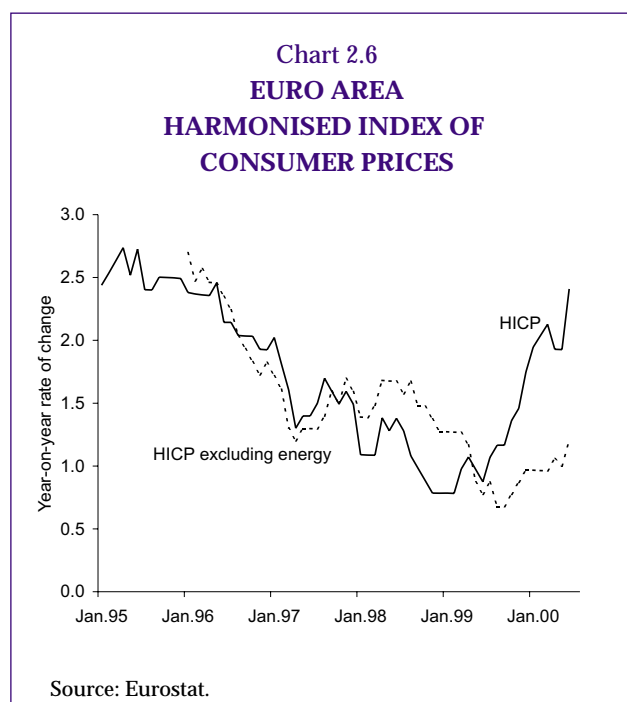
together with the euro behaviour, should underpin exports.

In the first quarter of 2000, the four largest economies of the euro area continued to show a strengthening of economic activity, except the German economy, where the pace of GDP growth remained unchanged (2.3 per cent, year-on-year). Activity in France recorded an increase slightly higher than in the previous quarter, 3.4 per cent against 3.2 per cent at the end of 1999. The Italian economy, that recorded one of the lowest growth rates in the euro area in 1999, accelerated significantly in early 2000 to 3.0 per cent (2.2 per cent in the last quarter of 1999). Spain continued to be the most buoyant amongst the largest economies in the euro area, with GDP accelerating from 3.7 per cent to 4.2 per cent. In most of these countries, particular emphasis should be placed on the acceleration of both imports and exports of goods and services<sup>(7)</sup>, the latter in line with the development of the international framework and with the real effective depreciation trend that the euro has been presenting.

Price development in the euro area throughout the first half of the year continued to be significantly influenced by the behaviour of energy prices. The persistently high international oil price, reinforced by the nominal depreciation of the euro, was reflected in strong increases of import prices in the first months of 2000, above 10 per cent (year-on-year) in several countries of the euro area. As regards the evolution of consumer prices, the year-on-year rate of change of the Harmonised Index of Consumer Prices (HICP) stood at 2.4 per cent in June, against 1.9 per cent in the two previous months and 2.0 per cent in the first quarter (Chart 2.6). Excluding the energy component, the rate of change of the HICP in the euro area increased to 1.2 per cent in June, after having remained relatively stable around 1.0 per cent in the first five months of the year.

On 8 June, the Governing Council of the ECB decided to raise its reference interest rates by 0.5 p.p.<sup>(8)</sup>, as it considered that the risks for price stability in the medium term had continued to in-

(7) In the case of Spain, exports and imports, despite their lower increase in the first quarter of this year, have continued to grow at very high rates (11.1 per cent and 12.8 per cent, respectively).



crease, against a background of strong economic growth (Chart 2.3). The interest rate on the main refinancing operations was set at 4.25 per cent and the interest rates on the deposit facility and on the marginal lending facility were set at 3.25 per cent and 5.25 per cent, respectively. Up to June the three-month interest rates maintained the upward trend observed since the beginning of the year, to stand in that month at 4.5 per cent, approximately 1 p.p. above the level for December 1999. Ten-year interest rates in the euro area did not pursue the markedly upward trend observed throughout the previous year and up to early 2000. In June, ten-year government bond yields stood at 5.4 per cent, i.e., below the level reached in January (5.7 per cent) but still above the average level for December 1999 (5.3 per cent) (Chart 2.4).

The nominal effective exchange rate of the euro depreciated further in the first five months of 2000, although recording an appreciation of approximately 3.5 per cent in June from the previous month level. In June, the euro was depreciated by

(8) In this meeting, the Governing Council of the ECB also decided that the major refinancing operations of the Eurosystem would be conducted as variable rate tenders, applying the multiple rate auction procedure. The new mechanism was intended as a response to the severe overbidding which had developed in the context of the previous fixed-rate tender procedure.



3.0 per cent from December 1999 and by 14.3 per cent from early 1999.

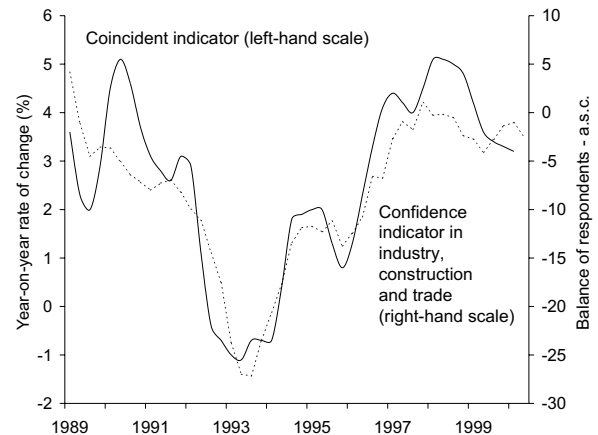
### 3. DEMAND AND OUTPUT

Information available for Portuguese economy suggests that the growth of economic activity stabilised in the first months of 2000. This is suggested by the coincident indicator of the Banco de Portugal — that in the first quarter of 2000, recorded a stabilisation vis-à-vis the last quarter of the previous year — and by the confidence indicator of Industry, Construction and Trade — which remained virtually unchanged from the second half of 1999 to the first half of 2000, in average terms (Chart 3.1). The economic situation in the first half of the year seems to have been further characterised by a reshaping of economic growth, in particular an acceleration of exports and a deceleration of private consumption. This development is illustrated by the trend of industrial confidence — to a large extent related with the evaluation of the external order book of the sector — and consumer confidence (Chart 1.1). Investment seems to have recorded some acceleration, in particular, investment in construction and transport material.

In overall terms, the trend of the economic activity in the period under analysis was in line with the forecasts published in the March *Economic Bulletin*, which pointed to a GDP growth between 2  $\frac{3}{4}$  and 3  $\frac{1}{4}$  per cent for 2000 as a whole (3.0 per cent in 1999).

In the first half of 2000, the decelerating trend of private consumption seems to have been maintained. This behaviour — anticipated in the forecast published in the March *Economic Bulletin* for the year as a whole — may be due, to a large extent, to the significant change in consumer expectations over the first half of the year. The consumer confidence indicator declined sharply as of March, to stand since then rather below the levels observed in the two previous years (Chart 1.1). This reduction was the result of a less positive evaluation of all the items included in the indicator, with particular emphasis on the items related to the general economic situation of the country. The recent interest-rate increase, combined with high household variable-rate indebtedness levels, is likely to have been one of the factors behind the reduction in household confidence.

Chart 3.1  
COINCIDENT INDICATOR OF ECONOMIC ACTIVITY AND CONFIDENCE INDICATOR IN INDUSTRY, CONSTRUCTION AND TRADE



Sources: European Commission, "Monthly Trade Survey" of the INE and Banco de Portugal.

Note:

(a) Simple arithmetic mean of confidence indicators in industry, construction, retail trade and wholesale trade.

The deceleration of private consumption is probably related with the behaviour of expenditure in durable consumer goods, in particular, the acquisition of vehicles. Sales of passenger vehicles, including off-the-road vehicles, declined, year-on-year, by 4.6 per cent in the first quarter of 2000, after very high growth rates in the two previous years (11.4 and 17.9 per cent in 1998 and 1999, respectively). According to the retail Trade turnover Index, the acquisition of other type of durable goods (furniture, electrical appliances, etc.) continued to gain momentum in January and February, but decelerated strongly in the subsequent months (Table 3.1). It should be noted that, according to the European Commission Consumer Survey, the willingness to make major purchases continued to decline over the first half of the year.

In the first quarter of 2000, the private consumption coincident indicator of the Banco de Portugal — which summarises qualitative information on this aggregate — decelerated, albeit remaining at high levels (Chart 3.2). Nominal imports of consumer goods, which do not include passenger vehicles, remained highly buoyant in this period (Table 3.1). The information available

Table 3.1

**DEMAND INDICATORS**  
Year-on-year rates of change

	1997	1998	1999	2000 <sup>(a)</sup>	Last month	1998					1999				2000					
						1998		1999		2000	1998		1999		2000					
						1st half	2nd half	1st half	2nd half	1st half	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q
<b>Private consumption</b>																				
Retail Trade turnover Index . . . . .	5.1	11.1	6.7	6.5	Apr	12.3	10.2	6.1	7.2		11.3	13.1	9.5	10.7	7.6	4.7	6.6	7.8	7.2	
Retail Trade turnover Index - durable goods . . . . .	7.4	10.9	6.8	9.3	Apr	13.4	8.8	5.2	8.3		12.2	14.6	7.4	10.1	6.3	4.1	9.5	7.3	11.7	
Sales of light passenger vehicles, including off-the-road motor vehicles . . . . .	-0.6	17.9	11.4	-4.6	Jun	13.7	22.4	24.7	-1.9	-4.6	5.5	21.9	23.1	21.9	34.9	15.9	12.0	-14.5	-1.2	-7.9
Bank credit to households (excluding mortgage lending) . . . . .	22.9	23.1	23.2	19.7	May	18.0	23.1	29.6	23.2		17.9	18.0	19.0	23.1	18.3	29.6	27.6	23.2	29.8	
<b>Investment</b>																				
Cement sales . . . . .	11.9	4.7	3.1	7.1	Jun	4.6	4.7	2.1	4.0	7.1	10.0	-0.2	0.2	9.9	-0.6	4.8	5.6	2.3	13.4	1.2
Contracted construction works . . . . .	26.1	-27.1	9.3	33.7	Jun	-26.2	-28.2	-14.6	41.8	33.7	-14.8	-36.9	-14.5	-40.5	-26.5	0.3	14.3	77.6	70.1	0.0
Mortgage lending to individuals . . . . .	27.4	34.8	29.7	25.1	May	31.4	34.8	36.9	29.7		29.5	31.4	32.6	34.8	36.5	36.9	32.5	29.7	26.3	
IPI of equipment goods, excluding transport material . . . . .	-0.1	8.8	-2.6	-5.6	Mar	9.5	8.1	-1.9	-3.3		8.5	10.6	8.4	7.8	0.4	-4.2	-3.7	-2.9	-5.6	
Imports of equipment goods, excluding transport material <sup>(b)</sup> . . . . .	14.7	22.3	8.8	19.3	Mar															
Exports of equipment goods, excluding transport material <sup>(b)</sup> . . . . .	22.2	20.3	19.2	5.2	Mar															
Sales of commercial vehicles under 3.5 ton. . . . .	20.9	12.0	1.3	14.1	Jun	8.9	14.8	5.2	-2.2	14.1	14.7	2.9	6.9	21.0	-0.5	11.7	12.7	-12.5	17.2	11.1
Sales of commercial vehicles over 3.5 ton. . . . .	32.0	15.8	19.4	9.8	Jun	31.3	2.4	21.8	16.8	9.8	67.4	3.8	0.9	3.6	10.8	35.2	34.0	3.2	17.4	2.2
Registrations of commercial vehicles over 3.5 . . . . .	35.6	22.4	17.5	6.0	Jun	32.2	13.2	17.9	17.0	6.0	48.5	18.1	0.9	26.9	13.2	23.1	25.8	9.2	7.9	4.1
<b>External trade<sup>(b)</sup></b>																				
Total exports . . . . .	10.5	6.3	3.3	14.5	Mar	11.0	1.9	0.8	6.0		12.5	9.5	5.6	-1.3	1.5	0.1	4.2	7.8	14.5	
Total exports, excluding fuels . . . . .	10.5	7.1	3.2	13.7	Mar															
Consumer goods exports . . . . .	7.9	4.1	2.1	5.1	Mar															
Equipment goods exports . . . . .	12.6	14.0	7.0	10.5	Mar															
Intermediate goods exports . . . . .	12.8	5.1	1.2	29.7	Mar															
Fuel exports . . . . .	9.7	-27.9	11.1	95.3	Mar															
<b>Total imports</b> . . . . .	13.1	12.6	9.2	25.3	Mar	16.3	9.1	4.9	13.8		16.0	16.6	11.3	7.3	5.2	4.6	11.8	15.6	25.3	
Total imports, excluding fuels . . . . .	13.0	15.6	7.6	18.3	Mar															
Consumer goods imports . . . . .	11.3	17.8	12.9	13.4	Mar															
Equipment goods imports . . . . .	14.2	21.9	12.1	20.7	Mar															
Intermediate goods imports . . . . .	12.8	8.0	-0.9	18.7	Mar															
Fuel imports . . . . .	15.2	-23.3	38.3	149.0	Mar															

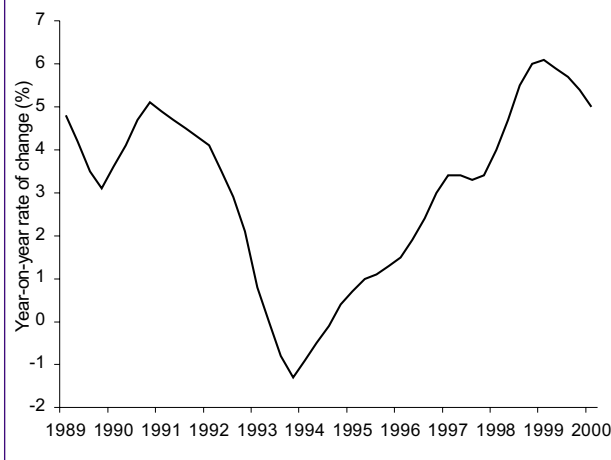
Sources: INE, Directorate-General for Traffic, ACAP (Portuguese Acronym for the Portuguese Association of Car Dealers), Cimpor, Secil and ANEOP (Portuguese Association of Public Work Contractors).

Notes:

(a) Accumulated values up to the last month available.

(b) The rates of change of exports and imports result from comparing definitive versions in 1997 and 1998, from comparing preliminary declared values for the January-December period in 1999 and from comparing preliminary declared values for the January-March period in 2000.

Chart 3.2  
COINCIDENT INDICATOR  
OF PRIVATE CONSUMPTION

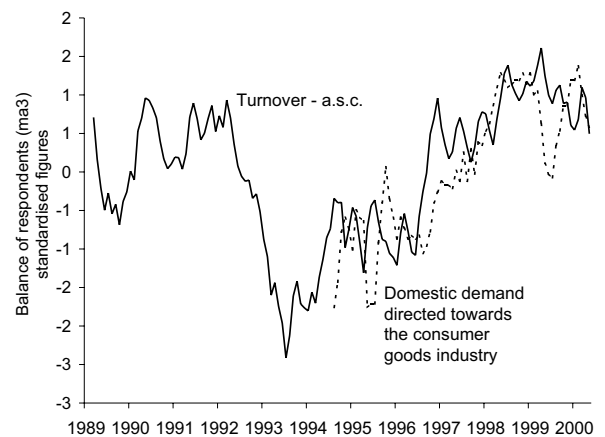


for the second quarter of 2000 points to a strengthening of the decelerating trend of private consumption. Over this period, according to the Monthly Trade Survey, there was a decline in the balance of respondents relating to the turnover, order book to suppliers, planned and actual activity in retail trade vis-à-vis the first quarter of the year. In parallel, the balance of respondents relating to the opinion of entrepreneurs producing consumer goods at the domestic demand level declined also in the same period from the previous quarter (Chart 3.3).

Investment increased strongly in the first half of 2000. It seems to have accelerated as a result of the behaviour of GFCF in construction — in particular in the public works sub-sector — and transport material. Available indicators for GFCF in machinery give contradictory information. In turn, over the same period, the information on the assessment of the stock level included in Industry and Trade Surveys point to a reduction of stocks, thus suggesting a negative contribution of this component of expenditure to GDP growth.

The strong growth of total GFCF in the first half of 2000 may imply that the increase of this aggregate in the year as a whole will be above the target range envisaged in the March 2000 *Economic Bulletin* (3  $\frac{3}{4}$  — 4  $\frac{3}{4}$  per cent, compared with 5.3 per cent in 1999). It should be stressed, however, that a reassessment of GFCF growth will have implications in imports, in particular as a result of the behaviour of investment in transport material,

Chart 3.3  
QUALITATIVE INDICATORS OF PRIVATE  
CONSUMPTION

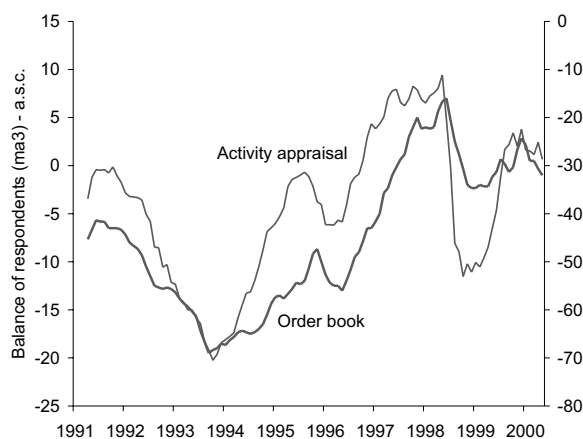


Source: INE, "Monthly Trade Survey" and "Monthly Manufacturing Industry Survey".

which has a high level of import content. Finally, it should be noted that the decelerating trend of construction in the housing segment is expected to continue in the second half of the year.

In the particular case of GFCF in construction, consumption of material indicators point to some acceleration in the January-June period of 2000. Cement sales in this period increased by 7.1 per cent (3.1 per cent in 1999 as a whole). According to the Construction and Public Works Monthly Survey, in the period from January to June 2000, the balance of respondents relating to the activity appraisal and the order book in the sector stood above the level observed in the same period of the previous year (Chart 3.4). This reflected, in particular, the behaviour of the public works sub-sector (Chart 3.5). The improvement of the order book in this sector reflects the sharp increase of public works contracted throughout the second half of 1999. These contracted public works continued to increase at high rates in the first months of 2000 wherefore prospects for this sub-sector in the second half of the year continue to be positive (Table 3.1). Qualitative information continued to point to a deceleration of the housing construction sub-sector. According to the Construction and Public Works Monthly Survey, the order book in that sub-sector continued to decline. In turn, the AECOPS Survey reveals that the assessment by entrepreneurs of sales in the housing construction

Chart 3.4  
**QUALITATIVE INDICATORS OF INVESTMENT IN CONSTRUCTION**  
 Activity appraisal and order book for the sector as a whole



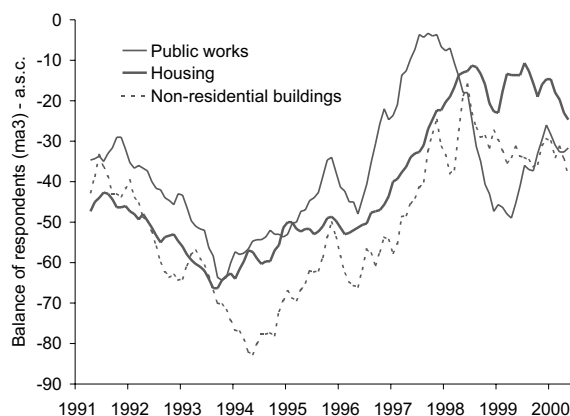
Source: INE, "Construction and Public Works Monthly Survey".

sub-sector deteriorated in the first months of 2000 vis-à-vis the same period of 1999. It should be noted that in May credit to households for house purchase decelerated from the end of 1999 (the year-on-year rate of change in May 2000 was 25.1 per cent, compared to 29.7 per cent in December 1999). The deceleration of investment in this sub-sector is chiefly associated with the recent interest-rate increase and with the effect of the changes introduced in the subsidised system for house purchasing and building.

Investment in transport material registered a strong increase in the first half of the year, particularly, in the first quarter. The delayed approval of the State Budget for 2000 has probably led to the postponement of purchases of commercial vehicles from the last quarter of 1999 to the first quarter of 2000. Therefore, sales of light commercial vehicles increased by 17.2 per cent in the first quarter, declining to 14.1 per cent in the January-June period (1.3 per cent for 1999 as a whole). In turn, sales of heavy commercial vehicles increased also by 17.4 per cent in the first quarter of 2000, with an accumulated growth of 9.8 per cent up to June (19.4 per cent for 1999 as a whole).

Indicators of investment in equipment, excluding transport material, suggest developments with inverted signs, not permitting to reach any conclu-

Chart 3.5  
**ORDER BOOK OF THE CONSTRUCTION AND PUBLIC WORKS SECTOR**



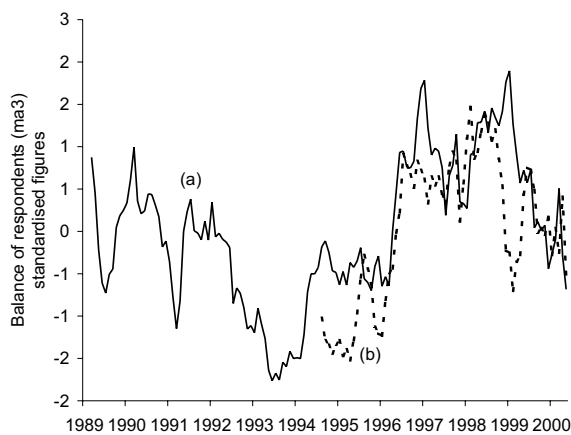
Source: INE, "Construction and Public Works Monthly Survey".

sions on the behaviour of the aggregate in the first half of the year. On the one hand, qualitative indicators suggest a less buoyant behaviour of GFCF in machinery in the first half of the year (Chart 3.6). The same is suggested by the Trade Turnover Index of industry in the domestic market of investment goods<sup>(9)</sup>, that declined by 4.8 per cent in the first four months of the year, after a fall of 4.5 per cent in 1999 as a whole. On the other hand, however, nominal imports of equipment goods excluding transport material increased sharply in the first three months of 2000 (19.3 per cent, compared to 8.8 per cent in 1999).

In the January-March period of 2000, according to information on external trade published by the National Statistical Office (Portuguese acronym: INE — *Instituto Nacional de Estatística*), nominal exports of goods increased by 14.5 per cent, while imports went up by 25.3 per cent (3.3 per cent and 9.2 per cent changes, respectively, for 1999 as a whole; Chart 3.7). The size of these changes should, however, be considered with some caution, given the revisions usually made to external trade data<sup>(10)</sup>. Turning to trade related with services with abroad, both exports and imports accel-

(9) Since most of the national production of transport material is exported, the trade turnover in equipment goods industry in the domestic market relates chiefly to machinery (i.e. equipment goods except transport material).

Chart 3.6  
QUALITATIVE INDICATORS OF  
INVESTMENT IN MACHINERY

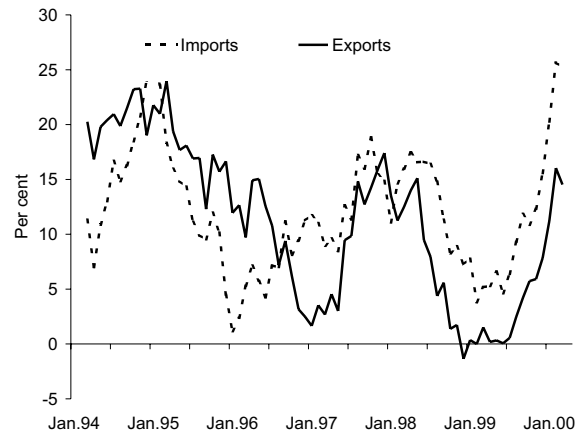


Source: INE, "Monthly Manufacturing Industry Survey" and "Monthly Trade Survey".

Notes:

- (a) Activity appraisal in the wholesale trade of machines and material for industry, trade and agriculture.  
(b) Domestic demand directed towards the equipment goods industry excluding car manufacturing.

Chart 3.7  
EXPORTS AND IMPORTS OF GOODS  
Non-accumulated year-on-year rate of change  
in the quarter ended in the month  
In nominal terms



Source: INE.

erated in the first four months of 2000 (see section 6. *Balance of Payments*).

The acceleration of nominal exports of goods in the first quarter of 2000 is partly related with the behaviour of the prices of external sales<sup>(11)</sup>. There was also an acceleration of exported volumes, in line with signs of an acceleration in external demand over the period. In the first quarter of 2000, imports of goods and services<sup>(12)</sup> in the euro area

(10) For instance, the year-on-year rate of change of exports on a monthly basis in January was revised downwards by 3.5 p.p. between the January publication and the March publication. The year-on-year change in February was revised downwards by 2.6 p.p. In turn, the year-on-year rate of change of imports in January was revised upwards by 1.0 p.p. between January and February, and downwards by 1.0 p.p. between February and March. The rate for February was also revised by -1.3 p.p.

(11) The evidence of an acceleration in the prices of exports of goods in the first quarter of 2000 is provided by the information already available on some economies in the euro area. In this period, the export deflator in Germany increased by 2.6 per cent (1.2 per cent in the fourth quarter of 1999; -0.5 in 1999 as a whole). In Italy, the prices of exports increased from 4.3 per cent (2.7 per cent in the fourth quarter of 1999; 0.0 per cent in 1999), while in Spain the same prices increased by 5.5 per cent (2.5 per cent in the fourth quarter of 1999; -0.9 per cent in 1999 as a whole).

increased by 10.7 per cent, in real terms, vis-à-vis 8.2 per cent in the fourth quarter of 1999. External demand for the Portuguese economy, measured as a weighted average of the growth rates, in volume, of imports of goods and services in 7 major countries of destination of Portuguese exports, increased by 10.6 per cent in the first quarter of 2000 (9.6 per cent in the fourth quarter of 1999).

The acceleration of sales of goods abroad covered the intra and extra community markets, in nominal terms. The value of the sales of goods for community markets increased by 11.6 per cent in the first quarter of the year (4.9 per cent in 1999). This acceleration was broadly based across all geographical destinations within the EU, except Germany, where it decreased by 8.7 per cent. Exports to countries outside the European Union increased by 25.3 per cent (-3.6 per cent in 1999), according to information available for the January-May period.

Most groups of exported products recorded very high nominal growth rates in the first quarter of 2000. Stress is laid on the growth of exports of fuels (above 100 per cent) and of products included in "Chemistry, Plastic and Rubber", "Paper

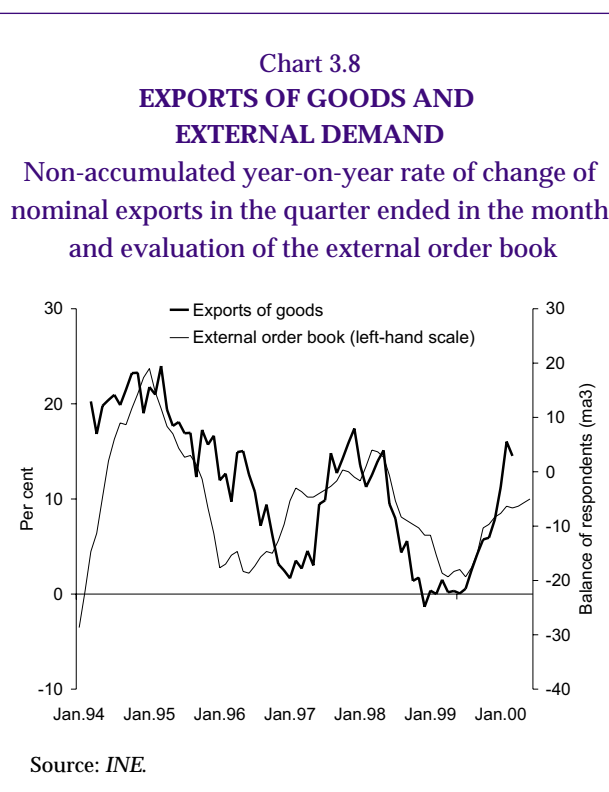
(12) Imports of goods and services in the euro area include trade amongst the different Member-States.

and paper pulp”, “Agriculture” and “Common metals” (in all cases, above 30 per cent), which must be closely associated with price behaviour. Exports of products included in “Machinery and other equipment” and in “Vehicles and other transport material” increased by 12.3 per cent and 11.8 per cent, respectively, over the same period. Sales abroad of “Textiles” increased also significantly (13.3 per cent). As an exception, as had already occurred in 1999, nominal exports of “Clothing” and “Footwear” recorded changes of -0.1 per cent and -6.7 per cent in the first quarter of 2000.

Leading indicators of exports suggest that the recovery of these flows — started in mid-1999 — have been maintained in recent months. According to the opinion of entrepreneurs in manufacturing industry, their external order book improved again in the second quarter of 2000 (Chart 3.8). However, sales abroad of transport material must have decelerated in April and May, which is explained by the temporary effect of an output reduction in a large company of the motor vehicle sector, which underwent a production reorganisation process<sup>(13)</sup>. This effect was reflected in the Trade Turnover Index of overall industry in the external market which, in the three months to in April, increased by 4.9 per cent, decelerating from the first quarter of the year (11.0 per cent), but maintaining a rate clearly above that recorded in 1999 (-0.9 per cent).

The high nominal growth of imports in the first quarter reflects, to a large extent, the evolution of import prices, with an intensification of the accelerating trend recorded during 1999<sup>(14)</sup>. This trend translated into a strong deterioration of the terms of trade in the first months of 2000, which is associated with the behaviour of the international

(13) This output reduction occurred chiefly in March and April. According to data supplied by the *Associação de Industriais de Montagem de Automóveis* (Association of the Vehicle Assembling Industry), national production of light passenger vehicles increased by 29.3 per cent, year-on-year, in the January-February period of 2000, to decrease subsequently by 42.8 per cent and 45.0 per cent in March and April, respectively. In May the reduction was more moderate (4.9 per cent). The impact on the turnover in industry was perceptible in March, but, considering the lags between production and sales, it seems to have been chiefly noticeable in April and May.



prices of commodities, particularly oil (see section 2. *External Environment of Portuguese Economy*).

Nonetheless, the growth in volume of Portuguese imports remained strong in the first quarter of 2000. In this period, domestic demand grew again significantly, albeit more moderately than in the previous year. However, some components with high import content, such as investment in transport material, increased sharply. In turn, the development of the industrial output during this period seems to have also contributed to the strong growth of imports of intermediate goods.

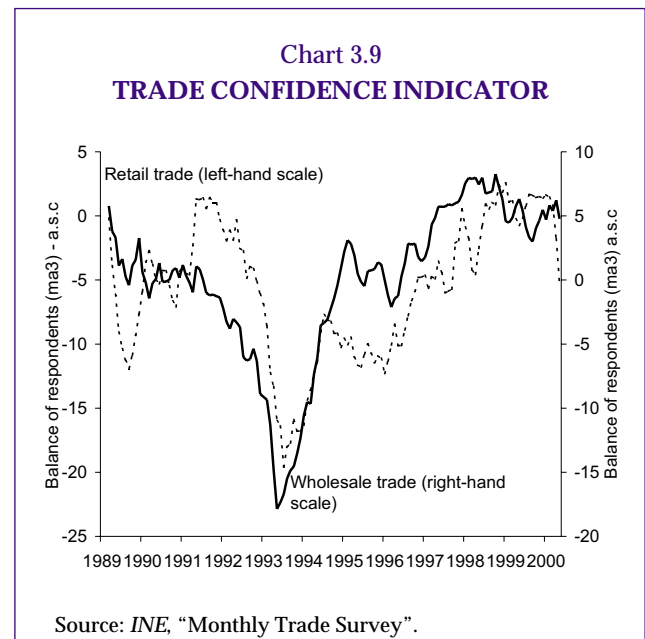
Turning to the development of major productive sectors, activity in the construction sector seems to have accelerated in the first months of 2000, while services and, in particular, wholesale and retail trade seem to have lost some momentum. Activity in industry, excluding production of transport material, continued to recover, in line with an acceleration in exports in this period. In

(14) Price behaviour in Portugal is in line with that recorded in other countries of the euro area. In the first quarter of 2000, the prices of imports of goods went up by 10.3 per cent in Germany (6.1 per cent in the fourth quarter of 1999; -0.5 per cent in 1999 as a whole), 13.6 per cent in Italy (6.4 per cent in the last quarter of 1999; -0.9 per cent in 1999) and 11.5 per cent in Spain (5.4 per cent in the fourth quarter of 1999, -0.1 per cent in 1999 as a whole).

turn, transport material industry seems to have been affected by the above-mentioned factors of a temporary nature, which translated in a drop of production in the first months of 2000.

Throughout the first half of 2000, the industry confidence indicator continued to improve, continuing the trend observed since mid-1999 (Chart 1.1). Behind this was a more positive evaluation of all components of the indicator, in particular the assessment of the order book — namely the external order book — of the stock level of finished products and of production expectations. The Trade Turnover Index of manufacturing industry increased by 5.4 per cent in the January-April period, compared with a 3.9 per cent rise in the fourth quarter of 1999. This acceleration may be partly explained by the trend of prices in industrial production. In fact, the Trade turnover Index of overall manufacturing industry excluding the manufacture of coque, refined oil products and nuclear fuels — the prices of which increased sharply over the period — has also accelerated (3.4 per cent in the first four months of the year, compared with 2.6 per cent in the last quarter of 1999). As a result of a reduction in stocks over the period, the development of production must have been less marked than that of the trade turnover<sup>(15)</sup>. It should be noted that the Trade Turnover Index decelerated somewhat in March and April (Table 3.2). This was, to a large extent, a result of the strong reduction of the trade turnover in the transport material sub-sector, which is related, as already mentioned, with the reorganisation of production in a large industrial company of the sector. In the first quarter of 2000, capacity utilisation in manufacturing industry remained at high levels (Table 3.2).

(15) The Industrial Production Index (IPI) for manufacturing industry, contrary to the Trade turnover Index, suggests a sharp deceleration of activity in the sector in the first months of 2000 (-2.2 per cent change in the January-April period of 2000, against a 3.4 per cent increase in the last quarter of 1999). Price acceleration in industrial production and the concomitant reduction in stocks of finished products in industry, according to surveys, can partly account for the discrepancies between the trends of the Trade turnover Index and of the IPI. However, the reduction in industrial production suggested by the IPI for most industries - discontinuing a clearcut recovery — seems difficult to reconcile with an improvement in industrial confidence over the same period.



Activity in construction accelerated in the first half of the year, as mentioned above, as a result of the behaviour of the public works sub-sector. This trend was reflected at the level of capacity utilisation of the sector, that increased to 76 per cent in the first quarter of 2000 (73 per cent in the same period of the previous year).

Information available for 2000 points to a less buoyant activity in the trade sector. According to the Monthly Trade Survey, there was a decline in the balance of respondents on the assessment of turnover and of activity by entrepreneurs of the wholesale and retail trade sub-sectors in the first half of 2000, vis-à-vis 1999, particularly noticeable in most recent months. The trend of the confidence indicators in both sub-sectors also illustrates the reduced momentum of activity in this sector (Chart 3.9). The retail trade sub-sector seems to have been particularly affected, as a result of the deceleration of private consumption over the period.

As regards tourism-related activities, tourism revenue recorded a strong nominal increase of 17.9 per cent in the January-April period of 2000, vis-à-vis the same period of the previous year (a 1.0 per cent increase in 1999 as a whole). Preliminary data on nights spent in hotels by foreigners point to an increase of 3.1 per cent, year-on-year, in the first quarter of the year, against a change of -0.1 per cent in 1999 as a whole. Notwithstanding a deceleration in nights spent by residents — a 1.7 per cent in-

Table 3.2  
SUPPLY INDICATORS

		1997	1998	1999	2000 <sup>(a)</sup>	Last month	1998		1999		1998				1999				2000
							1st half	2nd half	1st half	2nd half	1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q	1st Q
<b>Industry</b>																			
Industrial production indices (95 basis)																			
Manufacturing industry	yr-n-yr	2.9	3.7	1.1	-2.2	Apr	4.2	3.3	0.0	2.3	4.4	3.9	4.1	2.6	0.8	-0.7	1.2	3.4	-2.1
Consumer goods industry	yr-n-yr	-0.6	5.6	-0.8	-3.7	Apr	5.2	5.9	-2.2	0.7	4.1	6.2	6.9	5.0	-1.3	-3.1	0.0	1.3	-4.6
Investment goods industry	yr-n-yr	0.7	5.5	-4.4	-15.5	Apr	8.0	2.9	-2.4	-6.6	8.1	7.9	10.2	-2.9	2.6	-7.0	-7.8	-5.6	-13.1
Intermediate goods industry	yr-n-yr	4.4	5.9	6.7	3.0	Apr	6.0	5.9	6.5	6.9	6.0	5.9	6.4	5.4	5.4	7.6	6.4	7.3	3.4
<b>Trade turnover Index (1995 =100 basis)</b>																			
Manufacturing industry	yr-n-yr	5.9	6.2	-0.1	5.4	Apr	8.9	3.6	-1.8	1.6	11.1	6.9	5.4	1.8	-1.8	-1.8	-0.9	3.9	8.3
Consumer goods industry	yr-n-yr	2.8	6.0	-1.1	2.1	Apr	8.5	3.6	-2.1	-0.1	10.6	6.6	5.7	1.5	-2.7	-1.6	-1.4	1.4	4.1
Investment goods industry	yr-n-yr	8.1	12.2	-2.5	-8.9	Apr	17.7	7.2	-0.9	-4.1	19.4	16.3	16.6	-0.1	5.5	-6.5	-7.9	-0.6	-5.9
Intermediate goods industry	yr-n-yr	6.6	4.8	2.3	11.7	Apr	6.5	3.2	0.2	4.5	8.9	4.4	3.0	3.3	-1.0	1.2	2.6	6.4	14.8
<b>Rate of capacity utilisation</b>																			
Manufacturing industry	%	81	82	81	80	1st Q	82	81	80	81	83	81	81	82	80	81	81	82	80
Consumer goods industry	%	79	79	79	79	1st Q	79	80	78	79	80	78	80	80	79	78	80	78	79
Investment goods industry, excluding car manufacturing	%	84	87	88	89	1st Q	87	87	87	89	85	90	89	85	85	89	90	88	89
Car manufacturing	%	85	82	81	78	1st Q	83	80	82	80	85	82	79	82	81	82	80	80	78
Intermediate goods industry	%	81	83	82	80	1st Q	83	82	81	83	84	83	82	83	80	82	81	85	80
<b>Construction</b>																			
Rate of productive capacity utilisation	%	79	79	76	76	1st Q	81	77	75	77	82	79	77	76	73	76	77	76	76

Source: *INE*.

Yr-n-yr: Year-on-year rate of change.

Note:

(a) Accumulated figures up to the last month available.



crease in the first quarter, compared with 3.5 per cent in 1999 — activity in the sector seems to have increased more strongly in the first quarter than in 1999 as a whole, according to the trend of total nights spent (2.6 per cent and 1.0 per cent, respectively).

#### 4. LABOUR MARKET

In the first quarter of 2000, the labour market continued to reflect the cyclical trend of the economy, with a rise in the activity rate, an increase in total employment and in wage earners, and a reduction in the unemployment rate vis-à-vis the same period of the previous year.

According to the *INE's* Employment Survey, the activity rate — considering only individuals aged between 15 and 64 — stood at 71.1 per cent, which is equivalent to a 0.6 p.p. rise, year-on-year. This is the highest level recorded by this indicator in the present economic cycle<sup>(16)</sup>.

Turning to total employment, the number of workers rose by 1.6 per cent in the first quarter of 2000 vis-à-vis the first quarter of the previous year, which represents an increase identical to that observed in the fourth quarter of 1999. However, employment measured by the number of hours worked increased less significantly, since the average number of hours usually worked decreased further by 0.7 per cent.

Wage earners increased by 2.6 per cent in the first quarter of 2000, a rise similar to that recorded in the fourth quarter of 1999. Among these, the number of workers on permanent contracts increased by 0.6 per cent, while the number of wage earners with fixed-term contracts rose by 11.7 per cent.

An analysis of the *INE's* Employment Survey points to the continued trend of an increase in the weight of the services and construction sectors in total employment. In the first quarter of 2000, the contribution of these sectors to the trend of total employment were 2.1 and 0.9 p.p., respectively. In parallel, the weight of the industry and of the agriculture and fishing sectors declined. These sectors contributed with -1.0 and -0.4 p.p., respectively, to

(16) It should be noted, however, that the introduction of the new *INE's* employment survey in 1998 may affect the intertemporal comparison of these values.

the 1.6 per cent year-on-year development in total employment<sup>(17)</sup>.

In the first quarter of 2000, the unemployment rate continued to reveal a behaviour consistent with the stage of the economic cycle, with the usual lags, standing at 4.4 per cent, i.e. 0.3 p.p. less than in the same quarter of 1999. When seasonally adjusted, the unemployment rate seems to have increased slightly from the fourth quarter of 1999<sup>(18)</sup>. The number of the unemployed decreased by 5.5 per cent, year-on-year, i.e., less than in the two previous quarters.

Some signs of tension in the market are perceptible, as a result of the decrease of the unemployment rate to levels below the natural unemployment rate estimates. Therefore, there has been a rise in the percentage of companies that refer to their difficulties in hiring qualified personnel as a factor constraining their activity, particularly in the construction sector, but also in industry and trade<sup>(19)</sup>. The escalation of this type of situation may give rise to pressures leading to excessive wage increases. Taking into account the labour market situation, the increase in nominal wages actually paid must have continued to exceed average pay implicit in collective bargaining, although the information available do not permit as yet to evaluate the magnitude of such differential in 2000. The change in average pay implicit in collective bargaining for the private sector was 3.6 per cent in the January-June period of 2000<sup>(20)</sup>, therefore higher than the change for 1999 as a whole (3.3 per cent). It should be noted, however,

(17) Using the constant sample methodology, qualitative results obtained are much similar to those published by the *INE* with respect to employment growth in major sectors of activity. It should be noted, however, that the size of employment reduction in industry is less marked when this methodology is used.

(18) It should be noted that the seasonal adjustment ratios applied are those of the unemployment rate series calculated in the previous survey. It is not possible as yet to determine whether the introduction of the new survey implied changes to the seasonal pattern.

(19) According to the *INE's* surveys, the percentage of companies in the construction sector that refer to this type of difficulty remained very high in 1999 (approximately 40 per cent), exceeding 55 per cent in the first months of 2000. This percentage is lower in industry and trade, although it has been increasing (from around 13 per cent in 1998 and 1999 to 15 per cent in the first quarter of 2000 in industry, and from around 10 per cent in 1998 and 1999 to 13 per cent in the first quarter of 2000 in trade).

that the increase estimated for 2000 was affected by a contract in the clothing, footwear and leather sector covering 114.1 thousand workers, which envisages a wage increase of 5.8 per cent, well above the average for the private sector. Excluding this contract, the growth rate of the average pay implicit in collective bargaining for the private sector was 3.3 per cent.

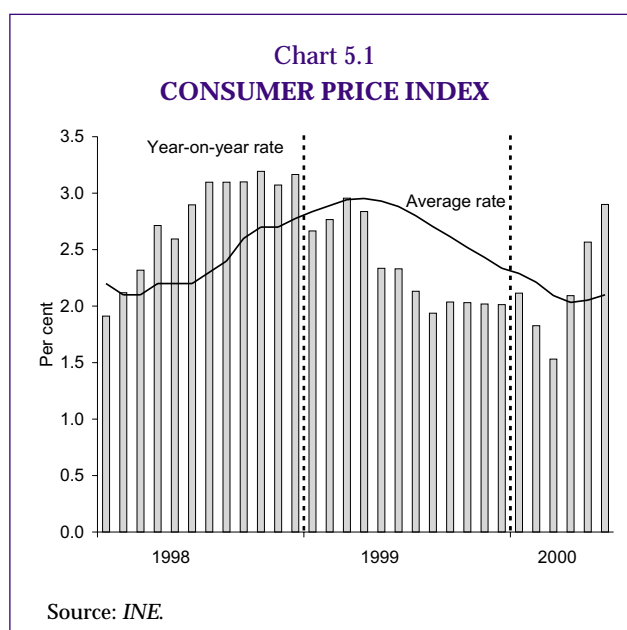
### 5. INFLATION

In the first quarter of 2000, the inflation rate rose in Portugal, with the year-on-year rate of change of the HICP increasing to 2.8 per cent in June from 1.7 per cent in December 1999. Nevertheless, the behaviour of the HICP in 2000 should be interpreted with particular caution, due to the methodological changes introduced in January 2000, which have an impact on the respective year-on-year rates of change<sup>(21)</sup>. In particular, as a result of including prices of health and education services in the HICP, which have recorded growth rates above the average of the other prices, the year-on-year and average growth rates of the

(20) The number of workers covered was 876.4 thousand, slightly above the number considered in the corresponding period of 1999.

(21) In January 2000, the HICP was subject to extensive methodological changes. Special emphasis should be laid on two of those changes. On the one hand, health and education services were included in the new index (up to then, only the non-subsidised services were considered). Those items were already accounted for in the CPI and they were the main reason why, in the past, the growth of the CPI exceeded the increase of the HICP. On the other hand, contrary to the CPI, the new HICP includes consumption by non-residents, which was reflected, in particular, in a rise in the weight of the item "accommodation services" from 0.7 per cent to 3.0 per cent.

The new index was linked to the former index with chain rates of change since December 1999. No values are available for 1999, consistent with the methodological changes introduced in 2000. Therefore, the behaviour of the year-on-year rates of change of the HICP in the course of 2000 will not be consistent with the behaviour of the year-on-year rates of change of its components. On the one hand, considering the strong seasonality of the prices of "accommodation services", the trend of the year-on-year rate of change of the HICP will be biased upwards (downwards) when demand for these tourism services increases (decreases). On the other hand, since the prices of health and education services have recorded a higher increase than the average rise of the other prices, including those services since January 2000 will tend to generate a mechanical increase in the year-on-year rates of change of the HICP up to December 2000.



HICP are likely to move towards the corresponding (higher) CPI rates of change<sup>(22)</sup>.

In this section, the CPI will therefore play a predominant role in the analysis of price developments in 2000, since this index was not affected by the above-mentioned methodological changes. The year-on-year rate of change of the CPI fell from 2.0 per cent in December to 1.5 per cent in March, and increased to 2.9 per cent in June. In turn, the annual average rate of change declined from 2.3 per cent in December to 2.0 per cent in April and rose to 2.1 per cent in May and June (Chart 5.1).

First, this acceleration of consumer prices is partly explained by the price adjustments associated with the increase of fuel prices at the end of March. This increase of fuel prices is likely to have had an impact of approximately 0.45 p.p. in the increase of the year-on-year rate of change in April. After this increase, there were also price adjustments in some sector, particularly vulnerable to fuel prices, such as gas and transport services. In the absence of further changes in fuel prices, this effect on the year-on-year rate of change of the CPI is expected to last until the first quarter of 2001.

Second, this acceleration of consumer prices also reflects the abating out of irregular effects that had contributed to the decrease in the

(22) On year-on-year terms, the rate of change of the HICP may even temporarily exceed the rate of change of the CPI, due to methodological aspects related to "hotel services", as mentioned in the previous footnote.

Table 5.1

**CONSUMER PRICE INDEX**  
Year-on-year rates of change percentage

	1999	2000	
	Dec.	Mar.	June
Food and non-alcoholic beverages .....	0.7	-0.6	1.8
Alcoholic beverages and tobacco .....	2.9	0.9	0.4
Clothing and footwear .....	1.1	-1.2	1.3
Housing, water, electricity, gas and other fuels .....	1.5	2.9	3.9
Accessories, housing equipment, current housing maintenance expenses .....	1.7	1.6	1.7
Health .....	3.7	3.4	2.9
Transports .....	3.3	3.2	5.4
Communications .....	-2.8	-4.8	-5.0
Recreation and culture .....	-1.0	-0.5	0.6
Education .....	4.9	5.0	5.0
Hotels, bars and restaurants .....	3.3	3.0	4.2
Miscellaneous goods and services .....	3.8	4.1	3.9

year-on-year rate of change of the CPI from December to March. On the one hand, from March onwards and particularly in May and June, there were important base effects associated with the price behaviour of some foodstuffs which, in the same period of the previous year, had undergone an adjustment for anomalous price behaviour. As a result, the year-on-year rate of change of the item “Food and non-alcoholic beverages” decreased from 0.7 per cent in December to -0.6 per cent in March, and increased to 1.8 per cent in June<sup>(23)</sup> (Table 5.1). On the other hand, the sales and promotions effect on the item “clothing and footwear”, which had been particularly strong in the first quarter of the year, was corrected in the second quarter. The year-on-year rate of change of prices of this item decreased from 1.1 per cent in December to -1.2 per cent in March, increasing subsequently to 1.3 per cent in June (Table 5.1).

(23) If should be noted in particular, the behaviour of the item “starches” of the CPI, with a weight of 0.38 per cent in this index, whose year-on-year rate of change decreased from -33.0 per cent in December 1999 to -51.1 per cent in March 2000, and increased to 32.9 per cent in June 2000.

(24) Calculated by the Banco de Portugal on the basis of the CPI. On the calculation methodology of the inflation trend indicators normally used by the Banco de Portugal, see C. Coimbra and P.D. Neves (1997), in “Trend inflation indicators”, quarterly *Economic Bulletin* of the Banco de Portugal, Volume 3, no. 1, March 1997.

The year-on-year inflation trend indicator, the trimmed mean at 10 per cent<sup>(24)</sup> rose from 2.0 per cent in December 1999 to 2.1 per cent in March 2000, and increased by 0.7 p.p. in the three subsequent months, reaching 2.8 per cent in June (Chart 5.2). The trend indicator was relatively stable in the first quarter of 2000 and the fact that it stood above that of the CPI year-on-year rate of change suggest that the reduction of the inflation rate in that period was largely explained by the abnormally favourable behaviour of some prices. From

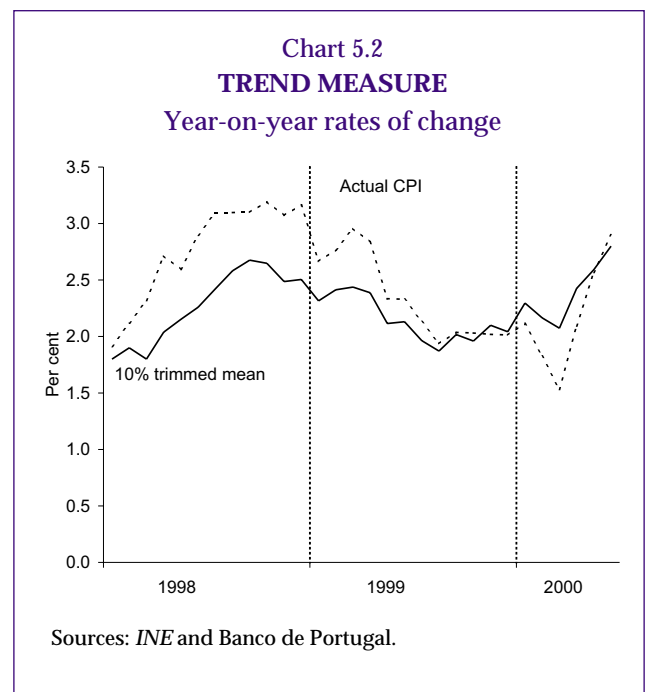
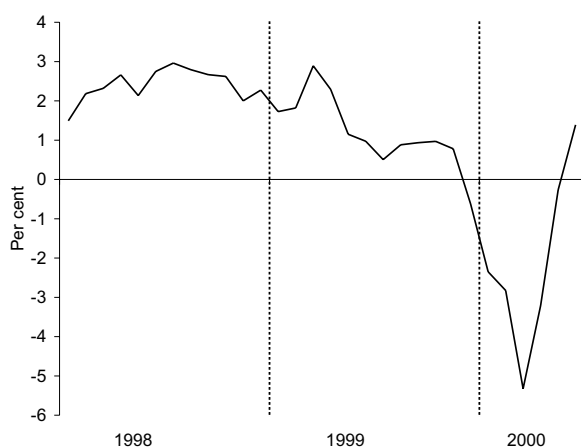


Chart 5.3  
ASYMMETRY OF CPI SECTORAL  
BREAKDOWN



Sources: INE and Banco de Portugal.

March to June, the trimmed mean increased by 0.7 p.p., although in this period the calculation of this trend indicator had excluded the specific effects of the fuel price increase<sup>(25)</sup>, as well as the major irregular effects related with the behaviour of prices of some goods, namely foodstuffs. The behaviour of the differential between the year-on-year rate of change of the CPI and the trimmed mean can be explained by the analysis of the asymmetry coefficient of the sectoral breakdown of price changes of CPI items. Indeed, there was a negative asymmetry from December 1999 to May 2000, particularly sharp from February to April<sup>(26)</sup>, a period in which the differential between the year-on-year rate of change of the CPI and the trimmed mean was more significant (Chart 5.3). In June, the sectoral breakdown of the CPI shows a positive asymmetry. The downward contribution to the CPI of items with negative changes was thus lower as of

(25) As from April, fuels are included in the group of items with a total weight of 10 per cent on the CPI, whose prices recorded the highest year-on-year rates of change, and were therefore excluded from the calculation of the trimmed mean.

(26) The sectoral breakdown of the price changes in CPI items is generally positively asymmetric, in the sense that price changes are frequently more severe above rather than below the trimmed mean of prices. In Portugal, as well as in most countries, the empirical evidence points to the predominance of positive asymmetry in the CPI breakdown. Also for the same reason, the trimmed mean, on average terms, shows price changes below those indicated in the CPI. See Coimbra and Neves (1999).

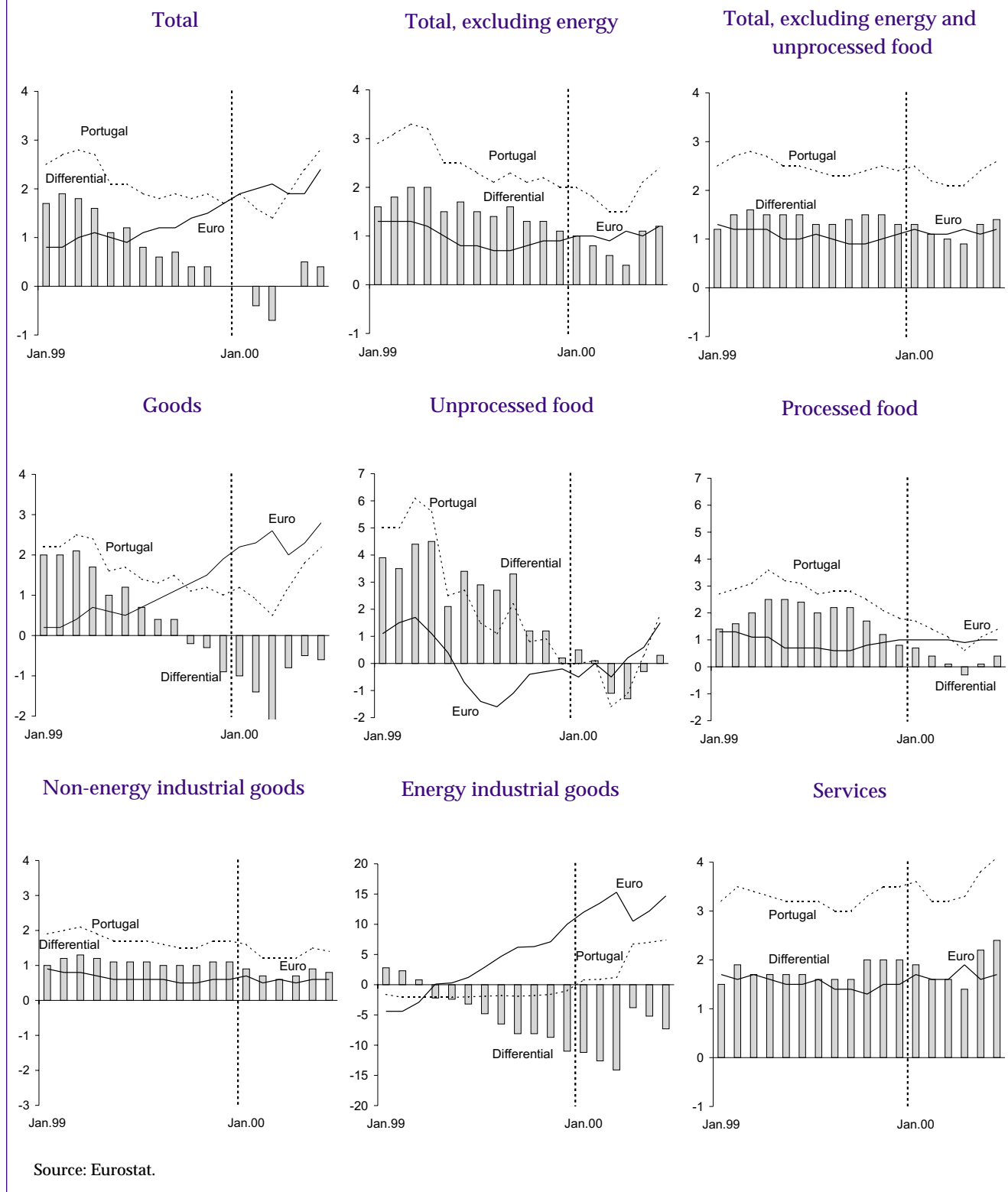
May than in previous months and the effect of excluding extreme observations in the trimmed mean was therefore much less significant.

Currently, given that the inflation rate on year-on-year terms is close to the respective trend indicator, it is likely that the irregular effects are not significantly influencing the present year-on-year rate of change of the CPI. Therefore, in addition to possible irregular behaviours of some prices in the future, the signs and magnitude of which are impossible to anticipate, the Portuguese inflation rate will be particularly dependent on the behaviour of the main factors explaining inflation. Vis-à-vis 1999, these factors point to less favourable external conditions, which will tend to dominate the recent slowdown of private consumption. Against this background, a reversal of this increase in the year-on-year inflation rate is unlikely to occur before the end of the year. In this case there will be further increases of the annual average inflation rate over the coming months.

The stability of the inflation rate in Portugal, after the elimination of the increase in fuel prices and the adjustment of some irregular effects, is also perceptible in the behaviour of the inflation differential vis-à-vis euro area countries (Chart 5.4). Taking into account the HICP, which is still the most appropriate indicator to assess the inflation differential, despite the limitations of the analysis in 2000, the inflation differential moved from zero in December 1999 to a negative figure of 0.7 p.p. in March, widening to a positive figure of 0.4 p.p. in June. Since early 1999, however, energy prices increased significantly in the other countries of the euro area, while in Portugal those prices were kept unchanged up to March 2000. Therefore, excluding energy, that differential narrowed from 1.1 p.p. at the end of 1999 to a minimum figure of 0.4 p.p. in April, to widen again to 1.2 p.p. in June. Excluding also unprocessed food, which decelerated sharply in Portugal in the course of 1999 and in the first quarter of 2000, the stability of the inflation differential was even more marked, narrowing from 1.3 p.p. in December 1999 to a minimum level of 0.9 p.p. in April, and widening again to 1.4 p.p. in June.

Considering the other HICP components, the price growth differential of non-energy industrial goods moved from 1.1 p.p. to a minimum level of 0.6 p.p. in March and to 0.8 p.p. in June, reflecting

Chart 5.4  
HARMONISED INDEX OF CONSUMER PRICES - TOTAL AND AGGREGATES  
Year-on-year rates of change and differentials



the above-mentioned price changes in “clothing and footwear”; in the case of processed food prices, and given the stability of the growth rate in the euro area, the narrowing of the differential

from 0.8 p.p. in December 1999 to 0.4 p.p. in June reflected the deceleration of these prices in Portugal; turning to services, the price growth differential narrowed from 2 p.p. in December 1999 to a

minimum value of 1.4 p.p. in April, and widen to 2.4 p.p. in June.

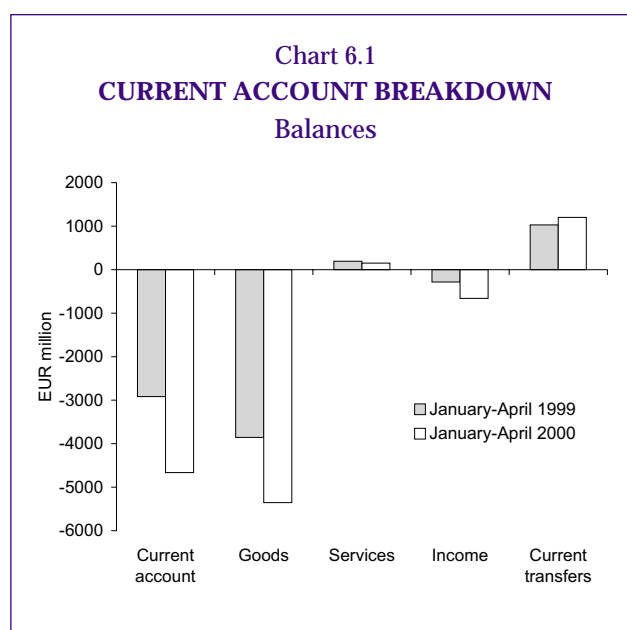
The analysis of the main factors explaining inflation does not reveal any significant change from the March *Economic Bulletin* of 2000. The external conditions remain less favourable than in 1999, which will likely be reflected in an intensification of the accelerating trend of import prices already recorded in 1999. In the first half of 2000, the exchange rate of the euro depreciated further and most international prices maintained an accelerating pattern, particularly raw materials prices (see section 2. *External environment of Portuguese economy*). In the case of oil, although the direct effect continues to be neutralized by the fact that fuel prices are administratively fixed, inflation in Portugal will tend to be indirectly affected by the effects of the oil price increase on the other international prices.

On the domestic side conditions of the Portuguese economy may to some extent smooth these external factors, taking particularly into account the deceleration of private consumption. However, it seems that these effects will not permit to offset the deterioration of the external conditions since, despite the slowdown in domestic demand, the labour market remains under some pressure (see sections: 3. *Demand and output*; 4. *Labour market*).

### 6. BALANCE OF PAYMENTS

In the January-April period of 2000, the deficit resulting from the total balance of the Current Account and the Capital Account widened by approximately 80 per cent vis-à-vis the same period of the previous year (Table 6.1). Similarly to developments in 1999, the increase in the Current Account deficit chiefly reflected the behaviour of the goods trade balance (Chart 6.1). The goods deficit<sup>(27)</sup> posted a strong deterioration in the first four months of the year, widening by nearly 40 per cent, year-on-year. Imports maintained a nominal growth rate above that of exports, partly reflecting the strong deterioration in terms of trade in the early months of 2000.

(27) The goods trade balance in January-April of 2000 includes external trade provisional estimates for April 2000 supplied by the INE.



The Service Account surplus narrowed in the January-April period of 2000 vis-à-vis the same period of 1999 (Table 6.1). At the major components level, stress should be laid on the increase in the deficit of transport services — particularly in passenger air transport — and on the increase in the deficit of other services, partly offset by a larger surplus in travel and tourism. Tourism revenue increased sharply, in nominal terms, by 17.9 per cent from the same period of the previous year, while nominal expenses in travel and tourism abroad by residents rose by 11.5 per cent.

In the January-April period of 2000, the Income Account deficit more than doubled vis-à-vis the same period of 1999 (Table 6.1). Behind this was the deterioration of the deficit of all major components of investment income, in line with the widening of the net debtor position of Portuguese economy.

The current transfers surplus widened by 16.7 per cent in the first four months of 2000, year-on-year, reflecting the behaviour of official transfers — chiefly with the European Union — as well as the larger surplus of private transfers (Table 6.1). As regards official transfers, the inflows from the European Social Fund increased from those recorded in the same period of 1999. Turning to private transfers, stress should be laid on the 8.3 per cent rise in the balance of emigrants' remittances (growth of 3.7 per cent in 1999 as a whole), which is probably associated with a more favourable international environment.

Table 6.1

## BALANCE OF PAYMENTS

EUR million

	January to April 1999			January to April 2000		
	Debit	Credit	Balance	Debit	Credit	Balance
<b>Current account</b> .....	16 105.6	13 188.6	-2 917.0	19 283.4	14 619.8	-4 663.6
Goods .....	11 793.3	7 938.2	-3 855.1	14 079.5	8 724.1	-5 355.4
Services .....	1 951.9	2 145.1	193.2	2 200.6	2 351.3	150.7
Transport .....	581.5	376.9	-204.6	681.9	360.0	-321.9
Travel .....	631.1	1 245.6	614.4	703.6	1 468.0	764.4
Insurance services .....	33.9	21.7	-12.2	38.3	18.4	-19.9
Royalties and licence fees .....	97.8	9.7	-88.0	100.8	7.4	-93.4
Other services .....	531.0	468.8	-62.2	595.6	470.7	-125.0
Government services .....	76.7	22.4	-54.3	80.3	26.8	-53.5
Income .....	1 670.1	1 385.7	-284.5	2 302.7	1 642.7	-660.0
Compensation of employees .....	33.9	41.7	7.8	29.1	41.7	12.6
Investment income .....	1 636.2	1 343.9	-292.3	2 273.6	1 601.0	-672.5
Current transfers .....	690.2	1 719.7	1 029.4	700.6	1 901.7	1 201.1
Official transfers .....	498.2	630.9	132.8	512.5	720.5	208.0
Private transfers .....	192.1	1 088.7	896.6	188.2	1 181.3	993.1
<b>Capital account</b> .....	49.5	595.7	546.2	45.7	408.0	362.4
Capital transfers .....	39.2	586.6	547.4	39.7	389.0	349.3
Official transfers .....	3.1	553.1	550.0	1.8	347.2	345.4
Private transfers .....	36.1	33.5	-2.6	37.8	41.8	4.0
Acquisition/disposal of non-produced non-financial assets ..	10.2	9.0	-1.2	6.0	19.1	13.0
<b>Financial account</b> .....	269 772.6	273 026.0	3 253.4	269 162.8	274 393.6	5 230.8
Direct investment .....	5 160.5	4 986.3	-174.2	6 313.8	5 898.2	-415.6
Portuguese investment abroad .....	1 833.5	1 347.2	-486.3	1 699.1	566.4	-1 132.7
Foreign investment in Portugal .....	3 327.0	3 639.1	312.1	4 614.7	5 331.8	717.1
Portfolio investment .....	73 570.5	73 658.4	87.9	48 067.0	50 523.1	2 456.0
Assets .....	47 431.3	44 506.0	-2 925.3	18 349.9	19 536.8	1 186.9
Liabilities .....	26 139.2	29 152.4	3 013.2	29 717.2	30 986.3	1 269.1
Financial derivatives .....	436.7	465.8	29.1	1 296.6	1 421.4	124.8
Other investment .....	178 008.0	181 013.9	3 005.9	195 848.8	198 993.5	3 144.6
Assets .....	125 849.8	129 945.3	4 095.5	157 251.9	154 536.8	-2 715.2
Liabilities .....	52 158.2	51 068.7	-1 089.5	38 596.9	44 456.7	5 859.8
Reserve assets .....	12 596.9	12 901.5	304.7	17 636.6	17 557.5	-79.1
Monetary gold .....	0.4	144.5	144.1	0.3	0.0	-0.2
Special drawing rights .....	32.5	121.9	89.4	14.7	11.8	-3.0
Reserve position in the IMF .....	473.4	510.0	36.6	1 991.7	1 988.8	-2.9
Foreign exchange .....	12 090.6	12 125.2	34.6	15 629.9	15 556.9	-73.0
<b>Errors and omissions</b> .....			-882.6			-929.5
Memo:						
<b>Current account + Capital account</b> .....	16 155.1	13 784.2	-2 370.8	19 329.1	15 027.8	-4 301.3

The Capital Account surplus narrowed by 33.7 per cent in the January-April period of 2000, as a result of the lower surplus of official capital transfers with the European Union (Table 6.1). It should be noted that the State Budget for 2000 also anticipates a reduction in these transfers in the year as a whole.

In the first four months of 2000, the Financial Account posted a surplus 60.8 per cent above that recorded in the same period of 1999, reflecting the increase in net external borrowing requirements of Portuguese economy (Table 6.2). These inflows into the Portuguese economy were the result of external financial operations in assets and liabilities

Table 6.2

## FINANCIAL ACCOUNT<sup>(a)</sup>

EUR million

	January-April 1999			January-April 2000		
	Change in liabilities	Change in assets	Net change	Change in liabilities	Change in assets	Net change
<b>Financial account</b> .....	1 799.0	1 454.4	3 253.4	6 549.4	-1 318.6	5 230.8
Direct investment .....	312.1	-486.3	-174.2	717.1	-1 132.7	-415.6
Portfolio investment .....	3 013.2	-2 925.3	87.9	1 269.1	1 186.9	2 456.0
Financial derivatives .....	-436.7	465.8	29.1	-1 296.6	1 421.4	124.8
Other investment .....	-1 089.5	4 095.5	3 005.9	5 859.8	-2 715.2	3 144.6
Reserve assets .....	-	304.7	304.7	-	-79.1	-79.1
<b>By resident institutional sector:</b>						
<b>Monetary Authorities</b> .....	509.2	2 011.5	2 520.7	122.1	3 623.2	3 745.3
Portfolio investment .....	-	156.5	156.5	-	-82.8	-82.8
Financial derivatives .....	0.0	0.0	0.0	-0.9	1.4	0.5
Other investment .....	509.2	1 550.3	2 059.5	123.0	3 783.7	3 906.7
Reserve assets .....	-	304.7	304.7	-	-79.1	-79.1
<b>General Government</b> .....	3 587.3	-10.1	3 577.2	789.4	250.0	1 039.4
Portfolio investment .....	3 667.0	-0.1	3 666.8	741.8	254.8	996.7
Financial derivatives .....	0.0	0.0	0.0	0.0	0.0	0.0
Other investment .....	-79.7	-10.0	-89.7	47.6	-4.9	42.7
<b>Monetary Financial Institutions</b> .....	-1 618.7	2 255.2	636.5	4 811.5	903.2	5 714.7
Direct investment .....	10.5	-49.8	-39.3	12.4	-72.8	-60.4
Portfolio investment .....	-54.5	-1 729.1	-1 783.6	72.3	1 091.0	1 163.3
Financial derivatives .....	-379.4	453.2	73.8	-1 177.2	1 338.5	161.3
Other investment .....	-1 195.4	3 581.0	2 385.7	5 904.0	-1 453.4	4 450.6
<b>Non-Monetary Financial Institutions</b> .....	-131.0	-1 324.0	-1 455.0	346.2	-3 469.0	-3 122.8
Direct investment .....	-79.4	45.0	-34.5	110.6	-43.1	67.5
Portfolio investment .....	-41.9	-1 361.5	-1 403.4	314.9	-54.9	260.0
Financial derivatives .....	-1.3	4.2	2.9	-82.9	76.9	-6.0
Other investment .....	-8.4	-11.7	-20.0	3.7	-3 448.0	-3 444.3
<b>Non-Financial Corporations and Private Individuals</b> ..	-547.7	-1 478.2	-2 025.9	480.1	-2 626.0	-2 145.8
Direct investment .....	381.0	-481.5	-100.5	594.1	-1 016.8	-422.7
Portfolio investment .....	-557.4	9.0	-548.4	140.0	-21.2	118.8
Financial derivatives .....	-56.0	8.5	-47.5	-35.5	4.5	-31.0
Other investment .....	-315.3	-1 014.2	-1 329.5	-218.5	-1 592.5	-1 811.0

Note:

(a) A positive sign (+) indicates an inflow, i.e., an increase in foreign liabilities or a decrease in foreign assets. A negative sign (-) indicates an outflow, i.e., a decrease in foreign liabilities or an increase in foreign assets.

of monetary financial institutions, Monetary Authorities (chiefly through operations carried out within the scope of the TARGET system) and General Government. Non-monetary financial institutions as well as resident non-financial corporations and private individuals were behind net capital outflows.

In the January-April period of 2000, direct investment operations between Portugal and abroad posted a deficit slightly above that recorded in the same period of 1999 (Table 6.2). In net terms, both direct investment flows increased vis-à-vis the January-April period of 1999, but the rise in Portuguese direct investment abroad was higher than



the increase in foreign direct investment in Portugal. The “wholesale and retail trade, repairs, hotels and restaurants” sector should be highlighted on account of the direct investment received in the January-April period of 2000. In turn, most Portuguese direct investment abroad in that period was carried out by holding corporations of different Portuguese economic groups.

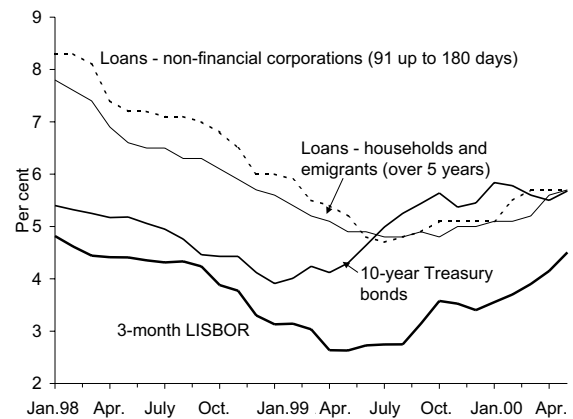
In the first four months of 2000, according to preliminary information<sup>(28)</sup>, portfolio investment operations between Portugal and abroad posted a surplus highly above that recorded in the corresponding period of 1999 (Table 6.2). In this period, despite a decrease in non-resident portfolio investment in Portugal vis-à-vis the January-April period of 1999, Portuguese portfolio investment abroad posted a net disinvestment in foreign securities, as opposed to developments in the corresponding period of 1999. This disinvestment was, to a large extent, a result of the behaviour of resident monetary financial institutions. As regards foreign portfolio investment in Portugal in the beginning of the year, there continued to be some demand for national securities by non-residents, albeit smaller than in the corresponding period of 1999. Non-residents continued to invest in government bonds, although to a lesser extent than in the same period of 1999.

Up to April 2000, operations included in the item “Other investment” continued to give rise to significant net inflows in the Portuguese economy, to an amount very close to that recorded in January-April of 1999 (Table 6.2). Loans and deposits made directly by resident monetary financial institutions in the January-April period of 2000 resulted in capital inflows highly above those recorded in the corresponding period of 1999. In addition, the operations carried out within the scope of the TARGET<sup>(29)</sup> system resulted in strong inflows in the January-April period, higher than those recorded in the same period of 1999. In turn,

(28) The information on portfolio investment flows, assets and liabilities includes, in some components, estimates calculated by the Banco de Portugal. These values are therefore subject to revisions.

(29) In accordance with the indications of the European Central Bank, operations carried out within the scope of the TARGET system are registered in the Balance of Payments as changes in Assets of Monetary Authorities under the item “Other investment”.

Chart 7.1  
MONEY MARKET, CAPITAL MARKET AND  
BANK CREDIT INTEREST RATES



operations included in the item “Other investment” carried out by non-monetary financial institutions consisted in net outflows, in contrast to the near-null balance recorded in the corresponding period of 1999.

## 7. INTEREST RATES AND CREDIT

In the first half of 2000, bank interest rates maintained the upward trend initiated in the third quarter of 1999. This trend is in line with the monetary-policy decisions of the ECB, which has gradually increased its intervention rates since November 1999. Notwithstanding this trend in the cost of credit, domestic credit aggregates continued to record very high growth rates. While credit to non-financial corporations has accelerated significantly since early 2000, credit to households has been gradually decelerating since mid-1999.

In June 2000, interest rates on time deposits (181 days to 1 year) stood at 3.0 per cent, increasing by 0.8 p.p. from the minimum level of 1999 (Chart 7.1). Interest rates on new loans to non-financial corporations were set at 5.6 per cent (operations at 91 to 180 days) and at 5.7 per cent (operations at 181 days to 1 year), which corresponds to 0.9 and 1.4 p.p. increases, respectively, vis-à-vis 1999 minimum levels. The rate on loans to households (operations at over 5 years) was set at 6.0 per cent, having increased by 1.2 p.p. from

the 1999 minimum level. In the first half of 2000, stress should particularly be laid on the 1.0 p.p. rise in the rate on loans to households at over 5 years (0.8 p.p. in the quarter to June) and on the 0.9 p.p. increase in the interest rate on loans to non-financial corporations for operations at 181 days to 1 year (0.6 p.p. in the quarter to June).

In general, lending rates increased more than deposit rates. This faster adjustment in lending rates stands in clear contrast to developments within the scope of the interest rate downturn observed in recent years in Portugal, when a faster adjustment of deposit rates had been observed<sup>(30)</sup>.

Talking into account the lags in the transmission of changes in money market interest rates to bank interest rates, additional increases should be anticipated in bank interest rates, in the wake of the recent rises of ECB intervention rates.

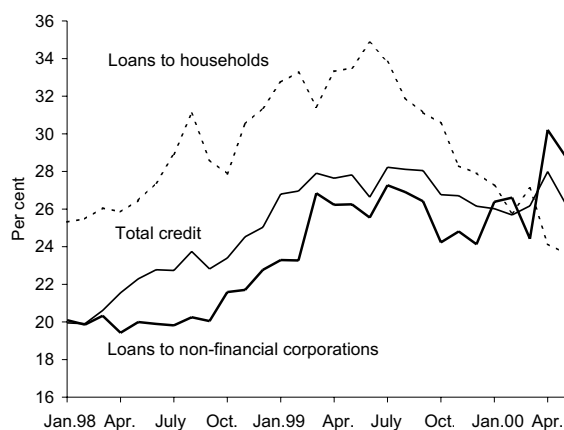
In May, total domestic credit recorded an year-on-year change of 23.9 per cent (19.9 per cent in December 1999). This evolution was the result of the combined effect of a decline in the pace of decrease of net credit to the General Government, with a relative stabilisation of total credit to the non-monetary resident sector (excluding public administration). This stabilisation resulted from a combination of a deceleration in bank credit to households and an acceleration of credit to non-financial corporations (Chart 7.2).

In May, credit to households recorded an year-on-year change of 23.6 per cent (34.8 per cent in the peak reached in June 1999 and 27.9 per cent in December 1999). This deceleration was mainly due to the trend of credit for house purchase that decelerated by 12.4 p.p. since the peak recorded in February 1999 (to 25.1 per cent). Credit for consumption and other purposes, which accounts for approximately 25 per cent of total credit to households, decelerated also from 23.2 per cent in December 1999 to 19.7 per cent in May 2000.

The recent deceleration of credit to households seems to be mainly due to the actual and predictable increase in bank interest rates, to the deterioration of consumer expectations on the future economic situation and to changes introduced in

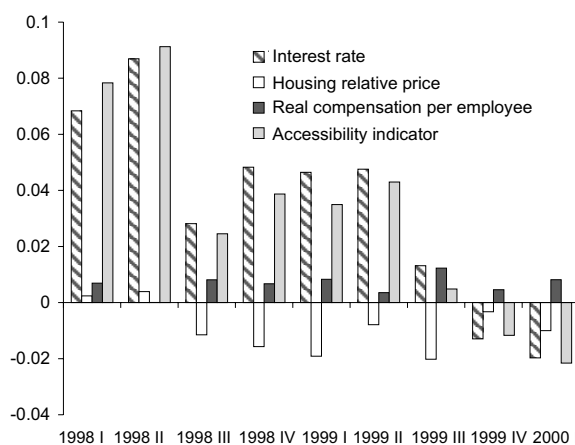
(30) This subject is analysed in more detail in the Box "Transmission of changes in money market interest rates to bank lending and deposit rates" in Chapter 2 of the 1999 Annual Report of the Banco de Portugal.

Chart 7.2  
DOMESTIC BANK CREDIT TO THE  
NON-MONETARY RESIDENT SECTOR  
(EXCLUDING GENERAL GOVERNMENT)  
Year-on-year rates of change



Note: The non-monetary resident sector (excluding general government) includes households, non-financial corporations and non-monetary financial corporations.

Chart 7.3  
ACCESSIBILITY INDICATOR  
AND COMPONENTS



the regulations governing the subsidised system for house purchasing. As regards the former of these factors, the gradual increase in the cost of credit implied a reduction in the accessibility to the housing market<sup>(31)</sup>, observed since the last quarter of 1999 (Chart 7.3).

In recent years, the level of indebtedness of households has increased significantly. At the end of 1999, it reached 76.5 per cent of the household

available income, vis-à-vis 43.7 per cent at the end of 1996. Since most housing credit contracts are carried out at a variable rate, that increase has raised households' sensitivity to interest rate changes, which may have also contributed to the deceleration of demand for credit by households.

It should be noted, however, that the interest rates are still at relatively low levels. In June 2000, the nominal and real interest rates on loans to households stood at levels close to those observed in the third quarter of 1998. This fact may be behind the still high growth rates of credit to households observed in the first half of 2000.

According to available information, the increase in bank lending rates seems to have had an impact on the debt service of households. By way of example, consider a loan of PTE 20,000,000, at a variable rate, redeemable in 25 years, under a fixed-installment system. In July, August and October 1999, the months in which the interest rates on credit to households at more than 5 years reached its minimum (4.8 per cent), the monthly debt service of that loan would correspond to approximately PTE 113,000. In July 2000, a loan contracted under the same conditions would correspond to a monthly instalment of around PTE 127,000, which represents an increase of 11.9 per cent<sup>(32)</sup> (Table 7.1).

The transmission of changes in the intervention rates to money market interest rates and subsequently to bank lending rates is a gradual process, in which the effects emerge in the course of several quarters<sup>(33)</sup>. Against this background, it is predictable that interest rates of credit for house purchase have not yet fully reflected the recent increases in ECB intervention rates (and money market rates).

With a view to evaluating this issue, Table 7.1 presents an estimate of the percentage deterioration of monthly instalments as a result of the transmission of changes occurred up to June in money market interest rates to the interest rates of credit

Table 7.1

**PERCENTAGE CHANGE IN THE MONTHLY  
DEBT SERVICING VIS-À-VIS 1999  
MINIMUM LEVEL**

Per cent	Residual maturity of the loan (in years)					
	5	10	15	20	25	30
Up to May 2000.....	2.8	5.4	7.8	9.9	11.9	13.7
After the full transmission of the money market rate of change .....	4.5	8.6	12.4	15.9	19.1	21.9

for house purchase<sup>(34)</sup>. This exercise assumes, on the one hand, that the changes in money market rates are fully transmitted (in a one-to-one correlation) to bank lending rates and that, on the other hand, there will be no further increases in money market interest rates.

The implementation of the exercise additionally requires the definition of an equilibrium spread between the rate on credit for house purchase and the six-month money market interest rate. In a simplified manner, it was assumed that this spread would correspond to the average of the spreads observed from May 1999 (the month in which the money market rate reached its low) to August 1999 (the month in which the interest rate on housing credit reached its low). This value corresponds to 1.8 percentage points<sup>(35)</sup>. Based on these assumptions, the interest rate on housing credit, that had increases by 1.2 p.p. up to June from the low observed in May 1999, would additionally increase by 0.7 p.p. It was therefore concluded that the change observed up to June in the monthly debt servicing corresponds to approximately two thirds of the total change foreseeable after the full transmission of the increase in the six-month money market interest rates. An addi-

(31) A more detailed description of the construction of the accessibility indicator can be found in the Box "Factors underlying the development of bank credit to the non-financial private sector in Portugal" in Chapter 2 of the 1999 Annual Report of the Banco de Portugal

(32) Note that this percentage change is not dependent on the amount of the loan.

(33) See Box: "Transmission of changes in money market interest rates to bank lending and deposit rates" mentioned above.

(34) In Portugal, most credit contracts for house purchase are carried out at a variable rate indexed to a money market rate (usually at 3 and 6 months). In this exercise, the six-month money market interest rate was used as reference rate.

(35) In case a spread is considered for a longer period (from May 1998 to June 2000), the average value of the spread would also correspond to 1.8 per cent.

Table 7.2

**NON-FINANCIAL CORPORATIONS, NON-BONDED  
DOMESTIC CREDIT AND COMMERCIAL PAPER**

Per cent

	1998		1999			2000				
	Dec.	Mar.	June	Sep.	Dec.	Jan.	Feb.	Mar.	Apr.	May
<b>Year-on-year rate of change</b> .....	21.7	26.7	26.6	28.7	27.2	31.0	30.9	28.3	34.0	32.1
<b>Sectoral contribution</b> .....										
Agriculture, livestock, hunting, forestry and fishing .....	0.1	0.3	0.3	0.5	0.4	0.4	0.4	0.2	0.2	0.3
Mining industries .....	0.1	0.2	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.3
Manufacturing industries .....	3.6	3.9	4.0	3.8	3.3	5.2	5.0	4.7	5.1	5.2
Production and distribution of electricity, gas and water .....	0.5	1.2	1.9	1.4	1.3	0.8	1.3	1.0	1.1	0.6
Construction .....	5.2	4.8	4.6	5.4	5.0	5.3	6.8	6.1	6.4	5.9
Services .....	12.2	16.2	15.2	17.1	16.9	18.9	17.2	16.1	21.0	19.9
<b>Breakdown of the services sector</b>										
Wholesale trade and trading agents (except motor vehicles and motorcycles) .....	3.5	4.5	2.7	2.2	1.7	2.4	2.6	1.5	1.9	1.6
Real-estate activities .....	2.1	2.6	2.6	2.8	3.5	3.5	3.2	3.6	3.8	3.4
Other activities related with services chiefly supplied to companies .....	1.9	3.2	3.4	4.6	4.5	4.2	3.6	4.0	7.8	7.6
Other services .....	4.6	5.9	6.5	7.5	7.2	8.8	7.8	7.0	7.5	7.4

tional rise may thus be expected in the debt servicing of households, in percentage of their available income.

Credit to non-financial corporations accelerated significantly in the first months of 2000. The year-on-year rate of change rose from 24.1 per cent in December 1999 to 28.8 per cent in May 2000. The breakdown by activity shows that credit to non-financial corporations recorded high growth rates in its major components. In May 2000, the rates of change of the credit aggregates intended for services, manufacturing industry and construction stood at 36.6 per cent, 23.2 per cent and 35.4 per cent, respectively<sup>(36)</sup>.

Table 7.2 evinces the significant and growing contribution of credit to companies whose major activity consists in the supply of services to corporations. This sub-branch includes credit granted to holding companies of the non-financial sector<sup>(37)</sup>, which, to a large extent, reflects the financing of

corporate financial reorganisation operations. These operations are most likely behind the acceleration of credit to corporations in the first five months of 2000.

The analysis of the consolidated balance sheet of monetary financial institutions reveals that the strong increase of credit to the private sector has chiefly been financed through resources raised abroad (Table 7.3). The increase in net foreign liabilities of banks over the first five months of 2000 was significantly higher than that observed in the corresponding period of 1999. Domestically raised resources (either through deposit taking or through the issue of securities) remained relatively stable, and did not move in line with changes in credit and in foreign liabilities. Stress should be laid on the evolution of deposits and other like instruments that recorded a negative flow in the first

(36) In May 2000, these branches of activities accounted for 56.2 per cent, 21.1 per cent and 17.0 per cent of total domestic bank credit to non-financial corporations.

(37) These companies are classified as non-financial corporations, in so far as they do not hold control of at least one financial corporations; however, they may carry on activities similar to those carried on by financial Holding Companies (included in the non-monetary financial sector).

Table 7.3

## CONSOLIDATED BALANCE-SHEET OF MONETARY FINANCIAL INSTITUTIONS

EUR million

	Balance	Changes	
	May 2000	Dec. 1999/ /May 2000	Dec. 1998/ /May 1999
Net foreign assets.....	-1 999	-1 1147	-5 429
Banco de Portugal.....	15 492	-3 131	-1 273
Other monetary financial institutions.....	-17 490	-8 016	-4 156
of which:			
Denominated in euro.....	-18 715	-8 155	-4 438
Loans to general government.....	9 418	654	-801
Domestic credit (except loans to general government).....	142 144	12 539	9 814
Households.....	6 1142	4 101	4 859
Non-financial corporations.....	64 315	7 788	4 394
Non-monetary financial institutions.....	16 688	651	562
Currency in circulation.....	4 849	-771	-242
Deposits and deposit-like instruments - Total.....	114 332	-202	3 238
Securities other than capital.....	14 631	1 315	136
Money market fund units.....	41	41	0
Capital and reserves.....	21 341	494	-3
Sundry items (net).....	-5 631	1 170	455

five months of 2000, in contrast to the evolution observed in the corresponding period of the previous year.

## 8. PUBLIC FINANCES

According to the *Bulletin* of the Directorate-General of the Budget, on a Public Accounts basis, total State revenue increased by 5.6 per cent in the January-May period of 2000 vis-à-vis the corresponding period of 1999. In the first five months, tax revenue of the State increased by 6.4 per cent. For comparison purposes, it should be mentioned that the figure for tax revenue included in the State Budget for 2000 represents a growth rate of 9.7 per cent from the 1999 budget outturn estimate.

Up to the end of May, direct tax revenue increased by 9.9 per cent, vis-à-vis the same period of the previous year. The growth rates of the personal income tax and the corporate income tax stood at 16.9 per cent and 0.4 per cent, respectively. The sharp increase of personal income tax collection is partly a result of the different intra-annual pattern of repayments between 1999 and 2000.

In the first five months of the year, indirect taxes recorded a growth rate of 3.9 per cent vis-à-vis the corresponding period of 1999. According to the State Budget for 2000, the forecasts of the revenue from these taxes for the year as a whole pointed to an increase of 9.8 per cent vis-à-vis the 1999 budget outturn. The figure for the January-May period was decisively influenced by the evolution of the revenue from the tax on oil products (-21.9 per cent) and the car tax (-0.7 per cent), despite the strong increase in VAT revenue (+13.4 per cent). The sharp decrease in the revenue from the tax on oil products was a result of the high oil price in the international market, which was not reflected in consumer prices of oil derivatives until the end of March. The Government decided then to raise prices based on the assumption that the price of oil per barrel would stand between 20 and 25 USD for the remainder of the year. However, the oil price has stood above the upper limit of that interval, implying an additional shortfall in tax revenue and increasing the foreseeable deviation of the revenue from the tax on oil products, for the year as a whole, from the budgeted figure. The sluggishness of the revenue from the car tax reflects a decrease in the sales of light passenger vehicles in the first months of the year.

Table 8.1

GENERAL GOVERNMENT REVENUE

EUR million

	1999			2000			Growth rates	
	Jan./May (1)	Budget outturn 1999 (2)	(1)/(2)*100 (3)	Jan./May (4)	State Budget 2000 (5)	(4)/(5)*100 (6)	Jan./May	State Budget 2000/ /Budget outturn 1999
Current receipts .....	10 763.1	25 435.2	42.3	11 427.5	28 163.1	40.6	6.2	10.7
Tax receipts .....	10 174.0	23 972.7	42.4	10 823.9	26 298.6	41.2	6.4	9.7
Direct taxation .....	4 295.1	10 033.8	42.8	4 718.6	11 002.5	42.9	9.9	9.7
of which:								
Personal income tax .....	2 452.6	5 981.6	41.0	2 868.1	6 467.9	44.3	16.9	8.1
Corporate income tax .....	1 805.1	3 979.9	45.4	1 813.1	4 452.3	40.7	0.4	11.9
Indirect taxation .....	5 878.8	13 938.9	42.2	6 105.3	15 296.1	39.9	3.9	9.7
of which:								
VAT .....	3 326.0	7 949.3	41.8	3 771.4	8 817.3	42.8	13.4	10.9
Tax on oil products .....	1 093.9	2 484.5	44.0	854.4	2 696.5	31.7	-21.9	8.5
Car tax .....	520.2	1 209.1	43.0	516.8	1 307.3	39.5	-0.7	8.1
Other current receipts .....	589.1	1 462.5	40.3	603.5	1 864.5	32.4	2.5	27.5
Capital receipts .....	71.8	2 172.8	3.3	153.1	443.4	34.5	113.2	-79.6
Total receipts .....	10 834.9	27 608.0	39.2	11 580.6	28 606.6	40.5	6.9	3.6

Source: Monthly Bulletin of the Directorate-General of the Budget, May 2000.

The high growth rate of VAT revenue up to the end of May reflects mostly the sharp nominal increase in domestic demand, despite a deceleration from 1999, and the delay in repayments.

In the first five months of the year, total State expenditure increased by 4.3 per cent from the corresponding period of 1999. It should be noted that the State expenditure forecast in the State Budget for 2000, for the year as a whole, represents an increase of 9.8 per cent from the 1999 budget outturn estimate underlying its preparation. However, primary current expenditure maintained a high growth rate in the first months of the year (+8.1 per cent), particularly due to the sharp increase in wages (+9.3 per cent) and to transfers to other general government subsectors (+15.8 per cent). The trend of primary current expenditure up to the end of May was mitigated by the decrease in expenditure with variable or temporary allowances (-9.9 per cent), social security of civil servants (-3.8 per cent), acquisition of goods and services (-6.6 per cent), other current transfers (-3.3 per cent) and subsidies (-10.1 per cent). The behaviour of these items is a result of the freezing of expenditure included in the Budget Law and in the Budget Implementation Decree<sup>(38)</sup> and, in some cases, possibly of delays in payments. Interest expenditure

decreased by 1.1 per cent. Finally, stress should be laid on the reduction of capital expenditure (-14.4 per cent), also affected by the above-mentioned freezing.

Information available permits to anticipate that the State tax revenue will be significantly below forecasts. The size of this deviation will depend

(38) According to the State Budget Law for 2000 (Article 5) the following amounts were frozen:

- 15 per cent of the total amounts allocated for variable and temporary allowances, acquisition of goods and services, other current expenditure and acquisition of capital goods, except appropriations stipulated in chapter 50, expenditures envisaged in the Military Programming Law, appropriations with compensation in revenue and earmarked for the payment of additional pay.
- 10 per cent of the total amounts allocated for current transfers to the autonomous services and funds, except those earmarked for the National Health Service, those included in chapter 50 and to appropriations with compensation in revenue.

Still within the scope of the State Budget for 2000, 8 per cent of the amount budgeted in chapter 50 concerning national financing, is frozen in all ministries or equivalent departments (Article 6).

Decree-Law no. 70-A/2000, which lays down regulations concerning the implementation on the State Budget for 2000, reinforces the freezing expenditure relative to the acquisition of goods and services by the State and by the autonomous funds and services.

Table 8.2

## GENERAL GOVERNMENT EXPENDITURE

EUR million

	1999			2000			Growth rates	
	Jan./May (1)	Budget outturn 1999 (2)	(1)/(2)*100 (3)	Jan./May (4)	State Budget 2000 (5)	(4)/(5)*100 (6)	Jan./May	State Budget 2000/ /Budget outturn 1999
Current expenditure .....	10 225.7	25 200.3	40.6	10 875.8	27 901.8	39.0	6.4	10.7
Compensation of employees .....	3 439.5	9 165.7	37.5	3 594.8	9 722.1	37.0	4.5	6.1
Wages .....	2 229.8	6 252.2	35.7	2 437.6	-	-	9.3	-
Variable or contingent allowances .....	104.6	281.6	37.1	94.3	-	-	-9.9	-
Social security .....	1 105.0	2 631.9	42.0	1 062.9	-	-	-3.8	-
Goods and services .....	297.0	1 120.5	26.5	277.3	1 250.0	22.2	-6.6	11.6
Subsidies .....	157.4	647.7	24.3	141.4	673.4	21.0	-10.1	4.0
Interest .....	1 914.6	2 948.6	64.9	1 893.2	3 562.9	53.1	-1.1	20.8
Current transfers .....	4 345.2	11 087.3	39.2	4 885.2	12 476.4	39.2	12.4	12.5
General government .....	3 569.4	9 299.6	38.4	4 134.5	10 579.0	39.1	15.8	13.8
Other .....	776.1	1 787.7	43.4	750.2	1 897.4	39.5	-3.3	6.1
Other current expenditure .....	72.0	230.4	31.3	83.8	217.0	38.6	16.3	-5.8
Capital expenditure .....	1 123.0	3 316.0	33.9	961.7	3 632.7	26.5	-14.4	9.6
Total expenditure .....	11 348.6	28 516.3	39.8	11 837.5	31 534.5	37.5	4.3	10.6
Memo:								
Primary current expenditure .....	8 311.1	22 251.6	37.4	8 982.6	24 338.8	36.9	8.1	9.4
Compensation of employees transfers to other subsectors of general government .....	7 008.9	18 465.2	38.0	7 729.4	20 301.1	38.1	10.3	9.9

Source: Information Bulletin of the Directorate-General of Public Accounts, May 2000.

chiefly on the trend of both the oil price in the international market and the exchange rate of the dollar (in case consumer prices of oil products are not revised before the end of the year) and on the extent to which the deceleration and the change of composition of domestic demand will affect VAT revenue. The shortfall in revenue can, to some extent, be offset by the freezing of the above-mentioned expenditure. However, it is not clear whether the freezing of certain current expenditure is actually followed by an effective cut in expenditure or results in a delay in payments. This distinction is relevant in economic terms and should be reflected in the compilation of the general government National Accounts. Indeed, in National Accounting, expenditure commitments should be registered as expenditure on the date they are undertaken, whether or not the payment is made on the same date. As regards capital expenditure, the budget outturn is expected to be

considerably below forecasts in the State Budget for 2000, not only as a result of the expenditure freezing announced by the Government, but also due the delayed entry into force of the Budget and to the fact that this is the first year of a new Community Support Framework.

## 9. CONCLUSION

According to information available, the growth of Portuguese economy stabilised in the first months of 2000, in line with forecasts published by the Banco de Portugal in the March *Economic Bulletin*, which pointed to a GDP growth between 2  $\frac{3}{4}$  and 3  $\frac{1}{4}$  per cent in the year as a whole (3.0 per cent in 1999).

Contrary to developments in the 1996-1999 period, there will be no positive growth differential between the Portuguese and the euro area economy in 2000. It should be stressed, however, that

in contrast to economy in the euro area as a whole, several indicators suggest that the Portuguese economy is in a situation close to full utilisation of resources. Therefore, growth rates above economy potential would tend to be reflected in further imbalances, mirrored in an increase in foreign borrowing requirements and/or in a rise of inflation.

In the first half of 2000, a reshaping of economic growth continued to be observed, reflected in an acceleration of exports and in a slowdown of private consumption. However, in the first four months of the year, the deficit resulting from the sum of the current account and capital account balances widened further, chiefly reflecting the higher deficit in merchandise trade. In effect, imports, in nominal terms, continued to rise well above exports, which is partly accounted for by a sharp deterioration in terms of trade, as a result of the strong increase in the international oil price.

A buoyant behaviour of exports is essential so that the reshaping of economic growth may continue without a significant deterioration of output growth. Against this background, and despite the favourable trend of external demand, it is imperative to prevent the deterioration of the competitive position of Portuguese exports. The wage trend plays a major role, in a context in which the unemployment rate is below the respective natural rate and in which the labour market undergoes some strains. Note, for instance, the increasing percentage of entrepreneurs who refer to their difficulties in hiring qualified staff as a factor limiting their activity, particularly in the construction sector, but also in industry and trade. Statistical restraints do not permit as yet to evaluate accurately the trend of wages in 2000, particularly as regards the differential between wages actually paid and average pay implicit in collective bargaining, a component which shows a marked cyclical behaviour. Changes in real wages as in the recent past — characterised by increases clearly above productivity gains — cannot be projected for the future without representing a significant risk for the competitive position of exporting companies. Under these circumstances, wage moderation is crucial for the recomposition of growth of the Portuguese economy.

Similarly to developments over the two last years, external borrowing operations by resident monetary financial institutions continued to repre-

sent an important share of external borrowing by Portuguese economy, reaching in the first four months of 2000 a level well above that observed in the corresponding period of the previous year.

In fact, despite the interest rate rise, the growth rate of domestic credit to the non-monetary private sector (excluding general government) revealed a relative stabilisation in the first five months of the year. This trend reflects a deceleration of bank credit to households and an acceleration of credit to non-financial corporations, the latter largely resulting from the financing of corporate restructuring operations. Indeed, in the light of the trend of its usual determinants (economic activity and interest rates), this higher growth of credit to non-financial corporations had not been anticipated. Therefore, the ratio of indebtedness of this sector to GDP continued to grow markedly, which will be reflected in the respective debt service, taking into account the present upward cycle of the interest rates.

The increase of credit to households, albeit lower, maintained very high expansion rates. This, combined with the interest rate rise and the persistence of variable-rate contracts, was reflected in a further increase of the ratio of household debt service to available income, as had already occurred in 1999. Credit to the private sector should reduce its pace of growth to values more consistent with its long-term growth. Only then will it be possible to contain the rise of the debt service and avoid situations of increased vulnerability to internal or external shocks with possible negative consequences for the evolution of the economy and for the stability of the financial system.

The Banco de Portugal continued to monitor the trend of indebtedness, and has endeavoured to increase and improve the indicators available on this subject. In turn, the bank has also been taking measures with a view to promoting the strength of the financial system against shocks. For this purpose, in early 1999, the minimum level of provisions against credit risks associated with consumption credit operations was raised from 1 to 1.5 per cent. More recently, in July 2000, for the purpose of calculating the solvency ratio of credit institutions, the Bank increased the weight of mortgage loans (up to now a uniform weight of 50 per cent) whenever the ratio between the value of the loan and the value of the property exceeds 75



per cent. In these cases, the amount exceeding this ratio will be subject to a weight of 100 per cent.

The March *Economic Bulletin* pointed out that the State Budget for 2000 continued to follow the same major guidelines adopted in recent years, envisaging a sharp increase in primary receipts and expenditure. According to public administration accounts published by the Government in the Stability and Growth Programme, a change in the budget policy will only occur in 2001.

According to information available for the first five months of the year, primary current expenditure continued to reveal a high growth rate (8.1 per cent), particularly as a result of the sharp increase in fixed and permanent wages and transfers to other public administrations. Total State expenditure, however, increased less than envisaged in the State Budget for 2000.

The March *Economic Bulletin* also pointed out that the main risks for the 2000 budget outcome were linked to tax revenues. The information now available permits to anticipate that the State tax revenue will be significantly below budget forecasts (in the first five months of the year, total State revenue increased by 5.6 per cent, compared to 9.7 per cent forecast in the State Budget for 2000). The size of this deviation will chiefly depend on the trend of the oil price in the international market and on the extent to which the deceleration and the change of composition of domestic demand will affect VAT revenue. Against this background, a strong control of public expenditure is required, in particular a resort to all expenditure-freezing measures envisaged in the State Budget for 2000, in order to avoid jeopardising the Stability Programme objectives.

Completed with data available up to 18 July 2000.

## INFLATION DIFFERENTIAL AND REAL CONVERGENCE IN PORTUGAL\*

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Isabel Horta Correia\*\*\*

*This work is intended to measure how real convergence observed in Portugal in the 1990s may have contributed to explain the inflation rate differential recorded during this period. This quantification is developed through the simulation of a two-sector neo-classical growth model. This model estimates that the differential associated with the real convergence process stood probably between 1 and 2 percentage points in 1990 and between 0.4 and 0.6 percentage points in 1999.*

### 1. INTRODUCTION

The convergence of the Portuguese inflation rate to the inflation rate prevailing in the group of countries with which a fixed parity has been maintained was started in October 1990, the date on which the escudo pegging strategy was initiated. However, this nominal convergence was not complete. Currently, there is still a significant differential between the Portuguese inflation rate and that of the mentioned group. The persistence of this differential is becoming more relevant as membership of Monetary Union implies a strictly single monetary policy.

Eliminating all types of different nominal rigidities, which could explain short-term changes in prices in Portugal vis-à-vis the euro area, the inflation differential seems to be due to real forces. These “real explanations of inflation differential” attempt at explaining the different pace of the general price index of a given country vis-à-vis a ref-

erence zone through changes in relative prices of the different goods. Thus, these real phenomena should only explain “inflation” if the persistence of their effects in the price differential were considerable.

There have been several attempts at explaining the differential through these relative price changes. One of the explanations, known as Balassa-Samuelson effect, identifies different levels of development with a growth rate differential of technological progress between sectors. As a result of such differential, the relative price of non-tradable goods increases in developing countries while remaining unchanged in developed economies. Another real factor related to the latter but consistent with equal technological progress among goods is directly related to the real convergence notion. In the real convergence process, economy is in the course of transition to a steady-state path, since the capital-labour ratio is below the steady-state value of this variable. Throughout this transition path, the relative price of non-tradable goods rises, for parameter values which describe the performance of the economy.

Real convergence is frequently seen as a cause for the inflation differential prevailing in Portugal in the past ten years. However, the most interest-

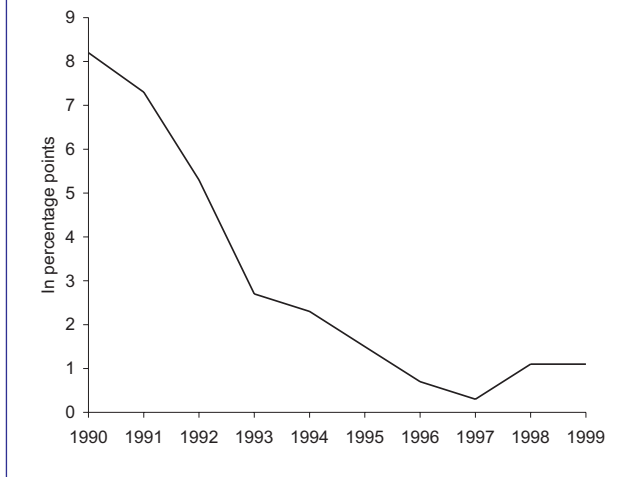
\* The views expressed in this article are those of the authors and not necessarily those of the Banco de Portugal.

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Chart 1  
**INFLATION DIFFERENTIAL**  
 Differential of HICP growth rate in  
 Portugal and in EU-11



ing issue is not whether this is a reasonable cause for the differential, but its relevance in quantitative terms for this phenomenon. Hence this article attempts at quantifying to what extent real convergence in Portugal (convergence meaning the above mentioned transition to a steady-state path) is responsible for the inflation differential observed from 1990 to 1999, by estimating which part of this differential can be attributed to real convergence<sup>(1)</sup>.

Inflation differential in Portugal for the period from 1990 to 1999 is presented in Chart 1. The index used is the Harmonised Index of Consumer Prices (HICP) and the reference group is EU-11<sup>(2)</sup>.

With a view to quantifying the relevance of real convergence to explain the inflation differential, a model will be used, able to simultaneously describe real convergence and the pace of relative price between non-tradable and tradable goods. This model will be adjusted to the Portuguese economy, with the major objective of replicating the pace of real output recorded in the past decade. After this calibration, the model will be able to respond to the pace of relative prices. This quantification effort is particularly attractive because it imposes discipline on the model, a disci-

(1) An alternative tentative study of the inflation differential is made in Costa, S. "Inflation differential between Portugal and Germany", published in this bulletin.

(2) If the reference group were EU-15 the description would be very similar.

pline represented by replicating real convergence, *i.e.* the transition path undergone by Portuguese economy in the past decade.

## 2. THE EXERCISE

As mentioned above the objective of this article is the quantification of the inflation differential caused by the different position of Portugal in the growth path when compared to the remaining countries of the group. Thus, it will be assumed that the reference group is undergoing a balanced growth path thereby isolating the transition effect of the Portuguese economy. The preferences of the representative consumer may be represented as follows:

$$U = \sum_{t=0}^{\infty} \beta^t u(C_t, N_t), \quad 0 < \beta < 1$$

where  $u$  is weakly separable into aggregate consumption,  $C$ , and working hours,  $N$ ,

$$C_t = (C^T)^\gamma (C^N)^{1-\gamma}$$

where  $C^T$  represents tradable goods consumption and  $C^N$  non-tradable goods consumption.

If inflation is measured by a consumer price index, this index,  $IP$ , will be described as follows:

$$IP_t = (P^T)^\gamma (P^N)^{1-\gamma}$$

where  $P^T$  represents tradable goods price and  $P^N$  non-tradable goods price.

Inflation rate as measured by this index will be

$$\pi_t = \hat{P}_t^T + (1 - \gamma) \hat{P}_t$$

where  $P = \frac{P^N}{P^T}$  represents the relative price of non-tradable goods and  $\hat{P}$  describes the growth rate of  $P$ .

Given the assumption of the balanced growth of the reference group, the inflation of the group,  $\pi^*$ , is measured by the rise of tradable goods prices, *i.e.* it is assumed that there are no persisting effects in the relative price of tradable goods vis-à-vis non-tradable goods. In this case the inflation differential,  $DIF$ , will be given by

$$DIF_t = \pi_t - \pi_t^* = (1 - \gamma) \hat{P}_t$$

This exercise consists in identifying the path of the variable *DIF* from 1990 to 1999, in a general equilibrium model calibrated so as to replicate the performance of the output *per capita* in Portugal during that period.

## 2.1 The model

The base model describes the general equilibrium of an economy over time, in which the level of the output *per capita* in each period is below the steady-state level of this variable for the same period. The long-term growth of the economy is exogenous, and the economy tends to a situation of balanced growth. The “small open economy” is considered to be the best analogy to describe the Portuguese economy in the period under review. There is one single tradable good. If we abstract from changes in terms of trade, we obtain a marketable asset whose price is exogenous for this economy. This price will make it possible that the economy converges to a balanced growth.

The economy is composed of agents whose preferences are described by

$$U = \sum_{t=0}^{\infty} \beta^t \frac{(C_t - \varpi X_t N_t^\mu)^{1-\sigma} - 1}{1-\sigma}, \quad 0 < \beta < 1, \sigma > 0, \mu > 1, \varpi > 0$$

where  $C$  is the consumption aggregate previously described, and  $X$  represents the level of technological progress.

There are three production factors in this economy: capital ( $K$ ), labour, ( $N$ ), and land, ( $T$ ). In the model, two of these factors are specific: the technology of tradable goods production uses capital and labour and the technology of non-tradable goods uses labour and land.

The technological progress is exogenous in both technologies and is related across sectors in such a way that the model converges to the steady state after extracting the trend. Therefore, it is not possible to impose technological progress distinguishing these two sectors permanently, in which case the “Balassa-Samuelson” pure effect is eliminated. The identification of the inflation differential percentage due to this channel raises some problems, since there are neither direct measures of the different rates of technological progress nor

aggregated behaviours from which these rates may be inferred.

Technologies are described by the tradable and non-tradable goods production functions

$$Y_t^T = AK_t^{1-\alpha} (X_t N_t^T)^\alpha$$

$$Y_t^N = X_t T^{1-\eta} (N_t^N)^\eta$$

and by the capital accumulation technology. As it is well known in this type of models, the existence of a transition period implies an accumulation technology in which there are costs of adjustment of the capital stock. Thus

$$K_{t+1} = \phi \left( \frac{I_t}{K_t} \right) K_t - (1 - \delta) K_t$$

Investment,  $I_t$ , is a tradable good.

The government has tradable and non-tradable goods consumption, financed by non-distortionary taxes. There are competitive markets for final goods, labour, capital input and external asset.

The stages for the resolution of this model are as follows<sup>(3)</sup>:

- Formalisation of the problem of the planner equivalent to the competitive general equilibrium in stationary variables;
- Description of the conditions describing the competitive equilibrium;
- Calibration of the model;
- Numeric resolution of the model in order to obtain the *DIF* path. With this purpose, the growth path is initiated through the deviation of the capital stock *per capita* that permits to replicate the path observed for the output. The resolution of the model permits to calculate the paths of the endogenous variables of the model over the ten following years. Among these, the relevant variables are output and the relative price of non-tradable goods vis-à-vis tradable goods. The growth rate of this relative price permits to reply to the issue in question, *i.e.* the subsequent calculation of the inflation differential.

(3) These stages will be described in detail in a *Working Paper* by the same authors, to be published shortly by the Banco de Portugal.

## 2.2 Calibration

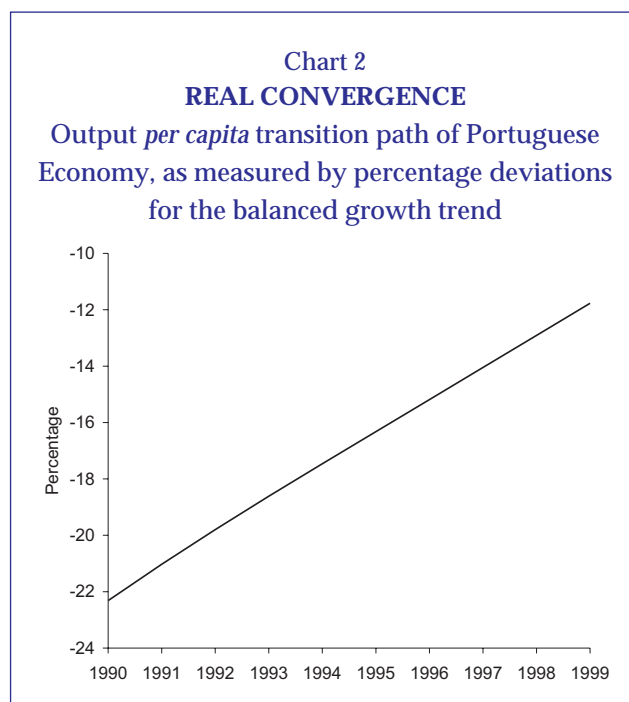
There are two different levels of calibration. The first one, which tries to replicate the steady-state of the economy, is conventional in models of real business cycles. In this exercise, in which the observed pace of the economy must be interpreted as a transition to that steady-state, more than an attempt at replicating data, international regularities were followed. In the calibration of the steady-state, a 1.75 per cent output growth rate *per capita* was considered, *i.e.* it was considered that the long-term growth rate of Portuguese economy is identical to the growth rate of the economies characterised by a balanced growth over this century. This is, for instance, the figure for the United States during the 1870-1994 period, in which a linear trend with this slope permits a good adjustment to data<sup>(4)</sup>.

The second calibration level, specific to the issue in question, attempts at replicating the pace of output *per capita* of the Portuguese economy over the past ten years. The pace of output *per capita* in Portugal is broken down into the long-term path and the path of transition to that long term. The second calibration level uses this transition path, as measured by percentage deviations from the path in which Portugal would stand, should it have pursued a balanced growth. The model is calibrated as explained below, mainly through the initial capital stock deviation, but also through the parameter of adjustment costs and weight of non-tradable goods, in order to replicate the path identified as the transition path of Portuguese economy.

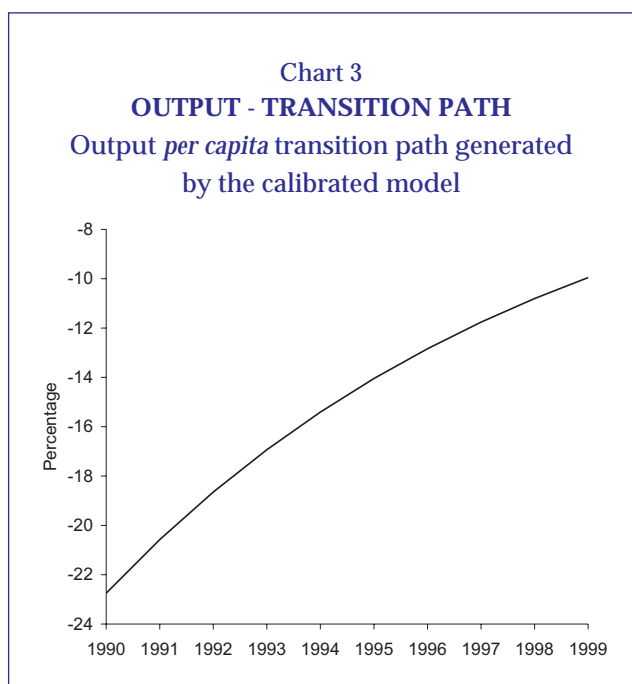
With a view to identifying the transition path from Portuguese economy data, a series of real output *per capita* in Portugal from 1975 to 1999 was used. This series was obtained from the output *per capita* figure for 1975, at 1975 prices, a figure to which real output growth rates from 1976 to 1999 were applied.

The Hodrick-Prescott filter was applied to this series, so as to separate high from low frequencies.

(4) Other figures used for the steady-state calibration were the following: discount rate of the stationary model: 0.96, percentage of the time used in the labour market 0.18,  $\alpha=0.15$ ,  $\eta=0.6$ ,  $\sigma=1$ ,  $\mu=2.7$ ,  $\delta=.05$ .



The resulting smooth series was then broken down into the trend and the transition to the trend. For the calculation of the trend it was necessary, in addition to the figure of 1.75 per cent steady-state growth rate, to derive the steady-state output level *per capita*. It was decided to choose as exogenous variable the level of output *per capita* of the group of reference countries and to define the percentage deviation of the steady-state output *per capita* in Portugal vis-à-vis the output *per capita* of the reference group. The transition path obtained for Portuguese economy is described in Chart 2, which presents the percentage deviations of the output *per capita* to the trend. This path permits to identify a real convergence calculated for Portugal. It should be noted that the convergence to the group of reference countries is not being measured but instead the convergence to the steady-state path in Portugal. It can be concluded from the transition path described in Chart 2 that over the ten years in question, Portugal nearly halved the distance recorded in 1999 from its steady-state: in 1990, Portugal was 22 per cent below its steady-state, while in 1999 it stood at 12 per cent of the steady-state path. The model will be adjusted so as to replicate over 10 periods the real convergence of output *per capita*, described by that transition.



The output convergence path given by the model is derived by

$$y = y^T \left( \frac{Y^T}{Y} \right)^{SS} + (y^N + p) \left( \frac{Y^{NP}}{Y} \right)^{SS}$$

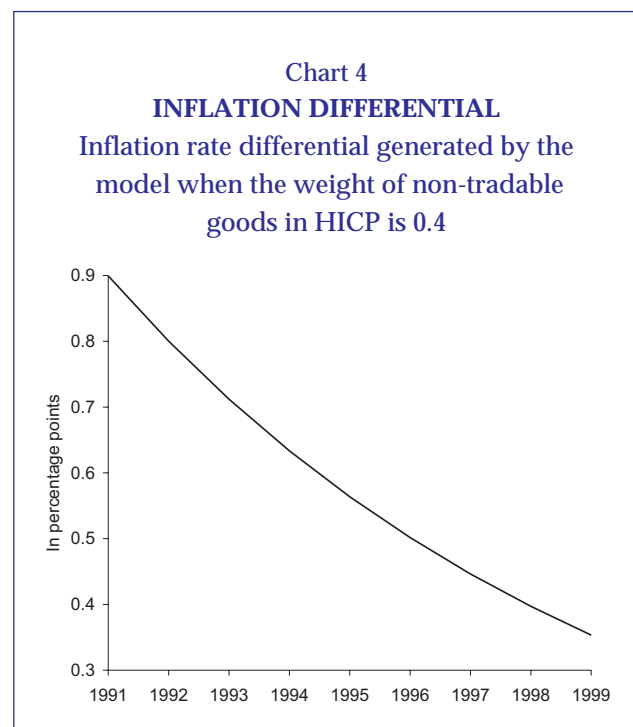
The characters in small letters represent percentage deviations from the variables vis-à-vis the steady-state, and  $\left( \frac{Y^T}{Y} \right)^{SS}$  and  $\left( \frac{Y^{NP}}{Y} \right)^{SS}$  represent the weights of the tradable and non-tradable goods in steady-state.

### 2.3 The quantification

The calibration of the convergence path is only possible when the capital adjustment costs are different from zero, as mentioned above. The manipulation of the adjustment cost parameter, on the basis of the values normally used, does not affect significantly the convergence of the model<sup>(5)</sup>.

The first quantification was carried out on the assumption that the weight of non-tradable goods,  $1 - \gamma$ , is 0.4. In this case the model replicates the pace of the product when, in 1990, the capital

(5) The parameter in question represents elasticity of  $\frac{1}{\phi'}$  (in which  $\phi'$  represents the derivative of  $\phi$ ), i.e., of the so-called Tobin's  $q$ , in relation to  $\frac{I}{K}$ .



stock is 50 per cent below the steady-state level and when the output steady-state level in Portugal is 80 per cent of the steady-state level of the reference group.

In this case the output path given by the model is represented in Chart 3. This chart describes the percentage deviations for the real output trend derived by the model.

Chart 4 describes the *DIF* pace. Hence, the inflation differential explained by the model for this calibration would be 0.9 percentage points in the beginning of the period and 0.36 percentage points at the end.

Several tests of sensitivity to these results were carried out. The main feature is the robustness of the pace of relative price, once it is controlled for the transition path of output *per capita*.

The parameter that most significantly changes quantification is the weight of non-tradable goods in aggregate consumption, and in the price index. A value of  $1 - \gamma = 0.4$  was used for this weight in the calibration described. When this parameter is increased to 0.6, the inflation differential accounted for by real convergence widens. For a smaller initial deviation of the capital stock, the output path is reasonably replicated, (Chart 5), and the inflation differential stands at 1.5 percentage points in the initial period and at 0.6 percentage points in 1999.

Chart 5  
INFLATION DIFFERENTIAL

Inflation rate differential generated by the model when the weight of non-tradable goods in HICP is 0.6

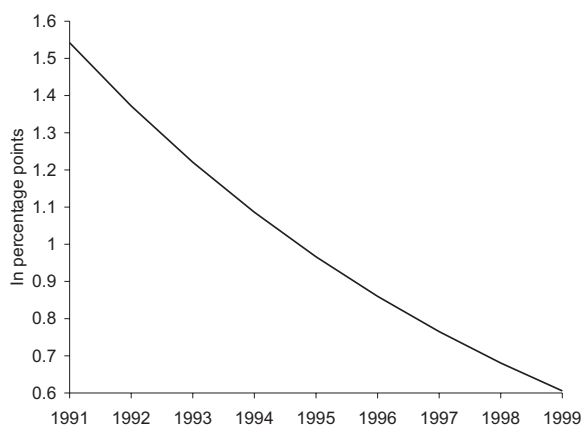
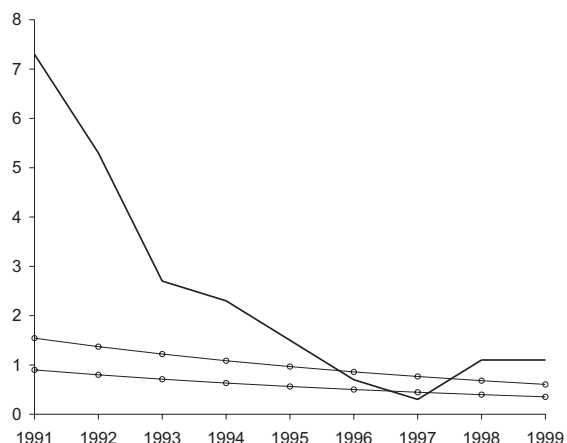


Chart 6

INFLATION DIFFERENTIAL BANDS



Note: The solid line describes the inflation rate differential and the band limits the figures of the differential generated by the model.

### 3. CONCLUSIONS

This work aims at measuring how real convergence in Portugal, characterised by a transition to steady-state capital *per capita*, contributes to the inflation differential between Portugal and a group of reference countries. Using a reasonable range for the value of the weight of non-tradable goods, Chart 6 answers this question: this chart describes the inflation differential band which, according to the model used, may have been caused by real convergence in Portugal.

In the first years of the period in question real convergence cannot easily account for the inflation differential. However, these early years are

certainly heavily influenced by the direct impact of the exchange rate stabilisation policy, which is not being taken into consideration in this work. The wealth effects caused by the stabilisation lead to a price increase in non-tradable goods to be considered together with the effect described in this model. As these effects are more relevant in the early periods it can tentatively be said that, from 1995 onwards, real convergence is largely responsible for the inflation differential. In the last year of the study approximately 0.5 percentage points of the inflation differential are accounted for by the real convergence phenomenon. Unless there are other persistent shocks, this differential, by its own nature, will narrow in the next decade.

## INFLATION DIFFERENTIAL BETWEEN PORTUGAL AND GERMANY\*

Sónia Costa\*\*

*The ratio of non-tradable goods price to tradable goods price has recorded a faster growth in Portugal than in Germany over the past decades. This trend was accompanied by similar developments in the ratio of labour productivity in the tradable goods sector to the non-tradable goods sector. Thus, assuming that relative productivity trends are maintained and that the purchasing power parity (PPP) is verified in the tradable goods sector in the long run, Portugal will likely record an average annual equilibrium real appreciation vis-à-vis Germany. Given Portugal's participation in the euro area, this appreciation implies a positive annual average inflation differential vis-à-vis Germany. The value estimated for this differential stands close to the average of the results obtained by Canzoneri et al (1998) for the main euro area countries. The results obtained must be interpreted with caution. On the one hand, deviations from perfect competition suggest that the real convergence of productivity will unlikely be the single factor to induce inflation differentials. On the other hand, it is reasonable to anticipate that the inflation differential will tend to narrow with the process of real convergence.*

## 1. INTRODUCTION

In Portugal as in several other euro area countries, namely Spain and Italy, the inflation rate declined significantly in the past decade. This trend mainly reflects the behaviour of tradable goods, which are more exposed to foreign competition. The inflation rate of non-tradable goods displayed greater resilience.

The continuing faster growth of the ratio of the non-tradable goods price to the tradable goods price (relative price of non-tradable goods) in the Portuguese economy than abroad has contributed to an appreciation of the real exchange rate<sup>(1)</sup>.

Explanations of price trends on the basis of “supply-side” factors generally build on the works by Balassa (1964) and Samuelson (1964), which suggest that in economies with higher growth rates the relative price of non-tradable goods grows at a faster pace. This reflects higher increases in the ratio of productivity in the tradable goods sector to the pro-

ductivity in the non-tradable goods sector (relative productivity of the tradable goods sector)<sup>(2)(3)</sup>. Explanations based on “demand-side” factors include the work of Frott and Rogoff (1991) and that of De Gregorio *et al* (1994). The former explores the hypothesis that an increase in government expenditure, which typically contains a higher weight of non-tradable goods than private consumption, can

- (1) Changes in the real exchange rate can be broken down into two components, one reflecting the differences in the trend of the relative price of non-tradable goods between the Portuguese economy and the external economy, and another reflecting the trend in the ratio of the tradable goods price in the Portuguese economy to that in the external economy.
- (2) In countries experiencing a process of real convergence, productivity growth tends to be concentrated in the tradable goods sector (since the latter is more capital-intensive it provides wider room for technological improvements). As a result, wages increase in this sector, and this extends to the whole economy if there is labour mobility. Whereas in the tradable goods sector prices remain unchanged on the assumption that PPP holds, in the non-tradable goods sector producers accommodate the increase in labour costs by raising prices. There is therefore an increase in the inflation rate and hence an appreciation of the real exchange rate.

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\*\* The views expressed in this article are those of the author and not necessarily those of the Banco de Portugal.



explain the slow convergence of inflation in some ERM countries to the European Union average. The latter concludes that one of the factors behind the growth of the relative price of non-tradable goods in OECD countries in the period 1970-85 was an increase in the private demand for this type of goods.

The hypothesis that trends in relative prices reflect supply and demand shocks interacting in competitive markets has an implication that can easily be tested. In fact, as mentioned in Canzoneri *et al* (1998), for a technology class, including the Cobb-Douglas production functions, the existence of labour mobility across sectors in each country and marginal cost pricing implies a proportional relation between the relative price of non-tradable goods and the relative productivity of the tradable goods sector.

This paper makes a simplified analysis of the data for the Portuguese economy vis-à-vis the German economy. The aim is to assess whether the relative price trend follows the relative productivity trend and, whether PPP holds for tradable goods in the long run. In the analytical framework used in Canzoneri *et al* (1998), the confirmation of these hypotheses means that Portugal is likely to observe a real appreciation trend in the long run, as supported in several papers on the Portuguese economy, and that such trend can be justified by a faster growth of the relative productivity of the Portuguese tradable goods sector vis-à-vis the corresponding German sector.

Given participation in the euro area, movements in the real exchange rate will have to occur via inflation differentials. Against this background it is possible to determine the inflation differential between Portugal and Germany underlying the long-term changes in the real exchange rate. This is the aim of the present paper. In order for the results to be comparable with those for other countries, the methodology used closely follows the paper by Canzoneri *et al* (1998), which estimates

long-term inflation differentials vis-à-vis Germany for nine European Union countries.

The theoretical model which serves as a reference to the analysis of Canzoneri *et al* (1998) is presented in section 2. Section 3 analyses the data for the Portuguese economy in order to anticipate whether the analytical context described applies to the Portuguese case. Section 4 estimates a value for the inflation differential between Portugal and Germany which would result from the verification of this model. Section 5 qualifies the results and finally, section 6 concludes, highlighting the limitations of this methodology.

## 2. ANALYTICAL FRAMEWORK

The analytical framework presented in Canzoneri *et al* (1998) is rather general, wherefore it may be implicit in a large class of models. Two sectors of activity have been considered: tradable goods (*T*) and non-tradable goods (*NT*). The national price level is defined as a geometrical mean of the prices in both sectors, weighted by the share of each sector in the economy's gross value-added ( $\gamma$ ). Expressions (1) and (2) represent the logs of the national price levels ( $p$ ) in period  $t$ , in Portugal and Germany respectively.

$$p_{P,t} = \gamma_{P,t}^{NT} p_{P,t}^{NT} + (1 - \gamma_{P,t}^{NT}) p_{P,t}^T \quad (1)$$

$$p_{G,t} = \gamma_{G,t}^{NT} p_{G,t}^{NT} + (1 - \gamma_{G,t}^{NT}) p_{G,t}^T \quad (2)$$

The deviation, expressed as a difference of logs (approximately as a percentage), of the nominal exchange rate of the Portuguese escudo against the Deutsche Mark (defined in Deutsche Marks per one Portuguese escudo), vis-à-vis the exchange rate implicit in PPP holding in the tradable goods sector is defined in (3), where  $e$  represents the log of the exchange rate.

$$d_{P,t} = e_{P,t} + p_{P,t}^T - p_{A,t}^T \quad (3)$$

The log of the real exchange rate in Portugal, expressed in units of the German production by output unit in Portugal will correspond to:

$$z_{P,t} = e_{P,t} + p_{P,t} - p_{G,t} \quad (4)$$

(3) In an economy with a capital/labour ratio lower than the steady state value, convergence to this level can justify a growth trend in the relative price of non-tradable goods, even in case of a similar technological progress across sectors. In order to quantify the Portuguese inflation differential associated with this effect in the 1990s, see the article by Brito and Correia, "Inflation Differential and Real Convergence", published in this issue of the *Economic Bulletin*.

Replacing (1), (2) and (3), in expression (4) the real exchange rate can be defined as:

$$z_{p,t} = d_{p,t} + \gamma_{p,t}^{NT} q_{p,t} - \gamma_{G,t}^{NT} q_{G,t} \quad (5)$$

where  $q = p^{NT} - p^T$  represents the log of the relative price of non-tradable goods. Calculating, on the basis of this expression, the cumulative change in the real exchange rate up to the end of the sample period (or the average of the annual changes throughout the sample period), it is possible to break down the percentage change of the real exchange rate into four components, as shown in (6) below:

$$\begin{aligned} \Delta z_p = & \Delta d_p + (\gamma_p^{NT} \Delta q_p - \gamma_G^{NT} \Delta q_G) + \\ & + (q_p \Delta \gamma_p^{NT} - q_G \Delta \gamma_G^{NT}) + (\Delta \gamma_p^{NT} \Delta q_p - \Delta \gamma_G^{NT} \Delta q_G) \end{aligned} \quad (6)$$

where  $\gamma_p^{NT}$ ,  $\gamma_G^{NT}$ ,  $q_p$  and  $q_G$  correspond to the values of the variables at the beginning of the sample period. The first term on the right-hand side represents the contribution of the deviations from PPP in the tradable goods sector, the second term the contribution from changes in the relative prices of non-tradable goods of the Portuguese and of the external economy, the third term the contribution from changes in the shares of non-tradable goods in the gross value-added (GVA) of the Portuguese and the external economy and the fourth is a residual term (which will be ignored).

According to this formalisation, in order for a real appreciation in Portugal against Germany to occur, there will have to be: a widening of the deviation from PPP; a higher growth of the relative price of non-tradable goods weighted by the share of this sector in GVA, in Portugal than in Germany; or an increase in the share of non-tradable goods in GVA, weighted by the relative price of non-tradable goods, higher in Portugal than in Germany.

In determining the long-run solution for changes in the real exchange rate three hypotheses are assumed. First, the relative price of non-tradable goods is proportional to the ratio of average labour productivity in the tradable goods sector to the average labour productivity in the non-tradable goods sector. In fact, in a situation of perfect competition and perfect labour mobility

across sectors, the ratio of sectoral marginal productivities will be equal to the relative price:

$$\frac{\partial Y_t^T / \partial L_t^T}{\partial Y_t^{NT} / \partial L_t^{NT}} = \frac{W_t / P_t^T}{W_t / P_t^{NT}} = \frac{P_t^{NT}}{P_t^T} = Q_t \quad (7)$$

where  $Y$  represents production,  $L$  labour,  $W$  the nominal wage,  $P$  prices and  $Q$  the relative price. In addition, if the production functions are of the Cobb-Douglas' type, the marginal productivity will be proportional to the average productivity in each sector, the proportionality factor being the share of the sector in the economy's GVA, i.e.:

$$\frac{\partial Y_t^T / \partial L_t^T}{\partial Y_t^{NT} / \partial L_t^{NT}} = \frac{\gamma^T (Y^T / L^T)}{\gamma^{NT} (Y^{NT} / L^{NT})} = \frac{\gamma^T \cdot y^T}{\gamma^{NT} \cdot y^{NT}} \quad (8)$$

where  $y$  represents average labour productivity<sup>(4)</sup>. Under such circumstances the log of the relative price of non-tradable goods will depend on the log of the relative average productivity in the tradable goods sector and can be defined as:

$$q_t = \ln Q_t = \ln \left( \frac{\gamma_t^T}{\gamma_t^{NT}} \right) + \ln \left( \frac{y_t^T}{y_t^{NT}} \right) \quad (9)$$

The two remaining hypotheses consist in considering that PPP holds in the tradable goods sector and that the share of the non-tradable goods sector in GVA is constant, which respectively implies the nullity of the first and third terms of the right-hand side of expression (6). Under these conditions, the change in the real exchange rate in the long run will be determined by the difference between the rates of change in relative productivity in Portugal and Germany, weighted by the respective shares of non-tradable goods in GVA, i.e.:

$$\begin{aligned} \Delta z_p = & \gamma_p^{NT} \Delta q_p - \gamma_G^{NT} \Delta q_G = \gamma_p^{NT} (\Delta \ln(y_p^T) - \Delta \ln(y_p^{NT})) - \\ & \gamma_G^{NT} (\Delta \ln(y_G^T) - \Delta \ln(y_G^{NT})) \end{aligned} \quad (10)$$

If the relative productivity of the tradable goods sector in Portugal is growing at a faster pace than in Germany, the relative price of non-tradable goods will also be growing faster in Portugal and thus, since PPP holds in tradable goods, there

(4) As pointed out in Canzoneri *et al* (1998), the proportionality condition between marginal and average productivities is seen for production functions which are less restrictive than the Cobb-Douglas'.

should be a real appreciation in the Portuguese economy ( $\Delta z_p > 0$ ).

### 3. DATA ANALYSIS

This section compares the data for the Portuguese and German economies with the hypotheses underlying the previously described model. Given the aim to obtain results for Portugal that are comparable with those presented in Canzoneri *et al* (1998) for several European Union countries, the data used closely follow those in that article, namely as regards the composition of tradable goods and non-tradable goods sectors<sup>(5)</sup>. Whereas in Canzoneri *et al* (1998) a calculation is made of inflation differentials both vis-à-vis Germany and European Union country aggregates, in this paper an analysis is only made vis-à-vis Germany. This approach is consistent with the conclusion of Marques *et al* (1996) that, in the long run, prices in Portugal behave in line with Germany's and not with those of its major trading partners. The sample period used was 1977-95, which differs from that of Canzoneri *et al* (1998) (1973-91), for it is deemed more adequate in the Portuguese case to exclude, on the one hand, the period immediately after 25 April 1974 and to include, on the other, a higher number of observations in the period after accession to the European Communities (which was limited to 1995 due to the unavailability of data for Portugal). Table 1, as well as Charts 1 to 7, show the main results.

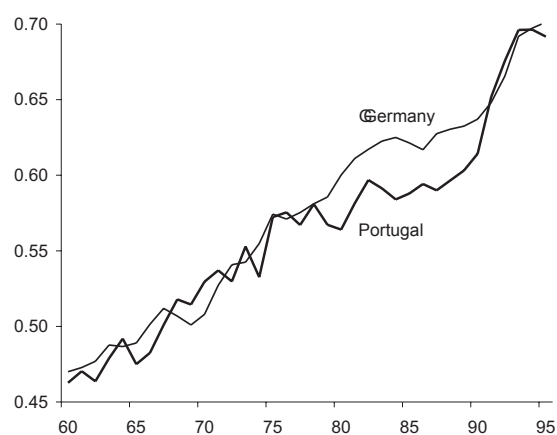
In the period 1977-95 the Portuguese escudo experienced a real appreciation of 1 per cent vis-à-vis

(5) The tradable goods sector includes data on: "manufacturing industry", "agriculture, hunting, forestry and logging" and "fishing". The non-tradable goods sector includes data on: "wholesale and retail trade", "restaurants and hotels", "transport and storage", "communication", "banks and other monetary financial institutions", "insurance", "real estate and business activities" and "services provided for collective use". Sectoral productivities were computed on the basis of GVA data at constant prices and of the number of employees. For the calculation of the sectors' weight, use was made of GVA data at current prices. Sectoral prices correspond to the deflators implied in GVA values. The sources used for these data were the OECD for Germany (National Accounts, Volume II), and Banco de Portugal for Portugal (*Long Series for the Portuguese Economy*). Use was made of IMF data (International Financial Statistics) for the nominal exchange rate in end-period values and for the German GDP deflator.

the Deutsche Mark, in annual average terms, calculated according to expression (4), i.e. using as national price indices geometrical means of tradable and non-tradable goods prices. When making the calculations implicit in (6), it can be concluded that such appreciation resulted from an annual average growth of the relative price of non-tradable goods, weighted by the share of this sector in GVA, 1 percentage point higher in Portugal than in Germany. In fact, since the average inflation differential of tradable goods prices between Portugal and Germany (9.5 per cent) was similar to the average nominal depreciation of the Portuguese escudo vis-à-vis the Deutsche Mark, deviations from the PPP in the tradable goods sector did not contribute to changes in the real exchange rate during this period. Both the contribution from the change in the shares of the non-tradable goods sector and the marginal term are nil, which, in the case of shares, is largely determined by the fact that its increase throughout the sample period was similar in Portugal and Germany (Chart 1).

In order for the real exchange rate to be determined in the long run by the behaviour of productivity in both economies, i.e. by expression (10), it is necessary that PPP holds for tradable goods prices. As noted above, in the period under review the nominal average depreciation of the Portuguese escudo vis-à-vis the Deutsche Mark was similar to the inflation differential in the tradable

Chart 1  
SHARE OF NON-TRADABLE GOODS  
IN GVA



Sources: OECD and Banco de Portugal.

Table

## INFLATION DIFFERENTIAL IN PORTUGAL VIS-À-VIS GERMANY

Average of annual rates of change (except shares)

	Including agriculture			Excluding agriculture		
	1977-95	1977-85	1986-95	1977-95	1977-85	1986-95
Portugal - Relative price of non-tradable goods . . . . .	2.5	0.7	4.0	1.6	-1.1	3.8
Portugal - Relative productivity in the tradable goods sector . . . . .	2.1	2.0	2.2	1.1	-0.3	2.3
Germany - Relative price of non-tradable goods . . . . .	0.7	0.7	0.8	0.5	0.4	0.6
Germany - Relative productivity in the tradable goods sector . . . . .	0.0	0.3	-0.2	0.0	0.3	-0.3
Nominal appreciation vis-à-vis the Deutsche Mark . . . . .	-9.5	-15.2	-4.9	-9.5	-15.2	-4.9
Inflation differential vis-à-vis Germany (calculated with the GDP deflator) .	10.5	15.3	6.6	10.5	15.3	6.6
Inflation differential in the tradable goods sector vis-à-vis Germany . . . . .	9.5	15.5	4.7	10.1	17.0	4.6
Real appreciation vis-à-vis the Deutsche Mark (calculated with sectoral GVA deflators) . . . . .	1.0	0.3	1.7	1.4	0.8	1.8
Contributions from:						
Deviation from PPP in the tradable goods sector . . . . .	0.0	0.3	-0.2	0.6	1.8	-0.3
Changes in the relative prices of non-tradable goods . . . . .	1.0	0.0	1.8	0.8	-1.0	2.2
Changes in the shares of non-tradable goods sectors . . . . .	0.0	0.0	0.0	0.0	0.0	-0.1
Marginal term . . . . .	0.0	0.0	0.0	0.0	0.0	0.0
Share of the non-tradable goods sector in:						
Portugal - at the beginning of the period . . . . .	0.57	0.57	0.59	0.66	0.66	0.67
Portugal - at the end of the period . . . . .	0.69	0.59	0.69	0.74	0.66	0.74
Germany - at the beginning of the period . . . . .	0.58	0.58	0.62	0.59	0.59	0.63
Germany- at the end of the period . . . . .	0.70	0.62	0.70	0.71	0.63	0.71
<b>Inflation differential vis-à-vis Germany . . . . .</b>	<b>1.4</b>	<b>0.9</b>	<b>1.7</b>	<b>0.8</b>	<b>-0.4</b>	<b>1.9</b>

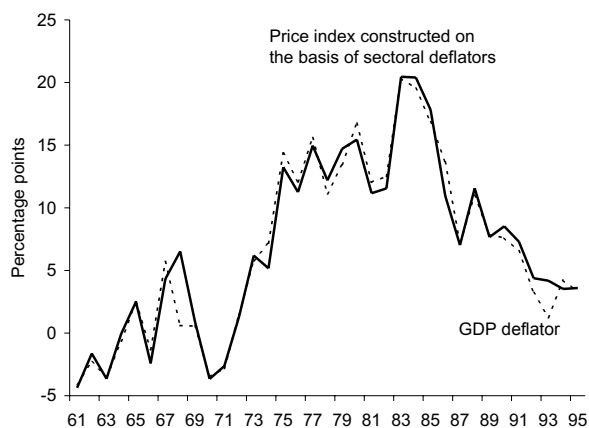
Sources: IMF, OECD and Banco de Portugal.

goods sector, whereby Portugal does not seem to have experienced a loss of international competitiveness in this sector. In fact, since the annual average of the inflation differential computed from GDP deflators<sup>(6)</sup> stood at 10.5 per cent, like most results in Canzoneri *et al* (1998), PPP is more clearly verified for tradable goods prices than for overall price indices<sup>(7)</sup>. A stationarity test on the deviations from PPP in the tradable goods sector

(6) Inflation differentials calculated on the basis of GDP deflators and of national price indices (constructed by using the series for prices in the tradable and non-tradable goods sector) are similar, suggesting that the sectoral data used do not bias the results (Chart 2).

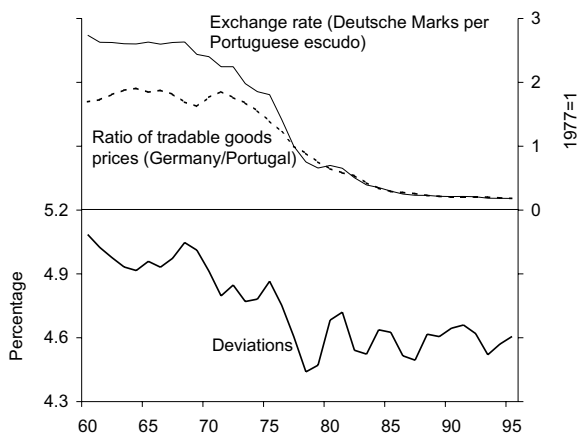
(7) In the paper by Canzoneri *et al* (1998), the case of Belgium is an exception to this result, revealing a nil inflation differential vis-à-vis Germany in the case of tradable goods, and an inflation differential similar to the nominal appreciation rate in the case of national price indices.

**Chart 2**  
**INFLATION DIFFERENTIAL BETWEEN PORTUGAL AND GERMANY**



Sources: IFM, OECD and Banco de Portugal.

**Chart 3**  
**DEVIATIONS FROM PPP IN THE TRADABLE GOODS SECTOR**

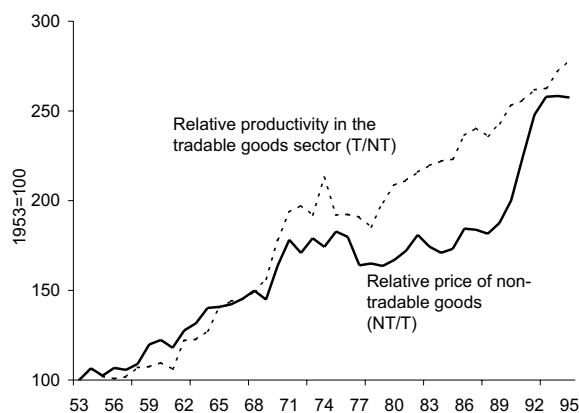


Sources: IMF, OECD and Banco de Portugal.

in the period 1977-95 allows the rejection of the existence of a unit root, thereby confirming this result<sup>(8)</sup>.

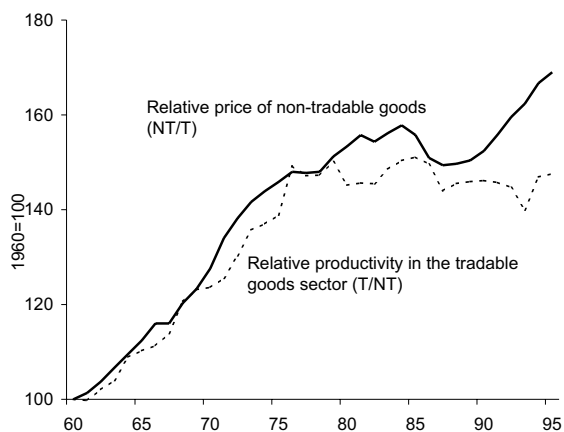
Another important hypothesis for the long-run specification for the real exchange rate to be valid is that relative productivity coincides with the relative price. According to the tests conducted for the Portuguese case, not only do both series seem to be non-stationary, but also, conversely to what is implicit in expression (9), the non-stationarity of

**Chart 4**  
**RELATIVE PRODUCTIVITY AND PRICE IN PORTUGAL**



Sources: OECD and Banco de Portugal.

**Chart 5**  
**RELATIVE PRODUCTIVITY AND PRICE IN GERMANY**



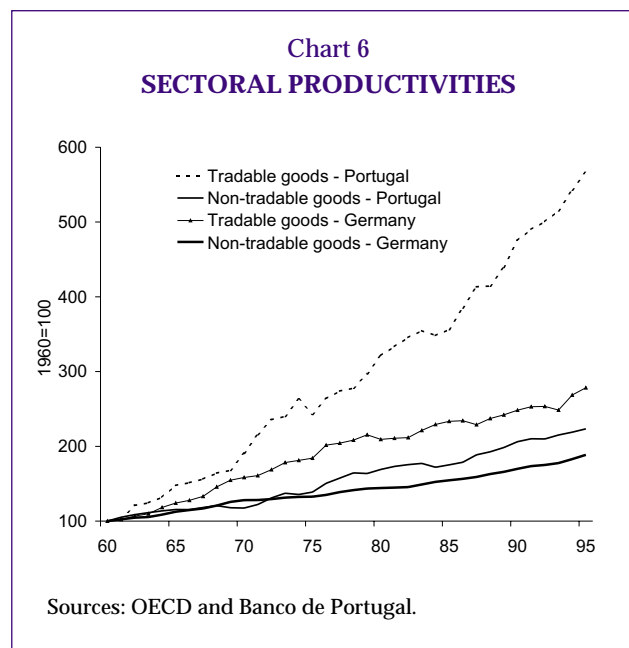
(8) The value of the ADF statistic, for the case in which a constant is included, is -7,793, leading clearly to the rejection of the null hypothesis that there is a unit root in the series of deviations from PPP in the tradable goods sector (the critical value at a significance level of 1 per cent and with 25 observations is -3.75). By contrast, when use is made of the whole sample (1960-95), the ADF test does not allow the rejection of the existence of a unit root (the ADF statistic is -1,398, vis-à-vis a critical value for 50 observations at the 10 per cent significance level of -2.6). In fact, as can be seen in Chart 3, up to the late 1970s deviations show a clearly narrowing trend, given that the Portuguese escudo continues to show a depreciating trend, drawing close to the inflation differential in tradable goods.

the difference between their logs cannot be rejected<sup>(9)</sup>. However, as can be seen from Charts 4 and 5, both in Portugal and in Germany the trend of the relative price of non-tradable goods seems to reflect, in general terms, the trend of relative productivity in the tradable goods sector. This behaviour, which is in line with the forecasts of the previously described neo-classical model, suggests that the fast growth of the relative price may reflect changes in the underlying conditions of supply and demand. In annual average terms, in the period 1977-95, the relative price of non-tradable goods increased by 2.5 per cent in Portugal and by 0.7 per cent in Germany, and the productivity of the tradable goods sector rose by 2.1 per cent in Portugal, while remaining constant in Germany. These values seem to be in line with the conclusion of Canzoneri *et al* (1998) that countries with higher sectoral inflation differentials are those with a higher growth of relative productivity<sup>(10)</sup>.

As illustrated in Chart 6, the higher growth of relative productivity in the Portuguese tradable goods sector than in the German is determined by higher productivity gains in the tradable goods sector in Portugal (in annual average terms in the period 1977-95, 4.2 per cent in Portugal against 1.8 per cent in Germany), likely reflecting the real convergence with Germany. Productivity in the non-tradable goods sector also recorded a sharper growth in Portugal (in the period 1977-95, it grew 2 per cent in Portugal against 1.7 per cent in Germany).

(9) These results are obtained either by using the whole sample (1953-95) or just the period under review (1977-95). For (1953-95) and (1977-95), ADF statistics are respectively -0.284 and -0.640 for the relative price, -0.602 and -1.001 for relative productivity and -1.262 and -1.805 for the difference between the relative price and the relative productivity, thus always leading to the non-rejection of the null hypothesis of the existence of a unit root. These results are in line with those obtained by Canzoneri *et al* (1998) for each individual country. In fact, the tests conducted in this paper only allow to reject the non-stationarity of the difference between the series of relative productivity and relative price logs when carried out jointly for 10 European Community countries.

(10) According to the results of Canzoneri *et al* (1998) in the period 1973-91, the relative price and productivity recorded respectively, in annual average terms, a growth of 3.1 per cent and 3.8 per cent in Belgium, 3 per cent and 3.2 per cent in Italy and 2.5 per cent and 2.7 per cent in Spain. In the same period in Portugal changes were of 1.3 per cent and 1.6 per cent respectively.



#### 4. RESULTS FOR THE INFLATION DIFFERENTIAL

The data available do not seem to violate the hypotheses underlying the determination of the long-run solution of the model applied in Canzoneri *et al* (1998). In fact, according to the analysis carried out in the previous section there is no strong empirical evidence against the verification of PPP in the long run for tradable goods, or the existence of common trends for the relative price and productivity. On the other hand, given similar developments in the share of the non-tradable goods sector in GVA in Portugal and in Germany, it is natural to assume that in the long run the contribution (to the change in the real exchange rate) of the difference between the growth of these shares in Portugal and in Germany will be negligible<sup>(11)</sup>. In this context, the change in the real exchange rate in the long run can be proxied by expression (10), i.e. by the difference between the rates of change in relative productivities in Portugal and in Germany, weighted by the respective shares of non-tradable goods in GVA. According to the calculations made, assuming that the sectoral shares recorded in 1995 and the productivity trends are maintained, a real annual average appreciation of 1.4 per cent vis-à-vis the Deutsche Mark is likely to be observed in Portugal in the long run. It should thus be noted that, whereas the

calculation of PPP would lead to the conclusion that the Portuguese escudo was overvalued at end-1995, according to these results, changes in the relative productivities would, on the contrary, have justified a stronger behaviour of the real exchange rate of the Portuguese escudo (annual average appreciation of 1.4 per cent) than the one observed (annual average appreciation of 1 per cent)<sup>(12)</sup>.

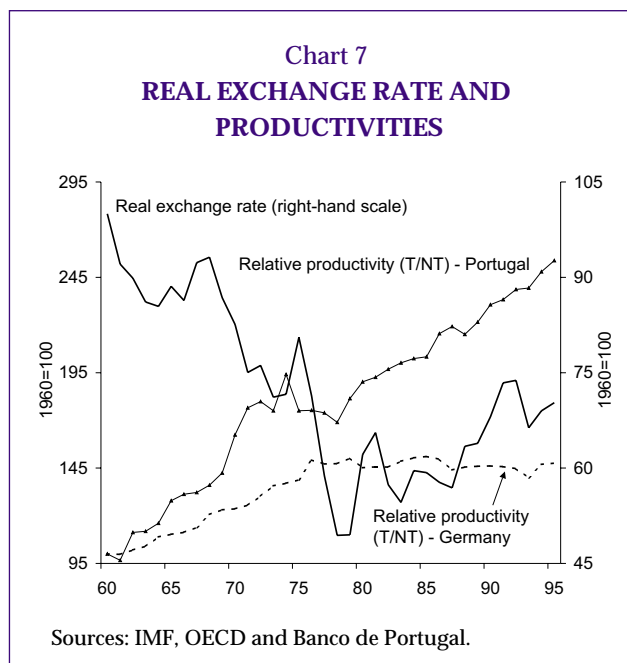
These results seem to be consistent with those from other studies carried out for Portugal. In fact, on the one hand, in Freitas (1992), Manteu and Mello (1992), Luís (1993) and Costa (1998) equilibrium real effective appreciation trends of the Portuguese escudo are detected throughout the period from the early 1980s up to the early 1990s, and the real exchange rate was found to be undervalued for the most part of this period. On the other hand, in several other papers there is empirical evidence linking the real appreciation trend in Portugal with real adjustments in the Portuguese economy<sup>(13)</sup>.

Given the participation in Economic and Monetary Union, real appreciation must occur via a

(11) As referred to in section 2, in Canzoneri *et al* (1998) the nullity of the contribution of changes in the shares results from the hypothesis that the sectors' weights in GVA are constant in the long run, which does not seem to be consistent with the data. In fact, between 1977 and 1995 the share of the non-tradable goods sector in GVA showed an upward trend in both countries, rising from 57 per cent to 69 per cent in Portugal and from 58 per cent to 70 per cent in Germany. However, taking into account this effect does not significantly change the conclusions. In fact, in the long-term solution, when evaluating the third term of the right-hand side of equation (6), for the annual average growth of the share of non-tradable goods in Portugal and in Germany in the period 1977-95 and for the values of the share ratios in GVA and of productivities in 1995, the value obtained is negative (given that the share and the relative productivity in the tradable goods sector in Portugal are lower than in Germany), albeit negligible (-0.00005).

(12) In fact, data available show that up to end-1970s the real exchange rate continued to follow a depreciation trend, thus failing to reflect developments in the relative productivity differential, which were favourable to Portugal, and that from the early 1980s, the real appreciation recorded by the Portuguese escudo does not seem to have shown an upward trend, as in the case of the relative productivity differential (Chart 7).

(13) See Rebelo (1992), Cunha and Machado (1993), Esteves (1993), Gaspar and Pinheiro (1994), Gaspar and Pereira (1995) and the article by Brito and Correia published in this issue of the *Economic Bulletin*.



higher inflation rate in the non-tradable goods sector in Portugal than in Germany, which implies a differential between national inflations of 1.4 percentage points per year. This value stands close to those calculated in Canzoneri *et al* (1998) for Spain and at approximately the average between the maximum and minimum differentials found in that paper for nine EU countries (2.4 percentage points in Belgium, 2 percentage points in Italy, 1.5 percentage points in Spain, 1.4 percentage points in the United Kingdom, 1.2 percentage points in Austria, 1.1 percentage points in France and Denmark, 1 percentage point in Finland and 0.9 percentage point in Sweden)<sup>(14)</sup>. Given the real interest rate parity, this inflation differential will likely imply that the real interest rate in Portugal will be lower than the corresponding German rate, by the same magnitude. In fact, in a situation of integration of financial and goods markets, real interest rates expressed in units of tradable goods must be

(14) Alberola and Tyrvaenen (1998) calculate for seven euro area countries the inflation rates implied by the Balassa-Samuelson model, extended for the case in which there are different wage growths in the tradable and non-tradable goods sectors. The results obtained point to the possibility of an annual inflation differential of approximately 2 percentage points among the countries with higher and lower rates, even if the inflation target of 2 per cent is met. With the exception of Spain, this article finds lower differentials with Germany than in Canzoneri *et al* (1998), ranging between 1.9 percentage points in Spain and -0.2 percentage point in France.

equal across countries. Thus, real interest rates, measured in national output units, must be lower in the countries where the relative price of non-tradable goods records a higher growth.

## 5. SENSITIVITY OF THE RESULTS

It should be expected that if there is a real productivity convergence effect in the Portuguese tradable goods sector vis-à-vis the German, as suggested by the data and by other papers for the Portuguese economy, it should be more marked in the period following accession to the European Community due, for example, to the favourable impact of market liberalisation on technology transfers. When dividing the sample into two sub-periods (1977-85 and 1986-95), a higher inflation differential is in fact obtained in the second half (0.9 percentage point in 1977-85, and 1.7 percentage points in 1986-95). However, contrary to what would be expected, this behaviour was essentially due to unfavourable developments in the relative productivity of the tradable goods sector in Germany (in annual average terms, it grew by 0.3 per cent in 1977-85, and decreased by -0.2 per cent in 1986-95). In fact, in Portugal, in the period following accession to the European Communities, productivity seems to have accelerated in both sectors (from 3.4 per cent to 4.8 per cent in the tradable goods sector, and from 1.4 per cent to 2.5 per cent in the non-tradable goods sector), inducing only a slight increase in the annual average growth of relative productivity from the first to the second period (from 2 per cent to 2.2 per cent).

These results are largely determined by the inclusion of agriculture in the tradable goods sector, which, as referred to in Alberola and Tyrvaïnen (1998), is quite controversial. In fact, due to the existence of production subsidies and administrative pricing, both frequent in the agricultural sector, the behaviour of these components is rather unlikely to be consistent with the model assumed, and the distortions induced are not expected to be common across countries either. By excluding the sector "agriculture, hunting, forestry and logging" from the data for Portugal, a less significant productivity growth is obtained in the tradable goods sector in the first part of the sample and a sharper growth in the second (1.1 per cent in 1977-85 and

4.9 per cent in 1986-95). This determines a clearly more favourable behaviour in the Portuguese relative productivity in the second part of the sample. For Germany the results remain virtually unchanged when agriculture is excluded. Therefore, the trend of relative productivity which is more favourable in Portugal than in Germany becomes more marked, pointing more clearly to the possibility that the integration in the European Community had a favourable impact on the productivity of tradable goods in Portugal. Excluding agriculture, the inflation differential would be -0.4 percentage point when calculated in the period 1978-85 and 1.9 percentage points when data for 1986-95 is used. For the whole period the exclusion of agriculture determines an inflation differential of 0.8 percentage point.

In interpreting the values obtained for the inflation differential, account should also be taken of the fact that the prices used were measured by sectoral GVA deflators. In fact, by excluding the imported components, these data tend to determine a differential between the Portuguese and the German inflation higher than the one implicit in consumer price indices, which are generally used to measure inflation. In fact, in annual average terms, in the period 1977-95 the Portuguese escudo seems to have recorded a real appreciation of 1 per cent vis-à-vis the Deutsche Mark, calculated by using price indices constructed with sectoral GVA deflators, and of only 0.5 per cent when consumer price indices are used.

## 6. CONCLUSIONS

The main purpose of this paper was to apply the methodology followed in Canzoneri *et al* (1998) to the Portuguese case, so as to obtain results comparable to those of other EU countries (and particularly, euro area countries) for the value of the inflation differential vis-à-vis Germany. According to the analysis carried out, in Portugal the relative price of nontradable goods recorded a faster growth than in Germany, a trend which was accompanied by a similar behaviour of relative average productivity of the tradable goods sector. These more favourable developments in relative productivity in Portugal appear to have been totally determined by the behaviour in the



tradable goods sector, thereby suggesting the existence of a real convergence effect, which justifies a real appreciation in Portugal in the long run. In the context of the participation in the euro area, this long-term appreciation implies the existence of a positive inflation differential between Portugal and Germany. When excluding the sector “agriculture, hunting, forestry and logging” from the sample, one obtains for the period 1977-95, an average inflation differential for Portugal of 0.8 percentage points, measured by the price index constructed using sectoral GVA deflators.

There are several other factors pointing towards the need of a cautious interpretation of these results. First, it is necessary to consider that the methodology followed only allows the detection of inflation differentials resulting from the existence of real divergences between economies that operate in a competitive environment. However, these divergences may not justify a sustainable inflation differential, since they do not necessarily result from effects associated with the real convergence process (as is the case of the Balassa-Samuelson effect), and they can, conversely, be determined by temporary factors such as an increase in the relative demand for non-tradable goods<sup>(15)</sup>. Second, in contrast to the hypotheses of the model, markets show deviations from competition which can justify part of the inflation differentials identified. On the other hand, it must be taken into consideration that the inflation differentials calculated in this paper are measured by price indices constructed from sectoral GVA deflators, which due to the exclusion of import prices are, in the case of Portugal, higher than the differentials measured on the basis of consumer price indices. Finally, the conclusion that the inflation differential found must persist in the future in order for the real exchange rate to be in line with the process of real convergence, is only valid assuming that past trends prevail, which is not necessarily true. In fact, on the one hand, it is possible that the increased competition resulting from Economic and

Monetary Union and the absence of the exchange rate as a potential adjustment mechanism will lead to major changes in the behaviour of both agents and markets, thus contributing to the narrowing of inflation differentials. On the other hand, the velocity of the process of real convergence is expected to slow down over time, thus justifying a narrowing of the “equilibrium” inflation differentials.

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(15) An approach similar to those followed in Rebelo (1992) and in the article by Brito and Correia published in this issue of the *Economic Bulletin* overcomes this limitation by allowing the distinction between effects on the relative prices caused by the process of real convergence and by other types of disturbances.

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### January\*

**11 January (Circular Letter of Banco de Portugal no. 2/DMRCF/CR)**

Informs that it is available on the Website of Banco de Portugal, the list of eligible assets proposed by the Banco de Portugal and accepted by the European Central Bank.

**27 January (Circular Letter of Banco de Portugal no. 4/DMR)**

Informs that, following Circular Letter no. 347/DMR, of 27 October 1999, the rate of return on Certificates of Deposit, Series B, was fixed at 3%, to prevail on the quarter started on 4 February 2000.

### February

**8 February (Regulation no. 5/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in no. 2 of Article 5, in Article 212, in no. 2 of Article 351 and in paragraph b) of no. 1 of Article 353 – all of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November –, regulates the functioning of markets, in general, and of stock markets, in particular. This Regulation comes into force on 1 March 2000.

**8 February (Regulation no. 7/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in Article 11 and for the purposes specified in Article 12 of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November, establishes the legal framework of credit-rating agencies. This Regulation comes into force on 1 March 2000.

**8 February (Regulation no. 8/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in no. 4 of Article 265 of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November, lays down the rules applicable to contango and securities lending operations, and exempts from this system the operations performed by the Banco de Portugal. This Regulation comes into force on 1 March 2000.

**10 February (Regulation no. 14/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in no. 2 of Article 5, in no. 2 of Article 59, in Article 60, in no. 6 of Article 91, in no. 5 of Article 99, in Article 105 and in paragraph b) of no. 1 of Article 353 – all of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November –, lays down the regulations applicable to central securities depositories and to the compulsory registration of securities with a single financial intermediary. This Regulation comes into force on 1 March 2000.

**11 February (Notice of the European Central Bank 2000/C 39/04)**

Notice of the European Central Bank on the imposition of sanctions for breaches of the obligation to hold minimum reserves.

**15 February (Regulation no. 15/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in nos. 1 and 5 of Article 260, in no. 1 of Article 264 and in nos. 1 and 2 of Article 273 – all of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November –, lays down the rules governing the securities settlement systems, irrespective of their managing entity, and provides for the adequacy of the settlement system managed by the Lisbon Stock Exchange Association until 1 September 2000. This Regulation comes into force upon the registration at the Securities Market Commission (CMVM) of the operational rules governing the systems, under the terms laid down in no. 3 of Article 6 of Decree-Law no. 486/99 of 13 November.

**15 February (Regulation no. 16/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in Article 212 and in no. 4 of Article 214 of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November, lays down the legal framework, the organisation and the functioning of the second market managed by the Lisbon Stock Exchange Association. This Regulation comes into force on 1 March 2000.

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\* The chronology for monetary measures of the Eurosystem can be found in the Monthly Bulletin of the European Central Bank.

**15 February (Regulation no. 17/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in Article 212 of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November, lays down the regulations governing the functioning of the market without quotations managed by the Lisbon Stock Exchange Association. This Regulation comes into force on 1 March 2000.

**15 February (Regulation no. 18/2000, Supplement to Official Gazette no. 45, Series II of 23 February)**

Under the provisions laid down in Article 212 of the Stock Market Code, approved by Decree-Law no. 486/99 of 13 November, sets forth the provisions governing the Special Market for Wholesale Transactions. This Regulation comes into force on 1 March 2000.

**16 February (Circular Letter of Banco de Portugal no. 4/00/DSBDR)**

Sets forth that all credit institutions subject to the supervision of the Banco de Portugal must previously communicate their projects regarding the direct or indirect acquisition of qualifying holdings in credit or financial institutions having their head-office abroad and which represent 10% or more of the capital of the undertaking or 2% or more of the shareholder's capital.

### May

**16 May (Council Regulation No.1010/2000, OJ L 115)**

Adopts measures relating to further calls by the European Central Bank on the national central banks' foreign reserve assets.

**23 May (Executive Order no. 284/2000, Official Gazette no. 119, Series I, B)**

Taking into account the provisions laid down in Executive Order no. 95/94 of 9 February and under the terms laid down in no. 1 of Article 95 and in no. 1 of Article 196 of the Legal Framework of Credit Institutions and Financial Companies, approved by Decree-Law no. 298/92 of 31 December, fixes the minimum capital stock for credit securitisation funds managing companies and for credit securitisation companies.

**25 May (Executive Order no. 289/2000, Official Gazette no. 121, Series I, B)**

Under the provisions laid down in paragraph b) of no. 1 of Article 59 of the Stock Market Code (*Código dos Valores Mobiliários*), establishes the rules governing the registration of book-entry securities with the issuer. This Executive Order takes effect on 1 March 2000.

**25 May (Executive Order no. 290/2000, Official Gazette no. 121, Series I, B)**

Under the provisions laid down in paragraph a) of no. 1 of Article 59 of the Stock Market Code (*Código dos Valores Mobiliários*), approves the model for the registration of securities issues with the issuer, provided for in Article 43 of the aforementioned ordinance. This Executive Order takes effect on 1 March 2000.

**26 May (Directive 2000/12/EC of the European Parliament and of the Council, OJ L 126)**

Adopts measures relating to the taking up and pursuit of the business of credit institutions. Directives 73/183/EEC, 77/780/EEC, 89/299/EEC, 89/646/EEC, 89/647/EEC, 92/30/EEC and 92/121/EEC, as amended by the directives set out in Annex V, Part A are repealed, without prejudice to the obligations of the Member States concerning the deadlines for transposition of the said directives listed in Annex V, Part B. References to the repealed directives are to be considered as being made to this directive and should be read in accordance with the correlation table in Annex VI.

### June

**2 June (Decree-Law No. 101/2000, Official Gazette No. 128, Series I, A)**

Transposes to Portuguese law Directive 98/7/EC of the European Parliament and of the Council of 16 February amending Directive 87/102/EEC of 22 December 1986 for the approximation of the laws, regulations and administrative provisions of the Member States concerning consumer credit. Replaces annexes nos. 1 and 2 of Decree-Law no. 359/91 of 21 September with annexes I and II of the above Decree-Law.

**26 June (Regulation of the Stock Market Commission no. 20/2000, Official Gazette no. 145, Series I)**

For the purposes laid down in Article 26 of Decree-Law no. 276/94 of 2 November reworded by Decree-Law no. 323/99 of 13 August, provides for the terms and conditions to be complied with in the disclosure to the pub-

	lic of the profitability measures of real estate investment funds. Revokes Regulation no. 10/97 of 26 June.
<b>28 June (Executive Order no. 382/2000, Official Gazette no. 147, Series I, B)</b>	Pursuant to the provisions set forth in no. 3 of Article 1 of Decree-Law no. 88/94 of 2 April, establishes that the securities representing the public debt, issued under the terms of the Resolution of the Council of Ministers no. 19-A/2000 of 2 May, shall be added to the list published through Executive Order no. 377-A/94, of 15 June.
<b>30 June (Regulation of the Stock Market Commission no. 22/2000, Official Gazette no. 149, Series I, Supplement)</b>	Regulates the operation of the Public Debt Special Market (Portuguese acronym: MEDIP), and provides for the application to this market of the rules laid down in Regulation no. 5/2000 of 23 February, that do not run counter to this Regulation.
<b>July</b>	
<b>5 July (Circular Letter of Banco de Portugal no. 23/DMRCF/DMC)</b>	Sends diskette containing a file with the list of all institutions subject to reserve requirements in the euro area, on 29 June 2000.
<b>7 July (Council Regulation no. 1478/2000, OJL 167)</b>	Introduces changes in Regulation (EC) no. 2866/98 on conversion rates between the euro and the currencies of the Member States which adopted the euro. This regulation enters into force on 1 January 2001.
<b>7 July (Council Decision no. 2000/427, OJL 167)</b>	Council Decision, under the provisions of Article 122 (2) of the Treaty, on the adoption of the single currency by Greece, on 1 January 2001. The derogation granted to Greece in recital 4 of the Decision 98/317/CE is revoked, coming into effect as from this date.
<b>13 July (Circular Letter of Banco de Portugal no.13/00/DSBDR)</b>	Recommends, in the wake of previous recommendation of the GAFI-Grupo de Acção Financeira, that credit institutions and financial companies should carefully examine the operations in which the respective counterparties have residence or are established in the following countries and territories: Bahamas, Cayman Islands, Cook Islands, Dominica, Philippines, Israel, Lebanon, Liechtenstein, Marshall Islands, Nauru, Niue, Panama, Russia, St. Kitts and Nevis and St. Vincent and Grenadines.
<b>15 July (Decree-Law no. 144/2000, Official Gazette no. 162, Series I, A)</b>	Creates an interest-rate subsidy in credit lines intended to the complementary financing of investment projects of municipal and inter-municipal nature subsidised by the ERDF and approved within the scope of the Community Support Framework (CSF 2000-2006) or of programmes implemented by the Community.
<b>17 July (Regulation of the Stock Market Commission no. 25/2000, Supplement to Official Gazette no. 163, Series II)</b>	Lays down a set of special regulations applicable to registration, clearing and settlement services of over-the-counter purchase and sale transactions of transferable securities, provided by a managing company operating in a regulated market.
<b>17 July (Notice of the Minister of Finance no. 11223/2000, Official Gazette no. 163, Series II)</b>	Announces, in compliance with the provisions laid down in Article 2 of Decree-Law no. 1/94, of 4 January, that the average interest rate to prevail in July 2000 is set at 2.53672%, which, multiplied by the 1.10 factor, is 2.79039%.
<b>17 July (Notice of the Minister of Finance no. 11224/2000, Official Gazette no. 163, Series II)</b>	Announces, in compliance with the final provisions laid down in Article 1 of Decree-Law no. 125/92, of 3 July, that the interest rate to prevail in July 2000, after multiplication by the 0.96 factor, is 2.43525%.
<b>18 July (Regulation of the Stock Market Commission no. 23/2000, Official Gazette no. 164, Series II)</b>	Establishes, under the provisions laid down in Article 34 (1) of the Stock Market Code, approved by Decree-Law no. 486/99, of 13 November, the voluntary intermediation procedure applicable to conflicts arising from relationships involving transferable securities.

## Chronology of major financial policy measures 2000

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**19 July (Regulation of the Stock Market Commission no. 24/2000, Official Gazette no. 165, Series II)**

Revises the regulatory base regarding the information to be released to the market. Introduces changes in different articles, adds the new articles 1-A and 1-B, and republishes the full version of Regulation no. 11/2000, of 10 February, with the changes introduced therein.

**19 July (Notice of Banco de Portugal no. 1/2000, Official Gazette no. 165, Series I - B)**

Establishes, under Articles 99 and 196 of Decree-Law no. 298/92, of 31 December (Legal Framework of Credit Institutions and Financial Companies), the relationship between the own funds of credit securitisation companies and the amount of the respective issues of asset-backed securities that comply with the provisions laid down in Article 50 of Decree-Law no. 453/99, of 05 November.

**19 July (Decision no. 14580/2000, Official Gazette no. 165, Series II)**

Authorises the Instituto de Gestão do Crédito Público (Public Debt Management Institute), under the provisions laid down in Article 92 (2) of Law no. 3-B/2000, of 4 April, to intervene in the public debt secondary market as a counterpart in reporting operations of transferable securities representing direct public debt of the State accepted in the Public Debt Special Market (Portuguese Acronym: MEDIP).

**24 July (Notice of Banco de Portugal no. 2/2000, Official Gazette no. 169, Series I - B)**

Rewords the first indent of no. 2 c) of part I of the attachment to Notice no. 1/93, of 19 May, published in the Supplement to Official Gazette no. 133, Series II, of 8 June 1993.

**25 July (Circular Letter of Banco de Portugal no. 24/DMR)**

Informs that, following Circular Letter no. 347/DMR, of 27 October 1999, the rate of return on Certificates of Deposit, Series B, was fixed at 3%, to prevail on the quarter started on 4 August 2000.

### August

**1 August (Regulation no. 28/2000 of the Stock Market Commission, Official Gazette no. 176, Series II)**

Lays down regulations on capital stocks, internal control requirements and the obligation to report to the Stock Market Commission applicable to market management companies, securities settlement systems and securities pooling systems, as well as their holding companies.

**2 August (Circular Letter of Banco de Portugal no. 25/DMRCF/DMC)**

Sends diskette containing a file with the list of all institutions subject to reserve requirements in the euro area, on 28 July 2000.

**9 August (Executive Order no. 1197/2000, Official Gazette, no. 183, Series II)**

Introduces changes in Executive Order no. 95/94, of 9 February, setting forth new minimum amounts for the capital stock of mutual agricultural credit banks.

**10 August (Decree-Law no. 181/2000, Official Gazette no. 184, Series I, A)**

Introduces changes in Decree-Law no. 408/91, of 17 October, which sets forth the new legal system governing minimum reserves.

**17 August (Guideline of the European Central Bank no. 2000/516/EC, OJ L 207)**

Guideline on the management of the European Central Bank reserve assets by national central banks and on juridical agreements relating to operations with European Central Bank reserve assets. (ECB/2000/1). This guideline comes into force on 3 February 2000.

**19 August (Regulation no. 26/2000 of the Stock Market Commission, Official Gazette no. 191, Series II)**

Introduces changes in Articles 5 (definition of criteria adopted for the valuation of listed assets) and 9 (responsibility of the managing entity) of Regulation no. 16/99, relating to the valuation of the assets of transferable securities investment funds and to the calculation of the value of the units, published in the Official Gazette no. 240, Series II, of 14 October 1999.

**19 August (Regulation no. 27/2000 of the Stock Market Commission, Official Gazette no. 191, Series II)**

Introduces changes in Article 7 (Information) of Regulation no. 21/99, relating to the use of derivative financial instruments by mutual funds, published in the Official Gazette no. 295, Series II, of 21 December 1999.

**22 August (Notice of the Banco de Portugal no. 3/2000, Official Gazette no. 193, Series I, B)**

Sets forth the Direct Debits System (Portuguese acronym SDD). This notice comes into force on 1 October 2000.

<b>23 August (Regulation no. 30/2000 of the Stock Market Commission, Official Gazette no. 194, Series II)</b>	Introduces changes in Article 67 (representative for the relationship with the market) of Regulation no. 10/2000, relating to offers and issuers, published in the Supplement to the Official Gazette no. 45, Series II, of 23 February 2000.
<b>23 August (Circular Letter of the Banco de Portugal no. 27/DMR)</b>	Informs of the changes introduced in Instruction no. 1/99 (BNPP no.1, of 15 January 1999), regarding valuation haircuts applied to some assets in Tier 1 and to assets in Tier 2. These changes will come into force as from 31 August 2000.
<b>23 August (Regulation no. 29/2000 of the Stock Market Commission, Official Gazette no. 194, Series II)</b>	Revokes Article 8 and introduces changes in Article 2 (2) (characteristics of underlying assets) as well as in Articles 4 (setting up of the price of the underlying asset), 6 (changes in the underlying asset), 12 (tradability in the spot stock market) and 13 (admission to trading of warrants issued by entities subject to foreign law) of Regulation no. 19/99, relating to autonomous warrants, published in the Official Gazette no. 275, Series II, of 25 November 1999.
<b>29 August (Notice of the Banco de Portugal no. 4/2000, Official Gazette no. 199, Series I, B)</b>	Sets forth, under the provisions laid down in Article 3 (2) of Decree-Law no. 408/91, of 17 October, reworded by Decree-Law no. 181/2000, of 10 August, the conditions of remuneration of cash certificates with nominal value below 50.000 euro, put out to public subscription.
<b>September</b>	
<b>5 September (Regulation no. 31/2000 of the Stock Market Commission, Official Gazette no. 205, Series II)</b>	Establishes, for the purpose of the provisions laid down in Article 35 (1) of Decree-Law no. 276/94, of 2 November, reworded by Decree-Law no. 323/99, of 13 August, the legal system governing the accounting of transferable securities investment funds. Revokes Regulation no. 95/14, of 21 December. The present Regulation comes into force on 1 January 2001.
<b>5 September (Executive Order no. 1338/2000, Official Gazette, no. 205, Series II)</b>	Introduces changes, under the provisions laid down in Article 211 of the Stock Market Code, approved by Decree-Law no. 486/99, of 13 November, in the interest rates on out-of-the-market operations. Rewords Articles 3 and 4 and adds article 5-A to the Executive Order no. 313-A/2000 (Series II), of 29 February. The present Executive Order will enter into force immediately, except Article 5-A, which will enter into force on 1 January 2001.
<b>9 September (Decree-Law no. 221/2000, Official Gazette no. 209, Series I - A)</b>	Transposes into national legislation, within the scope of the payment systems, Directive no. 98/26/EC, of the European Parliament and of the Council, of 19 May, on settlement finality in payment and securities settlement systems.
<b>9 September (Regulation (EC) no. 1921/2000 of the European Central Bank, OJ 229, Series L)</b>	Introduces changes in articles 1, 3, 5, 6 and 13 of Regulation (EC) no. 2818/98 of the ECB, of 1 December 1998, on the application of minimum reserve requirements, as well as in articles 4 and 5 of Regulation (EC) no. 2819/98 of the ECB, of 1 December 1998, on the consolidated balance-sheet of the monetary financial institutions sector. The present Regulation will be effective on the reserve maintenance period starting on the month following its publication in the Official Journal. An amendment to Regulation (EC) no. 1921/2000 of the ECB was published in the Official Journal no. 242, series B.
<b>16 September (Notice of the Banco de Portugal no. 5/2000, Official Gazette no. 215, Series I - B)</b>	Lays down a set of regulations on the remuneration of deposits redeemable at notice, time deposits, time deposits not withdrawable before maturity and deposits opened under a special system, of an amount up to PTE 10 million, mentioned in article 1, (1), b), c), d) and e) of Decree-Law no. 430/91, of 2 November.
<b>23 September (Decree-Law no. 228/2000, Official Gazette no. 221, Series I - A)</b>	Sets up the National Council of Financial Supervisors, with a view to promoting, inter alia, the co-ordination of the performance of national authorities supervising the financial system. It shall be chaired by the Governor of

the Banco de Portugal. In addition to the Stock Market Committee and to the Portuguese Insurance Institute, this Council expects to have the participation of representatives of public or private entities, in particular the Deposit Guarantee Fund, the Agricultural Credit Guarantee Fund, the Investor Compensation System, the entities managing regulated markets and associations representing any types of institutions subject to prudential supervision.

**25 September (Circular-Letter of the Banco de Portugal no. 29/DMR)**

In the wake of the decision of the ECB Council that established the closing days of the TARGET and concomitant closing of the RTGS system in the year 2001, it informs which will be the value-dates or repayment dates of the operations that cannot be carried out through SITEME in 2001. It also informs on which holidays the minimum services shall be ensured.

### October

**3 October (Circular-Letter of the Banco de Portugal no. 30/DMRCF/DMC)**

Sends diskette containing a file with the list of all institutions subject to reserve requirements in the euro area on 28 September 2000.

**13 October (Decree-Law no. 250/2000, Official Gazette no. 237, Series I, A)**

Transposes into Portuguese legislation Directive 98/33/EC of the European Parliament and of the Council of 22 June amending article 12 of Directive 77/780/EEC on the coordination of laws, regulations and administrative provisions relating to the taking up and pursuit of the business of credit institutions, articles 2, 5, 6, 7 and 8 and annexes II and III of Directive 89/647/EEC on a solvency ratio of credit institutions, and article 2 and annex II of Council Directive 93/6/EEC on the capital adequacy of investment firms and credit institutions. Rewords articles 81 and 82 of the Legal Framework of Credit Institutions and Financial Companies approved by Decree-Law no. 298/92 of 31 December. Increases the number of bodies performing co-operation tasks in the supervisory field, includes certain concepts (e.g. recognised market), fixes weighting coefficients for the calculation of the solvency ratio (e.g. unpaid share in the capital of the European Investment Fund) and introduces changes in the calculation of credit risk in the over-the-counter derivative instruments.

**16 October (Regulation no. 32/2000 of the Stock Market Commission, Official Gazette no. 239, Series II)**

Regulates some features relating the canvassing for investors within the scope of financial intermediation activities. Amends article 50 and adds articles 19-A, 50-A, 50-B and 50-C to Regulation no. 12/2000 of 10 February.

**18 October (Decree-Law no. 263/2000, Official Gazette no. 241, Series I, A)**

Transposes into Portuguese law Directive 98/32/EC of the European Parliament and of the Council of 22 June amending - in particular the provisions relating to mortgage credit - Council Directive 89/647/EEC on the solvency ratio of credit institutions, the Banco de Portugal being authorised to change these regulations, under the terms of this Decree-Law..

**20 October (Circular Letter of Banco de Portugal no. 31/DMR)**

Informs credit institutions that for the calculation and confirmation of reserve requirements of the ESCB, they must comply with the provisions set forth in Regulation (EC) no. 1921/2000 of the European Central Bank of 31 August (ECB/2000/8), which amended Regulation no. 2818/98 of the European Central Bank of 1 December (ECB/1998/15) on the application of minimum reserves and Regulation no. 2819/98 of the European Central Bank of 1 December (ECB/1998/16) concerning the consolidated balance sheet of the monetary financial institutions sector.

**30 October (Notice of Banco de Portugal No. 6/2000, Official Gazette No. 251, Series I, B)**

Defines the own funds requirements applicable to credit institutions and financial companies assigning claims in securitisation operations, which within the scope of these operations have assumed engagements or received assets or off-balance-sheet items. Adds nos. 7 and 8 to Part I, of the annex to Notice No. 1/93, of 8 June.



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