

## THE PORTUGUESE ECONOMY IN 1999

## 1. INTRODUCTION

Real output growth in 1999 is estimated to have stood in the lower half of the forecast interval disclosed in the September *Economic Bulletin* ( $2\frac{3}{4}$  -  $3\frac{1}{4}$ ), about 1 percentage point (p.p.) less than in 1998. Despite activity slowdown, total employment continued to exhibit a high growth — close to 2 per cent — in the first three quarters of 1999. As a result, the unemployment rate kept its downward trend, reaching 4.2 per cent in the third quarter.

The slowdown of activity from 1998 to 1999 resulted from the lower growth of domestic demand and exports. All domestic demand components — private consumption, public consumption and investment — decelerated from the previous year. Stress should be laid on the sharp slowdown of investment, from 9.8 per cent in 1998 to around half this value in 1999. Private consumption, which had grown 5.6 per cent in 1998, decelerated around 1 p.p.; nevertheless, this item continued to grow more than output, as in the previous year.

Exports slowed down by around 6 p.p. in 1999 (from a 9.1 per cent real growth in 1998). This slowdown was particularly sharp as regards services exports. Therefore, despite the sharp reduction of the growth rate exhibited by imports (8 p.p., from a 14.8 per cent growth in 1998), in line with the slowdown of the overall demand components, 1999 saw a further widening of the current plus capital account deficit, by around  $1\frac{1}{2}$  p.p. of Gross Domestic Product (GDP) (from 4.3 per cent of GDP in 1998).

The widening of the deficit, which reflects the behaviour of the trade account, results basically from the greater borrowing requirements of Portuguese households and corporations, due to the widening of the gap between investment and saving of these institutional sectors.

As in 1998, the current plus capital account deficit continued to be financed by capital inflows — corresponding to increases in the net foreign liabilities of General Government and banks. Regarding the latter, in the period January-October 1999 the net foreign liabilities of resident Monetary Financial Institutions (MFI) in the form of loans and deposits increased 6,866.2 million euros, compared with 7,177.2 million euros in the same period of 1998. Therefore, throughout 1999 MFI continued to finance the resident private sector by raising external resources — although some maturity recomposition took place in 1999. Despite the fact that non-residents' investments in loans and short-term deposits continued to account for the bulk of external resources raised by resident banks, long-term operations rose significantly.

The fulfilment of households and non-financial corporations borrowing requirements gave rise to a particularly strong growth of bank credit granted to these sectors. Over the course of 1999, domestic bank credit granted to the non-monetary resident sector excluding General Government recorded very high growth rates, peaking at 28.2 per cent in July, and decreasing slightly afterwards, to 26.2 per cent in December.

As a result, indebtedness of the non-financial private sector increased significantly again in 1999. Households and corporations' indebtedness, respectively as a percentage of disposable income and GDP, are estimated to have reached close to 80 and 77 per cent by the end of the year (66 and 65 per cent one year before). Despite the significant increase in the indebtedness of households due to the sharp fall in interest rates, the degree of effort (defined as the ratio between the debt service and disposable income) shall have risen only

1.5 p.p. between 1996 and 1998. In 1999, in the context of a smaller reduction of interest rates, households' degree of effort shall have increased around 2 p.p.

In 1999, interest rates in both the money market and the stock market reversed the sharp downward trend that had been recorded in recent years in Portugal. As regards long-term rates, this reversal took place early in the 1999, spreading to short-term rates from mid-1999 onwards. The behaviour of markets rates rebounded to banks' lending and borrowing rates, which stopped decreasing from the third quarter on the year — hence interrupting the reduction recorded since the early 1990s. Despite this recent behaviour, in December 1999 bank rates on new operations still remained below the levels observed by the end 1998 levels (by 0.4, 0.7 and 0.9 p.p., respectively in the case of time deposits between 181 days and one year, loans to private individuals at more than 5 years, and loans to non-financial corporations between 91 and 180 days).

GDP growth did not show a marked intra-annual profile over the course of 1999. However, its composition changed significantly throughout the year. Domestic demand recorded a significant slowdown in the second half of the year, especially at the level of the consumption of durable goods. On the other hand, merchandise exports recovered, in line with activity acceleration in the euro area. The change in the growth profile — namely through exports replacing private consumption as the leading engine of economic growth — provides a necessary condition to cut the borrowing requirements of the private sector, in particular of households.

Alongside the improvement of the external background throughout 1999, some factors affecting price developments evolved unfavourably — stress being laid on the sharp rise in oil prices in the international markets. In the euro area economies, this factor was enhanced by the exchange rate depreciation seen in 1999. As a result, inflation rose in the euro area. Measured by the year-on-year change in the Harmonised Index of Consumer Prices (HICP), inflation rose from 0.8 per cent in December 1998 to 1.7 per cent one year later. In Portugal, much on the contrary, inflation decreased. Still measured by the HICP, inflation in Portugal was reduced from 2.8 per cent in Decem-

ber 1998 to 1.7 per cent in December 1999. As mentioned in previous issues of the *Economic Bulletin*, the correction to some transitory factors affecting price behaviour in 1998 — including the significant increase in the prices of some products, especially food, the effects resulting from the depreciation of the escudo during the transition to the euro and the effects of the Expo98 on the prices of some services — contributed more or less expectedly to reduce inflation throughout 1999.

The fact that in Portugal the process of price fixing of fuel differed from the one followed in most euro area countries contributed to widen the inflation differential in 1998, yielding the reverse effect in 1999. The dissipation of the temporary effects mentioned above and the disparate fuel consumer price policies gave rise to a null inflation differential between Portugal and the euro area by the end of 1999, compared with 2.0 p.p. in December 1998.

## 2. INTERNATIONAL BACKGROUND OF THE PORTUGUESE ECONOMY

The international background of the Portuguese economy continued to improve in the second half of 1999, confirming the positive indications on the world economic situation that had appeared during the first half. Economic recovery in the euro area during the second half of the year was confirmed, basically meeting expectations (chart 2.1). The strengthening of activity in the United Kingdom also became evident in this period. The United States of America (USA) economy continued to show strong buoyancy, exceeding forecasts dated from one year before. Economic activity recovery in the emerging markets has also become evident, especially at the level of Asian markets. In Japan, despite some recent signs towards improvement, growth perspectives for the near future remain uncertain.

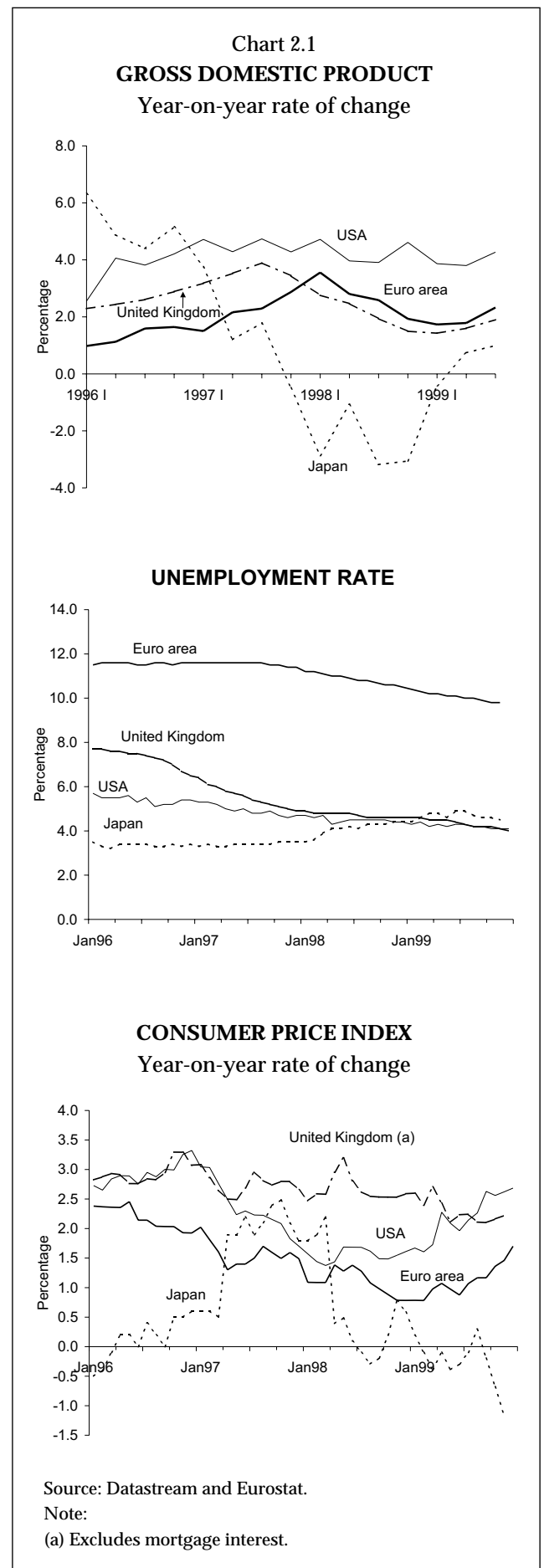
In the euro area, activity acceleration is basically linked to the recovery of exports of goods and services, as a result of the clear improvement of the external background of the area. As regards foreign trade flows, imports also grew slightly faster than in the first half-year. In fact, the recovery of trade flows over the course of 1999, following to the slowdown seen in the previous year, has become evident in a wide range of economies.

As for price developments, although the majority of the larger economies continued to record moderate inflation rates in 1999, the strong increase of oil prices in the international markets throughout the year (Brent prices in US dollars grew about 40 per cent in annual average terms) reflected in general to an acceleration of consumer prices (chart 2.1). In the euro area, this development was enhanced by the unfavourable exchange rate developments. The evidence of some worsening of the medium-term inflation perspectives in a context of economic activity recovery — along with a tightening in the labour markets in some countries — led to reactions by monetary authorities (chart 2.2). In the USA and in the United Kingdom, central banks carried out gradual increases to intervention rates over the course of the second half of 1999 and in early 2000. In the euro area, the European Central Bank (ECB) Council rose its official rates in early November. In the meantime, these considerations were reflected into increases in long-term interest rates throughout 1999, which reached 1.7 p.p. in the USA, 0.8 p.p. in the United Kingdom and 1.4 p.p. in the euro area (chart 2.2).

Economic activity in the USA continued to grow strongly in the second half of 1999, continuing the trend recorded in previous years (chart 2.1). In the third quarter, GDP grew 4.3 per cent year-on-year, following to 3.8 per cent in the first half-year. The available data point towards the maintenance of a strong buoyancy in late 1999. According to most estimates, growth in the year as a whole shall stand around 4 per cent (4.3 per cent in 1998)<sup>(1)</sup>.

In the third quarter, the dynamism of economic activity was again determined by strong domestic demand. More specifically, private consumption grew again about 5 per cent from the same period of the previous year, translating into a further reduction of households' saving rate. Among the most sensitive sectors vis-à-vis interest rate changes, residential building showed signs of slowing down. Gross fixed capital formation excluding housing accelerated in this quarter. The notable recovery of exports (6.2 per cent growth in

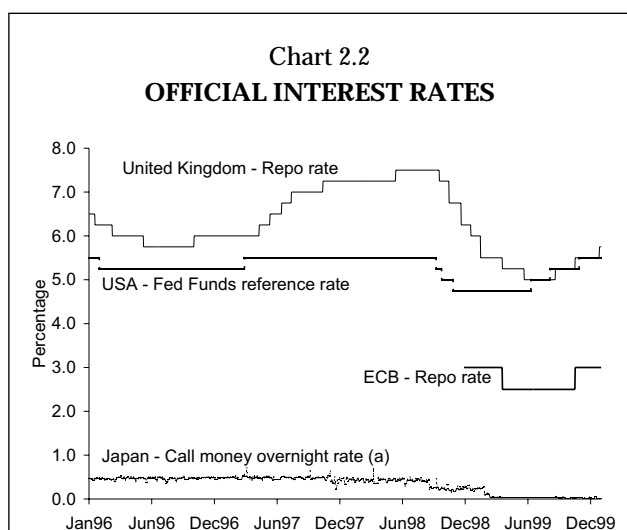
(1) For 2000, forecasts continue to point towards some slowdown of economic activity, though a less sharp one than expected some months ago (the OECD forecast disclosed in November points to a 3.1 per cent growth).



year-on-year terms in the third quarter, compared with 1.9 per cent in the first half of 1999) largely reflected the improvement of external demand, and was accompanied by a further expansion of imports (13.2 per cent growth in the third quarter, against 10.5 per cent in the first half-year). The difference persisting between the dynamism of domestic demand in the USA and in the rest of the world continued to yield a widening of the current account deficit, which is estimated to reach 3.7 per cent of GDP in 1999 (2.5 per cent in 1998). The progressive worsening of external accounts and households' saving continue to provide the major weaknesses of the USA economy.

As regards inflation in the USA, consumer prices (CPI) but especially producer prices accelerated throughout 1999. The year-on-year rate of change of the CPI reached 2.7 per cent in December, around 1 p.p. more than in late 1998/early 1999. In the meantime, producer prices accelerated from 0.8 per cent in early 1999 to 3.0 per cent in December. This behaviour is largely due to the rise in oil prices in the international markets, since excluding food and energy prices, consumer prices would have grown 1.9 per cent year-on-year in December 1999, against 2.4 per cent one year before. In the labour market, labour costs continued to show no signs of accelerating up to the third quarter of 1999, despite the low level exhibited by the unemployment rate (4.1 per cent in the three last months of 1999) and continued employment growth (by 2.2 and 2.1 per cent year-on-year, respectively in the third and fourth quarters). On 16 November, the Federal Reserve increased again the intervention rates, since it considered that risks towards a sustained, non-inflationary, economic expansion persisted. Both the federal funds reference rate and the discount rate were risen 0.25 p.p., respectively to 5.5 and 5.0 per cent — i.e., to their Summer 1998 levels, before the propagation of the Asian crisis to other markets (chart 2.2).

In Japan, GDP recorded a 1.0 per cent year-on-year growth rate in the third quarter of 1999, following to -0.4 and 0.7 per cent changes in the previous two quarters (chart 2.1). However, the growth recorded in the first half of the year already bears a downward revision from the preliminary official estimates, as well as a change in the intra-annual growth profile. Therefore, the latest projections for 1999 were in general adjusted

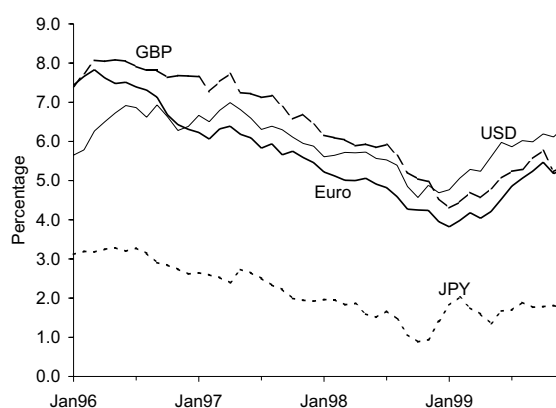


Source: Bloomberg.

Note:

(a) On 2 February 1999 the Bank of Japan decided to change the reference for the call money rate from 0.25 to 0.15 per cent initially; and subsequently induce further reduction to close to zero per cent.

### 10-YEAR PUBLIC DEBT BOND YIELDS



Source: Reuters and European Central Bank.

downwards from those disclosed in Autumn and point towards a growth slightly below 1 per cent — which nonetheless accounts for a recovery from the 2.5 per cent fall seen in 1998.

In the third quarter of 1999, domestic demand (excluding stocks) in both the private and the public sectors grew slightly less than in the previous quarter. Exports accelerated (3.5 per cent growth year-on-year, against falls in the previous two quarters), chiefly reflecting the increased demand from other Asian countries and despite the sharp

appreciation of the yen. Though remaining negative, the contribution of net external demand to growth was more favourable in the third quarter. However, the capacity of the Japanese economy to keep a sustained growth path remains somewhat uncertain. Despite the less pessimistic appraisal by industrials and some employment stabilisation (after successive falls), adjustments to the capacity of the economy proceed and some structural problems persist. Moreover, the yen appreciation carried on, and in the very short run the reduction in public sector's demand shall inevitably affect the Japanese economy. This situation is expected to be reversed only over the course of 2000, with the implementation of the measures foreseen in the programme announced in November 1999 (amounting to around 3.5 per cent of GDP). The successive expansionary measures adopted by the Government have given rise to public deficit and debt increases; according to the OECD, deficit and debt are estimated to reach respectively 7.6 and 105.4 per cent of GDP in 1999, providing an additional factor of risk.

In the United Kingdom, the second half of 1999 was characterised by a quick strengthening of economic activity. In the third quarter, GDP accelerated to 1.9 per cent year-on-year, following to 1.4 and 1.6 per cent growths respectively in the first and the second quarters (chart 2.1). The latest data suggest that recovery proceeded in the fourth quarter. Estimates for 1999 as a whole point towards growth between 1.7 and 1.8 per cent, compared with 2.2 per cent in 1998.

Domestic demand, which grew strongly up to early 1999, exhibited some slowdown in the second and third quarters, despite the strong dynamism of private consumption. Contrary to what occurred over the course of 1998 and early 1999, net exports rendered a less negative contribution to the year-on-year growth of GDP. The strengthening of world activity allowed exports to recover notably (year-on-year change of 6.1 per cent in the third quarter, against -0.1 per cent in the first half of the year). This development was also accompanied by a stronger growth of imports of goods and services in the third quarter (7.6 per cent, compared with 6.1 per cent in the first half-year). This new expansionary stage of activity has taken place in a context of some tensions in the labour market. The unemployment rate (claimant count) contin-

ued to decrease, reaching 4.0 per cent in December (4.5 per cent one year before). Meanwhile, in the quarter to November, nominal earnings rose 4.9 per cent in year-on-year terms (4.7 per cent in the third quarter). Inflation measured by consumer prices excluding mortgage interest has remained below the 2.5 per cent threshold (chart 2.1). Nonetheless, on 13 January 2000, the Bank of England decided to carry out a further increase of the repo rate, by 0.25 p.p. (to 5.75 per cent) (chart 2.2). Underlying this decision was the appraisal that medium-term inflation perspectives were less benign, due to the development of pressures in the labour market and on the productive capacity of the economy.

The information available for the second half of 1999 confirm the recovery of economic activity in the euro area, which had started in the second quarter of the year. GDP accelerated significantly in the third quarter, 2.3 per cent year-on-year change, compared with 1.7 and 1.8 per cent in the previous quarters (chart 2.1). Recent indicators are consistent with a continuation of the strengthening of activity later in the year. In general, this development does not differ greatly from the projections available in the autumn of 1999, which pointed to a 2.1 per cent growth in 1999 (2.7 per cent in 1998).

The greater buoyancy of activity in the third quarter was accompanied by a change in the structure of growth (chart 2.3). Domestic demand showed some deceleration from the previous quarter — especially at the level of stock accumulation — while exports of goods and services recovered notably (4.2 per cent growth in year-on-year terms, compared with 0.5 per cent in the first half-year)<sup>(2)</sup>. The improvement of exports reflects the strengthening of external demand. However, exporters shall have incurred in a loss of market share in 1999 as a whole (see box “*The Recent Performance of the Exporting Sector*”), despite the real effective depreciation of the euro (5.5 per cent in 1999, following to a 1.9 per cent appreciation in 1998). The recovery of exports gave rise to an equally stronger growth of imports, from 3.5 per cent in the first half of the year to 4.2 per cent in the third quarter. In net terms, the contribution

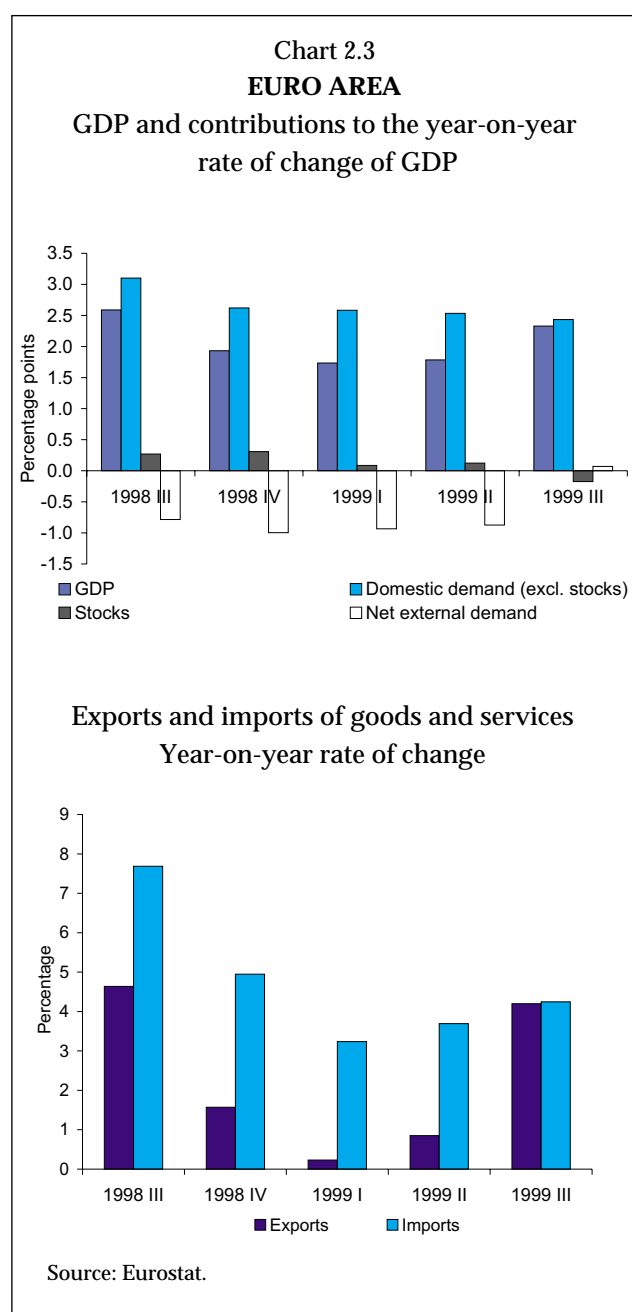
(2) It should be noted that exports of the euro area countries include exports to other countries in the area.

of external demand to GDP growth became positive, in contrast with previous behaviour.

The qualitative data available for the last quarter of the year suggests that economic activity continued to strengthen in late 1999. Consumers' confidence, after having stabilised during the third quarter, resumed its high levels, close to those reached earlier in the year. This improvement was sustained by more favourable overall perspectives and by the labour market situation. The unemployment rate decreased gradually over the course of the year, from 10.5 per cent at the end of 1998 to 9.8 per cent in November, while employment continued to expand up to the third quarter. Employment in industry has shown some signs of improvement. Confidence in industry has shown an upward trend since the second quarter of 1999; stress should be laid on the more favourable appreciation of production expectations and order books, most notably of export orders.

The acceleration of activity recorded in the euro area as a whole in the third quarter of 1999 was widespread to the four leading economies of the area. In any of these countries, this acceleration resulted from a more favourable contribution of the external sector to growth. This reflected above all the strong recovery of exports — in line with the improvement already recorded in the second quarter — that was also accompanied by a stronger growth of imports than in the first half of the year (only in the case of Spain imports slowed down, though continuing to grow strongly around 12 per cent in year-on-year terms). Germany and Italy continued to exhibit a less significant output growth, 1.2 per cent in year-on-year terms, which compares with 0.9 and 0.8 per cent in the previous quarter, respectively. In France, GDP growth increased from 2.4 to 3.0 per cent in the third quarter. The Spanish economy continued to grow at a high pace (3.7 per cent in the third quarter, against 3.5 per cent in the previous three months).

Inflation in the euro area, measured by the year-on-year rate of change of the HICP, kept up to December the upward path shown since mid-1999 (chart 2.1). The year-on-year change was 1.7 per cent in December (0.8 per cent in January). To this increase contributed basically the acceleration of the prices of energy goods over the course of 1999, which was partly compensated by the moderation of prices of the remaining goods and



services. As for the annual average rate of change, inflation in the euro area reached 1.1 per cent in December, the same level recorded one year before.

On 4 November, the ECB Council decided to raise the intervention rates by 0.5 p.p. The rate on the main refinancing operations rose to 3.0 per cent (chart 2.2). In December, the ECB Council decided to confirm the reference value for monetary growth, that is to say, an annual growth rate of 4.5 per cent for monetary aggregate M3.

In line with what occurred in the USA, long-term interest rates exhibited an upward movement over the course of 1999 (chart 2.2). In the euro area,

this trend was briefly discontinued in the months when changes to the intervention rates of the Eurosystem were recorded. In December, the yield on 10-year public debt bonds was at 5.30 per cent, against 3.95 per cent at the end of 1998. The monetary market interest rates decreased until April, the month when the Eurosystem intervention rates decreased. Afterwards, their upward behaviour was strongly influenced by expectations of raises to intervention rates, as well as by a risk premium associated to eventual software problems related with Y2K. In 1999, the euro exchange rate depreciated on average 5.7 per cent in nominal effective terms. In end of period terms, the depreciation of the nominal effective exchange rate of the euro reached 12.9 per cent.

### 3. DEMAND AND OUTPUT

The latest indicators confirm that in 1999 Gross Domestic Product (GDP) slowed down from the previous year. The deceleration of the Portuguese economy, foreseen in previous issues of the *Economic Bulletin* (EB), results from a lower growth of domestic demand and of exports of goods and services (table 3.1). The slowdown of domestic demand shall have been extensive to all components.

GDP growth shall have stood in the lower half of the forecast interval presented in the September EB (2¾ - 3¼ per cent). Compared with the estimates therein presented, the available information points towards more moderate growths of domestic demand and exports, partly offset by the lower growth of imports. In intra-annual terms, GDP growth did not show a particularly marked pattern over the course of 1999. In the first half-year, the pattern of growth was characterised by a slowdown of domestic demand and of exports of goods and services. This translates a significant activity slowdown from late 1998. In the second half of the year, domestic demand exhibited a further slowdown, greatly reflecting a less buoyant private consumption. In the same period, exports of goods and services shall have recovered, interrupting the slowdown recorded since the second half of 1998. The available information suggest that this recovery of exports shall have virtually compensated for the slowdown of domestic demand recorded in this period. As a result, the slowdown of overall demand shifted over the

Table 3.1

#### MAIN ECONOMIC INDICATORS Rates of change (percentage)

	1998	1999
Private consumption.....	5.6	4¼ - 5¼
Public consumption .....	3.0	2.4
GFCF.....	9.8	4¼ - 5¼
Domestic demand.....	6.4	4¼ - 4¾
Exports .....	9.1	3¼ - 4¼
Overall demand.....	7.0	4 - 4½
Imports.....	14.8	7 - 8
GDP.....	3.8	2¾ - 3¼
Current plus capital account deficit (as a % of GDP).....	4.3	5¼ ; 6¼

Note. These figures were disclosed in the September 1999 *Economic Bulletin*.

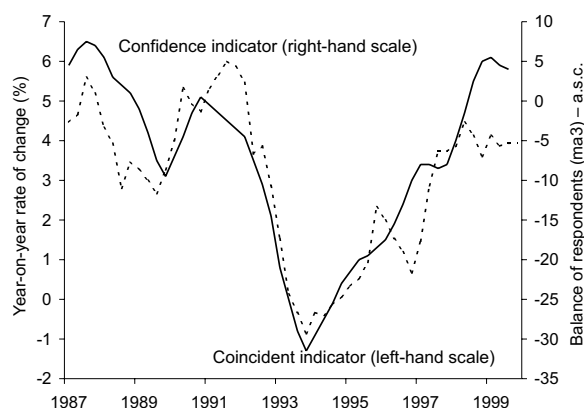
course of 1999, which however did not translate into a marked intra-annual growth pattern.

Short-term indicators point towards a slowdown of private consumption in the second half of 1999. In the third quarter of 1999, the coincident indicator of private consumption slowed down from the previous quarter (chart 3.1). According to the Monthly Trade Survey, in the second half of the year, the average level of the balance of respondents regarding turnover in retail trade stood below the levels recorded in the first half of the year (chart 3.2)<sup>(3)</sup>. This slowdown shall have been sharper than expected. As a result, the growth of this aggregate in 1999 as a whole shall stand close to the lower limit of the forecast interval presented in the September EB (4¾ - 5¼ per cent, against 5.6 per cent in 1998).

Despite the slowdown, private consumption continued to exhibit a high growth rate, to which contributed the maintenance of consumers' confidence at high levels (chart 3.1). These confidence

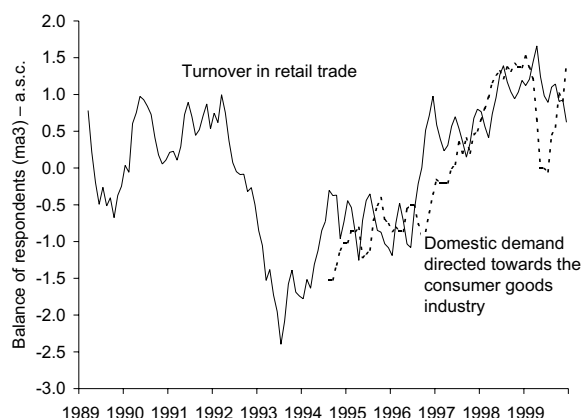
(3) According to the Monthly Manufacturing Industry Survey, in the second half of the year, the appraisal of domestic demand directed towards the consumer goods industry exhibited levels close to the ones of the first half. This suggests that the slowdown of private consumption shall not have affected Portuguese producers, which may be explained by the greater concentration the Portuguese Industry shows in current consumption goods.

**Chart 3.1**  
**PRIVATE CONSUMPTION: CONSUMERS' CONFIDENCE INDICATOR AND COINCIDENT INDICATOR**



Source: European Commission and *Banco de Portugal*.

**Chart 3.2**  
**PRIVATE CONSUMPTION: QUALITATIVE INDICATORS**

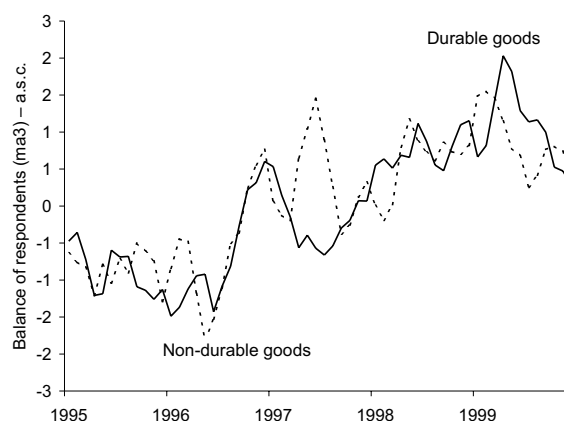


Source: *INE*, "Monthly Trade Survey" and "Monthly Manufacturing Industry Survey".

levels continued to reflect employment gains and the increase in real wages. Nevertheless, the disposable income of private individuals shall have slowed down in relation to 1998, namely due to the sharp fall in net interest received by households.

The slowdown of private consumption in the second half of the year reflected above all the behaviour of expenditure in durable goods. The reduction of the balance of respondents regarding turnover was particularly sharp at the level of retail trade of this kind of goods (chart 3.3). The survey to con-

**Chart 3.3**  
**TURNOVER**



Source: *INE*, "Monthly Trade Survey".

sumers of the European Commission also points towards a sharp reduction in households' intention to carry out large purchases. Also worth noting is the 2.0 per cent reduction sales of light passenger vehicles including 4x4 recorded in the second half; this development compares with a 24.7 per cent increase in the first half of the year<sup>(4),(5)</sup>.

The lower buoyancy of private consumption in the second half of 1999 is also related with some slowdown of households' expenditure in hotels, restaurants and transport services. Nights spent by residents in national hotels and similar establishments increased 1.4 per cent in the third quarter of 1999 (4.0 per cent in the first half and 6.6 per cent in 1998)<sup>(6)</sup>.

In the second half of 1999, investment shall have grown slightly less than in the first half of the year. In the second half of 1999, GFCF in construction recovered, while GFCF in equipment recorded again a lower dynamism. This behaviour of GFCF in equipment in the second half of the year was not fully expected, hence total GFCF might have grown below the average of

(4) Except where otherwise stated, all rates of change mentioned in the text are year-on-year rates of change.

(5) Sales of light passenger vehicles (including 4x4) dropped sharply in the last quarter of 1999, which may be partly due to the delay in the car tax (IA) actualization.

(6) Rates of change were obtained: in 1998, comparing revised data for 1998 and 1997; in 1999, comparing first version data and revised data for 1999 with first version data and revised data for 1998.



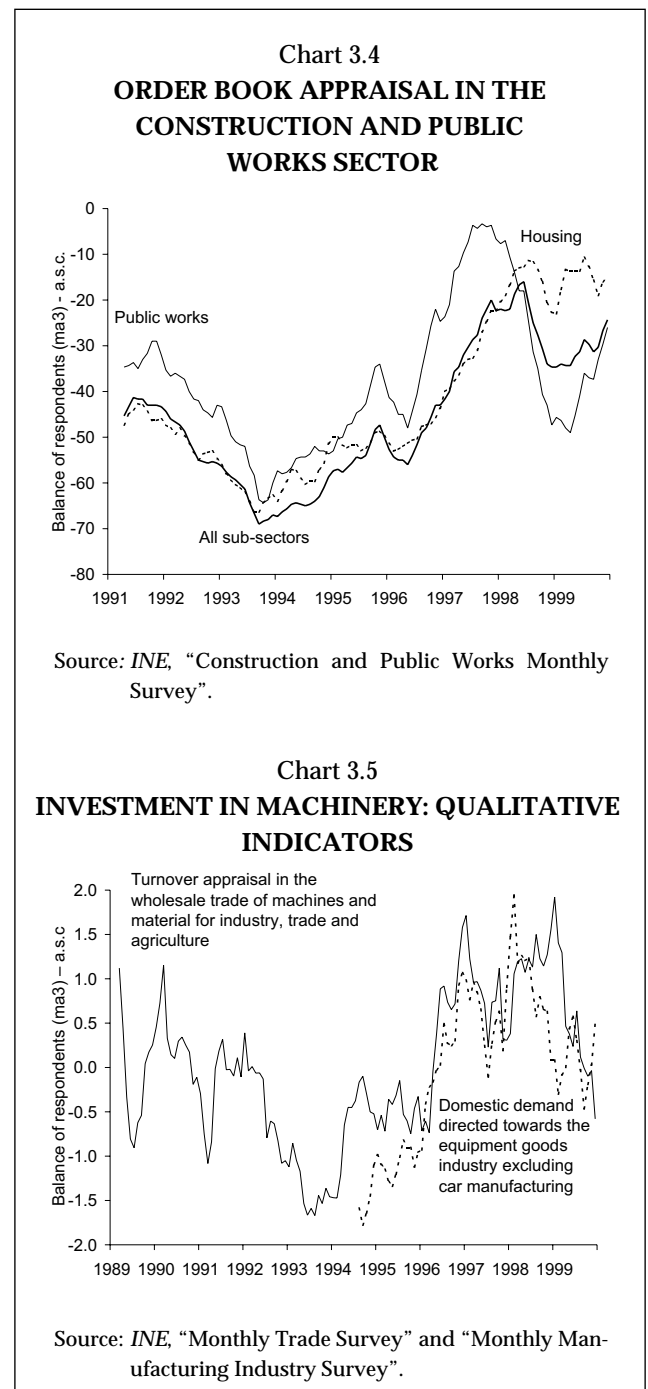
the forecast interval considered in the September EB (4¼ - 5¼ per cent, which compares with 9.8 per cent in 1998).

The available indicators point towards some acceleration of GFCF in construction in the second half of 1999, slightly greater than the one considered in the September EB. In the second half-year, cement sales grew 4.0 per cent, which compares with 2.1 per cent in the first half of the year. According to the Construction and Public Works Monthly Survey, the order book appraisal in the sector improved from the first half of the year, which resulted from the behaviour of the public works subsector (chart 3.4). On the contrary, the balance of respondents concerning the order book assessment in the residential building subsector stood below the level of the first half of 1999. Mortgage lending to private individuals recorded some slowdown (table 3.2). The data from the *Direcção-Geral do Tesouro* regarding new mortgage lending contracts also indicate a reduction in the number and the value of these contracts, which was particularly sharp in the subsidised credit regimes in the third quarter of the year (7). This suggests that the effects of changes in the mortgage subsidy scheme for housing purchase or construction are transmitting to households(8).

The available indicators suggest that in the second half of the year GFCF in machinery continued to grow clearly less than in 1998, in line with the previous forecast. The balance of respondents regarding the turnover of the wholesalers of machines and materials continued to decrease in the second half of the year. In the meantime, industrials of equipment goods excluding transport material became slightly less optimistic as regards domestic demand directed to their production (chart 3.5). Furthermore, according to the foreign trade data disclosed by the *INE*, nominal imports of this category of goods recorded a 10.6 per cent change in the period January-September 1999, which com-

(7) According to the *Direcção-Geral do Tesouro*, the number and the value of new loans granted decreased respectively by 21.6 and 13.9 per cent, in the third quarter of 1999 (35.4 and 44.0 per cent increases in the first half of the year). Considering only loans granted under the subsidised regime, the reduction reached 51.8 per cent in the number of contracts and 48.0 per cent in the overall amount lent (24.1 and 33.1 per cent increases, respectively, in the first half of the year).

(8) Regarding the changes introduced, see the June 1999 *Economic Bulletin*, Page 17.



pares with 9.3 per cent in the first half and 18.9 per cent in 1998 as a whole (9).

(9) The acceleration of nominal imports from the first half-year to the period January-September should be partly due to the behaviour of the deflator. Over the course of 1999, foreign trade deflators are estimated to have followed an upward path. According to data from the *Direcção-Geral das Relações Económicas Internacionais*, the rate of change of the prices in escudos of equipment good imports excluding transport material was -4.0 per cent in the first quarter and -2.3 per cent in the first half-year.

Table 3.2

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

	1997	1998	1999 <sup>(a)</sup>	Last month	1997		1998		1999		1997				1998				1999			
					1st half	2nd half	1st half	2nd half	1st half	2nd half	1stQ	2ndQ	3rdQ	4thQ	1stQ	2ndQ	3rdQ	4thQ	1stQ	2ndQ	3rdQ	4thQ
<b>Private consumption</b>																						
Retail Trade Turnover index.....	5.1	11.1	6.0	Sep	4.5	5.7	12.3	10.2	5.8													
Sales of light passenger cars incl. 4x4.....	-0.6	17.9	11.4	Dec	-2.8	1.9	13.7	22.4	24.7	-2.0	-3.4	-2.2	-0.9	4.6	5.5	21.9	23.1	21.9	34.9	16.0	12.0	-14.6
Bank credit to individuals for purposes other than housing.....	22.9	23.1	23.2	Nov	22.4	22.9	18.0	23.1	29.6		22.4	22.4	20.9	22.9	17.9	18.0	19.0	23.1	18.3	29.6	27.5	
<b>Investment</b>																						
Cement sales.....	11.9	4.7	3.1	Dec	19.5	5.3	4.6	4.7	2.1	4.0	22.6	16.8	9.4	0.9	10.0	-0.2	0.2	9.9	-0.6	4.8	5.6	2.3
Contracted construction works.....	26.1	-27.1	-7.6	Nov	66.9	-4.8	-26.2	-28.2	-28.2		73.1	61.5	-10.7	1.2	-14.8	-36.9	-14.5	-40.5	-26.4	-30.5	12.7	
Mortgage lending to individuals.....	27.4	34.8	30.2	Nov	25.7	27.4	31.4	34.8	36.9		25.8	25.7	28.0	27.4	29.5	31.4	32.6	34.8	36.5	36.9	32.5	
IPI of equipment goods excl. car manufacturing.....	-0.1	8.8	-1.7	Oct	-1.4	1.3	9.6	8.0	-1.6		-0.4	-2.4	1.0	1.6	8.6	10.5	8.3	7.6	0.6	-3.7	-3.0	
Imports of equipment goods excl. transport material <sup>(b)</sup> .....	14.7	22.3	10.6	Sep																		
Exports of equipment goods excl. transport material <sup>(b)</sup> .....	22.2	20.3	21.1	Sep																		
Sales of commercial vehicles under 3.5 ton.....	20.9	12.0	1.2	Dec	26.8	15.8	8.9	14.8	5.1	-2.4	28.2	25.4	19.5	13.1	14.7	2.9	6.9	21.0	-0.6	11.7	12.6	-12.6
Sales of commercial vehicles over 3.5 ton.....	32.0	15.8	19.2	Dec	28.3	35.4	31.3	2.4	21.7	16.5	14.7	41.0	44.5	28.8	67.4	3.8	0.9	3.6	10.8	35.1	34.0	2.6
Registrations of commercial vehicles over 3.5 ton.....	35.6	22.4	17.5	Dec	38.2	33.2	32.2	13.2	17.9	17.0	21.5	56.9	36.5	29.7	48.5	18.1	0.9	26.9	13.2	23.1	25.8	9.2
<b>Foreign trade<sup>(b)</sup></b>																						
Total exports.....	10.5	6.3	0.7	Sep	6.1	15.1	11.0	1.9	0.1		2.7	9.5	12.7	17.4	12.5	9.5	5.6	-1.3	1.3	-1.1	2.3	
Consumer goods exports.....	7.9	4.1	0.0	Sep																		
Equipment goods exports.....	12.6	14.0	6.6	Sep																		
Intermediate goods exports.....	12.8	5.1	-4.0	Sep																		
Fuel exports.....	9.7	-27.9	10.3	Sep																		
Total imports.....	13.1	12.6	6.4	Sep	10.8	15.4	16.3	9.1	4.5		9.0	12.6	16.0	14.9	16.0	16.6	11.3	7.3	4.6	4.4	10.9	
Consumer goods imports.....	11.3	17.8	9.2	Sep																		
Equipment goods imports.....	14.2	21.9	14.4	Sep																		
Intermediate goods imports.....	12.8	8.0	-5.1	Sep																		
Fuel imports.....	15.2	-23.3	18.7	Sep																		

Source: INE, *Direcção-Geral de Viação*, ACAP, Cimpor, Secil and ANEOP.

Notes:

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

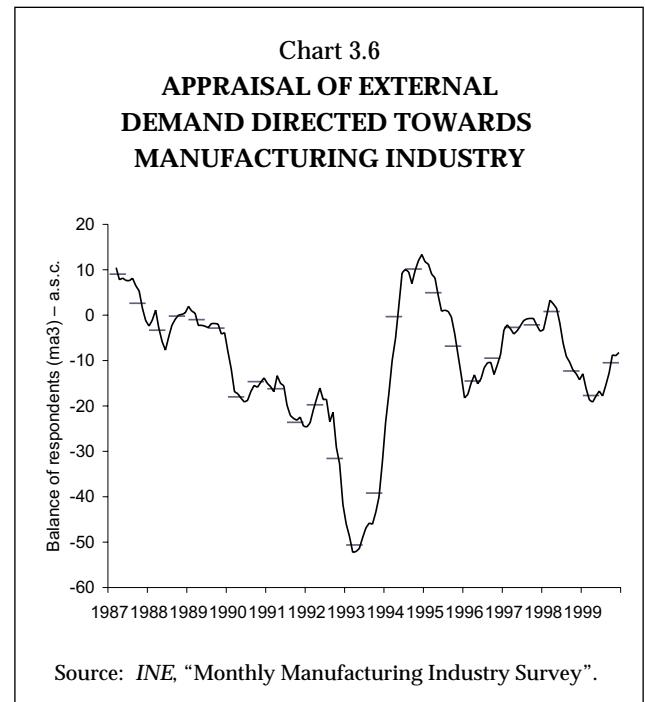
(b) The rates of change of exports and imports result from comparing definitive versions, in 1997 and in 1998, and preliminary declared values for the period January-September, in 1999.

In the second half of 1999, GFCF in transport material recorded a much greater slowdown than previously expected in the September EB. In this period, sales of commercial vehicles up to 3.5 ton fell 2.4 per cent, which compares with a 5.1 per cent increase in the first half of the year<sup>(10)</sup>. In turn, investment in commercial vehicles over 3.5 ton continued to grow significantly, according to the behaviour of the respective car plates (table 3.2).

Net external demand continued to render a negative contribution to output growth in the second half of 1999, though smaller in absolute value than in the first half-year. This development is broadly in agreement with the estimates presented in September. It should be noted that foreign trade data have continued to be significantly revised, which blurs data interpretation<sup>(11)</sup>.

In 1999 exports of goods and services shall grow less in real terms than in the previous year. According to the available data, this growth may stand close to the lower limit of the forecast interval presented in the September EB (3¼ - 4¼ per cent, which compares with 9.1 per cent in 1998). In the second half of 1996, exports of goods and services shall have recovered slightly, basically reflecting the stronger buoyancy of merchandise sales abroad, which had slowed down since mid-1998. In the meantime, exports of services shall have recorded some slowdown in the period, greatly resulting from the lower growth of tourism revenue. However, it should be noted that 1998 was an exceptional year from the point of view of tourism, with the Expo98 taking place (see section 6 — Balance of payments and international investment position).

According to the preliminary data available, in the third quarter of 1999, nominal merchandise exports grew 2.3 per cent, compared with 0.1 per cent in the first half of the year<sup>(12)</sup>. However, the nominal acceleration effectively recorded is probably greater than that conveyed by the presently available information, since the rates of change for



the latest months shall undergo greater revisions<sup>(13)</sup>. The behaviour of prices shall also provide an explanation for the nominal recovery of merchandise exports<sup>(14)</sup>. Nevertheless, this period shall have recorded some acceleration of exported volumes, in tune with the indications of an acceleration of external demand directed towards Portuguese producers, resulting from the effective acceleration of economic activity in the euro area. The behaviour of the external order book directed towards manufacturing industry suggests that recovery shall have proceeded in the last quarter of 1999 (chart 3.6). In annual terms, however, 1999 shall have seen a market share loss of Portuguese merchandise exports, between 0.5 and 1.0 per cent, which follows to a greater loss in the previous year (see Box "The Recent Performance of the Exporting Sector").

In 1999, imports of goods and services exhibited a lower dynamism than in 1998. As in the case of exports, the available data suggest that the

(10) See footnote 5.

(11) The monthly rates of change of merchandise exports and imports in 1999 continue to be subject to revisions (see the June and September 1999 Economic Bulletins). The pattern of revision of these rates has been irregular both as regards sign and size.

(12) According to the January to September 1999 version of the foreign trade data.

(13) See footnote 11. In the case of merchandise exports, revisions continue to be mostly to the upward, though by different sizes.

(14) According to the data disclosed by the *Direcção-Geral das Relações Económicas Internacionais*, the price in escudos of merchandise exports recorded a less negative change in the second quarter of 1999 when compared with the first quarter (-3.3 per cent in the first quarter, comparing with -2.0 per cent in the first half of the year). This trend shall have continued over the course of 1999.

growth of this aggregate will stand closer to the lower limit of the forecast interval presented in the September EB (7 - 8 per cent, which compares with 14.8 per cent in 1998).

According to preliminary data of the *INE*, nominal merchandise imports grew 6.4 per cent in the three first quarters of 1999 (4.5 per cent in the first half of the year)<sup>(15),(16)</sup>. This nominal recovery is estimated to reflect to a great extent the behaviour of prices, and shall be associated with a slowdown of imported volumes<sup>(17)</sup>. A slowdown of real merchandise imports is expected for the last quarter of the year, in tune with the behaviour of the domestic demand for durable consumer goods and investment in transport material. Imports of services are expected to have recorded less negative year-on-year changes than those recorded in the first half of the year.

An analysis of the behaviour of economic activity broken-down by activity sectors reveals that some recovery in activity shall have been recorded by the industrial sector and by the construction sector — especially in the public works sub-sector — in the second half of 1999, following to the slowdown recorded in the previous half-years (chart 3.4). Services kept being the most dynamic sector in the second half of the year — translated into strong net job creation (see the following section, on the Labour Market) — although some deceleration was recorded in relation to the first half of the year. All in all, these sectoral developments resulted in a smooth intra-annual profile for the economy as a whole.

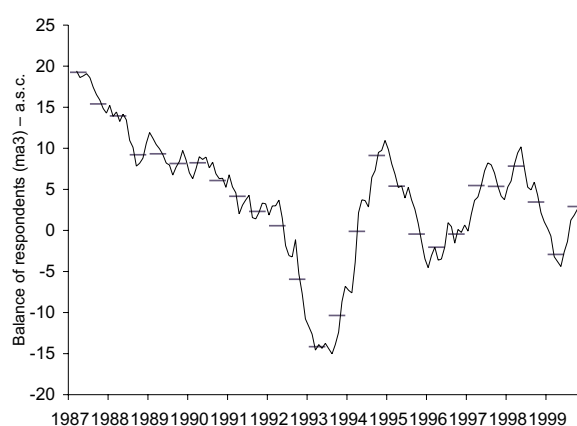
In what concerns the industrial sector, the information available for the second half of the year points towards a recovery of production in relation to the first half of 1999. In the period running from July to October 1999, production in manufacturing industry measured by the Industrial Production Index recorded a 1.2 per cent change

(15) According to the January to September 1999 version of the foreign trade data.

(16) See footnote 11. In the case of merchandise imports, the pattern of revision of growth rates has been irregular both as regards sign and size.

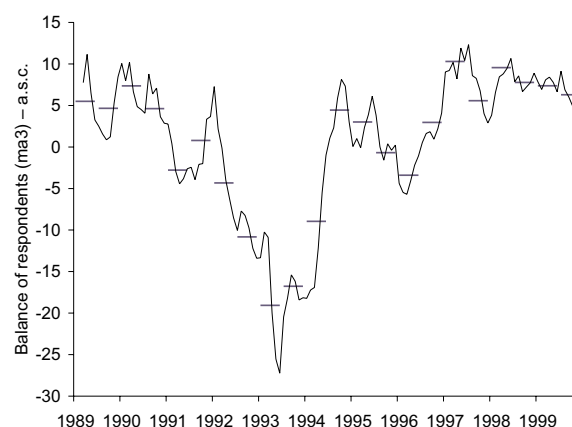
(17) According to the data from the *Direcção-Geral das Relações Económicas Internacionais*, the price in escudos of merchandise imports recorded a less negative change in the second quarter of 1999 than in the first quarter (-6.3 per cent in the first quarter, compared with -4.4 per cent in the first half of the year), the trend shall have proceeded throughout 1999.

Chart 3.7  
**CURRENT PRODUCTION**  
Manufacturing industry



Source: *INE*, "Monthly Manufacturing Industry Survey".

Chart 3.8  
**TURNOVER IN WHOLESALE TRADE**



Source: *INE*, "Monthly Trade Survey".

(which compares with a virtually null growth in the first half of the year; table 3.3). The Monthly Manufacturing Industry Survey indicates that the balance of respondents regarding the behaviour of current production (chart 3.7) continued to improve in late 1999, which resulted above all from the improvement of the external order book.

As for services, worth noting is the lower buoyancy trade exhibited in the second half of the year, according to the balance of respondents on the turnover in wholesale and retail trade (charts 3.2 and 3.8). The slowdown of the turnover in retail trade shall be linked to the behaviour of the private consumption of goods in this period. At the

Table 3.3

## SUPPLY INDICATORS

		1997	1998	1999 <sup>(a)</sup>	Last month						1997				1998				1999			
							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	3rd Q
<b>Industry</b>																						
Industrial production indices (1995 = 100) .....																						
Manufacturing industry .....	yr-n-yr	2.9	3.7	0.5	Oct	3.2	2.6	4.2	3.3	0.0	3.7	2.7	1.5	3.6	4.4	3.9	4.1	2.6	0.8	-0.8	1.1	
Consumer goods industry .....	yr-n-yr	-0.6	5.6	-1.6	Oct	0.7	-2.0	5.2	6.0	-2.5	2.0	-0.5	-2.0	-1.9	4.1	6.2	6.9	5.0	-1.2	-3.8	-0.5	
Investment goods industry .....	yr-n-yr	0.7	5.5	-4.5	Oct	-4.2	6.5	8.0	2.8	-2.3	-5.2	-3.3	-1.7	13.9	8.1	7.9	10.2	-2.9	2.5	-6.7	-7.4	
Intermediate goods industry .....	yr-n-yr	4.4	5.9	6.4	Oct	3.5	5.4	6.0	5.9	6.7	3.9	3.2	2.8	7.9	6.0	5.9	6.4	5.4	5.6	7.7	6.5	
Turnover index (1995 = 100)																						
Manufacturing industry .....	yr-n-yr	5.9	6.2	-1.2	Oct	4.0	7.7	8.9	3.6	-1.4	1.2	6.7	7.2	8.2	11.1	6.9	5.4	1.8	-1.3	-1.5	-0.5	
Consumer goods industry .....	yr-n-yr	2.8	6.0	-1.3	Oct	1.0	4.5	8.5	3.6	-1.3	-1.5	3.6	3.9	5.2	10.6	6.6	5.7	1.5	-1.8	-0.9	-1.1	
Investment goods industry .....	yr-n-yr	8.1	12.2	-3.9	Oct	1.3	15.1	17.7	7.2	-1.2	-2.3	4.6	9.1	20.3	19.4	16.3	16.6	-0.1	5.2	-6.8	-7.6	
Intermediate goods industry .....	yr-n-yr	6.6	4.8	1.1	Oct	6.7	6.5	6.5	3.2	0.4	3.2	10.2	6.6	6.5	8.9	4.4	3.0	3.3	-0.7	1.4	2.9	
Rate of productive capacity utilisation																						
Manufacturing industry .....	%	81	82	80	3rd Q	80	81	82	81	80	80	80	82	81	83	81	81	82	80	81	81	
Consumer goods industry .....	%	79	79	79	3rd Q	78	79	79	80	78	77	79	81	78	80	78	80	80	79	78	80	
Investment goods industry, excl. car manufacturing ..	%	84	87	88	3rd Q	83	86	87	87	87	84	82	86	85	85	90	89	85	85	89	90	
Intermediate goods industry .....	%	81	83	81	3rd Q	80	82	83	82	81	80	81	83	82	84	83	82	83	80	82	81	
<b>Construction</b>																						
Rate of productive capacity utilisation .....	%	79	79	75	3rd Q	80	79	81	77	75	77	82	81	77	82	79	77	76	73	76	77	

Source: *INE*.

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

Note:

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

level of wholesale trade, the lower dynamism sales showed reflects the behaviour of the trade of durable consumer goods and of investment goods. Activity in the hotels, restaurants and transport sectors shall also have slowed in the second half of the year. It should be noted that in 1998 these sectors had seen a particularly significant growth linked to the Expo98. The total number of nights spent at national hotels and similar establishments decreased 3.7 per cent in the third quarter of 1999

(which compares with a 2.9 per cent increase in the first half of the year and 9.6 per cent in 1998), especially reflecting the reduction in the bed nights spent by non-residents<sup>(18), (19)</sup>.

(18) See footnote 6.

(19) The number of nights spent by non-residents in national hotels and similar establishments fell 5.7 per cent in the third quarter of 1999, against a 2.4 per cent increase in the first half of the year and 10.8 per cent in 1998.

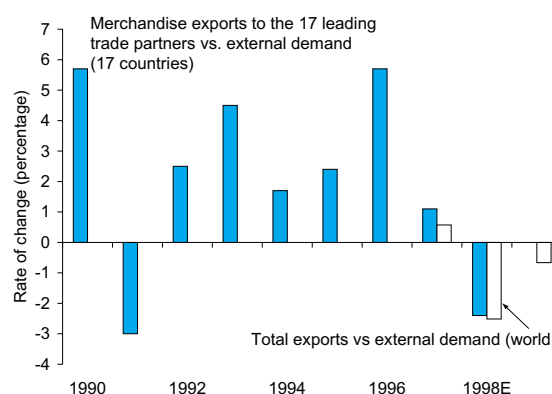
### THE RECENT PERFORMANCE OF THE EXPORTING SECTOR

In 1998, the market share of Portuguese merchandise exports recorded a loss of around 2.5 per cent. According to very preliminary estimates based on the latest information available, 1999 shall have recorded a further market share loss, though a smaller one (between 0.5 and 1.0 per cent). The change in the market share is obtained by comparing the real rate of growth of Portuguese exports with the average rate of growth of external demand directed towards the Portuguese economy<sup>(1)</sup>. The latter indicator is calculated as the average of the rates of growth in volume terms of the manufactured imports of destination countries<sup>(2)</sup>, weighted according to the relative importance of these countries in the geographical structure of Portuguese exports.

Chart 1 presents the behaviour of the market share of Portuguese exports over the course of the 1990s, according to two slightly different indicators in what concerns the set of trade partners taken into account<sup>(3)</sup>. One may observe that the recent share loss contrasts with the behaviour recorded in previous years, which were characterised by market share gains (except for 1991) some years having exhibited quite significant share increases.

In the context of the European Union (EU), most economies also recorded a loss in the share of their exports in 1998 and 1999. This market share loss was particularly sharp in Italy, the United Kingdom, Greece and Denmark (table 1)<sup>(4)</sup>. Among the EU countries, only Germany, the Netherlands, Sweden and most notably Ireland recorded market share gains in both years as a whole. Ireland is clearly distinguished from the remain-

Chart 1  
MARKET SHARE OF PORTUGUESE  
MERCHANDISE EXPORTS<sup>(a)</sup>



Source: INE, *Direcção-Geral de Relações Económicas Internacionais*, Banco de Portugal and OECD.

Note:

(a) Real growth of merchandise exports versus real growth of external demand. An increase denotes a market share gain of Portuguese exporters.

(1) More precisely, we have: rate change share =  $(1 + \text{real rate change exports}) / (1 + \text{rate change external demand}) - 1$ .

(2) Using OECD as a source.

(3) In one of the indicators, the comparison between exports and external demand is restricted to the 17 leading destination countries for Portuguese exports (Germany, Spain, France, United Kingdom, Netherlands, United States, Belgium, Luxembourg, Italy, Sweden, Denmark, Japan, Ireland, Switzerland, Austria, Norway, Finland and Canada), while in the other indicator — the only one that is possible to estimate for 1999 — compares total merchandise exports with the external demand of all trade partners.

Table 1

MARKET SHARE OF PORTUGUESE EXPORTS

	Rate of change			
	1996	1997	1998	1999
European Union...	n.a.	n.a.	-1.2	-1.6
Ireland .....	7.3	5.2	16.3	7.6
Netherlands .....	0.3	0.2	2.2	1.5
Germany .....	-0.6	-1.4	0.8	0.7
Sweden .....	-1.3	0.2	0.5	3.7
France .....	-0.5	3.5	-0.2	-0.7
Austria .....	-1.8	3.7	-0.3	-3.6
Finland .....	-0.7	2.2	-1.4	-3.0
Spain .....	5.2	2.3	-1.8	1.7
Portugal.....	6.7	0.7	-3.0	0.0
Belgium.....	-3.3	-1.6	-3.3	-3.3
Italy .....	-1.9	-5.3	-5.5	-6.5
United Kingdom ..	3.5	-1.6	-5.6	-8.5
Denmark.....	-3.4	-3.2	-7.6	-1.5
Greece .....	23.1	1.7	-14.5	-2.5
Hungary .....	27.0	24.4	17.0	12.6
Czech Republic...	-4.5	8.2	6.2	5.9
Poland .....	5.9	9.5	1.2	-6.0
South Korea .....	12.0	14.5	11.3	6.7
Dynamic Asian Economies (a) ...	n.a.	n.a.	0.4	-1.7
Other Asian Economies.....	n.a.	n.a.	1.5	-2.0

Source: OECD, Economic Outlook, December 1999.

Note:

(a) Taiwan, Hong-Kong, Indonesia, Malaysia, Philippines, Singapore, Thailand.

ing countries, having reached market share gains only comparable to those achieved by some Eastern European countries and by South Korea.

The financial crisis that affected several emerging markets from the second half of 1997 — firstly those of South-east Asia, following to Russia and Brazil — leading in some cases to deep recessions, led to a reduction of external demand directed towards the EU economies, by different amounts according to countries<sup>(4)</sup>. However, the major factor behind the fall of the export shares of most European countries was the strong devaluation of the currencies of most emerging economies that were affected by the crisis. This development helped these countries achieve significant improve-

Chart 2A

NOMINAL EXCHANGE RATE

Rates vis-à-vis the escudo – weekly values

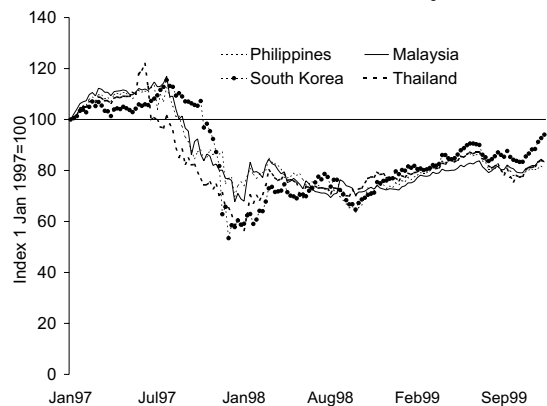
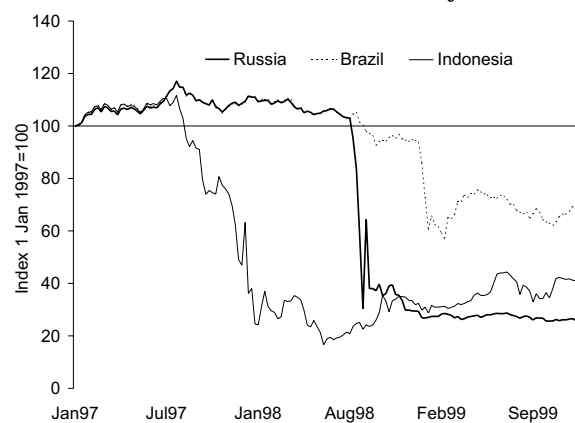


Chart 2B

NOMINAL EXCHANGE RATE

Rates vis-à-vis the escudo – weekly values

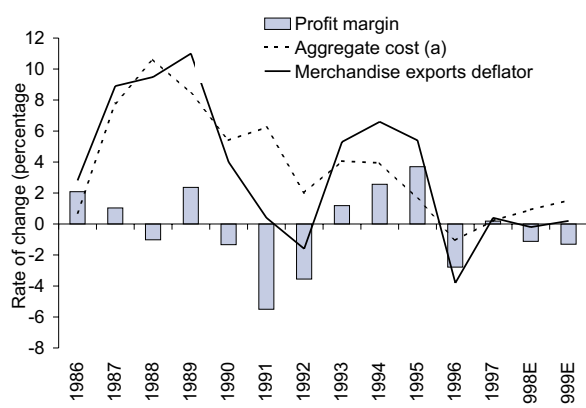


Source: Datastream.

(4) The figures reported in table 1 are those published in the December 1999 OECD Economic Outlook. For Portugal, the figures in table 1 differ slightly from those mentioned in the text and used to build chart 1, which are estimated by the Banco de Portugal. Differences are greatly due to the fact that the Banco de Portugal uses more recent data meanwhile disclosed, and in the case of 1999, also due to different forecasting scenarios.

(5) It should be noted that the pace of growth of exports of the EU countries as a whole to the countries outside the European Union decreased significantly, from 15.3 per cent in 1997 to 1.5 per cent in 1998. Stress should be laid on the 18.3 per cent reduction exports to the Asian countries (excluding middle Eastern and Eastern countries) recorded in 1998 (against a 9.6 per cent growth in 1997) and the lower growth of the value of exports to the Latin American countries (7.9 per cent in 1998, which compares with 27.0 per cent in 1997). In line with the other EU countries, the value of Portuguese exports to most Asian countries and to Russia recorded even sharper falls than in 1997. Most notably, exported values decreased 13.4 per cent to Japan, 36.5 per cent to Singapore, 63.4 per cent to South Korea and 42.3 per cent to Russia.

Chart 3  
UNIT PROFIT MARGIN IN THE  
EXPORTING SECTOR

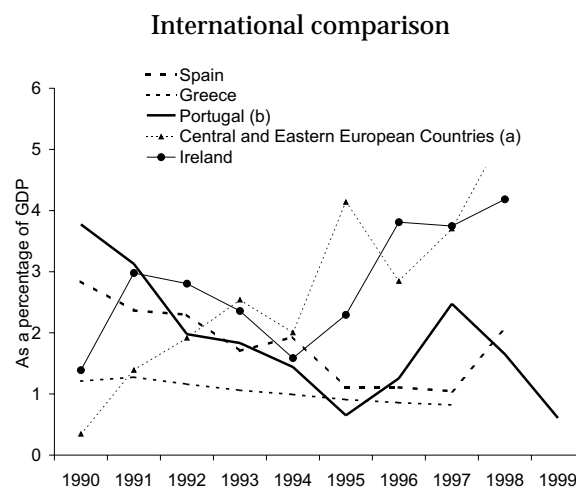


Source: INE, *Direção-Geral das Relações Económicas Internacionais*, *Ministério do Trabalho e da Solidariedade* and *Banco de Portugal*.

Note:

- (a) Unit labour cost in manufacturing industry (ULC) and intermediate goods import deflator, aggregated according to the wage and import content of exports of goods and services, of the 1994 input-output matrix.

Chart 4  
DIRECT INVESTMENT RECEIVED  
FROM ABROAD



Source: IMF, OECD and *Banco de Portugal*.

Notes:

- (a) Hungary, Poland, Rumania, Czech Republic and Slovakia (Czechoslovakia up to 1992).  
(b) From 1996 onwards, direct investment flows include item "re-invested profits", therefore they are not fully comparable with figures for previous years. Figures for Portugal referring to 1999 were estimated according to the information available up to October 1999.

ments in their competitive position (charts 2A and 2B). The strong growth of EU imports from Asian countries in 1998 is particularly illustrative of the competitiveness gain recorded by the exports of some countries in this geographical area. EU imports from Thailand, Malaysia, Singapore, South Korea, Taiwan and Hong Kong grew 23.8 per cent in real terms in 1998 (8.1 per cent in 1997)<sup>(6)</sup>.

Therefore, part of the phenomenon of the market share loss in many European countries — Portugal included — is due to the loss of competitiveness of their exports vis-à-vis those of certain emerging markets, most notably some Southern Asian countries. The fact that European countries show quite different structures of exports by products helps explaining why market shares did not exhibit a more homogenous behaviour in the EU. Countries more specialised in exporting commodities and consumer goods — i.e., products exhibiting low differentiation where price competition is the most important — were particularly affected. It should be noted that more than half of the value of Portuguese exports corresponds to consumer goods (half of which, in turn, are clothing, footwear and textiles).

Though clearly influenced by the competitiveness gain of the South Eastern Asian countries that carried out strong currency devaluations, this may not account for the full reduction Portuguese exports' market share recorded recently. Among the other factors, stress should be laid on the particularly strong growth of domestic demand in a situation close to full employment. This factor — whose impact is difficult to measure empirically — may be leading to some detour to the domestic market of production which under different circum-

(6) This development was accompanied by a reduction of the imports deflator of these countries, by 7.2 per cent in 1998 (6.1 per cent increase in 1997).



Table 2

## FOREIGN DIRECT INVESTMENT IN PORTUGAL

	Balance PTE billion				Weight on the total percentage			
	1996	1997	1998	1999	1996	1997	1998	1999
				Jan-Oct				Jan-Oct
<b>Total</b> .....	<b>210.5</b>	<b>447.0</b>	<b>316.9</b>	<b>86.9</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
By economic activity of the resident sector:								
Agriculture, hunting forestry and fishing .....	1.9	0.6	1.0	0.8	0.9	0.1	0.3	0.9
Mining and quarrying .....	-1.6	-2.1	-2.1	-1.6	-0.8	-0.5	-0.7	-1.8
Manufacturing .....	13.9	14.4	-5.4	15.4	6.6	3.2	-1.7	17.7
Electricity, gas and water .....	-12.4	-17.0	53.5	-10.2	-5.9	-3.8	16.9	-11.7
Construction .....	6.8	3.4	6.2	5.2	3.2	0.8	1.9	6.0
Wholesale and retail trade, repairs, hotels and restaurants .....	64.7	148.1	44.4	21.3	30.7	33.1	14.0	24.5
Transports, storage and communications .....	13.9	108.2	13.0	31.7	6.6	24.2	4.1	36.5
Financial intermediation .....	23.8	103.9	39.2	-153.9	11.3	23.2	12.4	-177.1
Real estate, rentals and other business activities <sup>(a)</sup> .....	74.9	72.3	146.7	150.5	35.6	16.2	46.3	173.2
Other activities .....	24.7	15.2	20.5	27.7	11.7	3.4	6.5	31.8

Note:

(a) Direct investment operations carried out by holding corporations are included in "other business activities" according to NACE rev. 2.

stances would be directed to the external market. Another factor is the reduction in recent years of the unit profit margins of exporting companies (chart 3).

The unit profit margin indicator results from comparing the unit price of merchandise exports with a cost measure which considers unit labour costs in manufacturing industry and the import prices of intermediate goods<sup>(7)</sup>. In this sense, if unit profit margin reductions are persistent, they may convey a deterioration of the competitiveness conditions of the exporting sector. In 1998 and 1999, the reduction recorded resulted chiefly from the increase in unit labour costs (i.e., labour costs adjusted for productivity growth).

In addition to the competitiveness factors of a short-term nature referred above, the recent behaviour of the market share of Portuguese exports may also reflect factors of a more structural nature, related with an apparent fading out of Foreign Direct Investment (FDI) plants in Portugal. These plants basically generate production oriented towards the external market. A significant part of the market share gain of Portuguese exports in the mid-1990s (chart 1) was related with the increase in the exporting capacity due to the beginning of activity of new industrial production plants, installed in the wake of FDI projects. In the last two years, FDI flows exhibited some reversal, contrasting with the developments in economies like Ireland and some Eastern European countries (chart 4) — whose exports have been recording expressive market share gains (table 1).

The overall amount of FDI in the Portuguese economy is relatively low when compared with the cases of Ireland and some countries of Eastern Europe; furthermore, conversely to these countries, FDI in Portugal has not been destined mostly to export-oriented projects. Indeed, in recent years, FDI in the Portuguese economy has been greatly channelled to non-tradable sectors and not to activities oriented towards exports or to import

(7) Aggregated according to the wage and import content of exports of goods and services in the 1994 input-output matrix.

substitution (table 2) — even when taking into account that part of investments in industry are classified, according to the Balance of Payments Statistics, under investment in services supplied to companies<sup>(8)</sup>. This feature is particularly important, since in the past FDI associated with export-oriented industrial plants shall have contributed to technological improvement and to the diversification of the national productive fabric — allowing for the broadening of the exports basis<sup>(9)</sup> and for the reduction of Portuguese exports' concentration in traditional sectors.

We have seen that many factors may account for the recent loss of market share experienced by Portuguese exports. Some of these are of a short-term nature, while others are structural. Among the first, mention was made of the devaluation of the currencies of some South-Eastern Asian economies, the eventual detour to the domestic market (as an outcome of the buoyancy shown by domestic demand) of production that under other circumstances would be directed to exports, and the deterioration in the last two years of the unit profit margin in the exporting sector indicator, due to the rise in unit labour costs. As regards factors of a more structural nature, stress was laid on the apparently diminishing capacity of attracting foreign direct investment projects oriented to the exporting activity — in a context where the European Union deepens its economic relations with Central and Eastern European countries, namely through leveraging trade constraints with these countries, and where trade liberalisation has intensified world wide. The only factors that are bound to be influenced in the short run are the pace of growth of domestic demand and the profitability of exporting firms. Therefore, it is crucial to promote fiscal consolidation — in the sense of moderating domestic demand growth — and the tighter contention of unit labour cost increases. If these efforts are not made, in the medium-term the growth of the Portuguese economy may become constrained, with consequences at the level of the unemployment level and the real convergence process.

(8) FDI operations in holding companies are classified by the Balance of Payments Statistics under "Other Services Supplied to Companies", according to NACE rev.1, regardless of the activity controlled by those holding companies.

(9) There is empirical evidence that foreign equity companies are in general more directed towards export markets than domestic companies. See S. Cabral (1996), "Comparative Export Behaviour of Foreign and Domestic Firms in Portugal," Banco de Portugal, WP 8-96.

#### 4. LABOUR MARKET

In 1999, the main labour market indicators continued to indicate a strong sensitivity to the cyclical changes in economic activity. The unemployment rate decreased again, while total employment and wage-earners grew strongly; the participation rate increased, and long-term unemployment decreased.

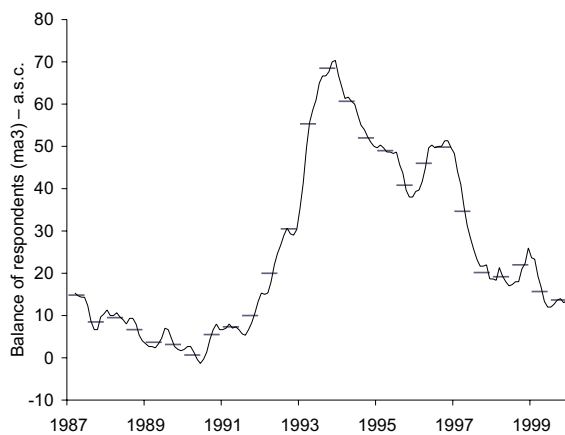
According to the Employment Survey of the INE, the unemployment rate recorded a further reduction in the third quarter of 1999, to 4.2 per cent (4.7 per cent in the same period of the previous year). In the first half of 1999, the unemployment rate had already decreased 0.6 percentage points from one year before. In the first three quarters of the year, the unemployment rate decreased 0.5 p.p. in relation to the same period of 1998, while

total employment grew 1.9 per cent. The behaviour of these indicators proved slightly more favourable than that anticipated according to an Okun law<sup>(20)</sup> for the Portuguese economy. Indeed, the latest information indicates that the unemployment rate shall stand slightly below the level projected in the September EB (4.6 per cent), and that total employment shall grow more than the disclosed forecast (1.5 per cent)<sup>(21)</sup>. A possible explanation for the latter outcome has to do with the recent structure of economic growth. The sectors that exhibited a greater buoyancy were those more labour-intensive — services, and to a lesser extent, construction — which translated into greater net

(20) Okun's law relates the unemployment rate with the deviation of GDP from its linear trend.

(21) Estimated according to an Okun relationship.

Chart 4.1  
UNEMPLOYMENT PERSPECTIVES FOR THE  
FOLLOWING TWELVE MONTHS



Source: European Commission.

job creation. Meanwhile, in the first three quarters of 1999 the Employment Volume Index<sup>(22)</sup> grew 0.7 per cent in year-on-year terms, thus less than the growth of total employment, measured by the number of effectively employed individuals.

The labour market situation continued to be characterised by some tension. According to the Monthly Survey conducted by the *INE*, some difficulties in hiring workers persisted, especially in some sectors. Stress should be laid on the construction sector, where the share of companies referring difficulties in hiring skilled staff as the leading obstacle to activity rose to 52 per cent in the last quarter of 1999, from 37 per cent one year before. In the industrial sector, this difficulty was indicated as the major obstacle by around 13 per cent of industrials in the third quarter of 1999 (14 per cent in the same period of the previous year). In the trade sector, difficulties in hiring skilled staff were pointed out as one of the leading factors limiting activity by around 8 per cent of companies in the third quarter — a less significant percentage, which nonetheless accounts for an increase from the same period in the previous year (6 per cent of the total).

(22) The Employment Volume Index is an indicator of the behaviour of employment transformed into the equivalent in full time, translated in the standard usual duration. This index is determined taking into account the number of workers effectively employed normalised to this standard usual duration for the respective activity sector.

In the third quarter of 1999, the number of unemployed individuals decreased 8.4 per cent from the same period in 1998 (10.3 per cent reduction in the first half of 1999). A reduction was recorded both by the number of first-job searchers (7.3 per cent) as by new-job seekers (13.6 per cent). In the third quarter of 1999, long-term unemployment decreased again as a proportion of total unemployment, reaching 37.0 per cent (38.2 per cent in the first half of the year). The information of the *Instituto do Emprego e Formação Profissional* suggests that the reduction of unemployment shall have proceeded in the last quarter of the year. In this period, the number of registered unemployed workers decreased 12.0 per cent (12.1 per cent reduction in the third quarter of the year). It should also be noted that consumers' expectations regarding unemployment in the following twelve months continued to exhibit a downward trend in the second half of the year, according to the Monthly Surveys of the European Commission (chart 4.1).

The rise in employment had as a result the reduction of the unemployment population but also an increase in the participation rate. This increase was particularly strong in the third quarter. Considering only individuals aged between 15 and 64 years old, the activity rate amounted to 70.6 per cent, increasing 0.7 p.p. from the same period of the previous year. This development suggests that labour market conditions are inducing the participation of individuals that under normal circumstances were probably out from this market.

In the third quarter of 1999, total employment grew 2.0 per cent in year-on-year terms (1.8 per cent in the first half of 1999), which exceeded the growth implicit in the forecast presented in the September EB. As referred, labour market participation increased significantly in this quarter.

The increase in total employment measured by the number of employed individuals is greater than the change in the Employment Volume Index<sup>(23)</sup>, which only increased 0.7 per cent in the first three quarters of 1999 (table 4.1). This behaviour reflects a reduction of the average duration of the working schedule, which is most probably related to the legislation that established the reduction of working weeks greater than 40 hours. As

(23) See this previous footnote.

Table 4.1

**TOTAL EMPLOYMENT ACCORDING TO ACTIVITY SECTOR**

Year-on-year rate of change

	Thousands				Employment Volume Index <sup>(a)</sup>			
	1999				1999			
	1st Q	2nd Q	3rd Q	Accumulated	1st Q	2nd Q	3rd Q	Accumulated
Agriculture, forestry and fisheries . . . . .	-4.3	-6.4	-4.4	-5.0	-6.1	-10.1	-9.3	-8.5
Industry, construction, energy and water . . . . .	1.8	-0.9	0.1	0.3	0.7	-0.3	-0.3	0.0
Services . . . . .	4.4	5.0	5.2	4.8	3.3	3.2	4.1	3.6
Total . . . . .	2.3	1.3	2.0	1.9	1.2	0.2	0.7	0.7

Note:

(a) The Employment Volume Index is an indicator of the behaviour of employment transformed into the equivalent in full time, translated in the standard usual duration. This index is determined taking into account the number of workers effectively employed normalised to this standard usual duration for the respective activity sector.

recorded in the previous two years, the proportion of employees whose usual working week exceeds 41 hours fell sharply in the first three quarters in 1999.

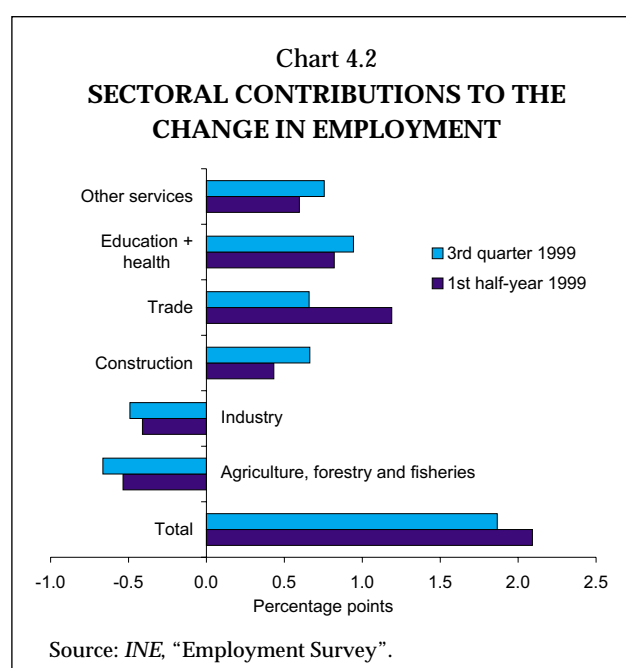
For the increase employment recorded in the third quarter of 1999 contributed again the growth in the number of wage-earners; by 3.4 per cent (3.6 per cent in the first half of the year). Conversely, self-employment decreased again, by 1.4 per cent (2.4 per cent reduction in the first half-year), due to the reduction in the number of self-employed workers with no employees.

The breakdown of the change in the number of wage-earners by kind of contract shows that the number of permanently-contracted workers increased 1.4 per cent in the third quarter of 1999 (1.8 per cent in the first half of the year). In the same period, the number of fixed-term contracted workers increased 12.1 per cent (10.7 per cent in the first half-year). Workers classified as suppliers of services (“green receipts”) and seasonally or occasionally contracted workers also continued to grow significantly, respectively by 16.3 and 12.8 per cent (22.9 and 15.8 per cent in the first half-year).

The sectoral breakdown of employment reveals that, in the third quarter of 1999, the strong pace of net job creation in the services and the construction sectors proceeded (5.1 and 3.9 per cent, respectively), alongside the employment reduction in the agriculture, forestry and fisheries sector and in manufacturing industry (reductions of 4.1 and

1.6 per cent respectively). In this period, worth noting is the contribution given by the services sector to the change in total employment, especially by the wholesale and retail trade sector (chart 4.2).

The strong sensitivity of real wages to the unemployment level — a distinctive characteristic of the Portuguese labour market — explains that the increase of nominal wages effectively paid to the private sector in 1999 exceeded, as in 1998, wage remunerations implicit in collective agreements. According to collective agreements registered in 1999, average contracted wages implicit in collec-



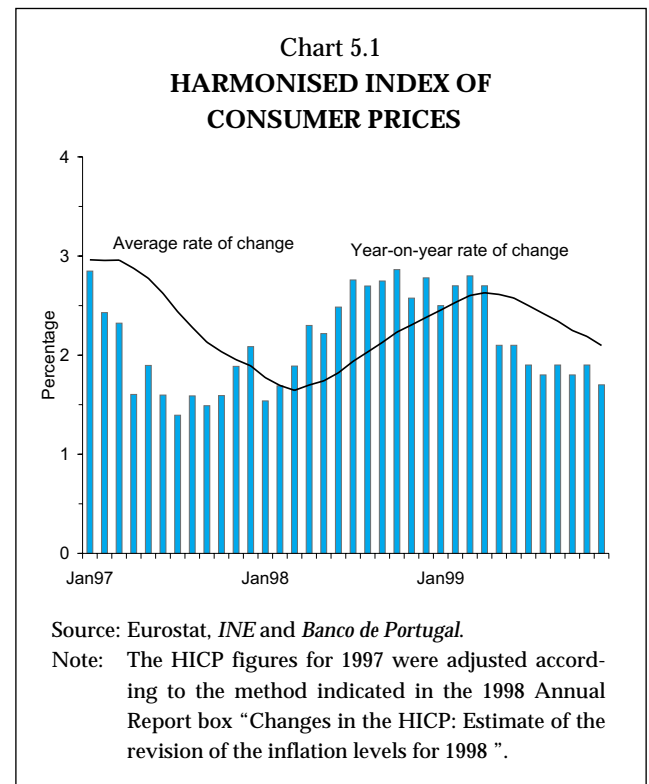
tive agreements for the private sector covering 1,236.7 thousand workers (1,348.7 thousand in 1998) recorded a 3.4 per cent nominal increase, thus accounting for an acceleration in relation to the previous year (3.1 per cent). The estimates of the *Banco de Portugal* disclosed in the September 1999 EB point towards a growth of compensation per employee in the private sector surpassing that of contracted wages by about 2 p.p., accounting for a 5.4 per cent growth (5.1 per cent in 1998).

## 5. INFLATION

The rate of inflation in Portugal remained stable in the last quarter of 1999, after having decreased sharply in the previous two quarters. The reduction of the inflation rate in 1999 is chiefly explained by the adjustment to the excessive price increases recorded in 1998 — which had been linked to transitory factors — since there were no significant changes in the main inflation determinants in the current year. In 1999, domestic economic conditions continued to be characterised by some tension in the labour market and by a high pace of growth of domestic demand; meanwhile, the contribution of the imports deflator to inflation, in annual average terms, must not have been significantly different from the one recorded in the previous year.

Three factors had contributed significantly to the rise in inflation in 1998: the effects of the depreciation of the escudo exchange rate, associated with its convergence towards the central parities over the period of transition to the euro, the excessive price increase in some foodstuff goods and the effects of the Expo98 over the prices of some services. Therefore, the fading out of these effects allowed a reduction of the rate of inflation in 1999 to be foreseen. This projection was confirmed in the second and third quarters of 1999.

In the last quarter of 1999, the year-on-year rate of change of the Harmonised Index of Consumer Prices (HICP) stood at 1.8 per cent, after the values of 2.7, 2.3 and 1.9 per cent recorded in the first three quarters of the year. Given the acceleration path prices over the course of 1998, the reduction of the average inflation rate was less significant (chart 5.1). Indeed, in 1999 the average rate of inflation stood at 2.2 per cent, which compares with 2.4 per cent<sup>(24)</sup> in 1998.



The behaviour of the trend inflation indicator, trimmed mean at 10 per cent, confirms that a significant part of the reduction of inflation recorded in 1999 is explained by the correction of the anomalous behaviour of prices in 1998 (chart 5.2). Indeed, while the Consumer Price Index (CPI) slowed down 0.5 percentage points (from 2.8 per cent in 1998 to 2.3 per cent in 1999), the trimmed mean indicator decreased only 0.2 percentage points (from 2.3 to 2.1 per cent).

As regards external factors conditioning price developments, it should be noted that the imports deflator will have inverted the markedly downward path recorded up to the first quarter of 1999. According to the information of the *Direcção-Geral das Relações Internacionais*, prices in escudos of merchandise imports recorded a -4.4 per cent year-on-year change in the first half of 1999 as a whole, after having fallen 6.3 per cent in the first quarter of 1999. This smaller fall will have been strongly influenced by the behaviour of the prices of fuel imports (from a -23.9 per cent change in the first quarter to -10 per cent in the first half), and to

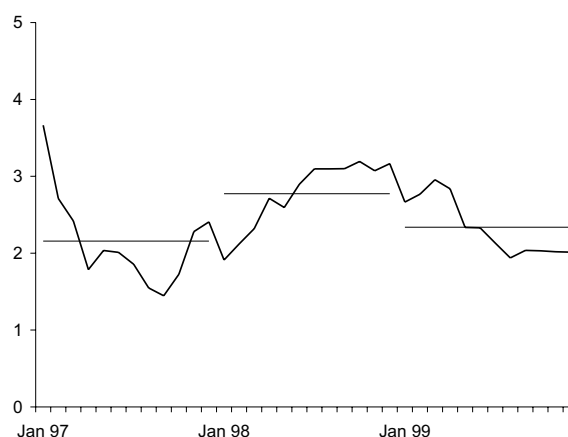
(24) The figures for 1998 are adjusted as described in Box "Changes in the HICP: Estimate of the revision of the inflation levels for 1998" in the 1998 Annual Report.

a lesser extent by the behaviour of import prices of intermediate goods (from -10.5 to -8.9 per cent). As for the deflator of consumer goods imports, its year-on-year rate changed from -1.7 per cent in the first quarter to -0.5 per cent in the first half-year. In the context of a US dollar appreciation, of the rise in the oil price and of a stronger world economic growth, import prices are projected to continue accelerating in the second half of 1999. Indeed, in annual average terms, the imports deflator is expected to record a virtually null change in 1999.

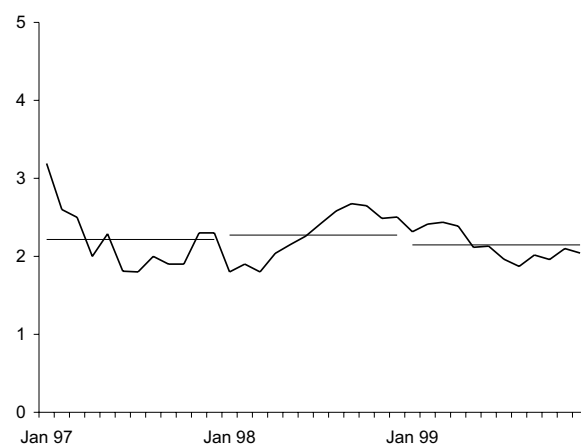
Nevertheless, despite its particularly marked intra-annual profile, the contribution of the imports deflator to the growth of consumer prices in 1999 will not have been particularly different from the one seen in 1998. First, a significant part of this acceleration is explained by the behaviour of import prices of energy, whose direct impact on the CPI has been neutralised, and also by the behaviour of the prices of intermediate goods, which have no direct impact on consumer prices. Second, the effects on the inflation rate in 1999 will have been attenuated not only by the downward path of import prices up to the first quarter of 1999, but also by the existence of a lag in the transmission of import price fluctuation to consumer prices. In this context, the effects on inflation due to the behaviour of import prices over the course of 1999 are expected to occur mostly in 2000.

In what concerns domestic factors conditioning the behaviour of prices, stress should be laid on the persistence of some tension in the labour market — described in the previous section — which has resulted in the maintenance of a high rate of growth of wages. This situation will have impeded a sharper slowdown of prices in the services sector, while also exerting pressures towards the reduction of profit margins or the deterioration of price-competitiveness in the sectors more exposed to external competition. In the same direction, also worth noting is the strong growth of domestic demand, more notably private consumption, though its effects continue to be reflected above all in the worsening of the trade deficit, due to the high level of openness of the Portuguese economy. Nevertheless, the effects of these domestic conditions will have been attenuated by the reduction in the prices of some services currently undergoing a process of quick deregulation — most notably the telecommunications sector.

Chart 5.2  
OBSERVED CPI



TRIMMED MEAN AT 10 PER CENT

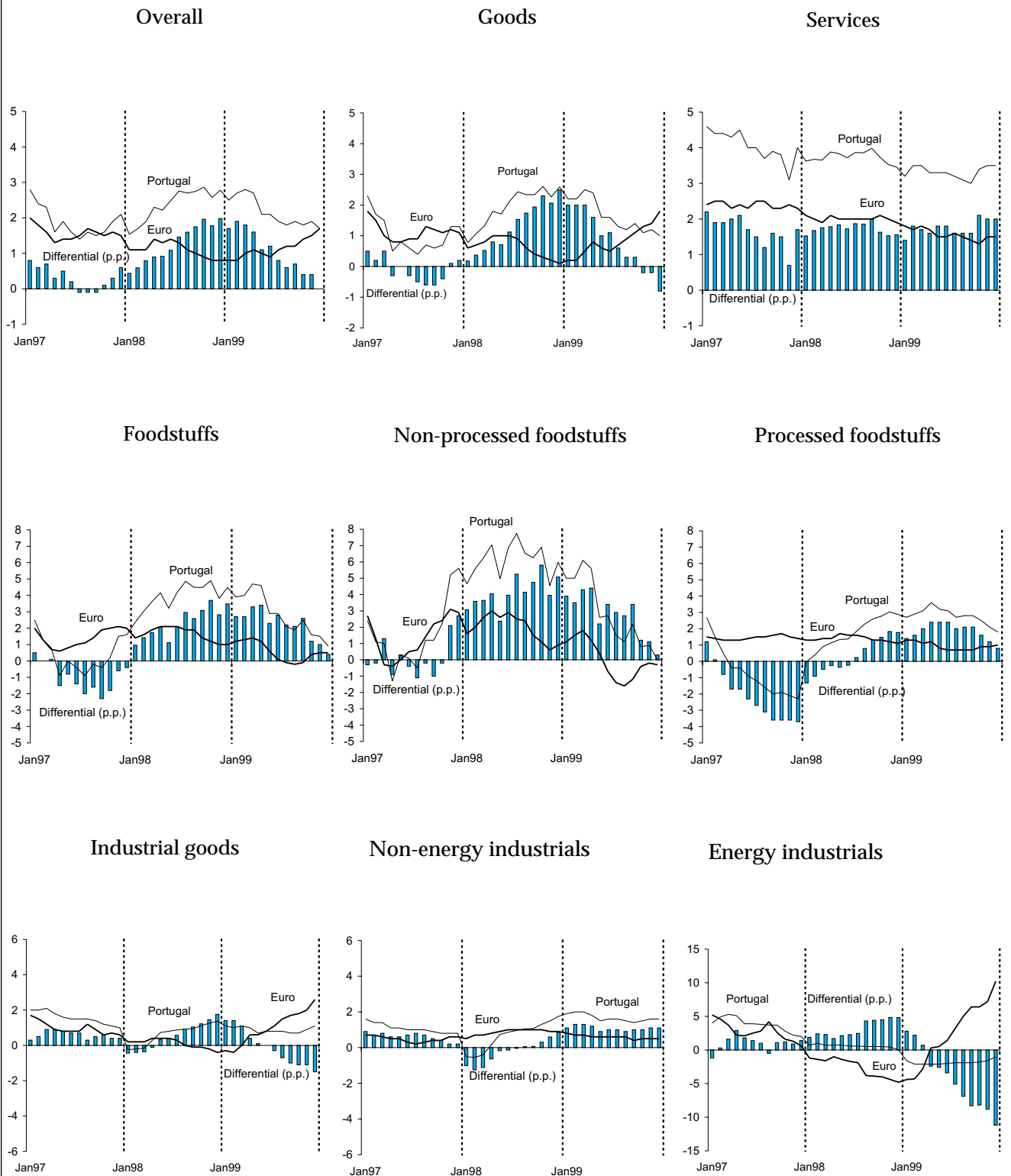


Source: INE and Banco de Portugal.

An analysis broken-down by HICP components reveals that the greatest contribution to inflation reduction was given by goods prices; the year-on-year rate of change of goods prices decreased from 2.6 per cent in December 1998 to 1.0 per cent in December 1999 (chart 5.3). This behaviour was strongly determined by the behaviour of prices of foodstuff goods, which in this period slowed down from 4.5 to 0.9 per cent, basically due to the non-processed component. Indeed, the year-on-year growth of non-processed foodstuff goods prices decreased 6.0 p.p. (from 6.0 to 0.0 per cent), while the slowdown of processed foodstuff goods was only 1.1 p.p. (from a 2.9 per cent growth in December 1998 to 1.8 per cent one year later).

As regards prices of industrial goods, the deceleration recorded (from 1.4 per cent at the end of

Chart 5.3  
**HARMONISED INDEX OF CONSUMER PRICES — OVERALL INDEX AND AGGREGATES**  
 Year-on-year rates of change and differentials



Source: Eurostat, INE and Banco de Portugal.

Note: The HICP figures for 1997 were adjusted according to the method indicated in the 1998 Annual Report box "Changes in the HICP: Estimate of the revision of the inflation levels for 1998".

1998 to 1.1 per cent in December 1999) was decisively influenced by the behaviour of energy prices; the reduction of energy prices was greatly associated to the reduction in the prices of electricity in January 1999. Meanwhile, the growth of the prices of non-energy industrial goods remained fairly stable between 1.5 and 2.0 per cent.

The prices of services stabilised at a high level. These prices grew 3.5 per cent in year-on-year terms in December 1999, the same figure as in December 1998. In intra-annual terms, the slowdown of services prices in the summer is worth noting. Services prices reached a minimum year-on-year rate of change of 3 per cent in September. However, this reduction will have been related with the excessive growth in the prices of services in the same period of the previous year, due to the Expo98 (September 1998 recorded a maximum growth of 4 per cent), which therefore were of a temporary nature.

Conversely to what occurred in Portugal, the rate of inflation for the euro area countries as a whole increased in the second half of 1999 (see section 2 — International Background). The year-on-year rate of change of the HICP rose from 0.8 per cent in December 1998 to 1.7 per cent in December 1999. As a result, the inflation differential between Portugal and the euro area narrowed from 2.0 p.p. in December 1998 to 0.0 p.p. at the end of 1999.

The major arithmetic contribution to this 2.0 p.p. reduction of the inflation differential between December 1998 and December 1999 was given by energy goods; the growth differential of energy prices narrowed from 4.8 to -11.2 p.p. (-1.4 p.p. contribution). In Portugal, in addition to the reduction of electricity tariffs — also recorded in other euro area countries — the increase in oil prices was not transmitted to consumer prices due to the fact that fuel prices are administered. On the contrary, the rise in fuel prices will have given the greatest contribution to the acceleration of prices in the euro area in 1999. It should be noted that in 1998 a contrary behaviour was recorded; indeed, in 1998 the maintenance of prices paid by consumers in Portugal contributed to widen the inflation differential vis-à-vis the euro area, in a context of a quite significant fall of the price of oil in the international markets.

Another important contribution to the reduction of the inflation differential was given by the

prices of non-processed food, which had exhibited an excessive growth in Portugal in 1998. The growth differential of these prices fell from 5.1 p.p. in December 1998 to 0.3 p.p. in December 1999 (a -0.8 p.p. contribution).

In the services sector, the inflation differential remained quite stable over the course of 1999, at levels ranging between 1.5 and 2 percentage points. Equally stable remained the price differential of non-energy industrial goods, around 1 percentage point.

## 6. BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION

The external borrowing requirements of the Portuguese economy continued to rise significantly in 1999. In the period January to October 1999, the Current plus Capital Account deficit increased significantly in relation to the same period of the previous year (table 6.1). In the year as a whole, as foreseen in the September EB, this deficit shall rise about 1.5 p.p. of GDP from its previous year level (4.3 per cent of GDP). The widening of the differential between domestic investment and saving was again greatly determined by the behaviour of the non-financial private sector, whose borrowing requirements continued to increase. The Current plus Capital Account deficit continued to be financed by capital inflows resulting from increases in the net foreign liabilities of General Government and the resident monetary sector.

In the period from January to October, the widening of the Current Account deficit chiefly reflected the behaviour of the merchandise account (table 6.1). The goods account deficit<sup>(25)</sup> increased 18.5 per cent in this period, since merchandise imports continued to record a stronger nominal growth than exports, though becoming slower than in the same period of the previous year.

In the period January-October 1999, the Services surplus remained virtually unchanged from the same period in the previous year (table 6.1). As for its main components, stress should be laid on

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(25) To determine the goods balance in the period January-October 1999, provisional estimates of foreign trade for October disclosed by the *INE* were used. This balance shall be revised when preliminary declared data are disclosed for October.



Table 6.1

## BALANCE OF PAYMENTS – On a Transactions Basis

Million euros

	1998		1998			1999		
	January-December		January-October			January-October		
	Balance	As a % of GDP	Debit	Credit	Balance	Debit	Credit	Balance
<b>Current account</b> .....	<b>-6 462.2</b>	<b>-6.6</b>	<b>39 221.1</b>	<b>34 471.6</b>	<b>-4 749.5</b>	<b>41 105.8</b>	<b>34 625.0</b>	<b>-6 480.7</b>
Merchandise .....	-10 975.2	-11.3	28 311.4	19 595.2	-8 716.2	30 149.3	19 817.3	-10 332.0
Services .....	1 417.6	1.5	5 184.1	6 605.3	1 421.2	5 109.8	6 532.4	1 422.5
Transport .....	-331.2	-0.3	1 413.4	1 205.4	-208.1	1 487.2	1 077.8	-409.4
Travel and tourism .....	2 611.7	2.7	1 793.0	4 115.9	2 322.8	1 799.1	4 144.7	2 345.6
Insurance .....	-7.7	0.0	71.4	48.4	-23.1	83.4	53.3	-30.1
Royalties .....	-224.2	-0.2	223.0	34.0	-189.0	207.3	21.0	-186.2
Other services .....	-426.5	-0.4	1 473.3	1 132.9	-340.4	1 473.3	1 170.4	-168.5
Government operations .....	-204.5	-0.2	209.8	68.7	-141.1	193.9	65.0	-128.9
Income .....	-526.8	-0.5	4 218.1	3 692.8	-525.3	4 313.9	3 539.7	-774.2
Labour income .....	65.2	0.1	74.0	133.2	59.3	94.4	104.4	10.0
Investment income .....	-592.0	-0.6	4 144.1	3 559.6	-584.5	4 219.5	3 435.3	-784.2
Current transfers .....	3 622.2	3.7	1 507.6	4 578.3	3 070.7	1 532.8	4 735.7	3 202.9
Official transfers .....	763.1	0.8	1 077.6	1 744.8	667.2	1 014.0	1 659.6	645.6
Private transfers .....	2 859.1	2.9	430.0	2 833.5	2 403.5	518.7	3 076.0	2 557.3
<b>Capital account</b> .....	<b>2 289.1</b>	<b>2.4</b>	<b>162.2</b>	<b>1 708.3</b>	<b>1 546.1</b>	<b>171.1</b>	<b>2 146.2</b>	<b>1 975.1</b>
Capital transfers .....	2 275.7	2.3	136.9	1 671.2	1 534.2	134.9	2 107.3	1 972.4
Official transfers .....	2 287.5	2.4	16.1	1 553.1	1 537.0	9.2	1 990.4	1 981.2
Private transfers .....	-11.8	0.0	120.8	118.1	-2.7	125.7	117.0	-8.7
Acquisition/disposal of non-financial non-produced assets .....	13.4	0.0	25.2	37.1	11.9	36.2	38.9	2.7
<b>Financial account</b> .....	<b>5 475.4</b>	<b>5.6</b>	<b>275 331.1</b>	<b>281 014.9</b>	<b>5 683.8</b>	<b>590 761.2</b>	<b>597 617.7</b>	<b>6 856.5</b>
Direct investment .....	-1 024.8	-1.1	8 019.6	7 608.8	-410.8	13 293.1	12 242.8	-1 050.3
Portuguese direct investment broad .....	-2 605.4	-2.7	2 039.5	537.2	-1 502.4	4 807.2	3 323.5	-1 483.7
Foreign direct investment in Portugal .....	1 580.6	1.6	5 980.0	7 071.6	1 091.6	8 485.9	8 919.3	433.4
Portfolio investment .....	136.6	0.1	139 434.0	138 940.8	-493.3	144 108.9	149 051.1	4 942.2
Assets .....	-5 481.6	-5.6	92 019.3	86 897.4	-5 121.8	87 705.4	83 644.0	-4 061.4
Liabilities .....	5 618.2	5.8	47 414.8	52 043.3	4 628.6	56 403.6	65 407.1	9 003.6
Other investment .....	6 741.3	6.9	125 588.7	132 573.3	6 984.6	402 824.6	406 084.6	3 260.0
Assets .....	-5 270.7	-5.4	79 294.4	73 719.6	-5 574.8	334 182.3	331 577.0	-2 605.3
Liabilities .....	12 012.0	12.3	46 294.3	58 853.7	12 559.4	68 642.3	74 507.6	5 865.3
Financial derivatives .....	100.7	0.1	566.3	662.8	96.5	1 047.8	1 088.1	40.3
Reserve assets .....	-478.5	-0.5	1 722.4	1 229.2	-493.2	29 486.8	29 151.2	-335.7
<b>Errors and omissions</b> .....	<b>-1 302.3</b>	<b>-1.3</b>			<b>-2 480.4</b>			<b>-2 350.8</b>
<i>Pour mémoire:</i>								
<b>Current plus capital account</b> .....	<b>-4173.1</b>	<b>-4.3</b>	<b>39383.3</b>	<b>36179.9</b>	<b>-3203.4</b>	<b>41276.8</b>	<b>36771.2</b>	<b>-4505.6</b>

the maintenance of the tourism surplus, the increase of the transport services deficit and the reduction of the deficit of other services supplied by companies. The tourism surplus exhibit a similar value to that recorded in the same period of 1998. Up to October, nominal tourism revenue grew 0.7 per cent in year-on-year terms. This development corresponds to a slowdown from the high growth recorded in 1998 as a whole (18.4 per cent growth, due to the Expo98) and from the first half of 1999

(7.3 per cent growth). Residents' expenditure on travel and tourism abroad recorded a similar behaviour (0.3 per cent growth in the period January to October, which compares with a 14.9 per cent increase in 1998 as a whole and 2.1 per cent in the first half of 1998). The transport services deficit virtually doubled in relation to the period January to October 1998, which resulted from a reduction of the exports of these services in the period, especially in what concerns air transportation of pas-

sengers. Meanwhile, imports of transport services recorded a 5.2 per cent year-on-year growth in the period January-October 1999 (2.0 per cent increase in the first half-year). Finally, the deficit recorded at the level of other services supplied by companies, mainly constituted by technical-professional services, fell sharply this year. This reduction basically resulted from the behaviour of imports of this kind of services, which decreased 16.3 per cent up to October (the reduction had been sharper in the first half of the year 23.4 per cent)<sup>(26)</sup>.

In the period January-October 1999, the Income Account deficit grew 47.4 per cent from the same period of the previous year (table 6.1). As for investment income<sup>(27)</sup>, stress should be laid on the contribution of the deficit regarding other investment operations (credit, loans and deposits) to the increase in the overall deficit. This development is related with the increase in the net foreign liabilities of the Portuguese economy — especially of banks — taking the form of loans and deposits. Meanwhile, the balance of portfolio investment income recorded a surplus in this period, which compares with the deficit exhibited in the same period of the previous year.

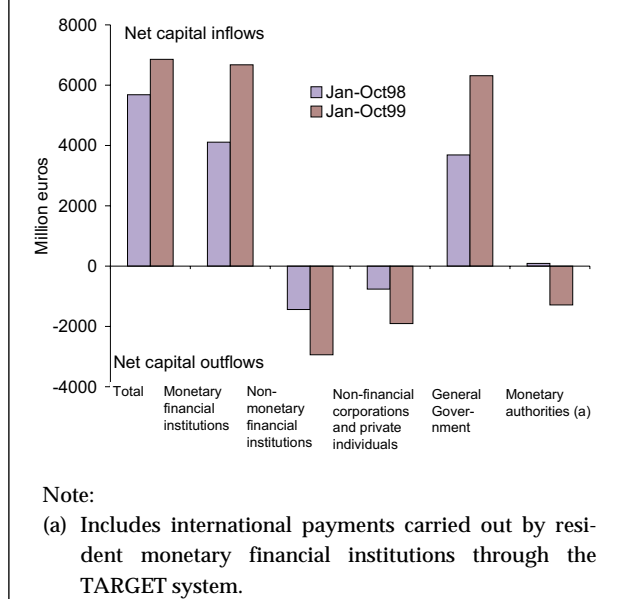
The Current Transfers surplus grew 4.3 per cent in the period January-October in comparison with the same period of 1998 (table 6.1). Private transfers grew 6.4 per cent in this period, worth being highlighted the 9.0 per cent growth of the balance of emigrants/immigrants' remittances. In the meantime, the balance of current public transfers with the European Union was similar to that recorded in January-October 1998.

The Capital Account balance rose 27.7 per cent in the period January-October 1999, due to the higher surplus recorded at the level of public capital transfers with the European Union.

(26) It should be noted that in the first months of 1998, imports of these services grew strongly, due to the preparations of the Expo98.

(27) The change to the concept of the Reserve Assets, due to the participation of Portugal in the Economic and Monetary Union, implied that part of the securities portfolio of the *Banco de Portugal* was no longer classified under Reserve Assets, to be included instead under Portfolio Investment Assets. This change also influences the breakdown of investment income, since the income from these securities are since the beginning of 1999 included in Portfolio Investment Income, instead of Other Investment.

Chart 6.1  
FINANCIAL ACCOUNT  
Balances



The Financial Account posted a surplus in the first ten months of 1999, 20.6 per cent greater than that recorded in the same period of the previous year (table 6.2). This capital inflow reflected again the financial operations with abroad carried out by General Government and monetary financial institutions, since the remaining resident institutional sectors carried out operations leading to net capital outflows (chart 6.1).

In the period January-October 1999, direct investment operations between Portugal and abroad exhibited a greater deficit than the one recorded in the same period of the previous year (table 6.2). In net terms, Portuguese direct investment abroad presented a similar level to that recorded in the first ten months of 1998, but foreign direct investment in Portugal decreased in relation to the same period of the previous year.

Portfolio investment operations between Portugal and abroad yielded a surplus in the first ten months of 1999, which contrasts with the deficit recorded in the same period of 1998 (table 6.2). Over the course of 1999, non-residents exhibited a greater demand for Portuguese securities, especially bonds and other long-term debt securities. Indeed, non-residents continued to invest mainly in public debt bonds (about 75 per cent of total investments). This period also recorded a greater interest of non-residents for debt securities issued by

Table 6.2

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

Million euros

	1998 January-October			1999 January-October		
	Change in liabilities	Change in assets	Net change	Change in liabilities	Change in assets	Net change
<b>Financial account</b> .....	<b>17 713.3</b>	<b>-12 029.4</b>	<b>5 683.8</b>	<b>14 254.5</b>	<b>-7 398.0</b>	<b>6 856.5</b>
Direct investment .....	1 091.6	-1 502.4	-410.8	433.4	-1 483.7	-1 050.3
Portfolio investment .....	4 628.6	-5 121.8	-493.3	9 003.6	-4 061.4	4 942.2
Other investment .....	12 559.4	-5 574.8	6 984.6	5 865.3	-2 605.3	3 260.0
Financial derivatives .....	-566.3	662.8	96.5	-1 047.8	1 087.5	40.3
Reserve assets .....	-	-493.2	-493.2	-	-335.7	-335.7
<b>By resident institutional sector:</b>						
<b>General Government</b> .....	<b>3 651.0</b>	<b>35.2</b>	<b>3 686.1</b>	<b>6 660.3</b>	<b>-346.8</b>	<b>6 313.5</b>
Portfolio investment .....	3 770.7	-6.7	3 764.0	6 703.9	-340.1	6 363.8
Other investment .....	-119.8	-0.7	-120.4	-43.5	-6.7	-50.2
Financial derivatives .....	0.0	42.6	42.6	0.0	0.0	0.0
<b>Monetary financial institutions</b> .....	<b>11 144.6</b>	<b>-7 034.7</b>	<b>4 110.0</b>	<b>6 894.2</b>	<b>-218.2</b>	<b>6 676.0</b>
Direct investment .....	98.2	-283.3	-185.2	-696.0	-41.9	-738.0
Portfolio investment .....	21.4	-2 959.9	-2 938.4	1 228.3	-728.5	499.8
Other investment .....	11 569.7	-4 392.6	7 177.2	7 345.9	-479.8	6 866.2
Financial derivatives .....	-544.7	601.1	56.4	-984.1	1 032.0	47.9
<b>Non-monetary financial institutions</b> .....	<b>342.2</b>	<b>-1 781.2</b>	<b>-1 439.0</b>	<b>-123.4</b>	<b>-2 817.5</b>	<b>-2 940.9</b>
Direct investment .....	60.2	-15.7	44.5	-71.6	-40.5	-112.1
Portfolio investment .....	327.9	-1 895.0	-1 567.1	-250.5	-2 834.5	-3 085.0
Other investment .....	-39.8	122.4	82.6	199.5	57.0	256.5
Financial derivatives .....	-6.0	7.1	1.1	-0.7	0.0	-0.2
<b>Non-financial corporations and private individuals</b> .....	<b>1 906.5</b>	<b>-2 669.6</b>	<b>-763.1</b>	<b>457.3</b>	<b>-2 362.7</b>	<b>-1 905.4</b>
Direct investment .....	933.3	-1 203.4	-270.1	1 201.1	-1 401.3	-200.2
Portfolio investment .....	508.6	-260.2	248.3	1 321.9	-295.4	1 026.5
Other investment .....	480.3	-1 218.0	-737.8	-2 002.7	-721.5	-2 724.2
Financial derivatives .....	-15.6	12.1	-3.5	-63.0	55.5	-7.5
<b>Monetary authorities</b> .....	<b>669.0</b>	<b>-579.2</b>	<b>89.8</b>	<b>366.1</b>	<b>-1 652.8</b>	<b>-1 286.8</b>
Portfolio investment .....	-	-	-	-	137.2	137.2
Reserve assets .....	-	-493.2	-493.2	-	-335.7	-335.7
Other investment .....	669.0	-85.9	583.0	366.1	-1 454.3	-1 088.2

Note:

(a) A (+) sign indicates an increase of foreign liabilities or a reduction of foreign assets, i.e. a capital inflow. A (-) sign indicates a reduction of foreign liabilities or an increase of foreign assets, i.e. a capital outflow.

monetary financial institutions and non-financial corporations. As regards Portuguese portfolio investment abroad, investments in bonds and other long-term debt securities decreased. More specifically, monetary financial institutions — which traditionally invested massive amounts in bonds issued by non-residents — carried out a net disinvestment in this segment. Net investments in securities representing the equity of non-residents increased in the period January-October, greatly as a

result of resident banks' greater investment in these securities. The increase of residents' investment in shares may be linked to the better performance of the leading international stock markets when compared with the Portuguese stock market.

Up to October, loans and deposits operations classified under "Other Investment" continued to lead to significant capital inflows into the Portuguese economy, though much smaller than those

Table 6.3

INTERNATIONAL INVESTMENT POSITION – end-of-period positions

	Million euros				As a % of GDP		
	1996	1997	1998	September 1999	1996	1997	1998
<b>I. International investment position</b> . . . . .	<b>-5 862.5</b>	<b>-12 546.6</b>	<b>-17 915.8</b>	<b>-24 043.9</b>	<b>-7.0</b>	<b>-14.0</b>	<b>-18.4</b>
<b>Direct investment<sup>(a)</sup></b>							
<b>Total</b> . . . . .	<b>-11 093.0</b>	<b>-11 588.3</b>	<b>-10 154.0</b>	<b>-9 273.0</b>	<b>-13.2</b>	<b>-12.9</b>	<b>-10.5</b>
Portuguese direct investment abroad . . . .	3 686.2	5 424.7	8 439.3	9 312.4	4.4	6.1	8.7
Foreign direct investment in Portugal . . . .	14 779.1	17 013.1	18 593.3	18 585.4	17.7	19.0	19.1
<b>Portfolio investment<sup>(b)</sup></b>							
<b>Total</b> . . . . .	<b>-2 983.7</b>	<b>-14 483.8</b>	<b>-14 320.5</b>	<b>-10 252.8</b>	<b>-3.6</b>	<b>-16.2</b>	<b>-14.7</b>
Assets <sup>(c)</sup> . . . . .	13 653.0	18 624.3	25 761.0	38 842.6	16.3	20.8	26.5
Liabilities . . . . .	16 636.7	33 108.1	40 081.5	49 095.4	19.9	37.0	41.3
<b>Other investment<sup>(b) (d)</sup></b>							
<b>Total</b> . . . . .	<b>-9 083.8</b>	<b>-5 416.4</b>	<b>-12 205.0</b>	<b>-18 094.3</b>	<b>-10.8</b>	<b>-6.0</b>	<b>-12.6</b>
Assets . . . . .	32 795.2	47 862.1	51 619.7	55 024.8	39.2	53.4	53.1
Liabilities . . . . .	41 879.0	53 278.5	63 824.7	73 119.2	50.0	59.5	65.7
<b>Financial derivatives<sup>(e)</sup></b> . . . . .	<b>329.1</b>	<b>348.8</b>	<b>248.1</b>	<b>202.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.3</b>
<b>Reserve assets<sup>(b)</sup></b> . . . . .	<b>16 968.8</b>	<b>18 593.1</b>	<b>18 515.7</b>	<b>13 373.6</b>	<b>20.3</b>	<b>20.8</b>	<b>19.1</b>
<i>Por mémoire:</i>							
<b>Net External Position<sup>(f)</sup></b> . . . . .	<b>6 397.9</b>	<b>3 219.6</b>	<b>391.3</b>	<b>-11 303.2</b>	<b>7.6</b>	<b>3.6</b>	<b>0.4</b>

Notes:

- (a) Includes quarterly estimates calculated by the *Banco de Portugal* based on the accumulation of monthly flows and on the latest annual data built from Direct Investment Surveys.
- (b) From January 1999, Reserve Assets considered are only Monetary Authorities' assets vis-à-vis non-residents of the euro area and denominated in currencies from countries outside the area, thus placing a series break at this date. The remaining assets of Monetary Authorities are thereafter included under Portfolio Investment assets or Other Investment assets, which also means these items exhibit a break in January 1999.
- (c) Includes quarterly estimates calculated by the *Banco de Portugal* based on the accumulation of monthly flows and on the latest annual data built from the Survey to the stock of foreign securities held by residents.
- (d) Includes in some items quarterly estimates calculated by the *Banco de Portugal* based on the accumulation of monthly flows.
- (e) Net values.
- (f) Some foreign assets and liabilities are not included in net external position, for instance, end-of-period positions resulting from direct investment operations.

recorded in the same period of the previous year (table 6.2). Operations of this nature carried out directly by resident monetary financial institutions led to a net capital inflow in the period January-October 1999 close to that recorded in the same period of the previous year. Indeed, monetary financial institutions continued to increase their net foreign liabilities over the course of 1999 to finance the resident non-financial private sector. However, this means of raising foreign resources underwent a maturity restructuring in this period. Investments in short-term loans and deposits decreased significantly in relation to the same period of 1998, though continuing to account for the bulk of this

kind of operations carried out by resident monetary financial institutions. Furthermore, this period also recorded a strong increase in long-term operations which gave rise to a much greater capital inflow than the one recorded in the period January-October 1998. Operations carried out in the context of the TARGET<sup>(28)</sup> system translated into a net capital outflow in the period January-October, contrasting with the inflow recorded in the first

(28) According to indications from the European Central Bank, operations carried out in the framework of the TARGET system are recorded in the Balance of Payments as changes to the Assets of Monetary Authorities under item "Other Investment".

half of 1999. Finally, operations classified under "Other Investment" carried out by non-financial corporations and private individuals resulted in a net capital outflow much greater than the one recorded in the same period of 1998. This sector's net investments abroad decreased from the period January-October in the previous year, but at the level of liabilities, a strong net redemption of short- and long-term loans was recorded — which contrasts with the use of external loans recorded in the same period of the previous year.

The *Banco de Portugal* disclosed statistics on International Investment Positions (IIP) for the Portuguese economy for the first time in the December 1999 *Statistical Bulletin*. These statistics replace the Net External Position statistics previously published<sup>(29)</sup>. IIP statistics are a balance sheet of the stock of all financial foreign assets and liabilities of a given economy, at a given moment.

According to the information currently available and considering all foreign financial assets and liabilities, the Portuguese economy exhibited a net debtor position equivalent to 18.4 per cent of GDP at the end of 1998 (14.0 per cent of GDP at the end of 1997) (table 6.3). According to the former concept of net external position — which excludes some of the foreign assets and liabilities<sup>(30)</sup> currently included — the Portuguese economy would record a creditor position of 0.4 per cent of GDP at the end of 1998 (3.6 per cent of GDP at the end of 1997).

The use of external financing by the Portuguese economy continued to rise over the course of 1999, due to the sharper growth of investment than domestic saving. At the end of September 1999, the net debtor position measured by the IIP increased 34.2 per cent from the end of 1998. This development basically reflected the rise in the net foreign liabilities of resident monetary financial institutions, especially in the form of investments in loans and deposits. Furthermore, it should be

noted that the stock of securities held by non-residents — mostly public debt bonds — continued to rise over the course of 1999.

## 7. PUBLIC FINANCE

Comparing with the State Budget Law for 1999, the approval of the Rectifying Budget last December — translated into a 377.1 million euros increase in the forecast for tax revenue for the year as a whole (289.8 in VAT and 87.3 in the Car tax). On the expenditure side, drawing an equivalent comparison, the increases in current expenditure reach a total of 854.9 million euros, while capital expenditure present a reduction of 128.7 million euros. As regards current expenditure, worth highlighting is the increase in the current transfers to the National Health Service (NHS), by 411.0 million euros. If the budgetary execution confirms exactly the figures considered in the Rectifying Budget, both in what concerns the revenue and the expenditure side, the State deficit on a public accounts basis shall increase 349.1 million euros.

It should be noted, however, that the Rectifying budget refers only to the State, thus it does not give an overall picture of the budgetary developments in the General Government as a whole. Therefore, it is possible that, for instance, the budgetary execution of Social Security and of Autonomous Funds and Services (excluding the NHS) prove more favourable than the projection included in the report made in the context of the excessive deficit procedure in late August 1999. Furthermore, it is also possible that the rise in the expenditure of the NHS in cash terms (i.e., the relevant concept from the public accounts perspective) has already been taken into account in the expenditure commitments of the NHS (the relevant figure for National Accounts), which are implicit in the report referred above. Therefore, the Rectifying Budget may imply (or not) a worsening of the General Government deficit calculated on a National Accounts basis.

As regards public debt, the Rectifying Budget extended the limit for the redemption of the debt of the NHS by 688.3 million euros, to 1,381.7 million euros. *Ceteris paribus*, this change shall have given rise to an equal increase in the public debt at the end of 1999. Taking into account that the public debt estimate used in the September excessive

(29) See International Investment Position Statistics — Introductory Note in the December 1999 *Statistical Bulletin*.

(30) The net external position does not consider a set of foreign assets and liabilities. In particular, it does not include end-of-period positions resulting from direct investment operations. In addition, the securities portfolios considered only include long-term debt securities and short-term debt securities, hence excluding securities representing companies' equity. Therefore only foreign assets and liabilities bearing interest are included.

deficit notification was already difficult to accomplish, it seems much likely that additional redemptions of debt of the NHS shall determine a higher debt ratio than the initial objective.

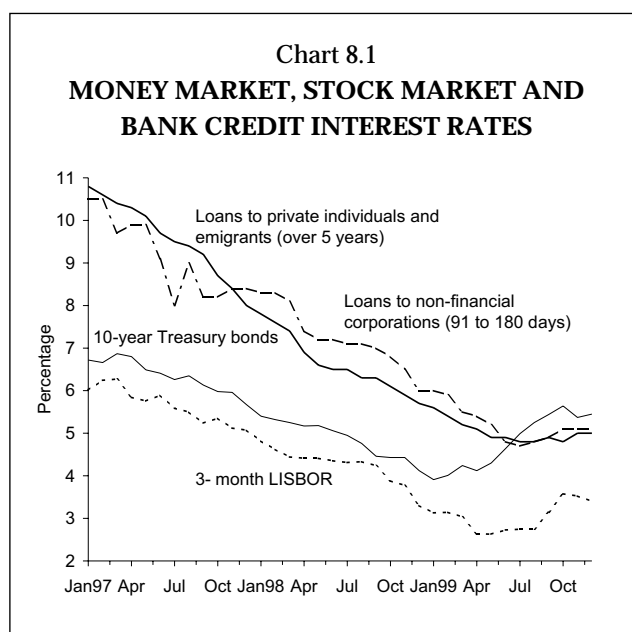
One of the major features of the budgetary execution in 1999, as in previous years, is the strong growth of tax revenue, most notably of taxes on goods and services. However, it should be noted that the revenue of some taxes might slowdown later in the year — especially the tax on oil products (ISP) and the car tax (IA). The behaviour of ISP basically results from the policy of determination of oil derivatives prices, while the behaviour of IA reflects the reduction of car sales in the last months of the year. However, VAT continues to exhibit a significant rate of growth (12.5 per cent in year-on-year terms, in the period January-November 1998).

Net borrowing to the General Government in the first eleven months of 1999 amounted to 1,400.5 million euros, which compares with -396.0 million euros in the same period of the previous year. This difference is basically due to the reduction of the revenue from privatisation operations and by the increase in the debt redemptions carried out by the Treasury in 1999, when compared with 1998.

### 8. INTEREST RATES AND CREDIT

Over the course of 1999, the interest rates of the money and stock markets reversed the downward path presented in Portugal in recent years. This reversal took place initially in the longer terms, spreading to shorter-term rates afterwards. The behaviour of market rates was reflected in banks' lending and borrowing rates, which from the third quarter of the year interrupted — and in some cases inverted — the downward trend recorded over the course of the 1990s. The relative stability in the last quarter of the year took place already at a slightly higher level than the one recorded in the second and third quarters of the year.

The rate on new loans to non-financial corporations (from 91 to 180 days) reached 5.1 per cent in December 1999, which compares with an annual minimum of 4.7 per cent reached in July, and with 6.0 per cent in December 1998 (chart 8.1). The interest rate on the new loans to individuals at more than five years amounted to 5.0 per cent, 0.2 p.p.



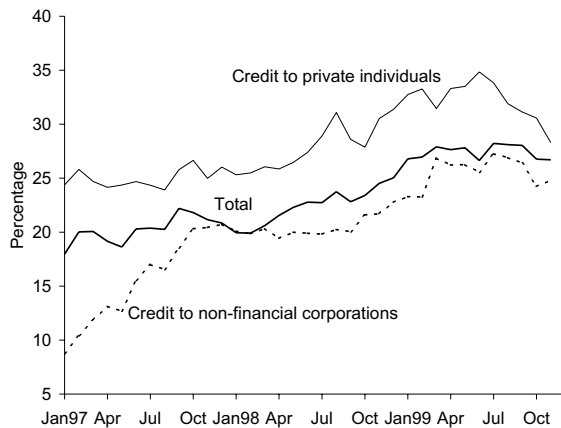
above the minimum level in the year (but still 0.7 p.p. below the December 1998 level).

Domestic bank credit to the non-monetary resident sector (excluding General Government) grew quite strongly over the course of 1999 (chart 8.2), peaking in July at 28.2 per cent. However, it should be noted that credit granted both to non-financial corporations and especially to private individuals slowed down in the second half-year. In December, these aggregates exhibited year-on-year changes of 24.1 and 27.9 per cent, respectively (which compare with maximum levels in the year of 27.3 and 34.9 per cent).

The sharp rise in indebtedness did not imply, in recent years, significant increases in private individuals' effort rate (defined as the ratio between the expenses with the debt service and disposable income)<sup>(31)</sup>. Indeed, the level of effort of individuals is estimated to have risen from 20.0 per cent of disposable income in 1996 to 21.5 per cent in 1998. This relative stability was attainable since interest rates dropped sharply. However, given the recent behaviour of interest rates, an increase of the effort rate could be expected. Indeed, considering an unchanged maturity structure of credit to the private sector, the effort rate shall have increased about 2 p.p. in 1999, reflecting the widening of the stock of bank credit granted to private individuals.

(31) See the June 1999 EB for further detailed methodological details and empirical evidence.

Chart 8.2  
**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 private individuals, non-financial corporations and non-monetary financial institutions.

## 9. CONCLUSION

Economic activity recorded a slowdown in 1999, which was widespread to all overall demand components — private consumption, public consumption, investment, exports of goods and exports of services. Stress should be laid on the slowdown of GFCF in equipment and transport material, to which the deceleration of consumption of durable goods in late 1999 should be added; both components are those with the largest imported content.

Although in 1999 output growth did not show a marked intra-annual profile, its structure recorded qualitatively important changes over the course of the year. Domestic demand slowed down in the second half of the year. Conversely, merchandise exports recovered, in line with the recovery of economic activity in the euro area.

This change in the pattern of output growth — with exports replacing private consumption as the leading engine of the economy — is a desirable development in the Portuguese economy and is an indispensable condition to the progressive reduction of the external deficit, hence also of the economy's indebtedness. Indeed, given the current

growth of (and the future perspectives for) external demand, it is necessary that domestic demand grows slower than in the recent past, so as to reduce the external deficit.

The period of transition to a new regime, associated with the participation in the euro area, translated into more favourable expectations regarding future income, but also into a significant reduction of inflation and the convergence of interest rates to the lowest levels recorded in the countries integrating the euro area since 1 January 1999. These factors contributed to a particularly strong growth of consumption and investment; also households' expenditure — especially in durable goods and in housing purchasing — and corporations' investment underwent an adjustment to higher levels than in the past. After this period of adjustment, a natural slowdown of these components of expenditure, hence of domestic demand, shall follow.

Fiscal policy must provide an additional factor contributing to the domestic demand slowdown. According to the objectives subscribed by the Portuguese Government in the Stability and Growth Programme, in 2000 public consumption shall grow more moderately than in the recent past, both in nominal and real terms, thus contributing to the development of a more balanced growth profile.

As a result of the probable slowdown of domestic demand, the growth possibilities of the Portuguese economy shall be decisively determined by the behaviour of the exporting sector, at least in the close future. In this context, it is worthwhile to assess the behaviour of Portuguese exports in the recent past. According to preliminary (thus, subject to future revisions) data, real Portuguese merchandise exports in 1998 and 1999 as a whole grew less than external demand directed towards Portuguese exports. This development contrasts with the period following to the adhesion to the European Economic Community, when market share gains were almost systematically achieved.

For the majority of the euro area countries, there is some empirical evidence of a loss of competitiveness of exports in the previous two years, namely due to the strong devaluations recorded by Southern Asian currencies. Therefore, this phenomenon shall have explained part of the market share loss recorded by Portuguese exports (though

the exact size of this contribution is difficult to measure). However, it is likely that factors specific to the Portuguese economy — whether of a short-term nature or of a more structural one — shall have also contributed to that result. As regards structural factors, stress should be laid on the apparent loss of capacity to attract foreign direct investment projects destined to the exporting activity. Among shorter-term factors, as a result of the dynamism of domestic demand in a situation close to full employment, worth noting is the eventual deviation to the domestic market of production — which under other circumstances would be directed to abroad. A second short-term factor is the worsening of the unit profit margin indicator in the exporting sector recorded in recent years.

In this context, it is crucial that the budgetary consolidation process proceeds — contributing to moderate the buoyancy of domestic demand — and that unit labour costs develop less unfavourably. Therefore, wage moderation is an essential element to establish a pattern of economic growth where exports replace domestic demand — and most notably consumption — as the leading engine of growth. If wage moderation is not ensured, the competitive capacity of Portuguese firms shall be jeopardised, and in the medium term the levels of economic growth and employment shall be lower.

Written with the available information as on 19 January 2000, except for the Harmonised Index of Consumer Prices for the euro area.



## EVALUATING CORE INFLATION INDICATORS \*

*Carlos Robalo Marques* \*\**Pedro Duarte Neves* \*\**Luís Morais Sarmiento* \*\*

## 1. INTRODUCTION

This study develops a set of properties that allow to assess, through adequate statistical tests, if a given indicator is an appropriate trend inflation measure. When analysing inflation developments, it is important to distinguish between permanent changes and transitory changes in the level of prices. The behaviour of the Consumer Price Index (CPI) is affected by a range of erratic or transitory factors, which do not reflect fundamental changes to the behaviour of inflation determinants. Take, for example, the extremely volatile behaviour of some foodstuff goods, more notably non-processed goods and services where price changes are concentrated in a single month or even situations where the level of prices of a given good is significantly adjusted. In any of these situations, it is quite difficult to identify the general trend of prices, as these one-off and temporary disturbances bring “noise” to inflation behaviour.

The conduct of monetary policy should not be affected by transitory disturbances in inflation. Since lags of monetary policy are long and a variable, it is crucial that the current general price trend is appropriately identified. For this purpose, a wide range of trend inflation indicators has been used by central banks to identify the “permanent” component of inflation. See, for instance, Cecchetti (1997), Coimbra and Neves (1997), Laflèche (1997), Bakhshi and Yates (1999), Álvarez and Matea (1999) and Wynne (1999). Despite the important

role this kind of indicator plays in analysing current price developments, there is no consensus in what concerns the properties such indicators should have.

This analysis is organised as follows<sup>(1)</sup>: Section 2 presents the trend inflation indicators most widely used by the majority of central banks, and in particular by the *Banco de Portugal*. Section 3 proposes criteria for evaluating these indicators. Section 4 draws an assessment of several trend inflation indicators, making use of these criteria. Section 5 concludes.

## 2. MOST WIDELY USED TREND INFLATION INDICATORS

A fairly broad range of statistical techniques is available for obtaining trend inflation indicators. Wynne (1999) and Álvarez and Matea (1999) provide quite up-to-date syntheses of the main techniques used. In general, procedures can be grouped into two families. The first studies the cross-section distribution of year-on-year changes in prices. A broad range of indicators is calculated in this way, including “underlying inflation” and “limited influence” estimators such as the trimmed mean and the weighted median. The second set of trend inflation indicators results from exploring the time series characteristics of the

\* The opinions of this paper represent the views of the authors, they are not necessarily those of the *Banco de Portugal*.

\*\* Economic Research Department.

(1) This text is an abridged version of Marques, Neves and Sarmiento (1999), “Evaluating Core Inflation Indicators”, forthcoming in the *Banco de Portugal Working Papers* series. The reader may find in the paper a more comprehensive description of the technical procedures utilised.

price index. This set includes, for instance, techniques of identification of the trend, seasonal and irregular components (through the application of fairly automatic process as in the case of X11-ARIMA, or TRAMO/SEATS), methods based on the Hodrick-Prescott and Kalman filters — Bryan and Cecchetti (1993) and Cecchetti (1997) are an example of the latter kind of application — or methods based on structural VAR models, as proposed in Quah and Vahey (1995) and applied to the Portuguese case in Dias and Pinheiro (1995)<sup>(2)</sup>.

Central banks have made use of a relatively wide range of trend inflation indicators that are included in the first family presented above. This section draws a quick description of the most commonly indicators referred in the analyses of central banks.

Possibly the most broadly calculated indicator is the so-called “underlying inflation”. This corresponds to the change of prices when excluding the classes of goods exhibiting a more volatile behaviour (i.e., non-processed food and energy). The higher volatility of these goods reflects well-known factors: the low demand-price elasticity of most non-processed foodstuff goods explains that changes in supply conditions — many times determined by climatic factors — are almost fully translated into price changes; the wide oil price changes in the international markets, as well as the US dollar fluctuation and the changes in the taxation of oil products, account in turn for the volatility of energy prices.

Bryan and Cecchetti (1994) proposed “limited influence” estimators like the trimmed mean and the weighted median as means to obtain central location measures of price changes. This kind of indicators is obtained after excluding outliers in price changes, both for extreme increases as for reductions. The statistical explanation<sup>(3)</sup> for using this kind of measure derives from the empirical evidence that the cross-section distribution of prices changes is strongly leptokurtical (i.e., it has fat tails). Statistical evidence widely supports this characteristic of the cross-section distribution for year-on-year price changes of goods and services

(2) See Gartner and Wehinger (1998) for an application of this methodology to some European Union countries.

included in the CPI (see for example Bryan and Cecchetti (1996), Coimbra and Neves (1997), Roger (1997) and Bakhshi and Yates (1999), respectively for the USA, Portugal, New Zealand and the United Kingdom).

Under these circumstances, the sample mean no longer exhibits the required statistical attributes, as it is very sensitive to outliers. In fact, the more leptokurtic the distribution, the more sensitive the sample mean is to outliers and, in principle, the greater is the percentage of observations to be excluded in the calculation of the trimmed mean.

Following the suggestion of Bryan and Cecchetti (1994), some central banks started to disclose “limited influence” estimators as indicators of trend inflation. This was the case of the Bank of England, the Bank of Australia and the *Banco de Portugal*.

The computation of the trimmed mean indicator raises, nevertheless, some issues: what should be the percentage of outliers that should be excluded<sup>(4)</sup>, whether this percentage should be allowed to change in time or not, whether the highest and the lowest observations should be excluded by the same amount<sup>(5)</sup>, among others. Furthermore, the calculation of trimmed means may lead to the exclusion of relevant information on the price changes of some goods and services, which could provide some indication on future price developments.

An alternative exists to the allocation of zero weights to items one wishes to exclude and one weights to those not to exclude. This approach consists of attributing variable weights according to the information content of each of the CPI items. Diewert (1995) suggests the attribution of weights that are inversely proportional to price volatility. Laflèche (1997) and Wynne (1997) apply this concept to price behaviour respectively in Canada and the United States of America.

(3) Bryan and Cecchetti (1994) also present a set of economic arguments, based on an application of the model of Ball and Mankiw (1995) where costs of adjustment of prices are taken into account. See for example Bakhshi and Yates (1999).

(4) See for instance Bryan, Cecchetti and Wiggins II (1997), Bakhshi and Yates (1999) and Andrade and O'Brien (1999).

(5) Roger (1997) suggested the utilisation of an asymmetric trimmed measure, which would bring some advantages in terms of efficiency and robustness of the estimator.

### 3. CONDITIONS FOR A CORE INFLATION MEASURE

This section introduces and discusses necessary conditions for a trend or core inflation measure.

To some extent, this issue has been overlooked in the literature. Sometimes, the potential trend inflation measures are analysed by comparing their behaviour with the trajectory of a so-called “reference measure”<sup>(6)</sup> for inflation. Coimbra and Neves (1997) use as “reference measure” the median of the CPI’s year-on-year change rates, for a 19-month time span, whereas Bryan, Cecchetti and Wiggins II (1997) use a 36-month centred moving average and Bakhshi and Yates (1999) a 37-month centred moving average.

The use of such an approach contains obvious drawbacks. The introduction of these so-called “reference measures” for inflation, on the basis of which the other indicators are evaluated, is never duly justified and so there is no guarantee that these indicators are themselves trend inflation measures with nice properties. Therefore, if it happens that the reference measure is not the best proxy for the (unknown) trend of inflation, then this approach does not guarantee that the best indicator is selected, as the inflation indicator that best approximates the reference measure is not necessarily the one that best approximates the true trend of inflation.

Roger (1997) suggests three properties for a core inflation measure. Ideally this measure should be timely (this would exclude, for instance, symmetric filters like centred moving averages or the Hodrick-Prescott filter), robust and unbiased (otherwise it will provide false signals to economic authorities) and verifiable (to have greater credibility). More recently, Wynne (1999) presented the following six criteria which should be used to select a core inflation measure: 1) to be computable in real time; 2) to be forward-looking in some

sense; 3) to have a track record of inflation of some sort; 4) to be understood by the public; 5) to be definitive in such that history does not change each time we obtain a new observation; 6) to have some theoretical basis, ideally in monetary theory.

There are two main comments that can be made about these conditions. Some of these conditions, however important, have the only purpose of previously excluding some candidate measures and are more a minimum pre-requisite (this is the case, for instance, of the conditions for the indicator to be timely and computable once and for all). Some other conditions, even though important to characterise the measures fulfilling this pre-requisite, are defined rather vaguely, and the form of their practical implementation is not addressed (this is the case, for instance, of the requirement for the indicator to provide a robust and unbiased measure of inflation). For this reason, these conditions allow little progress as to characterise the properties of the selected indicators.

To overcome these difficulties, we first introduce a set of *a priori* conditions that have to be met by any core inflation indicator. Obviously, in the discussion that follows, we implicitly assume that any candidate to be a core inflation measure does meet the pre-requisites of being timely and computable once and for all.

Let us assume that for a given period  $t$ , the inflation rate,  $\pi_t$ , is broken-down into the sum of two components: a permanent component, named trend inflation — say,  $\pi_t^*$  — and a temporary component of inflation in period  $t$ , represented by  $u_t$ . Hence, by definition, in each period of time we have:

$$\pi_t = \pi_t^* + u_t \quad (1)$$

In equation (1) we assume that the temporary disturbances in the inflation rate,  $u_t$ , are caused by events such as changes in weather conditions, disturbances in the demand or supply of some goods, significant adjustments to the prices of some goods for reasons different from those determining the general behaviour of prices, etc. By definition  $u_t$  is expected to have zero mean and finite variance, for any given moment  $t$ . Therefore, non-stationarity, understood as the presence of a unit root, is by definition excluded.

(6) See for instance Bryan and Cecchetti (1994), Coimbra and Neves (1997) or Bryan, Cecchetti and Wiggins II (1997). In general, in these papers, a good core inflation indicator is one that minimises the mean square error (MSE) calculated in relation to the “reference measure”, i.e.  $\sum_{t=1}^T (\pi_t - \hat{\pi}_t)^2 / T$ , where  $\pi_t^*$  stands for the trend measure,  $\hat{\pi}_t$  denotes the “reference measure” of inflation and  $T$  is the number of observations.

The simple examination of a chart for Portugal, plotting inflation measured by the year-on-year rate of change of the CPI, shows that neither the mean nor the variance of this variable is constant. Therefore, although the issue of the statistical attributes of the inflation rate is in general unsolved, in the Portuguese case it is reasonable to admit that the year-on-year inflation rate has a non-stationary behaviour. More specifically, the statistical tests do not allow to reject the hypothesis of this variable being integrated of order 1<sup>(7)</sup>. For this reason, in what follows it is assumed that  $\pi_t$ , the inflation rate, is an integrated process of order 1, i.e. it is a I(1) variable.

Given the assumption that the inflation rate is a I(1) variable, it then results from equation (1), given the hypotheses on  $u_t$ , that the core inflation measure,  $\pi_t^*$ , shall also be I(1) and, in addition, must be co-integrated with the observed inflation rate,  $\pi_t$ , so that  $z_t = \pi_t - \beta\pi_t^*$  is stationary with zero mean for some value of  $\beta$ .

However, given the hypothesis of a zero mean for  $u_t$ , one should have  $\beta=1$ , that is to say,  $z_t = \pi_t - \pi_t^*$  should be a stationary variable with zero mean. It should be noted that if  $z_t = \pi_t - \pi_t^*$  does not have zero mean, then  $\pi_t^*$  is not capturing all the systematic movements included in  $\pi_t$ , i.e., there is a non vanishing difference between  $\pi_t$  and  $\pi_t^*$ . Something similar happens if  $\beta \neq 1$ . Also in this case,  $\pi_t^*$  does not account for all the permanent movements included in  $\pi_t$ . The net result shall correspond to either a faster (if  $\beta < 1$ ) or slower (if  $\beta > 1$ ) systematic growth of  $\pi_t^*$  vis-à-vis  $\pi_t$ . The condition that  $z_t = \pi_t - \pi_t^*$  is a zero-mean stationary variable is, therefore, the first necessary condition for a trend inflation indicator. This condition was initially proposed by Freeman (1998).

We now turn to how to motivate the need for additional conditions. First, the variable  $\pi_t^*$  is to behave as an attractor for  $\pi_t$ , i.e., in the long run,  $\pi_t$  must converge to  $\pi_t^*$ . In fact, if the variable  $\pi_t^*$  does not exhibit this property, its interpretation as a core inflation measure is not useful in any sense. If there is no reason to expect that  $\pi_t$  will converge to  $\pi_t^*$ , there is no point in knowing whether in a given period  $\pi_t^*$  is above or below  $\pi_t$ . However, if  $\pi_t^*$  is an attractor for  $\pi_t$ , we can ensure that if in a given pe-

riod  $\pi_t$  is above (below)  $\pi_t^*$ , there is a reason to expect that, sooner or later,  $\pi_t$  will start to decrease (increase) and converge to  $\pi_t^*$ . Note that this condition, which we shall consider the second condition, includes as a special case the requirement of Granger causality. In particular, this condition requires that  $\pi_t^*$  Granger causes  $\pi_t$ , i.e., that  $\pi_t^*$  is a leading indicator of the of inflation rate.

Finally, it is important to ensure that the second condition does not occur the other way around, i.e., that  $\pi_t$  is not an attractor for  $\pi_t^*$  and also that  $\pi_t^*$  is not “too” sensitive to observed outliers in  $\pi_t$  in the recent past. The need for the first half of this third condition is quite understandable. If  $\pi_t^*$  is itself attracted by the inflation rate, then it will be very difficult to anticipate the most likely future sign of the change in the inflation rate. The fact, for instance, that in a given period  $\pi_t^*$  is above  $\pi_t$  does not indicate necessarily that it will be  $\pi_t$  who will converge to  $\pi_t^*$  and not the contrary. The second part of this condition ensures that the trend inflation indicator is insensitive to the presence of outliers in the inflation rate, hence rendering necessarily a smother measure than the inflation rate itself.

Combining the second and the third condition, we can conclude that if in a given period inflation stands above the trend indicator, then under normal circumstances there are reasons to expect that inflation will decrease, thus converging to the trend indicator.

The technical details of the econometric formulation and of the statistical tests for these three conditions can be seen in Marques, Neves and Sarmiento (1999).

#### 4. AN EMPIRICAL ILLUSTRATION: THE CPI IN PORTUGAL IN THE PERIOD 1993-1998

This section analyses the behaviour of a set of trend inflation measures for the period running from July 1993 up to November 1999. The choice of a relatively short time span is due to two reasons. First, the CPI recorded important re-basing in previous years (1976, 1983 and 1991), which makes it difficult to operate with a relatively consistent classification of the CPI items for a longer period. Second, 1992 saw a significant change of

(7) See for instance Sousa (1996).

VAT rates; hence it would be difficult to analyse this period.

The measures considered in this analysis are the following:

#### a) Trimmed mean (TM 10 and TM 25)

The trimmed mean of the year-on-year changes of the CPI is obtained by eliminating a given percentage of the highest and lowest price changes. The *Banco de Portugal* discloses the 10 per cent trimmed mean on a regular basis<sup>(8)</sup>. This indicator corresponds to the average of the 80 per cent central year-on-year price changes in the CPI. Coimbra and Neves (1997) recommended the utilisation of this indicator, with detriment to alternative indicators, as a result of the application of a set of criteria different from that proposed in the present analysis.

This is a symmetrical trimmed mean, as it excludes the same percentage of outliers at the upper and the lower tails of the distribution. We analyse two kinds of trimmed mean: the 10 per cent trimmed mean (TM10) and the 25 per cent trimmed mean (TM 25).

#### b) Underlying inflation (UNI)

The concept of “underlying inflation” used by the *Banco de Portugal* was originally proposed by Nascimento (1990). In general, this indicator (hereafter referred to as UNI) is obtained from the CPI when excluding non-processed foodstuff goods and energy.

#### c) First principal component (FPC)

Coimbra and Neves (1997) proposed the utilisation of the first principal component (FPC) of the year-on-year changes of the CPI as an alternative trend inflation indicator<sup>(9)</sup>. The behaviour of this indicator has been quite regularly referred in the Economic Bulletin of the *Banco de Portugal*.

The application of the principal components technique can be interpreted as a means of seizing

the general trend of prices. Therefore, one is admitting that the price change of each CPI item reflects not only specific factors but also the general behaviour of prices.

#### d) Weighted standard deviation CPI (SDI)

Following the suggestion of Diewert (1995) and Wynne (1999), we calculated a price change where in the place of the usual CPI weights we used a measure of the relative volatility of each CPI item in relation to the average change of CPI itself. The formula used was:

$$SDI_t = \frac{\sum_{i=1}^N w_{it} P_{i,t}}{\sum_{i=1}^N w_{it} P_{i,t-12}} \text{ with } w_{it} = \frac{1}{\sum_{j=1}^N \frac{1}{\sigma_{jt}}}$$

where

$$\sigma_{it} = \sqrt{\frac{\sum_{j=t-m+1}^t [(\pi_{ij} - \pi_j) - (\pi_{it} - \pi_t)]^2}{m}} \text{ for } i = 1, 2, \dots, N$$

with

$$(\pi_{it} - \pi_t) = \sum_{j=t-m+1}^t \frac{(\pi_{ij} - \pi_j)}{m}$$

where  $\pi_{it}$  is the year-on-year rate of change of the prices of component I in period  $t$  and  $\pi_t$  stands for the year-on-year rate of change of the original CPI in period  $t$ .

Charts in the Appendix depict these indicators for the sample period as well as the difference between these indicators and the year-on-year rate of inflation.

For the reasons presented in section 2, the analysis shall lie upon the assumption that the year-on-year inflation rate is an integrated variable of order 1.

To analyse the first condition, we took as the starting point the result of the unit root test — referred to in the literature as the augmented Dickey-Fuller (ADF) test — to the series  $(\pi_t - \pi_t^*)$ , where  $\pi_t$  stands for the year-on-year rate of infla-

(8) The *Banco de Portugal* published the trimmed mean for the first time in the March 1997 *Economic Bulletin*, in the article “Inflation – prospects for 1997 and 1998”.

(9) A limitation of this indicator derives from the fact that the principal components technique gives rise to a scale-less measure. As a result, it becomes necessary to find a priori an appropriate level for which the indicator can be directly compared with inflation.



tion and  $\pi_t^*$  denotes the trend inflation indicator. To explain this procedure, recall that the first condition stipulates the existence of co-integration between  $\pi_t$  and  $\pi_t^*$  with a unit coefficient and zero constant. This means that in the co-integration regression

$$\pi_t = \alpha + \beta\pi_t^* + u_t \tag{2}$$

residuals are stationary,  $\beta = 1$  and  $\alpha = 0$ . Equation (2) can be written as follows

$$(\pi_t - \pi_t^*) = \alpha + (\beta - 1)\pi_t^* + u_t \tag{3}$$

from which we infer immediately that  $(\pi_t - \pi_t^*)$  is stationary if and only if  $u_t$  is a stationary variable and  $\beta = 1$ . In the case the hypothesis of the existence of a unit root is rejected for series  $(\pi_t - \pi_t^*)$ , then this means that  $\pi_t$  and  $\pi_t^*$  are co-integrated and  $\beta = 1$  in (2). In this case the ADF test can be utilised to test the hypothesis of  $\alpha = 0$ , which only requires that the regression constant is analysed.

To test the second and third conditions it is necessary to specify dynamic models for  $\pi_t$  and  $\pi_t^*$  <sup>(10)</sup>.

Table 1 displays the results of the analysis carried out for the five indicators under scrutiny. We now recover the set of conditions that are being tested:

Condition 1: the difference between observed inflation and the trend indicator must be a zero-mean stationary variable;

Condition 2: the trend inflation indicator must behave like an attractor of the rate of inflation, in the sense that it provides a leading indicator of inflation;

Condition 3: observed inflation should not be an attractor of the trend inflation indicator.

Table 1 shows that three indicators — UNI, FCP and SDI — totally fulfil the first condition. But the trimmed means (whether at 10 or 25 per cent), despite being co-integrated with the rate of inflation and fulfilling condition  $\beta = 1$ , do not comply with condition  $\alpha = 0$ . This means that both indicators are systematically skewed vis-à-vis the rate of inflation, as Coimbra and Neves (1997) had

<sup>(10)</sup>See Marques, Neves and Sarmento (1999) for further technical details.

Table 1

EVALUATION OF THE CORE INFLATION INDICATORS

	First condition		Second condition	Third condition
	$\beta = 1$	$\alpha = 0$		
TM 10.....	Yes	No	Yes	Yes
TM 25.....	Yes	No	Yes	Yes
UNI .....	Yes	Yes	No	No
FPC.....	Yes	Yes	Yes	Yes
SDI.....	Yes	Yes	Yes	Yes

already demonstrated for the Portuguese case (see charts in Appendix).

The bias of the trimmed means has a relatively simple explanation. Indeed, recent researches show that in most cases the distributions of year-on-year price changes are not symmetrical. Instead, they tend to exhibit a predominantly positive degree of asymmetry. As for the Portuguese case, the studies by Coimbra and Neves (1997) showed that the distribution of price changes exhibited relatively lasting periods of positive asymmetry alternating with negative asymmetry. The fact that in Table 1 we obtained  $\alpha \neq 0$  indicates in principle that in the period under review the negative and the positive asymmetry periods do not fully offset each other.

As for indicators UNI and SDI, it should be noted that condition  $\alpha = 0$  is not rejected, but only at the limit — therefore suggesting the existence of some bias in this indicator as well.

The third column in Table 1 shows that all indicators except for underlying inflation verify the second condition. This conclusion is quite robust as it depends neither on the number of lags used in the estimated model nor on whether the model has a constant or not.

The last column in the Table 1 shows that the third condition is also fulfilled by all indicators except underlying inflation, although in this case the conclusion regarding the trimmed mean at 10 per cent is not very robust.

The results of the tests hence confirm the already existing idea that underlying inflation does not provide a good indicator of trend inflation<sup>(11)</sup>.

This is because, contrary to what would be desirable, this indicator is not a leading indicator. In fact, it works as a lagging indicator of inflation. Indeed, changes in the prices of the goods excluded from the indicator (energy and non-processed food) affect directly and contemporarily the CPI, while only transmitting indirectly and with some lag to underlying inflation, which hence becomes a lagging indicator of inflation.

In brief, one can say that from the five indicators analysed, only two — the first principal component and the SDI — fulfil all conditions. However, as regards trimmed means, it should be noted that only the first condition is unfulfilled, hence these indicators may still be used. In fact, if these indicators were adjusted so as to take into account the skewness of the price changes distribution, they would possibly fulfil all three properties.

## 5. CONCLUSIONS

This paper defines a minimum set of criteria that should be verified by a trend inflation indicator; through appropriate statistical procedures, it also tests if a relatively wide range of trend inflation indicators meet these criteria. The main conclusions are the following:

- a) “Underlying inflation” does not provide an appropriate core inflation indicator as it lags the year-on-year rate of inflation; this result is in line with those obtained by other authors, employing alternative statistical procedures;
- b) Trimmed means, as currently calculated by the *Banco de Portugal*, meet in general the criteria proposed in this article; however, in the sample period, these indicators exhibit a lower average price change than that of inflation, which is also in line with the findings of other authors; this result is also due to the fact that the cross-section distribution of year-on-year price changes exhibit relatively lasting periods of asymmetry, which

are alternatively positive and negative and do not fully compensate each other.

- c) The “first principal component” indicator fulfils all criteria proposed in this study; it therefore should continue being used as a trend inflation indicator;
- d) The indicator obtained through re-weighting the CPI according to the volatility of the prices of its items vis-à-vis inflation, and whose statistical properties are for the first time discussed for the Portuguese case in this article, also meets all criteria; however, it should be noted that there are signs of some bias vis-à-vis the inflation rate.

These findings suggest two guidelines for future research. First, trimmed means require further development as to take into account the skewness of the cross-section distribution of price changes. Second, the SDI indicator deserves a closer analysis that considers alternative forms of obtaining the weights of each CPI item.

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(11) See for example Coimbra and Neves (1997) and Cecchetti (1997).

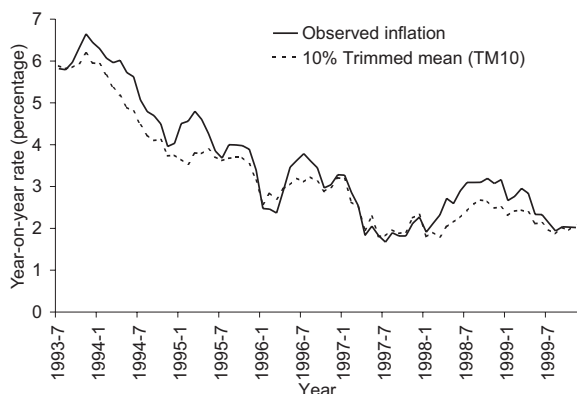
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**COMPARISON BETWEEN THE CPI AND CORE INFLATION INDICATORS**

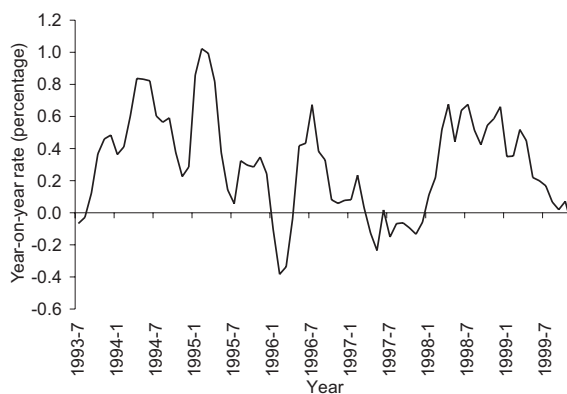
**Chart 1A**

**Year-on-year rates of change of the CPI and of the 10 per cent trimmed mean (TM 10)**



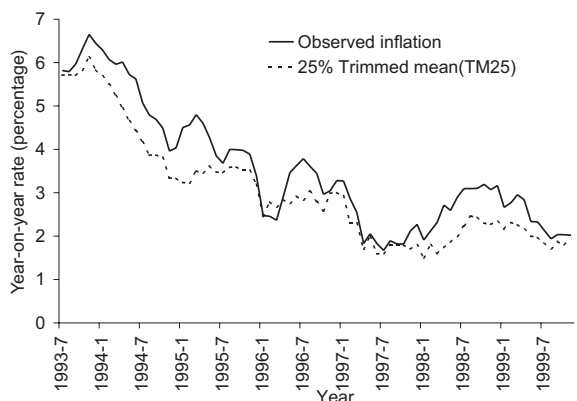
**Chart 1B**

**Difference between the year-on-year rates of change of the CPI and of the 10 per cent trimmed mean**



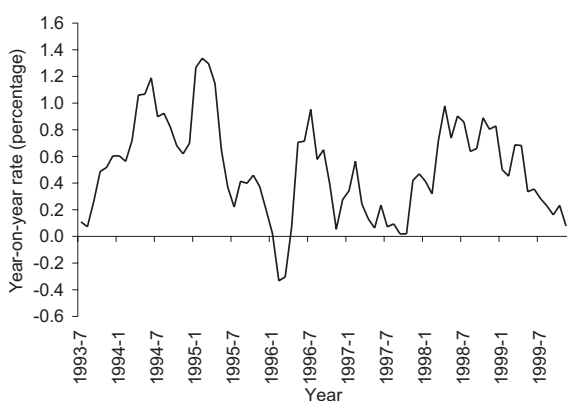
**Chart 2A**

**Year-on-year rates of change of the CPI and of the 25 per cent trimmed mean (TM 25)**



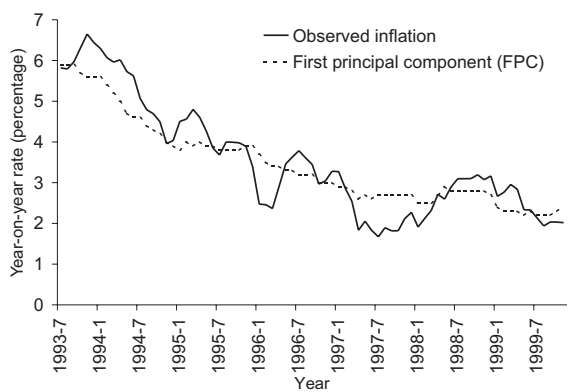
**Chart 2B**

**Difference between the year-on-year rates of change of the CPI and of the 25 per cent trimmed mean**



**Chart 3A**

**Year-on-year rates of change of the CPI and of the first principal component**



**Chart 3B**

**Difference between the year-on-year rates of change of the CPI and of the first principal component**



Chart 4A

Year-on-year rates of change of the CPI and of underlying inflation

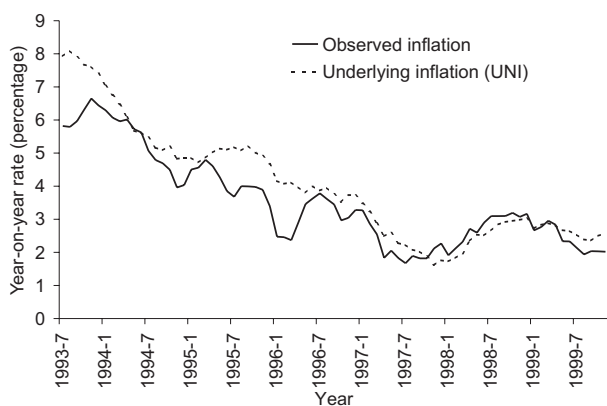


Chart 4B

Difference between the year-on-year rates of change of the CPI and of underlying inflation

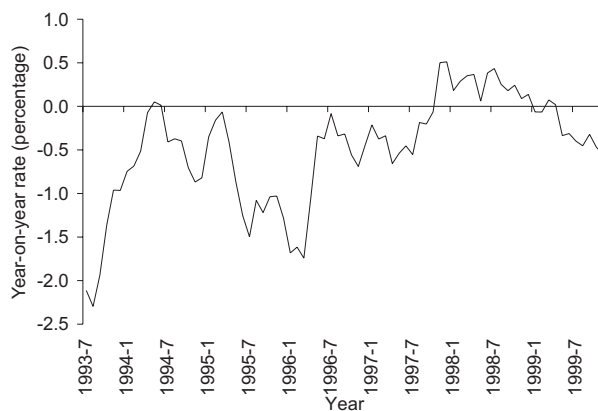


Chart 5A

Year-on-year rates of change of the CPI and of the Weighted standard deviation CPI

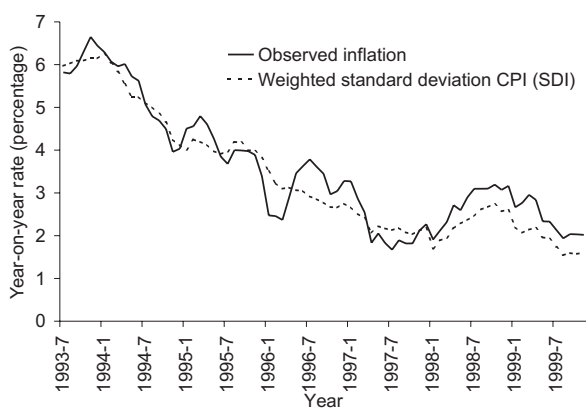
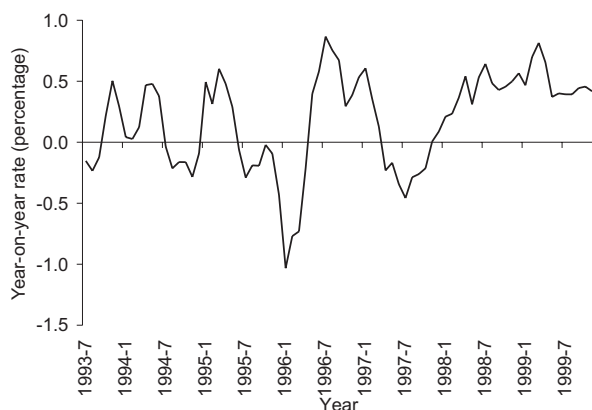


Chart 5B

Difference between the year-on-year rates of change of the CPI and of the Weighted standard deviation CPI



## EMPLOYMENT VOLATILITY, EMPLOYMENT PROTECTION AND UNEMPLOYMENT \*

*Pedro Portugal* \*\*

### 1. INTRODUCTION

This essay explores the richness of the Portuguese microdata provide for the characterisation of the job creation and destruction processes, and for the analysis of the transitions that occur in the Portuguese labour market<sup>(1)</sup>.

For a long while the general understanding of the functioning of labour markets assumed a strong inertia in employment's adjustment to shocks in the demand of final goods. The image that prevailed in economic research, based on aggregate empirical information, conveyed a gradual and smooth behaviour of the economic aggregates describing the labour market.

However, over the course of the last two decades, the growing use empirical researchers in the field of Labour Economics made of microeconomic databases — i.e., those electing the worker and/or the firm as the unit of observation — allowed to change radically the former perception of the labour market dynamics.

Behind the apparent smoothness conveyed by aggregate data, recent research based on microdata brought into light a picture of unexpected turbulence and of a very dynamic labour market functioning.

However, it should be stressed that the shift in the perception of the intensity of labour market flows largely preceded the current discussion around the effects on the labour market brought by international trade intensification and “globalisation”. Moreover, academics do not associate the idea of strong employment volatility to a recent trend characterising the economies, but consider it a structural phenomenon that characterises the labour market functioning already for quite a long time. Nevertheless, it is debatable whether em-

ployment volatility (job precariousness or instability) has worsened recently. Empirical evidence available for the United States of America, however, does not confirm the existence of a sustained increasing trend in job volatility (see Wanner and Neumark, 1999).

In this context, legislation on job protection in the Portuguese case is particularly important. The present analysis will suggest that this legal framework influences decisively labour adjustment costs, thus influencing the nature of the labour market itself. Therefore, stress shall be laid on the impact of firing costs on the intensity of flows of workers and on the equilibrium level of the unemployment rate. Although fixed-term contracted workers account for not more than 15 per cent of wage earners, this category absorbs more than half of employment adjustments. Therefore, we shall analyse the role of labour contracting regulation on employment dynamics and on workers' wage developments.

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\* The opinions of this paper represent the views of the author, they are not necessarily those of the *Banco de Portugal*.

\*\* Economic Research Department.

(1) The *Banco de Portugal* thanks the *Instituto Nacional de Estatística* for having made available individual records of the Employment Survey, and the Statistics Department of the *Ministério do Emprego e Solidariedade* for the microdata of the *Quadros de Pessoal*.

Table 1  
ANNUAL JOB FLOWS (1983 - 1994)

	Job creation			Job destruction			Turnover rate (A+B+C+D)
	Entry (A)	Expansion (B)	Total (A+B)	Exit (C)	Contraction (D)	Total (C+D)	
Manufacturing industry . . . . .	0.053	0.061	0.114	0.055	0.063	0.118	0.232
Total economy . . . . .	0.078	0.071	0.149	0.064	0.073	0.137	0.286

Source: Blanchard and Portugal (1999).

Notes:

(A) Ratio between the number of jobs created as a result of the entry of new establishments into activity and total employment.

(B) Ratio between the number of jobs created as a result of the expansion of existing establishments and total employment.

(C) Ratio between the number of jobs destroyed as a result of the closing of establishments and total employment.

(D) Ratio between the number of jobs destroyed as a result of the contraction of existing establishments and total employment.

## 2. JOB CREATION AND DESTRUCTION IN PORTUGAL

A conventional manner of carrying out a broken-down characterisation of job dynamics is to measure job flows. Taking the firm (or the establishment) as the reference unit, the measurement of job creation sums the number of jobs created due to the birth of new firms and the number of jobs created by the expansion of existing ones. Conversely, a measure of job destruction sums the counting of jobs foregone due to firm close-ups and jobs destroyed due to employment reduction in labouring firms. Therefore, four different situations account for the size of job flows: expansion, contraction, entries and exists of establishments.

In Portugal, labour market flows measured annually show a similar intensity to those of other OECD economies (OECD, 1996)<sup>(2)</sup>. According to the information collected from the individual records of the *Quadros de Pessoal*, in the period running from 1983 up to 1995, job destruction in manufacturing industry (in the economy as a whole) amounted annually to around 11.8 per cent (13.7 per cent) of existing jobs. On the other hand, in manufacturing industry (in the economy as a

whole) 11.4 per cent (14.9 per cent) of total jobs were newly created jobs (see table 1). Jobs destroyed are broken-down into virtually even shares of plant closings (5.5 per cent for manufacturing and 6.4 per cent for the economy as a whole) and contraction of employment (6.3 per cent and 7.3 per cent, respectively). In turn, jobs created are also due, in basically equal parts, to the opening of new establishments (5.3 per cent for manufacturing industry and 7.8 per cent for the economy as a whole) and the expansion of existing plants (6.1 per cent and 7.1 per cent).

It is interesting to notice that in Portugal, as in other economies, the bulk of job creation and job destruction takes place within the same activity sector or the same region, even when considering sectors and regions at a high breakdown level (Carneiro and Portugal, 1998). Indeed, employment flows are basically due to the expansion and contraction of employment and to the closing and opening of plants within the same sector and region, and not to phenomena of sectoral recomposition or regional displacement: while around 84 per cent (86 per cent) of employment flows are within sector (intra-regional), only 16 per cent (14 per cent) are due to inter-sectoral (inter-regional) changes (Carneiro and Portugal, 1998). Also in line with the empirical evidence available for other economies, job turnover drops sharply according to plant size (table 2).

(2) Job flows are calculated from the net job changes occurred in a given establishment between March of one year and March of the following year.

Table 2

**JOB FLOWS, MANUFACTURING INDUSTRY (1983 – 1994)**

Average establishment size	Entry (A)	Exit (C)	Expansion (B)	Contraction (D)
1 to 19 workers . . . . .	0.128	0.105	0.086	0.070
20 to 49 . . . . .	0.069	0.076	0.076	0.060
50 to 99 . . . . .	0.047	0.064	0.065	0.058
100 to 249 . . . . .	0.034	0.050	0.058	0.060
250 to 499 . . . . .	0.030	0.045	0.046	0.055
500 to 999 . . . . .	0.016	0.028	0.032	0.050
1000 to 2499 . . . . .	0.004	0.013	0.036	0.053
2500 to 4999 . . . . .	0.000	0.032	0.013	0.060
5000 + . . . . .	0.000	0.000	0.001	0.083

Source: *Quadros de Pessoal*, calculations made by the author.

Notes:

(A) Ratio between the number of jobs created as a result of the entry of new establishments into activity and total employment.

(B) Ratio between the number of jobs created as a result of the expansion of existing establishments and total employment.

(C) Ratio between the number of jobs destroyed as a result of the closing of establishments and total employment.

(D) Ratio between the number of jobs destroyed as a result of the contraction of existing establishments and total employment.

However, the relative importance of plant mobility in the distribution of job flows appears as a distinctive feature of the Portuguese labour market, which may be related with the influence job protection legislation on labour demand. This means that the reason behind the strong intensity of job flows due to plant creation and destruction (10.8 per cent — 5.3 plus 5.5 — for manufacturing industry and 14.2 per cent — 7.8 plus 6.4 — for the

economy as a whole, see table 1) when compared with the flow generated by plant contraction and expansion (12.4 per cent and 14.4 per cent) may be the high firing costs enforced by labour legislation (Blanchard and Portugal, 1998).

Another distinctive feature of the Portuguese labour market is the low intensity of quarterly employment flows, when compared with the corresponding annual flows (table 3)<sup>(3)</sup>. The natural in-

Table 3

**QUARTERLY JOB FLOWS (1983 – 1994)**

	Job creation			Job destruction			Turnover rate (A+B+C+D)
	Entry (A)	Expansion (B)	Total (A+B)	Exit (C)	Contraction (D)	Total (C+D)	
Manufacturing industry . . . . .	0.012	0.020	0.032	0.010	0.029	0.039	0.071
Total economy . . . . .	0.018	0.022	0.040	0.011	0.028	0.039	0.079

Source: Blanchard e Portugal (1999).

Notes:

(A) Ratio between the number of jobs created as a result of the entry of new establishments into activity and total employment.

(B) Ratio between the number of jobs created as a result of the expansion of existing establishments and total employment.

(C) Ratio between the number of jobs destroyed as a result of the closing of establishments and total employment.

(D) Ratio between the number of jobs destroyed as a result of the contraction of existing establishments and total employment.

terpretation for the low magnitude of quarterly employment flows is that Portuguese firms do not change significantly their demand for labour in the presence of transitory shocks, contrary to their reaction vis-à-vis shocks that are perceived as being of a permanent nature. Therefore, the observation of a strong persistence of job creation and destruction (i.e., hiring and firing decisions that are not reversed afterwards) (see table 4) is interpreted as resulting from the difficulty in reacting to temporary shocks, which in turn reflects the impact of high costs of adjustment to workers' departure.

### 3. WORKER FLOWS

The concept of worker flow is closely linked to the phenomenon of job creation and destruction by firms, and is distinct from the concept of job flows. To ascertain this, one only needs to consider a situation where more than one worker may, in a given period of time, rotate by the same job. The inflow of workers comprises total hired workers, while conversely the outflow encompasses all ways in which workers become unattached from firms (firings, retirements, quits etc.). Therefore, the intensity of worker flows reflects their mobility.

The Portuguese labour market is characterised by a very low labour mobility (see table 5). Obviously, a low intensity of job creation and destruction is sufficient to explain weak labour mobility (or worker turnover). However, even when conditioned to job creation and destruction, workforce rotation is low in Portugal. For each job created or destroyed only 1.5 workers rotate (around 60 per cent of the level obtained for the EUA) (table 5).

The low labour mobility is reflected in a range of indicators that allow to characterise the Portuguese labour market as one of the less (if not the least) dynamic (i.e., most stable) in the OECD. Both the average number of jobs over the working life and the average job tenure give a picture of

Table 4

#### PERSISTENCE OF JOB CREATION AND DESTRUCTION MANUFACTURING INDUSTRY

Job creation	Persistence rate after:			
	1st quarter	2nd quarter	3rd quarter	1 year
	1991 . . . . .	0.763	0.583	0.454
1992 . . . . .	0.757	0.556	0.436	0.347
1993 . . . . .	0.737	0.549	0.451	0.388
1994 . . . . .	0.731	0.590	0.488	0.408
Average . . .	0.747	0.569	0.457	0.375

Job destruction	Persistence rate after:			
	1st quarter	2nd quarter	3rd quarter	1 year
	1991 . . . . .	0.839	0.726	0.626
1992 . . . . .	0.850	0.737	0.647	0.588
1993 . . . . .	0.875	0.766	0.645	0.579
1994 . . . . .	0.869	0.769	0.659	0.602
Average . . .	0.858	0.749	0.644	0.586

Source: "Inquérito ao Emprego Estruturado", calculations made by the author.

Note: The rate of persistence is an indicator of the proportion of jobs created (destroyed) maintained in the following periods.

immobility (see table 6). The same message is conveyed by the proportion of long-term jobs (lasting over 20 years) and by the rate of transition from employment into unemployment, out of labour force or into another job (see table 6). In fact, the rate of transition from employment into unemployment is the lowest in the OECD.

These indications result not only from the weak job turnover but also from the weak incidence of voluntary exits (quits), which are discouraged in the Portuguese labour market by the perspectives of a

(3) It should be noted that this sum of quarterly job flows necessarily exceeds annual job flows, since annual flows are obtained from the net change in employment between two periods of time, separated one year from each other, while quarterly flows count the net changes employment records in a given quarter — i.e., the net changes in employment that take place in a given quarter, but are reversed in following quarters, and are hence do not appear in the annual job flows.

Table 5  
ANNUALISED WORKER AND JOB FLOWS<sup>(1)</sup>, ESTABLISHMENTS IN BUSINESS<sup>(2)</sup>

	Expansion	Contraction	Hirings	Separations	(C+D)/(A+B)
	(A)	(B)	(C)	(D)	
1991 .....	0.102	0.115	0.177	0.188	1.682
1992 .....	0.099	0.124	0.162	0.186	1.556
1993 .....	0.080	0.131	0.126	0.176	1.434
1994 .....	0.084	0.117	0.128	0.159	1.424
1995 .....	0.083	0.104	0.129	0.148	1.476
<b>Average</b> .....	<b>0.090</b>	<b>0.118</b>	<b>0.144</b>	<b>0.171</b>	<b>1.517</b>

Source: "Inquérito ao Emprego Estruturado", calculations made by the author.

Notes:

(1) Annual figures result from accumulating quarterly flows.

(2) Entries and exits of establishments are not included.

(A) Ratio between the number of jobs created as a result of the expansion of existing establishments and total employment.

(B) Ratio between the number of jobs destroyed as a result of the contraction of existing establishments and total employment.

(C) The rate of hirings is given by the ratio between the number of workers that, in a given year, decide to enter the establishment and total employment.

(D) The rate of separation is given by the ratio between the number of workers that, in a given year, leave the establishment and total employment.

Table 6  
LABOUR MARKET TRANSITIONS

	Data on the stock of employees					Quarterly transition from employment into:		
	Tenure	Tenure	Tenure	Number	First job	Unem-	Inactivity	Another
	In months	< 12 months Proportion	>240 months Proportion	of jobs Average	Proportion	ployment Proportion	Proportion	job Proportion
1993 .....	151.7	12.5	23.8	2.6	37.1	0.95	1.14	1.41
1994 .....	149.9	11.6	23.3	2.8	34.0	1.10	1.02	1.19
1995 .....	147.7	11.9	23.5	2.8	31.8	0.80	0.93	1.09
1996 .....	148.2	12.6	24.2	2.8	30.3	0.84	0.94	1.28
<b>Average</b> .....	<b>149.0</b>	<b>12.1</b>	<b>23.7</b>	<b>2.8</b>	<b>32.7</b>	<b>0.92</b>	<b>0.99</b>	<b>1.20</b>

Source: Microdata from the "Employment Survey" (INE), employed population, calculations made by the author.

Note: Proportions were calculated with reference to total employment.

long-lasting unemployment experience. Meanwhile, the hypothesis of switching jobs directly, with no unemployment or non-participation episode in between, does not appear to be relatively more inten-

sively used than the former. Thus, the weak rate of employment-unemployment transition is not compensated by a higher employment-employment transition rate.

#### 4. EMPLOYMENT PROTECTION AND WORKER FLOWS

The interpretation of job and worker flows in Portugal cannot be separated from the legal framework of job contracts. Portuguese legislation, which constitutionally consecrates the principle of job stability (article 53<sup>o</sup> of the Portuguese Constitution), establishes significant constraints on worker firings. These constraints are provided not only by the regulatory framework of severance pay and of the job contract forms, but also — and most notably from an economic point of view — by the existence of an imprecise and lasting set of procedures and mechanisms which the process of firing must observe<sup>(4)</sup>.

In the presence of non-returnable firing costs (for instance, administrative costs, cost of execution of the social plan, costs due to production disruption resulting from the announcement of collective lay-offs) economic theory predicts clearly the effects of job protection on employment flows: the greater the firing costs, the smaller shall be employment outflows (the lower shall be firings). If ex-ante a non-zero probability of the firm suffering a negative shock to the demand for the product exists, a rise in firing costs rises the minimum productivity threshold required to create a new job (or, from another perspective, the free entry condition lowers the maximum wage at which the employer is willing to pay the worker).

Furthermore, job protection strengthens the bargaining power of workers, whom therefore are in conditions to demand a higher wage level. Therefore, at an initial stage, firing costs lead to a gap between the wage offered by the employer (the feasible wage) and the wage demanded by the worker (the bargaining wage). To re-establish equilibrium in the labour market, unemployment penalisation will tend to rise through the reduction of job offers, which in turn rises the duration of an unemployment spell.

According to alternative references and methodologies, the Portuguese legislation on job protection is considered the most restrictive in the OECD. The most widely used indicator is compiled by the OECD and is based on the systematic comparison of job protection legislation in its member states (see table 7)<sup>(5)</sup>. However, this indicator is not exempt from criticism. In addition to

Table 7

#### RANKING OF COUNTRIES ACCORDING TO THE DEGREE OF JOB PROTECTION

Country	Index of job protection
Portugal . . . . .	3.7
Turkey . . . . .	3.5
Greece . . . . .	3.5
Italy . . . . .	3.4
Spain . . . . .	3.1
France . . . . .	2.8
Germany . . . . .	2.6
Norway . . . . .	2.6
Sweden . . . . .	2.6
South Korea . . . . .	2.5
Belgium . . . . .	2.5
Austria . . . . .	2.3
Japan . . . . .	2.3
Netherlands . . . . .	2.2
Czech Republic . . . . .	2.1
Finland . . . . .	2.1
Poland . . . . .	2.0
Hungary . . . . .	1.7
Denmark . . . . .	1.5
Switzerland . . . . .	1.5
Australia . . . . .	1.2
Ireland . . . . .	1.1
Canada . . . . .	1.1
New Zealand . . . . .	0.9
United Kingdom . . . . .	0.9
United States . . . . .	0.7

Source: OECD, 1999.

the difficulties that are always present in any comparative law exercise, a quantified measure of the level of rigidity of labour legislation is inevitably prone to some subjectivity and, most notably,

(4) From the viewpoint of economic theory, the relevant firing costs (i.e., the costs that effectively condition employers' labour demand decisions) are those that are not bound to become ineffective through the redesign of adequately conceived new contract (Lazear, 1990). For instance, in case of severance pay, the worker may offer inter alia the employer a monetary compensation (a bond) to pay for the right to the indemnity.

(5) This indicator is based on a weighted index of the degree of legal constraints included in the legislation on severance pay for dismissal, collective lay-offs, individual firing, temporary work and dismissal notice. Other indicators based on surveys to employers lead to similar rankings.



it cannot assess the degree of effectiveness of (compliance with) legal rules. However, there is no solid ground on which countries could be differentiated according to the degree of compliance with the respective legal frameworks.

The characterisation of worker flows allows to classify the Portuguese labour market as the paradigmatic case of the influence job protection can yield on the labour market dynamics. As referred above, this indication is clearly reflected both in the worker mobility indicators (average job duration, average number of jobs, intensity of labour force flows between employment, unemployment and non-participation) and in the high average unemployment duration.

## 5. JOB SECURITY AND UNEMPLOYMENT

The high levels and the strong persistence of unemployment in Europe, contrasting with the United States of America, gave rise to an intense discussion over the last decade on the role of the labour market institutions on unemployment developments (Nickell, 1997). More specifically, researches on the influence of the unemployment security system, the legal framework of job contracts, the training system and active labour market policies on the unemployment rate were developed<sup>(6)</sup>.

More specifically, the analysis of the effects of job protection (conditioning firings, regulating job contracts, etc) on the levels of the unemployment rate have risen sharp controversy<sup>(7)</sup>.

At the theoretical level, higher firing costs tend to give rise to lower inflows into unemployment and longer unemployment average duration. Since firing costs affect unemployment flows and duration in opposite directions, the expected effect of these costs on unemployment rates is ambiguous. At the empirical level, namely in research carried out based on international comparisons, the correlation between indicators of the degree of rigidity of job protection legislation and the unemploy-

ment rate is very weak, if not null. On the contrary, a strong sample correlation is found between the level of job protection and average unemployment duration, and also between the level of job protection and intensity of entries into unemployment (Blanchard and Portugal, 1999).

The comparison of the Portuguese case with that of other economies is particularly revealing. Indeed, when Portugal is compared with the USA (a country unanimously considered as one of those that least imposes constraints to firings), one can observe that both countries exhibited similar unemployment rates over the course of the last fifteen years. However, average unemployment duration in Portugal is three times higher than in the USA, which is compensated with flows into unemployment more than three times smaller. This suggests that job protection changes the nature of the labour market, making economies more sclerotic, and generating potential productivity and welfare losses.

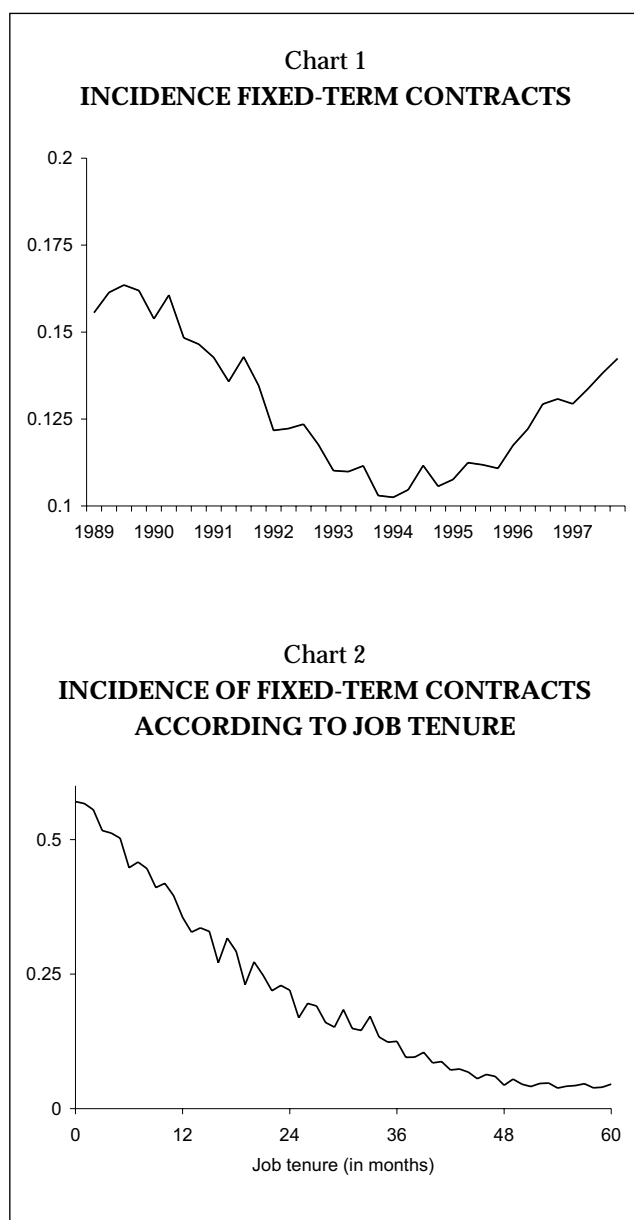
In this context, the comparison between the Portuguese and the Spanish labour markets is also quite suggestive. Though exhibiting very similar job protection legal frameworks<sup>(8)</sup>, the Spanish economy exhibits unemployment rates that are more than three times higher than in Portugal (Bover, Garcia-Perea and Portugal, 1999). This indicator suggests that the explanation for the paradoxical behaviour of the Spanish and Portuguese labour markets does not stem from job protection. Instead, it must be due to other institutions. A possible influence may be the system of unemployment subsidies, virtually non-existing in Portugal until 1985 (Blanchard and Jimeno, 1995). However, the current design of the Portuguese unemployment subsidy system does not differ substantially from the Spanish one<sup>(9)</sup>. A more plausible explanation is advanced in Bover, Garcia-Perea and Portugal (1999), based on the difference in the bargaining power of unions in both countries. For this purpose, these authors characterise the forms of

(6) More recently, some researches have tackled the issue of the interaction between labour market institutions in the accommodation to economic shocks (Bertola and Rogerson, 1997; Blanchard and Wolfers, 1999).

(7) This controversy is particularly evident in the political debate, since the main conclusions gather general consensus among researchers.

(8) Different job protection indicators consistently show that Portugal, Spain and Italy are the economies that show the highest protection indices.

(9) Nevertheless, one may argue that the impact of unemployment subsidy systems is felt only in the presence of very strong economic shocks to labour demand. This shall not have been the case of Portugal since the generalisation of the unemployment subsidy system.



union representation in both countries and collect a set of empirical data on the indirect manifestation of bargaining power (wage dispersion, strikes, wage differentials between insiders and outsiders, real wage flexibility, etc), which point towards a strong bargaining power of Spanish syndicates when compared with those in Portugal. Indeed, unions representation rules in Spain are such that syndicates reflect especially the interest of employed workers (the insiders), while in Portugal representation appears to be more diversified and decentralised, contributing to greater wage flexibility.

Finally, it should be stressed that the true economic costs associated with job protection do not translate into the increase of unemployment levels,

but instead into potential production and welfare losses. According to the calibration trials of Blanchard and Portugal (1999), these losses are quite significant.

## 6. JOB FLEXIBILITY AND FIXED-TERM CONTRACTS

In some European countries characterised by particularly rigid labour legislation, mechanisms of flexibilisation of labour contracts were introduced over the last decades. These aim at easing labour market adjustments and reducing unemployment. The most paradigmatic case is that of the introduction of fixed-term contracting. However, the explosion of fixed-term contracts in the hiring of workers did not always yield the expected results (Bentolita and Dolado, 1994). In some cases, the growing use made of fixed-term contracts seems to have increased the labour market segmentation between insiders and outsiders, increasing unemployment (Blanchard and Summer, 1986; Lindbeck and Snower, 1988). Moreover, the massive resort to temporary contracting (Alba-Ramirez, 1998), by giving rise to strong worker turnover by different jobs, creates less favourable conditions to investment in specific human capital, thus affecting productivity and wages.

### 6.1 The importance of fixed-term contracts

In Portugal, fixed-term contracts were introduced in the second half of the 1970s, as an attempt to alleviate the difficulties in job matching associated with an excessively rigid job protection framework. With the flexibilisation of lay-offs in 1989, more constraints were laid on fixed-term contracting. In the current legal framework, fixed-term contracts have a relatively limited share in total wage earners' contracts (see chart 1). However, these contracts represent around 60 per cent of total hirings and 50 per cent of total separations (see chart 2) (Varejão, 1998). Therefore, fixed-term contracting plays a key role in the process of labour adjustment.

Indeed, while a fixed-term contracted worker faces a 4.7 per cent (3.05 per cent) probability of entering unemployment (non-participation) within a quarter, for a open-ended-contracted worker

Table 8

## QUARTERLY RATES OF TRANSITION FROM A FIXED-TERM CONTRACT

	Transition to:					Number of jobs	Tenure (in months)
	Unemployment	Non-participation	Self-employment	Another Job	Open-ended		
1992 .....	3.41	3.62	0.45		5.03		16.77
1993 .....	5.29	3.83	0.91		7.20		19.64
1994 .....	6.31	3.01	0.67	3.74	5.98	3.67	19.18
1995 .....	4.53	2.45	0.66	3.45	4.81	3.66	17.17
1996 .....	4.43	2.85	0.45	4.02	4.59	3.51	15.37
1997 .....	3.92	2.72	0.34	4.14	4.99	3.38	16.51
Average...	4.70	3.05	0.58	3.84	5.45	3.56	17.05

Source: Microdata from the "Employment Survey" (*INE*), computations made by the author.

Table 9

## QUARTERLY RATES OF TRANSITION FROM A OPEN-ENDED CONTRACT

	Transition to:					Number of jobs	Tenure (in months)
	Unemployment	Non-participation	Self-employment	Another Job	Fixed-term contract		
1992 .....	0.44	0.78	0.21		0.24		129.43
1993 .....	0.68	1.10	0.29		0.30		138.83
1994 .....	0.78	0.85	0.18	0.87	0.24	2.70	141.43
1995 .....	0.59	0.70	0.20	0.83	0.29	2.70	141.30
1996 .....	0.61	0.72	0.22	1.01	0.34	2.69	143.50
1997 .....	0.51	0.74	0.17	1.01	0.41	2.69	143.23
Average...	0.61	0.82	0.21	0.93	0.30	2.69	142.36

Source: Microdata from the "Employment Survey" (*INE*), computations made by the author.

the probability of becoming unemployed (a non-participant) is 0.6 per cent (0.8 per cent) (see tables 8 and 9, and chart 3). However, the proba-

bility of a fixed-term contracted worker becoming permanently contracted (5.45 per cent, see table 8) is higher than the risk of unemployment (chart 4).

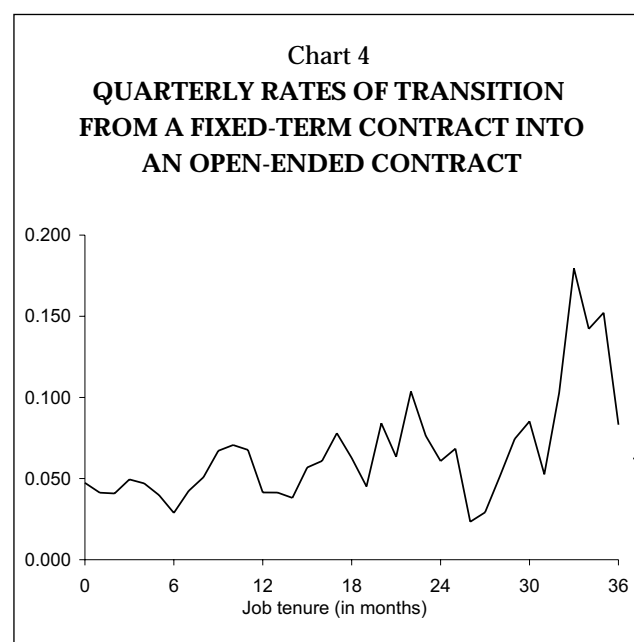
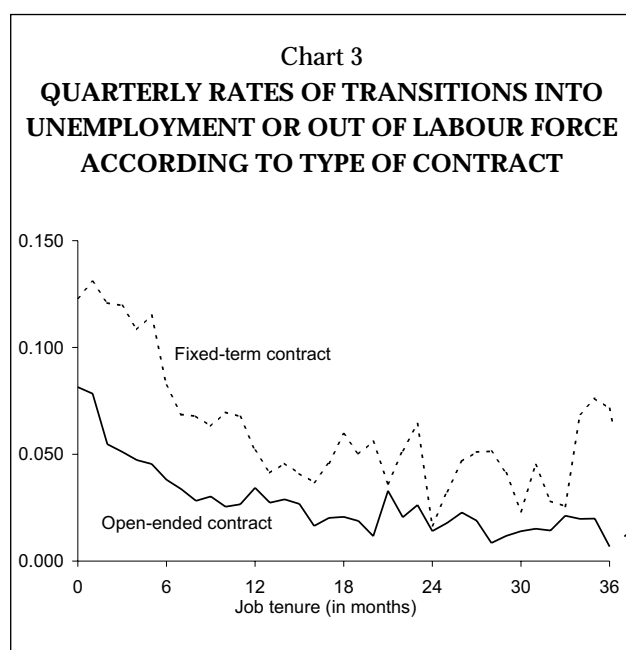


Table 10

**PROFILE OF FIXED-TERM  
CONTRACTED WORKERS**

Variable	Kind of contract	
	Permanent	Fixed-term
Age (in years) . . . . .	38.6	29.8
Schooling (in years) . . . . .	7.1	7.5
Male (proportion) . . . . .	55.1	49.3
Number of jobs. . . . .	2.7	3.5
Job tenure (in months) . . . . .	143.2	20.8
Part-time (proportion). . . . .	3.6	7.4
Married (proportion). . . . .	72.7	47.6

Source: Microdata from the "Employment Survey" of the *INE*, calculations made by the author.

It now seems clear that the resort to this contractual form has a behaviour markedly adjusted with the economic cycle. Since fixed-term contracts have lower adjustment costs than permanent contracts, it is quite natural that the former are used more intensively in the upper swing of the economic cycle, being fixed-term contracted workers the first to be fired when economic activity slows down (Varejão and Portugal, 1999).

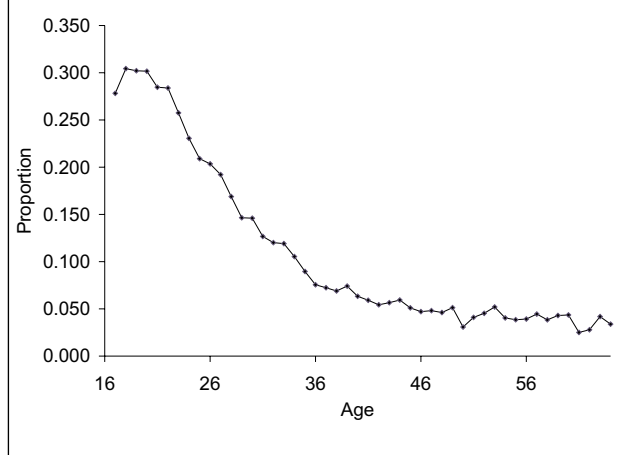
### 6.2 Why firms use fixed-term contracting

Several motives lead firms to resort to fixed-term contracting. Economic activities subject to greater demand variability, whether due to seasonal reasons (the case of tourism) or to the nature of the product (construction, for example), will tend to resort to fixed-term contracts more intensively. Thus temporary contracts perform as "buffers" against shocks to the demand of the product. Fixed-term contracts usually also perform as mechanisms of selection of workers; in cases the workers attributes match the job characteristics, this form gives place to a permanent contract. In this case, temporary contracting functions mainly as an "entry door" into the labour market.

### 6.3 Who are fixed-term workers

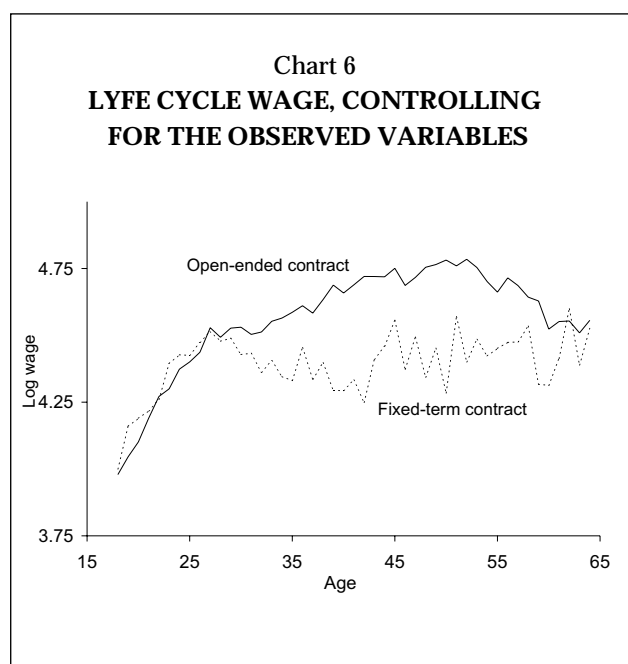
The use of temporary contracts, in addition to affecting job stability, may influence the process of accumulation of human capital specific to the job.

Chart 5  
**INCIDENCE OF FIXED-TERM CONTRACTS  
ACCORDING TO AGE**



If this contract form is used mainly to select and test workers, then it provides an improved allocation of resources, without influencing permanently individuals' productive abilities. On the contrary, the persistence of a temporary contract situation over the life cycle tends to generate inadequate investment in specific training, therefore feeding situation of labour market segmentation.

The characterisation of wage earners according to the respective contract form seems to indicate that in Portugal it is principally youngsters at the beginning of their work life who feed the stock of temporarily-contracted workers (table 10, chart 5). Given individuals' observed attributes, the labour situation of fixed-term contracted workers does not depress significantly their wage income (the loss is estimated at 3 per cent when comparing with permanently-contracted workers' wages). (table 4). However, if the temporary contract situation persists chronically over the age of thirty, the results of the estimation of the wage equation with parameters varying according to age indicate that wage losses will tend to be very high (chart 6). Therefore, the fringe of adult workers that keeps permanently rotating through temporary jobs will raise an income which is much lower than the one earned by permanently-contracted workers. This situation reflects, with a great likelihood, the absence of a return to investment in specific training.



## 7. CONCLUSIONS

Job protection legislation in Portugal is considered the most restrictive in the OECD. This perception is based on international comparisons, which are necessarily subject to many limitations and ambiguity. However, the indication of strong legal protection of jobs is consistent with the stylised facts on the Portuguese labour market developed in this article. Therefore, employment protection legislation seems to influence decisively employment adjustment, reducing the intensity of job creation and destruction flows and lowering worker turnover. Most notably, job flows compiled on a quarterly basis — as to avoid problems related with time aggregation — revealed the importance of the costs of adjustment of jobs to employment dynamics.

Table 11

### REGRESSION EQUATION OF LOG NET MONTHLY WAGE <sup>(a)</sup>

Variables <sup>(b)</sup>	Total	Open-ended	Fixed-term contract
Labour market experience . . . . .	0.0267 (0.0006) <sup>(c)</sup>	0.0273 (0.0007)	0.018 (0.0013)
Experience <sup>2</sup> . . . . .	-0.0004 (0.00001)	-0.0004 (0.00001)	-0.0003 (0.00003)
Basic schooling (1st cycle) . . . . .	0.0958 (0.0095)	0.1101 (0.0102)	0.0003 (0.0256)
Basic schooling (2nd and 3rd cycle) . . . . .	0.3052 (0.0100)	0.3249 (0.0108)	0.1239 (0.0267)
Secondary schooling . . . . .	0.5932 (0.0113)	0.6352 (0.0122)	0.2952 (0.0290)
Upper-level schooling . . . . .	1.1119 (0.0114)	1.1456 (0.0122)	0.816 (0.0303)
Training job tenure . . . . .	0.1178 (0.0079)	0.1306 (0.0087)	0.043 (0.0183)
Job tenure . . . . .	0.0127 (0.0007)	0.0121 (0.0008)	0.0234 (0.0049)
Tenure <sup>2</sup> . . . . .	-0.0001 (0.00002)	-0.0001 (0.00002)	-0.0007 (0.00038)
Male . . . . .	0.2264 (0.0042)	0.2313 (0.0046)	0.1996 (0.0105)
Fixed-term contract . . . . .	-0.0309 (0.0063)		
Constant . . . . .	3.5068 (0.0154)	3.4342 (0.0169)	3.8926 (0.0348)
Sigma . . . . .	0.3205	0.3196	0.3067
N . . . . .	31573	24300	4273
Log-likelihood . . . . .	-58131.5	-49042.7	-8873.6

#### Notes

(a) The estimation method used takes into account the aggregated nature of data on wages.

(b) The regression equation also includes 6 sectoral dummy variables.

(c) Asymptotic standard error.

The obvious explanation for the weak magnitude of quarterly job flows is that Portuguese firms do not change significantly labour demand in the presence of transitory shocks, contrary to what occurs when shocks are perceived as having a permanent nature. Meanwhile, job protection legislation appears to influence the mobility of establishments, yielding strong rates of entry and exit of establishments. It is possible that in situations where it is needed to shrink worker force, and adjustment costs are high, firms rather discontinue activity instead of reducing partly the number of jobs.

Higher firing costs tend to give rise to smaller flows into unemployment and longer average unemployment duration. Since firing costs affect unemployment flows and duration in opposite directions, their impact on the unemployment rate is ambiguous. In this regard, a comparison of the Portuguese labour market with the ones of Spain and the USA is particularly revealing. Although Portugal and Spain have quite similar job protection legal frameworks, the Spanish economy present unemployment levels three times higher than in Portugal. Meanwhile, when comparing Portugal with the USA — we may observe that both countries exhibited similar unemployment rates over the last 15 years. Therefore, it would appear that firing costs do not influence the unemployment level. Economic costs associated with job protection should instead be measured by productivity and welfare losses caused by the restrictions to firing.

Although accounting for less than 15 per cent of total wage earners, fixed-term contracts absorb more than half of worker adjustments. In Portugal, fixed-term contracting are used especially as a device to select and test workers at an early stage of their work life, to ensure a good matching of the job characteristics with the worker's skills. This way of using temporary contracting does not seem to penalise significantly workers' wage income. However, empirical evidence suggests that a fringe of workers is found in a chronic situation of temporary contracting. In this case, the disincentive to investment in specific training stemming from the limited duration of jobs seems to give rise to quite significant wage income losses and may originate segmentation in the labour market.

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## January\*

**7 January (Regulation no. 25/98 of the Stock Market Commission, Official Gazette no. 5/99, Series I, B)**

Lays down a set of rules regarding the compulsory reporting and advertising of transferable securities transactions by the issuing companies to the managing companies of the respective market. Revokes Regulation no. 92/6 of 7 January 1993.

**7 January (Executive Order no. 8/99, Official Gazette no. 5/99, Series I, B)**

According to the provisions laid down in Decree-Law no. 138/98 of 16 May, on the rules to be complied with in the process of transition to the euro, fixes at 3.25 per cent the benchmark rate to which the aforementioned Decree-Law, article 10, no. 2 refers. This is an equivalent rate, which will replace the discount rate of the Banco de Portugal as of 1 January 1999.

**11 January (Decree-Law no. 11/99, Official Gazette no. 8/99, Series I, A)**

Introduces changes in the calculation basis of the annual base rate. This Decree-Law takes effect on the first day of the month following its entry into force.

**15 January (Notice of the Banco de Portugal no. 1/99, Official Gazette no. 12/99, Series I, B)**

Determines the operations included in no. 1 of Article 5 of Decree-Law no. 13/90 of 8 January, which defines the scope of foreign exchange operations, introducing the changes arising from the entry into force of the euro. Revokes Notice no. 6/93 of 15 October.

**15 January (Executive Order no. 28/99, Official Gazette no. 12/99, Series II)**

Under the terms laid down in no. 4 of Article 8 of Decree-Law no. 138/98 of 16 May, entrusts the Directorate-General of the Treasury with the powers to guarantee the exact correspondence between the daily cash flows arising from the global settlement of means of payment denominated in euro and the respective accounting records, on an item-by-item basis, both at the fiscal level and at the level of the Treasury accounts.

**19 January (Regulation no. 3/99, Official Gazette no. 15/99, Series II)**

Lays down the rules governing the use of derivative products by insurance companies operating in Portugal or abroad, which are subject to the supervision of the Portuguese Insurance Institute.

**19 January (Regulation no. 4/99, Official Gazette no. 15/99, Series II)**

Lays down the rules governing the use of derivative products in pension funds by the respective managing companies operating in Portugal.

**26 January (Notice of the Banco de Portugal no. 2/99, Official Gazette no. 21/99, Series I, B)**

In use of the powers conferred to it by Article 99 (e) of the Legal Framework of Credit Institutions and Financial Companies, approved by Decree-Law no. 298/92 of 31 December, introduces changes in the setting up of provisions for general credit risks by credit institutions and financial companies, taking into account the growth level of credit granted to individuals for consumption purposes, namely the ratio risk/profitability associated with it. Rewords nos. 3 and 7 and revokes nos. 20 and 21 of Notice no. 3/95 of 30 June.

**28 January (Instruction no. 1, Official Gazette no. 23/99, Series II)**

Lays down the general rules governing the operation of the primary and secondary markets of Treasury bills.

**28 January (Decree-Law no. 22/99, Official Gazette no. 23/99, Series I, A)**

Lays down several rules governing the registration and settlement of transferable securities of a monetary nature by the Banco de Portugal.

## February

**10 February (Executive Order no. 118/99, Official Gazette no. 34/99, Series II)**

Under the terms laid down in no. 4 of Article 295 of the Companies Act (*Código das Sociedades Comerciais*) (legal reserve), stipulates that the provisions set forth in no. 2 of the aforementioned Act shall not be applicable to the companies subject to the supervision of the Banco de Portugal and the

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

	<p>Portuguese Insurance Institute, as regards the reserves set up for the amounts referred to in paragraph a) of this Act. It further stipulates that reserves cannot be utilised for the payment of dividends or the acquisition of own shares.</p>
<p><b>11 February (Decision no. 2481/99, Official Gazette no. 35/99, Series II)</b></p>	<p>Stipulates the new amounts in euro for the issue of fixed rate and variable rate Treasury Bonds, following the process of redenomination to which Decree-Laws no. 138/98 of 16 May and no. 343/98 of 6 November refer, to take effect on 1 January 1999.</p>
<p><b>18 February (Instruction no. 2/99, Official Gazette no. 41/99, Series II)</b></p>	<p>Rewords Articles nos. 12, 16, 21, 22 and 23, and introduces other changes in Instruction no. 2-A/98 (Series II) of 22 December, as regards the rules governing the issue of Treasury bonds.</p>
<p><b>20 February (Regulation no. 3/99 of the Stock Market Commission, 4th Supplement to Official Gazette no. 43/99, Series II)</b></p>	<p>Rewords no. 5 of Regulation no. 94/4 of 20 June, governing the special market for wholesale transactions.</p>
<h3>March</h3>	
<p><b>2 March (Decree-Law no. 58/99, Official Gazette no. 51/99, Series I, A)</b></p>	<p>Regulates the setting up and operation of risk capital funds. Revokes Decree-Law no. 187/91 of 17 May, and Decree-Law no. 214/92 of 13 October.</p>
<p><b>8 March (Circular Letter of Banco de Portugal no. 16/DOC)</b></p>	<p>Informs credit institutions and financial companies that the rules governing operations on the primary and secondary markets of Treasury bills, through the SITEME (Electronic Market Transfer System) are laid down in Instruction No. 6/99.</p>
<p><b>10 March (Regulation no. 4/99 of the Stock Market Commission, Official Gazette no. 58/99, Series II)</b></p>	<p>Rewords paragraphs 2.3.2 – Accounting Principles – Valuation Criteria – Securities Portfolio - of Regulations nos. 95/14 and 96/16, adding a new paragraph, which will become effective on 1 January 2000.</p>
<p><b>12 March (Regulation no. 8/99 of the Portuguese Insurance Institute, Official Gazette no. 60/99, Series II)</b></p>	<p>Lays down a set of rules on the calculation and setting up of the solvency margin and of the guarantee fund of pension fund managing companies. Revokes Rule no. 3/98-R of 18 February, retaining no. 61 of Rule no. 298/91 of 13 November, previously revoked.</p>
<p><b>12 March (Regulation no. 9/99 of the Portuguese Insurance Institute, Official Gazette no. 60/99, Series II)</b></p>	<p>Lays down a set of rules governing the calculation and setting up of the solvency margin and guarantee fund of insurance companies. Revokes Rule no. 2/98-R of 18 February.</p>
<p><b>16 March (Decree-Law no. 75/99, Official Gazette no. 63/99, Series I, A)</b></p>	<p>Valuation of the gold of Banco de Portugal. Brings into line the gold valuation criterion with the one defined for the European System of Central Banks and harmonises the nomenclature and the meaning of the current “Gold revaluation reserve” with that adopted in the Chart of Accounts of the Banco de Portugal. Revokes Decree-Law No. 229-H/88 of 4 July, effective as of 1 January 1999.</p>
<p><b>22 March (Circular Letter of the Banco de Portugal no. 9/DSB)</b></p>	<p>Sends a copy of Instruction no. 8/99, to be published in the BNPB no. 4, of 15 April 1999, relating to the procedures to be adopted by credit institutions and financial companies, as regards their clients, in the conversions between the escudo and other euro area currencies.</p>
<p><b>30 March (Notice of Banco de Portugal no. 3/99, Official Gazette no. 75/99, Series I, B)</b></p>	<p>Provides for the flexibilisation of the procedures governing the setting up of country-risk provisions, enabling its adaptation by the Banco de Portugal to new situations, through the issue of instructions. Rewords no. 1 of no. 12 of Notice no. 3/95 of 30 June.</p>
<p><b>31 March (Decree-Law no. 102/99, Official Gazette no. 76/99, Series I, A)</b></p>	<p>Changes the legal system governing mutual agricultural credit and agricultural credit co-operatives. Rewords articles 28, 44, 50, 53, 66, 68, 74 and 80 and adds articles 81 and 82 to Decree-Law no. 24/91 of 11 January,</p>



amended by Decree Law no. 230/95 of 12 September and Decree-Law no. 320/97 of 15 November.

## April

**1 April (Official Journal of the European Communities no.94, Series C)**

Interest rate applied by the European Central Bank to its repurchase agreements since 1 April 1999: 3.00%; euro exchange rates.

**1 April (Executive Order no. 227/99, Official Gazette number 77, Series I, 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. 9-A/99, of 23 February, shall be added to the list published through Executive Order no. 377-A/94, of 15 June.

**16 de April (Regulation no. 5/99 of the Stock Market Commission, Official Gazette no 89, Series II)**

Lays down the general rules governing the setting of the fees to be paid by the issuing entity to the Association of the Lisbon Stock Exchange (Portuguese acronym: ABVL) for the services provided by the latter, regarding the listing and relisting of securities, as well as their maintenance in the spot exchange markets. Revokes nos. 7 to 9 of Regulation no. 91/12 and no. 9 of Regulation no. 91/14 of the Stock Market Commission. Amended by Regulation no. 11/99, of 19 April, Official Gazette no. 113, Series II, of 15 May 1999.

**28 April (Circular Letter of the Banco de Portugal no. 24/DOC)**

Informes that on 10 May 1999 a redenomination shall be made by the Banco de Portugal of the outstanding Certificates of Deposit, and explains the method to be used in the referred operation.

**28 April (Executive Order no. 293/99, Official Gazette no. 99, Series B)**

Under the terms laid down in no. 2 of Article 27 of Decree-Law no. 415/91, of 25 October, adapts to the euro the rules governing the application of pension funds. Revokes Executive Orders no. 1152-E/94, of 27 December, no. 195/97, of 21 March and no. 46/98, of 30 January.

**30 April (Executive Order no. 299/99, Official Gazette no. 101, Series B)**

Under the terms laid down in no.1 of Article 90 and in Article 187 of Decree-Law no. 94-B/98, of 17 April, adapts to the euro the rules governing assets representing the insurance companies' technical reserves. Revokes Executive Orders no. 1152-D/94, of 27 December, no. 194/97, of 21 March and no. 48/98, of 4 February.

**30 April (Circular Letter of the Banco de Portugal no. 26/DOC)**

Informes that the rate of return on Certificates of Deposit, Series B, was fixed at 2.35%, to prevail on the quarter started on 4 May 1999.

## May

**5 May (Notice no. 4/99, Official Gazette no. 104, Series I)**

Fixes the contributions to the Agricultural Credit Guarantee Fund; lays down a transitional system to be applicable to the contributions of the Central Agricultural Credit Bank and the mutual agricultural credit banks, providing for their reassessment for the year 2000.

**12 May (Circular Letter of the Banco de Portugal no. 28/DOC)**

Informes that an amended credit-risk centralisation for January 1999 shall be disclosed, thereby cancelling the one issued on 22 April last.

**16 May (Decision of the European Central Bank, of 1 December 1998 (1999/331/EC))**

Decision on the national central banks' percentage shares in the key for the capital of the European Central Bank (ECB/1998/13). This decision replaces the ECB's Decision of 9 June 1998 (ECB/1998/1). The effects of this Decision are backdated to 1 June 1998. Pursuant to the provisions laid down in this Decision, the ECB's Executive Board is authorised to take all measures deemed necessary so as to make the adjustments to the amounts already settled by the NCBs, under the terms of the ECB's Decision of 9 June 1998, laying down the measures necessary for the paying-up of the capital of the European Central Bank.

**20 May (Decree-Law no. 172/99, Official Gazette no. 117, Series I, A)**

Lays down the legal system governing autonomous warrants issued, negotiated or traded in Portugal. Adds Article 157-A to the Stock Market Code, approved by Decree-Law no. 142-A/91, of 10 April, and rewords Article 3 of the Commercial Registration Code, approved by Decree-Law no. 403/86, of 3 December.

### August

**20 August (Decree-Law no. 329/99, Official Gazette no. 194, Series I, A)**

Regulates the process relating to the minting, storage, safekeeping, payment and entry into circulation of current euro metal coins, intended to replace the escudo from 1 January 2002 onwards.

**31 August (Decision no. 17704, Official Gazette no. 212, Series II)**

Determines, pursuant to article 10 (1) of Decree-Law no. 349/98, of 11 November, that all credit institutions authorised to grant housing credit under the terms of the general system in force in Portugal may carry out the operations envisaged in subsidised housing credit schemes, provided that they are in a position to ensure the supply of the necessary information to the management, control and supervision of the subsidised credit granted, in compliance with the above-mentioned Decree-Law and respective legislation, as well as with the regulations published by the Directorate-General of the Treasury.

### September

**15 September (Decree-Law no. 357/99, Official Gazette no. 216, Series I, A)**

Creates the education-saving schemes (Portuguese acronym: PPE), integrating registered certificates of an education-saving fund (Portuguese acronym: FPE), or registered certificates of a retirement/education-saving fund (Portuguese acronym: FPR/E), established expressly for the purpose or resulting from the adaptation of an already existing FPR, with the purpose of coping with the expenses with education in a professional or higher education course incurred by the participant or the member of his household, benefiting, with the adequate changes, from the fiscal system envisaged in article 21 of the Fiscal Incentives Statute, approved by Decree-Law no. 215/89, of 1 July.

**16 September (Regulation of the Stock Market Commission no. 15/99, Official Gazette no. 228, Series II)**

Establishes a set of regulations according to which the entities of stock market investment funds shall prepare a simple leaflet for each stock market investment fund, supplying all the major information in accessible and synthetic terms, enabling the investor to take a correct and informed investment decision.

**21 September (Circular Letter no.20/99/DSBDR)**

Recommends that, during the pre-contractual stage, the clients of credit institutions and financial companies shall be informed, in writing, of the impact that a 1 percentage point interest rate rise may have on the effective debt servicing of the corresponding loan, on the date the rate takes the form of a "variable" rate.

### October

**13 October (Decree-Law no. 394/99, Official Gazette no. 239, Series I, A)**

Approves the legal system restructuring and reorganising the entities managing regulated and non-regulated stock markets and the entities supplying services related with the management of those markets. Articles 190, 192, 194 to 263 and 481 to 498 of the Stock Market Code, approved by Decree-Law no. 142-A/91, of 10 April, are hereby revoked, wherefore the current associations are converted into companies. Should this not occur, article 194 (3) and (4) and articles 250, 494 and 495 of the same Decree-Law shall remain in force.

(Related Decree-Laws) Executive Order no. 1182/99 (Series II), of 22 October 1999, published in the Official Gazette no. 257, Series II, of 4 November 1999. Executive Order no. 1183/99 (Series II), of 22 October 1999, published in the Official Gazette no. 257, Series II, of 4 November 1999.

**22 October (Executive Order no. 1183/99  
Official Gazette no. 257, Series II)**

Creates the Public Debt Special Market (Portuguese acronym: MEDIP), which is a broker-dealer-activity on the Lisbon Stock Exchange specialising in gross operations of government book-entry securities. The management of this market is the responsibility of a public limited company, to be set up in compliance with Decree-Law no. 394/99, of 13 October, and with the regulations governing the Stock Market Committee.

**27 October (Circular Letter of the Banco  
de Portugal no. 347/DMR)**

Informs that, in the wake of the decision to link the rate of return of the Certificates of Deposit, Series B, to the rate of return of the minimum reserves of the European System of Central Banks, the rate of return of the Certificates of Deposit, Series B, is fixed at 2,5%, to prevail on the quarter started on 4 November 1999.

## November

**5 November (Decree-Law no. 453/99,  
Official Gazette no. 258, Series I-A)**

Lays down the system governing credit transfers for the purpose of securitisation (credit securitisation), and regulates the setting up and operation of credit-securitisation funds, credit-securitisation companies and management companies managing such funds. For the purpose of securitisation, credits are considered to be transferred when the licensee is a credit securitisation fund or a credit securitisation company.

**9 November (Decree-Law no. 475/99,  
Official Gazette no. 261, Series I-A)**

Regulates the setting up and operation of pension funds. Revokes Decree-Law no. 415/91, of 25 October. However, both the provisions relating to the investments of pension funds, and those laid down in the regulations already issued by the Portuguese Insurance Institute, shall remain in force.

## December

**29 December (Notice no. 6/99, Official  
Gazette no. 4, Series I, B, 6 January 2000)**

Lays down the conditions to be complied with by the agricultural credit banks who intend to extend their scope of activity to any of the activities specified in the different paragraphs of no.1 of Article 36-A of the legal framework of mutual agricultural credit and agricultural credit co-operatives, approved by Decree-Law no. 24/91, of 11 January, reworded by Decree-Law no. 230/95, of 12 September.

**29 December (Notice no. 7/99, Official  
Gazette no. 4, Series I, B, 6 January 2000)**

Introduces changes in no. 3 of Notice no. 1/93, of 8 June, regarding the method of calculation of the solvency ratio of credit institutions.

## 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.

**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.

**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.

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