INFLATION-DEVELOPMENTS IN 1997 AND PROSPECTS FOR 1998

1. INTRODUCTION

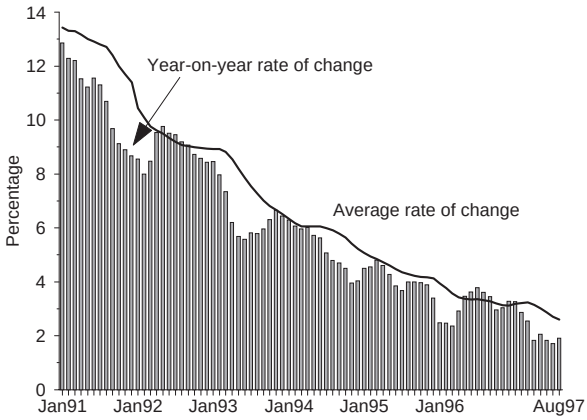
The maintenance of price stability is the main attribution of the Banco de Portugal[(1)] and, therefore, constitutes the final objective of monetary policy. In small open economies, the preservation of the external value of the national currency vis-à-vis a set of currencies which traditionally record nominal stability, constitutes an effective way of achieving price stability in the medium run. Under these conditions, the Banco de Portugal takes foreign exchange stability as an intermediate objective in conducting monetary policy, in a context of the escudo participation in the Exchange Rate Mechanism of the European Monetary System.

Portugal has been engaged in a gradual and continuous disinflationary process since 1990 (chart 1). The exchange rate stability of the escudo has been crucial to this process. Inflation, measured by the annual average change in the Consumer Price Index (CPI), fell to 3.1 per cent in 1996 and 2.6 per cent in August 1997.

The sustainable disinflationary process has encompassed a slowdown in the prices of both tradables and non-tradables, the latter growing systematically above the former (chart 2). Prices of tradable goods grew by 9.0 per cent in 1990, 4.6 per cent in 1993 and 1.9 per cent in 1996; on its turn, prices of non-tradables grew by 19.1, 9.0 and 4.5 per cent in 1990, 1993 and 1996, respectively.

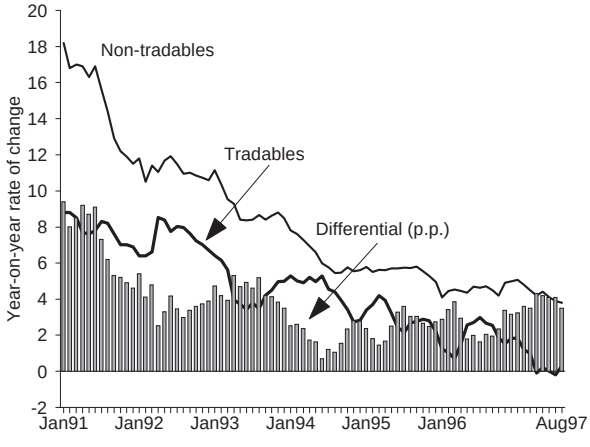
In July 1997 — the last month for which data is available for all the European Union countries — the annual average rate of change of the Harmonised Consumer Price Index in Portugal (2.4 per cent) stood, for the first time below the reference value for the application of the price stability criterion (2.6 per cent). In August, the Portuguese average inflation rate decreased again, amounting to

Chart 1
INFLATION
Consumer price index



Source: INE.

Chart 2
INFLATION INDICATORS



Source: INE and Banco de Portugal.

(1) Article no.3 of Decree-law nº337/90, 30 October, changed by Decree-law no.231/95 of 12 September.

2.3 per cent. The behaviour of the year-on-year rate of change of the HCPI since early 1997 points towards the continuation of the reduction in the average rate of change, which by the end of 1997 is expected to stand below the upper limit (2.25 per cent) used by the Banco de Portugal as the relevant reference in conducting the monetary policy.

Since a further reduction of inflation in tradables is not likely to occur in 1998, the continuation of the disinflation process is closely dependent on the slowdown of the prices of non-tradables. In this setting, the continued reduction in the nominal growth of wages becomes a central issue. In addition, in a context of economic activity acceleration above the expected, a more intense progress regarding budgetary consolidation would provide an additional contribution to the sustainable reduction in the inflation of non-tradable goods.

2. DEVELOPMENTS IN INFLATION IN 1997

The disinflation process proceeded in 1997. Inflation measured by the average change in the CPI, decreased from 3.1 per cent in December 1996 to 2.6 per cent in August 1997. In year-on-year terms, inflation stood at 1.9 per cent in August 1997, as against 3.3 per cent in December 1996.

The behaviour of prices of tradable goods was crucial in the reduction in inflation since early 1997. In fact, the annual average change in the prices of tradables decreased from 1.9 per cent in December 1996 to 1.0 per cent in August 1997. The behaviour of the prices of tradables is chiefly due to the slowdown in the prices of foodstuffs. In terms of annual average changes, prices of foodstuffs decelerated from 2.2 per cent in the first quarter of 1997 to 0.1 per cent in August.

However, prices of non-tradables kept recording significant increases (4.5 per cent in December 1996). The annual average rate of change of the prices of non-tradables goods amounted to 4.6 per cent in the first half of 1997, decreasing to 4.4 per cent in August.

To identify a trend in the behaviour of inflation which is not disturbed by momentarily factors, a set of trend indicators[2] should be followed. The "trimmed mean at 10 per cent"[3] and the "first main component"[4] confirm the slowdown of prices exhibited by the CPI (charts 3 and 4).

Chart 3
TREND MEASURES
Trimmed mean at 10 per cent

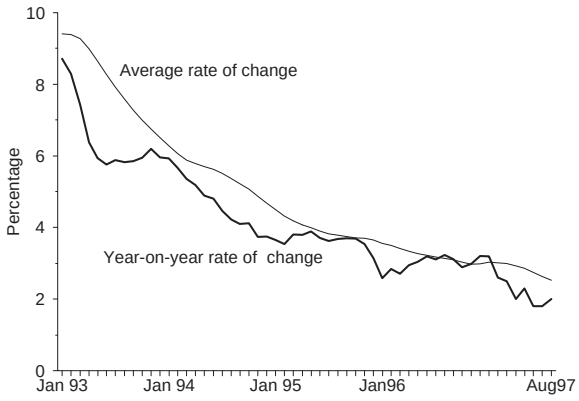
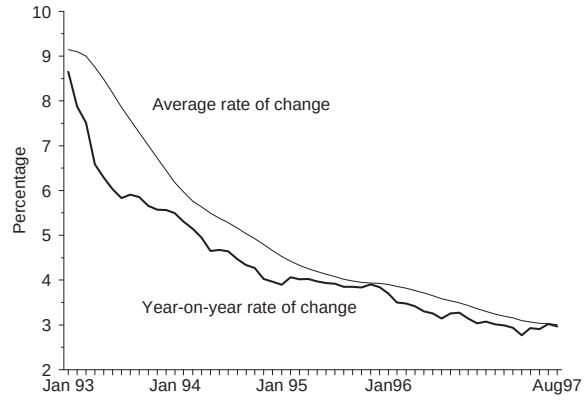


Chart 4
FIRST MAIN COMPONENT

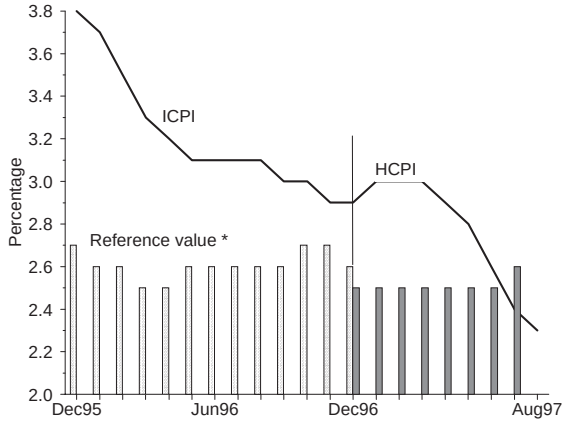


(2) See "Trend inflation indicators", by Carlos Coimbra and Pedro Duarte Neves, Published in the Economic Bulletin of the Banco de Portugal — Volume 3, Number 1, March 1997.

(3) This indicator is the mean of the central observations of the CPI, where the 10 per cent highest increases and the 10 per cent lowest increases in prices are excluded.

(4) The first main component assesses the general trend of prices, and hence eliminates the factors specific to the behaviour of prices of each type of goods. In general, the first main component issues higher weights to goods and services exhibiting less volatile prices, to non-foodstuff items of the CPI and to the CPI items whose prices are not subject to administrative control.

Chart 5
INTERIM AND HARMONISED CONSUMER PRICE INDEX
Average rate of change and reference value



* Simple average of the 3 countries recording the lowest inflation rates +1.5 percentage points.
Source: Eurostat.

Alongside the continuing of disinflation, the convergence of Portugal vis-à-vis the EU countries exhibiting the greatest price stability has been strengthened since early 1997. The HCPI provides a more adequate means of comparing the behaviour of prices between Member-States than the national CPI(5).

In August 1997, the annual average rate of change of the Portuguese HCPI stood at 2.3 per cent, comparing to 2.9 per cent in December 1996. In July 1997 (the last month for which the HCPI data is available for all EU countries) the annual average rate of change of HCPI in Portugal (2.4 per cent) stood, for the first time, below the reference value for the price stability criterion. This reference value rose to 2.6 per cent in July 1997, after having remained unchanged at 2.5 per cent since December 1996 (chart 5). In the first seven months of 1997, the differential of the Portuguese inflation rate vis-à-vis the reference value for the price stability criterion decreased by 0.6 percentage points.

The Banco de Portugal takes as the relevant reference for conducting the monetary policy an annual average growth of the HCPI not higher than 2.25 per cent at the end of 1997. Given the behaviour of the year-on-year rate of change of the HCPI (2.9 per cent in December 1996, 2.3 per cent in March 1997 and 1.6 per cent in August 1997), the annual average rate of change of the HCPI is expected to keep falling, reaching a value below 2.25 per cent at the end of the year.

In addition, a slight increase in the reference value for the price stability criterion is not to be excluded, reflecting some price acceleration in the countries which have presented lower inflation rates. The reference value for the price stability criterion is the simple average of the three lowest inflation rates plus 1.5 percentage points. These inflation rates are annual average rates of change. Sweden and Finland have systematically belonged to the group of the three countries exhibiting the lowest inflation rates. However, the respective year-on-year rates of change of the HCPI have increased in the last months, which may result in an increase in the future average rates of change(6).

To better understand the behaviour of prices in 1997, a short analysis of the recent behaviour of exchange rates, international prices, wages and the economic activity follows. These are in fact the main determinants of inflation.

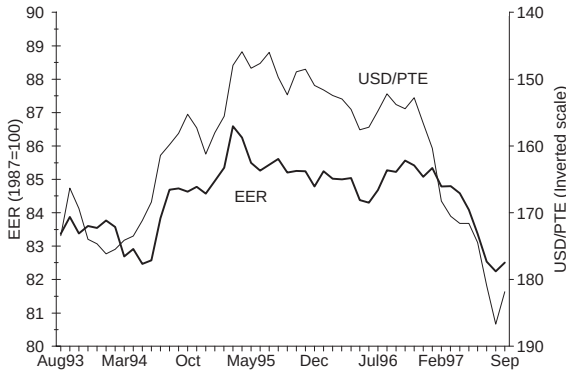
a) Exchange rate stability

The escudo has exhibited a remarkable stability in the Exchange Rate Mechanism; for the last two years the escudo has been traded within a narrow interval vis-à-vis the central parity against the Deutsche mark.

(5) The national CPI are built according to a wide range of concepts, methods and practices, which affects across-country comparability. To overcome this limitation, and to enable the evaluation of the convergence efforts taking place in Spring 1998 and to permit the definition of a single monetary policy in the countries integrating the "euro" area in 1999, the Harmonised Consumer Price Index (HCPI) was defined on the basis of common criteria. The HCPI is available in index terms since January 1995; consequently, the first average rate of change can only be calculated for December 1996. On the differences between national indices and harmonised indices see box "Consumer Price Index, Interim Index and Harmonised Index calculation and differences" in The Annual Report of the Banco de Portugal pp.51-52.

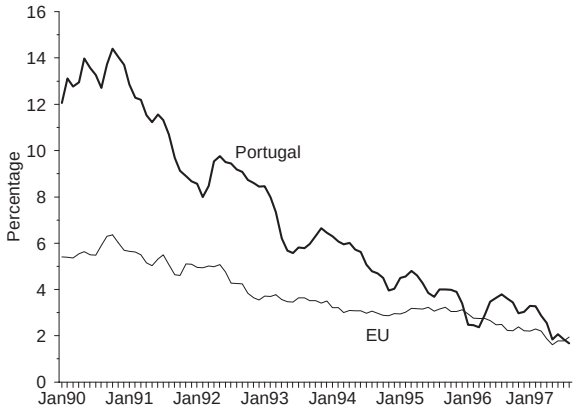
(6) Given the rule for determining the reference value, the probable increase in the average inflation rate in Sweden and Finland may lead one or both countries to exit the group of the three Member-States exhibiting the lowest inflation rates.

Chart 6
ESCUDO EXCHANGE RATES



Note:
(+) escudo appreciation; (-) escudo depreciation.

Chart 7
CONSUMER PRICE INDEX
Year-on-year rate of change



Source: INE and Datastream.

Chart 8
INTERNATIONAL PRICE INDEX OF RAW-MATERIALS (IN US DOLLARS)

Source: The Economist and Financial Times.

Between September 1996 and September 1997, the escudo appreciated 0.6 per cent vis-à-vis the Deutsche mark. In the same period, the escudo depreciated 3.2 per cent in effective terms (chart 6). This behaviour was recorded in a context of effective depreciation of most currencies in the exchange rate mechanism, reflecting the strengthening of the US dollar and of the Sterling pound.

The recent depreciation of the escudo in effective terms (resulting of the strengthening of the US dollar and of the Sterling pound) is not expected to affect consumer prices significantly up to the end of 1997. Although some acceleration in import prices is expected throughout the year — after the -2 per cent year-on-year rate of change recorded in the first quarter — the deflator of merchandise imports is expected to decrease on average by 0.4 per cent in 1997 as a whole.

b) International prices

In 1997, the convergence of inflation rates of the EU Member-States proceeded. Alongside this, the EU average inflation rate decreased further, reaching in July a historical minimum of 2.1 per cent in annual average terms, which compares to 2.5 per cent in December 1996. If measured by the HCPI, average inflation fell by 0.5 percentage points, from 2.4 per cent in December 1996 to 1.9 per cent in July 1997.

In Portugal, the behaviour of inflation was equally favoured by the behaviour of the prices of most raw-materials. Alike what occurred in 1996, the prices of industrial raw-materials denominated in US dollars kept falling in 1997. In the same direction, oil prices recorded a deceleration, after having recorded significant growth rates in 1996.

The behaviour of exchange rates and of international prices have contributed to the continuing of the disinflation process. The rate of growth of the imports deflator decreased from 1.7 per cent in 1995 to -0.2 per cent in 1996 and -2.0 per cent in the first quarter of 1997. The developments in the first quarter of 1997 reflect a fall in import prices in all economic categories (consumption goods, equipment goods and intermediate goods), except fuel. The fall in prices was particularly sharp in the intermediate goods (-5.2 per cent, in year-on-year terms).

c) *Wages and economic activity*

In 1996, wages per employee in the companies' sector grew by 4.7 per cent. According to the Strategic Agreement, the average reference wage for 1997 amounts to 3.5 per cent. In 1997, wages according to collective agreements will increase by 3.6 per cent. The average growth of wages per employee in the companies sector will amount to 3.8 per cent, according to estimates built by the Banco de Portugal. These figures account for a slowdown amounting to about 1 percentage point in relation to the previous year. According to the data available, the Portuguese economy will exhibit a strong growth in 1997, driven by domestic demand.

However, for the second half of 1997, domestic demand is expected to record a slowdown, which will contribute significantly to the maintenance of a downward trend in the inflation of non-tradable goods.

The unemployment rate decreased substantially since the beginning of 1997; a 0.5 percentage points decrease is expected in relation to 1996, although unemployment will still stand above its estimated natural rate. Therefore, and taking into account the slowdown in nominal wages, the labour market conditions remained favourable to the disinflation process.

3. PROSPECTS FOR INFLATION IN 1998

As mentioned above, in 1997 the disinflation process proceeded, based on the exchange rate stability of the escudo and on the maintenance of the slowdown in nominal wages. The Portuguese inflation rate converged to average values in the EU, becoming closer to levels generally taken as being compatible with the maintenance of price stability. Hence, after the consolidation of the disinflation process in 1998, the Portuguese economy shall benefit from the maintenance of price stability. As in the case of economies which generally benefit from macroeconomic stability, the inflation fluctuations will tend to become more related to the Portuguese economy's position in the cycle and with the behaviour of international prices.

The exchange rate stability of the escudo in the Exchange Rate Mechanism of the European Monetary System, the continuing of the wage slowdown and the recent projections on the behaviour of international prices are essential to the conclusion of the disinflation process in 1998.

In the scenery now defined for 1998, the slowdown in the prices of non-tradables is particularly important. The arithmetic effects on inflation in 1998 due to the behaviour of prices of foodstuffs in the first half of 1997, the lagged impacts of the US dollar appreciation recorded since early 1997 and the projection of a slight increase in inflation for the EU as a whole in 1998 are expected to prevent further reductions in the inflation rate of tradable goods.

The slowdown of nominal wages is then an indispensable condition for the reduction in the inflation of non-tradables to levels compatible with the continuing of the disinflation process. Furthermore, since economic recovery is happening faster than initially expected, the reinforcement of the budgetary consolidation process would contribute significantly to the disinflation policy. Finally, in structural terms, the growing market flexibility will contribute towards a faster transmission of the disinflation in the tradable goods to the non-tradable sector.

A revision of the present CPI and HCPI is expected for 1998. Since the effects of those changes are unpredictable, this analysis is based upon the actual structure of the HCPI.

3.1 Risks of the basic scenery

Some risks exist in the actual inflation scenery used as a reference in conducting the monetary policy. These risks deal with the volatility of the prices of foodstuffs, the possibility of maintenance

or acceleration of the pace of growth of both economic activity and wages in the last 12 months, and the possibility of developments in international prices which are more unfavourable than expected.

a) relative volatility of prices

The high volatility of the prices of some foodstuffs influences the indicators chosen to measure inflation. These effects are particularly sizeable in Portugal, since foodstuffs hold a greater share in total CPI; furthermore, those effects can become greater in a context of lower inflation rates. The present prospects suggest that the international prices of foodstuff raw-materials will decrease in 1998, although the prices of several of these goods depend on many factors which are unpredictable.

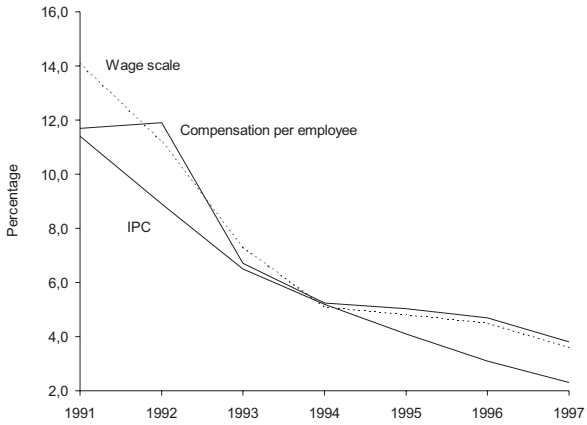
Over the course of the first half of 1997, the prices of foodstuffs recorded an uncommonly low increase. The eventuality of a reversion to the mean in the prices of foodstuffs is a risk factor in the resulting inflation in 1998. If the prices of these goods exhibit complete stability, the year-on-year rate of inflation may record a few momentarily increases over the course of the first half of 1998, which would be totally explained by the behaviour observed in the same period of 1997, and hence should not be seen as a sustainable increase in the general level of prices.

b) growth of economic activity and of wages

The growth of economic activity usually triggers inflationary pressures, by accelerating domestic demand and by the indirect effects through the labour market. However, given the virtual stability expected for the growth of GDP in 1997 when compared to the previous year, these cyclical effects on inflation should not be particularly significant in 1998.

Taking into consideration the actual levels for the inflation rate and the cyclical position of the Portuguese economy, the scenery drawn for 1998 lies on the assumption of a significant slowdown of contracted wages in nominal terms, following a 3.6 per cent increase recorded in 1997. The growth of wages may jeopardise the continuation of the disinflation process in 1998, since this process is particularly dependent on the slowdown of the prices of non-tradables.

Chart 9
PRICES AND WAGES
Rates of change



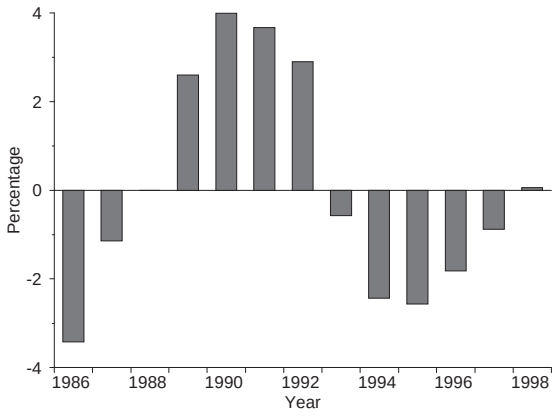
Source: INE, Ministério para a Qualificação e o Emprego and Banco de Portugal.
Note: The rates of change of compensations per employee and of the wage scale comprise the economy as a whole excluding General Government workers.

Finally, in a context of growing economic activity, it is necessary that the budgetary policy keeps contributing significantly to the reduction in inflation, specially in the non-tradable sector. The need for this contribution is clearly recognised in the Convergence Programme(7), approved by the Portuguese authorities in March 1997.

The Banco de Portugal takes exchange rate stability as an intermediate objective. In fact, the monetary conditions in Portugal will be strongly conditioned from the moment the countries participating in the "euro" are announced. Alongside the credibility and stability already achieved, this context makes that the behaviour of international prices and other country-specific factors (namely the wages and budgetary developments) achieve a greater relative relevance in the determination of inflation in 1998.

(7) "Convergence Programme, Stability and Growth 1998-2000", March 1997.

Chart 10
DIFFERENCE BETWEEN REAL GDP AND REAL TREND GDP



c) international prices

Over the course of 1997, most European countries recorded inflation rates below those initially expected. The most recent data suggest, however, that production prices and imports deflators might accelerate. If these phenomena take place, they will be transmitted to consumer prices. These indicators are consistent with the most recent forecasts of international organisations, which foresee a slight increase in inflation in our leading trade partners for 1998. The lagged effects consequent of the strong appreciation of the US dollar since early 1997 and the growing recovery of activity may contribute to an increase in inflation in the EU.

Even though the Portuguese economy is necessarily affected by perturbations related to the US dollar exchange rate and to the behaviour of international prices, it should be noted that these shocks are symmetrical to all countries in the Exchange Rate Mechanism. As a result, these shocks should not affect significantly the inflation differential between Portugal and the remaining EU countries.

Given the US dollar appreciation in 1997, the prospects concerning a slight increase in the EU inflation and the most recent perspectives regarding the behaviour of the international prices for raw-materials, the deflators of total merchandise imports and of consumption goods imports are expected to accelerate in Portugal in 1997-98, after having recorded negative year-on-year rates of change in the first quarter of 1997 (2 per cent and 3.6 per cent, respectively).

In what concerns the projected behaviour of EU prices, a set of factors are bound to attenuate possible inflationary pressures. First of all, despite the economic activity recovery, European labour markets are still characterised by the maintenance of high unemployment rates. The budgetary consolidation process taking place in most EU countries will also contribute to alleviate inflationary tensions related to the present upward stage in the economic cycle.

Secondly, the US dollar has already recorded a slight adjustment in relation to the higher level exhibited in early August. The effects of the US dollar appreciation may also be lessened by expected reductions in the prices in most raw-materials. Regarding oil prices, a sharp reduction was sensed throughout 1997, and further falls may occur in 1998.

Finally, the stability rationale underlying the functioning of the Exchange Rate Mechanism implies that countries integrating this mechanism shall keep adapting their monetary policies to lessen the inflationary pressures that may happen.

4. CONCLUSION

The disinflation process proceeded in 1997, with the Portuguese inflation rate converging to the average values in the EU. This process is a necessary condition for the Banco de Portugal to be able to attain its main attribution according to its Organic Law: the maintenance of price stability.

In addition, the reduction of inflation to the present levels, alongside the budgetary consolidation process, constituted since the December 1992 European Union Treaty and its coming into force in November 1993 (after being ratified by all Member-States) a necessary condition to the participation of Portugal in the third stage of the EMU in 1 January 1999.

Completed with information available as at 30 September 1997.

PORTUGUESE ECONOMY – DEVELOPMENTS IN 1997

1. INTRODUCTION

In 1997, the Portuguese economy was characterised by the continuing of the disinflation process, the reduction of the public deficit and the acceleration of economic activity.

Inflation maintained its downward path exhibited in previous years[1]. The year-on-year rate of change of the Consumer Price Index has stood around 2.0 per cent since April 1997. In July — the last month for which the Harmonised Consumer Price Indices (HCPI) are available for all European Union countries — average inflation reached 2.4 per cent in Portugal. For the first month around, average inflation in Portugal (measured by the HCPI) stood below the reference value for the application of the price stability convergence criterion.

In 1997, the deficit of the General Government (GG) kept decreasing. According to the Portuguese notification to the European Commission, sent September within the excessive deficit procedure, the public deficit is estimated to amount to 2.9 per cent of gross domestic product (GDP) in 1997, 0.3 percentage points (p.p.) less than in 1996. According to estimates by the Banco de Portugal, the GG deficit adjusted for cyclical effects shall remain fairly equal to its 1996 value. According to the above mentioned notification, the gross consolidated Public debt to GDP ratio is expected to decrease for the second year around: this ratio is expected to decrease to 63.2 per cent of GDP at the end of 1997, 2.4 p.p. less than in 1996. The Public debt to GDP ratio estimated for the end of 1997 is almost 1 p.p. below that indicated in the March notification. The change in the estimates is chiefly due to the fact that the revenue from privatisation operations allocated to debt redemption exceeded by far its forecast in the 1997 State Budget Law.

The Portuguese economy is expected to accelerate in 1997. The estimates of the Banco de Portugal suggest a growth of GDP between 3.25 and 3.75 per cent (table 1), which represents a 0.25 p.p. acceleration in relation to 1996, and a slight revision upwards of the central point of the forecast interval as disclosed in the March *Economic Bulletin* (EB).

Hence, the Portuguese economy is expected to exhibit a growth rate above that of the European Union (EU) for the second year around. According to the estimates recently disclosed by the International Monetary Fund (FMI), the EU shall grow by 2.5 per cent in 1997, which compares to 1.7 per cent in the previous year.

The pattern of growth of the Portuguese economy in 1997 has been characterised by a very dynamic performance of domestic demand — principally of Gross Fixed Capital Formation (GFCF) — and by a negative contribution of net external demand to the growth of GDP. GFCF increased significantly in all its items, accelerating strongly in relation to 1996. The perspectives regarding both external and domestic demand, the impact of the reduction of interest rates on companies and households' investment decisions, and the accomplishment of some investment programmes of infrastructure development are the major factors influencing the behaviour of GFCF. Private consumption is expected to record a real growth identical to that recorded in 1996. The growth of this item of demand reflects, in 1996 as in 1997, the in-

(1) See in this Bulletin "Inflation – Developments in 1997 and Prospects for 1998".

Table 1

MAIN ECONOMIC INDICATORS

Estimates for 1996 and projections for 1997
Rates of change (percentage)

	1996	1997
Private consumption	2.8	[2.5-3.0]
Public consumption	1.1	1.75
Investment	6.1	[11.25-12.25]
Domestic demand	3.3	[4.5-5.0]
Exports	8.5	[7.0-8.0]
Imports	7.5	[9.0-10.0]
GDP	3.3	[3.25-3.75]
(CA (% GDP))	-2.4	[(-3.0)-(-2.5)]

crease in households' real disposable income, the improved perspectives of job creation and the effects of the sharp fall in interest rates.

The behaviour of exports has been mainly determined by the behaviour of external demand. In 1997, Portuguese exporters are expected to record a slight gain of market share. Unlike what was recorded in 1995 and 1996, imports are expected to increase by more than exports in real terms. This behaviour reflects the dynamism of domestic demand and of the productive activity. As a result, the contribution of external demand to the growth of GDP shall amount to circa -1.5 p.p. in 1997, as against a virtually null value recorded in 1995 and 1996.

When compared to the macroeconomic scenario presented in the March EB, the contribution of domestic demand to GDP growth was revised upwards by about 1.5 p.p., while the contribution of net external demand decreased by about 1.25 p.p. The behaviour of GFCF — significantly revised upwards in comparison to the March forecast — and the revision of the growth of imports — in line with the revision of the estimated growth of domestic demand — account for those changes.

In intra-annual terms, the first half of 1997 recorded the maintenance of economic activity acceleration. The Portuguese economy grew by about 4 per cent in the first half of 1997[(2)], which follows a slightly lower growth rate recorded in the previous half-year. This behaviour was chiefly an outcome of the strong acceleration of domestic demand — specially of all GFCF items. In fact, domestic demand grew by 5 per cent in the second half of 1996, accelerating slightly in the first half of 1997. GFCF in construction and in transport material has recorded a strong acceleration since early 1996. Investment in equipment increased by almost 10 per cent in real terms, since the beginning of 1996 as well. Private consumption kept increasing at a pace similar to that recorded in 1996. The acceleration of domestic demand resulted in a higher growth of merchandise imports. On the contrary, exports recorded a slowdown in the second half of 1996 and in the first half of 1997, reflecting the behaviour of exports of transport material. Hence, the contribution of net external demand to economic growth became negative since the second half of 1996.

The dynamism of economic activity is expected to remain at a high level in the second half of 1997. Nevertheless, the forecast now released for GDP growth in the second half-year is lower than that of the first half, given the strong recovery recorded in the second half of 1996 — specially in construction. This estimate is due to a forecast slowdown of GFCF in the second half of 1997, specially in construction and in the purchase of transport material. The lower growth of domestic demand in the second half of 1997 (about 3.5 per cent) is expected to overcompensate the projected acceleration of merchandise exports up to the end of the year, induced by the higher growth expected for the European economies. In fact, the growth of external demand for Portuguese exports is expected to be between 1.0 and 1.5 p.p. above the one recorded in the first half-year. Imports are expected to record a slowdown in real terms in the second half of 1997, in line with the projected behaviour of overall demand.

By growing at more than 3 per cent the second year around, the behaviour of economic activity allowed for a reduction in the unemployment rate

(2) Except when mentioned otherwise, the referred rates of change are percentage changes in relation to the same period of the previous year.

from the second quarter of 1996 onwards. In 1997, the unemployment rate is expected to fall by about 0.5 p.p. in annual average terms vis-à-vis 1996. It will therefore remain above the natural rate of unemployment. In 1997, total employment will rise; also wage-earners will increase, unlike in the previous years.

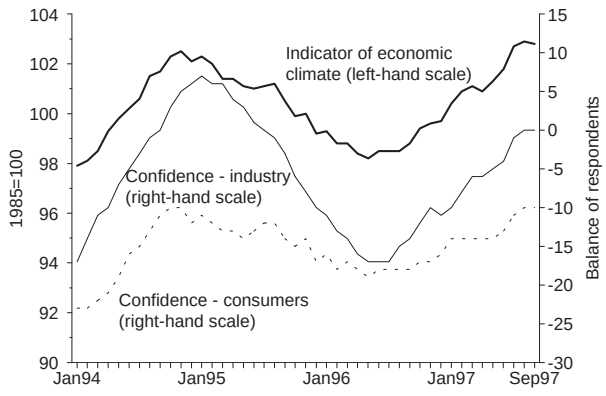
2. INTERNATIONAL BACKGROUND

The international background of the Portuguese economy remained favourable throughout the second half of 1997. This background was characterised by the strengthening of economic activity in the EU countries as a whole, alongside a strong growth exhibited by the USA. The acceleration of world economic activity and trade was accompanied by a moderate growth of prices in most industrialised countries. In the foreign exchange markets, the currencies of the three leading industrialised countries maintained in the first half of 1997 the behaviour recorded in 1996. The US dollar kept appreciating vis-à-vis the Deutsche mark and the yen, in conformity with the cyclical positions of the respective economies and the resulting expectations regarding their interest rate differentials.

The strengthening of economic activity in the industrialised countries is expected to proceed in the second half of 1997. The international institutions have revealed increasing optimism in their economic growth forecasts concerning these countries. According to the latest forecasts of the IMF, this set of countries is expected to grow by 3.1 per cent in 1997 (2.7 per cent in 1996). The previous forecast, dated May 1997, stood at 2.9 per cent. The greater dynamism of economic activity is expected to develop alongside a reduction in the average change in consumer prices, from 2.4 to 2.2 per cent. Budgetary consolidation in process in most industrialised countries will proceed over the course of 1997.

The IMF forecasts a 2.5 per cent growth for the EU as a whole, as against 1.7 per cent in 1996. This forecast is confirmed by the most recent activity indicators and by the widespread improvement of confidence levels (chart 1). The higher growth of economic activity is expected to be common to most Member-States. As regards inflation, the average growth of consumer prices is expected to decrease from 2.5 per cent in 1996 to 1.9 per cent in 1997.

Chart 1
CONFIDENCE INDICATORS IN THE EUROPEAN UNION

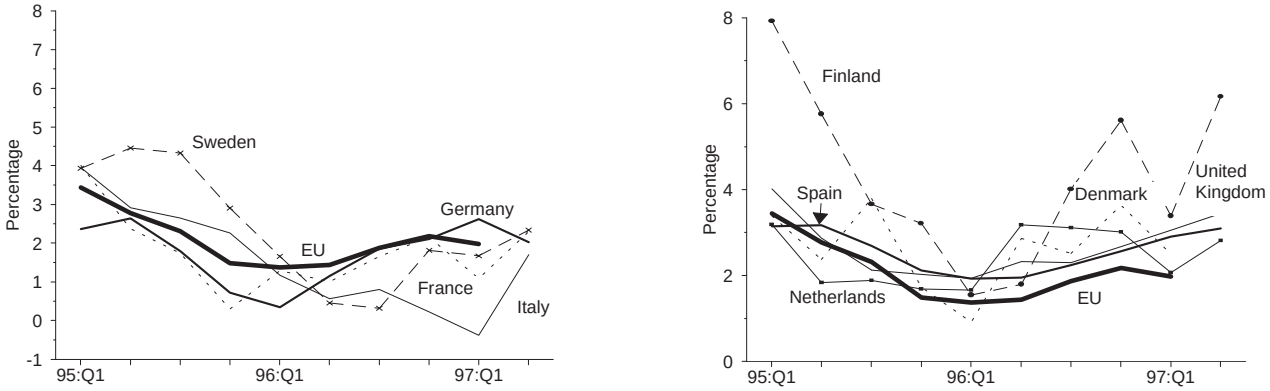


Source: European Commission.

In the first half of 1997, economic activity in the EU kept accelerating in most Member-States. Nevertheless, Member-States exhibited distinct paces of growth. The economies which had in 1996 presented a higher growth than the EU average kept behaving accordingly in the first half of 1997 (chart 2). Such is the case of the United Kingdom and of Spain, but also of some small EU economies (the Netherlands, Finland and Denmark). On the other hand, Germany and France kept exhibiting growth rates similar to the EU average. Economic activity in Italy — which had faced a sharp slowdown throughout 1996 and decreased slightly in year-on-year terms in the first quarter of 1997 — recovered in the second quarter.

In the first half of 1997, economic activity in Germany and in France grew by 2.3 and 1.7 per cent respectively, in year-on-year terms (2.0 and 1.9 per cent in the second half of 1996). Exports again accelerated in both countries, benefiting from an improved external competitiveness. German exports also benefited from the growth of the Central and Eastern European markets. Activity in the construction sector kept behaving unfavourably, as against investment in equipment — which accelerated slightly. A progressive improvement of industry confidence was recorded, partly due to

Chart 2
GROSS DOMESTIC PRODUCT
Year-on-year rate of change



Source: Datastream.

the depreciation of the Deutsche mark and of the French franc vis-à-vis the US dollar, to the fall in interest rates and to the rise in firms profits. In the first half of 1997, private consumption decelerated in both countries, reflecting the maintenance of low confidence levels linked to the growth of unemployment. According to the latest IMF forecasts, the growth of economic activity in Germany and in France in 1997 is expected to amount to 2.3 and 2.2 per cent respectively (1.4 and 1.5 per cent in 1996).

The IMF forecasts a 1.7 per cent growth for the Italian economy in 1997 (0.7 per cent in 1996). In the first half of the year, GDP grew by 0.8 per cent, reflecting an acceleration of private consumption — as a result of the government's scheme which incentives the purchase of new cars. The remaining items of demand are estimated to have maintained a low pace of growth in the first half-year.

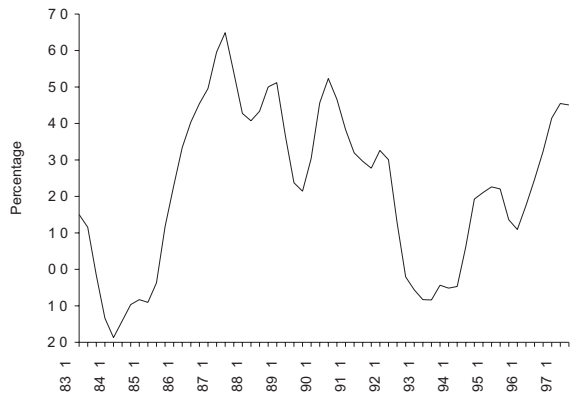
In the first half of 1997, the Spanish economy kept its acceleration trend recorded throughout the previous year (3.0 per cent growth, which compares to 2.4 per cent in the second half of 1996). Demand kept being led by exports — its most dynamic component. However, the contribution of domestic demand — namely of private consumption — to economic growth strengthened over the course of the first half-year. Investment in equipment grew by more than 7 per cent in year-on-year terms. On the contrary, investment in construction (namely in the public works sub-sector) again decreased. In the year as a whole, the Spanish economy is expected to grow by 3.1 per cent (2.2 per cent in 1996), according to the IMF.

In the first half of 1997, the British economy grew for the fifth year around (3.3 per cent, which compares to 2.5 per cent in the previous half-year). The growth of private consumption kept being induced by the improvement of consumers' confidence and by the growth of disposable income. Despite the sharp appreciation of the sterling pound and the decreasing confidence of British exporters, exports kept increasing at a high pace throughout the half-year, reflecting the growth of some destination markets (namely the USA) and the reduction of exporters' margins. According to the IMF, GDP in the United Kingdom is expected to grow by 3.3 per cent in 1997 (2.3 per cent in the previous year).

In the first half of 1997, the economies of some small EU countries — the Netherlands, Denmark, Finland, Ireland and Luxembourg — grew at a higher pace than the EU average. Economic growth in these economies has been driven not only by exports but also by the acceleration of domestic demand. Consumers' confidence in these countries — as in Spain and in the United Kingdom — has improved significantly, approaching or even surpassing the maximum levels reached in the period 1987-1991. According to the IMF, GDP in most of these countries is expected to grow by more than 3 per cent in 1997.

In the first half of 1997, the United States of America (USA) maintained a strong rate of growth in production and in employment; the economy operated at a high level of productive resources utilisation. Domestic demand maintained its high dynamism — specially private consumption and investment in equipment — alongside the strong growth of exports in the first half-year. Due to the performance of the US economy in the first half of the year, the IMF revised upwards its forecast regarding the US economic growth in 1997, from 3.0 per cent to 3.7 per cent (2.8 per cent in 1996).

Chart 3
COINCIDENT INDICATOR
Year-on-year rate of change



3. DEMAND

Economic activity kept accelerating in the first half of 1997. In this half-year, GDP grew by 4 per cent — which compares to a slightly lower pace of growth in the previous half-year. This behaviour is illustrated by the coincident indicator (chart 3). The pattern of growth of the Portuguese economy has been characterised, from the second half of 1996 onwards, by a very dynamic domestic demand and by a negative contribution of net external demand to the growth of GDP.

According to estimates built by the Banco de Portugal, the Portuguese economy is expected to grow between 3.25 and 3.75 per cent in 1997 (3.3 per cent in 1996) (table 1). The central value of the forecast interval here presented for the growth of GDP stands slightly above that disclosed in the March EB. The growth of domestic demand is significantly higher than that forecast in the March EB, and is expected to stand within the [4.5-5.0] per cent interval (3.3 per cent in 1996). This revision reflects a more marked acceleration than that previously expected for investment, namely in what concerns investment in construction. Private Consumption is expected to present a growth rate similar to that considered in the March EB, which means the maintenance of the pace growth evidenced in 1996. The contribution of net external demand to the change in GDP is expected to become more negative than the March forecast. The growth of imports of goods and services was revised upwards; this revision was substantially higher than that of the growth exports. In 1997, the growth of imports is expected to stand in the [9.0-10.0] per cent interval, reflecting the behaviour of domestic demand. On the contrary, the growth of exports shall stand in the [7.0-8.0] per cent interval, being expected an acceleration throughout the year, in line with the strengthening of economic activity in the leading European economies.

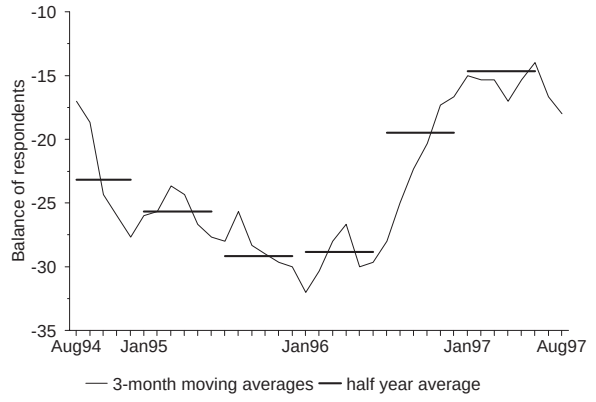
3.1 Domestic demand

The available indicators point towards a substantial growth of private consumption in the first half of 1997. According to the available data, the pace of growth of most consumption items is expected to have been maintained or increased in the first half-year. The purchase of private passenger vehicles recorded a sharp slowdown, though this item kept exhibiting a higher growth rate than total private consumption. As a result, private consumption recorded in the first half of 1997 a growth similar to that exhibited in 1996 as a whole.

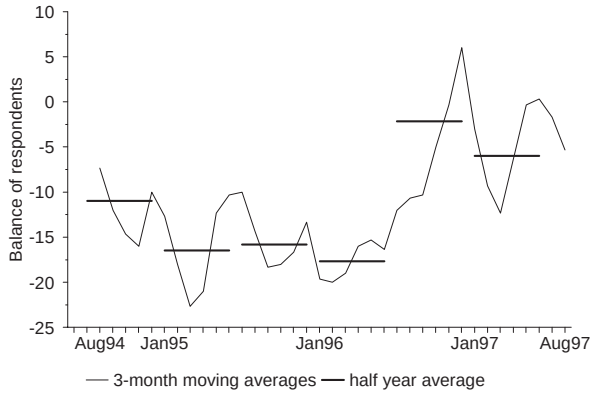
The results of the Monthly Trade Survey of the *Instituto Nacional de Estatística* (INE) show that the balance of respondents concerning the appreciation of past activity and the turnover of retail trade record much higher levels than those exhibited in the same period in 1996 (chart 4). This behaviour is common to most sub-sectors of retail trade.

In the first half of 1997 households' expenditure on goods excluding private passenger vehicles recorded a higher growth than the annual average in 1996. Imports of consumption goods increased by 7.0 per cent in nominal terms between January and

Chart 4
RETAIL TRADE
Activity in retail trade



Turnover in retail trade



Source: "Monthly Trade Survey", INE.

June 1997 (7.0 per cent in 1996)[3]. In real terms, imports of consumer goods accelerated, due to the behaviour of prices of these goods denominated in escudos. Exports recorded a 6.4 per cent nominal growth rate in the first half of 1997, which compares to 4.8 per cent in 1996 as a whole. Exports also accelerated in volume terms. In this same period, the industrial production index of consumer goods grew by 3.4 per cent (1.7 per cent in 1996)[4]. According to the Monthly Industry Survey the balance of respondents concerning the behaviour of the domestic demand for consumer goods stood from January to August 1997 at higher levels than over the course of 1996.

Households' expenditure on services also increased strongly in the first half of 1997. Employment in the hotel and restaurants sector increased by 4.5 per cent in the first half of the year after a 8.2 per cent increase in 1996. Nights spent by residents in Portuguese hotels increased by 4.3 per cent in the January to May period, in year-on-year terms (5.8 per cent in 1996). Nominal expenditure on travels and tourism of Portuguese abroad rose by 27.4 per cent in the first half-year (13.0 per cent in 1996). The consumption of private vehicles, though remaining at high levels, decelerated slightly, after having recorded high growth rates the previous year. Considering the number of licences issued by the *Direcção-Geral de Viação*, the number of private passenger vehicles sold — including 4x4 and households' purchases of imported vehicles outside the traditional sales circuits — increased by 6.3 per cent in year-on-year terms up to August (as against 17.4 per cent in 1996). Nevertheless, the slowdown recorded by the purchase of new vehicles was not as serious, since the average quality of vehicles sold increased.

According to the estimates of the Banco de Portugal, private consumption is expected to grow between 2.5 and 3.0 per cent in real terms in 1997, which means the maintenance of the pace of growth recorded the previous year (2.8 per cent). This growth is explained by the behaviour of disposable income and by the continuing of reductions in interest rates. On its turn, employment expectations improved. Households' real disposable income excluding external transfers is expected to increase by 2.6 per cent in 1997 (3.1 per cent in 1996). Both total employment and the number of wage-earners increased in the first three quarters of 1997 (1.7 and 1.4 per cent, respectively), thus reacting favourably to the economic activity acceleration. From January to July, average wages implicit in the collective agreements grew by 3.6 per cent for the economy as a whole excluding the GG

(3) Except when mentioned otherwise, the rates of change of merchandise imports and exports here presented are calculated on the foreign trade data made available by the INE, and are based upon the comparison between preliminary data for 1997 an equally preliminary data for the same period of 1996.

(4) The rates of change of the industrial production index mentioned above are calculated on comparable versions of the indices. For example, the indices released in June 1997 are comparable to those published in the same period of 1996.

(4.5 per cent in 1996 as a whole), hence standing clearly above inflation. Given the behaviour of disposable income and private consumption, households' saving rate is expected to remain virtually unchanged in 1997, when compared to that recorded in 1996.

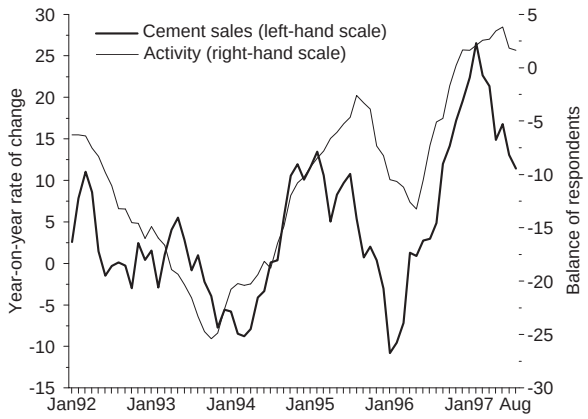
The growth of GFCF accelerated in real terms in the first half of 1997. Investment in construction and in transport material accelerated strongly in the six first months of the year, while investment in equipment maintained a high growth rate, much in line with its behaviour recorded from 1995 onwards.

Cement sales — the main activity indicator in the construction sector — increased by 19.5 per cent in the first half of 1997 (as against -2.1 and 15.5 per cent in the first and second halves of 1996, respectively) (chart 5). Steel sales directed to the domestic market also accelerated in the first five months of 1997 (27.9 per cent, as against 11.9 per cent in 1996 as a whole). The Construction and Public Works Monthly Survey of the INE kept presenting increasing balance of respondents referring to the appreciation of activity throughout 1997 — namely in the public works and housing building sub-sectors (chart 6). In these two subsectors, an historical maximum of this series was reached in the first half of 1997[(5)]. This behaviour is an outcome of both the strong growth of the value of adjudicated public works in the first half of the year and the increase in households' investment in housing — triggered by the fall in interest rates. Between January and July 1997, new bank credits granted to individuals at more than 5 years — which consist mainly of housing credit — increased by 31.3 per cent (28.8 per cent in 1996). Total employment in the construction sector increased by 13.8 per cent in the first three quarters of 1997 (-2.4 and 4.1 in the first and second half-year of 1996, respectively).

In the second half of 1996, investment in construction is expected to record a slowdown in year-on-year terms, given the strong recovery exhibited in the second half of 1996. Hence, this fact has already resulted in a 16.5 per cent accumulated change in cement sales up to August (19.5 per cent up to June). Nevertheless, activity in the construction sector is expected to remain at a high level. In August 1997, the balance of respondents on the placing orders and on expectations regarding employment in the sector recorded the highest level since the survey was first published.

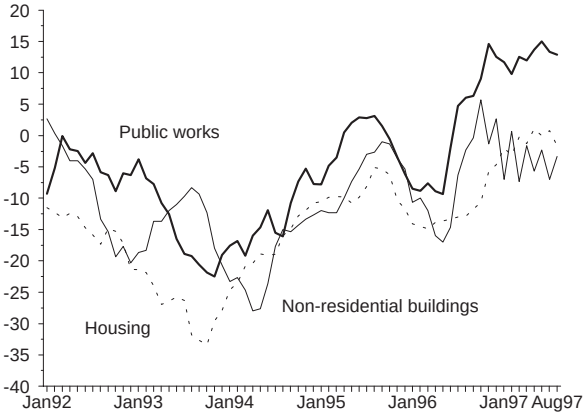
GFCF in equipment goods (excluding transport material) again increased at a high rate in the first months of 1997. In the first half-year, the industrial production index for investment goods excluding transport material grew by 7.0 per cent (which

Chart 5
INVESTMENT IN CONSTRUCTION
3-month moving averages



Source: INE, Cimpor and Secil.

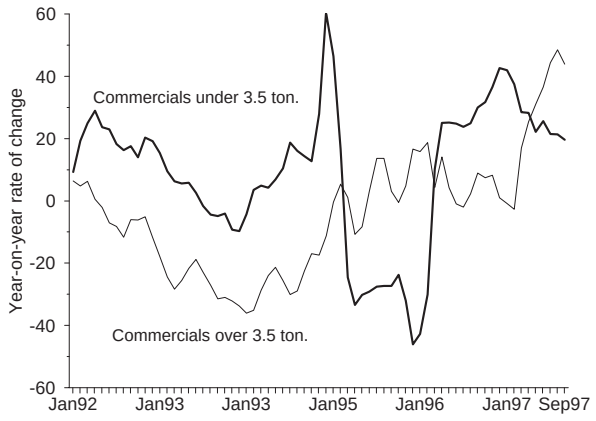
Chart 6
CONSTRUCTION BY SECTORS
Activity appreciation
3-month moving averages



Source: INE.

(5) The "Monthly Construction Survey" was first released in January 1991.

Chart 7
INVESTMENT IN TRANSPORT MATERIAL
3-month moving averages



Source: ACAP.

compares to 7.5 per cent in 1996). On its turn, nominal exports of these goods increased by 9.9 per cent up to June 1997 (2.3 per cent in 1996). In the same period, nominal imports grew by 9.8 per cent (11.9 per cent in 1996). Taking into account the behaviour of foreign trade deflators in the first quarter, the pace of growth of exports is expected to have recorded an acceleration in real terms, alongside a slowdown of imports of these goods in real terms. According to the "Monthly Manufacturing Industry Survey" of the INE, the opinion of the producers of equipment goods (excluding transport material) regarding domestic demand worsened slightly in the first half of 1997 vis-à-vis the second half of the previous year.

Investment in transport material accelerated in the first half of 1997. Sales of commercial vehicles under 3.5 ton increased by 27.0 per cent up to June, while commercial vehicles over 3.5 ton grew by 32.6 per cent (24.0 and 5.1 per cent, respectively, in 1996). In the following months, sales of commercial vehicles over 3.5 ton kept increasing at a high pace, while those under 3.5 ton recorded a slight slowdown (38.8 and 24.1 per cent rates of change accumulated up to August, respectively) (chart 7).

In 1997, investment is expected to accelerate significantly in comparison to 1996, growing between 11.25 and 12.25 per cent in real terms (6.1 per cent in 1996). This acceleration will be particularly noticeable as regards GFCF in construction, which is consistent with the high pace of growth of public investment in public works, and with the reduction in interest rates to housing credit. The dynamism of domestic demand, the perspectives regarding the growth of the international economy and the improvement of non-financial companies' profitability due to the fall in interest rates will keep sustaining investment in equipment.

The central point of the interval now presented for the growth of investment stands above that considered in the March EB. This variable exceeded its forecast growth, specially as regards GFCF in construction. However, given the intra-annual behaviour of GFCF in 1996, this aggregate is expected to slowdown in the second half of the year, specially in its construction and transport material items.

According to the figures transmitted in September to the European Commission within the excessive deficits procedure, public consumption is expected to grow by about 1.75 per cent in real terms in 1997 (1.1 per cent in 1996). Compensation of employees is expected to grow by 9.1 per cent in nominal terms, reflecting a 3 per cent updating of the wage scales, some specific changes in wages (namely in the education sector) and the significant growth in the State transfer to the *Caixa Geral de Aposentações* (Civil Servants Pension System). This nominal growth constitutes a 1 p.p. acceleration vis-à-vis 1996. On the contrary, expenditure on goods and services recorded a sharp slowdown — according to the September notification, these are expected to grow by 0.4 per cent (10.0 per cent in 1996).

3.2 Net external demand and current account balance[6]

In the first half of 1997, the nominal growth of merchandise imports exceeded that of exports. According to the estimates of the Banco de Portugal, merchandise exports grew by 4.8 per cent in nominal terms, which compares to 7.4 per cent in 1996 as a whole. This nominal slowdown chiefly results

(6) See in this Bulletin "Balance of Payments – main developments in the first half of 1997".

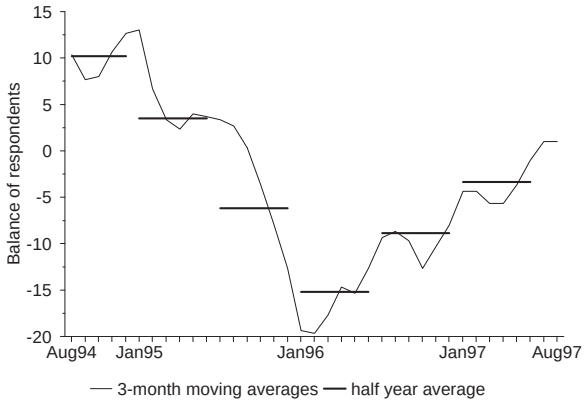
from the behaviour of exports of transport material. Unlike the two previous years — when exports of transport material contributed significantly to the growth of total exports — these recorded a negative rate of growth in the first half of 1997[7].

In the first half of 1997, the growth of exports in volume terms exceeded the respective nominal growth, since a fall in export prices is estimated for this period (by about 1.5 per cent[8]). The increase in volume exported was slightly greater than the growth of the destination markets, resulting in a small gain in the market share of Portuguese exporters. External demand directed to the Portuguese exporters, measured by the weighted growth of manufactured imports of our leading trade partners, increased by 6.0 per cent in volume terms in the first half-year of 1997 (4.9 and 5.4 per cent in the first and second half-years of 1996).

According to the estimates of the Banco de Portugal, merchandise imports grew by 9.3 per cent in the first half of 1997 (8.0 per cent in the previous year). A higher growth in volume terms was recorded, since also imports are estimated to have recorded a fall in the respective prices — by about 1.9 per cent[9]. The behaviour of imports follows the behaviour of domestic demand in the first half-year. The higher nominal growth of imports of intermediate goods in this period is worth being singled out (7.6 per cent, as against 1.0 per cent in 1996), in line with the acceleration of productive activity.

In what concerns the foreign trade of services, the reduction in the travel and tourism balance in the first half of 1997 should be singled out; this development was due to the fact that the nominal growth of tourists' expenditure exceeded that of tourism revenue (27.4 and 7.5 per cent, respectively). Tourism revenue, recovered from the fall recorded in 1996, increasing by about 5.8 per cent in real terms.

Chart 8
APPRECIATION OF EXTERNAL DEMAND



Source: "Monthly Manufacturing Industry Survey", INE.

For 1997 as a whole, exports of goods and services are expected to increase between 7.0 and 8.0 per cent in volume terms (8.5 per cent in 1996). The growth of imports of goods and services is expected to stand in the [9.0-10.0] per cent interval (7.5 per cent in 1996). The contribution of net foreign demand to the growth of GDP is estimated to be more negative than what was forecast in the March 1997 EB. Imports are estimated to present a substantially higher growth rate than the forecast released in the March EB, specially due to the acceleration exhibited by GFCF in the first half of the year. The growth of exports has also been revised upwards, though to a lesser extent. Exports are expected to accelerate in the second half of the year according to the manufacturing industry entrepreneurs' appreciation of external demand. These expectations — which have come to improve progressively — reflect the acceleration of the leading European economies (chart 8). The forecast for the external demand directed to the Portuguese exporters in the second half of 1997 amounts to 7.2 per cent in real terms.

The contribution of net external demand to the growth of GDP will be negative in 1997 (about 1.5 p.p. of GDP). In the first half of 1997, the current account deficit as a share of GDP remained virtu-

(7) Exports of transport material increased at very high rates in 1995 and 1996 (80.2 and 62.7 per cent, respectively) — due to the beginning of the export activity of the new vehicle plant in the second half of 1995 — which triggered a significant impact on the growth of total exports. In 1997, on the contrary, exports of transport material fell by 1.6 percent between January and June. If excluding these goods from total goods exported, exports increased by 6.4 per cent (0.4 per cent in 1996).

(8) In the first quarter of 1997, export prices decreased by 2.1 per cent, according to the data of the Direcção Geral de Relações Internacionais.

(9) In the first quarter of 1997, import prices fell 2.6 per cent, according to the Direcção-Geral de Relações Internacionais.

ally unchanged in comparison to the same period of the previous year [10].

4. SUPPLY

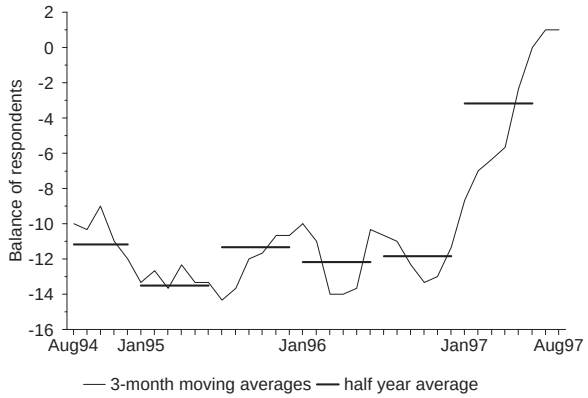
By the end of 1997, the Portuguese economy will continue to stand below its reference path, despite the fact that the growth rate of GDP has stood above pontential growth in 1997, as in 1996. In fact, the economy has tended to a greater productive capacity utilisation in the last two years. The unemployment rate has decreased since the second half of 1996, although several studies by the Banco de Portugal indicate that it will remain above the natural unemployment rate. In the first half of 1997, the rate of productive capacity utilisation in the manufacturing industry increased. It should be noted that in the construction sector substantial wage pressures were already sensed in 1996, and a significant share of the companies in the sector are operating at full capacity.

The productive activity accelerated in the first half of 1997; specially gross value added (GVA) in the construction sector, but also in the services sector, are estimated to have accelerated. The growth rate of industrial output is estimated to have remained virtually unchanged in relation to 1996, which is consistent with the acceleration recorded in most industries. On the other hand, the output of agriculture, forestry and fisheries recorded a slowdown.

As mentioned, activity in the construction sector increased significantly in the first half of the year, accelerating vis-à-vis the second half of 1996. Cement sales — the major indicator of activity in this sector — increased by 17.5 per cent between June 1996 and June 1997. This substantial growth was mainly induced by the public works sub-sector — where production recorded a strong acceleration — and the housing buildings sub-sector (chart 6). As mentioned, the Banco de Portugal now estimate a lower growth rate for the GVA of this sector in the second half of 1997.

According to the "Construction and Public Works Monthly Survey" of the INE, the share of companies indicating the shortage of skilled staff as an important drawback to activity increased by about 14 p.p. in the first half of 1997, in relation to the same period of 1996. This phenomenon was particularly noticeable in the public works sub-sector, where that indicator grew by 30 p.p. About half of the enterprises in this sub-sector indicated the shortage of skilled personnel as an obstacle to activity.

Chart 9
ACTIVITY IN WHOLESALE TRADE



Source: "Monthly Trade Survey", INE.

The services sector is estimated to have recorded in the first half of 1997 a higher growth than that exhibited in 1996. The behaviour of GVA of the services sector in this period was driven by the trade and communications sub-sectors. The acceleration of activity in trade — the greatest services sub-sector — is illustrated by the increase in the average levels of the balance of respondents on activity appreciation of the "Monthly Trade Survey" of the INE (charts 4 and 9). This increase was more significant in wholesale trade than in retail trade, which can be explained by the behaviour of activity in the wholesale trade of intermediate goods. Communications maintained a high growth rate, associated to the generalisation of new products and services in the telecommunications area.

Most available indicators on the behaviour of industrial supply are consistent with a high dynamism of activity in the first half of 1997. According to the Industrial Production Index, production in the manufacturing industry grew by 6.1 per cent in the second half of the year (4.5 per cent in the

(10) See in this Bulletin "Balance of Payments – main developments in the first half of 1997".

second half of 1996), reflecting an acceleration of production in most industries. The growth of industrial GVA was, however, less significant, reflecting the behaviour of the vehicles industry [(11)]. According to the "Monthly Manufacturing Industry Survey" of the INE, the balance of respondents on the behaviour of production from January to August 1997 stood at higher levels than those recorded throughout 1996. However, the confidence indicator in the industry decreased in the last months, although standing above the values recorded in the same period of 1996.

Activity in most industries accelerated. According to the Industrial Production Index, the production of intermediate goods grew by 7.9 per cent in the first half of 1997. According to qualitative indicators, domestic demand and specially external demand contributed to the acceleration of production of these goods. This assessment of external demand is confirmed by the behaviour of exports of intermediate goods in the first half of 1997. The production of investment goods decelerated in relation to the second half of 1996, though increasing at a high growth rate (6.0 per cent). This growth was supported by domestic demand, namely by the dynamism of investment in equipment goods in the first half of the year. According to the Monthly Manufacturing Industry Survey of the INE, the opinion of entrepreneurs of the investment goods industry (excluding the production of vehicles) regarding external demand only recovered in the last months. In what concerns consumption goods, production decelerated slightly, growing by 3.4 per cent up to June.

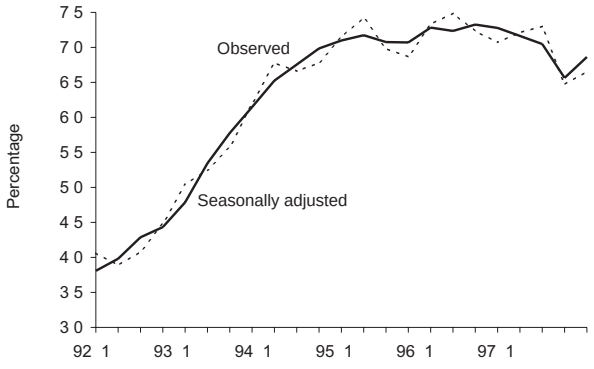
According to the Monthly Manufacturing Industry Survey of the INE, the average rate of productive capacity utilisation in the manufacturing industry amounted to 80.0 per cent in the first half of 1997, comparing to 78.7 per cent in the same period of the previous year. This development reflects the behaviour recorded in both equipment goods and consumption goods industries. The productive capacity utilisation in the intermediate goods industries remained at a level identical to that recorded in the first half of 1996. According to the same survey, the share of companies indicating the shortage of skilled staff as an obstacle to activity did not increase in the first half of 1997.

5. LABOUR MARKET

The behaviour of economic activity allowed for a further reduction in the unemployment rate in 1997, following the trend started in the second quarter of 1996. According to the Employment Survey of the INE, the unemployment rate stood at 6.7 per cent in the third quarter of 1997, decreasing by 0.4 p.p. in relation to the same period in 1996. In the first and second quarters, the reduction had amounted to 0.2 p.p. and 0.7 p.p., respectively. This behaviour confirms the downward trend exhibited by the unemployment rate since the second half of 1996 (chart 10). It should be noted that the observed unemployment rate remained close to that estimated through the Okun law [(12)], with the lag between the behaviour of this rate and the behaviour of economic activity remaining unchanged. In the year as a whole, the unemployment rate is expected to decrease by about 0.5 p.p. in relation to the average scored in 1996 (7.3 per cent), although it will remain above the estimated natural unemployment rate.

The overall participation rate — which generally has a pro-cyclical behaviour — increased by 0.5 p.p. in year-on-year terms, in the period run-

Chart 10
UNEMPLOYMENT RATE



(11) See footnote (7). The industrial production index takes fixed weights, and hence does not reflect the actual share of the vehicles industry in total production.

(12) The Okun law relates the unemployment rate to the deviation of GDP from its linear trend.

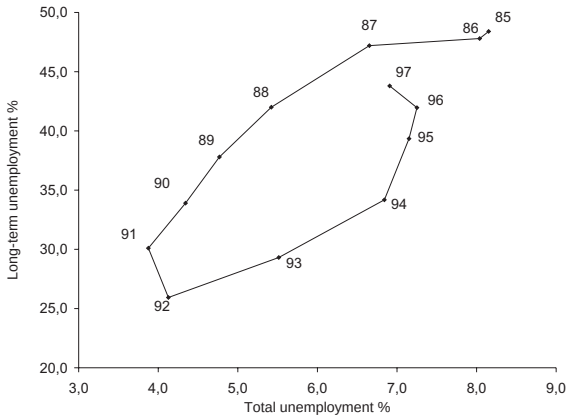
ning from January to September 1997 (0.2, 0.6 and 0.8 p.p. in the first, second and third quarters, respectively), amounting to 49.4 per cent in the third quarter.

Total employment grew by 1.7 per cent in the first nine months as a whole, in year-on-year terms (0.7, 2.1 and 2.2 per cent in the first, second and third quarters respectively). Also the number of wage-earners increased in this period — 1.4 per cent in year-on-year terms — contrasting with the reductions recorded in previous years. This growth was mainly due to the number of fixed-term contracts (16.0 per cent in relation to the same period of 1996). It should be stressed that fixed-term contracts constitute an element of flexibility of the Portuguese labour market, used as a means for adjusting the labour force to production expectations. The number of permanently contracted employees kept decreasing in this period (-0.7 per cent in the period running from January to September 1997), although at a decreasing pace. Self-employment also contributed to the growth of total employment in the first half-year, increasing by 2.9 per cent. Employment is expected to continue increasing up to the end of 1997, due to both wage-earners and self-employed. For the year as a whole, new productivity gains are expected to be recorded in the economy — in line with the developments occurred in the two previous years.

In what concerns the behaviour of employment per activity branches, the contribution of the construction sector to the increase in total employment in the first nine months should be singled out (about 1.1 p.p.). On the other hand, employment in the industry sector again decreased in this period (2.2 per cent in year-on-year terms), according to the "Employment Survey"[(13)]. The reduction in total industrial employment accumulated since 1992 amounts to about 10 per cent. This behaviour contrasts with the pace of growth of industrial activity recorded over the last years.

In the first three quarters of 1997, total unemployment decreased by 5.6 per cent in relation to the same period in 1996 (2.0, 9.4 and 4.3 per cent in the first, second and third quarter, respectively).

Chart 11
TOTAL UNEMPLOYMENT AND LONG-TERM UNEMPLOYMENT



* Calculations were based on the year ending on the third quarter of 1997.

This behaviour was due to the reduction in the number of new job seekers (3.5 per cent) but specially to the reduction in the number of first-job seekers (11.5 per cent). In the first half of 1997, long-term unemployment kept increasing as a share of total employment. However, a reduction was recorded in the third quarter in year-on-year terms (from 44.2 per cent in the third quarter of 1996, to 42.9 per cent in the third quarter of 1997). This item of total employment reacts to economic activity with a greater lag than total employment, and starts decreasing in a more advanced phase of the cycle (chart 11).

Wages implicit in collective agreements for the private sector increased by 3.6 per cent between January and August 1997, which compares to 4.5 per cent in the same period of 1996. This rate stands slightly above that initially recommended by the Social Agreement between the Social Partners and the Government (3.5 per cent), and represents a circa 1.5 per cent increase in real wages in 1997. The change in wages implicit in already closed contracts was similar in the industry, construction and services sectors. Except for the construction sector, no significant wage pressures were recorded in the economy in this period.

Completed with information available as at 30 September 1997.

(13) This fall is confirmed by the manufacturing industry employment index, which decreased by 2.5 per cent in the first half of 1997.

BALANCE OF PAYMENTS

Main developments in the first half of 1997

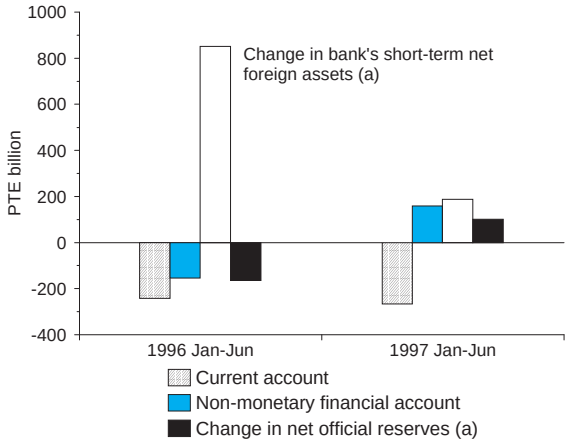
1. INTRODUCTION

According to the estimates of the Banco de Portugal, the current account deficit as a share of GDP remained unchanged in the first half of 1997. The current account — on a transaction basis — posted a deficit amounting to PTE 266.3 billion, which represents a greater deficit than that recorded in the same period of 1996 (PTE 243.1 billion). Over the course of the six first months of 1997, non-official capital movements gave rise to a net inflow of PTE 346.9 billion which compares to PTE 697.6 billion in the same period 1996. Net official reserves decreased by PTE 101.3 billion (PTE 165.0 billion increase in the first half of 1996)(1) (chart 1 and table 1).

In the first half of the year, the structure of the current account balance changed in relation to the first half of 1996. The trade balance deficit increased by PTE 151.2 billion, due to the high nominal growth of merchandise imports (9.3 per cent in year-on-year terms), which exceeded the increase recorded by exports in the same period (4.8 per cent). On its turn, the surplus of unrequited transfers increased significantly (by PTE 127.9 billion), reflecting the substantial increase in public transfers, partly due to the inflow of funds in delay, referring to 1996.

The non-official capital account posted a balance of PTE 346.9 billion in the first six months of 1997 (PTE 697.6 billion in the same period of 1996). Banks' short-term net foreign assets decreased in this half-year, though by much less than in the same period of 1996 (PTE 187.6 billion and 852.3 billion, respectively). Non-monetary capital transactions gave rise to a net inflow amounting to PTE 159.3 billion, as against the PTE 154.8 billion net outflow recorded in the first half of the previous year.

Chart 1
BALANCE OF PAYMENTS
Breakdown



Note:
(a) A plus (minus) sign indicates a net decrease (increase) of assets or a net increase (decrease) of liabilities.

2. CURRENT ACCOUNT

In the first half of 1997, the current account posted a PTE 266.3 billion deficit on a transactions basis, PTE 23.2 billion greater than that recorded in the first half of 1996. This increase in the current account deficit resulted from the increase in the trade deficit (by PTE 159.8 billion), since the income balance and the unrequited transfers balance

(1) In the first half of 1997, the item "leads/lags and statistical adjustments" amounted to PTE 203.5 billion. An important share of the statistical discrepancy continued to be explained by the divergence between the trade balance on a transactions basis and o a cash basis.

Table 1

BALANCE OF PAYMENTS

Transactions basis

PTE billion

	1996	1996			1997 P		
		January-June			January-June		
	Balance	Debit	Credit	Balance	Debit	Credit	Balance
I. Current account	-403.5	3673.5	3430.4	-243.1	3969.9	3703.6	-266.3
Goods and services	-1262.6	3143.3	2537.4	-605.9	3432.7	2667.0	-765.7
Merchandise f.o.b. (a)	-1485.6	2653.9	1985	-668.9	2900.9	2080.8	-820.1
Services	223.0	489.4	552.5	63.1	531.7	586.1	54.4
Travel and tourism (a)	361.4	161.2	313	151.7	205.5	338.4	132.9
Other services	-138.4	328.2	239.5	-88.7	326.2	247.7	-78.5
Transports	-41.7	131.8	106.3	-25.4	135.1	105.3	-29.8
Insurance	-22.9	26.0	8.1	-17.9	31.7	17.5	-14.3
Government services	-35.9	25.9	4.8	-21.1	22.4	6.1	-16.3
Others	-38.0	144.4	120.3	-24.2	137.0	118.8	-18.1
Income	-194.1	379.9	260.2	-119.8	394.7	283.8	-111.0
Labour income	11.1	6.2	11.5	5.3	6.5	12.0	5.5
Investment income (b)	-168.9	354.1	246.9	-107.3	362.6	269.1	-93.5
Other	-36.3	19.6	1.8	-17.8	25.7	2.7	-23
Unrequited transfers	1053.2	150.3	632.8	482.5	142.5	752.9	610.4
Official	534.9	119.8	364	244.2	121.7	470.7	349.0
Private	518.3	30.4	268.8	238.4	20.8	282.2	261.4
II.Non-monetary financial account	-389.6	8651	8496.2	-154.8	10645.5	10804.8	159.3
Direct investment	-23.9	322.3	322.7	0.3	454.2	449.9	-4.3
Portuguese investment abroad	-118.9	37.0	8.6	-28.4	100.8	7.5	-93.4
Foreign investment in Portugal	95.0	285.4	314.1	28.7	353.4	442.4	89.1
Portfolio investment	-11.3	4927.5	5038.1	110.6	6992.9	7192.9	199.9
Portuguese investment abroad	-794	2903.7	2412.4	-491.3	3825.4	3562.4	-263.0
Foreign investment in Portugal (b)	782.8	2023.8	2625.7	601.9	3167.6	3630.5	462.9
External credits	-142.3	1739.3	1607	-132.3	1675.2	1649.9	-25.3
Granted to non-residents	-64.9	63.3	30.9	-32.4	79.2	66.6	-12.6
Received	-77.4	1676	1576.1	-99.8	1596.1	1583.3	-12.8
Other operations	-212.2	1661.9	1528.5	-133.4	1523.2	1512.2	-11.0
Assets	-209.2	1659.3	1527.9	-131.4	1521.2	1509	-12.2
Deposits	-214.8	1568.5	1428.5	-140	1424.4	1408.9	-15.4
Other	5.7	90.8	99.3	8.5	96.8	100.1	3.2
Liabilities	-3.0	2.6	0.7	-1.9	2.0	3.2	1.2
III. Leads / lags and statistical adjustments (c)	-373.4			-291.4			-203.5
IV. Operations currently being classified	12.5			1.9			21.6
V. Change in short-term net foreign assets of banks (d) (e)	1233.4			852.3			187.6
VI.Change in net official reserves (e)	-79.4			-165.0			101.3
Assets	-71.1			-156.8			109.5
Liabilities	-8.4			-8.2			-8.1
Pour mémoire:							
Non-official capital account (II+V)	843.8			697.6			346.9

Notes:

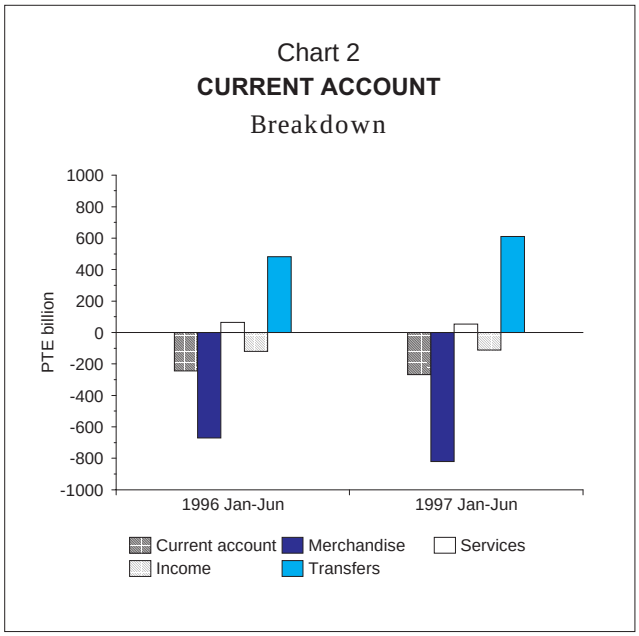
(a) Figures estimated by the Banco de Portugal.

(b) Includes adjustments resulting of the accountancy of debits of investment income on a transactions basis.

(c) The value of this item includes leads and lags in the settlement of operations involving merchandise and discrepancies at the level of the systems for gathering statistical information on such operations.

(d) The value of this item corresponds to the effect of operations with non-residents on the short-term assets and liabilities of banks, calculated on the basis of the system for drawing up the balance of payments on a cash basis.

(e) A plus (minus) sign indicates a net decrease (net increase) in assets or net increase (net decrease) in liabilities.



contributed to the reduction of the current account deficit in relation to the same period of 1996 (chart 2).

In the first half of this year, **the trade account** deficit (fob-fob) increased by PTE 151.2 billion, amounting to PTE 820.1 billion. This development was due to the fact that merchandise imports recorded a higher nominal growth rate than that exhibited by exports (9.3 and 4.8 per cent, respectively). According to estimates of the Banco de Portugal, the escudo-denominated prices of both merchandise exports and merchandise imports fell in year-on-year terms (by 1.5[(2)] and 1.9 per cent, respectively), resulting in a slight gain in terms of trade.

In the first half of 1997, nominal merchandise exports increased 4.8 per cent in year-on-year terms (7.4 per cent in 1996 as a whole). This slowdown resulted from the behaviour of exports of transport material. Exports of transport material grew sharply in 1995 and 1996 (by 80.2 and 62.7 per cent[(3)], respectively) due to the beginning of the exporting activity of the new vehicle production plant in the second half of 1995. If transport material outflows are excluded from the total value exported, the growth rate of exports amounts to 6.4 per cent in the first half of 1997 (0.4 per cent in 1996 as a whole).

In the first half of 1997, merchandise exports are estimated to have grown by 6.4 per cent in real terms, since export prices are estimated to have fallen in this period. The acceleration of economic activity in the leading economies of the European Union resulted in a higher growth of demand directed to Portuguese exports[(4)] in the first half of this year (6.0 per cent growth in volume terms, as against 5.1 per cent in 1996). Hence, the market share of Portuguese exporters kept increasing.

According to estimates of the Banco de Portugal, the competitiveness of Portuguese exports — measured by the relative costs per unit produced in the manufacturing industry — increased in the first half of 1997. Alike what occurred in 1996, the reduction in the relative unit labour costs resulted mainly from gains in productivity in the Portuguese manufacturing industry.

In the first half of 1997, nominal merchandise imports are estimated to have increased by 9.3 per cent (8.0 per cent in 1996 as a whole). Since import prices are estimated to have decreased by about 1.9 per cent in year-on-year terms, imports shall have recorded a very significant real growth in the first half of this year. This high growth of volume imported is linked to the greater dynamism of domestic demand in this period. The nominal growth of imports of consumption goods (7.0 per cent) and of equipment goods (8.5 per cent) is consistent with the behaviour of private consumption and of gross fixed capital formation in the first half of 1997; imports of intermediate goods (7.6 per cent increase) followed the acceleration of the productive activity in this period (see text “The Portuguese economy in 1997" in this bulletin).

(2) The changes in merchandise export and merchandise import prices indicated in the main text are estimates built by the Banco de Portugal, since no available data exists on the foreign trade deflators for the first half of 1997. In the first quarter, exports and import prices decreased by 2.1 and 2.0 per cent respectively, according to the data from the Direcção-Geral de Relações Internacionais.

(3) The rates of change of merchandise imports and exports broken-down by economic categories here presented are those calculated on data disclosed by the Instituto Nacional de Estatística for foreign trade, which results from comparing preliminary values of the current year with equally preliminary values of the same period of the previous year.

(4) Foreign demand was calculated on the basis of the real growth of manufactured imports of 17 trade partners. Each country was weighted according to its share as an export market in the previous year.

Chart 3
INVESTMENT INCOME: Breakdown
Balance on a transactions basis

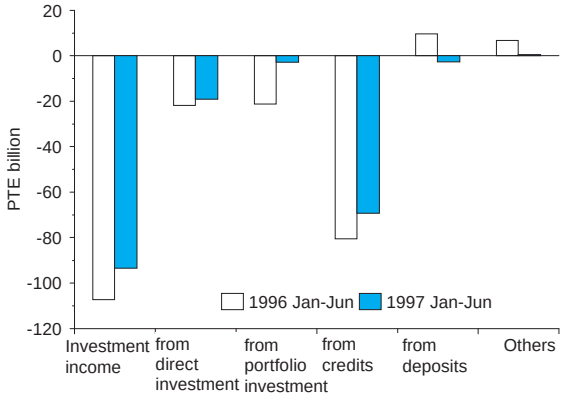
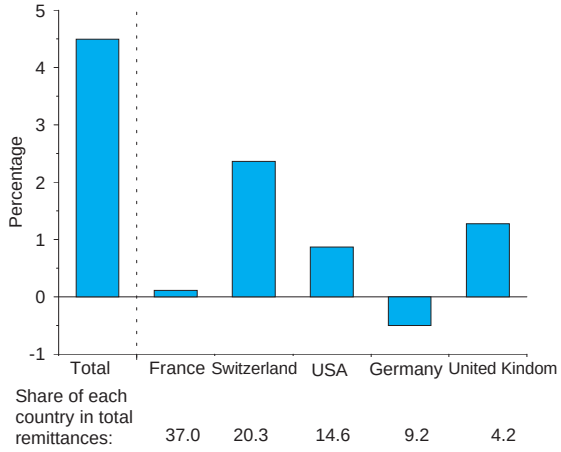


Chart 4
EMIGRANTS' REMITTANCES BROKEN-DOWN BY ORIGIN COUNTRY – FIRST HALF OF 1997
Contribution to total year-on-year rate of change



In the first half of 1997, the **services surplus** decreased to PTE 54.4 billion (PTE 63.1 billion in the same period of 1996). The travel and tourism surplus decreased from PTE 151.7 billion to PTE 132.9 billion, and the transport services deficit increased. Portuguese expenditure on travel and tourism abroad maintained a high growth rate (27.5 per cent in year-on-year terms), while travel and tourism receipts grew by 8.1 per cent in year-on-year terms, recovering from the fall recorded in 1996 as a whole.

The **income account** deficit decreased slightly in the first half of 1997, from PTE 119.8 billion to PTE 111.0 billion, due to the reduction in the investment income deficit. The latter reflected the sharp reduction in the portfolio investment income deficit, although net income outflows due to foreign direct investment and credit operations also decreased (chart 3). The portfolio investment income deficit decreased from PTE 21.1 billion in the first half of 1996 to PTE 2.9 billion in the same period of 1997, since the increase in income received surpassed that of income paid. The growth of income received resulted of the growth of the stock of foreign securities held by residents recorded in the last years. In the opposite direction, the deposit operations' income balance maintained its downward path recorded in the last years, scoring a PTE 2.7 billion deficit in the first half of 1997 (as against a PTE 9.6 billion surplus in the first half of 1996). This development is consistent with the behaviour of total net foreign assets (specially those of banks) in recent years. In this half-year, both receipts and payments decreased, in line with the recent behaviour of interest rates.

The **unrequited transfers** balance increased from PTE 482.5 billion in the first half of 1996 to PTE 610.4 billion in the same period of 1997. This reflects the significant growth of public transfers, but also the increase in private transfers. Net transfers from the European Union (which account for more than 95 per cent of total public transfers) increased PTE 100.8 billion in relation to the first half of 1996. The increase in inflows was chiefly due to greater transfers from the ERDF and from the Cohesion Fund, partly linked to the inflow of receipts in delay referring to 1996. Private transfers increased slightly in the first half of 1997, from PTE 238.4 billion to PTE 261.4 billion. Emigrants' remittances denominated in escudos increased by about 4.5 per cent in year-on-year term (chart 4).

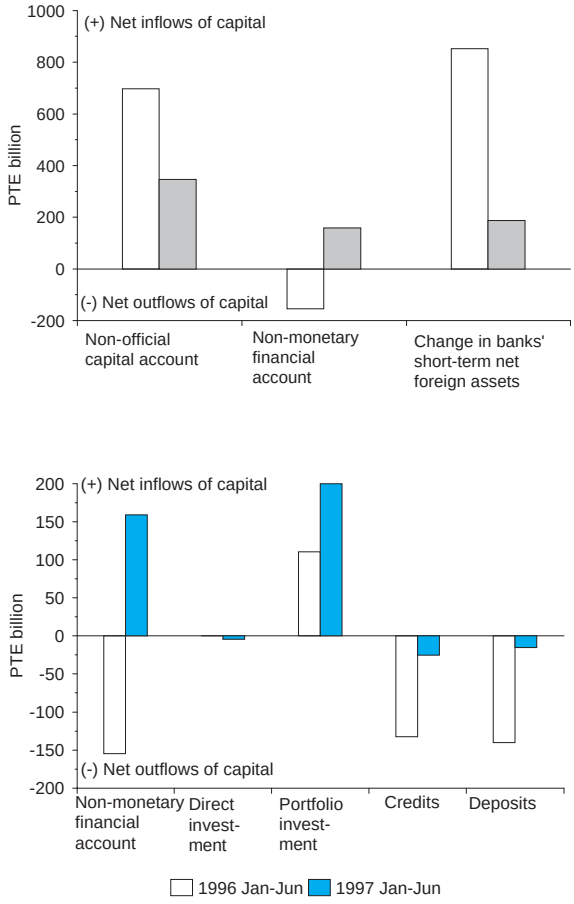
3. NON-OFFICIAL CAPITAL MOVEMENTS

In the first half of 1997, the non-official capital account posted a balance of PTE 346.9 billion, which compares to PTE 697.6 billion in the same period of the previous year. This surplus reflects the non-monetary financial inflows recorded in this period (PTE 159.3 billion) and the decrease in

banks' net short-term foreign assets (PTE 187.6 billion).

The non-monetary financial account recorded a net inflow in the first half of 1997, as against the net outflow exhibited in the year before. This surplus was partly an outcome of the greater net inflow of portfolio investments, while direct investment maintained a virtually null balance (chart 5). Both capital debits and credits increased significantly in the first half of 1997, maintaining the trend recorded in recent years, specially those related with portfolio investment operations.

Chart 5
NON-OFFICIAL CAPITAL ACCOUNT
Balance



3.1 Direct investment

In the first six months of 1997, direct investment in Portugal and Portuguese direct investment abroad reached similar values (about PTE 90 billion). As a result, the direct investment balance was virtually null (PTE 4.3 billion deficit).

The amount of **foreign direct investment received by the Portuguese economy** in the first half of 1997 reached PTE 89.1 billion in net terms, standing clearly above that recorded in the same period of 1996 (PTE 28.7 billion). Like in previous years, the increase in both credits and debits of this item (having a practically null effect on the foreign direct investment balance) was determined by short-term loans and additional capital. Excluding these operations, the greatest net inflow of foreign direct investment was due to an increase in gross investment (from PTE 106.8 billion to PTE 189.6 billion). However, the investment permanence rate excluding short-term loans and additional capital did not increase significantly, since a higher disinvestment was also recorded in relation to the first half of 1996.

Net direct investment through equity capital held by non-residents in Portuguese companies again recorded a significant increase in the period under review, accounting for over 80 per cent of total direct investment in Portugal. A significant share of this investment — occurred in January — was linked to a privatisation operation in the manufacturing industry — the sector receiving the largest amount of foreign direct investment in the first half of 1997 (chart 6).

Portuguese direct investment abroad again increased, standing clearly above that recorded in the first half of 1996 (PTE 93.4 billion as against PTE 28.4). Most Portuguese direct investment abroad kept being made in equity capital (about 57 per cent). Countries outside the OECD received most of Portuguese investment abroad — specially Brazil. The manufacturing industry, and to a lesser extent the financial sector were the main resident sectors investing abroad in this half-year (chart 7).

3.2 Portfolio investment and deposits

In the first half of 1997, the Portuguese economy recorded a net capital inflow linked to portfolio investments amounting to PTE 199.9 billion. Non-residents kept investing significantly in domestic securities in this period, more than compensating the portfolio investment of resident sectors abroad (table 2).

Chart 6
FOREIGN DIRECT INVESTMENT IN PORTUGAL BY SECTOR
Balance

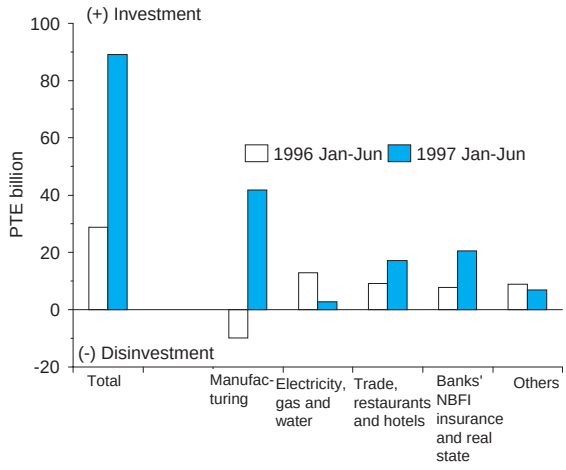
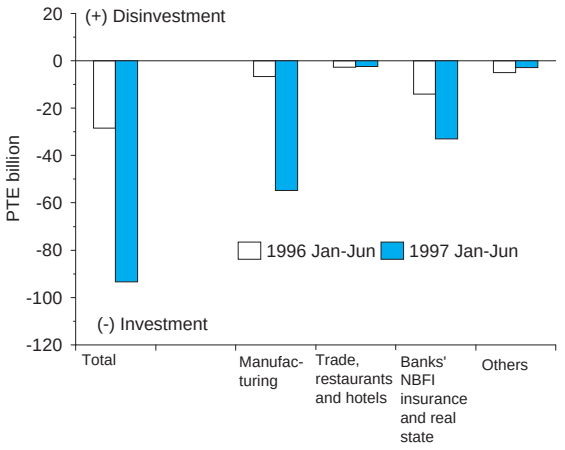


Chart 7
PORTUGUESE DIRECT INVESTMENT ABROAD BY INVESTING SECTORS
Balance



In the first half of the year, **portfolio investment by non-residents in domestic securities** (on a transactions basis) amounted to PTE 462.9 billion in net terms, comparing to a PTE 601.9 billion investment in the same period of 1996 (table 2). The lower capital inflow chiefly resulted from the lower net investment in public debt bonds denominated both in escudos and in foreign cur-

Table 2

PORTFOLIO INVESTMENT

On a transactions basis

PTE billion

	1996			1997 P		
	January-June			January-June		
	Debit	Credit	Balance	Debit	Credit	Balance
Portfolio investment	4927.5	5038.1	110.6	6992.9	7192.9	199.9
From Portugal abroad	2903.7	2412.4	-491.3	3825.4	3562.4	-263.0
Shares	26.3	26.2	-0.1	66.4	39.9	-26.5
Bonds	1643	1306.5	-336.5	2668.2	2424.4	-243.8
Short-term securities (a)	979.1	904.2	-74.9	143.5	207.4	63.9
Other securities	255.3	175.5	-79.8	947.2	890.7	-56.6
Foreign investment in Portugal (b)	2023.7	2625.7	601.9	3167.6	3630.5	462.9
Shares	279.8	479.9	200.2	1068	1243.3	175.3
Bonds	1599.5	2099.6	500.0	1810.7	2057.4	246.6
of which:						
Public debt bonds issued in the domestic market	1288	1440.9	152.9	1171.6	1292.1	120.5
Fixed-rate	513.3	545.1	31.8	510.8	707.5	196.7
Indexed-rate	774.7	895.8	121.1	660.8	584.7	-76.2
Public debt bonds issued in the external markets	72.8	391.2	318.3	71.7	232.1	160.5
Short-term securities (a)	140.9	43.2	-97.7	277.3	320.8	43.4
Other securities	3.6	3.0	-0.6	11.5	9.1	-2.4

Notas:

(a) Includes Treasury bills, commercial paper, deposit certificates and other short-term securities of maturity up to one year.

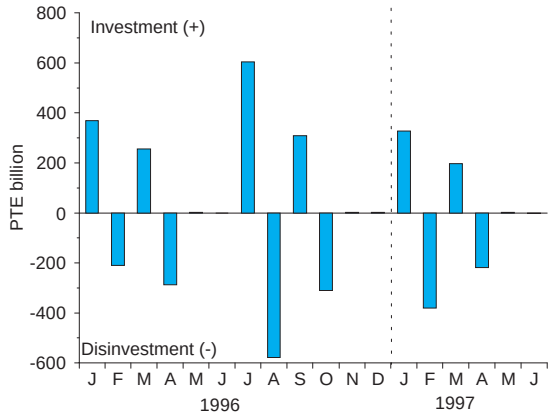
(b) Includes adjustments resulting of the accountancy of debits of portfolio investment income on a transactions basis.

Charts 8

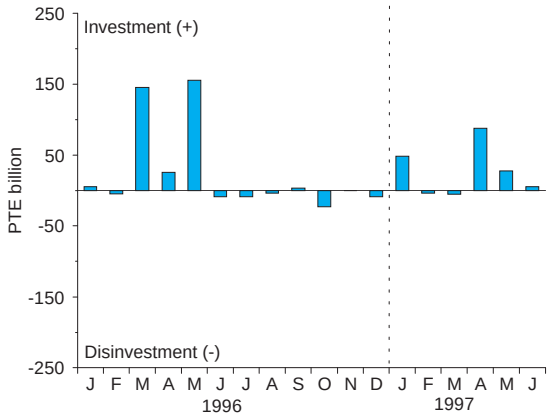
NON-RESIDENTS IN ESTMENT IN PORTUGUESE PUBLIC DEBT BONDS

Balance

Bonds issued in the domestic market — indexed rate in escudos



Bonds issued in the external market in foreign currency



rency. Investment in shares continued to give rise to large capital inflows, although slightly below those recorded in the same period of 1996 (PTE 175.3 billion and PTE 200.2 billion, respectively). Non-residents maintained their interest in the Portuguese stock market, partly due to the privatisation operations. The net investment recorded in June — PTE 111.3 billion — should be highlighted.

In the first half of 1997, the Portuguese State's issues of securitised debt in external markets decreased. As a result, the non-residents' investment in these securities decreased from PTE 318.3 billion in the first half-year of 1996 to PTE 160.5 billion in the same period of this year. As in previous periods, investments in public debt bonds issued in the domestic market kept exhibiting high volatility specially as regards the indexed-rate bonds (chart 8). Net investments by non-residents in fixed-rate public debt bonds issued in the domestic market increased sharply, from PTE 31.8 billion to PTE 196.7 billion. This development may be linked to the improvement of expectations regarding the Portuguese economy, in a context of rising prices of fixed-rate bonds.

Net investments in short-term securities by non-residents concentrated mainly on the Portuguese State's commercial paper denominated in foreign currency, as in 1996. The issues of these securities recorded a strong increase in the first half of 1997.

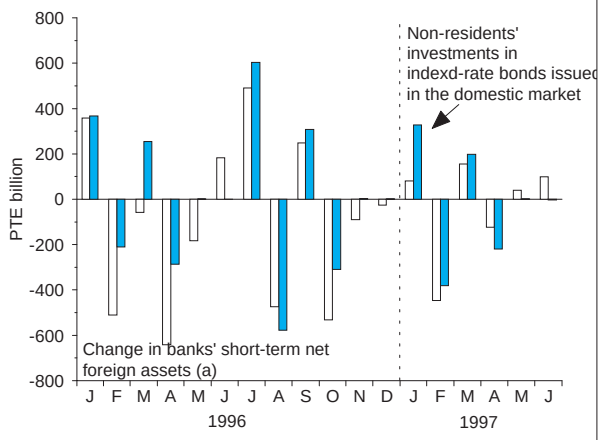
In the first six months of this year, **portfolio investment by residents abroad** gave rise to a net capital outflow of PTE 263.0 billion (PTE 491.3 billion in the same period of 1996) (table 2). Residents kept investing chiefly in bonds (around 93 per cent of total portfolio investment), even though the net purchases of these securities decreased in relation to the first half of 1996. Net investment in escudo-denominated bonds issued by non-residents entities amounted to PTE 266.1 billion (PTE 223.6 billion in the same period of 1996).

In the first half of 1997, non-bank residents' **deposits** abroad also recorded a net decrease from PTE 140.0 billion to PTE 15.4 billion.

3.3 External credit

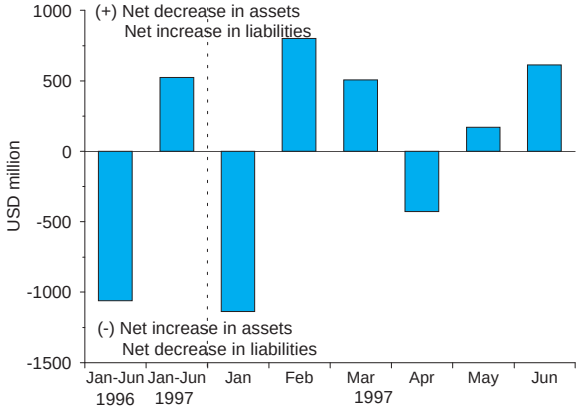
In the first six months of 1997, credit operations between residents and non-residents gave rise to a net capital outflow amounting to PTE 25.3 billion, lower than that recorded in the same period of 1996 (PTE 132.3 billion). **External credit received** by the Portuguese economy recorded a net repayment (PTE 12.8 billion, as against PTE 99.8 billion in the same period of 1996). In net terms, residents repaid PTE 45.8 billion of long-term credit, and

Chart 9
CHANGE IN BANKS' SHORT-TERM NET FOREIGN ASSETS



Note:
(a) A negative change indicates a net decrease in banks' short-term assets.

Chart 10
CHANGE IN NET OFFICIAL RESERVES



constituted PTE 33.0 billion of short-term credit. Only the General Government recorded a net constitution of long-term credits, amounting to PTE 13.3 billion. **Portuguese credits granted** to the rest of the world posted a small value, as usual (PTE 12.6 billion).

3.4 Change in banks' short-term net external position

Capital transactions between resident banks and the rest of the world in the first half of 1997 gave rise to a reduction in their short-term net foreign assets (i.e., a capital inflow) valued PTE 187.6 billion (PTE 852.3 billion in the same period of 1996). This decline resulted from a sharp increase in liabilities, mainly escudo-denominated deposits in foreign banks. As in 1996, the change in banks' short-term net external position over the course of the first half of 1997 continued to be greatly linked to portfolio investment operations on indexed-rate bonds issued in the domestic market (chart 9).

4. OFFICIAL RESERVES

The stock of net official reserves, measured in escudos and with gold at book value, increased by PTE 131.5 billion in the first half of 1997, reflecting the sharp US dollar appreciation in this period. At the end of June 1997, total net official reserves amounted to USD 19,074 million, with gold at book value. This value represents a USD 1,559 million reduction in net official reserves in relation to the end of 1996.

In the first half of 1997, net official reserves excluding exchange rate fluctuations decreased by USD 524.0 million (USD 1,062.0 million increase in the same period of 1996) (chart 10).

Completed with the available data until 30 September 1997.

THE BANKING SYSTEM IN THE FIRST HALF OF 1997

1. INTRODUCTION

This text describes and analyses the activity and results of the banking system, as well as credit risk associated to those activities, in the first half of 1997.

As in previous reports on this issue, the sections referring to the characterisation of the banking sector and the activity and results use the information on the banks subject to supervision by the Banco de Portugal[1], the Caixa Geral de Depósitos, the Caixa Económica Montepio Geral and branches of credit institutions having their head office in other European Union Member States which are subject to the control of home country supervisory authorities.

However, in the section referring to the behaviour of some prudential indicators, the analysis is limited to institutions subject to the prudential supervision by the Banco de Portugal.

The analysis focuses on overall business[2] of banks taken individually.

The growth of the banking system's net assets accelerated in the period under analysis, mainly due to the behaviour of investments in credit institutions, which now become the aggregate holding with the greatest share in total assets, in line with the upward behaviour recorded in recent years — and of credit to clients.

Conversely to what occurred in the same period of 1996, the financial margin increased, reflecting the stabilisation — or even a slight widening — of the differential between implicit interest rates (in both loans and deposits) and the increase in the business volume. Also net income recorded significant increase, though at a slower pace than that of cash-flow, due to the increase in provisions for the year (deducted of replacements). Finally, average risk of credit granted decreased[3] alongside with a slight reduction in the solvency ratio (table 1).

2. CHARACTERISATION OF THE SECTOR

2.1 Regulatory background

At the end of the first half of 1997, 59 institutions were in business in the Portuguese banking sector; the Banco de Portugal recorded six new institutions, four of which having their head office in Portugal and two new branches with their head offices in Spain and in France. Among those banking institutions, 45 are subject to the supervisory control by the Banco de Portugal.

However, as shown in table 2[4], on 30 June 1997 the remaining institutions comprising credit institutions, financial companies, and holding companies[5] amounted to 457 institutions; in net

(1) I.e., institutions having their head office in Portugal and subsidies of foreign banks and branches of non-European Union credit institutions.

(2) The overall activity encompasses total domestic activity of banks operating in Portugal, the activity of branches located in off-shores areas and the activity of branches abroad. Except when mentioned otherwise, each institution is taken individually and not in a group perspective.

(3) Measured by the ratio between overdue credit and interest, and gross credit granted.

(4) In this table, and in the following, the Caixa Económica Montepio Geral is included among the saving banks.

(5) According to the Legal Framework of Credit Institutions and Financial Companies, holding companies are only registered in the Banco de Portugal and subject to its supervision when:
- the total value of their holdings in credit institutions, financial companies or in both accounts for 50 per cent or more of total investment; or
- investments held directly or indirectly give then at least 50 per cent of voting rights in one or more credit institutions or financial companies.

Table 1

BANKING SYSTEM SITUATION – SYNTHESIS [a]

PTE billion

	Jun 96	Jun 97	Change	
			Absolute	Percentage
Assets (net)	30551.2	37510.0	6958.7	22.8
Credit granted	11270.2	13155.5	1885.4	16.7
Overdue credit and interest	662.2	606.1	-56.2	-8.5
Overdue credit and interest / credit granted (percentage)	5.9	4.6	-1.3p.p.	
Provisions for the year (deducted of replacements)	71.6	99.3	27.7	38.6
of which:				
Overdue credit	56.4	48.8	-7.6	-13.5
Doubtful credit	2.2	4.7	2.4	108.1
Country risk	2.0	0.6	-1.5	-71.8
Securities (investment portfolio)	-2.7	3.2	5.9	-217.5
General risk	8.5	14.2	5.7	67.1
Provisions for credit (accumulated)	597.3	583.1	-14.2	-2.4
Overdue credit	436.2	393.4	-42.8	-9.8
Doubtful credit	20.8	32.1	11.3	54.7
Country risk	8.7	7.3	-1.4	-16.2
General risk	131.5	150.2	18.7	14.2
Provisions for unrealised losses	58.0	55.2	-2.8	-4.9
Total credit provisions / overdue credit and interest (percentage)	90.2	96.2	6.0p.p.	
Specific provisions / overdue credit (percentage)	69.0	70.2	1.2p.p.	
Resources from clients	17287.3	18534.4	1247.1	7.2
Own capital	1985.6	2215.1	229.5	11.6

Profit and loss account	1st half 96	1st half 97	Change	
			Absolute	Percentage
Net interest income (financial margin)	346.2	388.0	41.9	12.1
Interest income and equivalent [b]	1289.3	1267.5	-21.7	-1.7
Income from securities [c]	33.4	25.2	-8.3	-24.7
Interest costs and equivalent	976.5	904.7	-71.9	-7.4
Other current results	135.1	174.6	39.5	29.3
Commissions (net value)	44.4	65.4	21.0	47.2
Profits in financial operations (net values)	64.3	76.0	11.7	18.2
Other profits (net values)	26.4	33.2	6.9	26.1
Banking product	481.2	562.6	81.4	16.9
Staff costs	175.2	187.2	12.0	6.9
Services and supplies from third parties	94.7	102.3	7.5	8.0
Operating cash-flow	211.3	273.1	61.8	29.3
Extraordinary income (net)	19.2	10.3	-8.8	-46.0
Cash-flow	230.4	283.5	53.0	23.0
Allocation:				
Provisions for the year (net of replacement of provisions)	71.6	99.3	27.7	38.6
Depreciation for the year	35.1	37.3	2.2	6.1
Tax on income for the year	24.8	33.6	8.8	35.4
Net income for the year	98.9	113.3	14.4	14.6
Solvency ratio (on a consolidated basis)	12.2	11.9	-0.3p.p.	

Notes:

(a) Includes branches of EC credit institutions (except for the solvency ratio).

(b) Includes interest from fixed-rate securities.

(c) Variable income securities.

Table 2

INSTITUTIONS REGISTERED[a]

	Number of institutions	
	1996	1997
	Dec.	Jun.
Credit institutions	321	311
Banks and branches of foreign banks	53	59
Saving banks [b]	8	7
Mutual agricultural credit banks	181	175
Investment companies	4	3
Financial leasing companies	34	28
Factoring companies	11	10
Credit-purchase financing companies	26	24
Branches of other foreign credit institutions	4	5
Financial companies	150	150
Dealers	12	12
Brokers	10	9
Foreign-exchange or money-market mediating companies	3	3
Investment fund managing companies	55	55
Credit card issuing or managing companies	3	3
Wealth managing companies	16	16
Regional development companies	3	3
Risk capital companies	12	12
Group-purchase managing companies	9	9
Exchange offices	25	26
Other companies	2	2
Representative offices of credit institutions and financial companies having their head office abroad	29	27
Holding companies	58	55
Total	558	543

Notes:

(a) Includes branches of EC credit institutions. Does not include institutions that, although registered in the Banco de Portugal, have gone into liquidation.

(b) Includes the Caixa Económica Montepio Geral.

terms, 13 institutions ended business over the course of this half-year. Three cases are worth being singled out: first, the reduction in the number of mutual agricultural credit banks, as a result of merger operations recorded within the process of financial consolidation of the Mutual Agriculture Credit.

Second, the reduction in the number of non-banking credit institutions (specially financial leasing companies), due to both the rationalisation actions carried out by Portuguese financial groups (following purchase and privatisation operations), and to the developments in the regulatory background[6].

Third, the reduction in the number of holding companies, as an outcome of changes in the characteristics of the respective equity investments.

At the end of 1996, banking institutions kept holding a leading position in the financial intermediation process which is illustrated by the indicators presented in table 3. Furthermore, as regards many credit institutions (e.g., financial leasing companies) and financial companies (e.g, dealers and brokers; securities investment fund managing companies), most belong to financial groups, given the developments recorded recently in the system.

2.2 Concentration in the banking system and market shares of foreign institutions

At the end of the first half of 1997, the market share of the five major banking groups (table 4) stood above that recorded on 30 June 1996 (specially when measured by "Resources from clients"), except as regards net income.

The increase in banking concentration was mainly linked to the fact that the number of institutions belonging to the five major groups increased from 17 on 30 June 1996 to 19 on 30 June 1997.

On the other hand, the reduction in the market shares of the five and ten major banks should be interpreted with caution, since the behaviour of indicators may be partly linked to the transfer within the same group of some activities (e.g. housing credit, personal credit and investment banking) to specialised institutions, which due to their small size do not appear in those groups. This transfer can even account for the fact that in both sets, the loss of market share measured by the indicator "credit to clients" is greater than that exhibited by "assets".

(6) The simultaneous exercise of real estate and other financial leasing activities by a same company — possible since Decree-Law no. 72/95 of 15 April-came into force with some lag.

Table 3

SOME STRUCTURE INDICATORS (a)

31 December 1996

PTE billion

	Banks		Saving banks (b)		Mutual agricultural credit banks		Other credit institutions		Financial companies		Total
		%		%		%		%		%	
Net assets	32835.2	91.6	707.1	2.0	997.7	2.8	1066.9	3.0	251.3	0.7	35858.2
Credit to clients	11012.0	83.7	555.1	4.2	545.3	4.1	986.3	7.5	61.4	0.5	13160.0
Debts to clients	17388.4	92.0	590.5	3.1	899.8	4.8	7.3	0.0	16.1	0.1	18902.2
Cash-flow	536.7	83.9	14.6	2.3	30.4	4.8	42.4	6.6	15.7	2.5	639.8
Income for the year	178.2	90.7	3.4	1.7	6.0	3.1	11.0	5.6	-2.2	-1.1	196.4
No. of institutions	53	11.3	8	1.7	181	38.4	79	16.8	150	31.8	471

Notes:

(a) Includes branches of EC banks.

(b) Includes the Caixa Económica Montepio Geral.

The greater decrease in the market shares in both the five and the ten major groups is recorded in net income which however is not common to all institutions considered: while in some institutions profits decreased in absolute terms or increased at a lower rate than the system's average, in other in-

Table 4

MARKET SHARES (a)

A - Five major banking groups (b)

Percentage

	Assets	Credit	Resources from clients	Net income	No. of branches
30.06.96	53.2	48.6	54.8	54.5	48.9
30.06.97	52.4	46.8	55.5	48.6	46.5

B - Five major banks (b)

Percentage

	Assets	Credit	Resources from clients	Net income	No. of branches
30.06.96	72.5	67.5	76.5	83.2	70.5
30.06.97	70.4	62.1	72.1	67.3	65.3

C - Ten major banks

Percentage

	Assets	Credit	Resources from clients	Net income	No. of branches
30.06.96	76.8	75.8	79.5	86.1	74.5
30.06.97	79.4	78.6	83.5	84.9	76.4

Notes:

(a) Includes branches of EC banks.

(b) The five and ten greatest banks in each period are considered; choice is made taking assets as a reference, and on the basis of overall activity.

Table 5

SHARE OF SUBSIDIARIES AND BRANCHES OF FOREIGN BANKS

Percentage

	Number		Net assets		Net credit to clients		Resources from clients	
	Jun. 96	Jun. 97	Jun. 96	Jun. 97	Jun. 96	Jun. 97	Jun. 96	Jun. 97
Branches	13	16	3.73	2.64	3.10	3.07	1.96	1.59
Subsidiaries	7	9	5.93	8.44	5.10	5.35	4.80	4.36
Foreign banks	20	25	9.66	11.08	8.20	8.42	6.76	5.95

Note: Includes branches of EC banks.

stitutions net income increased at rates above that of the sector.

The (negative) change recorded in the 10 greatest banks by "credit" and "resources from clients" (which exceeds "assets" substantially), as well as by "number of branches", was chiefly due to the establishment in Portugal of an institution that joined the 10 greatest banks, which does not raise deposits from the public, and does not grant credit to clients, having only one counter.

Non-domestic banks (subsidiaries[7] and branches of foreign institutions) keep accounting for a relatively low (and stable) share in the business of the sector, though the number of institutions increased since the end of the first half of 1996 (table 5). In fact, although the market share of non-domestic banks' net assets increased by 1.42 percentage points, the indicator "credit to clients" remained virtually unchanged (0.22 percentage points increase), alongside with a small market share reduction in "resources from clients" (-0.81 percentage points).

Non-domestic banks raise funds from other credit institutions and from the capital market to a larger extent than the banking system as a whole; at the end of the first half of 1997, the resources from clients to total resources ratio amounted to 49.4 and 26.5 per cent, for the system and for non-domestic banks, respectively. In addition, foreign banks' funds are used in non-credit purposes at a higher rate than in the sector as a whole: on 30 June 1997, the ratio between credit to clients and net assets reached 33.9 and 25.8 per cent, for the system and for foreign banks, respectively.

3. DEVELOPMENTS IN ACTIVITY AND RESULTS

3.1 Activity

The aggregated assets of the banking system increased by 18.5 per cent in year-on-year terms[8], considering the average values of the first half of 1997 (table 6). Despite being an outcome of distinct behaviours of the main aggregates, this development evidences an acceleration of growth in most aggregates in this half year in year-on-year term (9.9 per cent). This behaviour becomes more clear-cut in end-of-period terms — net assets increased by 22.8 per cent, as against 7.5 per cent at the end of the first half of 1996.

This increase is mainly due to the growth of investments in credit institutions (specially those in credit institutions abroad) and of credit granted to clients — the two major items of the balance sheet. Nevertheless, these items increased at distinct rates.

In what concerns the aggregated cash and liquid assets in central banks, the increase in the item

(7) Institutions having their head office in Portugal, and whose equity capital is mostly held by banking groups having their head office in other countries; joint control situations are excluded.

(8) Except when mentioned otherwise, the indicated growth rates are the percentage change in relation to the same period of the previous year.

Table 6

STRUCTURE OF ASSETS

PTE billion

	1995	1996	1997	Rate of growth (percentage)	
	Jun.	Jun.	Jun.	Jun96/Jun95	Jun97/Jun96
Net assets	28417.7	30551.2	37510.0	7.5	22.8
Cash and liquid assets in central banks	408.6	346.4	507.5	-15.2	46.5
Investments in credit institutions	8805.5	9674.8	13564.0	9.9	40.2
In Portugal	4168.6	4992.1	5997.2	19.8	20.1
Abroad	4637.0	4682.7	7566.8	1.0	61.6
Credit to clients (net)	9804.9	10804.4	12722.7	10.2	17.8
of which:					
Live credit	9548.8	10607.9	12549.5	11.1	18.3
Overdue credit	671.7	662.2	606.1	-1.4	-8.5
Provisions for overdue credit	415.0	436.2	393.4	5.1	-9.8
Security investments (net)	6441.6	6469.7	7071.1	0.4	9.3
Financial fixed assets (net)	789.5	827.0	1017.2	4.8	23.0
Non-financial fixed assets (net)	626.9	660.5	686.1	5.4	3.9
Non-financial fixed assets	1042.0	1128.9	1196.1	8.3	6.0
Depreciation	415.1	468.4	510.0	12.8	8.9
Other assets	531.2	569.8	750.5	7.3	31.7
Sundry accounts	1009.5	1198.5	1190.8	18.7	-0.6
Memo: net average assets in the 1st half-year	27259.9	29951.4	35485.6	9.9	18.5

Note: Includes branches of EC banks.

"sight deposits in the Banco de Portugal" in absolute terms should be singled out (around PTE 150 billion), despite its little proportion in the system's total assets. Furthermore, those deposits evidence a high intra-monthly volatility, as they are eligible for the constitution of minimum cash reserves.

Total investments in credit institutions increased by 40.2 per cent at the end of the first half of 1997 (comparing to 9.9 per cent on 30 June 1996). As a result, these investments increased as a share of total assets (by 4.5 percentage points), which for the first time exceeded the increase re-

Table 7

NON-SECURITISED DOMESTIC CREDIT TO COMPANIES AND INDIVIDUALS

PTE billion

	1995		1996		1997		Rates of growth	
	Jun.	%	Jun.	%	Jun.	%	Jun96/Jun95	Jun97/Jun96
Non-banking financial institutions	668.8	7.5	739.8	7.3	813.8	6.8	10.6	10.0
Non-financial companies	5096.6	57.1	5427.1	53.9	6343.1	52.8	6.5	16.9
Individuals	3157.9	35.4	3901.8	38.8	4866.9	40.5	23.6	24.7
Housing	2533.1	28.4	3088.9	30.7	3870.0	32.2	21.9	25.3
Other purposes	624.8	7.0	812.9	8.1	996.9	8.3	30.1	22.6
Total	8923.2	100.0	10068.7	100.0	12023.8	100.0	12.8	19.4

Note: Does not include branches of Portuguese credit institutions abroad; includes branches of EC banks in Portugal.

Table 8

NON-SECURITISED CREDIT TO NON-FINANCIAL COMPANIES ACCORDING TO SECTOR

Percentage

	Shares			Rate of growth	
	1995	1996	1997	Jun96 / Jun95	Jun97 / Jun96
	Jun.	Jun.	Jun.		
Agriculture, forestry, hunting and fisheries	2.7	2.5	2.4	-0.8	13.3
Mining	0.9	0.7	0.7	-12.1	11.5
Manufacturing	32.1	29.7	27.7	-1.6	9.0
Electricity, gas, water	4.9	3.8	3.1	-17.4	-3.9
Construction and public works	13.9	14.2	15.1	8.3	24.2
Services	45.4	49.1	51.0	15.0	21.4
Total	100.0	100.0	100.0	6.5	16.9

Nota: Includes branches of EC banks.

corded by the credit to clients (by 2.3 percentage points).

Net investments in credit institutions abroad recorded, between June 1996 and June 1997, a much higher growth rate than that of investments in domestic credit institutions (61.6 per cent and 20.1 per cent, respectively). The behaviour of the former is mainly explained by the growth of medium — and long-term loans and time deposits.

Credit granted to clients (in net terms) grew by 17.8 per cent in June 1997, clearly more than in the same period of 1996 (10.2 per cent). This behaviour continues to be linked to the pace of growth of economic activity and to the decrease in nominal interest rates.

The system's bank lending [9] in the period under analysis (table 7) is characterised by the maintenance of high growth rates of lending to individuals (24.7 per cent) — specially of housing

(9) The following analysis of the breakdown of gross credit to residents (including overdue credit) by sector and by purpose refers exclusively to the domestic activity of banks operating in Portugal and in the Madeira and Santa Maria off-shore areas. Hence, unlike in the remaining balance sheet items of the banking system, the activity of branches abroad is not included.

Table 9

NON-SECURITISED CREDIT TO NON-FINANCIAL COMPANIES ACCORDING TO PURPOSE

Percentage

	Shares			Rate of growth	
	1995	1996	1997	Jun96 / Jun95	Jun97 / Jun96
	Jun.	Jun.	Jun.		
Investment	23.8	23.3	26.3	4.2	32.1
Others	76.2	76.7	73.7	7.2	12.3
Total	100.0	100.0	100.0	6.5	16.9

Note: Includes branches of EC banks.

credit — accelerating slightly in relation to the same period of 1996 (1.1 percentage points above). This resulted in an increase of the proportion of this aggregate in non-securitised domestic credit to companies and individuals.

While housing credit grew by 25.3 per cent in this period (as against 21.9 per cent in the same period of 1996), credit to other purposes recorded a slowdown, from 30.1 per cent to 22.6 per cent in the same periods.

In aggregated terms, the rate of growth exhibited by credit to individuals in the period under analysis exceeded that of domestic credit to companies and individuals by 5.3 percentage points, as a result the share of the former in the overall portfolio of banking loans kept increasing, becoming the most dynamic credit activity.

In the period under analysis, credit to non-financial companies also increased substantially (16.9 per cent in June 1997) as against 6.5 per cent in June 1996).

Different behaviours were evidenced as regards the structure of credit to non-financial companies (table 8); The construction and public works sector stood as the most dynamic, increasing by 24.2 per cent — resulting in a 1 percentage point increase of its share in total credit granted to non-financial companies.

The services sector continued to evidence a growth rate above that of total credit granted by about 2 percentage points. At the end of the first half of this year, the relative share of the services sector had clearly surpassed 50 per cent of loans granted to non-financial companies, contrasting with the progressive (though less sharp) decrease of credit to the manufacturing industries. This behaviour is partly related to the fact that non-financial groups resort increasingly to credit markets through the respective holding companies, which are classified in the sector “other services”.

Nevertheless, credit granted to manufacturing industries, after recording a nominal decrease between June 1995 and June 1996, increased by 9.0 per cent in the period under analysis.

Also credit to the primary sector (agriculture, forestry, hunting, fisheries and mining) recovered, presenting a positive rate of change in the period under analysis.

Finally the growth of lending for investment purposes granted to non-financial companies accelerated in this period, rising its share in total credit by 3 percentage points (table 9).

Investments in securities increased by 9.3 per cent, after a virtual stagnation in the same period of 1996. Nevertheless, this item again lost its share in total assets (18.9 per cent on 30 June 1997 as against 21.2 and 22.7 per cent at the end of June 1996 and 1995, respectively).

The behaviour of this item in the period under analysis is possibly due (as previously) to an expansion of the portfolio of investment funds, resulting in an increase in portfolio investments, the securities being partly transferred form credit institutions (hence giving rise to an increase of the respective investments at a much lower growth rate than that exhibited by assets).

The acceleration of the growth rate of net financial fixed assets (by 18.2 percentage points) is linked to the restructuring of the Portuguese financial groups, reflecting the purchase of shareholdings or the granting of long-term loans.

Resources from credit institutions again accounted for the major contribution to the growth of the banking system's liabilities (table 10). This contribution rose from 28.3 per cent in June 1996 to 33.2 per cent at the end of the first half of 1997. Resources from foreign credit institutions which account for the largest share of total resources from credit institutions — also expanded, from 18.5 per cent of the system's total resources on 30 June 1996 to 21.0 one year later. Among these, the most important item — and that recording the most significant increase — consists of deposits of branches of other domestic banks and of non-resident credit institutions.

Resources raised from clients — which remain as banks' greatest funding source — again lost their weight in the system's total resources, despite having grown at a higher rate than in the same period of 1996 (7.2 and 5.2 per cent in the first half of 1997 and 1996, respectively).

The growth of liabilities represented by securities was chiefly due to the entrance of an institution in the system, which only raises resources in financial markets, which accounts for about 67 per cent of the absolute change in this aggregate. Among the remaining determinants of the behav-

Table 10

STRUCTURE OF RESOURCES

PTE billion

	1995	1996	1997	Rate of growth (percentage)	
	Jun	Jun	Jun	Jun96/jun95	Jun97/Jun96
Resources	28417.7	30551.2	37510.0	7.5	22.8
Resources from credit institutions	7472.1	8642.0	12476.7	15.7	44.4
In Portugal	2665.8	2981.4	4583.9	11.8	53.7
Abroad	4806.3	5660.5	7892.8	17.8	39.4
Resources from clients	16435.7	17287.3	18534.4	5.2	7.2
Liabilities represented by securities	487.2	568.5	2070.6	16.7	264.2
Other liabilities	232.1	127.5	203.0	-45.1	59.3
Sundry accounts	1080.4	1231.1	1009.5	13.9	-18.0
Provisions	447.4	301.7	283.6	-32.6	-6.0
Subordinated debt	376.0	407.5	717.0	8.4	75.9
Own capital	1886.8	1985.6	2215.1	5.2	11.6
Average own capital in the half-year	1879.0	1951.3	2174.6	3.9	11.4

Note: Includes branches of EC banks.

iour of liabilities represented by securities, the issuing of non-subordinated cash bonds are worth being singled out, which increased by PTE 300 billion. These securities were issued with the objective of substituting already repaid debt or of financing the business expansion of institutions already established in the system for a longer period.

Lastly, the rate of growth of the aggregate "subordinated debt plus own capital" recorded a very significant increase (22.5 per cent comparing to 5.8 per cent in the same period of 1996), although its components behaved quite differently, with consequences at the level of the structure of the system's own funds (as will be seen below). In overall terms, the relative share of this aggregate in total funds raised by the system remained virtually unchanged around 7.8 per cent.

3.2 Results

Conversely to what occurred in the first half of 1996, the financial margin increased by 12.1 per cent (table 11); however, this increase did not follow that of total assets — the ratio between the financial margin and net average assets decreased from 1.16 per cent in the first half of 1996 to 1.09 per cent in the same period of the current year.

The behaviour of the financial margin in this period was chiefly due to a negative change in interest income and equivalent lower than that exhibited by interest costs and equivalent partly due to the stabilisation (or slight widening) of the differential between interest rates implicit in credit and deposits operations[10], as well as to the increase in business volume. It should be noted that the implicit average rate of return of credit to clients decreased by 0.69 percentage points in relation to 30 June 1996, while the average rate of return of deposits fell by 0.85 percentage points.

Net commissions interrupted the nominal downward path exhibited in the first half of 1996, having increased by 47.2 per cent; as a result, its share in the formation of the banking product increased from 9.2 per cent in the first half of 1996 to 11.6 per cent in the same period of the current year.

Conversely to previous periods, the change in net commissions was totally due to profits — from which those referring to the supply of banking services and to operations on securities and exchange rates for third parties are worth being highlighted (the latter with lower relevance).

(10) Comprising total assets and liabilities, including investments in public debt securities.

Table 11

PROFIT AND LOSS ACCOUNT [a]

PTE billion

	1995	1996	1997	Rate of growth (percentage)	
	1st half	1st half	1st half	1st half96 / / 1st half95	1st half97 / / 1st half96
Interest income and equivalent	1350.7	1289.3	1267.5	-4.5	-1.7
Income from securities [b]	20.1	33.4	25.2	66.4	-24.7
Interest costs and equivalents	1003.3	976.5	904.7	-2.7	-7.4
Financial margin	367.4	346.2	388.0	-5.8	12.1
Commissions (net)	47.0	44.4	65.4	-5.5	47.2
Financial operations (net)	17.4	64.3	76.0	269.8	18.2
Other current income (net)	21.0	26.4	33.2	25.6	26.1
Banking product	452.8	481.2	562.6	6.3	16.9
Operating cost	245.2	270.0	289.5	10.1	7.2
Extraordinary income (net)	13.1	19.2	10.3	46.8	-46.0
Cash-flow	220.7	230.4	283.5	4.4	23.0
Utilisation					
Provisions (replacement of provisions deducted)	92.1	71.6	99.3	-22.2	38.6
Depreciation	34.7	35.1	37.3	1.2	6.1
Tax on profits	16.7	24.8	33.6	48.2	35.4
Net income	77.1	98.9	113.3	28.3	14.6

Notas:

(a) Includes branches of EC banks.

(b) Only includes variable income securities.

Net income from financial operations, despite exhibiting a slowdown in relation to the first half of 1996, increased by 18.2 per cent, due to unrealised gains and the revaluation of security portfolios (specially the variable income securities, conversely to what occurred in the same period of 1996, where capital gains due to fixed-rate securities were much greater) and to the exchange rate position.

As a result of these facts, banking product increased by 16.9 per cent (as against 6.3 per cent in the same period of 1996), from which the growth of the contribution of other current results (and consequently the loss in the share of the financial margin) should be singled out, from 28.1 per cent in the first half of 1996 to 31.0 per cent in the period under review (chart 1).

On the other hand, the ratio "banking product average assets" decreased from 1.61 per cent on 30 June 1996 to 1.59 per cent on 30 June 1997, which may indicate the confirmation of the stabilisation of this value recorded since 1995 (where this ratio amounted to 1.66 per cent).

The growth of operating costs recorded a significant slowdown in relation to the same period

Chart 1

BANKING PRODUCT: BREAKDOWN

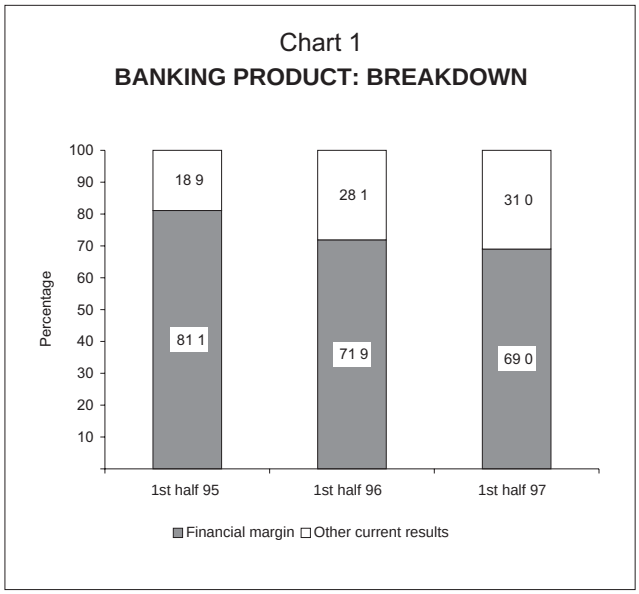


Table 12

PROFITABILITY INDICATORS [a] [b]

Percentage

	1st half 1995	1st half 1996	1st half 1997
Return on average assets (ROA)	0.28	0.33	0.32
Return on equity (ROE)	4.10	5.07	5.21
Financial margin / average assets	1.35	1.16	1.09
Cash-flow / average assets	0.81	0.77	0.80

Notes:

(a) Includes branches of EC banks.

(b) These indicators refer to the first half-year only.

of 1996 (7.2 per cent and 10.1 per cent, respectively), due to both staff costs and to supplies and services from third parties.

As a result, in the period under analysis, operating costs grew below the banking product (-9.7 percentage points), and hence the ratio between the former and the latter decreased to 51.5 per cent on 30 June 1997, as against 54.2 and 57.6 per cent on the same dates of 1996 and 1995, respectively.

Among the growth of operating costs (PTE 19.5 billion) costs due to wages and other staff income (PTE 9.0 billion) and costs due to skilled services from third parties — e.g. elecronic systems (around PTE 3.4 billion) — are worth being stressed, since contributions to pensions funds contributed only PTE 1.5 billion to that growth. Nevertheless, the growth share of staff costs in total operating costs again decreased (though not by much) in the first half of this year, to 64.7 per cent, which compares to 64.9 and 65.8 per cent at the end of June 1996 and 1995 respectively.

The gradual decrease in the share of labour costs is related to the reduction of the number of workers per counter (18.3, 16.7 and 15.3 at the end of June 1995, 1996 and 1997, respectively), alongside an expansion of the number of agencies (by 9.7 per cent between June 1995 and June 1996, and by 8.1 per cent between June 1996 and June 97).

The reduction in absolute terms of net extraordinary income resulted chiefly of the behaviour of extraordinary profits (namely by item "unrealised gains in fixed assets"), since income due to the alienation of fixed assets recorded inexpressive values vis-à-vis those of the first half of 1996.

Although net income continued to record a significant growth in comparison to the same period of the previous year (14.6 per cent), it did not follow the behaviour of cash-flow (23.0 per cent increase), which is greatly due to the increase in provisions for the year (net of replacements) — specially provisions for general banking risks and for general credit risks (in the latter case because the effects of reducing the respective minimum coefficient from 2 to 1 per cent dissipated [11]).

Consequently, the half-year profitability of the banking system, when measured by the most commonly used indicators (table 13), reveals a stabilisation of the return on assets (ROA), alongside with an increase in net return on average equity (ROE) — which on 30 June 1997 and in non-annualised terms amounted to 5.21 per cent, as against 5.07 per cent at the end of the first half of 1996.

4. DEVELOPMENTS IN CREDIT RISK

4.1 Provisioning

In comparison to the same period of the previous year, a further (and sharper) reduction was recorded by overdue credit and interest (8.6 per cent decrease) (table 13), chiefly resulting from the definitive write-off of credits considered unrecoverable, and of the reduction in new overdue credits — which in general are negatively correlated to the pace of growth of economic activity.

Therefore, the average credit risk again decreased (from 6.0 per cent in June 1996 to 4,7 percent on 30 June 1997), alongside with the reduction in the share of overdue credit (net of specific provisions) in net assets (from 0.74 to 0.57 per cent).

The decrease in the absolute value of provisions for overdue credit (by 9.9 per cent) resulted chiefly from the definitive write-off of non-performing loans which were provisioned at high rates, which in turn contributed to the reduction of the coverage of overdue credit (65.4 per cent, as

(11) See chapter " The banking sector of the 1995" Annual Report.

Table 13

OVERDUE CREDIT AND PROVISIONING

PTE billion

	1995	1996	1997
	Jun.	Jun.	Jun.
1.Credit granted (gross)	9913.1	10951.1	12785.4
2.Overdue credit and interest	661.5	653.1	596.9
3.Provisions for overdue credit	408.2	433.1	390.3
4.Provisions for general credit risk	199.1	127.1	146.2
5.Provisions for doubtful credit (credit)	0.0	17.1	27.5
6.Provisions for country risk (credit)	0.6	8.7	7.3
7. Average risk of credit granted [(2)/(1)X100]	6.7%	6.0%	4.7%
8. Average risk of credit net of provisions [(2-3)/(1-3)]X100	2.7%	2.1%	1.7%
9. Total credit provisioning{[(3)+(4)+(5)+(6)]/(1)}X100	6.1%	5.4%	4.5%
10. Overdue credit provisioning [(3)/(2)]X100	61.7%	66.3%	65.4%

Nota: Does not include branches of EC banks in Portugal.

against 66.3 per cent in the first half of 1996). It should be noted, however, that the ratio between overdue credit and interest (net of provisions) and credit granted (also net of provisions) fell from 2.09 per cent in June 1996 to 1.67 per cent at the end of the first half of 1997.

As a result of the behaviour of provisions for overdue credit and interest, and despite the growth of provisioning for general credit risk, doubtful credits and country risk (increasing by PTE 281.1 billion in overall terms), the overall level of credit provisioning fell from 5.4 per cent in June 1996 to 4.5 per cent in June 1997.

4.2 Solvency ratio

In analysing the solvency ratio consolidated data were used, although the system's average ratio includes elements calculated on an individual basis (that on institutions outside financial groups).

Table 14

SOLVENCY RATIO

Consolidated basis

PTE billion

Banking system	Weighted assets	Off-balance sheet items		Total	Own funds			Total (8) =(5)+(6)-(7)	Solvency ratio [(8)/(4)]*100 %
	(1)	Risk (2)	Rate (3)	(4) = (1)+(2)+(3)	Basis (5)	Complementary (6)	Deductions (7)		
31.12.94	10238.1	1367.6	72.3	11678.0	1332.0	365.1	54.9	1642.2	14.1
30.06.95	10812.3	1379.3	77.5	12269.1	1137.6	332.0	58.5	1411.1	11.5
31.12.95	12283.9	1644.8	97.1	14025.8	1377.8	343.5	72.7	1648.6	11.8
30.06.96	12729.1	1863.1	113.9	14706.1	1391.5	434.9	37.9	1788.5	12.2
31.12.96	13565.5	1966.4	108.4	15640.3	1353.1	491.5	78.6	1766.0	11.3
30.06.97	14644.7	1995.1	132.5	16772.4	1458.4	613.5	71.3	2000.6	11.9

Notes: Does not include branches of EC banks in Portugal.

Weighted assets are net of provisions for general credit risk

The off-balance sheet items are broken-down into two classes: “Risk”, encompassing operations not related to interest rate nor exchange rate risks (e.g., guarantee concession), and “Rate”, including derivative contracts on interest or exchange rates.

Table 15

SOLVENCY RATIO: BREAKDOWN

Consolidated basis

Percentage

	Base own funds / weighted risks	Complementary own funds / weighted risks	Deductions / weighted risks	Solvency ratio
31.12.94	11.4	3.1	-0.5	14.1
30.06.95	9.3	2.7	-0.5	11.5
31.12.95	9.8	2.4	-0.5	11.8
30.06.96	9.5	3.0	-0.3	12.2
31.12.96	8.7	3.1	-0.5	11.3
30.06.97	8.7	3.7	-0.4	11.9

On 30 June 1997, the system's average solvency ratio amounted to 11.9 per cent (table 14), hence decreasing slightly in comparison to 30 June 1996 (-0.3 percentage points). However, this value represents a 0.6 percentage points increase in relation to 31 December 1996, and in any case represents a value clearly above that legally required (8 per cent).

The reduction in the solvency ratio from 12.2 to 11.9 per cent is chiefly due to the fact that own funds increased at a lower pace than aggregate "risk-weighted assets and off-balance sheet items" (11.9 and 14.1 per cent, respectively).

A breakdown of the banking system's average solvency ratio according to the components of own funds (table 15) reveals a reduction in the contribution of base own funds in its relative share (-0.8 percentage points), when compared to 30 June 1996; on the other hand, complementary own funds saw their relative share increase from 3.0 to 3.7 per cent.

Lastly, it should be noted that on 30 June 1997 all institutions recorded solvency ratios above the legally fixed minimum threshold, both on a consolidated and on an individual basis, according to the regime regulating these institutions.

Completed with information available as at 10 September 1997.

THE PREVENTION OF MONEY LAUNDERING

The international component of money laundering which in brief can be described as being the camouflage of the true origin and property of funds and products resulting from criminal illicit activities — has recorded growing importance, too which has contributed, among others, the liberalisation of capital movements, technological innovations (e.g. electronic transfers) and the globalisation of financial markets.

As a result the prevention of money laundering demands a growing and active international co-operation between the various kinds of authorities involved.

In short, the capital laundering process can be described as a 3-stage process:

The placement in the monetary system (or in purchase of a good) of monetary assets raised through criminal activities.

The transformation of those funds, by accomplishing successive financial operations, as to cover the real origin. These operations frequently involve international transfers.

The integration stage, when funds are re-introduced in the economic and financial system, with an apparent legality.

In general, the moment more ulnerable to the detection of the illicit origin of these funds are those of their introduction in the financial system (usually in the form of currency), international transfers and the "exit" from the financial system.

Therefore, as a preliminary conclusion one can infer that an effective anti-money laundering scheme must encompass preventive measures regarding the utilisation of the financial system for these purposes.

In what concerns the international dimension of capital recycling, it should be noted that the allocation of resources raised in criminal activities is not a function of the expected net yields, nor of real interest rates - on the contrary, such allocation depends on the existence (or not) of an anti-money laundering regime, and on the quality of the control of the compliance to those regulations.

Since international investments of those funds are not based upon the leading macroeconomics variables, wrong signs to macroeconomic management may arise, either leading to the maintenance of disadjusted policies or to incorrect policy decision-making. Furthermore, since money laundering may take the form of economically irrational investments, the relative prices of financial and real assets may be distorted. Finally, the transparency and soundness of financial markets, together with the solvency and reputation of financial institutions, are determinant to the efficient functioning of economies; if markets and institutions credibility and trust are questioned in a given moment, recovery usually takes long.

These considerations justify the intervention of supervisory authorities, in the prudential control itself (e.g., cheking the fitness and properness of major shareholders of financial institutions and the adequacy of internal control systems), as well as in the evaluation of the compliance with specific anti-laundering provisions (e.g., identification of customers and reporting of potentially suspicious operations).

Those considerations also justify the introduction, at the international level (specially in the leading financial centres and in countries exhibiting higher rates of organised criminality), of consistent and sufficiently harmonised anti-laundering measures, since the States who do not equip themselves with a system for preventing money laundering impose negative externalities to other countries.

At the international level — and notwithstanding the relevance of other initiatives - the creation by the G-7 in July 1989 of the FATF (Financial Action Task Force) integrating 26 countries or jurisdictions [(1)] and two supranational entities[(2)] should be singled out. This consists of a multi-disciplinary group (joining legal, financial and law enforcement valences), which in 1990 issued 40 Recommendations(reviewed in 1996) comprising the penal justice regime and the application of laws, the financial system and international co-operation.

These Recommendations are principles for action that countries must put into force, without questioning the specificity of their juridical and financial systems or their constitutional framework, nor their economic development or free international capital movements.

The compliance with the 40 Recommendations is assessed through a double mechanism: an annual self-evaluation exercise, and a more detailed process of mutual evaluation in loco, where each Member is examined by a team encompassing three experts (from the legal, financial and investigation areas) from other FATF countries.

The results of the revision of the 40 Recommendations reflect the developments in the techniques, and also in the relative importance of the different criminal activities generating money laundering.

The major changes in the Recommendations can be in brief described as follows:

the enlargement of capital laundering incrimination to comprise other serious infractions beyond drugs traffic (e.g., and depending of the countries, corruption, weapon dealing, terrorism and fraud).

the recognising of the importance of extending preventive measures to non-banking financial institutions which in some countries are not subject to formal supervision (e.g., exchange offices).

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(1) Germany, Australia, Austria, Belgium, Canada, Denmark, Spain, USA, Finland, France, Greece, Hong-Kong (China), Ireland, Iceland, Italy, Japan, Luxembourg, Norway, New Zealand, the Netherlands, Portugal, United Kingdom, Singapore, Sweden, Switzerland and Turkey.

(2) Commission of the European Communities and Gulf Cooperation Council.

– *the identification of some non-financial activities which are understood to be particularly bound to be used for laundering: like game (specially in casinos) and trade for goods with high unit value — specially precious gems and metals, fixed assets, antiques and works of art.*

The FATF recommendations regarding financial institutions influenced decisively the dispositions of Directive no 91/308/EEC, of 10 June, namely in what concerns:

– *the scope of the Directive (all credit institutions and financial companies);*
– *the requirement of identification of customers and parties involved in occasional transactions, when these surpass ECU 15 thousand;*
– *the obligatory reporting to competent authorities of potentially suspicious operations (with derogation of the banking confidentiality duty and excluding any civil or criminal responsibility for the financial institution, its heads or staff, as long as the notification was done in good faith);*
– *the prohibition of informing the client of those notifications, and the duty to suspend the operations for a term that enables the competent judicial authorities to start the investigation process;*
– *the implementation of adequate internal control procedures, and of training programmes for the staff.*

The Portuguese Regulatory Framework[3] reflect, to a great extent, the provisions of Directive no 91/308/EEC; it should be stressed the imposition of duties of identification and notification of suspect operations to several non-financial companies.

Lastly, it is useful to make clear that, from the supervisisory authorities' point of view, credit institutions and financial companies should on their own interest collaborate actively in the anti-money laundering measures (namely as regards internal control and training), without, however, replacing the criminal investigation authorities; these institutions shall, on the basis of their knowledge of customers and of their experience regarding financial activities and techniques, assess carefully the normal or irregular character of their operations.

(3) *Decree-Law no 313/93 and 325/95, of 13 September and 2 December, respectively; Instruction 70/96, of 17 June.*

ANALYSIS OF THE RESULTS OF THE APRIL AND OCTOBER 1996 SURVEYS OF FOREIGN EXCHANGE AND DERIVATIVES MARKET ACTIVITY

In 1996, the Banco de Portugal proceeded its bi-annual survey of foreign exchange and derivatives market activity, which was undertaken for the first time on April 1995. This survey has a broader scope than the previous quarterly survey of foreign exchange turnover[1], now encompassing more detailed data on the derivatives market, and covering, for the first time, interest rate instruments.

The need to fill the statistical data deficit existing in this area at the international scale, namely as regards the over-the-counter market (OTC), led central banks and monetary authorities of 26 countries to conduct a global survey of derivatives markets in April 1995, under the aegis of the Bank for International Settlements (BIS). The Banco de Portugal took part in this project and, in a context where the non-traditional segments of the Portuguese derivatives market were starting to develop, decided to implement the regular collection of this data domestically, on a half-yearly basis.

This study aim is to analyse the developments recorded in the spot foreign exchange market and in the foreign exchange and interest rate derivatives market[2] in 1996, using the results of the April and October 1996 surveys[3].

Activity in the foreign exchange spot market continued to grow at a sustained pace, having achieved a stage of relative maturity. As a result, this text focuses on the Portuguese derivatives market which, excepting the foreign exchange forward market[4] is still in an early stage of development and has recorded high growth rates.

Section 1 refers the main developments in the derivatives market, regarding both notional amounts outstanding and turnover, focusing those situations where the structure of portfolios diverges from the structure of transactions.

The foreign exchange spot market is analysed in the subsection dedicated to the analysis of data on turnover, linking its development with that of the traditional segments of the foreign exchange derivatives market — the forwards.

Section 2 identifies some structural characteristics of the foreign exchange and derivatives markets. After measuring and comparing levels of concentration, the distribution of foreign exchange[5] and interest rate derivatives according to maturity classes is analysed. Then we try to identify patterns of behaviour in both amounts outstanding and turnover data. Lastly, the frequency distribution of transactions of derivatives instruments is analysed. The joint analysis of the various aspects studied in this section aims at identifying the main characteristics of the most usual operations made in the Portuguese derivatives market.

(1) The quarterly survey of foreign exchange turnover was first carried out in April 1992, and only covered transactions in the spot market and foreign exchange derivatives market.

(2) The half-yearly survey of the Banco de Portugal does not cover equity and stock index derivatives, nor commodity derivatives.

(3) The analysis of the results of the half-yearly surveys carried out in 1995 was released in the Economic Bulletin of June 1996.

(4) Forwards comprise outright forwards and foreign exchange swaps.

(5) Foreign exchange derivatives include outright forwards, foreign exchange swaps, currency swaps, and foreign exchange futures and options.

1. MAJOR DEVELOPMEMTS IN THE FOREIGN EXCHANGE AND DERIVATIVES MARKETS

The Portuguese derivatives market continued to record a remarkable development in 1996, growing in both amounts outstanding and turnover terms. The pace of growth of the Portuguese economy in 1996, alongside with the disinflation and budgetary consolidation processes in course, allowed for a favourable setting to the development of the Portuguese financial markets.

In a context of greater stability of monetary policy, and given the expected convergence of the Portuguese economy to the other European Union economies, ***the interest rate derivatives segment — which was still in an early stage — developed significantly***.

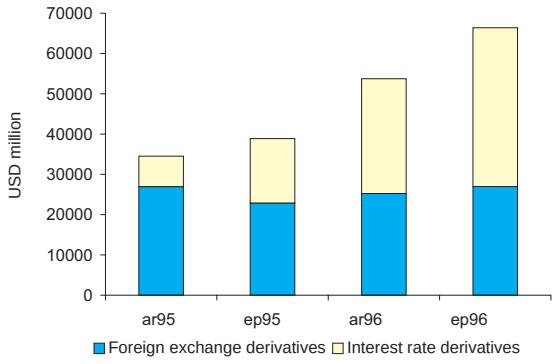
From the analysis of the results of the surveys carried out in 1996, the following aspects strike out:

- ***The growth of about 20 per cent of total turnover in the foreign exchange market, which reached USD 3,288 million in October 1996. The spot market, where turnover amounted to USD 1,690 million, recorded a lower pace of growth (13 per cent).***
- ***The growth in business in the derivatives market, which was more significant in the interest rate derivatives segment. As a result, these instruments became the most important in terms of amounts outstanding; the relative share of these instruments also increased significantly in terms of turnover.***
- ***The substantial growth recorded by FRAs and interest rate futures, specially in the escudo-denominated contracts***. The beginning of activity in the Bolsa de Derivados do Porto was decisive to the growth of future contracts, which was greater in turnover terms than when considering their share in amounts outstanding.

Amounts outstanding

On 30 September 1996[(6)], total amounts outstanding held by the surveyed banks as a whole amounted to USD 66,389 million, which represents a 71 per cent increase in relation to 29 September 1995. In escudos, total amounts outstanding reached PTE 10,312 billion, representing a 80 per cent increase vis-à-vis September 1995.

Chart 1
AMOUNTS OUTSTANDING IN THE DERIVATIVES MARKET

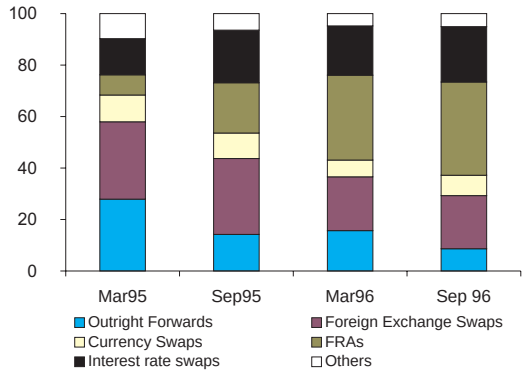


The growth in amounts outstanding was almost exclusively due to the behaviour recorded in the interest rate derivatives segment, which more than multiplied twofold in relation to September 1995 (chart 1). Amounts outstanding in interest rate derivatives as a share of total notional amounts increased from 40 per cent in September 1995 to 60 per cent in September 1996.

FRAs have recorded an increasing share in the total notional amounts outstanding of derivatives instruments. In September 1996, these became the leading instruments in the derivitaves market (with 36 per cent of the total), surpassing the joint relative shares of the *outright forwards* and *foreign exchange swaps* (29 per cent) (chart 2). One must recall that, in international terms, in April 1995, according to the results of the survey co-ordinated by the BIS, the relative share of FRAs amounted to about 10 per cent while forwards accounted for around 20 per cent; swaps were by then the most representative instrument, accounting for 40 per

(6) Except when mentioned otherwise, figures refer to September 1996. The data on positions in the over-the-counter market are adjusted for double-counting due to transactions carried out in the domestic interbank market. Likewise, the data on the exchange traded derivatives market were adjusted by approximation, assuming that final customers are, in most operations, resident banks.

Chart 2
AMOUNTS OUTSTANDING IN THE DERIVATIVES MARKET
Breakdown by instrument



cent of total amounts outstanding. The fact that the Portuguese market exhibits a distinct structure is chiefly linked to the complexity of swaps, in terms of both risk involved and the technical means necessary to their dealing and valuation.

A broken down analysis of the foreign exchange and interest rate derivatives segments reveals that no significant changes occurred regarding the share of each instrument within ***the foreign exchange derivatives*** — forwards continue to account for more than 70 per cent of total amounts outstanding (foreign exchange swaps with around 50 per cent, and outright forwards with about 20 per cent). However, it is worth noting the increasing share hold by currency swaps as against options.

In the interest rate derivatives segment, amounts outstanding of FRAs contracts increased substantially, also increasing as a share of total interest rate derivatives (to about 60 per cent), alongside with a reduction in the share of swaps (the leading instrument up to September 1995, which continue to increase in absolute terms).

In the foreign exchange derivatives segment, non-resident ***counterparties*** have recorded an increasing share (to around 70 per cent); non-resident counterparties consist mainly of banks and other financial institutions. On the other hand, the relative share of non-financial resident customers came down to 20 per cent. In the interest rate derivatives segment, the breakdown according to the residence of counterparties remained unchanged (resident counterparties accounting for about 40 per cent of amounts outstanding).

Regarding the structure by currency of foreign exchange instruments there were no significant changes (chart 3) with the escudo maintaining a

Table 1

AMOUNTS OUTSTANDING OF DERIVATIVES PRODUCTS

US dollar million

	1995		1996		Y / Y %
	Mar	Sep	Mar	Sep	Sep 96
Foreign exchange derivatives	**26955**	**22890**	**25240**	**26975**	**17.8**
Outright forwards	9636	5527	8429	5742	3.9
Foreign exchange swaps	10373	11457	11227	13701	19.6
Currency swaps	3594	3856	3508	5248	36.1
OTC options	3352	2050	2076	2284	11.4
Interest rate derivatives	**7564**	**15984**	**28492**	**39414**	**146.6**
FRAs	2707	7591	17709	24046	216.8
Swaps	4846	7946	10293	14282	79.7
OTC options	-	430	486	477	10.9
Exchange-traded options	-	10	-	22	120.0
Futures	11	7	4	587	8285.7
Total	**34519**	**38874**	**53732**	**66389**	**70.8**

Chart 3
AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES
Breakdown by currency

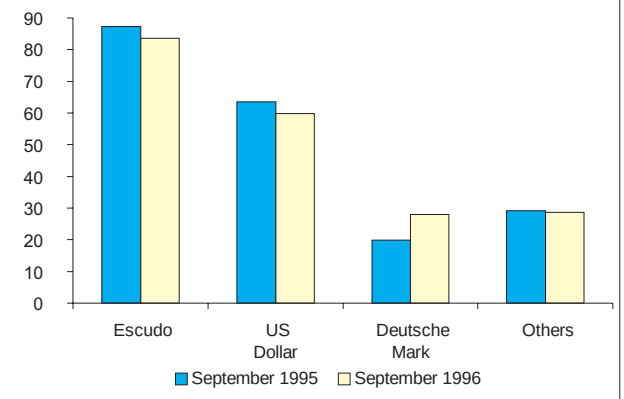
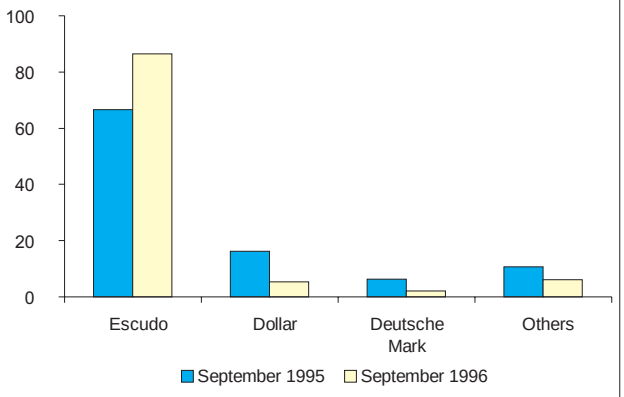


Chart 4
AMOUNTS OUTSTANDING OF INTEREST RATE DERIVATIVES
Breakdown by interest rate



share of over 80 per cent[7], followed by the US dollar (with about 60 per cent); however, it is worth noting the increase of foreign exchange derivatives denominated in Deutsche marks, from 20 per cent in September 1995 to around 28 per cent in September 1996.

Conversely, in the interest rate derivatives segment the escudo recorded a significant increase in its relative share (to around 90 per cent), as against its relative shares of the US dollar and of the Deutsche mark (which now account for only 5 and 2 per cent, respectively) (chart 4). This development resulted chiefly from the growth of amounts outstanding of escudo denominated interest rate swaps and FRAs.

Turnover

In 1996, the average daily turnover[8] in the spot and derivatives markets increased significantly, specially in the second half of the year. The turnover of derivatives increased at a substantially higher rate than that of the spot market (67 and 13 per cent, respectively, when measured in US dollars)[9], reflecting the development of the derivatives market. When measured in escudos, the growth of turnover is even more striking (73 per cent and 19 per cent, respectively), due to the depreciation of the escudo vis-à-vis the US dollar.

In the spot market total turnover amounted to USD 1690 million in October 1996 (around PTE 261 billion). The turnover growth was mostly due to the increase in transactions involving the escudo. Indeed, the relative share of the escudo in total spot operations increased, alongside with the reduction in the relative share of operations denominated in Deutsche marks. As result, both currencies held in October 1996 very similar relative shares (around 65 per cent [10]).

(7) In the foreign exchange market, total amounts outstanding by currency double total portfolio amounts, since each operation involves two currencies – one for sale, and another for purchase. For instance, the relative share of the escudo means that the Portuguese currency was involved in 80 per cent of all operations, either as a purchase currency or as a sale currency.

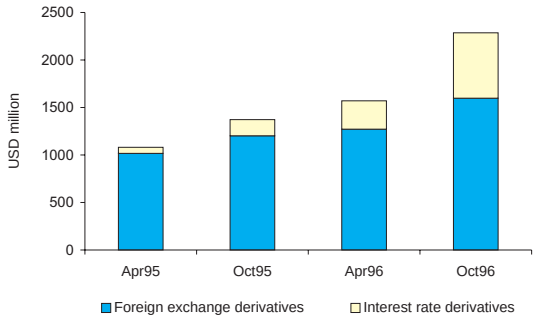
(8) Data on transactions are always referred in terms of average daily amounts, adjusted for double-counting due to transactions in the domestic interbank market. Likewise, the data on the exchange market were corrected by approximation, assuming that final customers are resident banks in most operations.

(9) Except when mentioned otherwise, figures refer to transactions carried out in October 1996, and changes are the respective year-on-year rates of growth.

(10) In the foreign exchange market, total transactions by currency double total turnover, since each operation involves two currencies – one for sale and one for purchase. For instance, the x per cent relative share of a currency indicates that the currency was involved in about x per cent of total transactions, whether as a purchase currency or as a sale currency.

Chart 5

TURNOVER IN THE DERIVATIVES MARKET



Total foreign exchange market turnover increased by 22 per cent in relation to October 1995, reaching USD 3,288 million in October 1996 (around PTE 508 billion). It is worth nothing that foreign exchange transactions between currencies belonging to the Exchange Rate Mechanism of the European Monetary System accounted for about 32 per cent of total foreign exchange market turnover in October 1996. This proportion amounts to 53 per cent in the spot operations, and only 7 per cent in the forwards[(11)].

In the derivatives market, turnover recorded a striking growth in the interest rate derivatives segment (chart 5). However, in October 1996, and conversely to what was recorded in terms of amounts outstanding, foreign exchange derivatives continued to lead in terms of turnover — USD 1,598 million. This figure represents a 33 per cent growth in relation to October 1995, and is around the double of total interest rate derivatives turnover.

Nevertheless, the average daily turnover of interest rate products almost multiplied fourfold in relation to October 1995, reaching USD 668 million. Single-currency interest rate instruments saw their share in total derivatives market turnover increase, from 12 per cent in October 1995 to 30 per cent in October 1996.

The increase in transactions of ***foreign exchange derivatives*** was mostly an outcome of the growth recorded in the most traditional segment — the forwards. Indeed, outright forwards and foreign exchange swaps continued to be the leading foreign exchange derivative instrument, accounting

(11) It should be mentioned that, as regards forwards, and since the US dollar is usually used as a vehicle currency, this figure does not reflect operations which, in the case a vehicle currency were not used, would be carried out directly between two currencies belonging to the ERM of the EMS.

Table 2

AVERAGE DAILY TURNOVER

US dollar million

	1995		1996		Y / Y %
	Apr	Oct	Apr	Oct	Oct 96
1. Spot	**1379**	**1496**	**1465**	**1690**	**13.0**
2. Foreign exchange derivatives	**1017**	**1202**	**1272**	**1598**	**32.9**
Outright forwards	126	108	184	319	195.4
Foreign exchange swaps	877	1073	1066	1240	15.6
Currency swaps	3	1	0	1	0.0
OTC options	11	20	22	38	90.0
1 + 2 **Total foreign exchange market**	**2396**	**2698**	**2737**	**3288**	**21.9**
3. Interest rate dervatives	**64**	**170**	**298**	**688**	**304.7**
FRAs	55	122	260	384	214.8
Swaps	6	31	31	64	106.5
Exchange-traded options	1	5	2	1	- 80.0
Futures	2	12	5	239	1891.7
2 + 3 Total derivative products	**1081**	**1372**	**1570**	**2286**	**66.6**

Chart 6
TURNOVER OF FOREIGN EXCHANGE DERIVATIVES
Breakdown by instrument

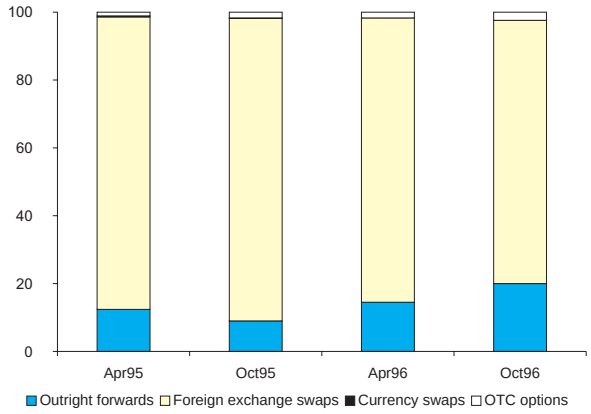


Chart 7
TURNOVER OF INTEREST RATE DERIVATIVES
Breakdown by instrument

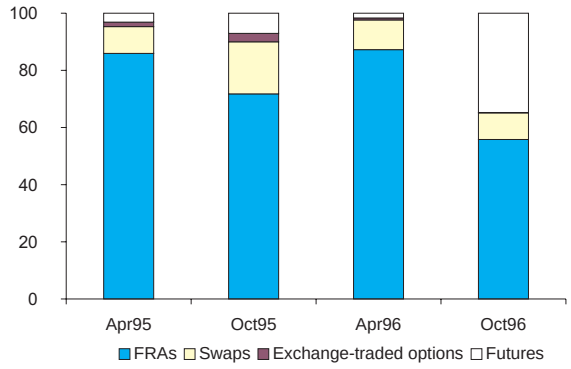
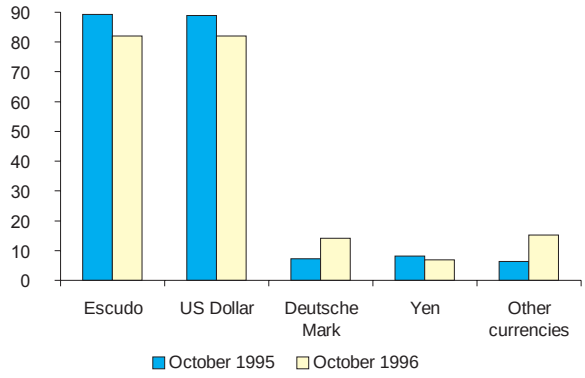


Chart 8
TRANSACTIONS OF FOREIGN EXCHANGE DERIVATIVES
Breakdown by currency



for 98 per cent of total turnover (chart 6). It should be stressed that the share of outright forwards increased (from 9 per cent in September 1995 to 20 per cent in September 1996), alongside with a reduction in the share of foreign exchange swaps (from 89 to 78 per cent). The remaining instruments traded in the over-the-counter market kept a residual share. As in 1995, no transactions of exchange-traded foreign exchange derivatives were reported in the 1996 surveys.

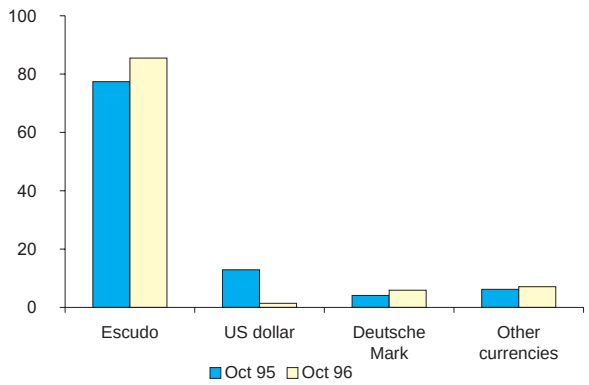
In the ***interest rate derivatives segment***, the increase in turnover was mostly due to the growth of FRAs and futures (chart 7). The sharp increase in FRAs resulted from the importance that banks and other financial institutions gave to this instrument, as a mean to carry out coverage and dealing operations. The FRAs also benefited from a growing level of liquidity, which in turn brought new participants into the market, and also from the fact that no market for escudo interest rate futures existed until June 1996. On the other hand, the beginning of this market's activity in Portugal came to activate significantly futures contracts transactions, which accounted then for 35 per cent of total turnover — FRAs remaining as the leading instrument (with 56 per cent).

Analysing the ***breakdown by counterparty***, non-residents continued to lead in the foreign exchange derivatives (79 per cent), while decreasing their relative share in the interest rate derivatives (37 per cent). Resident counterparties increased their share in the interest rate derivatives, due to the increase exhibited by FRAs transactions with banks, and specially with other financial institutions, as well as due to the development of futures contracts in the Portuguese derivatives exchange.

An analysis ***broken-down by currency*** indicates that the escudo and the US dollar relative shares in the foreign exchange derivatives market dropped from 89 per cent in October 1995 to 82 per cent in October 1996, in both cases (chart 8).

Alongside this reduction, the relative share of transactions against the Deutsche mark increased

Chart 9
TURNOVER OF INTEREST RATE DERIVATIVES
Breakdown by interest rate



(from 7 to 14 per cent), as well as those against a set of currencies not including the escudo, the US dollar, the Deutsche mark and the Yen (from 7 to 15 per cent). The relative share of the Yen remained around 7 per cent.

In the interest rate derivatives segment, the significant growth of the turnover in FRAs and in escudo-denominated futures resulted in an increase in the relative share of the escudo in this market — from 77 per cent in October 1995 to 82 per cent in October 1996 (chart 9).

Table 3

MARKET SHARES OF THE 3 AND 6 MAJOR FINANCIAL GROUPS

Turnover in the foreign exchange market

Percentage

	S3	S6
Spot		
April 1996	54.8	81.2
October 1996	54.3	85.1
Total foreign exchange market		
April 1996	51.3	78.1
October 1996	61.3	85.6

Table 4

MARKET SHARES OF THE 3, 5 AND 10 MAJOR BANKS

Turnover in the foreign exchange market

Percentage

	S3	S5	S10
Spot			
April 1996	44.8	58.5	76.6
October 1996	50.6	61.6	79.0
Total foreign exchange market			
April 1996	38.5	51.6	73.3
October 1996	50.4	61.7	80.2

2. SOME CHARACTERISTICS OF THE FOREIGN EXCHANGE AND DERIVATIVE MARKETS IN 1996

2.1 Concentration of transactions in the foreign exchange market

Analysing the data provided by the 43 financial institutions surveyed in 1996 yields that ***transactions in the foreign exchange market are highly concentrated.***

In October 1996, the 6 major financial groups[(12)] carried out 85 per cent of total transactions, reflecting a slight increase of the level of concentration in relation to April 1996 (table 3).

Considering banks on an individual basis, ***the joint shares of the three, five and ten major banks*** also reveal a high level of concentration — in October 1996, the 3 major banks carried out around 50 per cent of total transactions, as against 39 per cent in April 1996 (table 4).

(12) Six financial groups were considered, and these comprise:

i) Banco Comercial Português, Banco Português do Atlântico, Banco de Investimento Imobiliário, Banco CISF, Credibanco, Banco de Crédito Pessoal and Banco Comercial de Macau;
ii) Banco Pinto & Sotto Mayor, Banco Totta & Açores, Crédito Predial Português and Banco Chemical;
iii) Banco Mello Comercial, Banco Mello Investimentos and Banco Mello Imobiliário;
iv) Banco Espírito Santo, Banco Internacional de Crédito and Banco Essi;
v) Caixa Geral de Depósitos and Banco Nacional Ultramarino;
vi) Banco Português de Investimento, Banco Fonsecas & Burnay, Banco de Fomento e Exterior and Banco Borges & Irmão.

Table 5

MARKET SHARES OF THE 3 AND 6 MAJOR FINANCIAL GROUPS

Amounts outstanding

Percentage

	S3	S6
Foreign exchange derivatives		
April 1996	49.7	69.2
October 1996	61.8	75.1
Interest rate derivatives		
April 1996	48.9	62.8
October 1996	58.7	69.4

Table 6

MARKET SHARES OF THE 3 AND 6 MAJOR FINANCIAL GROUPS

Turnover

Percentage

	S3	S6
Foreign exchange derivatives		
April 1996	47.6	75.0
October 1996	68.9	86.1
Interest rate derivatives		
April 1996	59.2	80.8
October 1996	67.5	90.6

Table 7

MARKET SHARES OF THE 3, 5 AND 10 MAJOR BANKS

Amounts outstanding

Percentage

	S3	S5	S10
Foreign exchange derivatives			
April 1996	40.8	59.1	78.7
October 1996	49.7	66.1	84.7
Interest rate derivatives			
April 1996	54.5	74.4	98.2
October 1996	51.7	69.5	94.3

Table 8

MARKET SHARES OF THE 3, 5 AND 10 MAJOR BANKS

Turnover

Percentage

	S3	S5	S10
Foreign exchange derivatives			
April 1996	38.6	53.8	80.9
October 1996	58.3	71.3	87.3
Interest rate derivatives			
April 1996	53.9	70.6	98.9
October 1996	64.7	81.5	96.6

2.2 Some characteristics of the derivatives market

2.2.1 Market concentration

From the analysis of the data on operations carried out in the derivatives market, one also concludes that this market is highly concentrated; only a small number of institutions participates actively in all market segments.

An analysis of the ***market shares of the major financial groups*** indicates a high level of concentration; only three groups hold about 60 per cent of total amounts outstanding, and around 70 per cent of total turnover (table 5 and 6).

Results indicate an increase in the level of concentration in both foreign exchange derivatives and interest rate derivatives, between April and October 1996.

As regards ***the joint market shares of the three, five and ten major banks,*** the level of concentration is higher in the interest rate derivatives segment. This fact is possibly linked to the still recent development of this type of products in the Portuguese market, explaining that only a limited number of institutions is participating, by now, in this market segment (tables 7 and 8).

In fact, also in the non-traditional segments of the foreign exchange derivatives, only a few institutions carry out operations.

Foreign exchange derivatives are still very limited to traditional forwards. So, the higher dispersion of market shares in the forward market ends up determining a lower level of concentration in the foreign exchange derivatives market as a whole.

Chart 10
TURNOVER IN THE DERIVATIVES MARKET
October 1996

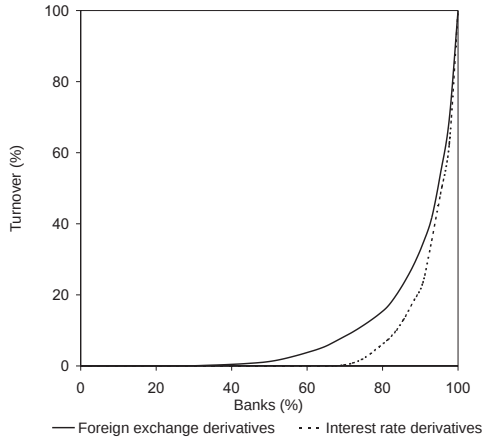
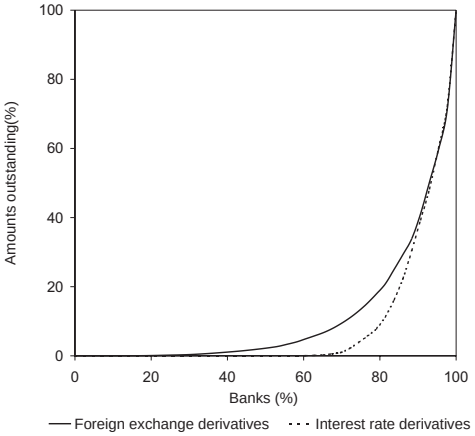


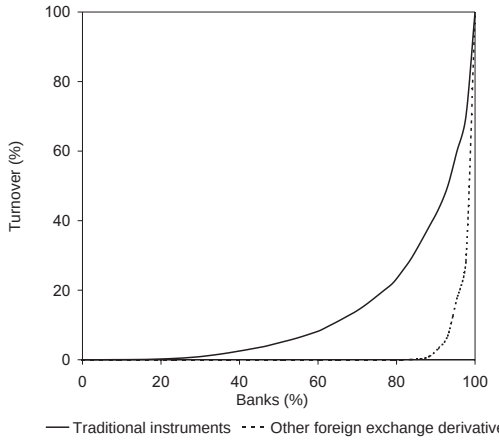
Chart 11
AMOUNTS OUTSTANDING IN THE DERIVATIVES MARKET
September 1996



An alternative representation of inequality in the distribution of market shares among banks is provided by the ***Lorenz Curve*** — which represents the share in total turnover (or in amounts outstanding) held by a given share of banks.

Also the *Lorenz* Curves for the two derivatives segments suggest a high level of concentration in the derivatives market. In parallel, the greater convexity of the *Lorenz* Curve in the interest rate derivatives segment suggests a greater inequality in the distribution of market shares in this market segment, which is consistent with the above presented results (chart 10 and 11).

Chart 12
TURNOVER OF FOREIGN EXCHANGE DERIVATIVES
October 1996



The comparison between the Lorenz curves for the foreign exchange forward transactions and for the remaining foreign exchange derivatives confirms the above stated phenomenon of a lower level of concentration in traditional instruments. Indeed, the curve for the other foreign exchange derivatives is much more convex (chart 12).

Analysis of the Lorenz curves for both instruments, broken-down by conterparty, shows that foreign exchange derivatives transactions with non-resident counterparties are relatively more concentrated in a small proportion of banks, than those carried out in the domestic market; in the interest rate derivatives segment, this distinction is not relevant as regards concentration.

2.2.2 Breakdown by maturities

When analysing the maturity breakdown[13] of turnover and amounts outstanding in the derivatives market, we tried to identify the maturities in which most operations are carried out. We concluded that operations are highly concentrated in maturities up to one year. However, in the foreign ***exchange derivatives market***, although amounts outstanding are chiefly concentrated in maturities

(13) In the analysis by maturity five classes were considered: P1 - up to 7 days; P2 - between 7 days and 1 month; P3 - between 1 month and 1 year; P4 - between 1 and 5 years; and P5 - over 5 years.

Chart 13
TURNOVER OF FOREIGN EXCHANGE DERIVATIVES RESIDENTS vs NON-RESIDENTS
October 1996

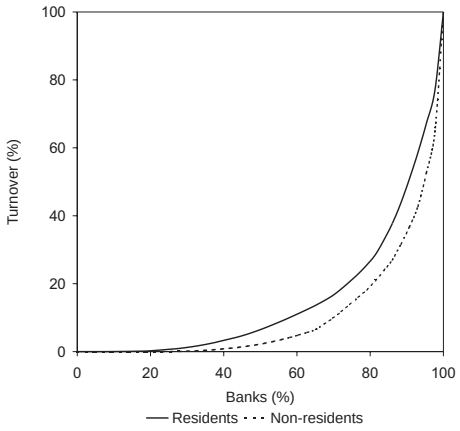


Chart 15
AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES RESIDENTS vs NON-RESIDENTS
September 1996

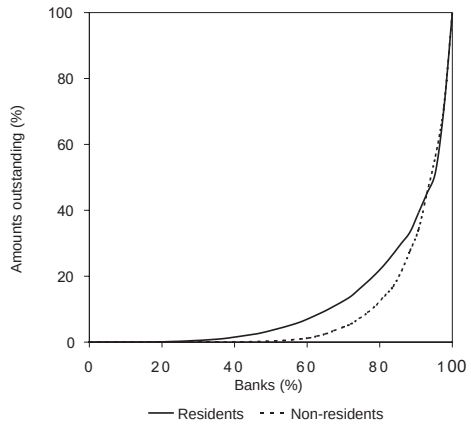


Chart 14
TURNOVER OF INTEREST RATE DERIVATIVES RESIDENTS vs NON-RESIDENTS
October 1996

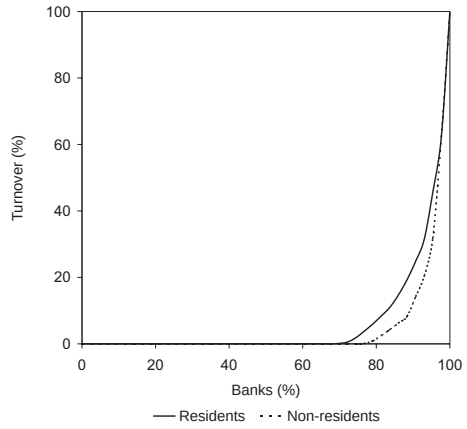
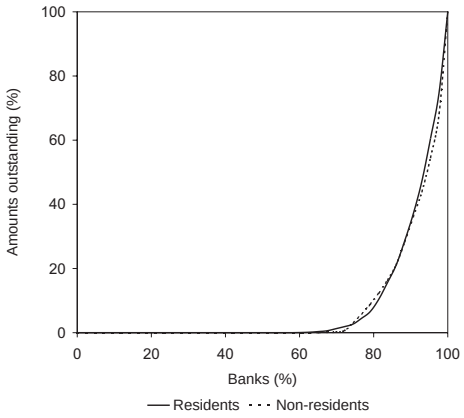


Chart 16
AMOUNTS OUTSTANDING OF INTEREST RATE DERIVATIVES RESIDENTS vs NON-RESIDENTS
September 1996



from 1 month to 1 year, most transactions are carried out in maturities up to 7 days (charts 17 and 19). On the other hand, in the ***interest rate derivatives*** segment both turnover and amounts outstanding are highly concentrated in maturities between 1 month and 1 year (charts 18 and 20).

We also tried to investigate the eventual existence of factors determining a maturity distribution distinct from that described above. Namely, an analysis of distribution by maturity was carried out for each instrument taken individually; we concluded that the main determinant of the maturity structure is the kind of underlying asset — either the exchange rate or the interest rate. A breakdown by counterparty and by currency was also developed; no significant changes in the distribution pattern were identified in these cases.

Breakdown by instrument

The distribution by maturity for each instrument is, in general, identical when taking into account amounts outstanding or turnover figures. ***Traditional foreign exchange derivatives*** exhibit a

Chart 17
FOREIGN EXCHANGE DERIVATIVES TURNOVER
October 1996

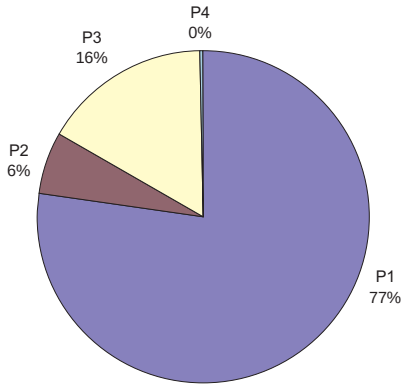


Chart 18
INTEREST RATE DERIVATIVES TURNOVER
October 1996

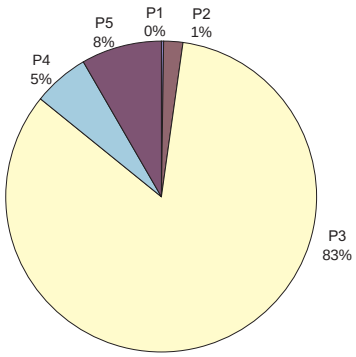


Chart 19
AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES
September 1996

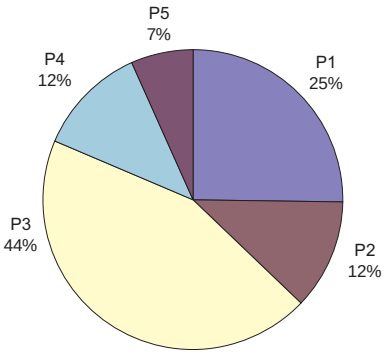
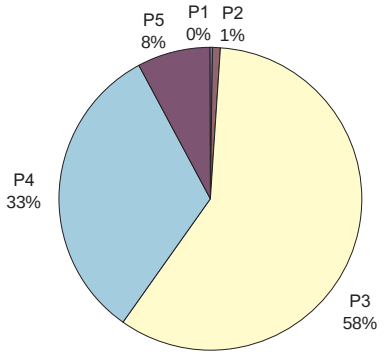


Chart 20
AMOUNTS OUTSTANDING OF INTEREST RATE DERIVATIVES
September 1996



very high level of concentration (over 95 per cent) in maturities up to 1 year[14], while currency swaps were mostly contracted in maturities over 1 year (84 per cent and 100 per cent, in terms of amounts outstanding and turnover, respectively).

As regards interest rate derivatives, ***FRAs*** and ***futures*** are mostly contracted in maturities between 1 month and 1 year, while most interest rate ***swaps*** are contracted in maturities over 1 year (about 75 per cent of total amounts outstanding, and 94 per cent of total turnover).

Breakdown by counterparty

The maturity structure is not significantly distinct according to whether the counterparty is resi-

(14) It should be stressed that, concerning turnover, foreign exchange swaps are very concentrated in the shortest maturity (about 80 per cent in maturities up to 7 days), while in outright forwards only 50 per cent of total transactions are carried out in this maturity.

dent or non-resident. However, it is worth noting some specific characteristics of operations contracted with non-financial resident clients and with branches of Portuguese banks abroad, since these two types of operations present a slightly different pattern.

Foreign exchange derivatives contracted with ***non-financial resident clients*** exhibit a low concentration in the shorter maturity (up to 7 days), as against a greater share of longer maturities. Simultaneously, interest rate derivatives contracted with these counterparties concentrate in maturities between 1 and 5 years (concentrating less in maturities between 1 month and 1 year).

The maturity distribution of operations with ***Portuguese banks' branches abroad*** is more skewed to shorter maturities, in both amounts outstanding and turnover.

Breakdown by currency

An analysis of the maturity distribution for each currency was also carried out, showing that this factor does not change significantly the maturity structure.

Nevertheless, some cases present a pattern which is distinct from the general one. ***Foreign exchange derivatives contracted in US dollars*** are more concentrated in the shorter maturity (up to 7 days); conversely, ***foreign exchange derivatives contracted in Deutsche marks*** are less concentrated in maturities up to 7 days, and are more frequently contracted in maturities between 1 month and 1 year. On the other hand, ***interest rate derivatives contracted in Deutsche marks*** are more concentrated in longer maturities (over 1 year).

2.2.3 Distribution of operations according to transactions' amounts

Lastly, the frequency distributions of foreign exchange and interest rate derivatives were analysed in order to characterise in further detail the transactions in the Portuguese derivatives market[(15)]. Indeed information on the average size of a transaction and its differences according to the type of operation, counterparty or currency are relevant to a better knowledge of the market. The methodology used consisted of comparing the real distribution of transactions with that of a normal distribution, as to measure the skewness of the frequency distribution. Some statistical indicators were used, namely descriptive measures (percentiles, mean, median and mode)[(16)]. Simultaneously, the distributions of transactions broken-down by the instrument, counterpart and currency were compared.

Chart 21
HISTOGRAM
Foreign exchange derivatives

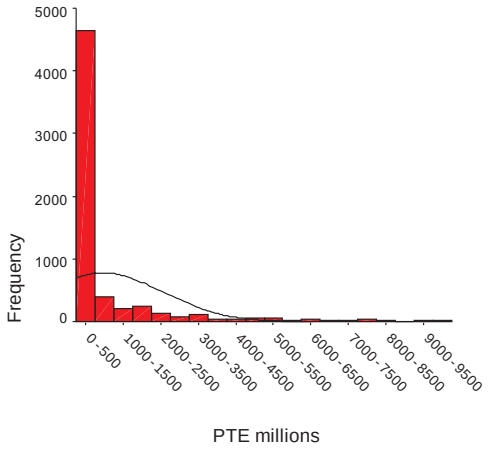
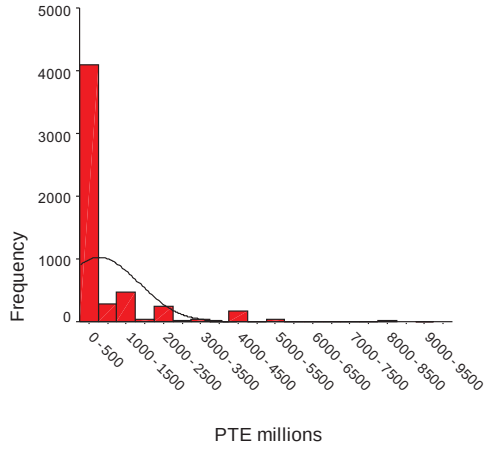


Chart 22
HISTOGRAM
Interest rate derivatives



(15) In the analysis of the frequency distribution of operations, data on total transactions reported by banks were used; the two sides of a transaction between two local banks are counted as two different operations.

(16) Recall that in a symmetrical distribution one has: mean = median = mode. In a positively skewed distribution one has: mean > median > mode. A negatively skewed distribution presents the opposite relationship.

In this analysis turnover values were analysed in escudos (and not in US dollars), since the characterisation of operations was considered to be more relevant in the Portuguese currency.

A first analysis indicates that ***the distribution of transactions of derivatives is significantly skewed***, exhibiting a high concentration of operations in smaller amounts. This pattern is common to both interest rate and foreign exchange derivatives.

In order to obtain more detailed information on the distribution of derivatives an analysis was drawn excluding operations over PTE 10 billion. The excluded transactions were considered outliers[17], which somehow diverge from the distribution, and bias the analysis. These operations are highly concentrated in ***values up to PTE 35 billion***, and more than 90 per cent of the transactions is due to foreign exchange derivatives. Most of these operations are carried out in escudos and in US dollars, and are mostly contracted with non-resident financial institutions. It is worth noting that 80 per cent of the total turnover of operations over PTE 10 billion refers to foreign exchange swaps, and 15 per cent is due to outright forwards.

Taking into account only transactions below PTE 10 billion, operations are still highly concentrated in small amounts, with 75 per cent of these having values below PTE 500 millions, in both foreign exchange derivatives and interest rate derivatives.

A comparison between some descriptive statistics of the transactions distributions for each market segment reveals no significant difference in the bias patterns (table 9).

In what concerns the intra-annual evolution in the derivatives market, both segments exhibit an increasing skewness of distributions for operations of smaller amount. The increase in skewness was more significant in interest rate derivatives transactions with the P50 and P75 values increasing from PTE 1,000 millions and PTE 2,000 millions in April to PTE 100 and PTE 490 millions in October, respectively. This behaviour was mostly due to the increase in the relative share of interest rate futures contracts conversely to FRAs, since the latter exhibit a less skewed distribution (as seen below).

Table 9

DISTRIBUTION OF TRANSACTIONS CARRIED OUT IN OCOTBER 1996

PTE millions

	Foreign exchange derivatives	Interest rate derivatives
Mean	725	529
Mode	16	10
P25	16	20
P50	77	100
P75	500	490
P90	2303	2000

Note: P25 stands for percentile 25; P50, P75 and P90 have identical meanings. Percentile X is the value up to which x per cent of observations are accumulated; hence P50 is the median.

Foreign exchange derivatives

Among foreign exchange derivatives, the foreign exchange swaps exhibit a less skewed distribution — though also skewed for smaller amounts as shown by the respective means and medians. The median and the mean of this distribution amount to PTE 769 million and PTE 1815 million respectively, which compare to PTE 77 million and PTE 725 million for the median and the mean of foreign exchange derivatives as a whole, and to PTE 31 million and PTE 250 million for the outright forwards. Consequently, although the number of transactions in outright forwards is clearly greater than that of swaps, the latter have a much greater relative share in total turnover than the former.

Interest rate derivatives

As regards interest rate derivatives, transactions involving futures are much more concentrated in lower amounts than operations involving FRAs and interest rate swaps. It should be noted

(17) Excluding transactions over PTE 10 billion means excluding 2.1 per cent of total transactions on foreign exchange derivatives and 0.3 per cent of total transactions on interest rate derivatives.

Chart 23
HISTOGRAM
Foreign exchange swaps

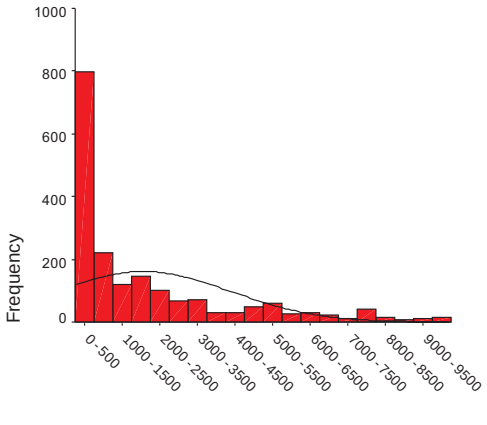


Chart 24
HISTOGRAM - FRAs
April 1996

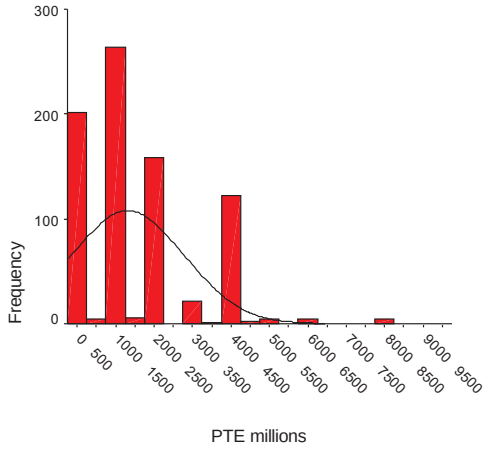


Chart 25
HISTOGRAM - FRAs
October 1996

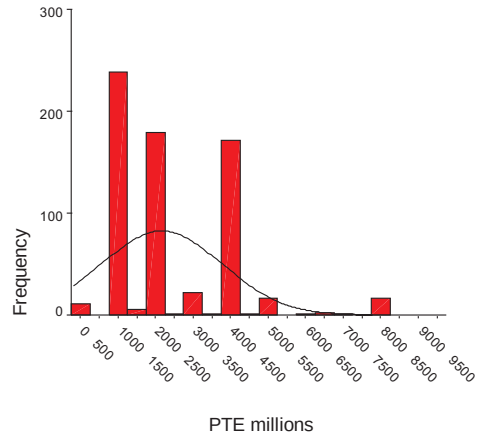
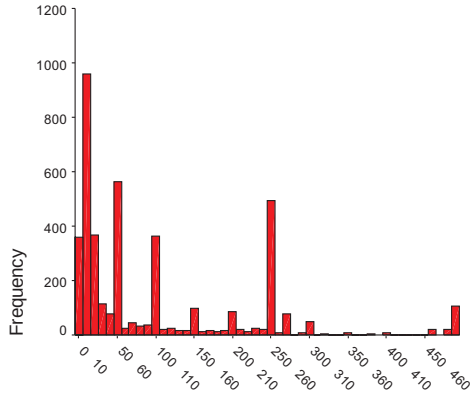


Chart 26
HISTOGRAM
Interest rate futures
(< PTE 500 millions)



that the greater number of transactions in futures (about 4600, which compares to only 670 of FRAs) determines the high skewness of the distribution of interest rate derivatives as a whole.

The existence of standard amounts traded in FRAs (PTE 1, 2 and 4 billion) is notorious, determining a frequency distribution closer to the normal distribution. Indeed, the mean and median values become closer in October 1996 (PTE 2.4 and 2 billion, respectively).

Comparing the frequency distribution of FRAs in April and in October 1996 (charts 24 and 25), it becomes clear that skewness is lower in October, due to a significant reduction in the number of transactions below PTE 500 million. This behaviour is linked to the opening of the Portuguese futures market in June 1996, with many operations involving small amounts being thereafter carried out using interest rate futures.

In fact, as regards interest rate futures, the existence of standard values is also clear (chart 26), although these are of smaller value (75 per cent of operations are smaller than PTE 250 millions).

Breakdown by counterparty

Some differences between the frequency distributions of derivatives which are due to the counterparty involved are worth being singled out.

In both foreign exchange and interest rate derivatives, operations with ***non-resident entities are***

Table 10

DISTRIBUTION OF TRANSACTIONS CARRIED OUT IN OCTOBER 1996

PTE millions

	Foreign exchange derivatives		Interest rate derivatives	
	Residents	Non residents	Residents	Non residents
Mean. . . .	452	924	421	1357
P50	34	205	51	1000
P75	194	1110	250	2000
P90	921	3070	1000	3215

Table 11

AVERAGE VALUE OF TRANSACTIONS CARRIED OUT IN OCTOBER 1996

PTE millions

	Escudo	US Dollar	Deutsche mark	Total
Foreign exchange derivatives	815	1184	504	725
Interest rate derivatives	492	625	1193	529

less concentrated in smaller amounts, and are on average of higher value than those contracted with residents (table 10).

Operations carried out in ***the resident interbank*** market are less skewed than total transactions with residents, although skewness is still significant. In this market transactions are on average of higher value: in the foreign exchange derivatives the average is PTE 1755 million, and in interest rate derivatives the average is PTE 2194 million.

When comparing these results to those of ***transactions carried out with non-resident banks***, it is possible to identifie a distinct pattern from that recorded for total operations: in foreign exchange derivatives transactions contracted between financial institutions are on average of smaller amount than those carried out with non-residents.

Breakdown by currency

Finally, we tried to investigate the existence of distinct distribution patterns from those identified for operations considered as a whole according to the currencies involved. The skewness of the frequency distributions is, in general, very high; some differences exist between the average values traded according to the currency involved in the transaction (table 11).

Operations carried out in escudos are highly concentrated in amounts below PTE 500 millions; about 70 per cent of foreign exchange derivatives and 80 per cent of interest rate derivatives are included within this interval. It should be noted that the skewness of the distribution of interest rate derivatives increased from April to October, since transactions smaller than PTE 500 million increased significantly (due to the substantial growth exhibited by interest rate futures contracts). For this same reason, the mean decreased from PTE 1552 million in April to PTE 492 million in October.

As regards ***operations denominated in US dollars***, values traded are on average higher than those of operations as a whole, specially in foreign exchange operations (PTE 1.2 billion, as against PTE 725 million). In what concerns ***transactions in Deutsche marks*** the average values are much greater than the overall mean in interest rate derivatives, while in foreign exchange derivatives the average value is smaller.

Appendix

Table A.1

AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES[a] – March 1996

US dollar million

	PTE against			USD against		DEM against	Other currency pairs	Total
	USD	DEM	Other	DEM	Other[b]	Other[c]		
Outright forwards	898	1168	4754	916	496	183	15	8429
With residents	363	197	2524	49	24	21	8	3186
Banks and other financial institutions	183	30	99	28	7	2	0	349
Non-financial customers	180	168	2425	21	17	19	8	2837
With non-residents	535	971	2230	867	472	162	7	5243
Banks and other financial institutions	531	954	2230	866	472	162	5	5217
Non-financial customers	5	17	0	1	0	0	2	25
Foreign exchange swaps	8625	252	507	1201	641	1	0	11227
With residents	2119	34	330	2	9	0	0	2494
Banks and other financial institutions	2078	18	132	2	9	0	0	2239
Non-financial customers	41	16	198	0	0	0	0	254
With non-residents	6507	218	178	1199	631	1	0	8733
Banks and other financial institutions	6507	218	178	1199	631	1	0	8733
Non-financial customers	0	0	0	0	0	0	0	0
Other derivative products	1577	1863	867	884	283	51	58	5584
With residents	581	859	613	311	22	26	58	2470
Banks and other financial institutions (includes the *Bolsa de Derivados do Porto*)	76	41	9	0	0	6	32	164
Non-financial customers	505	818	604	311	22	20	26	2306
With non-residents	996	1004	252	573	261	25	0	3112
Banks and other financial institutions (including foreign derivatives exchanges)	996	995	252	573	261	25	0	3103
Non-financial customers	0	9	0	0	0	0	0	9

Table A.2

AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES[a] – September 1996

US dollar million

	PTE against			USD against		DEM against	Other currency pairs	Total
	USD	DEM	Other	DEM	Other[b]	Other[c]		
Outright forwards	649	1883	2295	490	146	258	21	5742
With residents	313	261	2125	6	48	18	10	2780
Banks and other financial institutions	76	91	550	1	3	0	0	721
Non-financial customers	237	170	1575	5	45	18	10	2060
With non-residents	337	1622	170	484	98	240	11	2962
Banks and other financial institutions	335	659	170	484	98	240	8	1993
Non-financial customers	2	963	0	0	0	0	4	968
Foreign exchange swaps	9962	374	827	1390	863	285	0	13701
With residents	1488	37	516	8	5	0	0	2053
Banks and other financial institutions	1424	27	236	5	5	0	0	1697
Non-financial customers	64	10	280	3	0	0	0	357
With non-residents	8474	337	311	1382	858	285	0	11647
Banks and other financial institutions	8474	337	311	1382	858	285	0	11647
Non-financial customers	0	0	0	0	0	0	0	0
Other derivative products	1904	2200	2472	473	254	180	50	7532
With residents	968	553	1783	168	22	6	24	3525
Banks and other financial institutions (includes the *Bolsa de Derivados do Porto*)	187	89	386	0	0	0	0	663
Non-financial customers	780	464	1397	168	22	6	24	2862
With non-residents	936	1647	689	305	232	173	26	4007
Banks and other financial institutions (includes foreign derivative exchanges)	936	1647	689	305	232	173	26	4007
Non-financial customers	0	0	0	0	1	0	0	1

Notes:
(a) Adjusted for double-counting due to transactions in the domestic interbank market and due to future transactions where the two final customers (counterparties in the exchange-traded operation) are local banks.
(b) Excluding transactions against escudos.
(c) Excluding transactions against escudos and US dollars.

Table A.3

AMOUNTS OUTSTANDING OF INTEREST RATE DERIVATIVES[(a)] – March 1996

US dollar million

	USD	DEM	PTE	Other interest rates	Total
FRAs	1720	44	15839	106	17709
With residents	3	0	6868	0	6871
Banks and other financial institutions	3	0	6721	0	6724
Non-financial customers	0	0	147	0	147
With non-residents	1717	44	8970	106	10838
Banks and other financial institutions	1717	44	8970	106	10838
Non-financial customers	0	0	0	0	0
Swaps and other OTC derivatives	1539	213	8155	871	10779
With residents	80	118	2607	43	2848
Banks and other financial institutions	3	0	1625	0	1911
Non-financial customers	78	118	982	43	938
With non-residents	1459	95	5548	828	7930
Banks and other financial institutions	1459	95	5548	828	7930
Non-financial customers	0	0	0	0	0
Exchange-traded products	2	0	0	2	4

Table A.4

AMOUNTS OUTSTANDING OF FOREIGN EXCHANGE DERIVATIVES[(a)] – September 1996

US dollar million

	USD	DEM	PTE	Other interest rates	Total
FRAs	958	76	21689	1323	24046
With residents	0	0	12188	210	12398
Banks and other financial institutions	0	0	12126	210	12337
Non-financial customers	0	0	61	0	61
With non-residents	958	76	9501	1113	11648
Banks and other financial institutions	958	76	9501	1113	11648
Non-financial customers	0	0	0	0	0
Swaps and other OTC derivatives	1112	737	12057	853	14759
With residents	203	113	3667	108	4092
Banks and other financial institutions	128	0	2145	73	2346
Non-financial companies	76	113	1522	35	1746
With non-residents	908	624	8390	745	10667
Banks and other financial institutions	908	624	8338	706	10576
Non-financial customers	0	0	51	39	91
Exchange-traded products	11	29	354	215	609

Note:

(a) Adjusted for double-counting due to transactions in the domestic interbank market and due to futures transactions where the two final customers (counterparties in the exchange-traded operation) are local banks.

Table A.5

TURNOVER IN THE FOREIGN EXCHANGE MARKET[a]

Average daily turnover

April 1996

US dollar million

	PTE against			USD against		DEM against	Other currency pairs	Total
	USD	DEM	Other	DEM	Other [b]	Other [c]		
Spot	149	454	294	307	66	191	3	1465
With residents	94	166	246	57	15	20	1	598
Banks and other financial institutions	27	105	39	24	4	6	0	205
Non-financial customers	67	61	207	33	11	13	1	394
With non-residents	55	288	48	251	50	172	2	866
Banks and other financial institutions	50	268	37	250	50	171	1	829
Non-financial customers	5	20	10	0	1	1	0	38
Outright forwards	33	52	91	2	3	2	1	184
With residents	11	16	59	1	1	0	1	89
Banks and other financial institutions	2	0	2	0	0	0	0	4
Non-financial customers	9	16	57	1	1	0	1	85
With non-residents	22	36	32	1	2	2	0	95
Banks and other financial institutions	19	16	32	1	2	2	0	72
Non-financial customers	3	20	0	0	0	0	0	23
Foreign exchange swaps	879	8	26	89	63	1	1	1066
With residents	168	0	19	0	1	0	1	189
Banks and other financial institutions	168	0	0	0	1	0	0	169
Non-financial customers	0	0	18	0	0	0	1	20
With non-residents	710	8	7	89	62	1	0	877
Banks and other financial institutions	710	8	7	89	62	1	0	877
Non-financial customers	0	0	0	0	0	0	0	0
Other derivative products	2	13	4	2	0	2	0	22
With residents	1	4	0	1	0	0	0	6
Banks and other financial institutions (includes the *Bolsa de Derivados do Porto*)	1	3	0	1	0	0	0	5
Non-financial customers	0	0	1	0	0	0	0	1
With non-residents	1	9	4	1	0	2	0	17
Banks and other financial institutions (including foreign exchanges)	1	9	4	1	0	2	0	17
Non-financial customers	0	0	0	0	0	0	0	0

Notes:

(a) Adjusted for double-counting due to transactions in the domestic interbank market and due to future transactions where the two final customers (counterparties in the exchange-traded operation) are local banks.

(b) Excluding transactions against escudos.

(c) Excluding transactions against escudos and US dollars.

Table A.6

TURNOVER IN THE FOREIGN EXCHANGE MARKET[a]

Average daily turnover

October 1996

US dollar million

	PTE against			USD against		DEM against	Other currency pairs	Total
	USD	DEM	Other	DEM	Other[b]	Other[c]		
Spot	174	624	308	290	72	218	5	1690
With residents	107	234	266	30	14	18	2	670
Banks and other financial institutions	34	168	69	23	10	6	0	312
Non-financial customers	72	65	197	7	3	11	2	358
With non-residents	68	390	42	260	58	200	3	1020
Banks and other financial institutions	65	367	33	259	57	199	2	983
Non-financial customers	2	24	9	1	0	1	0	37
Outright forwards	33	55	138	58	25	6	4	319
With residents	13	10	91	0	1	0	3	118
Banks and other financial institutions	4	6	28	0	0	0	0	39
Non-financial customers	9	4	63	0	1	0	2	79
With non-residents	20	45	47	58	25	5	1	201
Banks and other financial institutions	20	22	42	58	25	5	1	172
Non-financial customers	0	23	6	0	0	0	0	29
Foreign exchange swaps	1017	22	23	46	124	6	1	1240
With residents	181	0	20	1	1	2	0	206
Banks and other financial institutions	180	0	0	1	1	0	0	183
Non-financial customers	0	0	20	0	0	2	0	23
With non-residents	837	22	2	44	123	4	1	1033
Banks and other financial institutions	837	19	2	44	123	4	1	1031
Non-financial customers	0	3	0	0	0	0	0	3
Other derivative products	1	15	4	4	0	14	0	39
With residents	1	2	3	1	0	0	0	8
Banks and other financial institutions (includes *Bolsa de Derivados do Porto*)	1	1	0	0	0	0	0	2
Non-financial customers	0	2	3	1	0	0	0	6
With non-residents	0	13	2	2	0	13	0	31
Banks and other financial institutions (including foreign derivatives exchanges)	0	13	2	2	0	13	0	31
Non-financial customers	0	0	0	0	0	0	0	0

Notes:

(a) Adjusted for double-counting due to transactions in the domestic interbank market and due to future transactions where the two final customers (counterparties in the exchange-traded operation) are local banks.

(b) Excluding transactions against escudos.

(c) Excluding transactions against escudos and US dollars.

Table A.7

TURNOVER IN THE SINGLE-CURRENCY INTEREST RATE DERIVATIVES MARKET[(a)]

Average daily turnover — April 1996

US dollar million

	USD	DEM	PTE	Other interest rates	Total
FRAs	9	0	247	4	260
With residents	0	0	167	0	167
Banks and other financial institutions	0	0	166	0	166
Non-financial customers	0	0	1	0	1
With non-residents	9	0	80	4	93
Banks and other financial institutions	9	0	80	4	93
Non-financial customers	0	0	0	0	0
Swaps and other OTC products	0	0	31	0	31
With residents	0	0	3	0	3
Banks and other financial institutions	0	0	3	0	3
Non-financial customers	0	0	0	0	0
With non-residents	0	0	28	0	28
Banks and other financial institutions	0	0	28	0	28
Non-financial customers	0	0	0	0	0
Exchange - traded products	3	1	0	3	7

Table A.8

TURNOVER IN THE SINGLE-CURRENCY INTEREST RATE DERIVATIVES MARKET[(a)]

Average daily turnover — October 1996

US dollar million

	USD	DEM	PTE	Other interest rates	Total
FRAs	4	2	377	0	384
With residents	0	0	259	0	259
Banks and other financial institutions	0	0	255	0	255
Non-financial customers	0	0	4	0	4
With non-residents	4	2	118	0	125
Banks and other financial institutions	4	2	118	0	125
Non-financial customers	0	0	0	0	0
Swaps and other OTC products	0	22	33	10	64
With residents	0	0	11	6	17
Banks and other financial institutions	0	0	4	0	4
Non-financial customers	0	0	7	6	13
With non-residents	0	22	22	4	48
Banks and other financial institutions	0	22	22	4	48
Non-financial customers	0	0	0	0	0
Exchange - traded products	8	26	156	50	240

Note:
(a) Adjusted for double-counting due to transactions in the domestic interbank market and due to future transactions where the two final customers (counterparties in the exchange-traded operation) are local banks.

ANALYSIS OF THE CYCLICAL BEHAVIOUR OF THE PORTUGUESE ECONOMY FROM 1953 TO 1993*

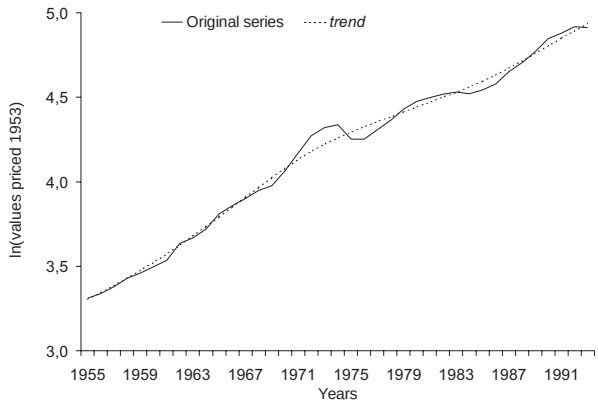
*Mónica Dias***

1. INTRODUCTION

The recently published "Historical Series for the Portuguese Economy" (Banco de Portugal, 1997) discloses new information on the annual behaviour of the major macroeconomic variables over the course of the four decades running between 1953 and 1993. This work provides the ground for studies on the performance of the Portuguese economy in the second half of our century. The new data set presents fairly disaggregated information on the following areas: Monetary and Financial statistics, Balance of Payments statistics, General Government statistics and Output, Expenditure and Income. Given the set's consistency, scope and detail, the major facts which characterised the economic behaviour in the period under review can now be identified with improved accuracy and reliability.

This study is a first approach to this new pack of information, and aims at providing an overview of the cyclic events taking place over the course of these four decades. Output tends to drift around a long-run trend (see chart 1); economic cycles are the deviations from that trend. Other economic variables follow the output cycle — either pro-cyclically or counter-cyclically, in some cases with a lag, in other cases, with no lag or even in advance. Although the periodicity and size of those changes are somewhat irregular, these movements are quite similar as regards the way variables behave throughout the cycle. This phenomenon is observable both at the country level as in across-country comparisons.

Chart 1
GROSS DOMESTIC PRODUCT AT MARKET PRICES
Original series and trend
Per capita values at 1977 prices (in logarithms)



This analysis emphasises the real cycles, and the main variables reflecting output, expenditure and employment were hence selected. Previous studies refer to similar periods of the Portuguese history, also collecting the stylised facts that characterise the economic cycles. However, these studies use distinct data sources (see Correia, Neves and Rebelo (1992, 1993)).

The remainder of this paper is structured as follows: section 2 presents a short description of the data. The third section discusses the major results. Here, the comparison between the two main sub-periods (i.e., the sub-sample running up to 1974 and the post-1974 period) is thoroughly analysed. Comparisons with results obtained by using other data sources are drawn in section 4. The last section concludes.

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

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2. THE DATA

This paper analyses the annual data collected in the Historical Series published by the Banco de Portugal. The main macroeconomic variables were taken into account — namely output, private and public consumption, investment, imports and exports, disposable income, wages and salaries, saving, employment and unemployment. All variables are in real terms at 1997 prices; the private consumption deflator was used to deflate variables with unknown price behaviours. All series are in *per capita* terms and in logarithms.

To analyse the cyclical behaviour of the series, these were broken-down into their main components: trend and cycle. A wide range of instruments that identify the trend and deliver the cycle residually is available. However, the choice between these is far from consensual. Our choice was conditioned by the need to allow for comparisons with previous results, so the Hodrick-Prescot filter was chosen [(1)].

3. ANALYSIS OF THE CYCLICAL BEHAVIOUR

Tables 1 to 3 display some descriptive statistics for the de-trended series of the referred variables. Two adjacent sub-periods were considered to account for an evident break recorded within the 1973 to 1976 period, due to the change in the political regime.

The first two columns in table 1 exhibit the standard deviations of the considered series, in both absolute terms and as a share of the standard deviation of Gross Domestic Product (GDP). As expected, the investment variables record high variability: the standard deviation of investment almost multiplies threefold that of GDP, while that of consumption of durables doubles the standard deviation of GDP. Nevertheless, the most volatile variable considered is saving of households and private administrations. Apparently, saving of firms and of the General Government are clearly less volatile, restoring the variability of investment.

Private consumption is as volatile as GDP. However, the standard deviation of private consumption is clearly greater than that of GDP in the period following the revolution. This result is somewhat unexpected, as the economic theory predicts that the consumption path is smoothed by saving, which would imply a standard deviation of private consumption lower than that of GDP. It should be noted that private consumption includes durable goods, which are expected to be strongly volatile (indeed, this expectation is confirmed). This component of private consumption, more volatile in period 1976-1993, strongly influences the variability of consumption as a whole, but does not account for the size of its changes in that sub-period. In fact, the estimates for this subsample indicate that GDP and the consumption of non-durable goods and services exhibit identical standard deviations.

A point of interest in this data set deals with the labour market. Both employment and real wages are quite stable up to the change of political regime occurred in 1974. On the other hand, both series become much more volatile in the 1976 to 1993 period — specially wages and salaries, exhibiting a standard deviation which doubles that of GDP. The strong sensitivity of wages indicates that the labour market adjusts rapidly on the prices side.

Unemployment is strongly variable and counter-cyclical with lasting effects (note the correlation coefficients between unemployment and the present and lagged GDP). Unemployment recorded its highest volatility in the period 1955-1973, but its persistence rose strikingly in the most recent sub-period.

Also in public consumption the two subperiods contrast strongly. This series is more volatile in the first sub-period, where it also exhibits less persistent values and an indefinite cyclical pattern. The shocks in public consumption seem to have been more significant then than in more recent years.

The values exhibited in the tables also indicate that all variables excepting saving are highly persistent (first-order autocorrelation coefficients above 0.5). In addition, all variables (except for unemployment) are clearly pro-cyclical, with

(1) The smoothing parameter λ was equalled to 100. This figure is typically used in the analysis of annual data, and ensures the comparability with the above mentioned studies.

Table 1

DESCRIPTIVE STATISTICS OF THE MAJOR MACROECONOMIC VARIABLES
(TREND EXTRACTED WITH A HP FILTER - λ =100)

Per capita values at 1977, prices in (logarithms)

Period: 1955 to 1993

	Standard deviation (Sd)	sd(x) / sd(GDP market prices)	Coefficient of autocorrelation		Coefficient of correlation between x(t) and GDP market prices (t+i)				
			-1	-2	i = -2	i = -1	i = 0	i = 1	i = 2
GDP market prices	0.039	1.00	0.65	0.09	0.09	0.65	1.00	0.65	0.09
Private consumption	0.039	1.00	0.58	0.09	0.24	0.73	0.90	0.48	-0.01
of which:									
Private consumption of non-durable goods and services	0.036	0.92	0.55	0.03	0.21	0.70	0.89	0.48	-0.03
Private consumption of durable goods	0.091	2.33	0.59	0.17	0.29	0.64	0.72	0.38	0.08
Public consumption	0.038	0.97	0.42	-0.08	0.17	0.36	0.46	0.25	-0.06
Investment	0.106	2.72	0.58	0.00	0.07	0.39	0.78	0.67	0.26
Imports	0.094	2.41	0.51	0.03	0.04	0.45	0.75	0.60	0.21
Exports	0.084	2.15	0.62	0.15	-0.02	0.38	0.68	0.50	0.14
Disposable income	0.052	1.33	0.68	0.10	-0.14	0.49	0.93	0.76	0.32
Wages and salaries	0.055	1.41	0.74	0.36	0.48	0.64	0.55	0.30	0.04
Saving of families and private administration	0.168	4.31	0.23	0.03	0.24	0.40	0.36	0.29	0.07
Employment	0.015	0.38	0.63	0.09	0.08	0.58	0.78	0.53	0.09
Unemployment (broad sense)	0.205	5.26	0.60	0.07	-0.32	-0.71	-0.74	-0.36	0.13

Table 2

DESCRIPTIVE STATISTICS OF THE MAJOR MACROECONOMIC VARIABLES
(TREND EXTRACTED WITH HP FILTER - λ =100)

Per capita values at 1977 prices (in logarithms)

Period: 1955 to 1973

	Standard deviation (sd)	sd(x) / sd(GDP market prices)	Coefficient of autocorrelation		Coefficient of correlation between x(t) and GDP market prices t+i)				
			-1	-2	i = -2	i = -1	i = 0	i = 1	i = 2
GDP market prices	0.04	1.00	0.73	0.15	0.15	0.73	1.00	0.73	0.15
Private consumption	0.03	0.75	0.45	0.12	0.12	0.65	0.88	0.61	0.17
Of which:									
Private consumption of non-durable goods and services	0.03	0.75	0.38	0.02	0.13	0.61	0.83	0.51	0.07
Private consumption of durable goods	0.08	2.00	0.64	0.22	0.06	0.46	0.57	0.46	0.24
Public consumption	0.04	1.00	0.37	-0.21	-0.08	0.00	0.20	0.25	-0.01
Investment	0.09	2.25	0.67	0.14	0.12	0.60	0.79	0.71	0.20
Imports	0.08	2.00	0.41	0.09	0.22	0.45	0.57	0.61	0.34
Exports	0.08	2.00	0.68	0.59	0.32	0.58	0.77	0.59	0.45
Disposable income	0.05	1.25	0.81	0.39	0.07	0.68	0.97	0.82	0.45
Wages and salaries	0.03	0.75	0.67	0.22	-0.06	0.57	0.72	0.76	0.44
Saving of families and private administration	0.21	5.25	0.27	0.06	0.00	0.48	0.48	0.45	0.24
Employment	0.01	0.25	0.77	0.29	0.38	0.63	0.62	0.36	0.09
Unemployment (broad sense)	0.23	5.75	0.55	-0.13	-0.37	-0.80	-0.75	-0.37	0.05

Table 3

DESCRIPTIVE STATISTICS OF THE MAJOR MACROECONOMIC VARIABLES (TREND EXTRACTED WITH HP FILTER - λ=100)

Per capita values at 1977 prices (in logarithms)

Period: 1976 to 1993

	Standard deviation (sd)	sd(x) / sd(GDP market prices)	Coefficient of autocorrelation		Coefficient of correlation between x (t) and GDP market prices (t+i)				
			-1	-2	i = -2	i = -1	i = 0	i = 1	i = 2
GDP market prices	0.035	1.00	0.73	0.23	0.23	0.73	1.00	0.73	0.23
Private consumption	0.041	1.17	0.72	0.19	0.24	0.77	0.95	0.69	0.20
Private consumption of non-durable goods and services	0.036	1.03	0.74	0.17	0.22	0.76	0.96	0.72	0.19
Private consumption of durable goods	0.097	2.77	0.56	0.09	0.27	0.72	0.80	0.52	0.23
Public consumption	0.03	0.86	0.56	0.15	0.30	0.63	0.81	0.59	0.08
Investment	0.118	3.37	0.61	0.08	0.05	0.39	0.76	0.69	0.45
Imports	0.098	2.80	0.65	0.14	0.05	0.48	0.82	0.73	0.43
Exports	0.084	2.40	0.65	0.05	0.00	0.29	0.51	0.30	0.03
Disposable income	0.055	1.57	0.69	0.13	-0.18	0.43	0.91	0.85	0.52
Wages and salaries	0.064	1.83	0.70	0.24	0.32	0.60	0.59	0.46	0.18
Saving of families and private administration	0.118	3.37	0.10	0.04	0.56	0.52	0.29	-0.08	-0.52
Employment	0.019	0.54	0.64	0.14	0.22	0.70	0.92	0.71	0.18
Unemployment (broad sense)	0.139	3.97	0.72	0.52	-0.60	-0.74	-0.69	-0.25	0.11

stronger effects in present correlations than in the lagged ones, in general.

Charts 2 to 9 illustrate the behaviour of the considered variables. The contrast between the period prior to the revolution and the period which follows is striking. Up to the 1970's no cycles are detected, but an apparently erratic pattern. This phenomenon is possibly related to the high share of agriculture output in total GDP — although decreasing through time, this share contributes to a less systematic behaviour of the considered variables. On its turn, the 1970's mark the beginning of markedly cyclical fluctuations; since then, sizeable cycles are recorded, and the major events influencing the recent economic history become clearly noticeable — namely the 1974 revolution, the IMF stabilisation programmes (1977-1979 and 1983-1985) and the exacerbated economic growth following the adhesion to the EEC.

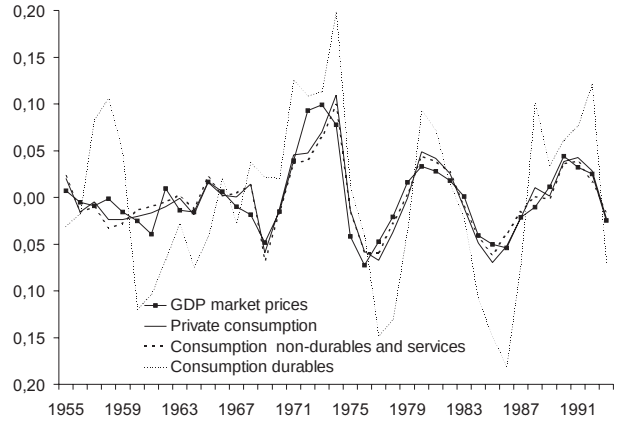
4. COMPARISON WITH PREVIOUS STUDIES

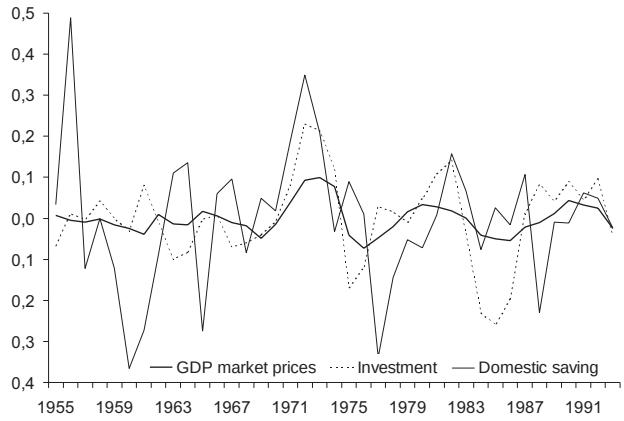
The results here presented are much in line with those of previous studies[(2)]. Conclusions are in general the same, which indicates that the series used as basis information are very consistent. In particular, the strong persistence exhibited by most variables and their markedly cyclical behaviours are common with previous researches.

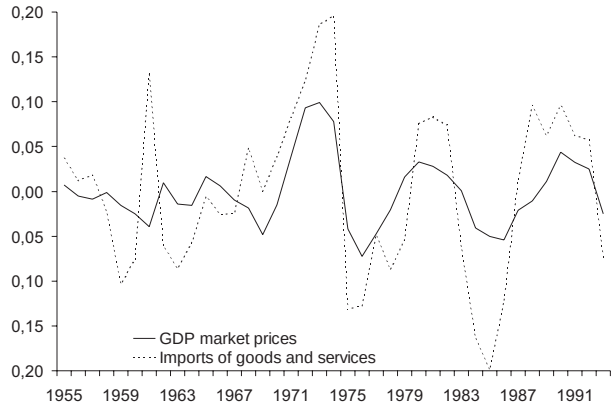
However, some issues should be analysed in detail. First, the relative volatility of total consumption is significantly higher in the new data source (an estimated 1.01, as against 0.84 in Correia, Neves and Rebelo (1993)). As mentioned above, the new estimate for the variability of consumption would not be surprising if it weren't for the size of the standard deviation estimated for the non-durable component in the period 1976-1993. The distinct methodologies used in building these series (which no longer are calculated residually) may have contributed to this.

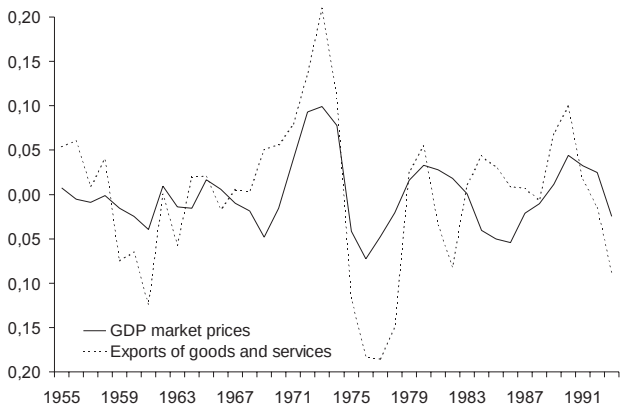
(2) We compare the recently disclosed study with two studies by Correia, Neves and Rebelo (1992, 1993). These studies use different data sources. The first (1992) uses a data collection comprising the historical series built by Nunes, Mata and Valério, data drawn from the National Accounts built by Cartaxo and Rosa, some series prepared by the Banco de Portugal, among others. The Second study (1993) is based mainly on the data set of Santos, Dias and Cunha, which then is updated with data prepared by the Banco de Portugal.

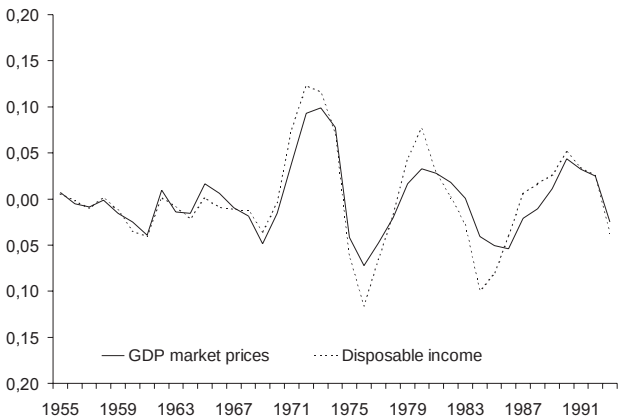
CYCLICAL BEHAVIOUR

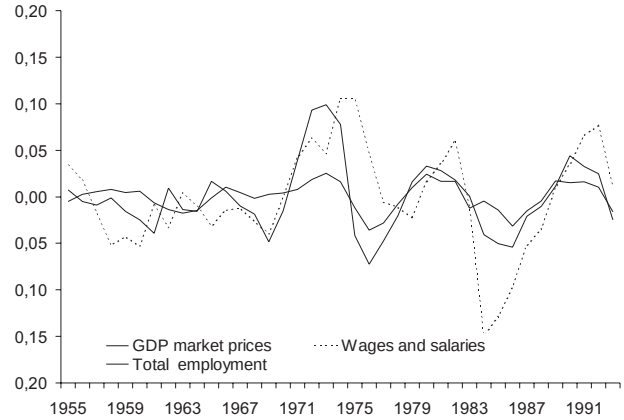


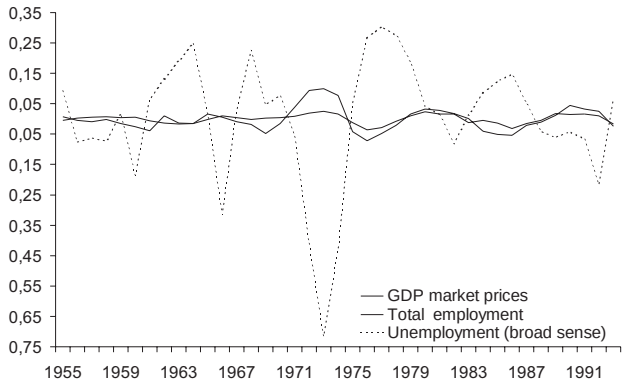


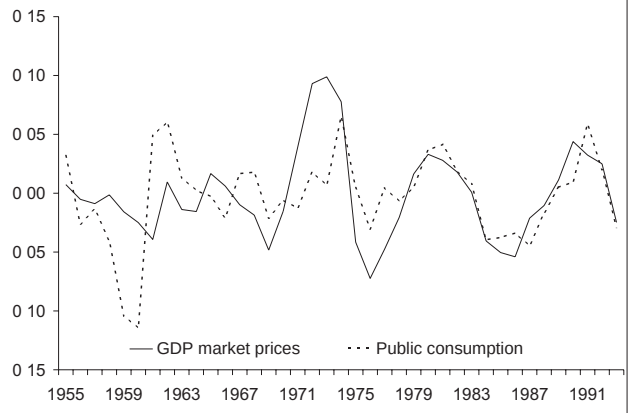












Secondly, the late 1950's and early 1960's are marked by a sharp fall in public consumption, which is evident in all studies but appears to be much more striking in the newly disclosed data. This accounts for the greater variability of public consumption before the 1974 revolution.

Lastly, the previous researches suggest less marked breaks in the cyclical behaviour in the first half of the 1960's (see Correia, Neves and Rebelo (1992, 1993)). In particular, the colonial war period is characterised by a recession which is more lasting and less pronounced than in following recessions, but has common features. On the other hand, the new data set exhibits a variability which suggests an erratic path drawn by output in years prior to the 1970's.

5. CONCLUSIONS

This paper aims at describing the major features of the cyclical behaviour of the Portuguese real macroeconomic variables in the second half of our century. We used the "Historical Series for the Portuguese Economy", recently released by the Banco de Portugal, to attain this objective.

The most evident feature deals with a clear structural break recorded in the early 1970's, corresponding to the change in the political regime. The behaviour of the considered variables is not very systematic in the period prior to the revolution. Afterwards, cycles appear to be well defined, and the effects of historical facts become clear-cut.

The major stylised facts of the Portuguese economy in the period 1955-1993 are the following:

investment- and saving-related variables are much more volatile than output. The variability of investment multiplies two to threefold that of output, while the volatility of saving more than multiplies fourfold that of output.

private consumption and output record similar volatility.

employment exhibits a very low relative variability, as against wages and salaries — which are more volatile than output. In addition, the series related to the labour market exhibit very low variability in the 1950's and 1960's — exception made for unemployment.

most variables are pro-cyclical, specially in contemporary terms. Unemployment is the only counter-cyclical variable.

finally, except for households and private administrations' saving, all variables record high autocorrelation, suggesting that shocks tend to be persistent.

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EXCHANGE RATE PASS-THROUGH: THE CASE OF THE PORTUGUESE IMPORTS AND EXPORTS*

*Cláudia Costa***

1. INTRODUCTION

The purpose of this study is to analyse how the changes of the Portuguese exchange rate have affected the prices of the Portuguese imports and exports.

The traditional theories of exchange rate determination have not yet been able to deliver a satisfactory explanation for recorded deviations from the "law of one price". Recently, however, theories have been developed using concepts and instruments from microeconomics and in industrial economics. This study follows this approach, modifying the "Purchasing Power Parity" theory by encompassing the possibility of different market structures.

According to the model developed in Hooper and Mann (1989), the analysis assumes that oligopolist firms maximise their profits in a partial equilibrium environment. Here, firms face constant marginal costs. The model concludes that the pass-through coefficients (i.e., those coefficients measuring the impact of exchange rate changes on exports and import prices) depend upon the mark up capacity of firms — i.e., to fix their own market prices, hence determining their profit margins. Two factors generally determine these margins. The first deals with the difference between prices in the destination markets and production costs. The second relates to demand pressures on production, measured by capacity utilization.

This study starts by defining the theoretical framework and by specifying the model (section 2.1). The second part presents the empirical analysis, assessing how the changes in the Portuguese escudo were passed-through into the Portuguese export and import prices measured in domestic currency, over the period 1985-1992 (section 3.2). This study focuses on the prices of exported manufactured goods and the prices of imported manufactured goods, on a quartely basis. The analysis shows that in the long-run, Portuguese exporters become price-takers in foreign markets, holding little power to fix prices. Conversely, foreign producers that maintain trade bonds with Portugal fix prices in their currency, reflecting changes in the exchange rates on prices practised in the Portuguese market. Section 4 draws the main findings and concludes.

2. THEORETICAL ANALYSIS

2.1 The model

Any theory of real exchange rate determination should be able to interpret two phenomena observed in international relative prices. First, in aggregate terms changes in the real exchange rate tend to persist in time; second, agents tend to resist to price changes when denominated in national currency. As a result, deviations from the "law of one price" occur(1). Some studies suggest that the pricing to market phenomenon explains the systematic violation of this "law"(2). The pass-through analysis provi-

* The opinions of this paper represent the views of the author, and are not necessarily those of the Banco de Portugal.
The author would like to thank Paul De Grauwe and Carlos Robalo Marques for useful suggestions. All remaining errors are of the author's responsibility.

** Foreign Department.

(1) See De Grauwe (1996). For an analysis of the Portuguese case see Marques *et al.* (1996).

(2) Pricing to market takes place when an exporter fixes prices in the destination market conditioned to his expectations regarding the bilateral exchange rate. Hence the price fixed is distinct from the one set in the domestic market. Krugman (1987) and Knetter (1989) make an interesting analysis of the phenomenon.

des an alternative explanation. The present study opts for the latter.

We assume imperfect competition, where firms maximise profit and face a negatively sloped demand curve. As a result firms make non-zero profits[3]. This framework is broad enough to comprise different theoretical models. However, it should be noted that our model is a partial equilibrium one, since both cost and productive capacity utilisation are exogenous in the determination of the exchange rate.

The pass-through of the exchange rate to export prices consists of the impact of changes in the exchange rate on the escudo-denominated prices of exports. Symmetrically, the pass-through of the exchange rate to import prices is the impact of exchange rate changes on the escudo-denominated import prices.

This section specifies the theoretical model that determines the exchange rate pass-through coefficient as regards export prices. An identical — but symmetric — procedure is developed in obtaining the pass-through coefficient for import prices.

With respect to the Portuguese exports, total pass-through occurs when exporters adjust their prices in escudos in the same proportion as the exchange rate change. As a result exchange rate changes are not reflected in export prices in the destination markets. Conversely, if escudo-denominated export prices remain unchanged in the presence of exchange rate fluctuations, the pass-through is null. In this case, Portuguese exporters are able to influence prices in the destination markets. The interpretation of the exchange rate pass-through to import prices is the opposite.

We assume that the firm sets its export prices (PX) as a mark-up (π) over marginal production costs (C). Analytically, we have:

$$PX = \pi.C \qquad (1)$$

The mark-up of Portuguese exporters is given by ($\pi = 1 + \lambda$), where (λ) stands for the profit margin. The latter is variable, and depends first on pressures of overall demand directed towards the good; and second, on competitive pressures in the destination market. Demand pressures are quantified by the level of productive capacity utilisation (UC); competition is measured by the ratio of the escudo-denominated prices of products competing with Portuguese exports (P^*) to the Portuguese production cost (C).

The exporters' profit is given by:

$$\pi = [ER.P^* / C]^{\varepsilon} (UC)^{\varphi} \qquad (2)$$

where ER is the exchange rate of the escudo.

Substituting equation (1) in (2), and re-writing in logarithms yields:

$$px = \varepsilon er + \varepsilon p^* + (1-\varepsilon)c + \varphi uc, \qquad (3)$$

where (ε) is the pass-through coefficient ($0 \leq \varepsilon \leq 1$).

If the Portuguese exporter is a price-taker, then $\varepsilon = 1$, and exchange rate movements are totally reflected in the escudo-denominated prices of exported goods. As a result, the prices of Portuguese exports denominated in escudos remain unchanged. If the productive capacity utilisation remains constant, the changes in international prices will determine the changes in px, and the changes in production costs will be totally absorbed by profit margins. As a result the price of Portuguese exports in the destination markets will not be affected.

On the other hand, if Portuguese exporters hold a substantial market power — thereby fixing prices in the destination markets — the changes in the exchange rate will have no impact on escudo-denominated prices ($\varepsilon = 0$). In this case, changes in

(3) The model of profit maximisation in imperfect competition is based on a study by Hooper P. and Mann C. (1989). These authors assume that the profit margin is the variable responding to both the competition conditions in the domestic market, and the pressures of overall demand. As a results, neither the supply curve nor the demand curve are infinitely elastic. Fisher (1989) uses the Bertrand assumption for oligopolistic competition as the simplest way to include the competitors' price in the profit maximisation process. Dornbusch (1985) presents a complete survey of the literature, exploring the interaction between exchange rate and prices in an subsquent oligopolistic context. Some other studies have contributed using alternative methods of incorporating competitive pressure in the international market in the optimal price determination. For instance, Froot and Klemperer (1989) analyse price strategies that ensure the maintenance of the market share. Krugman (1989) presents an intuitive explanation for the assumption of imperfect competition in international trade and its impact on exchange rate movements.

production costs will be fully reflected in the prices of exports (holding the assumption that UC is constant).

Up to this point, the model specification is static — which means that agents' behaviour to achieve the chosen long-run position is not yet taken into account. However, one may want to analyse the adjustment path of Portuguese export prices to exchange rate changes. Such an analysis could indicate what kind of expectations agents hold as regards the persistence in time of the observed exchange rate movements.

The distinction between short-run and long-run pass-through allows for an empirical verification of the hypothesis that different exchange rate systems result (or not) in distinct pass-through patterns(4). The theory predicts that a change in the value of a currency in a credible fixed-rate system will yield expectations of a permanent change in the exchange rate. Consequently, the pass-through is expected to be high in the short-run, slowly stabilising around its equilibrium value afterwards. A similar pattern can be expected in a crawling-peg system, or in the presence of a change in the central rate of a monetary system like the EMS. Conversely, in a flexible exchange rate system, agents will have a tendency to be cautions in adjusting prices. This is so because they do not know whether a given change in the exchange rate is temporary or permanent. They will only adjust prices in the destination market when they observe that the change is permanent, as to maintain an optimal mark-up.

Therefore, we shall consider the following dynamic model (4):

$$px_t = \sum_{i=0}^{k} \mu_i p_{t-i}^{*} + \sum_{i=0}^{k} \zeta_i er_{t-i} + \sum_{i=0}^{k} (1-\phi)_i c_{t-i} + \sum_{i=0}^{k} \varphi_i cu_{t-i} \qquad (4)$$

The short-run pass-through coefficient measures the instanteneous impact of changes in the exchange rate *er* on *px*, and equals (ς_0). Accordingly, $\left(\sum_{i=1}^{k} \varsigma_i\right)$ stands for the long-run pass-through.

(4) See comment in De Grauwe *et al*. (1990). Altern atively see Krugman (1987) or Fisher (1989).

Similarly, the imports pass-through is given by equation (5):

$$pm_t \sum_{i=0}^{k} 0_i er_{t-i} + \sum_{i=0}^{k} \delta_t c_{t-i}^{*} + \sum_{i=0}^{k} \gamma_i p_{t-i}^{ESC} + \sum_{i=0}^{k} \beta_i uc_{t-i}^{*} \qquad (5)$$

where *pm* is the price of Portuguese imports, *er* is the escudo exchange rate, *c** stands for the production costs of the foreign producers exporting to Portugal, p^{ESC} is the average price of those goods competing with Portuguese imports and *uc** the productive capacity utilisation of foreign producers exporting to Portugal. All variables are in logarithms.

2.2 Limitations of the analysis

The model has several limitations. First, it excludes changes in import and export taxes and other obstacles to free international trade (e.g., transport and distribution costs) and insurance. This simplification may distort the analysis, as the set of relevant prices is reduced. It also disregards discontinuities.

Second, the model is a partial equilibrium one. It excludes changes in production costs and in the productive capacity utilisation that result from movements of imports or export prices. This limitation may be particularly relevant as regards the exports of a small open economy, as is the case of Portugal. In fact, the fluctuations of the escudo tend to affect Portuguese agents' production costs in a systematic manner, and hence are reflected in the costs of intermediate goods, and consequently in final prices.

3. ESTIMATION

3.1 The data

This study used quarterly data for the period running from the first quarter of 1985 up to the last quarter of 1992. Data referring to the period after 1992 were not used in the econometric analysis, because of the unsatisfactory quality of the available statistics of intra-community trade in 1993. The indirect tax harmonisation put into force by the EU in 1993 (namely the change in the pro-

cess of accounting and collection of the VAT on the intra-community trade) makes the analysis of the international price indices for that year difficult.

In addition, the estimation used aggregate price indices for manufactured exports and imports[5], which do not individualise the behaviour of price indices in each sector of manufacturing industry. Although some studies stress the need to disaggregate these indices[6]— so as to attain a higher statistical quality and to possibly detect distinct sectoral pass-through coefficients — the specificity of the data required for the analysis impedes that kind of research.

Unit labour costs in the manufacturing industry provide a measure for Portuguese production costs. The production cost index for the foreign agents exporting to Portugal was constructed using the unit labour costs of our leading trade partners[7] and weighting these by the share of each trade partner in total trade with Portugal. A similar procedure was adopted for all external variables in the model. In order to make export and import prices compatible with production costs, energy prices and agriculture foodstuff prices were excluded from the overall price indices.

The price index of products competing with Portuguese exports is a geometric mean of the consumer price indices of our leading trade partners[8]. The Portuguese consumer price index[9] was used to measure the behaviour of prices of those Portuguese goods competing with imports. The exchange rate is the nominal effective exchange rate[10].

Finally, the productive capacity utilisation was measured by the difference between the growth of real GDP and the growth of real trend GDP[11].

(5) Source: Direcção-Geral de Comércio Externo.

(6) See Melick (1994).

(7) For Portugal data was made available by the INE and by the Ministério do Emprego e Segurança Social. For the external costs data was drawn from the IMF.

(8) Series built over data draw from the AMECO database of the European Commission.

(9) Source: European Commission, AMECO database.

(10) Source: Banco de Portugal.

(11) Source: European Commission, AMECO database.

3.2 The Error-Correction Mechanism

In order to estimate the model, the unit root test was used (see Appendix 1). This shows that all variables are I (1). As a result, the use of ordinary least squares may lead to spurious results. Two alternatives exist to this method. Either the model can be estimated directly in first differences, or we can estimate a static relation between variables (i.e., the cointegration regression). We chose to estimate the model by using the dynamic formulation provided by the Error Correction Model (ECM)[12].

In specifying the ECM we used the Bårsen formulation. Not only does this formulation enable us to apply the ordinary least squares, but it also encompasses the short-run dynamics of the model. To test for the existence of cointegration in the ECM, the Boswijk test was used [13], since it allows to test the stability of the model in a dynamic context. It should be noted that in this analysis it is assumed that only one cointegrating vector exists in each equation, and that the explanatory variables are (at least) weakly exogenous.

(12) This estimation method is commonly known as the "one-step method", where the dynamic specification of the estimation is directly used. Banerjee *et al*. (1994) presents a detailed discussion of its advantages, as an alternative to the "two-step methodology". Furthermore, the Representation Theorem of Granger shows that if a set of variables is bound to be represented through an ECM, then these variables is cointegrated. See Engle and Granger (1987).

(13) In short, the Boswijk test is as fllows. Given the general formulation of the one-equation ECM:

$$D(y_t)=\beta_0 D(z_t)+\lambda(y_{t-1}-\theta z_{t-1})+\sum_{j=1}^{p-1}\left[\gamma_j D\left(y_{t-j}\right)+\beta_j D\left(z_{t-j}\right)\right]+\varepsilon_t,$$

we wish to test the null hypothesis of ($\lambda=0$) (instability of the model), i.e., we test the hypotheses according to which y_t and z_t only appear in the ECM in first differences, against the alternative hypothesis ($\lambda=0$) . For this purpose a Wald test *(WD*) is used. This test is specified as follows:

$$WD=\left[T-\left[p\times\left(k+1\right)+k\right]\right]\frac{RSS_R-RSS_L}{RSS_L}=\left(k+1\right)F$$

where T is the number of observations used in the estimation, *K+1* is the number of constraints impact with $\lambda=0$, *Px(K+1)+k* the number of parameters estimated in the free model, *RSSL the sum of square residuals of the model with constraints, RSSL* stands for the sum of square residuals in the free model, and F is the usual statistic. The asymptotic distribution of *WD* is given by the table built by Boswijk. For further detail see Boswijk H.P. (1994).

We began by estimating the general model,

Export price equation

$$\Delta px_t = \theta + \xi T + \sum_{j=0}^{p-1} \psi_j^* \Delta px_{t-j} + \sum_{j=0}^{m-1} \varepsilon_j^* \Delta er_{t-j} +$$

$$\sum_{j=0}^{m-1} (1-\phi)_j^* \Delta c_{t-j} + \sum_{j=0}^{m-1} \mu_j^* \Delta p_{t-j}^* + \sum_{j=0}^{m-1} \varphi_j^* cu_{t-j} +$$

$$+ a_1 px_{t-1} + a_2 er_{t-1} + a_3 c_{t-1} + a_4 p_{t-1}^* + a_5 uc_{t-1} + z_t$$

Import price equation

$$\Delta pm_t = \eta + \zeta T + \sum_{j=1}^{p-1} \omega_j^* \Delta pm_{t-j} + \sum_{j=0}^{m-1} \tau_j^* \Delta er_{t-j} +$$

$$\Delta pm_t = \eta + \zeta T + \sum_{j=1}^{p-1} \omega_j^* \Delta pm_{t-j} + \sum_{j=0}^{m-1} \tau_j^* \Delta er_{t-j} +$$

$$+ b_1 pm_{t-1} + b_2 er_{t-1} + b_3 c_{t-1}^* + b_4 p_{t-1}^{ESC} + b_5 uc_{t-1}^* + v_t$$

to which a trend was added, as suggested by the properties of some of the model's variables in the unit root tests. After excluding the non-significant regressors[14], the specification displayed in table 1 was obtained.

The analysis of the import and export price equations reveals some interesting aspects. As displayed in table 1, the long-run analysis shows that Portuguese exports hold a small market power in the presence of exchange rate movements, i.e., Portuguese exporters behave like international price-takers in aggregated terms. Conversely, foreign producers selling in Portugal do not allow for changes in their mark-up level due to fluctuations in the value of the escudo. Nevertheless, it should be noted that the market power of Portuguese agents is different from zero, since the prices practised abroad react to the pressures of total demand directed towards Portuguese goods.[15]

Therefore, the long-run price strategy of Portuguese exporters consists in fixing prices denominated in foreign currency, so as to fully adjust the profit margin to the exchange rate movements (the coefficient of the export prices long-run elasticity vis-à-vis the exchange rate movements is around 1). This means that in the long-run, Portuguese producers hold little market power.[16]

In contrast, the price strategy adopted by foreign producers exporting to Portugal consists in fixing prices in their own currency, so that changes in the escudo rate result in identical changes in the prices practised in the Portuguese market (i.e., the long-run pass-through averages 1[17]. Consequently, these firms' mark-ups remain unaltered when the currency fluctuates. Therefore, we are led to conclude these firms hold a high market power in Portugal.

The explanatory power of demand pressures, measured by the coefficient of the productive capacity utilisation, is significantly different from zero in the long-run, in both equations. As regards export prices, the additional demand pressures induce partial price increases (*uc = 0.4*), suggesting that Portuguese producers still tailor their long-run price policy to demand pressures.

The coefficient of *uc* in the import price equation indicates that in the long-run increases in total demand directed to foreign products imported by Portugal result into reductions in the Portuguese prices of imports.

The ECM also provides information on the speed of adjustment to the long-run equilibrium. This information is given by the coefficients associated with the import [*pm (-1)*] and export price level [*px (-1)*] one period lagged. The estimates suggest that import prices adjust almost 50 per cent in each quarter, in relation to the long-run deviation recorded in the previous quarter. Export

(14) Coefficients were selected according to the *t* statistic. However, one is aware that residuals might be autocorrelated, and the parameters of the integrated variables may not follow an asymptotically normal distribution. Consequently, the *t* tests of the ECM equation may be biased, and hence should be interpreted with caution. Nevertheless, these statistics were used since they aid in identifying and specifying the ECM regression.

(15) This result can also be due to structural changes in the Portuguese economy, namely as regards the structure of output – making the interpretation of this coefficient difficult. This suggestion should, however, be subject to further investigation on this matter.

(16) Definitive conclusions cannot be drawn concerning the hypothesis of a price-to-market strategic behaviour, since no available data exists on the mechanism by which specific prices are determined in the domestic and foreign markets. This hypothesis could be tested only if it were possible, for instance, to check whether an escudo appreciation would make the escudo-denominated export prices lower than prices practised in the domestic market.

(17) Although the exchange rate pass-through coefficients regarding imports and exports exhibit identical values, their interpretation is the opposite — as established in the theoretical model.

Table 1

ERROR – CORRECTION MECHANISM

	Import price equation				*Export price equation*		
	Coefficients	t-statistc	Prob.		Coefficient	t-statistic	Prob.
D(er)	0.297	(2.33)	0.028	$D(p^{*}(-1))$	0.280	(2.51)	0.018
$D(p^{ESC}(-2))$	0.962	(4.81)	0.000	px (-1)	-0.687	(-4.30)	0.000
pm (-1)	-0.486	(-7.55)	0.000	er (-1)	0.686	(4.31)	0.000
er (-1)	0.475	(6.67)	0.000	uc (-1)	0.277	(2.35)	0.026
uc* (-1)	-0.089	(-2.86)	0.008				
long-run[(a)]	Coefficient	Variance		long-run[(a)]	Coefficient	Variance	
er	0.978	0.108		er	0.998	0.483	
uc*	-0.184	0.006		uc	0.404	0.11	
Adj. R-sq.[(b)]	0.83			Adj. R-sq.[(b)]	0.52		
SER[(c)]	0.005			SER[(c)]	0.014		
DW[(d)]	2.79			DW[(d)]	2.12		
BOSWIJK[(e)]	78.9	C.V. (1%)= 18.8		BOSWIJK[(e)]	30.0	C.V. (1%) = 18.8	
LM[(f)]	1.61			LM[(f)]	2.54		
ARCH[(g)]	0.46			ARCH[(g)]	0.31		
RESET[(h)]	0.51			RESET[(h)]	0.94		

(a) Long-run elasticities are calculated as the ratio of the coefficient of each variable in levels, one period lagged, on the symmetric of the coefficient of the endogenous variable one period lagged.

(b) Adj. R-sq. is the determination coefficient adjusted for the degrees of freedom.

(c) SER stands for the standard error of the regression.

(d) DW is the Durbin-Watson statistic for testing first order autocorrelation in residuals.

(e) Boswijk is the Wald test proposed by Boswijk, to test for the stationarity of the ECM equations. Cv is the respective critical value.

(f) LM is the Breusch-Goodfrey serial correlation test for four periods.

(g) ARCH stands for the Engle test, to find conditional and auto-regressive heteroskedascity of order 4.

(h) RESET is the probability associated to the Ramsey test for the omission of the variables.

prices react even faster, exhibiting a correction rate close to 70 per cent. We can conclude that the pass-through is very fast in both Portuguese imports and exports.

The econometric analysis also allows us to test whether changes in the exchange rate policy[(18)] might have affected the pass-through dynamics in the period under review. For this purpose, the import and export price equations are estimated through the Recursive Least Squares Method[(19)]. The analysis of the stability of the parameters (namely those of the error-correcting term and of the long-run pass-through coefficient) shows that

(18) The Portuguese exchange rate policy between 1985 and 1992 can be divided into three distinct stages. In the first sub-period from 1977 up to July 1990 a crawling-peg regime existed. This system consisted of the previous announcement of the monthly rate of effective depreciation of the escudo, and was supported by systematic interventions of the Banco de Portugal. The second period, between July 1990 and April 1992, featured a pre-determined but not announced band for the effective exchange rate of the escudo, which was managed taking into account the market behaviour.
In April 1992, a new policy change was instituded, when the escudo adhered to the Exchange Rate Mechanism of the European Monetary System, in a 6 per cent band.

(19) See Appendix 2.

the changes in the exchange rates were not reflected in the speed of adjustment of prices. In fact, the expectations on the persistence of exchange rate movements remained unchanged. Furthermore, the size of the pass-through was not affected by the different exchange rate policies adopted.

The short-run dynamics component reflects the impact of competition on prices. In the short-run, foreign producers exporting to the Portuguese market follow almost totally the movements of the prices of domestic competitors, although with a six months lag (the short-run import price elasticity relative to changes in competitors' price is close to 1). In contrast, Portuguese exporters adjust their prices fastly to changes in competitors' prices (with only a three months lag), although the adjusted amount is quite low (about 0.3). In both cases this effect fades away in the long-run.

Finally, empirical evidence suggests that the impact of production costs on the prices of exported and imported goods is not significantly different from zero. This conclusion is common to the short-run and to the long-run analyses (insofar as unit labour costs are taken as a measure for total costs). This finding is not surprising for export prices, since Portuguese producers have little power in determining international prices. As regards imports, this finding is somewhat surprising. As a matter of fact, agents with high market power would be expected to transmit the changes in their production costs to the final prices of their products, so as to maintain their profit margins unchanged.

4. CONCLUSIONS

The results of this study suggest that between 1985 and 1992 the Portuguese economy behaved very much like a price-taker in foreign markets, although in aggregate terms it holds a non-zero market power.

In contrast, in the long-run, foreign producers exporting to Portugal fix prices in their own currency, so that the escudo prices closely follow the movements of the escudo exchange rate. The mark-up of these producers is thus maintained unchanged. Consequently, the long-run exchange rate pass-through to Portuguese imports is complete (the long-term elasticity of escudo-denominated import prices with respect to the exchange rate is very close to 1).

Prices of Portuguese exports are, however, fixed in the currency of the importing country, and producer's profit margins adjust fully to the changes in the value of the escudo (long-run elasticity close to 1). In the long-run, however, the pressures of overall demand also seem to influence the prices of Portuguese exports, thus suggesting that Portuguese exporters hold some power in the exports market.

Our results are consistent with a similar study on Portugal[20] indicating that in the long-run, escudo-denominated export prices vary in the same proportion of changes in the parity of the escudo.

In addition, the speed of adjustment of export and import prices to the respective equilibrium values is high, which suggests that a large part of exchange rate changes is expected to be permanent. In fact, export prices adjust about 70 per cent of the differential with respect to the equilibrium value in the first quarter, while import prices adjust by 50 per cent. We also show that different foreign exchange policies in Portugal in the period under analysis (namely a crawling-peg policy, a policy of exchange rate management in a non-announced band and finally the participation of the escudo in the Exchange Rate Mechanism of the European Monetary System) did not result in significantly distinct expectations regarding the persistence in time of the exchange rate movements.

Therefore, the results of this study provide interesting conclusions for economic policy. First of all, exchange rate changes are transmited rapidly and in a sizeable proportion to domestic prices, by influencing both the prices of imports (which in six months adjust by 50 per cent of the long-run deviation) and the prices of exports (70 per cent adjustment of the deviation from long-run price in only one quarter). This finding is confirmed by the long-run analysis. Here the impact of exchange rate changes on domestic prices is total, confirming the hypothesis that the behaviour of the Portuguese economy is one of a small open economy.

Finally, this paper shows that the impact of changes in the exchange rate on the prices of ex-

(20) See Abreu I. and C. Manteu (1995).

ports and imports is identical, when denominated in escudos. As a result, we can conclude that in the presence of exchange rate fluctuations the terms of trade remain unchanged.

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Appendix 1

Unit root test

To test the possibility of using the classical linear regression model (by means of the ordinary least squares method) the stationarity of our variables was tested. The graphical analysis suggests that unit roots may exist. However, in order to determine the level of integration of the series we used the ADF test, proposed by Dickey Fuller, using the sequential procedure suggested by Holden and Perman [(21)]. To find the number of lagged terms necessary to eliminate the autocorrelation between residuals, we used the multiplier test, suggested by Breush and Goodfrey. For each variable the general formulation of the ADF was used:

$$D(y_t) = \alpha + \beta t + p y_{t-1} + \sum_{i=1}^{m=p} \theta_i D(y_i) + \varepsilon_t$$

Table 1 displays the main results.

The ADF test indicates that all variables are non-stationary in levels, and are integrated of order one - I(1).

(21) See Holden, D. and R. Perman (1994).

Table 1

UNIT ROOT TEST

Series	*I()* (a)	$t-\alpha$ (b) Ho: a=0	$t-\beta$ (c) Ho: b=0	$t-\rho$ (d) ADF	Φ_2 (e)	Φ_3 (f)	p (g)	F* (h)	BG (i)	(j)	
pm	1	t=0.41 P=0.68	t=-0.41 P=0.68	-0.33	F=3.0	F=4.49	6	t=-1.6 P=0.01	12	F=1.33 P=0.42	Random walk, without drift or trend
px	1	t=0.19 P=0.84	t=-0.85 P=0.39	-0.11	F=4.6	F=3.5	0	-	12	F=0.97 P=0.50	Random walk with drift but no trend
c	1	t=3.23 P=0.00	t=3.23 P=0.00	-3.19	F=16.86	F=5.2	0	-	12	F=0.60 P=0.81	Random walk, without drift or trend
c*	1	t=0.8 P=0.4	t=1.11 P=0.27	-0.83	F=17.78	F=1.29	0	-	12	F=0.72 P=0.71	Random walk with drift but no trend
p*	1	t=0.55 P=0.58	t=-0.25 P=0.58	-0.50	F=0.56	F=0.33	1	t=1.91 P=0.06	12	F=0.46 P=0.90	Random walk, without drift or trend
p^{esc}	1	t=1.64 P=0.11	t=1.89 P=0.06	-1.63	F=6.65	F=1.91	0	-	16	F=1.45 P=0.25	Random walk, without drift or trend
er	1	t=0.64 P=0.52	t=-3.31 P=0.00	-0.43	-	F=32.45	0	-	12	F=0.80 P=0.64	Random walk, with drift, and trend
cu*	1	t=2.99 P=0.01	t=2.66 P=0.017	-2.98	F=6.16	F=5.99	6	t=2.23 P=0.04	12	F=1.28 P=0.43	Random walk, with drift but no trend
cu	1	t=-0.27 P=0.82	t=-0.85 P=0.40	0.23	F=3.01	F=2.45	5	t=1.99 P=0.06	16	F=2.43 P=0.33	Random walk, without drift or trend

(a) Order of the auto-regressive process.

(b) Value of the t-statistic (*t*) and of the probability of not rejecting the null hypothesis (*p*), associated to parameter α (drift).

(c) Value of the t-statistic (*t*) and of the probability of not rejecting the null hypothesis (*p*), associated to parameter β (linear trend).

(d) ADF test.

(e) Φ_2 is statistic *F* for hypothesis : $(\alpha, \beta, \rho) = (0, 0, 0)$.

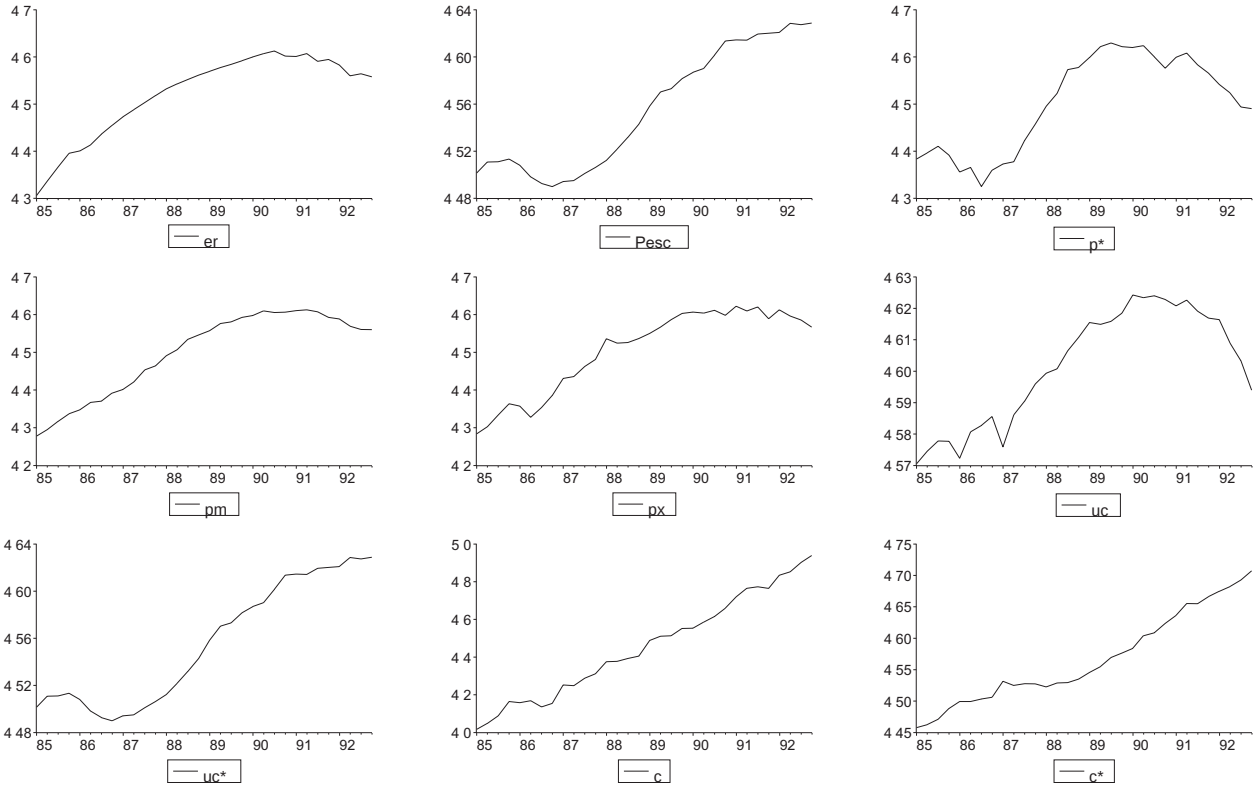
(f) Φ_3 is statistic *F* for hypothesis : $(\alpha, \beta, \rho) = (\alpha, 0, 0)$.

(g,h) *p* is the order of the lagged endogenous variable ($D(y_{t-p})$), with the corresponding t-Statistic and the associated probability.

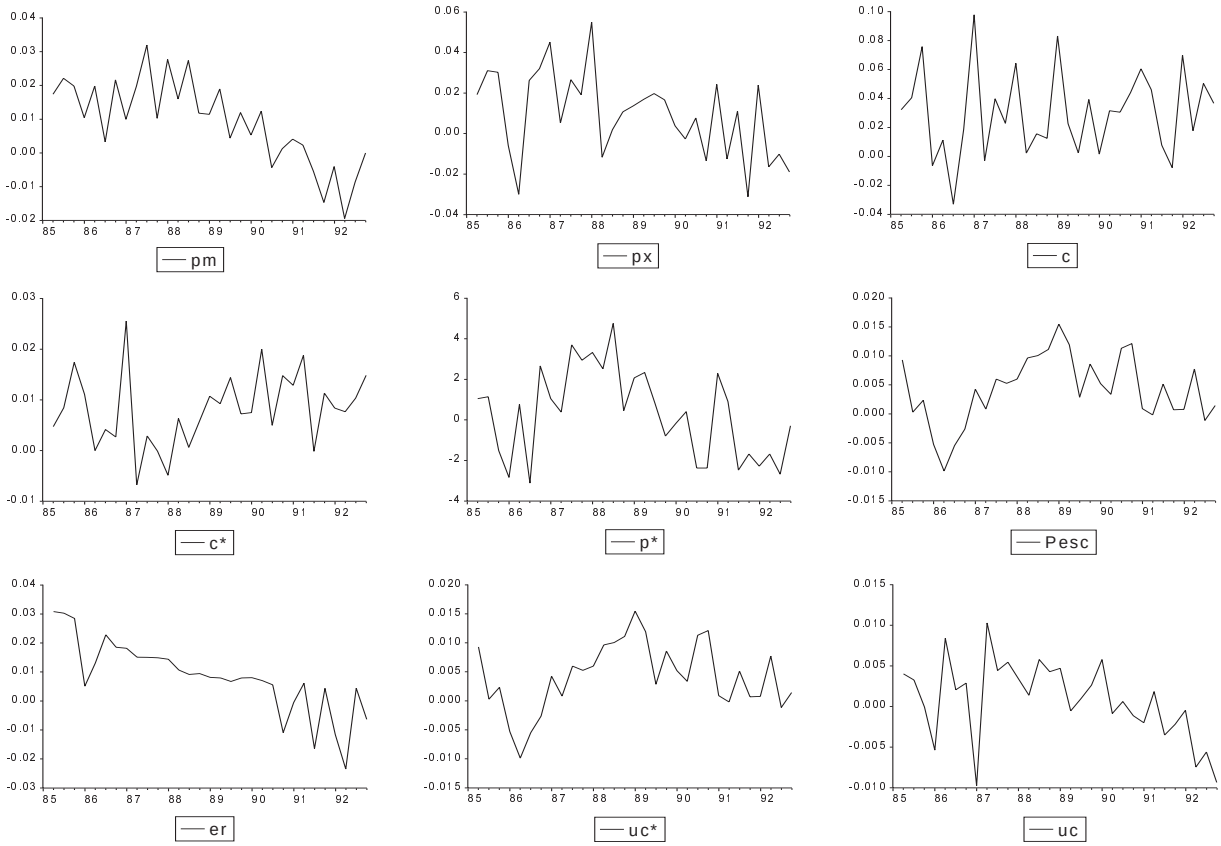
(i,j) BG is the number of lags of the endogenous variable necessary to eliminate autocorrelation, according to the Lagrange multiplier test of Breush-Godfrey (f-statistic and its associated probability (P)).

SERIES IN LOGARITHMS AND IN FIRST DIFFERENCES OF LOGARITMS

Series in logarithms



Series in first differences of logarithms



Appendix 2

RECURSIVE ESTIMATION OF THE ERROR-CORRECTING MECHANISM

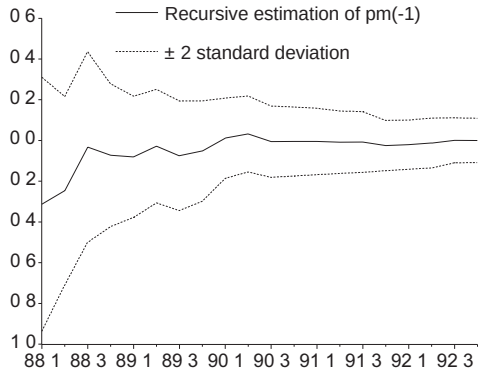
Between 1985 and 1992 two changes in the exchange rate regime were recorded. In July 1990 the previously announced crawling-peg system was substituted by a pre-determined but not announced band. In April 1992, the escudo entered the Exchange Rate Mechanism of the European Monetary System.

To test whether these policy changes affected the exchange rate pass-through coefficient (regarding both import and export prices) the equations for import and export prices were estimated by the recursive least squares method. The error-correcting term exhibits high stability over the course of the period under review, namely at the moments those policy changes took place. Hence, these results indicate that the speed of adjustment of prices was not significantly altered as a result of changes in the exchange rate regime. This is confirmed by the the fact that the parameters used in constructing the long-term pass-through coefficients are also stable. Consequently, we conclude that the pattern of pass-through was not significantly affected by the changes in the exchange rate regimes occurred over the analysed period.

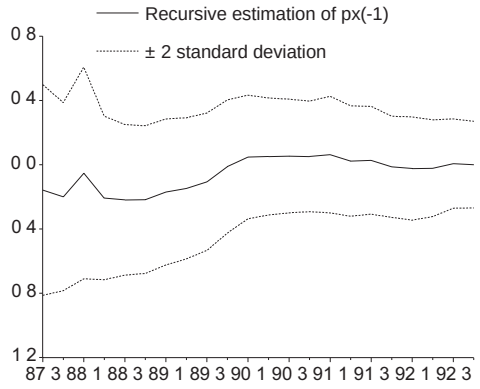
Charts for the tests of structural changes in parameters

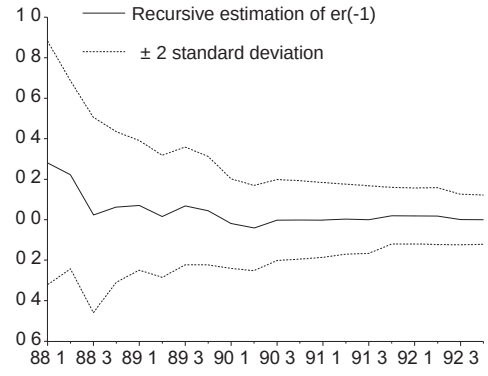
Least squares

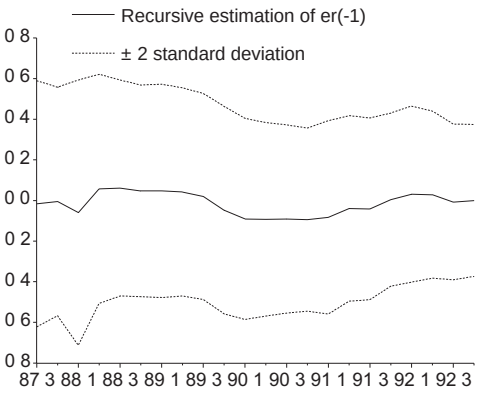
Import price equation



Export price equation







MOBILITY AND UNEMPLOYMENT IN THE PORTUGUESE LABOUR MARKET*

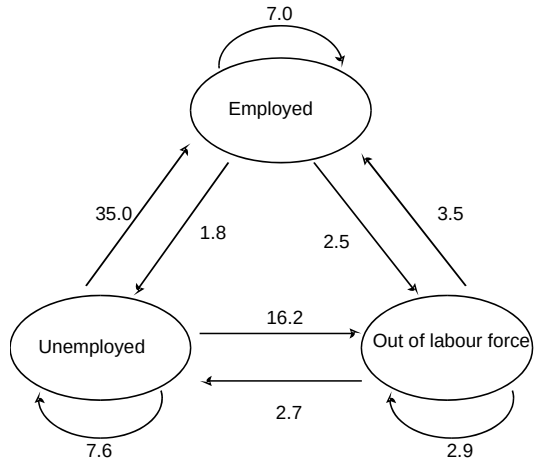
Pedro Portugal **

Mónica Dias **

1. INTRODUCTION

A conventional way of characterising the labour market state consists of breaking-down population at working age into employed, unemployed and out of labour force. Following these variables through short periods of time suggests that their behaviour is quite stable. However, the apparent stability may result from either the weak intensity of flows between the three states considered or the compensation between those flows — even if these are sizeable. A more precise characterisation would require the measurement of gross flows of workers, alongside the corresponding net flows. The microdata supporting the Employment Survey released by the *Instituto Nacional de Estatística* (INE) allow for a detailed analysis of the Portuguese labour market flows, and for a characterisation of its mechanism(1).

Diagram 1
LABOUR MARKET TRANSITIONS



Note: The values presented are the flows recorded between the fourth quarter of 1995 and the fourth quarter of 1996, as a percentage of the total number of individuals initially belonging to each state.

2. INTENSITY OF LABOUR MARKET FLOWS

The set of observed transitions between the employment, unemployment and out of labour force states refer to the period running from the fourth quarter of 1995 up to the fourth quarter of 1996 (diagram 1). Here, transitions between different states are distinguished from changes occurred within each state — insofar as the latter involve a passage through a new job over the course of the year.

The main characteristic to be drawn from the transition values is the high stability of the labour market. A large share of individuals report the same labour market state at both moments. Initially employed individuals record very low flows into unemployment and out of labour force; on the contrary, job switching is much more frequent — reaching 7 per cent of employment throughout the year(2). Transitions from individuals out of labour force are mostly due to the fact that this state feeds

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

The authors thank Vítor Gaspar for his comments and suggestions.

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(1) The Banco de Portugal thanks the INE for making the data available.

(2) It should be noted that these transitions (which are cumulative) may encompass temporary passages through unemployment and out of labour force.

the remaining labour market state — e.g., providing first time job seekers. Finally, and corroborating expectations, transitions are more intense among the group of individuals initially unemployed. Unemployment is by definition a transitory state. Nevertheless, around 50 per cent of individuals remain in that state up to the end of 1996, although 7.6 per cent had an interim job experience which ended up in a new unemployment experience[3].

The size of gross flows of workers across different labour market states obviously reflects clearly higher transition intensities than those of the corresponding net flows. This fact does not, however, contradict to the general impression of a weak mobility between the employment, unemployment and out of labour force states[4].

3. DETERMINANTS OF LABOUR TRANSITIONS

The indication of strong stability is independent on gender. However, in most cases transitions are even more unlikely to occur among women (diagrams 2 and 3). Two states are worth being highlighted. Firstly, transitions from out of labour force are more frequent among women, suggesting a higher propensity towards household production. Secondly, job switching is much more frequent for males than among females, which suggests that job shopping (i.e., the investment in searching for a more adequate job) is more intense in males than in females.

Throughout the life cycle transitions follow a well defined pattern. When individuals first enter the labour force, both employed and unemployed individuals switch labour market states quite frequently (chart 1); this frequency decreases with age. This shows that younger individuals search for a job that matches their productive capabilities. At the end of labour life this pattern is inversed, reflecting transitions into the out of labour force state. The share of out of labour force individuals who exit this state increases with the growing labour market insertion of individuals ending their school life. In general, the out of labour force population records very low outflows from this state.

Diagram 2
LABOUR MARKET TRANSITIONS
Females

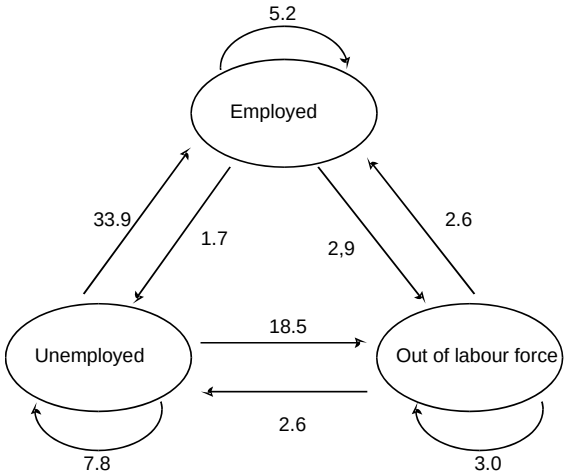
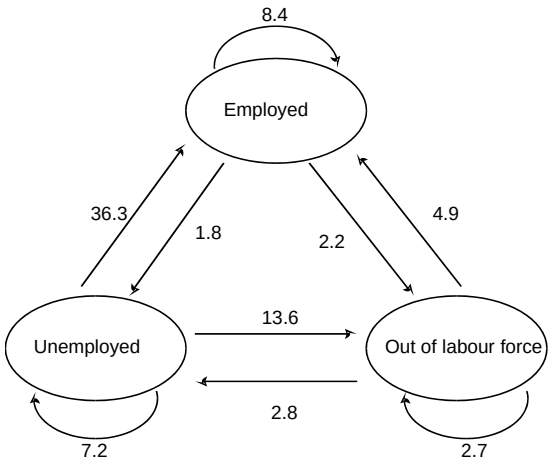


Diagram 3
LABOUR MARKET TRANSITIONS
Males



Note: The values presented are the flows recorded between the fourth quarter of 1995 and the fourth quarter of 1996, as a percentage of the total number of individuals initially belonging to each state.

Educational level influences strongly individuals' labour market state (table 1). Individuals with higher education levels have a much higher probability of being employed, and hence a lower probability of being out of labour force or unem-

(3) See Mata and Dias (1997) for a detailed discussion on transitions within the same state.

(4) The intensity of flows in the Portuguese labour market is the lowest among the European Union (see, for example, Blanchard and Jimeno (1995)).

Chart 1

INTENSITY OF LABOUR TRANSITIONS BY AGE

By initial labour market situation

ployed. The relative share of this group of individuals has increased lately, due to the increase in the education level and in the participation rate of younger generations, specially females. In addition, education seems to inhibit labour market transitions for those already employed (table 2). In fact, higher educational levels correspond to higher job stability. However, education does not seem to influence significantly the outflows from unemployment. Lastly, more educated individuals have a greater probability of exiting from the non-participation state.

Table 1

LABOUR MARKET SITUATION BY EDUCATIONAL LEVEL

Percentage

	Eduacation level			
	Illite-rate	Basic level	Secondary level	Upper level
Labour market state in 1996:IV				
Employed	26.7	54.7	53.1	79.5
Unemployed	1.3	4.5	5.8	3.4
Out of labour force	72.0	40.8	41.1	17.1
Total	100	100	100	100

Table 2

INTENSITY OF LABOUR TRANSITIONS BY EDUCATIONAL LEVEL

Percentage

	Eduacation level			
	Illite-rate	Basic level	Secondary level	Upper level
Labour market situation in 1995:IV				
Employed	10.1	12.1	10.6	7.8
Unemployed.....	72.0	56.9	61.6	62.8
Out of labour force .	3.0	9.6	17.3	31.3

Note: The values presentd are the proportion of individuals engaging in labour market transitions.

4. CHARACTERISATION OF UNEMPLOYMENT

One aspect of greatest concern regarding the labour market — and which demands a more detailed characterisation — is the unemployment state. The determinants of the stock of unemployed encompasses very distinct situations and dynamics. Firstly, the stock of unemployment is a result of the accumulation of vary different flows. These comprise transitions of individuals from out of labour force — e.g., individuals ending school who are first-job seekers, individuals who had already exited labour force — and transitions from employment — e.g., due to job destruction (resulting from the firm closings) or to the end of fixed-term contracts. Secondly, the stock of unemployed results also from outflows of the unemployment state, which may origin distinct arrival states: either employment (if a new job is found) or non-participation (when the household production, retirement or discouragement state is preferred).

Table 3 displays a breakdown of the stock of unemployed according to the reason of job-searching. The most frequent state is that where individuals are unemployed due to the ending of a fixed-term job experience (27.1 per cent). However, these are the individuals who faster find a new job (table 4). Conversely, collective dismissals (14.5 per cent) are linked to a greater difficulty in moving to employment, and to a higher incidence

Table 3

COMPOSITION OF THE STOCK OF UNEMPLOYED

Percentage

	Reasons for job searching				
	First job	Collective dismissal	Individual firing	End of a fixed-term contract	Other
Relative share in the stock of unemployment	20.1	14.5	15.2	27.1	23.1
Proportion out of labour force	33.8	55.3	41.2	29.8	46.3

Table 4

INTENSITY OF QUARTERLY OUTFLOWS FROM UNEMPLOYMENT

Percentage

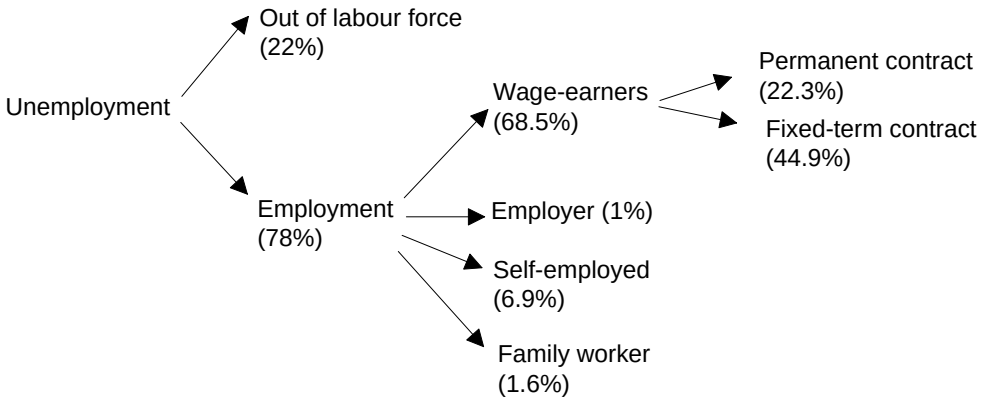
	Reasons for job searching				
	First job	Collective dismissal	Individual firing	End of a fixed-term contract	Other
Proportion entering employment	14.1	11.7	13.4	20.6	13.0
Proportion moving to out of labour force	5.3	3.7	4.0	2.7	4.6

of long-term unemployment (individuals searching for a job for a period over 12 months).

Most unemployed individuals (68.5 per cent of those exiting unemployment) become dependent wage-earners (diagram 4). The most common state is that where individuals engage in a fixed-term contract (44.9 per cent of formerly unemployed individuals are fixed-term contracted, while 22.3 per

Diagram 4

TRANSITIONS FROM UNEMPLOYMENT BY DESTINATION



cent engage in a permanent contract). Although these proportions contrast with those of total employment, it should be noted that many individuals are at first fixed-term contracted, managing to get a permanent contract afterwards. Finally, 22 per cent of all exits from an unemployment state result into exits into out labour force, while 7.9 per cent of transitions result in self-employment.

5. UNEMPLOYMENT PERSISTANCE AND UNEMPLOYMENT INSURANCE

The concern about long-term unemployment is partly linked to the increasing difficulty in finding a job with the persistence in time of the unemployment spell. This observation has sustained the hypothesis that unemployment persistence may be due to a dependence relationship between present and future unemployment. From a microeconomic perspective, this negative relationship between unemployment duration and the probability of re-employment has been attributed to human capital depreciation, to the stigmatisation of the long-term unemployed by the potential employers, to a discouragement phenomena affecting the intensity of job searching, and to undesirable effects of unemployment protection schemes. In the period under review, the probability of finding a job falls sharply with unemployment duration (chart 2); conversely, transitions out of labour force seem to exhibit a weak upward trend.

The existence of unemployment protection schemes characterised by high replacement rates and long maximum potential durations are factors frequently pointed in the explanation of chronic and persistent unemployment in most European Union countries[5]. In Portugal the change in the eligibility requirements for the unemployment subsidy occurred in 1989 favoured a very sharp increase in the share of unemployed workers benefiting from the unemployment subsidy in the following years (chart 3). The attribution of the unemployment social subsidy became dependent on the verification of less restrictive

Chart 2
QUARTERLY TRANSITIONS FROM UNEMPLOYMENT

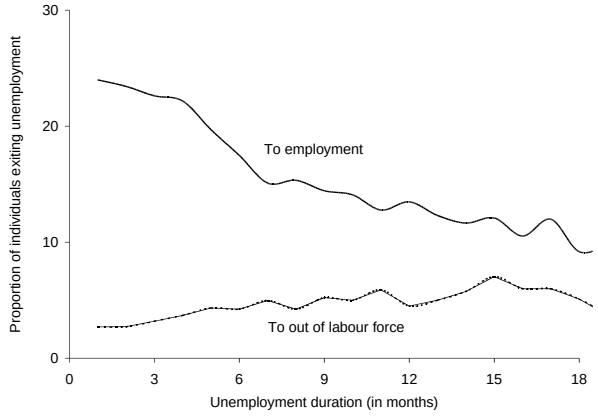
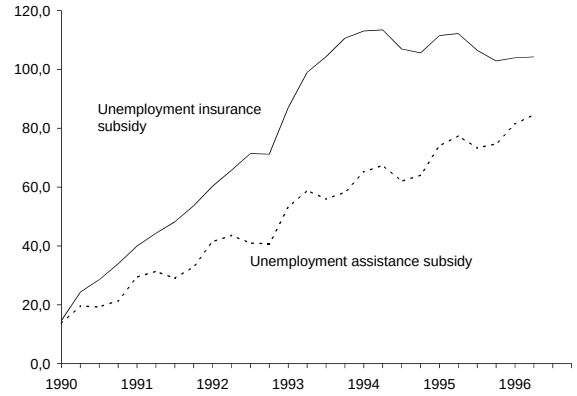


Chart 3
UNEMPLOYMENT SUBSIDY BENEFICIARIES
Thousand individuals

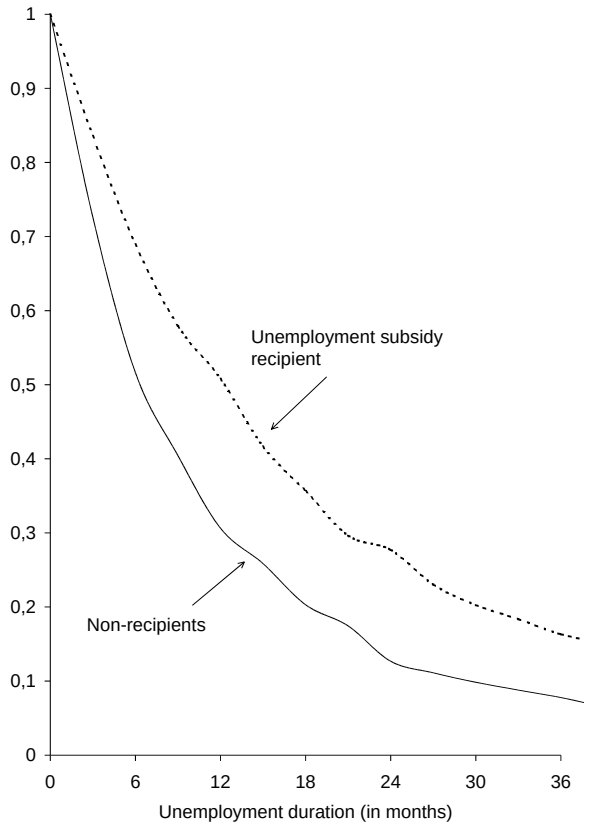


eligibility conditions, which are mostly determined by the worker's recent labour market profile. The upper limit of the subsidy duration started being indexed to the worker's age; in the higher age bracket (over 55 years old), this duration lasts up to 30 months.

Chart 4 compares the behaviour of workers benefiting from the unemployment subsidy with the non-beneficiary workers. It becomes clear that non-recipients move into employment at a much greater pace than that of beneficiaries. The indication that the unemployment subsidy scheme might be contributing to restrain the transitions from unemployment into employment is not disturbed by the fact that beneficiaries also share

(5) See Scarpetta (1997) for a study on unemployment in the OECD countries.

Chart 4
PROBABILITY OF REMAINING UNEMPLOYED



other characteristics that disfavour transitions into employment — namely older ages and lower education levels[6]. In fact, the impact of the Portuguese unemployment subsidy scheme on the pace of transition into employment does not differ substantially from that of other European economies. For instance, the Portuguese and Spanish experiences are in this respect quite similar (Bover, Garcia-Perea and Portugal, 1997).

The unemployment subsidy system has a social justification, as a means of income support and social insurance. Consequently, the existence of an unemployment insurance regime is in itself a means of macroeconomic stabilisation. Furthermore, unemployment insurance may improve the efficiency of the economy — by favouring the job matching process, by improving the allocation of resources (and hence labour remuneration itself) and by stimulating the labour supply of individuals who are eligible to benefit from the unemployment subsidy. However, as in any insurance activity, the moral hazard problem arises (as the beneficiary does not behave according to a risk minimisation criterion). The size of undesirable effects of the unemployment insurance schemes depend on each system's specific design (eligibility conditions, replacement rate, maximum duration, etc.). In general, the maximum duration of the subsidy appears to be the most influential factor [7].

6. CONCLUSION

The existence of barrier to labour mobility tends to result, in the long run, into a inadequate resource allocation, and hence into a chronic productivity problem. The weak intensity of labour market transitions in the Portuguese case is clearly symptomatic of the importance of those barriers. Therefore, it is of great importance the study of the relationship between those elements of microeconomic rigidity and the seeming rigidity of the Portuguese labour market. Firstly, both the legal framework of labour relations (namely the employment protection legal framework) and the obstacles to regional mobility (namely, the standstill in the market for house renting) rise significantly the costs of adjustment for both the labour demand and labour supply[8]. Secondly, both the income maintenance mechanisms (e.g., minimum wage, unemployment subsidy and minimum income) and the persistence of labour markets weakly sensitive to the general conditions in the labour market, tend to raise reserve wages, hence making it harder for workers to accept of low paid jobs.

In evaluating employment policies the equity and efficiency objectives should always be weighted adequatly. However, the announced equity purposes very often do not correspond to the

(6) See Portugal and Addison (1997) for a detailed study on the impact of the unemployment insurance on unemployment transitions.

(7) In the Portuguese case it is also noticeable that the unemployment subsidy scheme disincentives part-time job finding (Portugal and Addison (1997)).

(8) Grubb and Wells (1993) considers that the Portuguese job protection legal framework is the most inflexible of all EU countries.

actual outcomes. Frequently such policies affect negatively the position of the less skilled, the unemployed, and the younger workers (the outsiders), favouring those with secure (the insiders).

Finally, individual welfare is not independent of the intensity of the labour market flows. In fact, for the same unemployment rate a more flexible labour market (characterised by higher unemployment rates but shorter unemployment durations) is preferable to a more rigid one (with lower unemployment incidence rates but longer unemployment durations). This analysis seems to suggest that the Portuguese labour market — even after discounting the influence of cyclical movements — is closer to the second characterisation than to the first one.

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