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ECONOMIC POLICY AND SITUATION

Outlook for the Portuguese Economy: 2009-2010

OUTLOOK FOR THE PORTUGUESE ECONOMY: 2009-2010[1]

1. INTRODUCTION

A key feature of the current macroeconomic projections is the maintenance of the fall of real GDP in 2009 (-3.5 per cent) in comparison with the interim projections published in April in the Spring *Economic Bulletin*. At that time, the Banco de Portugal's projection for the Portuguese economy was the lowest among different institutions, which nevertheless, at a later stage, revised their projections downwards. The most recent information for the Portuguese economy justifies, however, the maintenance of the figure published in the Spring *Economic Bulletin*, which embodies a slightly lower fall then the one expected for the euro area. It should be highlighted, nonetheless, the high uncertainty of these projections and that the balance of risks continues to point to downward risks for economic activity in Portugal.

The outlook for the Portuguese economy in the 2009-2010 period continues to be marked by the interaction between the international financial market crisis and economic developments worldwide, most notably the collapse of international trade since the end of 2008. Against this background, activity in most advanced economies is assumed to contract sharply in 2009, while growth in emerging market economies is expected to stand at historically low levels. This overall recessive scenario should start to

Table 1.1

PROJECTIONS OF BANCO DE PORTUGAL 2009-2010
Rate of change, per cent

	Weights 2008		Current projections		EB Spring 2009	EB Winter 2008	
		2008 (e)	2009 (p)	2010 (p)	2009 (p)	2009 (p)	2010 (p)
Gross domestic product	100.0	0.0	-3.5	-0.6	-3.5	-0.8	0.3
Private consumption	66.6	1.7	-1.8	-0.6	-0.9	0.4	0.6
Public consumption	20.7	0.6	1.0	0.7	0.4	-0.1	-0.2
Gross fixed capital formation	21.7	-1.3	-14.3	-3.8	-14.4	-1.7	-0.3
Domestic demand	109.6	1.1	-4.5	-0.7	-3.5	0.0	0.3
Exports	32.9	-0.4	-17.7	-0.9	-14.2	-3.6	1.8
Imports	42.5	2.6	-17.1	-1.2	-11.7	-1.0	1.5
Contribution to GDP growth (in p.p.)							
Net exports		-1.2	1.4	0.2	0.3	-0.8	0.0
Domestic demand		1.1	-4.9	-0.7	-3.9	0.0	0.3
of which: changes in inventories		0.2	-0.8	0.2	-0.2	0.1	0.0
Current+capital account (% of GDP)		-10.5	-8.3	-9.6	-7.9	-7.9	-9.4
Goods and services account (% of GDP)		-8.9	-6.5	-6.6	-6.6	-7.0	-7.5
HICP		2.7	-0.5	1.3	-0.2	1.0	2.0

Source: Banco de Portugal.
Notes: (e) - estimated; (p) - projected. The central projections for each aggregate are shown (considered to be its most likely value, depending on the range of assumptions in question). As described in Section 7, probability distributions assigned to the possible values of the aggregate may be asymmetrical. Therefore, the probability of observing a value below the central projections may be different from the probability of observing a value above the central projections.

(1) This section is based on data available up to mid-June. International environment assumptions are based on figures up to 18 June 2009.

fade away, albeit very gradually, over the projection horizon, amid the progressive normalisation of financial conditions worldwide and a gradual recovery in world demand. The Portuguese economy, as an open and fully integrated economy in economic and financial terms, could not avoid being significantly affected by this international environment. In this context, the current projections point to a very significant contraction in economic activity in 2009, followed by a limited reduction in 2010.

The financial crisis that started in mid-2007 and intensified throughout 2008 has resulted in greater uncertainty and led to a revaluation of risk worldwide, which implied tighter financing conditions. These developments have significantly affected confidence among economic agents and demand prospects, which may have determined the postponement of consumption and investment decisions and the start of a deleveraging process, characterised by a readjustment of the indebtedness levels of private agents.

The intensification of the financial crisis and its impact on global economic activity and on lower inflation expectations determined the widespread easing of monetary policies by most central banks, including the European Central Bank (ECB). Moreover, in a context of international cooperation, a number of central banks and governments have adopted measures to support the financial system, in order to strengthen confidence and restore the normal functioning of financial markets. With regard to fiscal policy measures adopted by the Portuguese government, and in line with the rule applied in Eurosystem projection exercises, the current projections include measures already approved in legal terms or specified in sufficient detail, more specifically those include in the State Budget for 2009 and those approved in December 2008.

According to available data, Gross Domestic Product (GDP) stagnated in 2008, following an increase slightly below 2 per cent in 2007, in an environment marked by the international economic and financial crisis and in which persistent structural weaknesses seem to have continued as a conditioning factor of economic growth in Portugal. The current projections point to a 3.5 per cent contraction in economic activity in 2009, an unprecedented situation since the 1975 recession. This contraction mainly denotes the effects associated with the deteriorating international economic and financial environment, which on the one hand affects export growth and, on the other, prompts a reduction and the postponement of consumer and investment expenditures by Portuguese economic agents. Although international financial market tensions are expected to ease progressively over the projection horizon, and demand is likely to increase gradually in Portugal's export markets, GDP is projected to contract somewhat in annual terms in 2010 (-0.6 per cent).

With regard to developments in supply-side conditions, current estimates for GDP developments are consistent with a decline in total factor productivity in 2008. This seems to have taken place in a context where the degree of capacity utilisation seems to have declined significantly and the level of employment has yet to fully reflect the slowdown in economic activity. Total factor productivity is projected to decline further in 2009 and to increase only marginally in 2010.

Turning to demand, the deceleration in economic activity in 2008 resulted from the virtual stabilisation of private consumption growth and less favourable developments in the remaining global demand components, most notably exports and GFCF, which declined from the previous year, amid increasing deterioration in demand prospects in both domestic and external markets. Financial market tensions seem to have also contributed to the collapse in international trade and the faster deterioration in confidence. The strong contraction in economic activity projected for 2009 reflects a recessive scenario during the course of the year, with particular emphasis on both the maintenance of a markedly negative behaviour of investment and exports and the significant contraction in private consumption. In particular, consumption of durable goods is expected to fall markedly, given that it is more sensitive to developments in the economic cycle and agents' confidence levels. This contraction in overall demand is

likely to reflect inter alia considerably tight financing conditions worldwide in early 2009. Over the projection horizon, it is assumed that international financial market situation will normalise progressively, interest rates will stand at levels below those observed in 2008, while the risk premium is assumed to decline gradually. In any case, financing conditions will be tighter than in the period prior to the onset of the financial crisis, particularly as regards risk *premia*, despite monetary policy easing and measures to support the financial system taken by a number of governments and central banks. In Portugal, in addition to the effects related to demand prospects, the tightening of credit standards by the Portuguese banking system is likely to make the household and corporate intertemporal budget constraints more biding, given the high indebtedness levels of the non-financial private sector.

The contraction in economic activity in 2010 (-0.6 per cent) will reflect a limited decline in most overall demand components, against a background where the external demand for Portuguese goods and services is likely to resume an upward path in the second half of the year. Domestic demand prospects in 2010 will continue to be constrained by labour market conditions, persistent structural weaknesses and uncertainty over the restart of the fiscal consolidation process.

Following a 2.7 per cent increase in 2008, the current projections indicate that the Harmonised Index of Consumer Prices (HICP) will fall by 0.5 per cent in 2009, and subsequently increase by 1.3 per cent in 2010. The projected reduction in consumer prices for the current year should not lead to a situation of deflation, given that it is likely to represent a temporary reduction and, furthermore, not broad based. These developments in the inflation rate are conditional on a 7.2 per cent fall in the prices of the energy component of the HICP (compared with a 6.6 per cent increase in 2008). The non-energy component of the HICP, which accounts for around 90 per cent of the basket of goods and services, is expected to slow down markedly from 2.2 per cent in 2008 to 0.2 per cent in 2009, followed by an increase of 0.7 in 2010. The subdued increase of prices of non-energy goods and services in 2009 is conditional on both the projected reduction of import prices of non-energy goods and the contraction in domestic demand, which is likely to lead to a significant reduction in profit margins, against a background of relatively high unit labour cost growth in the private sector. Projections for this component also reflect the expected dynamics of the food component, marked by base effects largely associated with price developments in these commodities. The consumer price increase projected for 2010 reflects both an increase in energy prices (5.9 per cent), in a context of continued oil price increases and a slight acceleration in the prices of non-energy goods and services, against a background of subdued unit labour costs, which should allow for some recovery in profit margins.

According to the latest data, borrowing requirements of the Portuguese economy, measured by the deficit in the combined current and capital account as a percentage of GDP, stood at 10.5 per cent in 2008 (8.1 per cent of GDP in 2007). This reflects unfavourable developments in the terms of trade, due to the strong increase in oil prices, and an abrupt reduction in export growth, which exceeded the significant slowdown in imports, particularly at the end of the year. For 2009, external borrowing requirements of the economy are projected to fall to 8.3 per cent of GDP, due to a reduction in the goods and services deficit, which particularly reflects a marked decline in oil prices and a drop in overall demand and its import content that exceeds the contraction in exports. The current projections point to an increase in borrowing requirements to 9.6 per cent of GDP in 2010. These developments reflect an increase in the income deficit, due to a further deterioration in the international investment position, a limited and gradual rise in interest rates as of mid-2009, and the stabilisation of the goods and services deficit.

The degree of uncertainty underlying the current projections remains particularly high, namely with regard to the moment when the downward trend in the global economy will be reversed, the new level around which international financial markets will stabilise, and the impact of fiscal stimulus measures.

Turning to the balance of risks to economic activity, risk to growth is on the downside, particularly in 2010 (see "Section 7 *Uncertainty and risk analysis*"). Such risk stems from the possibility of a greater persistence in the current international crisis, which may result in a protracted slowdown in the world economy, and the need to consolidate the financial situation of households, in a context of high indebtedness. This need may lead to a greater contraction in private consumption, affect demand prospects and, consequently, investment.

In comparison with the projections published in the *Economic Bulletin*-Spring 2009, the evolution of economic activity projected for 2009 remains unchanged, as already mentioned, although the composition of expenditure has changed, mainly reflecting actual data released for the first half of the year. Such data mirror more negative developments in private consumption and exports in the first quarter of 2009 and a higher than expected fall in imports, which, together with a particularly significant reduction in inventories, reflects a downward revaluation of demand prospects. The revision of private consumption will particularly mirror the impact of a marked deterioration in labour market conditions in the first quarter of 2009. With regard to consumer prices, the current projections for 2009 point to a downward revision of 0.3 p.p., which mainly reflects lower than expected inflation in the first months of the year, mirroring inter alia a greater than expected reduction in profit margins.

2. ASSUMPTIONS UNDERLYING THE PROJECTION EXERCISE

The current projections are based on a set of assumptions about future developments in the variables underlying the Portuguese economy. These assumptions reflect data available up to mid-June 2009 and are based on several assumptions about future developments in interest rates, exchange rates and commodity prices, as well as the performance of economic activity abroad, particularly in the euro area, and its implications for the evolution of the external demand that Portuguese firms will face.

The variables underlying the projection have been significantly affected by the interaction between the international financial market crisis and the deterioration in economic activity worldwide, with particular impact on international trade. It should be emphasized, on the one hand, the rapid deterioration of expectations regarding the evolution of world demand in 2009, which was reflected inter alia in commodity price developments, particularly oil. On the other hand, risk *premia* increased significantly, due to the revaluation of risk worldwide. The evolution assumed for the variables underlying the projection point to a gradual normalisation of the international financial market situation over the projection horizon.

With regard to financing costs, the projections presented in this section takes into account a marked decline in short-term interest rates in the interbank money market (3-month EURIBOR) in 2009, followed by a slight increase in 2010. Moreover, these projections also incorporate some judgement on the financing conditions of the Portuguese economy, regarding bank credit standards to apply on the amount of supplied loans and also regarding the higher credit risk premium for the non-financial private sector. In the context of a gradual normalisation of the financial market situation, some easing of credit standards and the reversal of risk *premia* to levels closer to historical average values are expected for 2009 and 2010.

Turning to developments in external economic activity, the assumptions in these projections reflect data underlying the June 2009 Eurosystem staff projections (published in the ECB Monthly Bulletin), in a context where a gradual recovery in activity is expected as from early 2010, following a marked deterioration in economic growth prospects worldwide at the end of 2008 and in 2009.

As usual, the current projections also include a set of assumptions for the Portuguese economy re-

lated to public finances and administered prices.

The current assumptions were not revised substantially in comparison with those underlying the interim update of macroeconomic projections for 2009 included in the *Economic Bulletin*-Spring 2009. In turn, in comparison with the assumptions underlying the projections published in the *Economic Bulletin*-Winter 2008, the current external environment for the Portuguese economy points to significantly less favourable developments in external demand, which mainly reflects the materialisation of the risks that were then identified, although in a greater degree (Table 2.1). These developments in economic activity, together with commodity price developments, also contributed to a higher than expected reduction in short-term interest rates. With regard to commodity prices, particularly oil, expectations implied in futures markets do not point to a significant change against those included in the *Economic Bulletin*-Winter 2008. The assumptions underlying the international environment considered in the current projections are still surrounded by high uncertainty, despite the materialisation of risks identified in the previous projections, particularly regarding both the magnitude and persistence of the current economic slowdown and the moment when a sustained recovery of economic activity worldwide is expected to start.

Table 2.1

ASSUMPTIONS UNDERLYING THE PROJECTION EXERCISE

			Current projection		EB Spring 2009	EB Winter 2008	
		2008	2009 (p)	2010 (p)	2009 (p)	2009 (p)	2010 (p)
External demand	yoy	1.2	-13.0	-0.5	-12.9	-2.5	1.7
Interest rate							
Short term	%	4.6	1.4	1.8	1.8	2.6	3.0
Long term	%	4.5	4.5	5.0	4.4	4.4	4.6
Exchange rate (+ = appreciation)							
Effective	yoy	4.8	0.1	0.6	-2.4	-3.8	0.0
Euro-US dollar	aav	1.47	1.36	1.40	1.29	1.28	1.28
Oil price							
in US dollars	aav	97.7	61.9	76.3	49.3	56.5	66.5
in euros	aav	65.5	45.2	54.7	38.2	44.3	52.1

Sources: Bloomberg, ECB, Thomson Reuters and Banco de Portugal calculations.
Notes: (p) - projected. yoy - year-on-year rate of change, % - per cent, aav - annual average value.

2.1. Interest rates and exchange rates

The assumption on the development of the short-term interest rate is based on expectations about the evolution of the three-month EURIBOR implied in futures contracts. Financial market participants estimate that after a strong decline in the first quarter of 2009, this rate is expected to fall further, albeit more moderately, up to the third quarter of 2009, to be followed by a very gradual upward trend until the end of the projection horizon, but nonetheless to levels clearly below the average values recorded in 2008. Hence, in annual average terms, the 3-month EURIBOR is expected to decline from 4.6 per cent in 2008 to 1.4 per cent in 2009, and to increase to 1.8 per cent in 2010. It should be mentioned in this context that the evolution of short-term interest rates is constrained by expectations regarding ECB intervention rates, which point to a gradual and limited increase over the projection horizon, and also by the behaviour of the risk premium implied in the money market, measured by the spread between the

interest rates of collateralised and uncollateralised operations. This spread widened sharply in mid-2007, with the outbreak of the current financial crisis, and remained at high levels during 2008, rising significantly in the second half of the year. During the first half of the current year, this evolution was reversed in a sustainable manner (Chart 2.1.1). The profile of future interest rate developments included in these projections assumes, implicitly, a slight decline in the interbank money market risk premium in the second half of the year, against the background of continued gradual fading away of financial market instability, followed by relative stabilisation in the course of next year, at levels above those observed prior to the outburst of the financial crisis in the Summer of 2007.

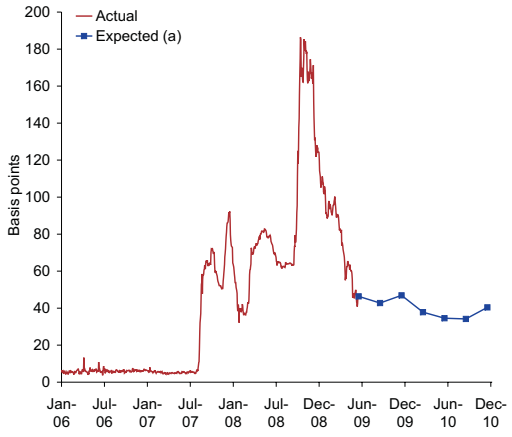
In addition, the widening of the yield spreads between non-financial corporate bonds and Treasury bonds over the past few quarters suggests an increase in the credit risk premium of these corporations, which may have also led to a tightening of financing conditions, with an impact on the financing costs through the banking system (Chart 2.1.2). The current projections includes a gradual easing in the restrictiveness level of credit standards, assuming a gradual narrowing of the spread between bank lending rates and money market rates. In addition to these spread developments, money market interest rates are projected to remain at lower levels during the projection horizon *vis-à-vis* 2008.

The information implied in 10-year government bond yields indicates that the key long-term interest rate level will stand at approximately 4.5 per cent in 2009, a level quite similar to that observed in 2008, and at close to 5 per cent in 2010.

Finally, the technical assumption on exchange rate developments considers that these will remain unchanged at the levels observed in mid-June 2009, implying an annual average marginal appreciation of the euro, in nominal effective terms, of 0.1 per cent in 2009 and 0.6 per cent in 2010 (7.3 per cent depreciation *vis-à-vis* the US dollar in 2009, followed by a 2.3 per cent appreciation in 2010), after a 4.8 per cent appreciation in 2008 (7.3 per cent *vis-à-vis* the US dollar).

Chart 2.1.1

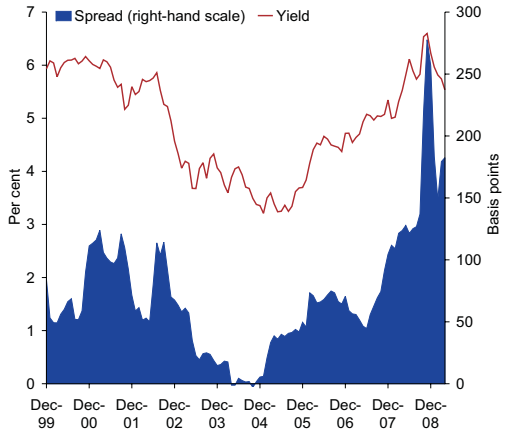
ACTUAL AND EXPECTED SPREAD BETWEEN EURIBOR AND 3-MONTH EONIA SWAPS



Sources: Bloomberg, Thomson Reuters and Banco de Portugal calculations.
Note: (a) Spread between the 3-month EURIBOR implicit in future contracts and the average expected EONIA rate (computed from the EONIA swap index) for the corresponding period.

Chart 2.1.2

PORTUGUESE NON-FINANCIAL CORPORATIONS BOND YIELDS AND SPREAD *VIS-À-VIS* GOVERNMENT BONDS OF A COMPARABLE MATURITY



Source: Barclays Capital.
Note: The average maturity of the non-financial corporate bonds considered is 7 years.

2.2. International prices

After having reached USD 134 per barrel in July 2008, in monthly average terms, oil prices declined sharply in the second half of the previous year, particularly in the last quarter, attaining a monthly average of USD 42 per barrel in December 2008. Since then, oil prices have resumed a moderate upward trend, to stand at values close to USD 70 per barrel in mid-June 2009. Expectations implied in futures market suggest that the moderate upward trend will continue up to the end of the projection horizon, to reach values close to USD 78 per barrel. In annual average terms, this profile implies a price decline from USD 98 per barrel in 2008, to approximately USD 62 in 2009, followed by an increase to around UDS 76 per barrel in 2010. Taking into account the above assumptions regarding the development of the euro/USD exchange rates, this profile should materialise in an annual average oil price of €45 per barrel in 2009 (€66 in 2008) and €55 in 2010.

Turning to non-energy commodity prices, available data point to a significant increase in these prices in 2008. Data on price developments obtained from contracts traded in futures markets point to a decline of approximately 10 per cent in food prices and 25 per cent in the other non-energy commodities in 2009, reflecting the impact on prices of the sharp fall in demand expectations. In 2010, prices in both components are expected to rise again, in a context of some anticipated recovery of world demand and, therefore, of demand for commodities.

2.3. International environment and external demand

Against the background of high uncertainty determined by the persisting international financial crisis, June 2009 Eurosystem's projections, published in the *ECB Monthly Bulletin*, and based on data available up to 13 May 2009, point to a GDP contraction between 4.1 and 5.1 per cent in the euro area in 2009. This corresponds to the sharpest decline in activity, in average annual terms, in the past few decades. These developments reflect not only a significant fall in exports, in line with the profile for the external demand for euro area goods and services, but also a contraction of domestic demand, especially of private investment, showing a trend largely constrained by the situation in financial markets, as well as by the deteriorating confidence of economic agents. This contraction in activity will likely to assume a long-lasting nature, and quarterly growth rates are projected to turn positive again only in 2010, implying that activity growth will lie between -1.0 and 0.4 per cent in annual average terms.

Projections for consumer price developments in the context of the same projection exercise point to a significant fall in inflation in the euro area, measured by the annual average rate of change of the HICP, from 3.3 per cent in 2008 to a value between 0.1 and 0.5 per cent in 2009. These developments largely reflect the previously mentioned fall in commodity prices, in particular oil prices, and are also conditioned by the effect on the evolution of profit margins stemming from the moderation projected for economic activity. In 2010, the HICP is expected to show a moderate increase, standing between 0.6 and 1.4 per cent. Against a background of wage moderation and increased productivity, these developments reflect limited growth of import prices, and a slight recovery of profit margins.

The external environment of the current projections implies a fall in the indicator of external demand for Portuguese goods and services of approximately 13 per cent in 2009, after having increased around 1 per cent in 2008. Since the early 1980s,[2] this indicator fell in annual average terms only in 1993 (by -1.8

(2) Data underlying the calculation of this indicator are only available since 1980.

per cent), illustrating the atypical nature of the current situation. The contraction of external demand reflects an unprecedented collapse of international trade worldwide, hence reflecting the interaction between world demand and the financial market crisis, which may have affected financing conditions of international trade. This situation is being augmented by the effects of the growing fragmentation of the productive chain at the international level, implemented over the last few decades, which has originated a new paradigm in the organisation of world production. The current projections for the international environment point to a marginal fall in external demand in 2010. Behind this is a reversal of the downward trend of external demand for Portuguese goods and services as of early next year. The assumption on the start of the recovery of economic activity, both worldwide and in the euro area, represents the main uncertainty and risk factor of the current projections for the Portuguese economy arising from the international environment (see "Section 7 *Uncertainty and risk analysis*").

2.4. Assumptions for public finance and administered prices

The current projections also reflect some Portuguese economy-specific assumptions, in particular those on the developments of public finance and administered prices.[3]

As a rule in the Eurosystem projection exercises, public finance projections only include budget policy measures that have already been approved in legal terms or specified in sufficient detail and with high probability of legislative approval. In the light of this principle, the projections have considered the measures approved in the course of 2008, including the fiscal stimulus measures adopted by the Council of Ministers in December, as well as those specified in the State Budget for 2009. As regards public consumption, developments in forthcoming years will also depend on the effect of the public administration reform, which essentially covers legally approved measures, but with a still uncertain impact. In this context, the projections assume a real increase in public consumption of 1.0 and 0.7 per cent in 2009 and 2010 respectively. These developments reflect the assumption of a stabilisation in the number of General Government employees and an increase in the volume of expenditure with medicine co-payments and contracts with private health care providers and with intermediate consumption, more expressive in 2009.

As regards the volume of public investment, the projections assume a significant rise in 2009, followed by a decline in 2010. The profile of public investment is significantly affected by the fiscal stimulus package approved by the Council of Ministers in December 2008.

Turning to indirect taxation, the current projections consider the impact in 2009 of the decline in the VAT standard rate from 21 to 20 per cent, effective as of 1 July 2008. In addition, these projections consider that the tax on oil products will be kept unchanged until the end of the projection horizon, and include the rise in vehicles sales and tobacco taxation approved in early 2009. Regarding the tobacco taxation, it should be mentioned that the increase registered in 2009 was clearly below that of 2008.

In what concerns other prices conditioned by administrative decisions, these projections include a 3.9 per cent cut in the price of natural gas in July 2009, according to the proposal of the national regulator (ERSE[4]). Contrary to the usual procedure, the projections consider slightly lower increases than those registered in recent years for the other administered prices, as a result of the constraints imposed by the current economic situation. In fact, increases in some of these prices were have been already lower than usual in early 2009, as in the case, for instance, of monthly combined passengers transports.

(3) For further details on these prices, see the ECB's methodological note on this subject, available at http://www.ecb.europa.eu/stats/pdf/hicp_ap.pdf.
(4) For further information, see the ERSE press release, at http://www.erse.pt/pt/imprensa/comunicados/2009/Paginas/comunicados.aspx.

3. SUPPLY

3.1. Output and sectoral developments

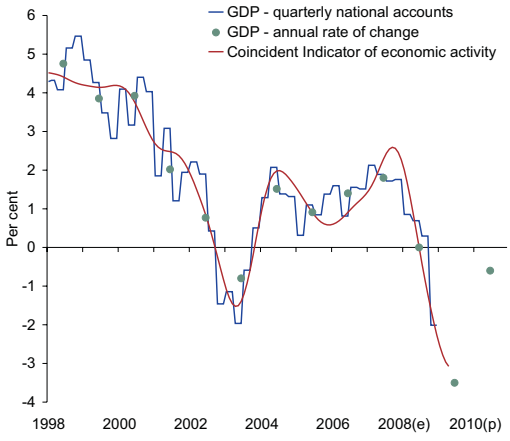
After stagnating in 2008, GDP is projected to sharply contract in 2009 (-3.5 per cent), followed by a limited reduction in 2010 (-0.6 per cent) (Chart 3.1.1). These developments are marked by the performance of activity in the private sector, as activity in the public sector is likely to contract substantially less than activity in the private sector in 2009 and to stagnate in 2010.[5]

At the sectoral level, activity in the manufacturing industry is projected to shrink strongly in 2009, followed by a limited drop in 2010, amid the progressive recovery of global economic activity. In 2009 the evolution projected for output in this industry is strongly marked by the contraction in the main markets of destination of Portuguese exports, as well as by the strong deterioration of demand prospects in the domestic market. In addition, available information points to an adjustment process of inventory levels, which certainly contributed to the fall in activity in this sector at the beginning of the current year. Projections for 2010 point to a smaller contraction, based on the assumption that the downward trend of the external demand for Portuguese goods and services will be reversed as from early 2010.

Activity in the construction sector is expected to contract over the projection horizon, in particular in 2009, associated with both the contraction of corporate investment and with the fall in residential investment. These developments are only partially counterbalanced by the evolution of public investment included in the set of assumptions underlying the current projection, which reflect the fiscal stimulus measures approved at the end of 2008 and due to be implemented in the course of the current year.

Chart 3.1.1

GROSS DOMESTIC PRODUCT
Year-on-year rate of change



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

(5) Public sector output corresponds to general government expenditure on primary factors intended for the supply of public goods and services, particularly staff costs and fixed capital consumption. Private sector output is obtained as the difference between total output and public sector output, thus including general government intermediate consumption expenditure on goods and services produced by the private sector.

With regard to the services sector, activity is also projected to contract both in 2009 and in 2010, albeit far less than in the manufacturing industry and construction sectors. These developments are likely to be associated with the evolution of household consumption expenditure and of services exports, in particular in what concerns the tourism sector, which is likely to continue to be strongly affected by the deterioration of economic activity in advanced economies and, in particular, in the main countries of origin of tourists visiting Portugal (United Kingdom and Spain).

Against a background of uncertainty about the nature of the current economic contraction, the assessment of potential output growth and of the level of the output gap is particularly sensitive to the assumptions underlying their estimates, and therefore results should be interpreted with special caution. The current projections are based on the assumption that GDP will sharply fall, particularly in 2009, turning the identification of the economy's current cyclical position and potential output growth subject to a much higher degree of uncertainty than usual. This identification is typically more difficult for contemporaneous values, as it implies an assumption about the future trend of activity that may fail to materialise. Notwithstanding these difficulties, the qualitative assessment points in general to a very significant negative change in the output gap between 2008 and 2010, corresponding to a GDP growth below the estimated potential growth for the most recent period.

3.2. Employment

Developments in employment over the projection horizon will be marked by the strong contraction of economic activity, which will continue to affect significantly the demand for labour over the projection horizon. Thus, after 0.4 per cent growth in 2008, employment is projected to fall by 2.6 per cent in 2009, followed by a further reduction of 1.5 per cent in 2010.

The evolution of employment in 2008 and the current projection for 2009 imply a fall in apparent labour productivity, as measured by output per worker, which will reflect, inter alia, the maintenance of a level of employment that is not fully used in the production process,[6] as well as changes in hours actually worked. In 2010 labour productivity is projected to increase, albeit only marginally.

Concerning labour supply, it should be noted that over the past few years it has been marked by an increase in the activity rate, reflecting both the rise in female labour market participation and the promotion of active ageing. However, these factors are likely to have already reached their maturity and therefore the participation rate is assumed to remain unchanged over the projection horizon. This evolution of the participation rate, in conjunction with low population growth, implies the stagnation of the labour force until the end of the projection horizon, in contrast to an average growth of approximately 1 per cent in the last decade.

Developments in employment over the projection horizon are strongly marked by the performance of employment in the private sector, which after 0.7 per cent growth in 2008, is likely to fall by around 3 per cent in 2009, followed by a drop of approximately 2 per cent in 2010. With regard to public sector employment, after a net reduction in the number of employees in the past few years, the level of employment is assumed to stabilise over the projection horizon (see "Section 2 *Assumptions underlying the projection exercise*").

(6) It should be noted that the retention of workers in these circumstances may result either from the difficulty of adjustment of employment for legal reasons, or from the strategy of some firms to avoid the destruction of specific human capital, *i.e.* incur in unrecoverable costs resulting from the transmission of firm-specific skills. Thus, in situations of rapid slowdown in economic activity, firms may avoid firing workers with specific skills, also contributing to the existence of a lag between the employment and the output cycle.

3.3. Economic growth factors

Output growth may be analysed as the result of the contribution of inputs – capital and labour – and their total productivity, through a simple growth accounting exercise using the Cobb-Douglas production function.[7] Although this exercise makes it possible to organise information about aggregate supply, it suffers from some shortcomings. In particular, total factor productivity is obtained as a residual, implying that it is not a measure of efficiency in production, but also the result of variables that are not explicitly included in the growth accounting exercise, as for instance the quality of productive factors or the degree of capacity utilisation.

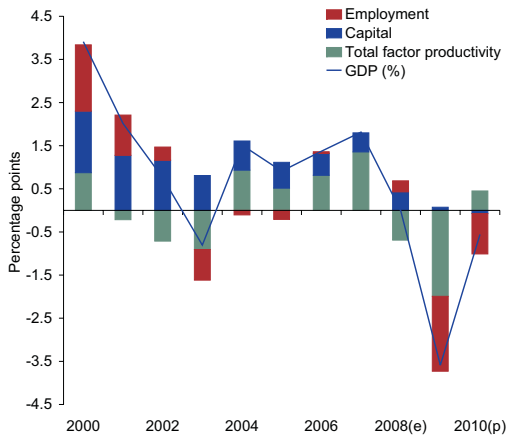
The contribution of the capital stock to economic activity growth is expected to decline over the projection horizon, decreasing from 0.4 p.p. in 2008 to close to zero in 2009 and in 2010 (Chart 3.3.1). These developments translate the stagnation of the capital stock over the projection horizon at the levels recorded in 2008, in a context in which the contraction of GFCF recorded in 2008 and projected for 2009 and 2010 may imply that the investment volume will stand at a level close to that of the depreciation of the capital stock.

The contribution of the labour factor to output growth is estimated to be negative both in 2009 and in 2010 (-1.7 p.p. and -0.9 p.p. respectively), in contrast to a positive contribution of 0.3 p.p. in 2008, in line with the developments projected for employment.

Finally, the contribution of total factor productivity to output growth is estimated to be particularly negative in 2009 (approximately -2 p.p.), after a negative contribution of around 1 p.p. in 2008. In 2010 total factor productivity is likely to make a positive contribution of around 0.5 p.p. The reduction of the level of total factor productivity in 2008 and 2009 is likely to reflect both the less intensive utilisation of installed capital (Chart 3.3.2.), and the influence of the already referred phenomenon of maintenance of a level of employment that is not fully used in the production process. In addition, it should be noted

Chart 3.3.1

GROWTH ACCOUNTING 2005-2010
Contribution to the rate of change



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

(7) For a discussion of this methodology, see, Almeida, V. and R. Félix (2006), "Computing potential output and the output gap for the Portuguese economy", Banco de Portugal, *Economic Bulletin*-Autumn.

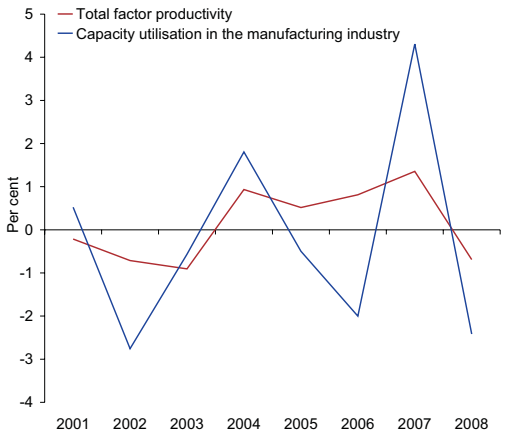
that the persistence of a number of structural rigidities in the Portuguese labour market may condition the adjustment of the number of hours worked, also translating into a deterioration of productivity.

A comparison of the period 2007-2010 with previous recessive episodes of the Portuguese economy (1991-1994 and 2001-2004) shows marked contrasts as regards both developments in GDP and the contribution of each input factor and total productivity (Chart 3.3.3). While between 1991 and 1994 the annual average growth of GDP stood at around 2 per cent, between 2001 and 2004 it was far lower, approximately 1 per cent, and according to the current projection it is expected to decline by around 0.6 per cent, between 2007 and 2010, revealing the unprecedented nature of the ongoing recession phase. In addition, the smaller output growth in the most recent period embodies a sharp fall in the contribution of all components, in particular of the capital stock. This may reflect the repayment of the huge flows of investment made in the 1990s, as well as the weak performance of investment in this period. Concerning the contribution of the labour input it exhibits a particularly negative contribution, in contrast to the other two periods of recession, which reflects on the one hand a weaker employment growth in the private sector and on the other hand the recent net reduction in the number of civil servants (see "Section 2 *Assumptions underlying the projection exercise*"). Finally, the negative contribution of total factor productivity is quite similar to that made in the period 2001-2004.

Chart 3.3.2

TOTAL FACTOR PRODUCTIVITY AND CAPACITY UTILISATION IN THE MANUFACTURING INDUSTRY

Year-on-year rate of change

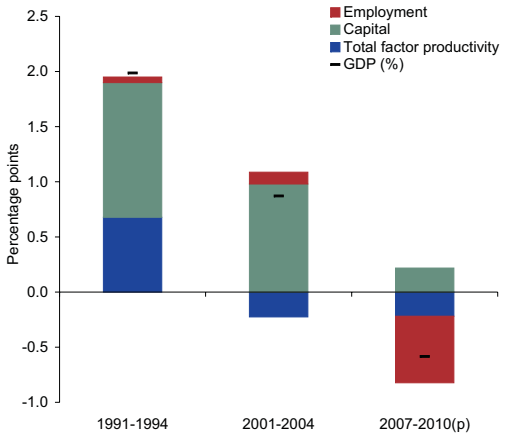


Sources: European Commission and Banco de Portugal.

Chart 3.3.3

COMPARISON OF GROWTH ACCOUNTING: 1991-1994, 2001-2004 AND 2007-2010

Contribution to the annual rate of change



Source: Banco de Portugal.
Note: (p) - projected.

4. DEMAND

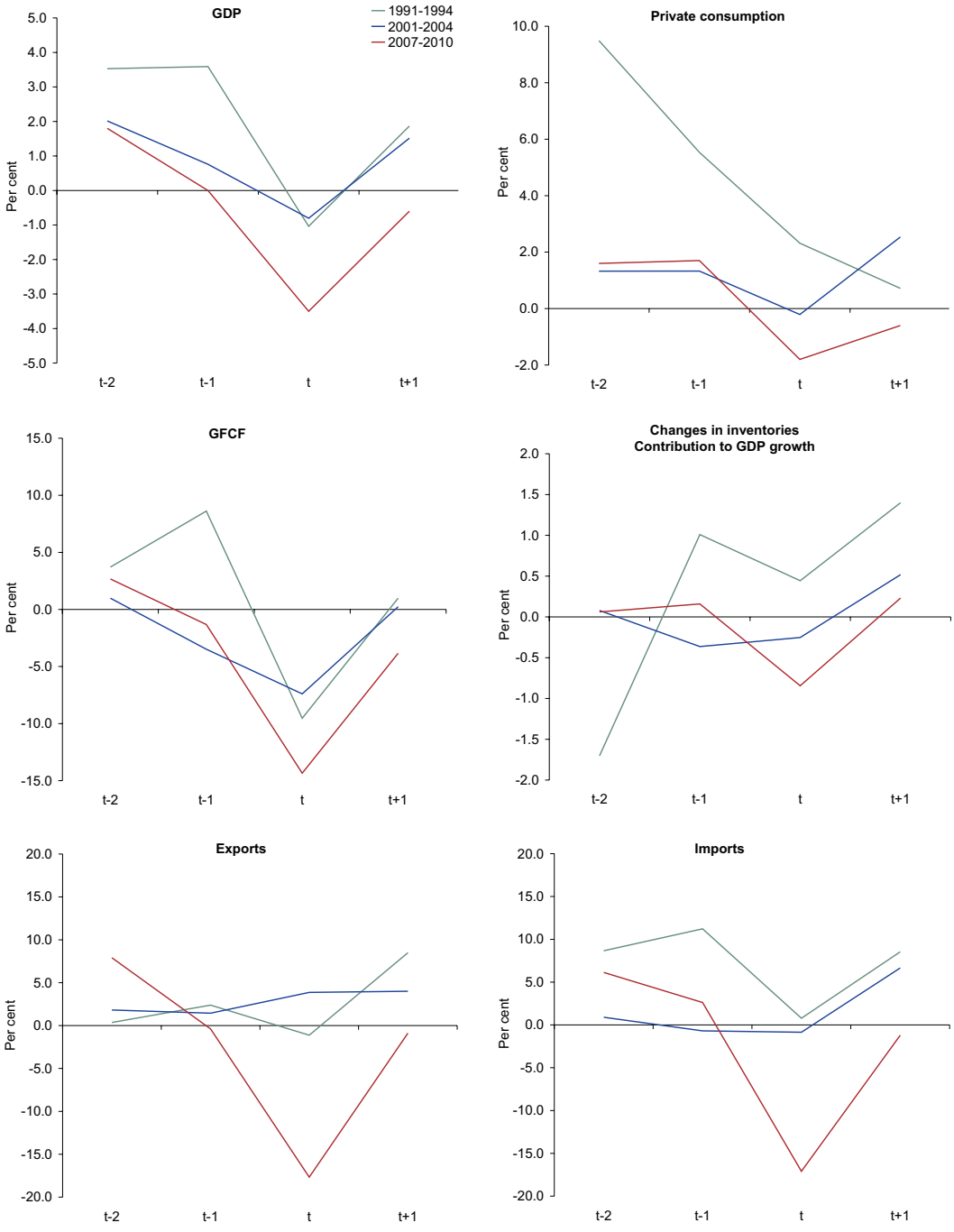
In an environment of a significant slowdown in worldwide economic activity, the Portuguese economy decelerated markedly throughout 2008, giving rise to the stagnation of GDP in average annual terms. The deceleration was particularly intense at the end of 2008 and in the first quarter of 2009. According to the current projection, this period marks the beginning of a recession, which is projected to be the most profound and long-lasting of the last decades.

The unprecedented in terms of magnitude and nature of the current economic downturn can be put into perspective by comparing it with the previous recession episodes (Chart 4.1). In the past 20 years two such episodes took place. However, the contraction of GDP had never been of a similar magnitude and had never lasted for two consecutive years. The analysis of the projected developments of the

Chart 4.1

DEVELOPMENTS IN GDP AND EXPENDITURE COMPONENTS IN RECESSION EPISODES

Rate of change



Sources: *INE* and Banco de Portugal.

components of overall demand leads to the conclusion that this recession envisages an unusual drop in investment and exports. This reflects the impact of the economic and financial crisis on investment decisions and demand expectations, and in particular the collapse of international trade that we have been witnessing since the end of 2008. The current projection foresees a reduction in private consumption in both 2009 and 2010. These developments also differ from those seen in previous reces-

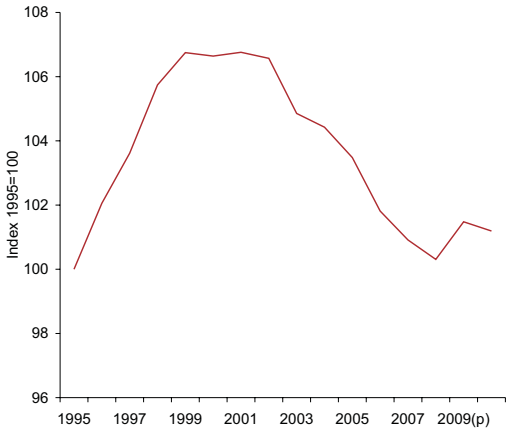
sion episodes, given the current environment of strongly deteriorating labour market conditions, huge uncertainty and high indebtedness level, and less favourable financing conditions for households than in the previous recession episode.

The current contraction can also be put into perspective by comparing the performance of the Portuguese economy with developments in the euro area in the 1995-2010 period (figures for 2009 and 2010 are based on the current projection for Portugal and on the midpoints of the projection ranges for the euro area, published in the June 2009 issue of the ECB *Monthly Bulletin*). As regards economic activity, the cumulative growth differential between the Portuguese and the euro area economy narrowed continuously over the 2001-2008 period, leading to the return to a relative GDP level close to that of the mid-1990s (Chart 4.2). The current projections imply a slightly positive growth differential in the 2009-2010 period.

A more detailed analysis shows that all major overall demand components registered negative growth differentials *vis-à-vis* the euro area over the 2001-2008 period, with the exception of private consumption (Chart 4.3). This feature portrays the positive aspects of a monetary union that allows for risk sharing and consumption smoothing over the years for member countries. This profile was reflected in the evolution of imports, in spite of the continued increase in the import content of overall demand. Over the projection horizon, this pattern of development is expected to continue in the components of overall demand. However, mention should be made of the particularly strong contraction in imports as compared with projections for the euro area, which besides the contraction in overall demand also reflects a very significant reduction in import penetration.

Chart 4.2

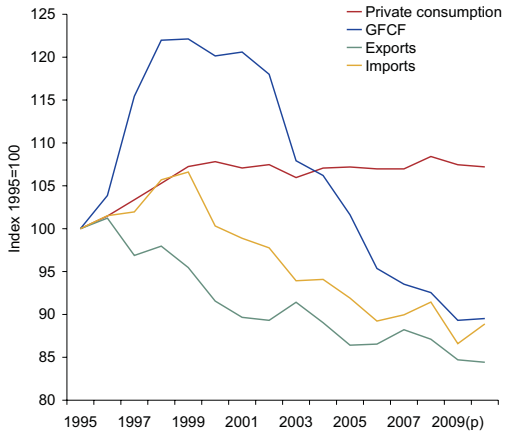
GROSS DOMESTIC PRODUCT
Cumulative growth differential *vis-à-vis* the euro area



Sources: ECB, Eurostat, *INE* and Banco de Portugal.
Note: (p) - projected.

Chart 4.3

GDP COMPONENTS
Cumulative growth differential *vis-à-vis* the euro area



Sources: ECB, Eurostat, *INE* and Banco de Portugal.
Note: (p) - projected.

4.1. Private consumption

In 2008 private consumption continued to grow at a similar pace to that in the previous year (1.7 per cent). The current projection encompasses a contraction in private consumption of 1.8 per cent in 2009, followed by a reduction of 0.6 per cent in 2010. This implies that the household savings rate will increase markedly in 2009, remaining virtually flat in the following year. Nevertheless, the projection points to the maintenance of a positive gap between the evolution in private consumption and in overall

economic activity, as observed in the past and in line with the usual smoother development in consumption (Chart 4.1.1). However, in contrast with 2008, and similarly to the previous downturn, the current projection for private consumption for Portugal points to lower growth than in the euro area, taking as references the midpoints of the projection ranges published in the June 2009 issue of the ECB *Monthly Bulletin*, (Chart 4.1.2).

The increase in household consumption expenditure in 2008 reflected, to a large extent, growth in real disposable income, which recorded a value close to 2 per cent (-0.5 per cent in 2007), in an environment of some improvement in labour market conditions. Although decelerating over the year, the growth of bank loans to households seems to have helped to sustain, to some extent, the consumption dynamics.

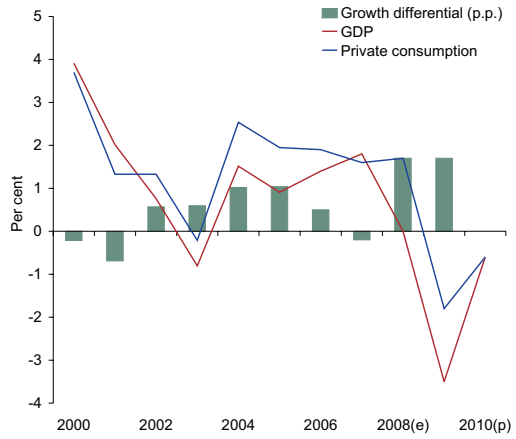
The anticipated reduction in private consumption in 2009 and 2010 is expected to reflect the uncertainty surrounding households' income and wealth prospects associated with the deteriorating labour market conditions, notwithstanding the gradual easing of financing conditions. Although the underlying assumptions include a reduction in interest rates in comparison to 2008 and assume a gradual normalisation of financing conditions over the projection horizon, credit conditions are expected to remain tighter than in the period preceding the onset of the financial crisis, namely owing to the risk revaluation and to the tightening of credit standards. In particular, and despite the growth in customer deposits, the tighter financing conditions for Portuguese banks borrowing in international markets, compared to those prevailing before the onset of the turbulence in these markets, are expected to reduce the supply of banking products that make possible to adapt debt servicing to the capacity of households budgets. The results of the April 2009 bank lending survey suggests a tightening of the credit standards applied to consumer credit and other lending to households, as seen throughout 2008.

According to available information, in 2008 the household savings rate interrupted the downward trend observed since 2003 (Chart 4.1.3). This behaviour seems to reflect, in particular, precautionary motives related with the increased uncertainty and continued deterioration of consumer confidence throughout the year (Chart 4.1.4). An increase in the level of saving is anticipated for the projection ho-

Chart 4.1.1

PRIVATE CONSUMPTION AND GDP

Rate of change

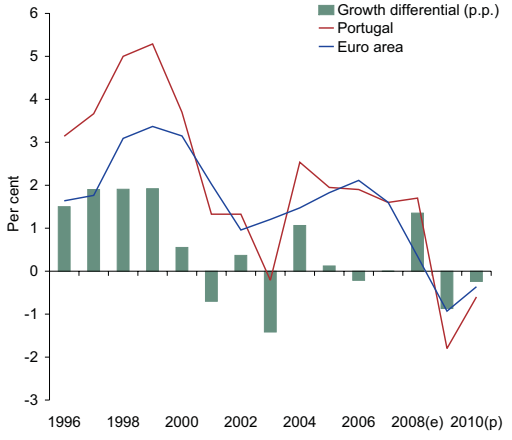


Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

Chart 4.1.2

PRIVATE CONSUMPTION IN PORTUGAL AND IN THE EURO AREA

Rate of change

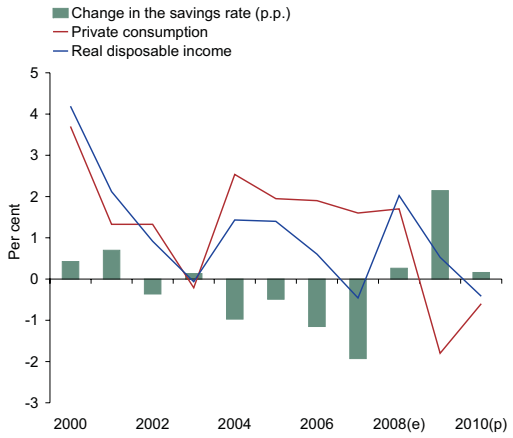


Sources: ECB, Eurostat, *INE* and Banco de Portugal.
Notes: (e) - estimated; (p) - projected. Euro area figures correspond to the midpoints of the projection ranges published in the June issue of the ECB *Monthly Bulletin*.

Chart 4.1.3

PRIVATE CONSUMPTION, DISPOSABLE INCOME AND SAVING RATE

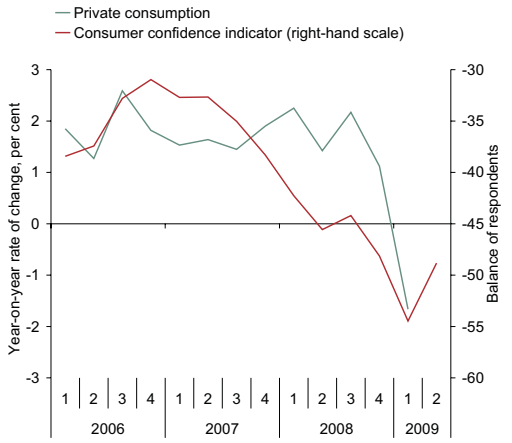
Rate of change



Sources: *INE* and Banco de Portugal.
Notes: (e) - estimated; (p) - projected. The saving rate is calculated as a percentage of disposable income.

Chart 4.1.4

PRIVATE CONSUMPTION AND CONSUMER CONFIDENCE



Sources: European Commission and Banco de Portugal.
Notes: The levels for the second quarter of 2009 are based on the assumption that the monthly indicator for June will remain unchanged at the level of the latest figure available (May).

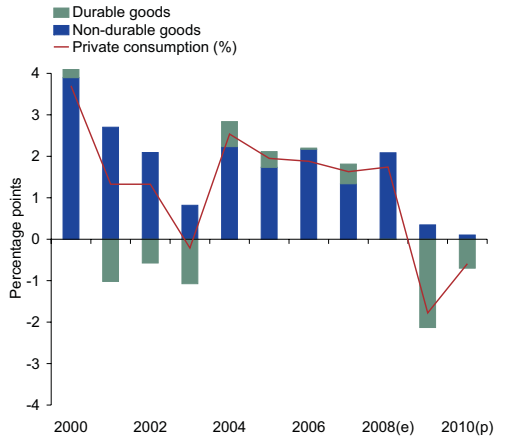
rizon, particularly in 2009. Households are expected to intensify the adjustment of their financial situation to the economic prospects, namely due to the revaluation of their income and wealth levels, the expected deterioration of labour market conditions and the need to comply with the debt services associated with the outstanding loans, notwithstanding lower interest rates levels than those prevailing in 2008.

The breakdown of private consumption growth shows that the increase in household expenditure in 2008 was restricted to the non-durable goods and services component (Chart 4.1.5). The consumption of durable goods remained virtually unchanged, constrained by a set of changes in taxation that

Chart 4.1.5

BREAKDOWN OF PRIVATE CONSUMPTION

Contribution to the growth rate



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

took place in 2007 and 2008, in particular in taxes on motor vehicles (see Banco de Portugal, *Annual Report* 2008). A very significant reduction in spending on durable goods is expected in 2009 and 2010, reaching 20.6 per cent in 2009 and 8.3 per cent in 2010, portraying the usual strong pro-cyclical behaviour of this component. According to the quarterly national accounts, this component decreased sharply in the first quarter of 2009, and available information for the second quarter points to the maintenance of very negative year-on-year rates of change. The non-durable goods and services component, which typically presents smoother cyclical behaviour, is expected to show a small increase in both 2009 and 2010.

4.2. Investment

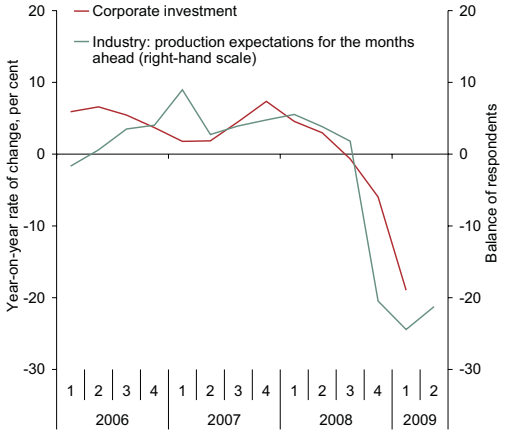
After having recorded a positive development in 2007 (2.7 per cent), GFCF fell once again in 2008 (-1.3 per cent). The current projection envisages a contraction of around 14 per cent in 2009 and a reduction of around 4 per cent in 2010.

The evolution of GFCF in 2008 was characterised by a clear deceleration throughout the year, with particular emphasis on the significant contraction in year-on-year terms witnessed in the fourth quarter. The deterioration of the economic and financial situation throughout 2008, both at the internal and international level, had a very negative impact on the investment decisions of households and corporations. In particular, there was a continued worsening of demand expectations in a context of high uncertainty, as well as a widespread deterioration of financing conditions. According to the quarterly national accounts, the fall in GFCF deepened further in the first quarter of 2009, contributing to the current projection of a very sharp decline in GFCF in the current year. In 2010 GFCF is expected to contract again, although less markedly than projected for 2009, against a background of a gradual easing of international financing conditions over the projection horizon. These are anticipated to contribute to a gradual recovery of global economic growth in 2010, and to less negative developments in overall demand.

The breakdown of GFCF by institutional sector shows that corporate investment decelerated strongly in 2008, in line with the deterioration in the expectations of economic agents regarding the behaviour of demand. This was apparent in the evolution of a number of indicators, namely industrial production expectations (Chart 4.2.1). In annual terms, corporate investment decelerated 3.7 p.p. to 0.2 per cent. According to the latest investment survey conducted by *Instituto Nacional de Estatística - INE* (Statistics Portugal), published in January 2009, 48.6 per cent percentage of the enterprises reported investment constraints in 2008, which represents a considerably revision *vis-à-vis* the figure published in the survey carried out in July 2008 (42.5 per cent). In fact, the number of enterprises identifying the deterioration of sales prospects as the main factor limiting investment increased considerably. Albeit to a lesser extent, the relative importance of difficulties in obtaining credit also increased as the main factor limiting investment, in contrast to the decrease in the relevance of the interest rate level. A very negative rate of change in corporate investment is expected for 2009 (-18.2 per cent), contributing significantly to the reduction of overall GFCF (Chart 4.2.2). The projected developments in corporate investment for 2009 reflect deteriorating expectations of order book from both residents and non-residents. Furthermore, financing conditions are projected to remain tight, particularly in early 2009, despite lower interest rates levels and a gradual easing of financing conditions over the projection horizon. As a percentage of GDP, the current projection implies that this type of investment, which is essential to intensify both in quantitative and qualitative terms so as to ensure a sustained recovery of economic activity and of potential output, is expected to revert to levels comparable to those recorded in the mid-1990s (Chart 4.2.3). Corporate investment is projected to decline around 3 per cent in 2010, reflecting an evolution in line with expected developments in the private sector economic activity.

Chart 4.2.1

CORPORATE INVESTMENT AND INDUSTRIAL PRODUCTION EXPECTATIONS

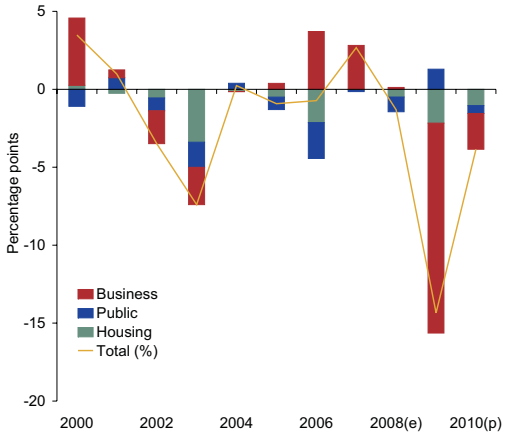


Sources: European Commission and Banco de Portugal.
Note: The levels for the second quarter of 2009 are based on the assumption that the monthly indicator for June will remain unchanged at the level of the latest figure available (May).

Chart 4.2.2

BREAKDOWN OF GFCF BY INSTITUTIONAL SECTOR

Contribution to the growth rate



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

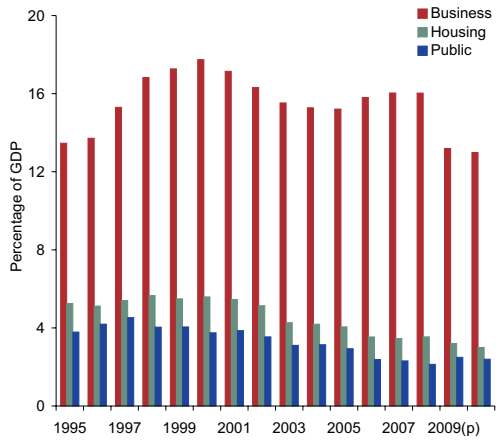
Residential investment decreased around 3 per cent in 2008, after recording a positive growth in the second half of 2007. This type of investment exhibited a negative trend between 2001 and 2008, with a cumulative decline of over 30 per cent. Residential investment will be strongly affected by the current financial crisis owing to the high household indebtedness level and the need to service that debt, as well as due to the large share of this type of investment which is financed through bank credit. Furthermore, housing investment is expected to be highly affected by the deterioration of the labour market situation and, consequently, of the income prospects. The quarterly national accounts for the first quarter of 2009, as well as available information for the second quarter of the year, point to the maintenance of a strong negative trend in this GFCF component in the current year. In addition to the survey indicators, mention should be made to the sharp reduction in cement sales by Portuguese companies in the domestic market. For 2009, the current projection foresees a reduction of around 13 per cent in residential investment and, consequently, a further drop as a percentage of GDP (Chart 4.2.3). The current projection envisages a further decline in 2010, although less pronounced than in the previous year (-6.2 per cent).

GFCF of the general government is expected to evolve in line with the assumed evolution of the public finance variables described in the assumptions underlying the current projection.

In line with the quarterly national accounts, the current projection also incorporates a marked drop in inventory levels in the first quarter of 2009, which seems to be broadly based across most European countries. Estimates of Banco de Portugal for the second quarter of the year are consistent with the intensification of this drop in inventories. From the second half of 2009 onwards, the current projection assumes a gradual decline in the drop over the projection horizon, which implies a contribution to GDP growth of 0.2 p.p. in 2010, following a contribution of -0.8 p.p. in 2009.

Chart 4.2.3

GFCF: BREAKDOWN BY INSTITUTIONAL SECTOR



Sources: *INE* and Banco de Portugal.
Note: (p) - projected.

4.3. External trade

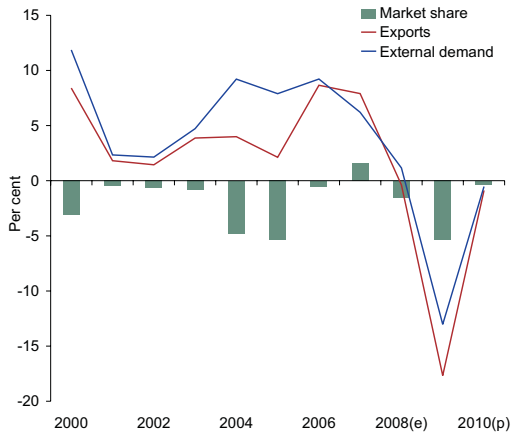
After a -0.4 per cent change in volume in 2008, the current projection foresees for 2009 an unprecedented contraction in exports, by historical standards (of nearly 18 per cent), followed by a very moderate reduction in 2010 (-0.9 per cent). These developments reflect the collapse of international trade observed since the last quarter of 2008, though a modest and gradual reversal is expected in the course of 2010 (Chart 4.3.1).

The pattern of intra-annual export developments in the course of 2008 continued to follow the decelerating trend observed since the beginning of 2007, and started to record strongly negative changes as from the last quarter of the year. In fact, the interaction of the financial crisis with global economic activity origined a strong contraction in worldwide demand, which in turn translated into an intense and progressive decline in external demand for Portuguese goods and services. The contraction in international trade may be reflecting, to a great extent, the postponement of investment and consumer expenditure, in particular of durable consumer goods, owing to the uncertainty related with the current economic environment, which may have been deepened by credit constraints to exports on a global scale. Furthermore, the increasing fragmentation of the production chain at a global scale, witnessed over the past decades, gave rise to a new paradigm of world organisation of production and may have helped to increase the import content of exports.

Developments in a small open economy, as the Portuguese, had naturally to be affected by this strong deterioration in external demand for Portuguese goods and services, in particular as from the last quarter of 2008 onwards. Against this background, the current projection envisages a substantial contraction in exports in 2009 (around 18 per cent). This projection already incorporates international trade data published in the meantime by *INE* for the first months of the year, which present a significant decline in comparison to the previous year. In fact, in the January-April period, nominal exports of goods dropped by nearly 30 per cent in year-on-year terms. In 2010 exports are expected to pick up moderately over the year as the effects of the current international environment gradually fade out. However, the average growth of exports is projected to be slightly negative (-0.9 per cent), in particular due to the pronounced downward profile of exports in the ongoing year.

Chart 4.3.1

EXPORTS AND EXTERNAL DEMAND
Rate of change

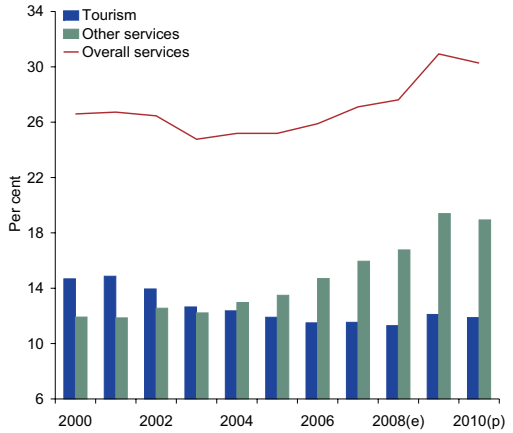


Sources: ECB, *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

In the most recent period, the services market has presented a more dynamic evolution than the goods market, which have been accompanied by the maintenance of a relatively stable market share in world exports of services (see "Box 4.1 *The structural evolution of services exports in the Portuguese economy*", Banco de Portugal *Annual Report* 2008). Following this trend, exports of services are anticipated to continue to increase their share in total exports in the current cyclical downturn (Chart 4.3.2). In fact, the contraction projected for 2009 is more pronounced in exports of goods, although also extensive to exports of services, and in particular tourism, which is usually more sensitive to the economic cycle (Chart 4.3.3). In a context of a marked contraction of economic activity in the markets of origin of tourists visiting Portugal (in particular, Spain and the United Kingdom), a sizeable drop of nearly 12 per cent is expected in exports of tourism in 2009 (-2.5 per cent in 2008).

Chart 4.3.2

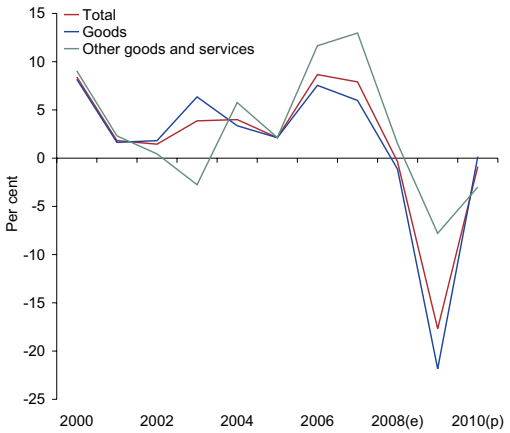
SHARE OF EXPORTS OF SERVICES IN OVERALL EXPORTS



Source: Banco de Portugal.
Note: (e) - estimated; (p) - projected.

Chart 4.3.3

EXPORTS
Rate of change



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

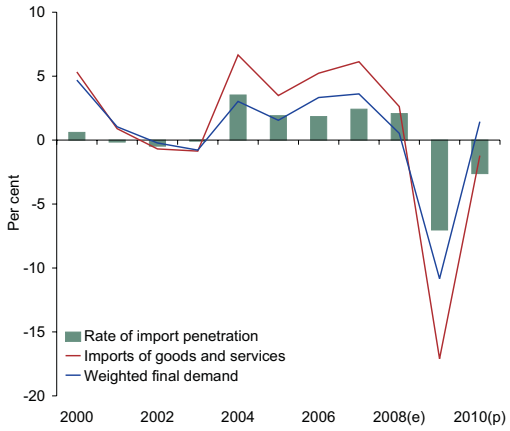
According to the current projection, the contraction in the exports of goods is projected to be much larger than the decline in external demand for Portuguese goods and services in 2009. These developments largely reflect information on external trade available for the first half of the year, as well as more recent estimates of demand developments in the markets of destination of Portuguese exports. Nonetheless, it should be noted that the level of external demand, measured by the commonly used indicator, has presented particularly high volatility in the current environment and may be subject to sharper revisions than usual, considering the unprecedented magnitude of the collapse of international trade. From the second half of 2009 onwards, the current projection envisages the virtual maintenance of export market shares.

Regarding imports of goods and services, the current projection foresees a significant drop in 2009 (-17.1 per cent), in contrast to the growth observed in the previous year (2.6 per cent) (Chart 4.3.4). This contraction stems from the considerable slowdown in overall demand included in the current macroeconomic projection, in particular in the demand components with higher import content: durable goods consumption, corporate investment and exports of goods. As mentioned earlier, the current projection envisages a marked drop in inventories in 2009, in line with the data from the quarterly national accounts for the first quarter of the year. This feature, which tends in general to characterise the inventory cycle in downturns, may also be associated with the considerable decline in imports in the first months of the year.

The 2009 projection already incorporates the information available for the beginning of the year, which shows a substantial decline in imports of both merchandise and other goods and services. The reduction in import penetration projected for 2009 is a feature that characterises cyclical downturns, and is expected to be particularly pronounced in the present environment, considering the magnitude of the current recession. For 2010, imports are anticipated to decline marginally. This decline is expected to be concentrated in the goods component following the gradual stabilisation of overall demand.

Chart 4.3.4

IMPORTS AND WEIGHTED FINAL DEMAND
Rate of change



Sources: *INE* and Banco de Portugal.
Note: (e) - estimated; (p) - projected.

5. INFLATION

According to the current projections, after 2.7 per cent growth in 2008, the average annual rate of change of the HICP is expected to stand at -0.5 per cent in 2009 and 1.3 per cent in 2010. The fall in consumer prices in 2009 reflects in particular the sharp drop in energy prices (average annual change of -7.2 per cent, compared with 6.6 per cent in 2008), which are expected to return to a positive growth of 5.9 per cent in 2010. Although to a lesser extent, the pace of growth of the non-energy component of the HICP is also likely to moderate in 2009, to 0.2 per cent (2.2 per cent in 2008), accelerating to 0.7 per cent in 2010.

The 0.5 per cent fall in consumer prices in 2009, incorporated in the current projection, does not correspond to a deflation phenomenon, since it is temporary and not broadly based across most HICP components.[8]

In the early months of 2009, the annual growth rate of the HICP continued to be lower than that of the euro area as regards the unprocessed food and industrial goods components – similarly to 2008 –, and a negative differential emerged regarding services, which was influenced by the performance of some tourism-related items.[9] These developments are expected to contribute to the negative differential *vis-à-vis* the euro area inflation of 0.7 p.p. assumed in the projections for 2009 (close to the figure recorded in the previous year), taking as a reference the mid-points of the ranges underlying the Eurosystem projections disclosed in the June 2009 issue of the ECB *Monthly Bulletin* (Chart 5.1). The current projection is based on the assumption that this differential will fade over the projection exercise, with a marginally positive differential being expected for 2010.[10]

In intra-annual terms, the reduction in the HICP projected for 2009 reflects particularly significant year-on-year drops in the second and third quarters, with a return to positive year-on-year rates of change being projected to occur towards the end of the year (Chart 5.2). These developments translate the negative rates of change projected for energy prices in the first three quarters of 2009, as well as the deceleration of the non-energy component throughout the same period. In 2010, the non-energy component is expected to follow a somewhat accelerating path, in year-on-year terms, in the first half of the year, stabilising thereafter, while energy goods will be on a downward path, in particular in the first half of the year. These diverging developments are expected to lead to a relative stability of overall inflation in the course of 2010 at values slightly above 1 per cent.

Developments projected for the energy component of the HICP are in line with the assumptions for oil prices in euro terms (see "Section 2 *Assumptions underlying the projection exercise*"). Thus, the year-on-year rate of change in this component is expected to be around -11 per cent until the second half of 2009 and to accelerate markedly at the end of the year, resuming positive growth rates. In 2010, after some deceleration in the first half of the year, year-on-year rates of change of energy prices are projected to remain relatively stable at around 4 per cent in third and fourth quarters.

The particularly marked profile projected for consumer prices throughout 2009 also reflects a persis-

(8) Deflation is usually defined as a sustained fall of an aggregate price measure, such as the consumer price index or the GDP deflator. This definition also assumes that the price reduction corresponds to a widespread phenomenon, and not to a change in relative prices or to a shock in the terms of trade. For more detailed information, see "Box 2 *Recent consumer price developments and deflation risks in the euro area*", Banco de Portugal, *Economic Bulletin-Spring 2009* and Faulkner-MacDonagh, C. *et al.* (2003) "Deflation: Determinants, Risks, and Policy Options", *IMF Occasional Papers* 221, International Monetary Fund.

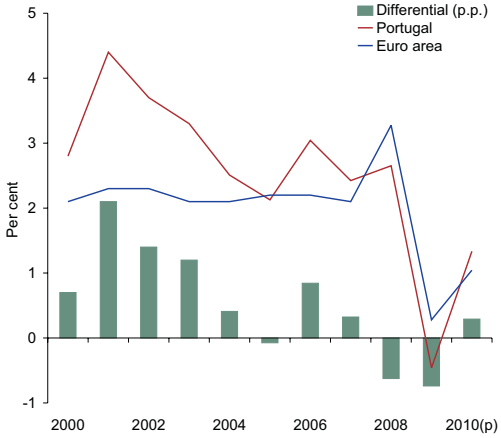
(9) In particular, accommodation, package holidays and air transport services have showed in the months up to June 2009 significantly negative year-on-year rates of change in Portugal, in contrast to the euro area.

(10) In addition, the differential between projections for inflation in Portugal and in the euro area is also conditioned by the 1 p.p. reduction in the standard VAT rate in 2008, whose effects on the annual rate of change in the HICP will only unwind in July 2009.

Chart 5.1

INFLATION IN PORTUGAL AND IN THE EURO AREA

Annual rate of change

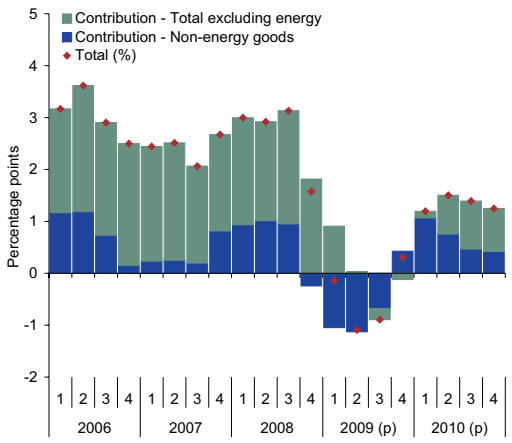


Sources: ECB, Eurostat, *INE* and Banco de Portugal calculations.
Notes: (p) - projected. Euro area figures correspond to the midpoint of the projection ranges published in the June issue of the ECB *Monthly Bulletin*.

Chart 5.2

INFLATION AND CONTRIBUTION OF ENERGY AND NON-ENERGY GOODS

Year-on-year rate of change



Sources: *INE* and Banco de Portugal calculations.
Note: (p) - projected.

tent deceleration of the HICP excluding energy, which has already been observed since the end of 2008 and is likely to continue until the last quarter of the year. This translates to a large extent the projected dynamics of the food component, which is marked by base effects resulting from the high rise in the prices of food commodities in early 2008 (Chart 5.3).[11] In the first months of 2009, in addition to the downward impact of these base effects, the annual rates of change in this component were also conditioned by the fact that the monthly growth rates of food prices were particularly muted.

The HICP excluding food and energy is also expected to slowdown in 2009, in a context of strong contraction of demand, which will prevent firms from reflecting the relatively high growth projected for unit labour costs in 2009 in their final price, thereby implying a squeeze on profit margins. The maintenance of the pace of growth of unit labour costs at a relatively high level in 2009 mirrors the projected reduction in productivity (see "Section 3.1 *Supply*"), as the average growth of compensation per employee is expected to be subdued over the projection horizon compared with past years, in a context of significant contraction of economic activity and a sharp rise in unemployment.

After the strong fall projected for 2009, in 2010, the growth of the non-energy import deflator is expected to contribute to a slight acceleration of HICP excluding food and energy in the first half of the year, in parallel with some moderation of the pressure on demand, which may lead to a slight recovery in profit margins.

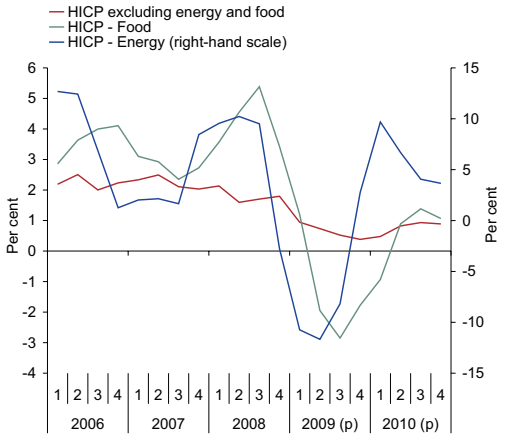
It should be noted that in 2008, most notably towards the end of the year, and throughout the first half of 2009, some indicators of inflation expectations have been showing a downward trend, although in the case of the Consensus Forecasts, they are still above 1 per cent for 2010, i.e. close to the inflation projection of Banco de Portugal for the current year (Chart 5.4).

(11) In June 2009, this effect was reinforced by the impact of disturbances in the distribution of unprocessed food occurred n the corresponding month of the previous year.

Chart 5.3

HICP BREAKDOWN

Year-on-year rate of change

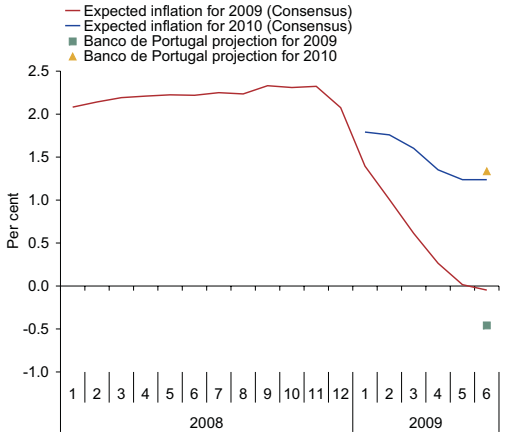


Sources: Eurostat, *INE* and Banco de Portugal calculations.
Note: (p) - projected.

Chart 5.4

DEVELOPMENTS IN INFLATION EXPECTATIONS FOR 2009 AND 2010 AND BANCO DE PORTUGAL PROJECTIONS

Year-on-year rate of change



Sources: Consensus Economics and Banco de Portugal calculations.

6. CURRENT AND CAPITAL ACCOUNT

Net external borrowing requirements of the Portuguese economy, measured by the deficit of combined current and capital account balance as a percentage of GDP, have remained high for a protracted period. The current projections point to a reduction in these requirements to 8.3 per cent of GDP in 2009 (10.5 per cent in 2008), followed by an increase to a level close to 9.6 per cent in 2010 (Chart 6.1). This situation reflects the persistent and increasing imbalance between investment and domestic savings that has characterised the Portuguese economy (Chart 6.2).[12] Over the projection horizon, in the context of the current economic crisis, the operation of automatic stabilisers and the discretionary fiscal measures aimed at stimulating the economy (see "Section 2 *Assumptions underlying the projection exercise*") will lead to an increase in public sector borrowing requirements, which compares with the significant reduction projected for the private sector.

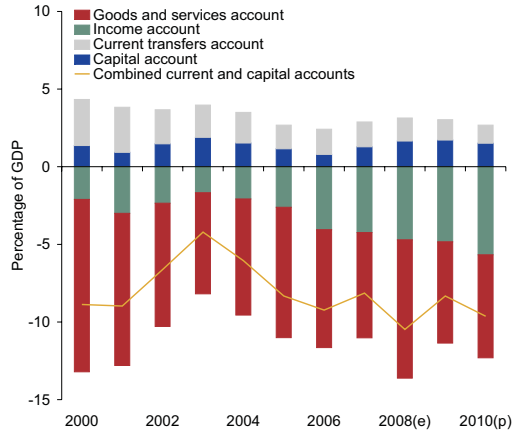
The continued net external borrowing requirements have resulted in a successive deterioration of the international investment position of the Portuguese economy and a progressive increase in the income account deficit, largely reflecting the consequent rise in external debt service. The income account deficit, which increased from 2 per cent of GDP in 2000 to 4.7 per cent of GDP in 2008, is expected to continue on an upward path over the forecasting horizon (4.8 and 5.7 per cent in 2009 and 2010 respectively).

The reduction in net external borrowing requirements in 2009 result from the combination of various factors: (i) a considerable downturn in imports, related to the strong contraction in domestic activity and to the decline in the import content typically observed in recessive phases of the economic cycle; (ii) a substantial gain in the terms of trade resulting from lower oil prices; and (iii) a temporary halt in the upward path of the income account deficit, due to a decrease in interest rates.

(12) However, borrowing requirements of the Portuguese economy have been partially mitigated by the capital account surplus, as a result of capital transfers from abroad related to the implementation of projects approved within the scope of Community Support Frameworks.

Chart 6.1

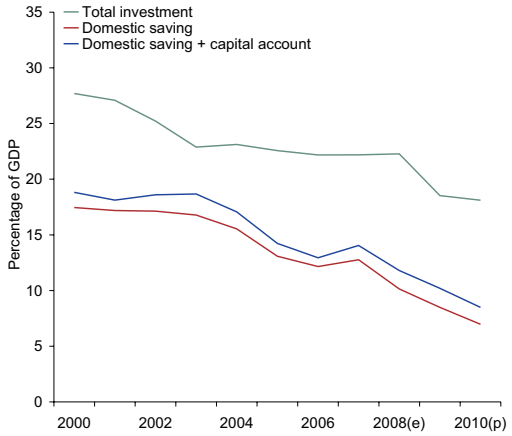
CURRENT AND CAPITAL ACCOUNT



Source: Banco de Portugal.
Note: (e) - estimated; (p) - projected.

Chart 6.2

SAVING, INVESTMENT AND CAPITAL TRANSFERS



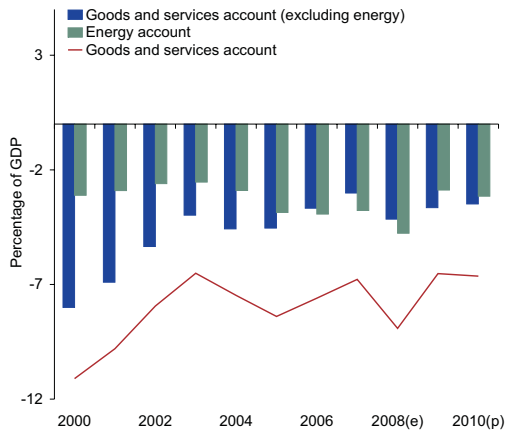
Source: Banco de Portugal.
Note: (e) - estimated; (p) - projected.

For 2010, the current projections point to a new increase in borrowing requirements, to a level close to 9.6 per cent. These developments reflect the stabilisation of the goods and services account, and, in particular, the deterioration of the income account, as a result of the assumption of a gradual increase in interest rates underlying the current projections (see "Section 2 *Assumptions underlying the projection exercise*") and the deterioration of the international investment position of the Portuguese economy.

As noted above, the goods and services account deficit will stabilise around 6.5 per cent in 2009 and 2010 (-8.9 per cent in 2008). This adjustment from 2008 reflects a marked decline in the energy account deficit (from 4.8 per cent in 2008 to around 3 per cent in 2009-2010), due to lower oil prices, and a smaller reduction in the deficit of other goods and services account (Chart 6.3). In turn, and considering the current assumptions about the trend of transfers from the European Union to Portugal (see

Chart 6.3

GOODS AND SERVICES ACCOUNT AND ENERGY ACCOUNT



Source: Banco de Portugal.
Note: (e) - estimated; (p) - projected.

"Section 2 *Assumptions underlying the projection exercise*"), a slight fall in the capital account surplus is anticipated over the projection horizon.

7. UNCERTAINTY AND RISK ANALYSIS

The projections included in this article must be taken as the values with the highest probability of occurrence in 2009 and 2010, conditional on the range of assumptions presented in "Section 2 *Assumptions underlying the projection exercise*". The possible non-materialisation of these assumptions or the occurrence of idiosyncratic risk factors with a direct impact on the central projection justifies the quantitative assessment of risks presented in this section.

7.1. Risk and uncertainty factors

The main risk factor to the Portuguese economy relates to the duration, magnitude and implications of the economic and financial crisis. The current projections assume the maintenance of a gradual easing of financial market tensions, which developments in the most recent period seem to confirm. A longer-than-assumed crisis will imply a stronger negative impact on world economic activity, in particular in the euro area. In 2009 and 2010, the external demand for Portuguese goods and services may fall below the assumptions underlying the projection exercise, particularly if economic activity deteriorates in countries like Spain, Germany, the United Kingdom and the United States (which account for over 50 per cent of Portuguese exports), or in a number of emerging market economies, towards which Portuguese exports have increased remarkably in the past few years.

The second risk factor relates to the future behaviour of Portuguese households. Given the need to adjust their financial situation to economic conditions over the projection horizon, it cannot be ruled out that consumer expenditure may decrease below the level assumed in the central projection, more specifically in 2010. Among the factors that may lead to a stronger adjustment in private consumption, a special mention should be made to uncertainty over household income and wealth levels, against a background of deterioration of the conditions prevailing in labour market and high indebtedness. Moreover, a change in debt and equity market conditions would tend to weigh on the financing conditions of Portuguese banks in international wholesale markets, leading to a tightening credit standards on loans to households.

The degree of uncertainty underlying the current projections remains particularly high, notably with regard to the magnitude and persistence of the overall economic slowdown, the new level around which international financial markets will stabilise and the impact of the fiscal stimulus packages.

7.2. Quantification of risk factors

The impact of the above risk factors may be quantified by assigning a subjective probability to the occurrence of deviations from the assumptions underlying the projection exercise and the specific effects considered in the projection for the main economic variables (Table 7.2.1).

With regard to risks stemming from the international environment of the Portuguese economy, the following has been considered: a 55 per cent probability in 2009 and a 60 per cent probability in 2010 that external demand for Portuguese goods and services will grew below the level assumed in the current projections. In turn, there is 55 per cent probability that in 2010 private consumption will fall below the central projection.

Table 7.2.1

SUBJECTIVE PROBABILITIES OF RISK FACTORS

Per cent

	2009	2010
Conditioning variables		
External demand	55	60
Endogenous variables		
Private consumption	50	55

Source: Banco de Portugal.

Table 7.2.2

PROBABILITY OF AN OUTTURN BELOW THE PROJECTIONS

Per cent

	Weights 2008 (%)	2009	2010
Gross domestic product	100	53	59
Private consumption	67	50	56
GFCF	22	51	53
Exports	33	54	59
Imports	42	52	58
HICP		50	51

Source: Banco de Portugal.

Table 7.2.2 and Charts 7.2.1 and 7.2.2 illustrate the main impacts of the above risks on the projected variables, namely GDP, its components and the inflation rate. As regards projections for economic activity, the quantified risk analysis points to a downside risk, particularly in 2010.

According to the methodology used,[13] there is a 53 per cent and a 59 per cent probability that in 2009 and 2010, respectively, GDP growth will stand below the current projections. The possibility of external demand falling short of the assumptions underlying the projection exercise indicates a higher probability of a more negative growth in exports over the projection horizon. The possibility of consumption standing below the central projection has a direct impact on the current risk assessment to GDP and

Chart 7.2.1

GROSS DOMESTIC PRODUCT

Rate of change

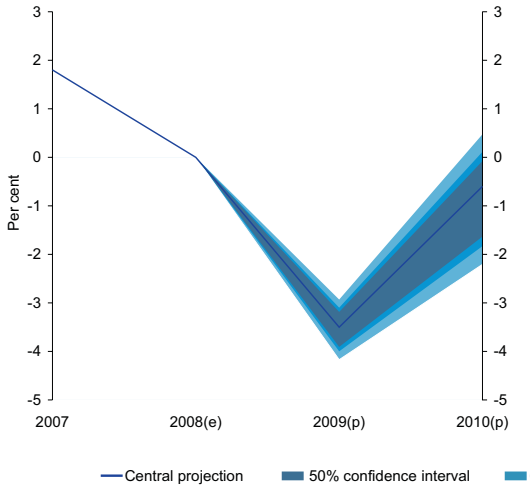
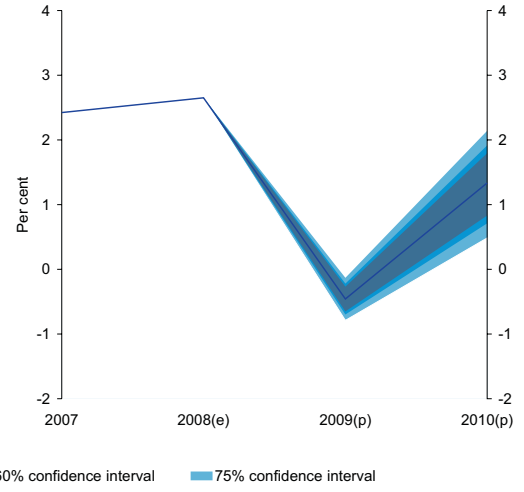


Chart 7.2.2

HARMONISED INDEX OF CONSUMER PRICES

Rate of change



Source: Banco de Portugal.
Note: (e) - estimated; (p) - projected.

(13) The methodology followed in this analysis was published in A. Novo and M. Pinheiro, "*Uncertainty and Risk Analysis of Macroeconomic Forecasts*", Banco de Portugal *Working Paper* No 19/2003.

contributes to the probability of investment falling short of the central projection. According to the calculated confidence intervals, the probability that GDP will contract in 2010 is around 75 per cent.

With regard to the inflation rate, risks associated with the central projection are broadly balanced. According to the calculated confidence intervals, the probability of a positive inflation rate in 2010 is approximately 95 per cent, which suggests that the projection of a reduction in consumer prices in 2009 is likely to be temporary.

8. CONCLUSION

The current projection confirms the intercalary update published in *Economic Bulletin*-Spring 2009, pointing to a contraction of economic activity in Portugal of 3.5 per cent in 2009, against a background of retrenching world economy and collapsing international trade. This was associated with the onset of an unprecedented financial crisis, which has very significantly affected financial conditions worldwide. A small open economy fully integrated in economic and financial terms, like Portugal, could hardly avoid the effects of such a crisis, particularly given its degree of openness to international trade and its high external indebtedness level.

The external environment underlying the current projections reflects the deterioration in international financing conditions that started in mid-2007 and has intensified after the summer of 2008, as well as the effects of its interaction with world economic activity. Since the first quarter of 2009, some easing in international financing conditions has occurred. The current projection assumes the continuation of this process. Nevertheless, a return of the financing conditions to pre-financial crisis levels is not envisaged. In this line, a gradual recovery of world economic activity is assumed over the projection horizon. The latest qualitative data reveal a slight recovery in agents' confidence levels for a broad set of economies, including Portugal.

Developments projected for economic activity in the 2009-2010 period are unprecedented, in terms of the magnitude of economic contraction and the developments in international trade, which reflects the global dimension of the crisis. The current projections also point to a significant private consumption retrenchment, which will contribute to a substantial increase in the households' saving rate. This mirrors, in particular, the adjustment of the households' financial situation to the current economic outlook, namely as regards labour market and wealth developments, against a background of high indebtedness. The strong contraction projected for investment reflects a reassessment of demand prospects in the domestic and external markets, which is broadly based across private investment components and includes a noticeable decrease in inventories. In turn, exports and imports have been strongly influenced by the collapse in international trade, which seems to be echoing the postponement of investment and private consumption worldwide, in a context of uncertainty over the current juncture. Moreover, this phenomenon may have been amplified by the growing fragmentation of the international production chains over the past few decades, which resulted in a new paradigm for the organisation of world production and in an increase in the import content of exports.

Developments in the Portuguese economy over the next few years will crucially depend on its capacity to adjust to the international economic environment that will follow the current economic and financial crisis. However, the persistence of structural weaknesses, particularly with regard to the human capital level, the functioning of labour and product markets and the efficiency of the judicial system, may hold back the adjustment of the Portuguese economy and its ability to ensure a sustained resumption of real convergence with the EU average. The recovery of the Portuguese economy will depend on its ability to proceed with the gradual restructuring process, fostered by increased competition in world markets.

With regard to inflation prospects, the current projections point to a slight decline in consumer prices in 2009, closely associated with a fall in energy and food prices, as a result of a reversal in the strong increase in commodity prices in 2008, particularly as regards oil. However, the prices of other goods and services are projected to record a limited growth, which, in a context where unit labour cost are projected to grow above inflation, will lead to a decline in corporate profit margins. In 2010 further subdued growth is projected for consumer prices, in line with developments in their main determinants, implying that the price reduction in 2009 cannot be considered a deflation episode, given its chiefly temporary nature.

The current projections for the Portuguese economy embodies risks associated with the possibility of a recovery in world economy during 2010 and the behaviour of domestic demand, against a background of high indebtedness. Net external borrowing requirements over the projection horizon imply a continued deterioration in the international investment position. It should noted that the projected increase in net external borrowing requirements of the Portuguese economy reflects a very significant decline in private sector borrowing requirements and a rather substantial increase in public sector borrowing requirements, associated with the operation of automatic stabilisers and the implementation of fiscal stimulus measures to mitigate the contractionary impact of the crisis. In this context, a sustained recovery of the Portuguese economy following the current recession, cannot be pursued without a restart of the fiscal consolidation process on the basis of a clear strategy, which fosters the creation of a framework oriented to macroeconomic stability and economic growth.

ARTICLES

ASSESSING THE ECONOMIC IMPACT OF THE FISCAL STIMULUS PLANS WITH THE NiGEM MODEL*

*Cristina Manteu***

*Carlos Martins***

1. INTRODUCTION

In the last year, almost all advanced economies have launched and/or announced discretionary fiscal packages, to help mitigate the impact of the global financial and economic crisis.[1] The objective of this work is to assess the impact of these packages in the 2009-2010 period using the NiGEM model. The group of selected advanced economies includes the US, Japan, the UK and the euro area.[2] NiGEM is a multi-country macro-econometric model whose features make it particularly suitable for simulating the effects of discretionary and synchronized fiscal plans, of which the following should be highlighted: detailed structure (in particular of the government sector), options in simulation design (regarding for instance the specification of monetary policy and fiscal rules or type of forward looking behaviour) and modelling of commercial and financial linkages between countries.[3]

The article is organized as follows. In section two, we present the fiscal multipliers resulting from simulations in the NiGEM, showing that countercyclical effects depend on the type of fiscal instrument used and differ across economies. We also show that fiscal multipliers increase with international coordination of policy stimulus, because of positive spillovers from national packages. In section three, after briefly assessing and comparing the size and composition of the different fiscal packages, we present the results of two simulation scenarios. The first scenario considers the simultaneous implementation of these packages assuming unaltered interest rate risk premia. The results show that the announced fiscal stimulus plans have a transitory positive impact on GDP growth rates. Relative to the baseline scenario, world GDP growth rate is estimated to increase in 2009 by 0.6 percentage points (p.p.), to be unaltered in 2010 and to decrease in 2011. The reduction in 2011 reflects mainly the disappearance of the fiscal stimulus. The fiscal packages, combined with the effect of the automatic stabilizers, imply a large increase in fiscal deficits and a build-up of public debt. In the current environment, these trends in fiscal ratios may raise concerns over sustainability and trigger an adverse market reaction in the form of a rise in risk premia. Accordingly, in the second scenario, we combined the implementation of the fiscal stimulus plans with a risk premium shock. Results show that increases in interest rate risk premium

* We would like to thank Nuno Alves, Mário Centeno, Ana Cristina Leal and João Sousa for very helpful comments. The opinions expressed in this article are of the author and do not necessarily coincide with those of Banco de Portugal or the Eurosystem.

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(1) Several emerging market economies have also announced fiscal stimulus packages aimed at offsetting the slowdown in domestic private demand (e.g. Saudi Arabia, China, Korea and Russia). See IMF (2009c).

(2) In our analysis, the euro area excludes Luxembourg, Slovenia, Slovakia, Cyprus and Malta.

(3) See Gomes *et al.* (2007) for a more detailed description of the NiGEM model.

as a result of debt concerns imply a slight reduction of the impact of the fiscal packages on GDP growth (by 0.1 and 0.2 p.p. in 2009 and 2010, respectively). Section four concludes.

2. FISCAL MULTIPLIERS

We define fiscal multipliers as the per cent change in GDP in the first year resulting from a one per cent of GDP change in the fiscal instrument in that year. These multipliers provide a quantitative summary of the impact of fiscal measures on aggregate activity in the short term.

Table 1 presents the main characteristics of the simulations performed in the NiGEM model to estimate the fiscal multipliers. The fiscal shock is temporary, assumed to last only for a year (just one quarter in the case of the increase in transfers).The NiGEM model incorporates an automatic fiscal solvency rule, which was disabled during the first two years of the shock.[4] Only after these two years taxes are assumed to rise to ensure the payment of the debt created by the current fiscal expansion. Regarding monetary policy, we have computed the fiscal multipliers assuming no monetary policy reaction for two years.[5] In the simulations, financial markets, including the foreign exchange market, are assumed to be forward looking while consumers are backward-looking (e.g. they do not react to expected future increases in taxes).[6]

Table 2 shows the fiscal multipliers by economy and by fiscal instrument resulting from the NiGEM simulations in the first year.[7] Chart 1 presents the impact on real GDP at longer horizons (up to year 12),

Table 1

SIMULATION OF FISCAL MULTIPLIERS

		Scenarios					
		Increase in transfers to households	**Government consumption increase**	**Government investment increase**	**Indirect tax cut**	**Personal income tax cut**	**Corporate tax cut**
Dimension of the shock	Size	1% of GDP					
	Duration	1 quarter	4 quarters				
Policy options	Fiscal policy solvency rule	non-active in the first 2 years					
	Monetary policy rule	non-active in the first 2 years					
Agents	Financial markets	Forward looking					
	Consumers	Backward looking					

(4) This automatic solvency rule works as follows: if after a shock the government budget deficit is greater than the deficit target defined by authorities, then the tax revenue has to increase gradually, which is implemented by a gradual increase in direct tax rates. When we temporarily turn off this solvency rule, we delay the adjustment, which implies larger fiscal multipliers.

(5) We have also computed the fiscal multipliers assuming the regular functioning of monetary policy (see results in the Annex 1, Table 1). As expected, under the assumption of endogenous monetary policy, the fiscal multipliers are smaller than when assuming an accommodative monetary policy. However, the difference between the two sets of multipliers is quite small (Annex 1, Table 2).

(6) If consumers would be set in forward-looking mode, the impact on GDP of a fiscal expansion would be subdued. However, it may be noticed that in our simulations, with private consumption set in the backward-looking mode, consumers still look towards the future via financial markets that are set to be forward looking and affect financial and housing wealth and hence consumption behaviour now.

(7) Barrel *et al.* (2009) present results for a set of similar simulations.

Table 2

FISCAL MULTIPLIERS

Per cent change in GDP in year 1 resulting from a 1 per cent of GDP fiscal expansion in year 1

	Increase in transfers to households	Government consumption increase	Government investment increase	Indirect tax cut	Personal income tax cut	Corporate tax cut
US	0.3	1.0	1.0	0.4	0.3	0.4
Japan	0.5	1.1	1.1	0.3	0.5	0.3
UK	0.2	0.7	0.7	0.2	0.2	-
Euro area [(a)]	0.2	0.8	0.8	0.3	0.3	-

Source: Authors' simulations based on NiGEM model.
Note: (a) Impact of implementation of measure in all euro area countries simultaneously (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

measured as percentage deviations from the baseline level (that is, without the implementation of fiscal packages).

The main conclusions regarding short term multipliers from Table 2 are the following:

- Fiscal multipliers in year 1 are positive but show some variation across fiscal instruments and economies;
- Government spending on consumption or investment has the biggest effect in year 1;
- Multipliers for transfers and both indirect and direct taxes cuts are usually smaller in year 1.

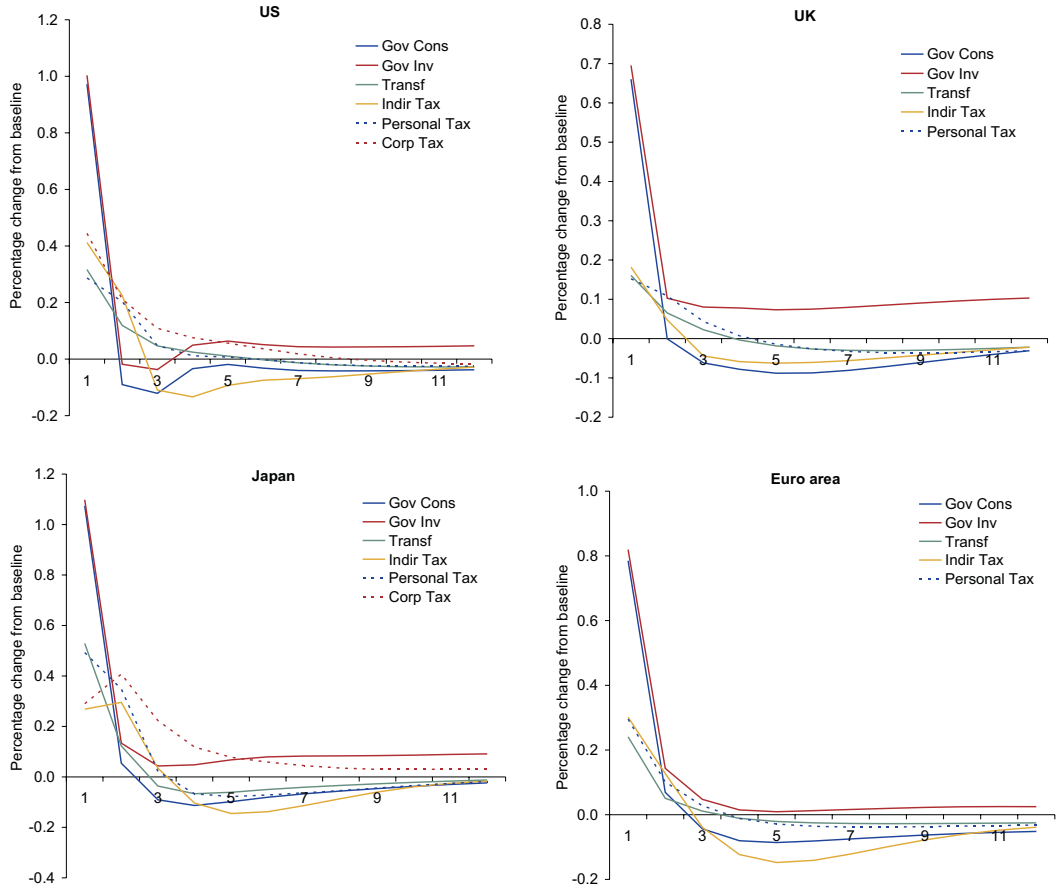
Regarding the impact at longer horizons, NiGEM simulations point to a relatively rapid return of the level of real GDP to the baseline after a temporary fiscal expansion in year 1 (Chart 1). For example, for the US, an increase in government consumption and investment in year 1 implies a negative to null deviation of the level of real GDP relative to the baseline already in year 2. The impact of indirect and personal taxes cuts as well of transfers also fades away by year 3 (deviations of real GDP from baseline become less than 0.05 p.p. or negative). The impact of the corporate tax cut seems to last longer, but is less than 0.1 p.p. after year 4.[8] Results for Japan, the UK, and the euro area show a similar trend of relatively quick convergence of the level of real GDP to the baseline after year 1.

However, in year 1, there is considerable heterogeneity in results across economies regarding the GDP impact. Short-term fiscal multipliers in the US and Japan are higher than the ones in the UK and in the euro area, independently of the instrument considered. Differences are more noticeable in the case of public consumption and investment multipliers. These differences can be related to a certain extent to differences in the degree of openness of the economies (defined as the ratio of the average level of exports and imports in volume in percentage of GDP). The reaction of GDP to a fiscal expansion tends to be smaller the more open the economy is, as it is more likely that some of the impact of the domestic fiscal expansion will leak abroad through imports. Chart 2 illustrates this relation for the

(8) Notice that, given its structure, the NiGEM model does not take into account eventual effects of tax reductions or increases in public investment on the supply side of the economy.

Chart 1

IMPACT ON REAL GDP OF A 1 PERCENT OF GDP FISCAL EXPANSION IN YEAR 1 AT LONGER HORIZONS



Source: Authors' simulations based on NiGEM model.

case of public consumption multipliers.[9]

The fiscal multipliers obtained with the NiGEM model can be seen as broadly consistent with the results from other macro-models (See Annex 2).

The effectiveness of the fiscal expansion may increase if implementation is coordinated, because in this case each country benefits from the others´ fiscal stimulus through trade linkages. The gains from coordination can be measured by comparing fiscal multipliers assessed when each country acts alone with those resulting from a coordinated move.[10] Table 3 shows the NiGEM results of this exercise for government consumption multipliers, illustrating that the gains from a generalized fiscal expansion can be quite significant in some cases.[11] These gains tend to be smaller for more closed economies (Chart 3).

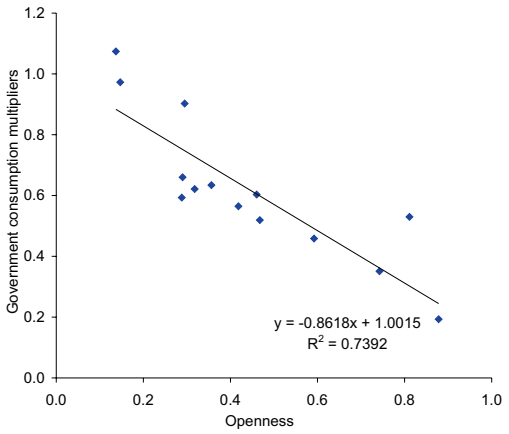
(9) There is also an inverse relation between the degree of openness and the other fiscal instruments multipliers. However, this relation is stronger in the case of the expenditure side multipliers than in the case of revenue side multipliers.

(10) See similar comparisons in Barrel *et al.* (2009), OECD (2009a) and Freedman *et al.* (2009).

(11) Table 3 in Annex 1 contains the results for the same exercise when monetary policy is non-accommodative in all countries.

Chart 2

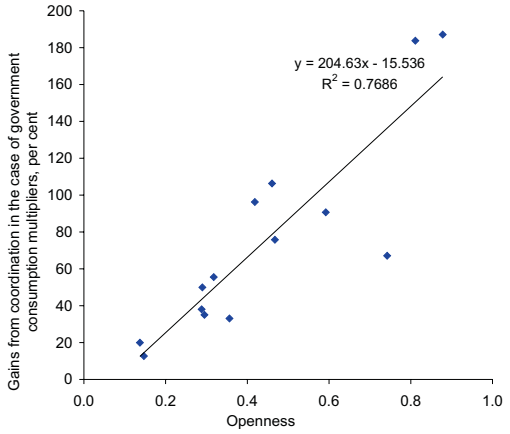
FISCAL MULTIPLIERS AND COUNTRIES' OPENNESS [(a)]



Source: Authors' simulations based on NiGEM model.
Note: (a) The fiscal multipliers considered are the ones of the USA, Japan, UK and euro area countries. The measure of openness is: [imports + exports]/2 in percentage of GDP.

Chart 3

COORDINATION GAINS AND COUNTRIES' OPENNESS [(a)]



Source: Authors' simulations based on NiGEM model.
Note: (a) The fiscal multipliers considered are the ones of the USA, Japan, UK and euro area countries. The measure of openness is: [imports + exports]/2 in percentage of GDP.

Table 3

FISCAL MULTIPLIERS WITH COORDINATION

Per cent change in GDP in year 1 resulting from a 1 per cent of GDP increase in public consumption (no monetary policy reaction)

	Acting alone (1)	Coordinated policy (2)	Gains from coordination (2)/(1) in %
US	1.0	1.1	12.7
Japan	1.1	1.3	20.0
UK	0.7	1.0	49.9
Euro area [(a)]	0.8	0.9	19.2

Source: Authors' simulations based on NiGEM model.
Note: (a) The first column presents the impact of the implementation of the measure in all euro area countries simultaneously (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta), while the second presents the impact of the implementation in all listed economies.

3. IMPACT OF FISCAL PACKAGES

The set of multipliers by geographical area and fiscal policy instrument obtained with the NiGEM simulations in the previous section can be used to determine the impact of the fiscal packages on economic activity. However, to control for the spillovers between countries and to obtain the effect on other macroeconomic variables (inflation, public deficit and debt, long run interest rates), the simulation of actual fiscal packages was required. Therefore, in this section, we considered the simulation of two scenarios: the first considering the simultaneous implementation of all countries´ fiscal packages and the second, combining the implementation of the packages with an interest rate risk premia shock. In both scenarios, we continued to assume an accommodative monetary policy during 2009-10 (implying unaltered official interest rates relative to the baseline), as well as the assumption that the fiscal rule is

not active during the implementation of the stimulus.

3.1. Scenario 1: Impact of fiscal packages (with unaltered interest rate risk premia)

The simulation of the fiscal packages implied the need of detailed information on the countries' plans. We used data compiled by OECD (2009b), which contains details of fiscal measures taken by each OECD country in response to the economic crisis, presented using a consistent methodology across countries.[12] The main principles adopted in defining and measuring the size of the fiscal packages were as follows (see OECD (2009b) for a more detailed description):

- Fiscal packages include discretionary measures (both expansionary and restrictive[13]) implemented and/or announced in response to the crisis up to 6 March 2009. Changes in fiscal balances resulting from automatic stabilizers were not included. Discretionary measures which cannot be considered as a response to the crisis, even if they are implemented over the period 2009 to 2010, were also excluded from the definition of fiscal packages.

- The overall size of the fiscal packages was measured as the deviation of fiscal balances compared with a "no-crisis related action scenario" over the period 2009-10.

- Spending and revenue measures have been broken down, to the extent possible, by main categories so as to allow cross-country comparisons.

Table 4A and 4B present a summary description of the fiscal packages used in the simulations. Table 4A includes the size of the packages (measured by its net effect on fiscal balances in percentage of the GDP) and its distribution over the period 2009-10. Table 4B contains the decomposition of the fiscal measures in revenue and spending items. Note that we have classified the measures listed in OECD country tables in a way that allowed them to be used in NiGEM simulations (specifically tax cuts – personal, corporate and indirect – transfers and public consumption and investment expenditures), which required some degree of judgement.

Table 4A reveals that there is considerable variation in the size of the fiscal packages across economies. These differences may be accounted not only by the severity of the economic crisis in each country, but also by the size of automatic stabilizers and the fiscal position prior to the crisis and subsequent room for fiscal expansion. The US package is the largest, amounting to 4.6 per cent of GDP over the period 2009-10. The UK and Japan packages represent 1.0 and 1.7 per cent of GDP, respectively. For the euro area countries aggregate, the announced fiscal stimulus amounts to 1.4 per cent of GDP.

In Japan and the UK, the fiscal stimulus will be concentrated in 2009, while in the US and the euro area the size of fiscal packages in 2009 and 2010 is broadly similar.

Regarding the composition of the fiscal packages, the economies considered in Table 4B have an-

(12) Some cautions are required in comparing the data compiled by OECD and those communicated by national governments or presented by other international organizations (IMF (2009c)). The differences may reflect judgement required in deciding whether a discretionary measure was adopted as a response to the crisis. In addition, there may be differences in the methodology for classifying the fiscal measures. Finally, there may be differences in the cut-off date of the measures.

(13) Restrictive discretionary measures were also announced in response to the crisis. In fact, in Ireland the overall fiscal package is restrictive.

Table 4A

FISCAL PACKAGES - SIZE AND TIMING

	Net effect on fiscal balance (in percentage of GDP)		
	2009	**2010**	**2009-10**
US	2.1	2.5	4.6
Japan	1.3	0.4	1.7
UK	0.9	0.1	1.0
Euro area [(a)]	0.8	0.6	1.4

Sources: OECD (2009b) and authors' calculations.
Note: (a) The values for the euro area exclude the fiscal packages of Luxemburg, Slovenia, Slovakia, Cyprus and Malta.

Table 4B

COMPOSITION OF FISCAL PACKAGES

Total over 2009-10 period as percentage of GDP

	Revenue				Expenditure			
	Personal Taxes	**Corporate Taxes**	**Indirect Taxes**	**Total**	**Public Consumption**	**Public Investment**	**Transfers to Households**	**Total**
US	1.6	0.6	0.0	2.2	1.6	0.3	0.5	2.5
Japan	0.2	0.2	0.1	0.5	0.7	0.1	0.5	1.2
UK	0.0	0.1	0.8	0.8	0.0	0.1	0.1	0.2
Euro area[(a)]	0.5	0.1	0.0	0.6	0.1	0.4	0.2	0.7

Sources: OECD (2009b) and authors' calculations.
Note: (a) The values for the euro area exclude the fiscal packages of Luxemburg, Slovenia, Slovakia, Cyprus and Malta.

nounced both tax reductions and spending increases. However, the fiscal package of the UK privileged tax cuts. On the contrary, Japan has given priority to spending measures. The packages of the US and the euro area are relatively more balanced, with roughly half the stimulus stemming from tax cuts and the other half from increased expenditure. The tax cuts are expected to take place mainly through cuts in personal taxes and, to a lesser extent, in corporate taxes. Significant reductions in indirect taxes were announced only in the United Kingdom. Concerning expenditure measures, public investment seems to feature predominantly in the euro area packages while the US and Japanese packages give more weigh to public consumption and transfers to households.

Table 5 presents the simulation results of our first scenario.[14] The impact of the combined fiscal stimulus packages of the selected countries on real GDP growth is positive in 2009, as expected. The growth rate of world GDP in 2009 is 0.6 p.p. higher in the fiscal packages' scenario than in the baseline scenario. Growth of world GDP is unaltered by the packages in 2010 and it is actually reduced vis-à-vis the baseline in 2011 reflecting the disappearance of the fiscal stimulus. Note that this implies that the level of world GDP in the scenario with the fiscal packages stands above the baseline during the years 2009 and 2010 (by 0.6 p.p. in both years) and equals the baseline in 2011.

(14) Simulation results for scenario 1 with non-accommodative monetary policy can be found in the Annex 1, Table 4.

Table 5

IMPACT OF THE FISCAL PACKAGES

Percentage point deviations from the baseline

	Real GDP growth			Inflation			Fiscal balance (in % GDP)			Government debt [a] (in % GDP)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
US	1.3	0.3	-1.5	0.2	1.3	1.1	-1.5	-1.9	-0.1	-0.1	0.3	1.3
Japan	1.0	-0.4	-0.6	0.0	0.3	0.2	-1.0	-0.2	-0.1	-1.7	-1.1	0.0
UK	0.6	-0.2	-0.3	-0.6	1.2	0.5	-0.4	0.2	0.1	0.4	-0.3	-0.5
Euro area [b]	0.6	0.0	-0.4	0.1	0.4	0.4	-0.6	-0.4	0.0	-0.2	0.0	0.2
World	0.6	0.0	-0.6	0.1	0.8	0.7	-	-	-	-	-	-

Source: Authors' simulations based on NiGEM model.
Notes: (a) Maastricht definition for the euro area. (b) Impact of implementation of the fiscal packages of all euro area countries (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

The impact on GDP growth is the highest for the US (1.3 and 0.3 p.p., respectively, in 2009 and 2010). In 2011, US GDP growth is reduced by 1.5 p.p. relative to the baseline, which implies that the level of real GDP will stand above the baseline by 0.1 p.p this year. In the euro area, the fiscal packages raise real GDP growth by 0.6 p.p. in 2009, leave the rate unaltered in 2010 but reduce it in 2011 (by 0.4 p.p., respectively).[15] By 2011, the level of real GDP in the euro area is just 0.1 p.p. above the baseline, illustrating the transitory effect of the fiscal stimulus measures.

The impact on consumer price inflation in 2009 is generally positive but small. World inflation deviates from the baseline by just 0.1 p.p.. Only in the UK, inflation is reduced vis-à-vis the baseline as the UK package incorporates a reduction in VAT rates. In 2010 and 2011, consumer price inflation rises more significantly above the baseline in all economies. World inflation rises by 0.8 and 0.7 p.p., respectively, in 2010 and 2011, relative to the baseline. The impact is more significant in the US.

As would be expected, the packages imply a deterioration of the fiscal balance-to-GDP ratio relative to the baseline in 2009 and 2010. In 2011, reflecting the disappearance of the stimulus measures and the re-activation of the fiscal rule in NiGEM, the fiscal balance returns to levels close to the baseline. In general, the public debt-to-GDP ratio does not change much in the years 2009-11 relative to the baseline. This partly reflects higher GDP growth and inflation in the fiscal stimulus scenario which limit the increase in the debt ratio. Notwithstanding, the generalized fiscal expansion implies a rise in long term interest rates in all economies relative to the baseline (between 0.2 and 0.3 p.p.).

It is worth mentioning that both the fiscal packages scenario and the baseline scenario incorporate a large deterioration of fiscal balances and a considerable build-up of public debt, which mainly reflect

(15) Freedman *et al.* (2009) use the GIMF model to simulate the impact of the fiscal packages of euro area countries in euro area GDP growth, pointing to an estimate of 0.5 p.p. in 2009, which rises to 0.7 p.p. when considering spillover effects from the fiscal stimulus in the US and Japan. For 2010, the impact in the euro area GDP growth is negative (-0.2 p.p.) when taking into account fiscal packages only in euro area countries, but it becomes positive (0.3 p.p.) when spillover effects from other countries packages are considered. According to the authors, the fiscal package in the euro area is assumed to amount to 0.9 and 0.8 per cent of GDP, respectively, in 2009 and 2010.

the operation of the automatic stabilizers in the context of a quite severe downturn (Chart 4).[16] In fact, the deterioration in public finance indicators should be more marked than suggested in these two scenarios. On the one hand, the baseline scenario results from projections made in January 2009 and, since then, the projections for economic activity in 2009 have been revised downwards.[17] A more pronounced economic crisis implies, through the operation of automatic stabilizers, a bigger increase in fiscal deficits and public debt ratios than the one considered in the baseline scenario (and also in the fiscal packages scenario). On the other hand, financial sector support plans which have been announced were not incorporated in any of these scenarios but are also expected to contribute to the rise in public debt ratios, in particular in some economies. These increases in government debt may give rise to an adverse market reaction and trigger a rise in interest rate risk premia. This is the motivation for the scenario considered in the next section.

3.2. Scenario 2: Impact of fiscal packages combined with a risk premium shock

The deterioration of fiscal positions may prompt an increase in interest rate risk premia, reflecting rising risks of default or of inflation. In order to investigate the implications of this event, we augmented the scenario considered in the previous section with a shock on interest rate risk premium on government debt. We imposed an exogenous increase in the risk premium of 100 basis points in 2009-2011 in all economies. The calibration of the shock is in line with the empirical literature pointing to increases in the long run interest rates of 2 to 6 basis points when the government debt-to-GDP ratio rises by one percentage point (Freedman et al. (2009), Kinoshita (2006) and Laubach(2003)).[18]

The macroeconomic effects of the risk premium rise are relatively small when compared with the direct effects of the fiscal packages (Tables 6 and 7). The impact on world real GDP growth is reduced by 0.1 p.p. in 2009 and by 0.2 p.p. in 2010 compared to the scenario considered in the previous subsection, as the increase in risk premia reinforces crowding-out effects. In the euro area, GDP growth deviates from the baseline by +0.4 p.p. in 2009, by -0.4 p.p. in 2010, and -0.5 p.p. in 2011, which compares to deviations of +0.6 p.p., 0.0 p.p. and -0.4 p.p., respectively, in 2009, 2010 and 2011 in the scenario of the previous subsection. Regarding the impact on consumer price, the scenario with risk premia implies a less strong increase in world inflation relative to the baseline in the period 2009-2010. The fiscal balance worsens compared with the scenario of fiscal packages only, reflecting higher interest rate expenditures due to the risk premium and lower economic growth. This implies that all countries accumulate more government debt than in the scenario considering only the fiscal packages.

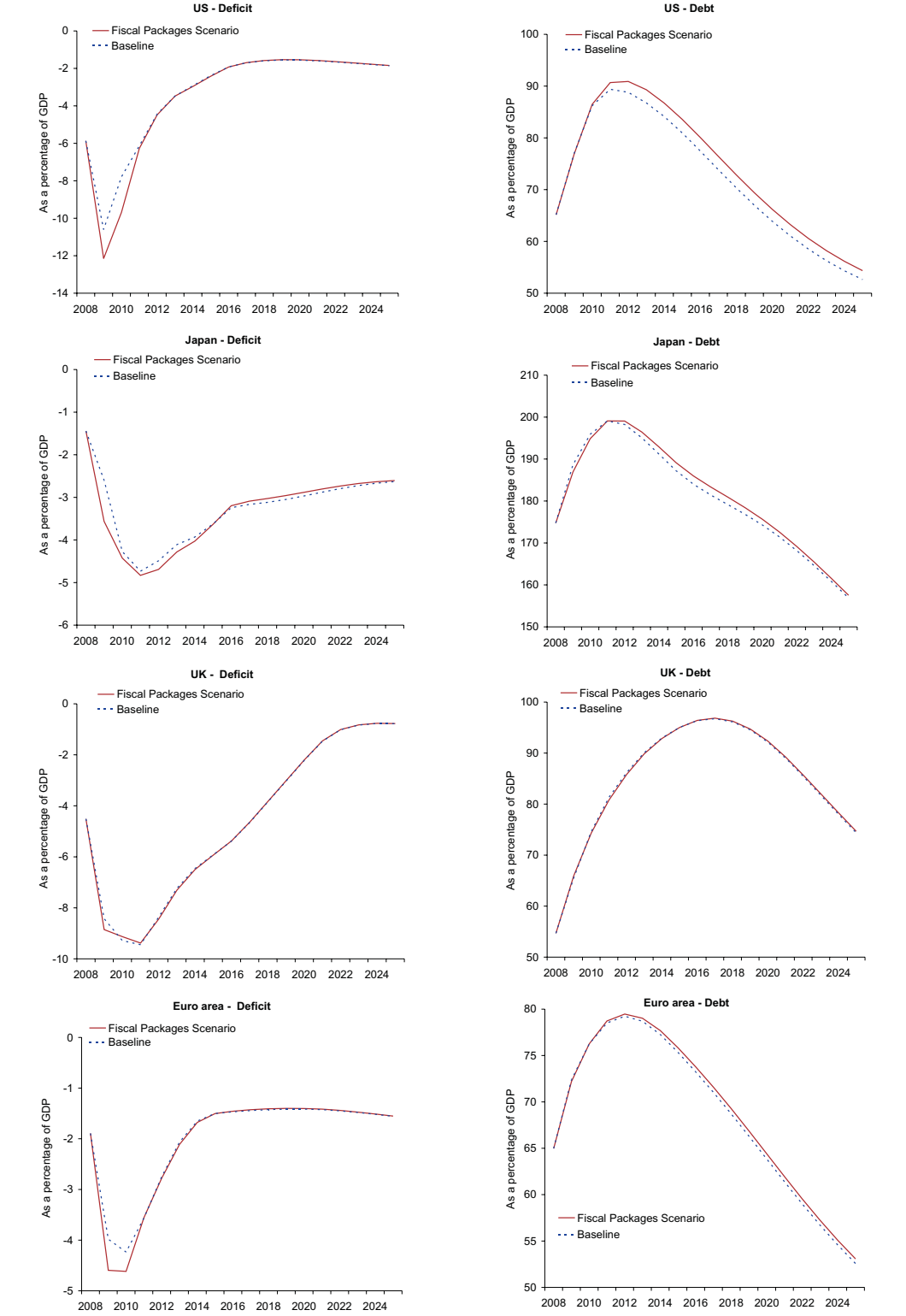
(16) The debt-to-GDP ratios start to moderate only after 2012 (2017 in the case of the UK) due to the operation of the fiscal rule in the model.

(17) In the baseline scenario, world GDP growth is estimate to stand at 0.5 per cent in 2009 and 1.7 per cent in 2010 (Holland *et al.* (2009)). The IMF, in its latest projections released in April 2009, considers that world economy activity will contract by 1.3 per cent in 2009 and recover to a growth rate of 1.9 per cent in 2010 (in January 2009, the IMF had forecasted world GDP growth to stand at 0.5 and 3.0 per cent, respectively, in 2009 e 2010).

(18) In the fiscal packages' scenario, government debt ratios increase between 2008 and 2012 by 15 p.p. in the euro area, by around 25 p.p. in the US and Japan and by roughly 30 p.p. in the UK. These increases would be higher if one took into account the likely downward revision to growth projections as well as the measures to support the financial sector announced in several economies. Public debt evolution in scenario 1 would result, according to the above rule, in a rise in interest rates ranging between 30 and 190 basis points, depending on the economy. We have chosen to consider an equal rise of 100 basis points in all selected economies.

Chart 4

GOVERNMENT DEFICIT AND DEBT-TO-GDP RATIO



Source: Authors' simulations based on NiGEM model.

Table 6

IMPACT OF THE FISCAL PACKAGES AND THE SHOCK TO RISK *PREMIA*

Percentage point deviations from the baseline

	Real GDP growth			Inflation			Fiscal balance (in % GDP)			Government debt [a] (in % GDP)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
US	1.2	0.1	-1.5	0.2	1.1	0.8	-1.7	-2.3	-0.5	0.0	1.1	2.7
Japan	0.9	-0.7	-0.6	0.0	0.2	0.1	-1.3	-0.8	-0.8	-1.2	0.7	2.8
UK	0.4	-0.5	-0.3	-0.6	1.0	0.1	-0.5	-0.1	-0.3	0.5	0.3	0.7
Euro area [b]	0.4	-0.4	-0.5	0.1	0.3	0.4	-0.7	-0.7	-0.3	0.0	0.8	1.4
World	0.5	-0.1	-0.6	0.1	0.6	0.4	-	-	-	-	-	-

Source: Authors' simulations based on NiGEM model.
Notes: (a) Maastricht definition for the euro area. (b) Impact of implementation of the fiscal packages of all euro area countries (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

Table 7

COMPARISON OF SCENARIOS

Scenario 2 (Table 6) minus Scenario 1 (Table 5), in p.p.

	Real GDP growth			Inflation			Fiscal balance (in % GDP)			Government debt [a] (in % GDP)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
US	-0.1	-0.2	0.1	0.0	-0.2	-0.3	-0.1	-0.4	-0.3	0.2	0.8	1.4
Japan	-0.2	-0.2	0.0	0.0	-0.1	-0.1	-0.3	-0.7	-0.7	0.6	1.8	2.8
UK	-0.2	-0.3	0.0	-0.1	-0.2	-0.3	0.0	-0.3	-0.3	0.1	0.6	1.2
Euro area [b]	-0.2	-0.3	-0.1	0.0	-0.1	0.0	-0.1	-0.3	-0.3	0.2	0.8	1.2
World	-0.1	-0.2	0.0	0.0	-0.2	-0.3	-	-	-	-	-	-

Source: Authors' calculations.
Notes: (a) Maastricht definition for the euro area. (b) Impact of implementation of the fiscal packages of all euro area countries (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

4. CONCLUSIONS

NiGEM simulations of the impact of the fiscal packages suggest that the announced measures can have positive but transitory effects on real GDP growth rates. The results show that the impact on output growth will be concentrated in 2009, implying a 0.6 p.p. increase in world GDP growth in that year. On the contrary, the impact on inflation will be mainly noticeable in 2010, when the rate of change of consumer prices at the world level rises by 0.8 p.p. relative to the baseline. As would be expected, fiscal balances deteriorate relative to the baseline, but the impact on government debt-to-GDP ratio is not significant in most cases. However, in both the baseline and fiscal packages scenarios, there is a strong deterioration in fiscal balances and a marked increase in public debt ratios. The deterioration in public finances ratios would be even more marked if one considered the impact of the downward revi-

sions to growth projections embedded in the baseline scenario (which dates from January 2009), as well as the measures to support the financial sector announced in several economies.

The expected deterioration of fiscal positions may cause a rise in interest rate risk premia, if it is seen as jeopardizing medium-term fiscal sustainability. In the event of a 100 basis points increase in the risk premia, the effectiveness of fiscal packages in raising GDP growth rates is reduced. World GDP growth is reduced by 0.1 and 0.2 p.p. in 2009 and 2010, respectively, compared to the scenario without rises in risk premia. Assuming a larger shock to the risk premium – which could be justified in a scenario of crisis, where macroeconomic uncertainty and non-linearities become more important – would imply a bigger loss in the effectiveness of the fiscal stimulus packages. This should act as a reminder of the importance of a credible commitment to long-run fiscal discipline.

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Annex 1

Simulation results assuming endogenous monetary policy

Table 1

FISCAL MULTIPLIERS (ASSUMING ENDOGENOUS MONETARY POLICY REACTION)

Per cent change in GDP in year 1 resulting from a 1 per cent of GDP fiscal expansion

	Increase in transfers to households	Government consumption increase	Government investment increase	Indirect tax cut	Personal income tax cut	Corporate tax cut
US	0.3	0.9	1.0	0.4	0.3	0.4
Japan	0.5	1.0	1.0	0.2	0.4	0.3
UK	0.1	0.6	0.7	0.1	0.1	-
Euro area [(a)]	0.2	0.7	0.8	0.2	0.3	-

Source: Authors' simulations based on NiGEM model.
Note: (a) Impact of implementation of measure in all euro area countries simultaneously (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

Table 2

DIFFERENCE BETWEEN FISCAL MULTIPLIERS (EXOGENOUS *VS* ENDOGENOUS)

Fiscal multipliers in Table 2 A (Main Text) minus fiscal multipliers in Table 1 (Annex)

	Increase in transfers to households	Government consumption increase	Government investment increase	Indirect tax cut	Personal income tax cut	Corporate tax cut
US	0.0	0.1	0.0	0.0	0.0	0.0
Japan	0.0	0.1	0.1	0.1	0.0	0.0
UK	0.0	0.1	0.0	0.1	0.0	-
Euro area [(a)]	0.0	0.0	0.0	0.1	0.0	-

Source: Authors' calculations.

Table 3

FISCAL MULTIPLIERS WITH COORDINATION (ASSUMING ENDOGENOUS MONETARY POLICY REACTION)

Per cent change in GDP in year 1 resulting from a 1 per cent of GDP increase in public consumption

	Acting alone (1)	Coordinated policy (2)	Gains from coordination (2)/(1) in %
US	0.9	1.1	16.1
Japan	1.0	1.2	22.4
UK	0.6	0.9	53.9
Euro area [a]	0.7	0.9	24.5

Source: Authors' simulations based on NiGEM model.
Note: (a) The first column presents the impact of the implementation of the measure in all euro area countries simultaneously (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta), while the second presents the impact of the implementation in all listed economies.

Table 4

IMPACT OF THE FISCAL PACKAGES (ASSUMING ENDOGENOUS MONETARY POLICY REACTION)

Percentage point deviations from the baseline

	Real GDP growth			Inflation			Fiscal balance (in % GDP)			Government debt [a] (in % GDP)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
US	1.2	0.2	-1.4	-0.1	1.0	1.2	-1.6	-2.0	-0.2	0.1	0.9	2.0
Japan	1.1	-0.4	-0.6	0.1	0.3	0.2	-1.0	-0.2	-0.1	-1.7	-1.2	-0.1
UK	0.5	-0.3	-0.3	-0.5	1.2	0.4	-0.4	0.0	-0.1	0.4	-0.1	0.0
Euro area [b]	0.6	0.0	-0.4	0.2	0.3	0.3	-0.6	-0.4	0.0	-0.2	0.0	0.2
World	0.6	0.0	-0.5	0.1	0.6	0.6	-	-	-	-	-	

Source: Authors' simulations based on NiGEM model.
Notes: (a) Maastricht definition for the euro area. (b) Impact of implementation of the fiscal packages of all euro area countries (except for Luxemburg, Slovenia, Slovakia, Cyprus and Malta).

Table 5

COMPARISON OF FISCAL PACKAGES' SCENARIOS (EXOGENOUS *VS* ENDOGENOUS MONETARY POLICY REACTION)

Impacts in Table 5(Main Text) minus impacts in Table 4 (Annex)

	Real GDP growth			Inflation			Fiscal balance (in % GDP)			Government debt [a] (in % GDP)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
US	0.1	0.1	-0.1	0.2	0.3	0.0	0.1	0.1	0.1	-0.2	-0.6	-0.7
Japan	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
UK	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	-0.2	-0.5
Euro area [b]	0.0	0.0	0.0	-0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
World	0.0	0.0	0.0	0.0	0.2	0.1	-	-	-	-	-	-

Source: Authors' calculations.

Annex 2

Multipliers from other Macro-Models

The Table below presents simulation results from diverse macro-models for the US and the euro area.[19] The structure of the macro-models surveyed can be very different, with considerable variation in underlying assumptions. In some cases the design of the simulations differs across models, which may affect the comparability of results. These caveats may help explaining the large diversity in fiscal multipliers estimates. For the US, simulation results from the macro-models surveyed point to government expenditure multipliers in the range between 0.8 and 1.8. The personal income tax multipliers are lower, standing between 0.2 and 0.4. The results for the euro area are qualitatively similar (between 0.6 and 1.5 and between 0.3 and 0.5, respectively for a public consumption increase and a personal income reduction).

FISCAL MULTIPLIERS FROM OTHER MACRO-MODELS

Per cent change in GDP in year 1

	Model name	Interlink [a]	FRB- US [b]	MULTIMOD [c]	GIMF [d]	*Memorandum item*: NiGEM
US	*Model proprietor*	*OCDE*	*FRB*	*FMI*	*FMI*	*NIESR*
	Gov't expenditure	1.1	1.4	0.8	1.8	1.0
	Personal income tax	0.4	0.4		0.2	0.3

	Model name	AWM [e]	*Interlink* [a]	QUEST [f]	QUEST III [g]	MULTIMOD[h]	*Memorandum item: NiGEM* [i]
Euro area	*Model proprietor*	*ECB*	*OECD*	*EC*	*EC*	*IMF*	*NIESR*
	Gov't expenditure	1.1	1.2	0.9	0.6	1.5	0.8
	Personal income tax	0.3	0.5				0.3

Notes and Sources: (a) INTERLINK The simulations are based on a sustained increase in real government non-wage expenditures worth 1 per cent of baseline GNP an on a personal income tax cut worth 1 per cent of GDP (drop in wage and salary tax rate). Real interest rates are held at their baseline level and nominal exchange rates are fixed. Source: Dalsgaard *et al.* (2001), "Standard Shocks in the OECD Interlink Model," OECD Economics Department Working Papers 306, OECD Economics Department. (b) FRB-US The shocks relate to a permanent increase in federal government purchases of goods and services equal to 1 percent of GDP and a permanent decrease in federal personal income taxes equal to 1 percent of GDP ex ante. Constant interest funds rate was assumed. Source: Reifschneider, D., R. Tetlow, and J. Williams (1999), "Aggregate disturbances,monetary policy, and the macroeconomy: The FRB/US perspective", Federal Reserve Bulletin, 1/1/1999. (c) MULTIMOD The simulation is that of a permanent increase in government consumption expenditure of 1% of baseline GDP. Standardised fiscal and monetary rules. Source: Mitchell *et al.* (1998), "Comparing global economic models", Economic Modelling 15 1998. (d) GIMF The shocks area are temporary fiscal expansions (government productive investment and labour income taxes) calibrated to deliver a primary deficit that is 1% above the baseline in year 1 and 0.5% above baseline in year 2. Interest rates are held constant for the initial two years. Source: IMF (2008), World Economic Outlook, Chapter 5, Fiscal Policy as a Countercyclical Tool, October 2008. (e) AWM The simulations are based on a temporary increase in government purchases of goods and services or a decrease in personal income tax, worth 1 per cent of baseline GNP. Interest rates, exchange rates and fiscal policy variables were left exogenous. Source: Henry et al (2004), "The short-term impact of government budgets on prices: Evidence from macroeconomic models", ECB Working Paper Series, No. 396 / October 2004. (f) QUEST The fiscal shock relates to a 1% of GDP rise in government spending in the first year. During the first year the model's normal policy reaction functions are switched off. The results relate to the aggregation of individual national fiscal shocks in France, Germany and Italy. Source: Wallis, K.F. (2004), "Comparing Empirical Models of the Euro Economy", Economic Modelling, Volume 21, Issue 5, September 2004, Pages 735-758. (g) QUEST III The fiscal shock relates to a 1% of GDP rise in government spending in the first year. Normal monetary policy reaction function. Source: Ratto *et al.* (2008), "QUEST III An Estimated Open-Economy DSGE Model of the Euro Area with Fiscal and Monetary Policy," European Comission Economic Papers 335, July 2008. (h) MULTIMOD The fiscal shock relates to a 1% of GDP rise in government spending in the first year. During the first year the model's normal policy reaction functions are switched off. Source: Hunt and Laxton (2003), "Some Simulation Properties of the Major Euro Area Economies in MULTIMOD", IMF Working Papers 03/31. (i) Authors' simulations based on NiGEM model.

(19) See also OECD (2009a), which contains a box surveying simulation results from various macro-models for OECD countries. Short term fiscal multipliers based on all large-scale models surveyed (and all countries) range from 0.6 to 1.9 for government consumption, from 0.1 to 1.1 for personal income tax cut, from 0.1 and 0.5 for corporate tax cut and from 0.0 to 1.4 for indirect tax cuts.

WAGES AND INCENTIVES IN THE PORTUGUESE PUBLIC SECTOR*

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1. INTRODUCTION

The need to understand and assess the personnel management practices in the Portuguese public sector is justified by its importance as the employer of about one fifth of the workforce as a whole and of the majority of workers in some occupational categories. In this paper we analyse the incentives linked to public sector wages using the benchmark provided by the private sector.[1] We use comprehensive micro datasets for private and public employees, collected in 1996, 1999 and 2005. This time span, though relatively short, allows us to go beyond a static analysis and pinpoint some features that appear to be changing in recent years. While the literature comparing different aspects of the private and public pay systems is extensive, there are not many papers addressing this type of issues for Portugal. A first analysis of this kind was made by Portugal and Centeno (2001) using survey data. Centeno and Pereira (2005) studied the determination of wages in general government based on the same dataset for 1999 we use, but without the benchmark provided by the private sector. This paper takes the analysis further, exploring the datasets for the two sectors in several dimensions.

The article deals with two main issues. The first one concerns incentives linked to the wage level, which are investigated mainly by looking at the premium associated with working in the public sector. This premium is calculated by netting out the effect of the differences in observed characteristics of workers from the raw wage gap between the two sectors. It thus measures the inequality in the returns to those characteristics. We start by focusing on the overall premium and how it has changed for specific groups of workers, namely, men and women and workers in more and less developed regions, and across different points of the wage distribution (Section 3). Section 4 concentrates on the employees with higher education and, specifically, attempts to assess the public sector's ability to attract and retain the best professionals. The issue is investigated on the basis of premia and wage compression, as a whole and also for specific occupational categories. In this section, we also make some considerations about how the interaction of the public and private sectors in the market for highly-skilled labour seems to have influenced the way wages have changed.

* This work has benefited from helpful discussions with Mário Centeno and Álvaro Novo, who also helped in programming the code. The authors also thank Lucena Vieira for computational support, as well as Nuno Alves, Cláudia Braz, Jorge C. Cunha, Ana C. Leal, José F. Machado and Sara Moreira for their comments. All errors and omissions are the sole responsibility of the authors. The opinions expressed here represent the views of the authors and do not necessarily coincide with those of the Banco de Portugal or the Eurosystem .

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(1) Throughout this study the designation «private sector» refers to the corporate sector as a whole, also including public corporations. The terms «public sector» and «general government» are taken as synonymous.

The second main issue the article deals with are the incentives referring to individual motivation throughout the employees' career-span. Wage progression is an important tool to that end. In Section 5, we compare the typical advancement pattern of employees in both sectors. Additionally we gather evidence about the importance of the workers' (unobserved) individual skills in the determination of wages. The article has two additional sections. Section 2 presents an overview of the data and describes the main features of the wage distribution in each sector. Section 6 summarizes the main findings.

A final remark is in order. This article concentrates on incentives linked to wages. However, there are other incentives, such as those stemming from differences in employment protection and social security systems. These are very important, in particular as far as the sorting of workers between the public and private sectors is concerned. We do not directly address them here but they are brought into the analysis when necessary.

2. DATA

2.1. The datasets

Data for general government workers come from the Public Administration Census (*Recenseamento Geral da Administração Pública*), and for private sector workers from the *Quadros de Pessoal*.[2] The Census is available for 1996, 1999 and 2005, and the waves of the *Quadros de Pessoal* that are used refer to the same years. The first source is supposed to encompass the whole of public employment in Portugal, with the exception of military personnel, and the second one all private sector employees. The two datasets have altogether over 2 million individual records in each of the years (Table 1). The actual coverage of *Quadros de Pessoal* appears to have increased throughout the period considered, in particular, between 1999 and 2005. This is suggested by a comparison of the number of records in this source with total private employment (without own-account employment) from National Accounts excluding the general government, which indicates a coverage slightly over 50 per cent in 1996, around 55 per cent in 1999, and close to 70 per cent in 2005.[3] The actual coverage of the Public Administration Census has also had some fluctuations (see note to Table 1) but these have been small.

The datasets comprise, specifically, information about gender, education, age, monthly wage, hours worked, years of service in the public sector or in the current firm, occupation, and geographic location of the workplace. Wages are measured as the base salary plus other remunerations received on a reg-

(2) The Public Administration Census is carried out by the *Direcção-Geral da Administração e do Emprego Público*. *Quadros de Pessoal* is a yearly survey carried out by the *Ministério do Trabalho e da Solidariedade Social*. In 2002 this latter survey was extended to public employees whose employment relationship assumes the form of individual contract, who were excluded from the dataset we used.

(3) The widening of the survey coverage is also indicated by the fact that the number of firms included increased in the 1996-2005 period, and the average number of employees per firm has decreased from approximately 10 in 1996 to around 8 in 2005.

Table 1

WORKERS IN THE DATASETS

	Cross Sectional Data			Panel Data
	1996	**1999**	**2005**	
Public Sector	548 397	573 904	523 358	289 272
Central Government	447 248	459986	445 932	
Local Government	101 149	98 310	61 927	
Regional Government	n.a.	15 608	15 499	
Private Sector	1 517 234	1 712 382	2 194 918	305 057
Total	2 065 631	2 286 286	2 718 276	594 329

Sources: Authors' calculations based on the Public Administration Census and the *Quadros de Pessoal*.
Nota: As far as the public sector datasets are concerned, local government does not have a full coverage in 2005. Moreover, data for 1996 referring to the regional government are unavailable and in the remaining years they comprise the Região Autónoma da Madeira only.

ular basis.[4] Experience is proxied by the age, taking into account the years of schooling.[5] As regards the location of the workplace, the only aggregate classification available in the two databases for the three years takes the *distrito* (municipal region) as a reference. This information was used to construct an indicator of workplace location in more vs less developed areas.[6] Only full-time workers (in general, defined as those who work at least 35 hours per week) have been considered in the study, since most of the results are obtained on the basis of monthly wages. We also present some evidence considering hourly wages which - as we shall see - is very much consistent with that for monthly wages.

Data regarding the occupational category in *Quadros de Pessoal* follow the National Occupation Classification (*Classificação Nacional de Profissões*) of 1994. By contrast, the corresponding information in the Public Administration Census is not shown according to a harmonised classification. In this case, the presentation is mainly based on the categorization of employees for pay purposes and is not uniform across the three years. A substantial effort was put into converting the occupational information in the public sector datasets to the National Occupation Classification. Some categories of civil servants, such as judges, doctors, nurses or teachers, could be easily classified because they correspond to occupations set out in the National Occupation Classification. This is not the case of generic categories, such as *Técnico Superior*, which overlap several occupations, like economists, engineers or legal staff. A case-by-case analysis was made for them, taking into account additional information, notably, the details about the service of the employee and, especially for the college-graduated, the area of study. Due to the difficulty of this task, it was only carried out for 1999 (for all employees) and 2005 (for college graduates). The occupations take as a reference the National Occupation Classification at three-digit level, in some cases aggregating more than one of those.

(4) The information about regular remunerations other than the base salary is made available in the *Quadros de Pessoal* for all years considered. In the Public Administration Census, however, this is only the case for 2005. In view of this, we considered the base salary as given in the Census and added to it the meal allowance (whose amount is the same for all workers and known for every year) as the only additional regular remuneration of government employees. This may imply some underestimation of public wages, but of small magnitude (about 1 per cent, on average, considering the figures for 2005).

(5) Experience is computed as the difference between the age of the worker and either the number of years of schooling plus six, if greater than 15, or 15.

(6) The more developed areas were assumed to be the *distritos* of Aveiro, Braga, Coimbra, Faro, Leiria, Lisboa, Porto, Santarém, Setúbal and Viana do Castelo and the *Região Autónoma* da Madeira. The less developed areas correspond to the *distritos* of Beja, Bragança, Castelo Branco, Évora, Guarda, Portalegre, Vila Real and Viseu and the *Região Autónoma* dos Açores.

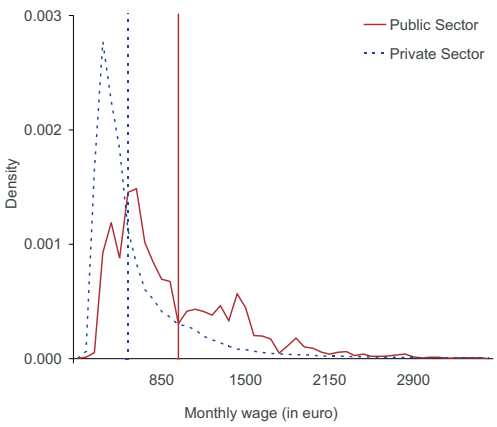
The records in the databases identify the individuals, allowing us to trace the continuity of a given worker either in general government or in a firm throughout the period 1996-2005. Hence, besides the cross-sectional datasets for each of the three years, we are able to construct a panel dataset with workers who did not change jobs in that period (i.e. that remained in the public sector or the same firm). The panel is an intersection of the cross sections for the three years, and it is interesting to assess how the results drawn from it differ from those obtained using the full datasets, for instance, as far as public wage premia are concerned. Such differences arise as a result of two effects. Firstly, the panel does not include the workers who joined and retired from the labour market in the decade 1996-2005. We label this as the turnover effect. Secondly, the panel entails a selection effect, as it tends to select advantaged private sector workers, an effect that is relatively unimportant for their public sector counterparts. In the latter sector, jobs are more stable and it is quite reasonable, indeed expectable, for an individual to remain a public employee for his whole career. By contrast, restricting the focus to individuals who stay in the same firm from 1996 to 2005 amounts to selecting more stable and possibly larger companies and workers who are doing well with the current private employer (in view of the fact that, on non-wage grounds, changing jobs within the private sector is less costly than leaving the public). Figures in Table 1 give an indication about the magnitude of the selection effect. For the private sector, the workers in the panel are about 20 per cent of the ones in the sectional dataset with the least number of observations, while this figure goes up to 55 per cent for the public sector.

2.2. Descriptive analysis

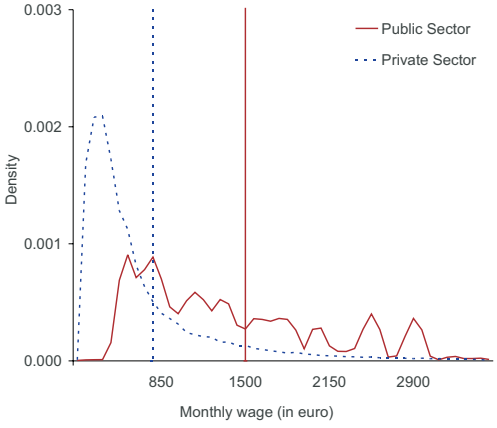
Chart 1 depicts the estimates of the density functions of monthly wages earned in the public and the private sectors, in 1996 and 2005. Tables A1 and A2 in the Appendix present some descriptive statistics for this variable as well as the main figures summarizing the characteristics of the labour force in

Chart 1

DENSITY FUNCTIONS FOR WAGES IN THE PUBLIC AND PRIVATE SECTORS - 1996



DENSITY FUNCTIONS FOR WAGES IN THE PUBLIC AND PRIVATE SECTORS - 2005



Sources: Author's computations based on the Public Administration Census and the *Quadros de Pessoal*.
Notes: The charts depict the kernel density estimates using the Epanechnikov method; the vertical lines represent the average wage.

the two sectors. Wage densities show a concentration of workers in the lower tail of the distribution in both sectors, but this is much more evident for the private, as also indicated by the statistics for skewness. The distribution of wages in the public sector has become less skewed in recent years and this feature is also present in the panel. Such a pattern may indicate a quicker advancement pace for categories of employees occupying lower wage brackets[7]. The earnings distribution in the public sector has several modes, reflecting a concentration of workers at the steps of the wage scales corresponding to the main categories of public employees. By contrast, the one referring to the private sector is very concentrated around the statutory minimum wage level. For this reason, the dispersion at the central part of the respective distribution is comparatively smaller, as indicated by the ratio between wages at percentiles 75th and 25th. The dispersion as a whole is nevertheless larger in the private sector (as indicated by the ratio between the standard deviation and the mean). The average monthly salary in general government is clearly above the one in the private sector, and this gap has widened over time, from around 50 per cent in 1996 to almost 75 per cent in 2005.

The distributions based on hourly earnings have, to a large extent, the features just described. However, comparatively to the results based on monthly wages, the distributions in the public sector are shifted to the right relative to the private sector. Consequently, the public wage gap in terms of hourly wages is larger by around 15 percentage points (p.p.) when computed at the mean wage. This is explained by the longer weekly working time in the private sector.[8]

Considering the panel, the distribution of earnings in the private sector shows less skewness and dispersion, indicating a more homogenous set of workers. The wage gaps go down in comparison to those in the sectional datasets, in line with the selection effect.

Raw wage gaps as given above can be a misleading indicator of wage inequality, as higher wages can be justified, for example, by larger human capital endowments. Figures in Table A2 indeed indicate significant differences in this respect between the public and private sectors in Portugal, in particular as far as formal education is concerned. The proportion of public employees reporting college education approaches 50 per cent in 2005, while it is barely over 10 per cent for the private sector.[9] General government employees are also, on average, more experienced than their private sector counterparts, although the difference is not very significant (2 to 3 years out of around 20 years of average experience). This means that wages should be compared controlling for the stock of human capital. Figures in Table A2 also point to differences in terms of gender between the two sectors, since public employees are mainly women while in the private sector most jobs are performed by men. There is a marked asymmetry in the regional distribution of employment, with most jobs concentrated in more de-

(7) In recent years (2003 and 2004) there were differentiated wage increases in the public sector, benefiting workers with lower wages and this may have contributed to the observed pattern. The same happens for the insufficient coverage of local government in 2005, since its employees tend to occupy the lower cohorts of the general government wage distribution. Note, however, that the skewness reduction is already present in the 1999 data.

(8) The maximum weekly working time in the private sector was reduced to 40 hours by legislation enacted at the end of 1996. In the 1996 data, which do not yet reflect the effect of such legislation, approximately half of the employees reported a working time longer than 40 hours. In the public sector, the weekly working time stood at 35 hours throughout the analysed period, except for blue-collar employees. This personnel's working time was reduced from 40 hours to 37 hours in 1998, 36 hours in 1999 and 35 hours since 2000.

(9) That proportion is slightly overestimated in the general government 2005 data due to the less-than-full coverage of local government, in which employees without higher education predominate. The figures for 1996 and 1999 show, however, very much the same picture.

veloped areas, particularly in the private sector. These factors should also be controlled for when computing wage premia as described in the next section.

3. A GENERAL CHARACTERIZATION OF THE PUBLIC WAGE PREMIUM

3.1. Empirical approach

In order to study the raw wage gap between public and private sectors in Portugal we use decomposition techniques based on wage regressions. Such decompositions break down the gap as:

Raw wage gap	=	differential in workers' characteristics	+	premium or differential in the returns to the characteristics

The first term is the part of the gap that can be assigned to differences in the covariates appearing in the wage regressions, i.e. the features of the labour force in each of the sectors. The second term is the unexplained wage premium (or penalty), reflecting the wage inequality that would prevail if workers in the two sectors shared the same characteristics. Recent studies applying similar methodologies are, for instance, García-Pérez and Jimeno (2005) for Spain, Lucifora and Meurs (2006) for France, Great Britain and Italy, and Melly (2005) for Germany.

We compute the wage decompositions using two methods: ordinary least squares (OLS) and quantile regressions. In the former, the gap is explained at the mean of the wage distribution, while the latter brings additional insight by explaining it at different percentiles of the curves. The decompositions are computed on the basis of wage regressions ran separately over the set of workers in each sector. The specification we use is quite standard: the logarithm of the monthly (or hourly) wage is regressed on a constant, indicator variables for three levels of education (basic, secondary and higher – the omitted category corresponds to less than basic education), male gender and more developed regions, as well as experience and experience squared. For the OLS-based decompositions this procedure was replicated for men and women (excluding the gender dummy) and, within these groups, for employees with workplaces located in more and less developed areas (excluding, in addition, the workplace location dummy). It is worth noting that the OLS-based decompositions match exactly the raw gap, a property not shared by the ones based on quantile regressions.

Throughout this paper we follow the convention of defining the wage gap as the difference between the wages of the group with higher pay, the public sector, and with lower pay, the private sector. The differences in returns are evaluated taking as a reference the characteristics (covariates) prevailing in the public sector - see note to Table 2 for more details. This is arbitrary since one could equally define the gap in the opposite way and evaluate the differences in returns at private sector's covariates. Thus we considered it appropriate to present (for the overall gap at the mean) the coefficient of an indicator variable for the public sector in a regression pooling the data for both sectors. In addition, using data for

1999, we also checked the impact of the inclusion of occupational indicator variables on this coefficient.

It should be mentioned that the results of these methodologies are affected by the omission of factors explaining wages, if they also influence the sorting of workers between sectors. Thus, the wage premia we calculate may reflect, besides a «pure» premium, a preference for one of the sectors by workers with certain (unobserved) characteristics. To formally address such an issue is beyond the scope of this study, but we briefly discuss it when interpreting the results.

3.2. Premium at the mean of the wage distribution

Table 2 summarizes the results of the OLS-based decompositions for the full datasets in each of the three years considered. Recall that we define the wage premium as the premium associated with working in the public sector. The first conclusion is that the raw wage gap between the two sectors presented in the last section is mostly explained by differences in the labour force characteristics. This should come as no surprise in view of the evidence adduced about the latter differences. Nonetheless, controlling for such characteristics there is an unexplained premium, implying that, for the same endowments, wages are higher in the public sector. This is in line with the findings in Portugal and Centeno (2001). Moreover, the premium has risen over the period 1996-2005. In terms of monthly wages, it increased from almost 10 per cent in 1996 to 15 per cent or a bit more at the end of the ensuing decade. Results for hourly wages are consistent with the evidence just described, as the larger raw gap is essentially accommodated by a larger premium. With wages defined in this way, the figures rise by approximately 10 p.p. in each year and the premium stands at around 25 per cent in 2005.

When one controls also for the occupational category (available for 1999 only), the premium decreases. This is expectable because unequal pay in the two sectors partly materialises through the predominance of public employees in relatively better paid occupations. Results also indicate that there is inequality even after this effect is taken out.

In order to analyse the documented increase in the wage premium over time it is useful to look at the results for the panel, which includes the individuals who have not switched jobs in the 1996-2005 period (Table 3). These results indicate that the premium has remained stable over the period, implying that the improvement in the relative position of public employees in Table 2 is not linked to the workers in the panel. In particular, such an improvement did not result from higher wage increases in the public sector comparatively to the ones benefiting employees that remained in the same firm. If it had, then the premia computed for the panel would feature an ascending profile. The evolution in the sectional data should thus reflect, on the one hand, the fact that job switchers had a particularly small rise (or, perhaps, a reduction) in wages. On the other hand, it may also result from the fact that the public premium is higher for workers who entered the labour market than for those who left it during the period under analysis. In Section 4 we focus on this point as far as college-educated employees are concerned, as the widening of the premium over the decade chiefly occurred for them.

Table 2

DECOMPOSITIONS BASED ON LEAST SQUARES REGRESSIONS, SECTIONAL DATASET

Per cent

Monthly wage	1996			1999			2005		
	Raw gap	Wage premium	Differential in characteristics	Raw gap	Wage premium	Differential in characteristics	Raw gap	Wage premium	Differential in characteristics
Overall	44.9	8.6	36.3	51.8	14.5	37.3	56.3	16.9	39.4
Government indicator variable [a]		9.4			13.2			14.9	
Government indicator variable (with occupation) [b]					9.2				
Men	29.3	-2.6	31.9	36.5	5.1	31.5	47.0	6.2	40.8
More developed regions	31.4	-6.7	38.1	35.1	1.0	34.1	45.8	3.3	42.5
Less developed regions	46.9	17.9	29.0	57.2	27.2	29.9	62.2	25.8	36.5
Women	64.9	19.4	45.5	70.5	23.8	46.7	68.6	24.3	44.3
More developed regions	64.1	15.5	48.5	69.1	20.9	48.2	67.2	22.0	45.2
Less developed regions	80.8	50.4	30.4	87.7	48.6	39.1	82.3	42.6	39.7
Overall - hourly wage	57.0	17.7	39.3	61.5	22.4	39.1	67.6	26.3	41.3
Government indicator variable [a]		18.8			21.3			25.0	

Source: Authors' calculations.

Notes: The decompositions are given by $\overline{Y}^{pub} - \overline{Y}^{priv} = \overline{X}^{pub}\hat{\beta}^{pub} - \overline{X}^{priv}\hat{\beta}^{priv} = \overline{X}^{pub}\left(\hat{\beta}^{pub} - \hat{\beta}^{priv}\right) + \left(\overline{X}^{pub} - \overline{X}^{priv}\right)\hat{\beta}^{priv}$, where $\overline{Y}^{i}$ and $\overline{X}^{i}$, *i=pub, priv*, are the average values of log wages and covariates for each sector within the groups considered. (a) refers to the coefficient of an indicator variable for the public sector in OLS regressions over the data for both sectors with otherwise the same covariates; same in (b) but including occupational indicator variables. These coefficients are significant at the 1 per cent level. The number of observations is 1 999 669 in 1996, 2 244 790 in 1999 (2 063 633 with occupations), and 2 694 524 in 2005.

Table 3

DECOMPOSITIONS BASED ON LEAST SQUARES REGRESSIONS, PANEL DATASET

Per cent

Monthly wage	1996			1999			2005		
	Raw gap	Wage premium	Differential in characteristics	Raw gap	Wage premium	Differential in characteristics	Raw gap	Wage premium	Differential in characteristics
Overall	41.2	6.6	34.5	44.6	8.4	36.3	49.0	8.1	40.8
Men	31.6	-6.2	37.8	35.1	-3.0	38.1	36.5	-3.6	40.1
More developed regions	34.5	-9.7	44.2	34.4	-5.8	40.3	37.3	-7.0	44.2
Less developed regions	44.5	6.9	37.6	51.0	12.4	38.7	52.3	9.9	42.4
Women	60.8	17.3	43.4	60.9	15.5	45.4	61.4	12.3	49.1
More developed regions	56.5	12.0	44.5	59.4	12.5	47.0	65.3	13.0	52.3
Less developed regions	71.7	41.6	30.1	76.3	39.2	37.1	79.3	34.4	44.9

Source: Authors' calculations.

Notes: Same as note to Table 2. The number of observations is 576668.

The results based on the panel also imply that the public sector was accompanied by the private in the wage growth contention implemented in the post-2002 years, otherwise the relative position of public workers in the panel would have worsened. There are some factors that, in broad terms, may have limited wage growth in the private sector in recent years. Firstly, in this sector the unionisation rate has sharply decreased, which tends to undermine the bargaining strength of unions and their success in improving pay conditions. According to Cerdeira (2004), the average unionisation rate for the years 1991-95, in comparison to 1979-84, went down from 61 to 31 per cent and 60 to 38 per cent, respectively, in the secondary and tertiary sectors as a whole. For government employees this indicator remained relatively more stable, falling from 56 to 45 per cent.[10] The increased international competition faced by some private industries also tends to limit the extent to which they can afford to pay higher wages.

There is a data issue that may contribute to increase the public premium as measured in our results. This is the abovementioned fact that the coverage of the datasets for the private sector got fuller over time. Indeed, the enlargement of the base of the *Quadros de Pessoal* was basically made by means of the inclusion of more smaller firms, which typically feature a wage penalty.

There are substantial differences according to gender and location of the workplace (Table 2). Taking the figures obtained from the OLS decomposition for 2005, the premium ranges from around 3 per cent for males working in more developed areas (who in 1996 still had a penalty) to over 40 per cent for females in less developed regions. In general, there is a clear tendency for differences in pay between men and women and between more and less developed regions to appear attenuated in the public sector. This is explained by the fact that public wages are set nationwide, using a common wage scale for all employees of a given category, regardless of gender and region. In terms of the dichotomy between more and less developed regions, results indicate that the public sector does not have the same level of flexibility to respond to local economic conditions as firms have. As a matter of fact, in broad terms, the public sector activity is framed by equity and redistributive constraints that prevail over profit-maximization goals. Pay uniformity in this sector has redistributive effects among regions and, in that regard, it may serve public policy purposes.

The evolution of the public premium by group in the sectional datasets deviates from the general tendency only in the case of women working in less developed areas, for whom the indicator goes down between 1996 and 2005. Since such a decrease also shows up in the panel, it appears to stem from a quicker growth of this group's wages in the private sector.

(10) According to the OECD Labout Market Database, figures for the period after 1995 do not indicate a further decline in the global unionisation rate, but the evolution by activities is not available.

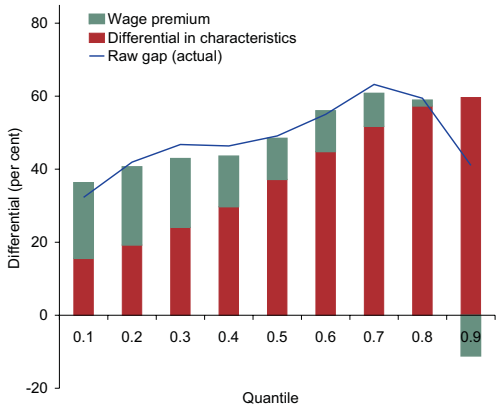
3.3. Premium across the wage distribution

Chart 2 displays the decompositions based on quantile regressions for the sectional datasets. It shows, in the first place, that the public premium is not invariant to the point of the distribution where it is measured and that it decreases as one moves up the wage distribution. Specifically, in 1996 its value was approximately nil at the 8th decile of the conditional distribution and there was a penalty at the 9th. Thought relatively less marked, the same profile is present in the 2005 data. Such evidence is consistent, in particular, with the fact that the premium tends to be larger for less-educated workers than for their counterparts with higher education (the explained part of the raw gap also rises across the distribution of earnings, as it is mostly related to education endowments). The chart also shows that the conditional wage distribution is more compressed for workers in the public sector[11], a fact coherent with a greater rigidity of the wage setting. In particular, the existence of common wage scales for a broad range of occupations in the wage curve, as it happens with the *carreiras do regime geral*, is likely to contribute to that result.

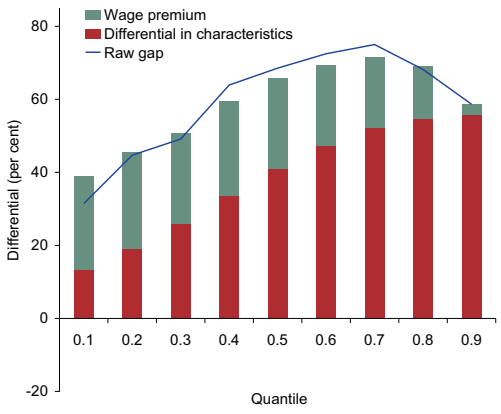
The second aspect arising from the chart is that the shrinkage of the wage premium across the distribution is less obvious in 2005 than in 1996. The rise in the relative wage between the public and the private sectors evaluated at the mean, documented in Table 2, is thus mostly associated with increases at the upper part of the distribution, although there is a slight increase at the lower quantiles as well. In contrast, the profile of decrease in premia when one moves up the wage distribution remains approxi-

Chart 2

DECOMPOSITIONS BASED ON QUANTILE REGRESSIONS - 1996



DECOMPOSITIONS BASED ON QUANTILE REGRESSIONS - 2005



Source: Author's calculations.

Notes: The decompositions are given by $Y_{\theta}^{pub} - Y_{\theta}^{priv} = \left(\left[X^{pub} \hat{\beta}^{pub} \right]_{\theta} - \left[X^{pub} \hat{\beta}^{priv} \right]_{\theta} \right) + \left(\left[X^{pub} \hat{\beta}^{priv} \right]_{\theta} - \left[X^{priv} \hat{\beta}^{priv} \right]_{\theta} \right) + e_{\theta}$, where Y_{θ}^{j} is the θ^{th} decile of the distribution of log wages in sector i and, $\left[X^{j} \hat{\beta}^{i} \right]_{\theta}$ is the θ^{th} of the distribution of log wages resulting if the covariates from sector $j \left(X^{j} \right)$ were associated with the coefficients from sector $i \left(\beta^{i} \right), i, j = pub, priv$. the text for the covariates. The coefficients were obtained using quantile regressions. The decomposition was computed using a random sample of 50 000 workers of each sector, as in Machado and Mata (2005), using the variant presented in Albrecht *et al.* (2003).

(11) The difference between the premium at upper and lower quantiles of the conditional wage distribution gives an indication of the relative compression of wages in the two sectors, since it may be rewritten as the difference in the amplitudes between the upper and lower quantiles in each sector.

mately stable over time in the panel (not shown). This is in line with the already mentioned fact that the variation of the premia in the 1996-2005 period is associated with the wage evolution for college-educated employees, particularly those at the beginning of the employment spell.

4. HIGHLY-SKILLED WORKERS: IS THE PUBLIC SECTOR COMPETITIVE VIS-A-VIS THE PRIVATE SECTOR?

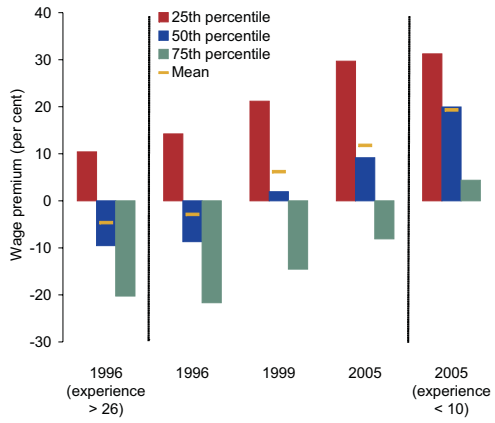
4.1. General trends

We estimated wage regressions similar to those presented in the previous section (see note to Chart 3) considering college-educated workers only. Charts 3 and 4 depict the estimated coefficient of the public sector indicator variable in quantile regressions, at the 25th, 50th and 75th percentiles, and the least squares estimate for the sectional and panel datasets, respectively. In the first case, two additional subgroups of workers are considered: those whose experience was over 26 years in 1996 and those with less than 10 years of experience in 2005. These two subgroups broadly correspond to the turnover during the period and the results for them are important to reconcile the evidence for the two datasets. Moreover, the results for the second group allow the assessment of the relative entry-level pay conditions between sectors currently prevailing in the labour market for college-educated employees.

In the cross-sections, the relative position of public sector workers considerably improved over 1996-2005, with the respective conditional distribution of earnings shifting progressively to the right in comparison with that for the private sector. While in 1996 there was a penalty associated with working

Chart 3

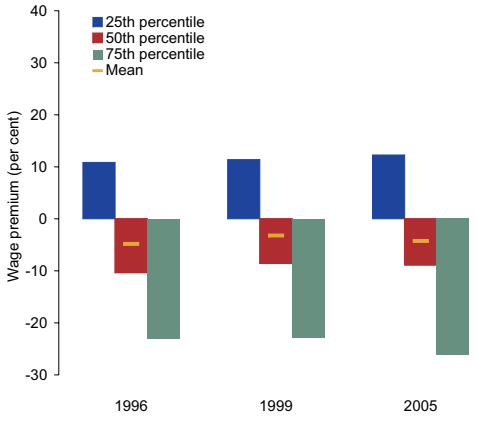
PUBLIC WAGE PREMIA FOR EMPLOYEES WITH COLLEGE DEGREES, SECTIONAL DATA



Source: Author's calculations.
Notes: Coefficient of the indicator variable for the public sector in a regression of log wages (monthly) on a constant, experience and experience squared, and indicator variables for male gender, jobs located in more developed areas and public sector. Number of observations: 261259 in 1996, 332724 in 1999 and 477497 in 2005. The estimates are significant at the 1 per cent level.

Chart 4

PUBLIC WAGE PREMIA FOR EMPLOYEES WITH COLLEGE DEGREES, PANEL DATA



Source: Author's calculations.
Notes: Regressions specified in the same way as in Chart 3. Number of observations: 127736 in 1996, 135720 in 1999 and 146336 in 2005. The estimates are significant at the 1 per cent level.

in the public sector already at the median of the distribution, this region is approximately confined to the last quartile in 2005. By contrast, for the panel there is a wage penalty associated with the civil service except roughly at the lower quartiles, and the level is rather stable. As in the previous section, there is a different evolution of the premium depending on the dataset used, but the magnitude of its increase is more substantial in the cross sections. Such an increase stands now close to 15 p.p. compared with 5 to 7 p.p. for all workers (Table 2). The first and the last sets of bars in Chart 3 illustrate an important reason why the premium is rising for college graduates: the figure for those who joined the labour market is clearly above that for those who left it during the period considered.

The evidence presented suggests an ascending trend in the relative wage between the public and private sectors for entrants with advanced education. We collected further evidence on this issue by looking at the premium for employees with less than 10 years of experience at the mean of the earnings distribution at different points in time. For 2005, the figure appears in Chart 3 (last set of bars) and it stands at approximately 19 per cent. The same calculations on the basis of the 1996 data, i.e. for entrants between the mid-eighties and mid-nineties, yield a premium of around 4 per cent. We do not have a dataset collected around the mid-eighties that would provide information about starters in the preceding decade. However, we do have indirect information inferred by looking at those who in 1996 had 10 years or more and less than 20 years of experience. In this case, the figure goes down to a penalty of about 7 per cent. This figure will of course reflect, besides the conditions at entry, the subsequent evolution of wages. The evidence presented in the next section indicates that career advancement is quicker in the private sector and thus the entry-level penalty could be smaller. Nevertheless, it seems reasonable to conclude that there has been an increase in the premium at the beginning of the career, in spite of the decrease in the relative importance of government as an employer of college graduates. Such relevance has come down as a result of the gradual stabilization of the size of the public sector and, more recently, of the enhancement of budgetary constraints. It is possible to get an approximate idea about how the allocation of entrants with advanced degrees between the two sectors has evolved by looking at their proportion in each sector, by experience cohorts. In the dataset for 2005, the public sector employs roughly 30 per cent of college graduates with 10 or less years of experience, over 50 per cent of those reporting between 10 and 20 years of experience and around 70 per cent of graduates with 20 to 30 years of experience.[12]

Taken together, these pieces of evidence offer some insight into the way public and private labour markets in Portugal have interacted. They indicate that the relative public/private wages are largely unresponsive to the sorting of workers between the two sectors. In the past, the public sector was paying relatively less when it was hiring relatively more, and vice-versa in recent years. Such an evidence should stem, firstly, from the fact that wages in the private sector respond to market conditions whilst public wages are more rigid and stable. Given the rapid growth in the number of college graduates coming to the market and the slowdown in recruitment by the public sector, firms had to compete less

(12) This only gives an approximate indication since more experienced workers may not have joined the sector where they are now at the beginning of their careers, but moved later. As the flow of workers is presumably more important from the private to the public sector than the opposite, the figures may somewhat overstate the actual proportion of entrants into general government in the past. Nevertheless, taking into account the fact that sector switching typically occurs when workers are relatively younger, the distortion may not be all that substantial.

for highly-skilled labour and are likely to have adjusted the entry points downwards. An analysis by occupation made below shows an increase in the premium for jobs in which the two sectors are important employers. Moreover, part of the additional supply of college-graduated labour that was accommodated by private employers occupies worse-paid jobs, traditionally performed by workers with intermediate to low education. This is indicated by an increase in the share of those jobs in the employment structure of college graduates in the private sector, from approximately 40 per cent in 1996 to 45 per cent in 2005.[13] The evidence gathered also indicates that other factors on the side of the labour supply have played an important role, allowing, particularly in the past, a large intake by the public sector despite a wage penalty. Specifically, the attractiveness of public jobs, due to aspects such as employment protection and earlier retirement, appears to have influenced the behaviour of labour supply in terms of selecting preferentially into the public sector (equivalently, the premium does not provide an exact measure of how workers value jobs in the two sectors).

Another implication following from this analysis is that the increase in the public premium for starters does not appear to reflect a deliberate public policy aiming at hiring better professionals, but rather a reaction of the private sector to an increased supply of highly-skilled labour. Note also that such an evolution contrasts with that for other countries in which the public sector has had difficulties to keep up with the rise in the private wages offered to skilled professionals (e.g. the United States, see Borjas (2002), and Great Britain, see Disney and Gosling (1998)).

The conditional distribution of earnings of college-educated workers is more compressed in the public sector than in the private. This characteristic can be assessed by analysing the difference in the premia at the 75th and 25th percentiles for each year (see footnote 11). Such a difference is smaller in the public sector by approximately 35 p.p., a magnitude that remains broadly stable along the decade 1996-2005 and is similar for the cross sections and the panel. The higher wage compression is more evident for the subset of workers with advanced education than when considering all workers (Chart 2). The room to reward differentiated individual performances is typically much larger in the case of higher-educated workers, and government seems to make a much more limited use of wages to this end.

4.2. An analysis by occupational category

Jobs for college graduates in the public sector are quite diverse and it might thus be expected that the overall results above are subject to considerable variation across occupational categories. We now examine this issue by breaking down the data according to the National Occupation Classification. Some jobs in the public sector do not have private analogues, among them judges, foreign office personnel, criminal investigation personnel and security forces (recall that the military are absent in our data). These were excluded from the analysis now carried out. The remaining jobs were divided into two main categories. The first one aggregates those for which the public sector is largely predominant in Portu-

(13) These figures were calculated taking into account the proportion of college-graduate employees in the *Quadros de Pessoal* in occupations with codes 3 or higher according to the National Occupation Classification.

gal although they also exist in the private sector. This includes doctors, nurses, university teachers and primary and secondary education teachers. The second category covers the occupations well represented in both sectors, namely, managerial staff, engineers and life sciences professionals, IT specialists, legal professionals, social science professionals and economists (codes 1 and 2 of the National Occupation Classification). As explained in Section 2, we only have comparable occupational information for both sectors for the years 1999 and 2005. For these years, Table 4 presents the public premia computed separately for each of the two categories as a whole, and for the jobs that are well represented in both sectors.[14] It is also possible to find college graduates in intermediate technical, administrative and personal service occupations (codes 3 to 5 of the National Occupation Classification). We also present the premium computed for them (labelled as «non-professional»).

The most striking result coming out of the table is the high level of the mean public premium associated with occupations in which the public sector is the predominant employer, contrasting with a penalty for those in which both sectors share the employment. The penalty is particularly marked for the jobs that the private sector seeks most, such as engineers, IT staff and economists. In 1999, such occupations featured penalties not far from 20 per cent at the mean and, despite an attenuation in more recent years in line with the developments described above, they are still significant in 2005. This indicates a limited ability on the side of the public sector to hire or retain the most skilled workers in these occupations. Added to this is the fact that we are considering only regular remunerations, while in-kind compensation and fringe benefits are likely to be relatively more important in the private sector.

The high level of the premium for the predominantly public jobs may indicate that they are not fully comparable between the two sectors. Indeed, certain workers in the areas of health and higher education in government perform particularly skill-intensive tasks that have no analogue in the private sector.

Table 4

PUBLIC WAGE PREMIA FOR EMPLOYEES WITH COLLEGE DEGREES, BY OCCUPATION

Per cent

Occupations	1999					2005				
	Proportion		Wage Premium			Proportion		Wage Premium		
	Public	Private	P25	Mean	P75	Public	Private	P25	Mean	P75
Mostly public	96.8	3.2	56.6	42.8	28.7	91.3	8.7	33.6	27.5	13.6
Public and private	35.2	64.8	-3.8	-11.7	-28.7	20.7	79.3	6.2	-5.9	-25.7
Managerial staff	23.5	76.5	23.3	10.2	-18.1	14.3	85.7	19.7	4.5	-23.4
Eng. and life sciences spec.	34.4	65.6	-10.0	-17.5	-29.7	17.0	83.0	2.7	-4.3	-19.1
IT specialists	17.9	82.1	-9.2	-19.0	-34.5	15.5	84.5	-4.7	-13.8	-26.3
Legal specialists	75.7	24.3	4.4	-12.1	-32.7	64.9	35.1	10.3	-1.1	-21.8
Social sciences specialists	75.2	24.8	34.0	18.4	7.9	45.5	54.5	34.1	21.7	10.3
Economists	34.1	65.9	-6.7	-17.3	-36.1	31.0	69.0	-3.3+	-18.6	-36.6
Non-professional	15.1	84.9	-10.6	-13.6	-22.2	8.5	91.5	-1.3+	-9.3	-21.7

Source: Authors' calculations.
Notes: Coefficient of the indicator variable for the public sector in regressions of log (monthly) wages on a constant, experience and experience squared, and indicator variables for male gender, jobs located in more developed areas and public sector. All coefficients are significant at the 1 per cent level, except the ones marked with +, significant at the 5 per cent level.

(14) Note that the figures presented in the table cannot be interpreted as a breakdown of the overall premium figures presented in Chart 3, in particular because the latter are also influenced by relative wages between occupations, given that the occupational structure is very different in the two sectors.

The size of the premia might be expected to shrink over time, as the role of the private sector becomes progressively more important (as it is currently taking place in the area of health care). This has indeed happened between 1999 and 2005.[15] Nevertheless, the relatively higher public wages in those occupations are also likely to reflect the bargaining strength of the respective workers, arising from the social importance of the functions they perform and the role of the respective unions. In fact, all the occupations in this group have specific legal frameworks and wage scales.

The tendency for less compression of salaries in the private sector is generalized across jobs. The findings in this respect stand out for managerial positions featuring a difference over 40 p.p. in the inter-quartile range between the two sectors. Such positions seem to occupy a much broader spectrum in the earnings distribution for the private sector. Finally, public sector employees in non-professional occupations have a penalty across almost the whole distribution. Within these relatively low-grade jobs, private employers seem to have more room to reward the skills of workers with advanced education.

To finalise the discussion of wage premia, we address the question of how our results may be impacted by a preference for one of the sectors by employees sharing some (unobserved) characteristics that also determine wages. Studies finding a premium associated with working in government at the lower quantiles, as we do, relate it to more strict admission requirements in this sector (e.g. Bargain and Melly (2008)). This conclusion is reasonable in the case of countries in which the recruitment of public employees relies on nationwide examination practices (such as Spain and France, for instance). We find this conclusion unlikely to hold for Portugal, where no such mechanisms exist.

The higher relative wage for private employees at the upper part of the distribution is often associated with specific characteristics of this group of workers. We cannot exclude that such an effect is present, for instance, in the results for the upper quantiles in occupations of shared public/private employment. An analysis of this issue would require a deeper investigation.

5. INCENTIVES LINKED TO CAREER ADVANCEMENT AND REWARD TO INDIVIDUAL SKILLS

Wage premia are important indicators from the point of view of attracting and retaining workers in the public sector. However, in a sector with full employment protection, these are unlikely to play a significant role as far as the motivation of workers throughout the career spell is concerned. We now look at other incentives that may be important in that regard, starting by the advancement prospects faced by workers in each sector. We measure these prospects over time as the average gain in relation to the initial salary. Since the progression pattern may vary according to whether the occupation corresponds to higher or lower wage cohorts, we separate workers in accordance with educational attainment, considering workers with basic education or less and workers with higher education. We estimate the pro-

(15) Detailed figures by job within this subset (not shown) indicate strong reductions in the premia for the occupations in which the number of private sector workers increased substantially in our sample in 2005 (nurses and primary and secondary teachers). Note that this increase may also reflect to some extent the fact that the coverage of *Quadros de Pessoal* became fuller.

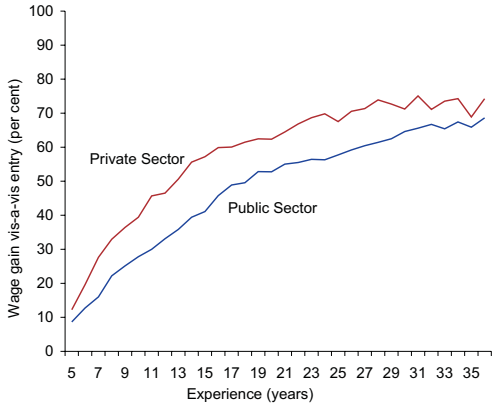
gression pattern in each sector by including indicator variables for the years of experience, starting from the 5th (given that in the initial years it is typically difficult to accurately estimate the gains). Thus, the estimated coefficients capture the difference between the average earnings in the first four years and in each of the following years over the employment spell, controlling for gender and workplace location, as well as education for the first group of employees.[16]

Chart 5 plots the wage advancement patterns in each sector for college graduates in 1996 and 2005. The curves have the usual shape, indicating decreasing marginal returns to experience, which in the regressions in the preceding sections was captured by the (negative) coefficient of experience squared. The important point is that college-graduate employees working in the general government have smaller wage gains vis-a-vis the entry point than their counterparts in the private sector. In 1996 the difference stands at about 12 p.p. after 10 years of experience and then remains very much stable over the career spell; in 2005 the figures are a bit larger, featuring a difference in the gains around 15 p.p. after 10 years of experience and 20 p.p. after 20 years. The private sector manages to have a faster advancement pace that should impact positively on workers' motivation, even with lower wage levels than the public sector (particularly in 2005).

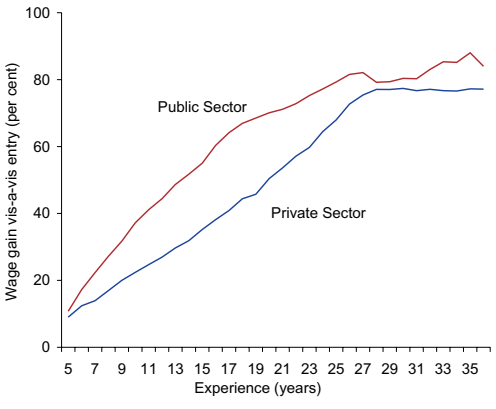
For less-educated employees (Chart 6) the difference in the gains in comparison with the entry point also stood at around 10 p.p. over the whole employment spell in 1996. In 2005 the picture is similar in the first two decades of the career, but then there is an upward swing in the progression pattern for public sector employees, who end their careers with a quicker advancement pace. We do not have a good explanation for the change in comparison to the profile estimated using the 1996 data. In any

Chart 5

ADVANCEMENT PATTERN FOR EMPLOYEES WITH COLLEGE DEGREES - 1996



ADVANCEMENT PATTERN FOR EMPLOYEES WITH COLLEGE DEGREES - 2005



Source: Author's calculations.
Notes: Charts are based on OLS regression of log wages (monthly) on a constant and indicator variables for male gender, jobs located in more developed regions and each year of the career span (from the 5th to the 36th). The coefficients of the latter are shown.

(16) The private sector as an employer is much more differentiated than government. Indeed, in the former wages are explained by factors such as industry and firm size that have no counterpart in the latter. Thus, we could have controlled for those factors when measuring the progression profiles. However, as the point we want to make concerns the comparability between the two sectors, we considered it appropriate to include the same covariates. The outcome of the regression in terms of estimated coefficients is not much affected, as long as the factors omitted are approximately uncorrelated with the covariates included.

case, overall, this clearly suggests that the public sector could benefit from modifying the design of wage scales, specifically by reducing relative wages between the steps occupied by entrants and the steps occupied by more experienced workers.[17]

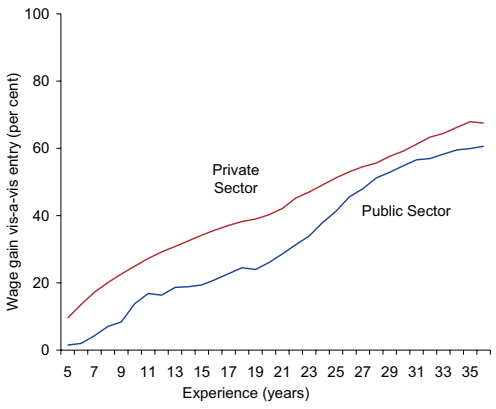
Another important incentive in terms of workers' motivation is their perception that wages depend on individual performance. It might be expected that, in general, workers whose wages are determined by some automatic rules have a weaker commitment to the job. In the public sector it is generally difficult to evaluate employees' performance, given the nature of the services produced and the fact that these are not traded in the market. Career advancement tends to heavily depend on experience.

The relevance of attributes associated with workers' individual skills in the determination of wages cannot be explicitly measured, since these are typically unobserved. The covariates we have been using measure general human capital (education and experience), and determinants related to demography, geography and occupation. However, we can assess the role of unobserved skills in wage determination in each sector by considering the unexplained proportion of the wage variability in the regressions we have been running. The greater this proportion, the bigger that role. A caveat is in order: the proportion of unexplained wage variability in the private sector may be attributed, to a certain extent, to factors unrelated to workers without counterpart in the public sector and that are not being controlled for (see footnote 16).

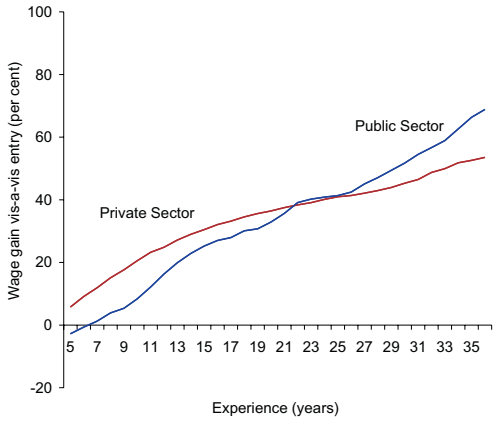
Independently of the differences between the two sectors, an additional aspect that should be taken into account is the fact that unobserved individual skills may interact with experience and become more important in wage determination as employees move forward in their career. Such an interaction may translate, for instance, into the workers' capability to acquire specific human capital. Therefore,

Chart 6

ADVANCEMENT PATTERN FOR EMPLOYEES WITH BASIC OR LESS THAN BASIC EDUCATION - 1996



ADVANCEMENT PATTERN FOR EMPLOYEES WITH BASIC OR LESS THAN BASIC EDUCATION - 2005



Source: Author's calculations.
Note: Same as note to Chart 5 but controlling also for basic education.

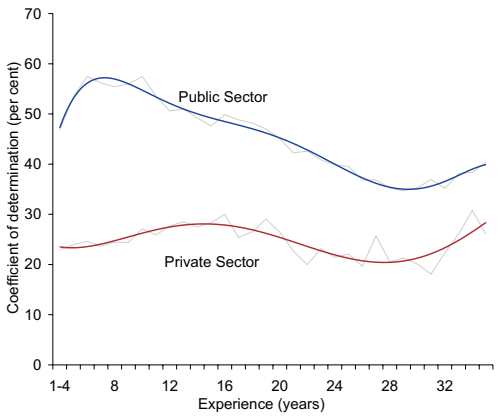
(17) The results obviously reflect the wage scales in force when and before the collection of the data. These wage scales were substantially modified by recently enacted legislation.

we sectioned the data for college-graduate employees into 36 groups according to the sector and the years of experience. For each group we estimated the usual wage regressions (see note to Chart 7) and computed the coefficients of determination in order to measure the explanatory power of the covariates (which also depends on the functional specification used, that is the same for both sectors). The results are depicted in Chart 7 for 1999 and 2005, the years for which information on occupations is available for both sectors.

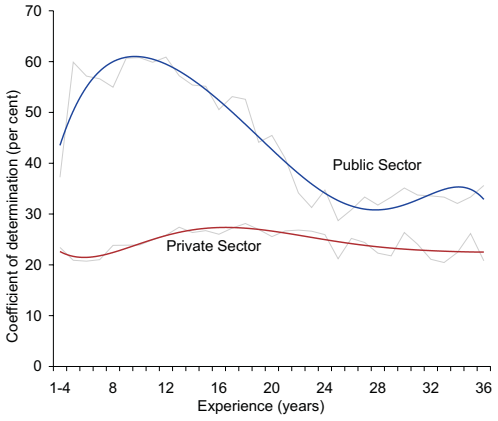
Chart 7 clearly indicates that non-observable skills are less likely to play an important role in the public sector than in the private. The covariates in the regression explain about 30 p.p. less of the wage variability in the latter sector after 10 years of experience. The gap goes down as workers become more experienced, to about 20 p.p. after 20 years of experience and then further to 10 p.p. towards the end of the employment spell. These results should be interpreted carefully in view of the caveat made above, but they are consistent, in particular, with the evidence about wage compression presented in the previous sections. The pattern over the career span obtained for the public sector is more in line with what one would expect, since it is compatible with an increase in the relevance of specific human capital in wage determination.

Chart 7

THE ROLE OF OBSERVABLE CHARACTERISTICS IN THE DETERMINATION OF WAGES - 1999



THE ROLE OF OBSERVABLE CHARACTERISTICS IN THE DETERMINATION OF WAGES- 2005



Source: Author's calculations.
Note: Coefficients of determination from OLS regression by experience cohorts: 1-4 and 5 to 36 years. Regression of log (monthly) wages on a constant and indicator variables for male gender, jobs located in more developed regions and occupations.

6. CONCLUDING REMARKS

The goal of this paper was to analyse the incentives related to wages in the Portuguese public sector, using the private sector as a benchmark. The results obtained can be summarized as follows.

After controlling for observable individual endowments, public sector employees earn higher wages than their private sector counterparts and this premium has risen over the 1996-2005 period. Such a development occurred particularly for college graduates at the beginning of their career spell.

The premia vary according to gender and location of the workplace. Women (particularly in less developed areas) attract a higher premium than men (particularly in more developed regions).

An analysis across the wage distribution shows that the public premium decreases as one moves from the lower to the upper quantiles, in line with the higher relative wages of public employees with lower educational levels.

The rise in the public wage premia for college-graduate entrants is explained, in particular, by an increase in the supply of these workers directed to the private sector, which has been accommodated by changes in the respective employment structure and a downward adjustment of wages at the entry-level.

There is considerable variation in the level of the public premia across occupational categories. Occupations in which the private and the public sectors share the employment feature a wage penalty, suggesting that the general government has a low capacity to attract the workers performing them. On the contrary, there is a large premium in the areas of health and education, in which the public sector is the predominant employer, partially reflecting the strong bargaining power of public employees in those areas.

Public sector employees have a slower advancement pace than their counterparts in the private sector. This may impact negatively workers' motivation. There is also evidence that the reward to non-observable skills is likely to play a relatively less important role in terms of wage determination in the public sector.

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Appendix

Table A1

WAGES, DESCRIPTIVE STATISTICS

	Public Sector			Private Sector		
	1996	**1999**	**2005**	**1996**	**1999**	**2005**
Cross-Sectional Data						
Monthly wage						
Mean (euro)	950	1 142	1 491	619	692	859
Mean 1996=100	*100.0*	*120.2*	*157.0*	*100.0*	*111.6*	*138.6*
Median/Mean	754	894	1 250	455	504	626
Median	566.2	698.6	897.9	487.0	533.3	693.7
Std. Dev.	0.79	0.78	0.84	0.73	0.73	0.73
Skewness	1.9	1.6	1.3	3.6	3.5	3.8
Std. Dev./Mean	0.60	0.61	0.60	0.79	0.77	0.81
P75/P25	2.3	2.3	2.4	2.0	2.0	1.9
Hourly wage						
Mean (euro)	6.6	8.0	10.5	3.9	4.4	5.5
Median/Mean	5.3	6.2	8.9	2.8	3.2	3.9
Median	4.1	4.9	6.2	3.3	3.6	4.6
Std. Dev.	0.80	0.77	0.84	0.71	0.71	0.71
Skewness	1.8	1.5	1.2	3.5	3.5	3.8
Std. Dev./Mean	0.62	0.61	0.59	0.84	0.81	0.84
P75/P25	2.4	2.3	2.4	2.1	2.0	1.9
Panel Data						
Monthly wage						
Mean (euro)	968	1 202	1 663	644	772	1 042
Mean 1996=100	*100.0*	*124.2*	*171.9*	*100.0*	*120.0*	*161.9*
Median	809	972	1 358	499	589	774
Std. Dev.	557.4	710.4	968.4	456.8	550.3	801.4
Median/Mean	0.84	0.81	0.82	0.78	0.76	0.74
Skewness	1.9	1.5	1.3	3.4	3.1	3.2
Std. Dev./Mean	0.58	0.59	0.58	0.71	0.71	0.77
P75/P25	2.3	2.4	2.5	1.9	2.0	2.1

Source: Author's calculations, based on the *Quadros de Pessoal* and the *Recenseamento Geral da Administração Pública*.

Table A2

LABOUR FORCE CHARACTERISTICS

	Public Sector			Private Sector		
	1996	**1999**	**2005**	1996	1999	2005
Experience (years)	23.4	24.2	24.6	21.1	21.4	21.8
Std. Dev.	*11.5*	*11.3*	*11.4*	*11.6*	*11.7*	*11.6*
Education						
<Basic Ed. (%)	33.4	30.6	20.9	65.2	59.9	47.8
Basic Ed. (%)	13.8	13.7	11.3	15.4	16.4	21.7
Secondary Ed. (%)	17.6	16.5	19.8	14.3	17.1	19.9
College grads. (%)	35.2	39.3	47.9	5.1	6.7	10.6
Gender						
Male (%)	43.8	42.2	35.1	61.3	59.1	57.9
Female (%)	56.2	57.9	65.0	38.7	40.9	42.1
Region						
More developed areas (%)	82.2	82.5	83.1	91.0	90.5	89.6
Less developed areas (%)	17.9	17.5	16.9	9.0	9.5	10.4

Source: Author's calculations, based on the *Quadros de Pessoal* and the *Recenseamento Geral da Administração Pública*.
Note: Based on the cross-sectional datasets.

WAGE AND PRICE DYNAMICS IN PORTUGAL AN INTEGRATED APPROACH USING QUALITATIVE DATA*

*Fernando Martins***

1. INTRODUCTION

A correct definition of economic policies in general and monetary policy in particular requires a deeper understanding of the characteristics and determining factors underlying wage dynamics. When the exchange rate is no longer available to bring about adjustments, wage flexibility becomes a fundamental requirement for ensuring an adequate adjustment to shocks, whether symmetrical or asymmetrical, within a monetary union. Indeed, even though a number of reforms in labour markets have been put into place in various euro area countries, there are striking differences remaining in collective bargaining procedures and other labour market institutions (Du Caju *et al.*, 2008). In addition, wages are also an important determinant of firms' prices. Recent microeconomic research, both qualitative and quantitative, suggests that those sectors with a higher labour cost share, such as services, typically show a greater rigidity in prices (Fabiani *et al.*, 2006 and 2007, Altissimo *et al.*, 2006, Alvarez *et al.*, 2006). Against this background, the Eurosystem set up in 2006 a research network entitled Wage Dynamics Network (WDN) aiming at study more in depth the features and sources of wage and labour cost dynamics in the euro area and their implications for monetary policy.[1] One of the lines of research of this network consisted in analysing data from surveys among firms relating to their price and wage setting behaviour. It is within this context that this article details the findings of a survey carried out by the Banco de Portugal in the first half of 2008 within the scope of its participation in the WDN.

One of the main advantages of using surveys is their flexibility. There is the possibility of questioning firms directly on a number of points relating to the way they set prices or wages, such as the main obstacles to freezing or cutting wages, the most important factors determining wages or the ways they react to significant changes either in demand or in production costs. This type of information, for instance, cannot be obtained from large administrative databases such as the Ministry for Labour and Social Solidarity Personnel Database (*Quadros de Pessoal* - QP) or the Social Security Wage Data-

* This article was developed within the context of the Wage Dynamics Network (WDN). This is a Eurosystem research network, bringing together researchers from the European Central Bank and the 24 national central banks of the countries that make up the European Union. The aim is to analyse the characteristics and crucial elements in how wage dynamics work in the euro area and look into the implications for monetary policy. Several members of the Banco de Portugal staff represent the Bank in the network along with the author. They are Cláudia Duarte, Carlos Robalo Marques, Álvaro Novo and Pedro Portugal. The author received many comments and suggestions and would like to thank his colleagues at the Research department - Nuno Alves, Mário Centeno, Ana Cristina Leal, Carlos Robalo Marques, Pedro Portugal and Carlos Santos - along with other participants in the WDN. Special thanks are due to Vasco Gonçalves and Daniela Miranda of the Universidade Lusíada de Lisboa for their excellent contribution, both in the analysis of databases and in their work with the companies involved. Thanks are also due to Fátima Teodoro, Pedro Prospero Luís and Maria Lucena Vieira for their IT input at various stages of the project. And last but not least, thanks to all the firms that took part. Without their collaboration, this study would not have been possible. The opinions expressed in this article are the sole responsibility of the author and do not necessarily reflect the position of the Banco de Portugal or the Eurosystem.

** Banco de Portugal (Research Department) and Universidade Lusíada de Lisboa.

(1) More detailed information on the aims of the WDN can be found on the European Central Bank website at http://www.ecb.int/home/html/researcher_wdn.en.html. The work presented in the conference that was held on 24 and 25 June 2008 with the main results of the WDN can be found on http://www.ecb.int/events/conferences/html/wage_dynamics_network.en.html.

base (*Base de Dados do Registo de Remunerações da Segurança Social* - BDRR).[2] Quite clearly, surveys that are not conducted directly with the firms may well throw up a number of problems. These relate both to the low response rate normally obtained and to the possibility of ill-judged interpretation of the questions raised. Apart from this, the responses may be coloured by other factors, such as the way questions are formulated or the economic outlook in which they occur. As a final point, this kind of survey is not based on regular revisits, and this makes it impossible to create time series that allow for an assessment of how the variables being analysed change over time.

This article is structured in the following way. Section 2 describes some of the institutional characteristics of the labour market that is being reviewed. The analysis is based on information from the survey, and includes such things as the importance of collective contracts or the relative importance of the so-called wage cushion in Portugal. There is also a comparison between the architecture of the wage bargaining process in Portugal and the rest of Europe. Section 3 presents some stylised facts about the dynamics of prices and wages in Portugal, as well as the link between the two. Section 4 looks at the evidence on wage rigidity (real and nominal) and describes some of adjustment strategies used by firms as an alternative to changes in base wages. Section 5 looks at the reaction of firms to different types of shocks. Finally, section 6 sets out the main stylised facts that have been identified. Annex 1 details the process of sample selection, the questionnaire and the way the survey was conducted.

2. SOME ASPECTS OF THE INSTITUTIONAL ARCHITECTURE OF WAGE BARGAINING IN PORTUGAL

The institutional framework of wage bargaining plays an important role in determining the dynamics of wages and, in general, of the labour market itself. Druant *et al.* (2008) show that labour market institutions influence the frequency and timing of wage changes, while Messina *et al.* (2008), Babecký *et al.* (2008) and Dickens *et al.* (2007) show that the institutional framework is also an important determinant of downward wage rigidity. In addition, institutions seem to influence the reaction of firms to shocks, as suggested by Bertola *et al.* (2008), as well as the degree to which firms use available adjustment policies to reduce labour costs. This is documented in Babecký *et al.* (2008). There is in fact a vast body of literature that looks at the impact of the institutional frameworks where decisions are taken on wages as a result of the wage bargaining process (including decisions on wage levels, wage dispersion and rigidity).[3]

(2) The Ministry for Labour and Social Solidarity Personnel Database are collected annually by the Strategy and Planning Department of the Ministry of Labour and Social Solidarity from all Portuguese companies. The data is therefore tantamount to a census and is an extremely important source of information for a microeconomic analysis of the labour market in Portugal, making it possible to undertake longitudinal analysis of firms and employees. Another very useful source is the Social Security Wage Database. The information is collected on a monthly basis and is permanently updated. It provides important data for an assessment of short-term movements in the labour market.

(3) For a summary of the recent literature on the subject, see Freeman (2007).

In spite of the importance given to the role of institutional wages, the information available from international sources is rather scarce.[4] The survey that was produced provides information on a range of institutional characteristics that may influence wage decisions in Portugal, among them the degree of centralised decision-making, collective contract coverage or the relative importance of contracted wages. The main conclusions relating to wage institutions in Portugal are summed up below.

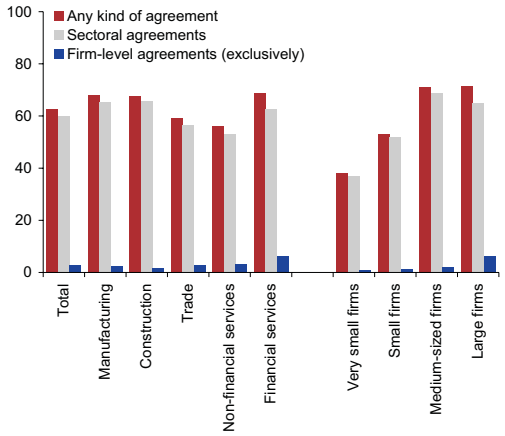
The wages of most workers, above all those in larger firms, are determined by in the context of collective agreements at the sectoral level. In around 60 per cent of firms wages are set through agreements of this nature, although in only 30 per cent of the cases are the firms directly involved in the negotiations (Chart 1).[5] Furthermore, 9.7 per cent of the firms apply firm-level wage agreements: in 6.9 per cent firm-level and sectoral agreements coexist, whereas in 2.8 per cent firm-level agreements are exclusive. As might be expected, collective wage agreements are more important in larger firms.[6] There is little difference between the sectors analysed.

The share of workers covered by collective agreements (either sectoral or firm-level) is significant, and it is considerably higher than the estimates for the union density. This phenomenon is frequently explained by a simple fact: although in legal terms the agreements are only binding for unionised workers and firms affiliated to employers associations, the collective agreement is typically extended to all the workers and firms in a specific sector. This can be done on a voluntary basis, or through extension procedures issued by Ministry for Labour and Social Solidarity. According to the Employment Outlook of

Chart 1

FIRMS WITH WAGES SET UNDER COLLECTIVE WAGE AGREEMENTS

As a share of all surveyed firms; unweighted results



Source: Survey on wage setting in Portugal (2008).

(4) The OECD has probably the most comprehensive database in this field. It provides quantitative information on an array of developed countries relating to the percentage of cover through collective contracts, unionisation rates, the importance of minimum wages and the degree of coordination and decentralisation of decisions (see, for example, Elmeskov *et al.*, 1998)

(5) Unless otherwise stated, all the results shown are weighted in terms of the relative size of each firm measured on the basis of the number of workers. Blank replies were excluded.

(6) In the context of the analysis firms were split according to their size into the following categories: i) very small firms (between 10 and 19 workers); ii) small firms (between 20 and 49 workers); iii) medium-sized firms (between 50 and 199 workers); and iv) large firms (more than 199 workers).

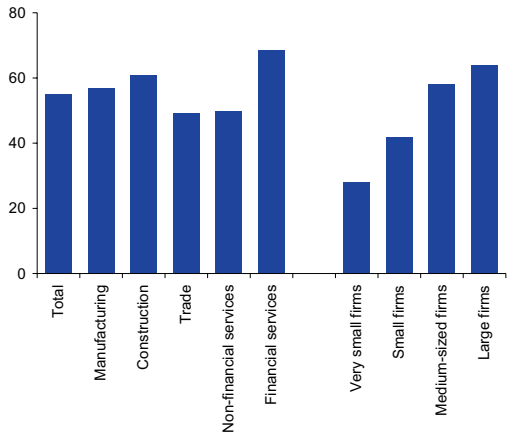
the OECD, in 2004, union density in Portugal in 2000 stood at 24 per cent (compared with 61 per cent in 1980 and 32 per cent in 1990). More recent data, from the International Social Survey Programme, published in the Labour Relations White Book, point to a 17 per cent rate in 2007. These figures are considerably lower than the average percentage of workers covered by collective agreements as found in our survey (Chart 2). The level of coverage is particularly high in the financial services and tends to increase with the size of the firms.

It is worth noting, however, that the wage scale agreed in the context of collective wage agreements is taken in many cases merely as a reference. Indeed, a significant number of firms pay wages above those agreed under collective wage agreements (Chart 3). The difference between effective wages and contracted wages, the so-called wage cushion (Portugal, P., 2006), is particularly high in financial services.[7] Cardoso and Portugal (2005) estimate that the effective wages in 1999 exceed contracted wages in amount that varies between 20 and 50 per cent. The figure obtained in the survey is 25 per cent. From the point of view of the firms, the way this cushion is handled makes it a strategic buffer against adverse shocks, in particular in a context where downward nominal wage rigidity turns out to be an active constraint.

Chart 2

SHARE OF WORKERS COVERED BY COLLECTIVE WAGE AGREEMENTS

As a percentage of total workers in the sample

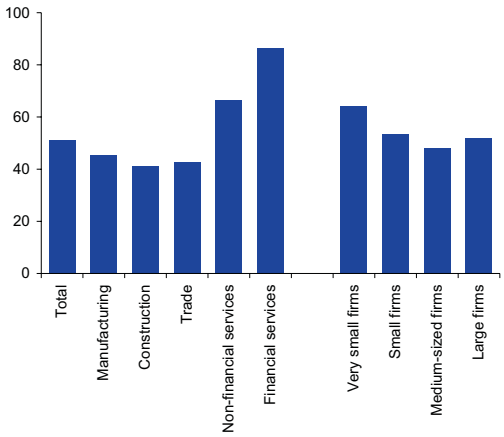


Source: Survey on wage setting in Portugal (2008).

Chart 3

SHARE OF WORKERS WITH BASE WAGES ABOVE THE WAGE SCALE

As a percentage of workers with wages set under collective wage agreements



Source: Survey on wage setting in Portugal (2008).

3. THE BEHAVIOUR OF PRICES AND WAGES: DURATION AND INTERACTION

As mentioned before, one of the most robust facts coming out of recent microeconomic evidence points to the fact that those sectors with higher labour cost shares tend to show a higher degree of price rigidity. This in turn is frequently suggested as sign of greater wage rigidity. Business services – a

(7) Financial services include the banking sector and the insurance companies.

sector where the labour cost share is typically high – are often cited as an example where the degree of price flexibility is strongly affected by wage rigidity.

The findings from our survey seem to be consistent with this conclusion. An analysis of price frequency shows that around 70 per cent of firms do not change prices more than once a year; with percentage being particularly high in the case of non-financial services (Chart 4).

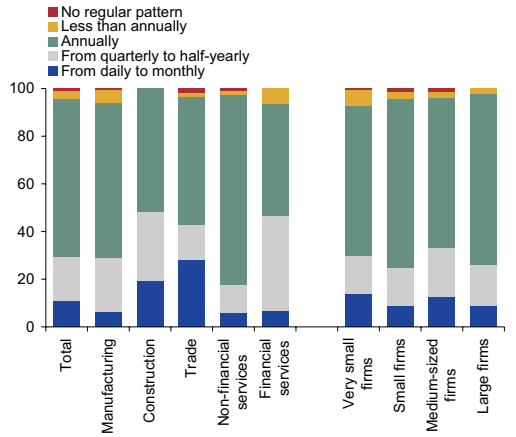
Moreover, in non-financial services, unlike other sectors, there is a predominance of time-dependent rules. Here, price revisions are typically carried out at specific moments of the year and, unlike state-dependent price setting rules, they do not depend on current economic conditions (Chart 5). In the presence of shocks, time-dependent rules typically lead to greater price rigidity. Another way of assessing price rigidity, alternative to the more common approach based on frequency analysis, is to find out directly from the firms what is speed of price reactions to significant changes in costs or demand. In line with previous evidence, Chart 6 points to greater rigidity in non-financial services, with firms here taking on average between 8.1 and 9.3 months to adjust their prices, depending on the type of shock. This analysis excludes those firms that apply time-dependent pricing rules strictly which account for about 25 percent of the total sample. The findings also show that firms appear to react more quickly to positive shocks on the cost side and negative shocks on the demand side.

As a complement to this evidence, the survey looked into the link between the frequency of price changes and the frequency of wage changes. The aim was, in particular, to get answers to the following questions: i) how does the frequency of price changes compares with the frequency of wage changes? ii) is there any synchronisation between changes in prices and changes in wages? and iii) are there significant differences across sectors regarding the frequency and timing of wage and price changes and their relationship?

Chart 4

FREQUENCY OF PRICE CHANGES

As a share of surveyed firms;
unweighted results

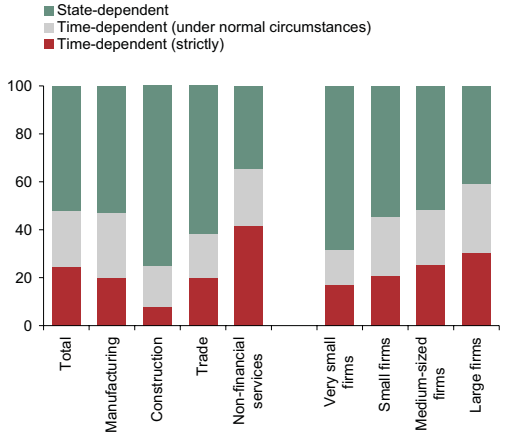


Source: Survey on wage setting in Portugal (2008).

Chart 5

PRICE-SETTING RULES: TIME-DEPENDENT VS. STATE-DEPENDENT PRICE SETTING

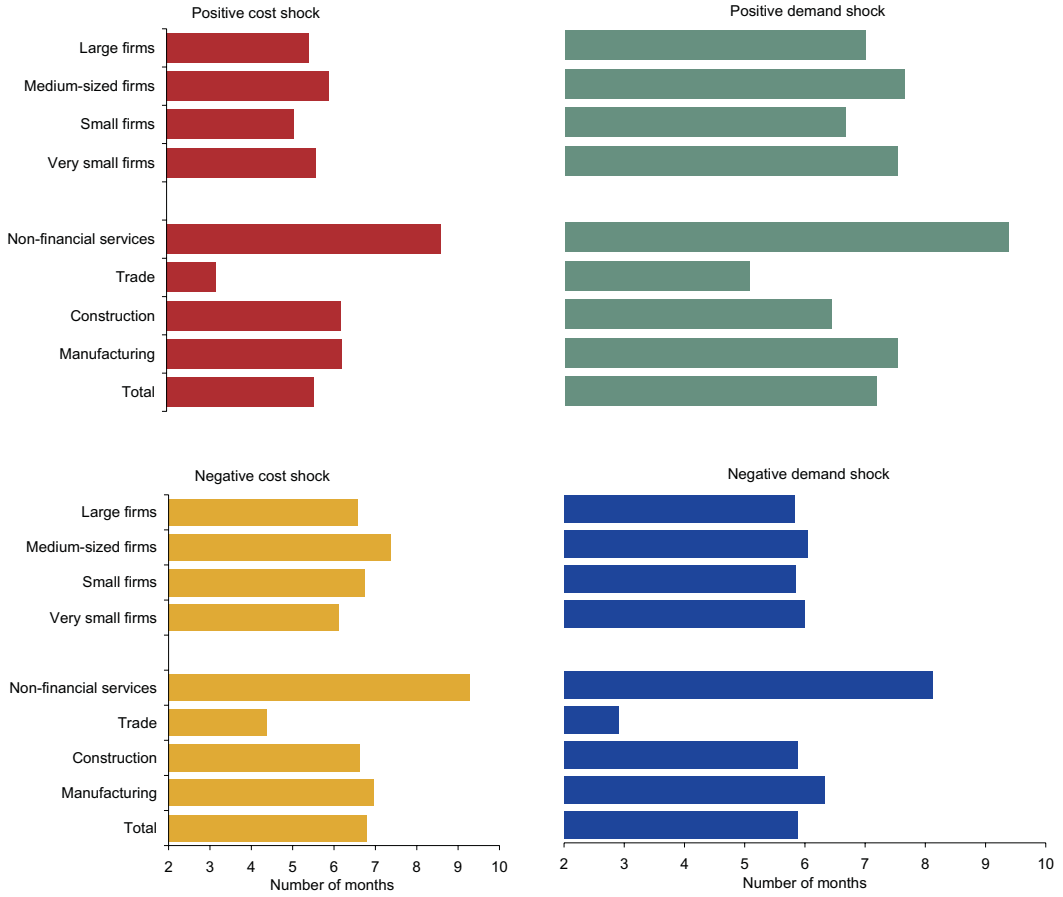
As a share of surveyed firms;
unweighted results



Source: Survey on wage setting in Portugal (2008).

Chart 6

SPEED OF PRICE REACTION TO DEMAND AND COST SHOCKS
Excluding firms that apply time-dependent pricing rules strictly



Source: Survey on wage setting in Portugal (2008).

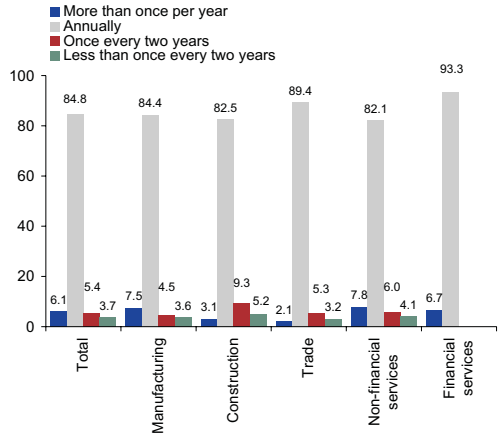
The approach used in the analysis of price change frequency was different from the procedure for wage change frequency. In terms of prices, the firms were asked directly about the frequency of change, while for wages the frequency of change was analysed through three different questions: the changes stemming from moves in inflation, changes deriving from tenure and those related to other factors. One composite variable was calculated for the three motivations, defined as the highest frequency of wage changes for each firm, irrespective of the specific determining factor. Results show that the wages of most workers (85 percent) are changed only once per year (Chart 7)

In order to simplify the comparison, a proxy for the average duration of wage and price spells was computed by simply multiplying each point category by its respective frequency. For those categories expressed though intervals the mid-point was assumed. Table 1 shows that prices in financial services, construction and trade have short durations when compared to manufacturing and other non-financial services. However, the results obtained for the financial sector should be interpreted with some caution, not only because the concept of reference in this sector may not be absolutely clear, but also be-

Chart 7

FREQUENCY OF WAGE CHANGES

Percentage of workers



Source: Survey on wage setting in Portugal (2008).

Table 1

AVERAGE DURATION OF PRICE AND WAGE SPELLS

In months

	Prices	Wages
Total	10.3	12.8
Manufacturing	10.1	12.6
Construction	7.4	13.7
Trade	8.4	12.5
Non-financial services	11.4	13.2
Financial services	6.8	12.1
Very small firms	9.6	14.6
Small firms	10.0	14.3
Medium-sized firms	9.4	13.8
Large firms	10.5	12.5
Memo:		
Euro area	9.6	14.7

Sources: Druant *et al.* (2008) and Survey on wage setting in Portugal (2008).

cause the questionnaire was filled in during a period of turmoil in the international financial markets and this may have coloured in some way the replies from the institutions concerned.[8] When compared with the euro area as a whole, price spells in Portugal are apparently slightly longer.

As expected, the average duration of wage spells is higher than that of price spells (at around 2.5 months), and it also shows a smaller sector variability. When compared with the euro area as a whole, wages remain constant for an average period that is around 2 months shorter. Druant *et al.* (2008) show that the differences between European countries in terms of wage durations are significant, though they are relatively slight in terms of sectors. The opposite is true for prices, where the differences between countries are of only minor significance, but significant in terms of sectors. These results are consistent with the evidence that differences between firms in terms of frequency of price adjustments are determined to a large extent by their degree of competition and their labour cost share, while differences between frequencies of wage changes is to a large extent a reflection of national institutional factors.

Another equally relevant factor in the assessment of firms' flexibility when they face changes in their economic environment is the degree of synchronisation between price changes and wage changes. In order to obtain empirical evidence on this point, firms were asked whether changes to their prices occur without any defined time pattern or if, on the contrary, those changes occur largely in specific months of the year. According to the information obtained, in 37 per cent of firms price changes are

(8) As mentioned in the Annex, the questionnaire that was sent to banks was somewhat different from the base version. The biggest difference was in the section related to price setting. In particular, firms were asked to take as a reference price the interest rate applied to their main credit product, assuming a customer with average risk.

concentrated in specific months of the year, and 64 per cent of these firms adjust their prices in January (Chart 8).

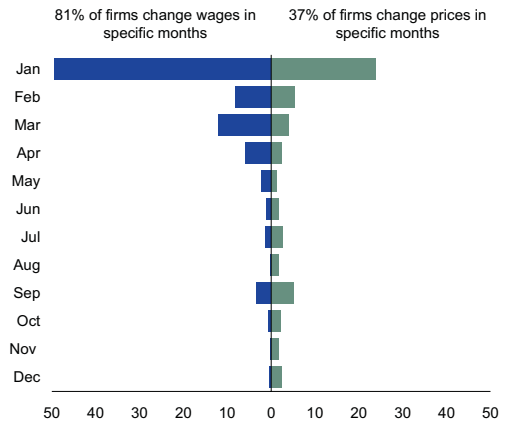
Firms were also asked whether changes to wages occurred in specific months of the year or whether there was no temporal pattern defined. The results show that the degree of concentration of wage changes is considerably higher than that of prices, with 81 per cent of wages changed in specific months of the year. January is the month with the largest number of changes. The fact that most decisions on wages are made in January is probably institutional by nature, both at sectoral level and at firm level, a reflection of collective labour conventions.[9]

Firms were also asked about the possible connection between the timing of their price setting and wage setting decisions. The intensity and direction of this connection is illustrated in Chart 9. The results suggest that there is some degree of synchronisation between the timing of price and wage changes, with around 50 per cent of firms recognising that a link does exist. However, only 20 per cent admit that the link is strong: in 7 per cent the decisions are taken at the same time, in 9 per cent changes in prices are taken only after wages are set, and in 4 per cent changes in wages occur only after prices are set. In contrast, in around half of the firms there does not seem to be any link between the timing of both decisions. However, the lack of synchronisation between the two decisions at the micro level does not necessarily imply that the behaviour of inflation is irrelevant when it comes to setting wages. As mentioned in Section 2, around two-thirds of firms take inflation into consideration when

Chart 8

CONCENTRATION OF WAGE AND PRICE CHANGES

As a share of all surveyed firms with valid responses; unweighted results



Sources: Survey on wage setting in Portugal (2008).
Note: Values computed as a share of all firms with valid responses. The sum of percentages exceed the proportion of firms that change wages or prices in specific months as they could choose more than one month.

(9) The big convergence of changes in wages in specific periods of the year may also have an impact on the way that monetary policy decisions affect the real economy. Olivei and Tenreyro (2008) quote, for example, the case of Japan, where most firms fix their wages between February and May each year (the so-called "Shunto" or great offensive). Results show that a monetary policy shock in the first half of the year – when wages are more flexible – produces less of an impact on economic activity than one towards the end of the year.

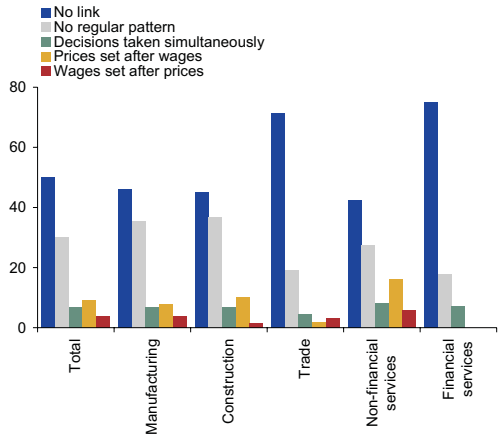
setting their base wages. In addition, survey results show that, among the several factors affecting the frequency of wage changes, inflation is the one triggering most frequent wage adjustments in frequencies greater or equal to one year (Chart 10).

The existence of wage indexation mechanisms is another factor affecting the way price changes are transmitted to wages. The survey includes two questions that are geared to assessing the way the inflation behaviour is reflected in firms' base wages. In the first, firms were asked if the issue of inflation was a consideration when they set their base wages. If yes, they were asked to indicate whether the inflation behaviour is reflected automatically in base wages, for instance through an explicit indexation rule, or if it is used only as a non-formal reference for wage setting. Firms should also indicate if the most relevant inflation for setting base wages is the past or the expected rate. Table 2 shows that the wages of around 65 per cent of workers are set with inflation as a point of reference, though in most cases this is done only informally. This figure is higher than the average for the euro area, though less than in some countries, such as Spain or Belgium. In these, unlike Portugal, the bargaining systems are characterised by strong automatic wage indexation mechanisms (see European Central Bank, 2008, for a summary of the importance of wage indexation in several euro area countries). On the other hand, expected inflation seems to be more relevant in Portugal than past inflation. This goes against the trend in most other countries, where past inflation is of greater importance (Druant *et al.*, 2008).

Chart 9

SYNCHRONISATION BETWEEN PRICE AND WAGE SETTING DECISIONS

As a share of all surveyed firms; unweighted results

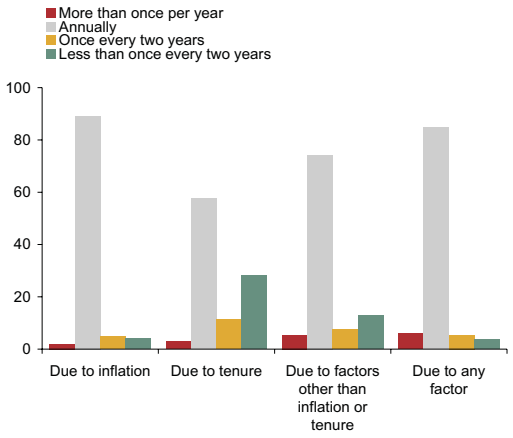


Sources: Survey on wage setting in Portugal (2008).

Chart 10

FREQUENCY OF WAGE CHANGES

As a percentage of total workers in the sample



Source: Survey on wage setting in Portugal (2008).

Table 2

HOW INFLATION BEHAVIOUR IS REFLECTED IN FIRMS' BASE WAGES

As a percentage of total workers in the sample

	Automatically		No formal rule		Total
	Past inflation	Expected inflation	Past inflation	Expected inflation	
Total	1.8	4.8	15.4	42.7	64.6
Manufacturing	3.2	5.9	15.3	44.6	69.1
Construction	1.6	2.7	11.9	31.0	47.2
Trade	0.4	2.0	26.8	43.6	72.9
Non-financial services	1.7	5.9	7.6	39.6	54.8
Financial services	0.0	1.2	37.7	56.5	95.5
Very small firms	2.9	5.9	8.7	20.0	37.5
Small firms	4.2	2.7	10.1	18.6	35.5
Medium-sized firms	2.2	2.0	15.1	29.1	48.4
Large firms	1.6	5.9	15.7	47.7	70.9

Source: Survey on wage setting in Portugal (2008).

4. WAGE RIGIDITY: EVIDENCE OF AND MECHANISMS FOR ALTERNATIVE ADJUSTMENTS

4.1. Survey evidence on downward (real and nominal) base wage rigidity

The concept of nominal wage rigidity is frequently associated with legal or contractual constraints which hinder firms from reducing the wages of their workers[10]. In Portugal, there has been a legislative framework since the 1950s barring firms from reducing wages, which would suggest a high degree of downward nominal wage rigidity in Portugal.

The questionnaire contained two questions with the main aim of assessing the extent to which the possibility of firms reducing their base wages or increasing them below the inflation rate is constrained by legal or contractual factors.[11] The first of these questions, firms were asked if they would have considered the possibility of changing their base wages in 2006 (the reference year in the survey) in an amount below the one that was agreed. If the answer was affirmative, firms should indicate the desired change in base wages. As a measure of downward nominal base wage rigidity it was considered the share of firms that would like to reduce their base wages, while the share of firms that would like to increase their base wages below the inflation rate was used as a measure of downward real base wage rigidity.

(10) A current has been developing recently in the literature on the issue of wage rigidity stemming from the availability of longitudinal databases such as the QP and the BDRR. In the context of this literature, nominal wage rigidity is normally illustrated through empirical distributions of wage changes, where there is an almost total absence of negative wage variations and a notable mass of probability at zero (see Portugal, 2006, and Duarte, 2008). This restriction, however, does not eliminate the possibility of firms reducing real wages in response to adverse shocks. All that is necessary for this is to make sure that the (non-negative) variation in nominal wages is less than the expected rate of inflation. Given this, real wage rigidity is usually measured as the proportion of workers with a wage variation rate close to the expected rate of inflation. In the absence of real rigidity, the wage variation of these workers would be more moderate.

(11) These two questions were only included in the Portuguese version of the questionnaire.

Results show that a small fraction of firms would consider the possibility of reducing their base wages in 2006 if there were no legal or contractual restrictions. These firms account for 1.6 per cent of total employment in the sample (Table 3), with this share being higher in firms applying collective wage agreements, in manufacturing and smaller firms. On the other hand, those firms that would have considered the possibility of increasing their base wages in 2006 below the inflation rate in that year account for 4.4 per cent of total employment in the sample.

Following the pioneering work of Blinder and Choi (1990), Babecký *et al.* (2008) present an alternative approach to assess nominal and real wage rigidity. In their work, and based on the information collected in the common questionnaire developed in the context of the WDN, downward nominal wage rigidity is defined as the share of firms that state they have frozen wages at least once in the past five years. The hypothesis that is assumed is similar to the one used by Dickens *et al.* (2007), who assumed that firms that freeze their workers' wage would, in the absence of nominal rigidity, be accepting a cut in wage. This hypothesis assumes, of course, that those firms that never froze their workers' wages over the five years prior to the survey do not consider the impossibility of reducing nominal wages as an active restriction. In relation to real rigidity, the choice of an indicator is not nearly so clear-cut. Babecký *et al.* (2008) consider as a yardstick for the real rigidity of wages the percentage of firms that accept the existence of an automatic connection between the variation of their wages and inflation (past or expected). This is clearly a measure that restricts the degree of real rigidity and, as such, any findings should be treated with caution. The results show that nominal rigidity is markedly more prevalent in the firms under review than real rigidity (Table 4). These findings are in line with those obtained for the United States and for the United Kingdom, but different from those found in many euro area countries. It should be noted that the evidence adduced for various European countries using these two indicators reveals considerable differences,

Table 3

INDICATORS OF DOWNWARD NOMINAL AND REAL BASE WAGE RIGIDITY

As a percentage of total workers in the sample

	Firms that would like to have their base wages reduced	Firms that would like to have their base wages increased by an amount below the inflation rate
Total	1.6	4.4
Manufacturing	3.4	4.9
Construction	1.2	0.3
Trade	0.4	11.8
Non-financial services	1.2	3.1
Financial services	0.0	0.0
Very small firms	2.9	3.9
Small firms	4.8	6.9
Medium-sized firms	2.5	3.5
Large firms	1.2	4.6
Collective wage agreements:		
Yes	1.9	5.5
No	1.0	1.8

Source: Survey on wage setting in Portugal (2008).

Table 4

ALTERNATIVE INDICATORS OF DOWNWARD NOMINAL AND REAL BASE WAGE RIGIDITY

Percentage of total workers in the sample

	Firms that have frozen their base wages at least once over the last 5 years	Firms with formal wage indexation
Total	23.7	6.6
Manufacturing	16.3	9.1
Construction	13.5	4.3
Trade	14.2	2.4
Non-financial services	38.0	7.6
Financial services	0.0	1.2
Very small firms	11.9	8.2
Small firms	18.3	9.5
Medium-sized firms	18.1	7.7
Large firms	25.7	6.1
Collective wage agreements:		
Yes	23.9	5.8
No	23.3	8.7
Memo:		
Euro area	8.4	16.2

Sources: Babecký *et al.* (2008) and Survey on wage setting in Portugal (2008).

both in relation to nominal and real rigidity (see Babecký *et al.*, 2008). Nominal rigidity is, apart from Portugal, particularly strong in the Czech Republic, Estonia, Germany and the Netherlands, while it is markedly weaker in Belgium, Greece and Poland. Moreover, real rigidity is significant in Belgium and Spain, countries where wage indexation is a common practice, in France and in Hungary, but not relevant in Italy, Greece, Poland, Estonia and Slovenia.

The findings obtained from our survey show that legal restrictions do have an impact on reduction or freezing of wages, but workers' morale and performance are equally important in a context where firms have to bring labour costs down (Table 5).[12]

Table 5

MAIN OBSTACLES TO WAGES CUTS/FREEZES

Most important factors		Less important factors	
Factors	**Score [a]**	**Factors**	**Score [a]**
Legislation and collective wage agreements(2)	3.58	Impact on firm's reputation	2.93
Impact on workers' morale	3.44	Risk that wages become little competitive	2.92
Impact on workers' performance	3.39	Difficulties in attracting new workers in the future	2.83
Workers dislike unexpected changes in their wages	3.37	Costs of hiring and training new workers in the future	2.73
Risk that the best workers leave the firm	3.29		

Source: Survey on wage setting in Portugal (2008).
Notes: (a) Average score on a scale from 1 ("Irrelevant") e 4 ("Very relevant") weighted by the number of workers in each firm. (b) This factor is only relevant for wage cuts

(12) Results do not change by much when it is considered only those firms that, in the absence of legal or contractual constraints, would have considered the possibility of reducing their base wages in 2006 or increasing them below the inflation rate.

4.2. Alternative adjustment mechanisms

The importance of wage rigidity clearly depends on the availability of other mechanisms through which firms can reduce their labour costs without changing the base wages. The information obtained from the survey provides unique evidence on the relevant importance of those alternative mechanisms. In this context, firms were asked if had at any time had recourse to ways of cutting labour costs without changing their base wage. These mechanisms include the possibility of reducing or cutting out monetary and non-monetary bonuses, taking on new workers with the same characteristics as those who left but on a lower wage, changing the shifts policy, taking longer over promotions or reducing the number of employees. The firms had the chance to choose more than one of these options.

The results show that around 70 per cent of the firms have already used at least one of these strategies to cut labour costs, above all larger firms and those that apply collective wage agreements (Table 6). Reducing the number of employees is by far the most frequently used alternative, particularly in financial services and in larger firms. Other frequently used mechanisms are taking longer over promotions or introducing a freeze, and hiring workers at wages below those who leave.

Table 6

ALTERNATIVE STRATEGIES TO REDUCE LABOUR COSTS

As a percentage of total workers in the sample

	Reducing monetary benefits	Reducing non-monetary benefits	Changing shifts policy	Slowdown the pace of promotions	Hiring new workers with lower wages	Reducing the number of employees	At least one strategy
Total	20.1	19.2	12.8	27.6	24.0	56.6	70.5
Manufacturing	17.2	11.0	13.2	14.1	23.2	57.1	70.3
Construction	8.5	5.5	8.3	17.1	15.7	47.4	55.4
Trade	28.3	18.6	19.9	30.5	28.5	52.6	68.4
Non-financial services	16.5	22.1	13.9	26.0	20.6	53.2	69.8
Financial services	41.1	40.0	0.0	77.9	41.5	82.3	87.2
Very small firms	5.1	4.4	3.0	9.4	5.3	30.7	44.7
Small firms	15.7	10.2	7.4	14.9	15.5	40.4	57.6
Medium-sized firms	17.2	9.1	13.1	14.8	19.5	42.7	62.9
Large firms	21.2	22.6	13.0	31.8	25.8	61.4	73.5
Collective wage agreements:							
Yes	24.0	24.1	13.7	27.4	23.0	63.4	75.2
No	9.3	6.3	10.7	27.9	27.4	39.0	58.7
Memo:							
Euro area	20.6	-	21.4	25.2	38.8	20.7 [(a)]	63.5

Sources: Babecký *et al*. (2008) and Survey on wage setting in Portugal (2008).
Notes: The sum of each row could exceed 100 percent since firms had the option of choosing more than one strategy. (a) The question asked in many surveys related to those workers that left the firm through early retirement. Hence, the results are not directly comparable with those obtained for Portugal.

5. REACTION OF FIRMS TO SHOCKS

The information gathered from the survey also made it possible to analyse the way firms reacted to unexpected and generalised adverse shocks. Three types of shocks were given: a fall in demand for the main product; a highly relevant rise in the cost of an intermediate good, such as a rise in the price of fuel; and a permanent rise in wages due, for example, to the renegotiation of collective wage agreements. Firms were asked to put a value between 1 ("Irrelevant") and 4 ("Very relevant") on the relative importance of the following four strategies relating to adjustments to the shocks suggested: i) a change to prices; ii) a change to margins; iii) a cut in production; iv) a cut in costs. The results are given in Table 7 and they show that, regardless of the type of shock, a cut in other costs seems clearly to be the dominant strategy. However, adjustments to prices and margins are also used, as opposed to reducing production, which comes in as far less relevant, with the exception of demand shocks. In addition, shocks to demand seem to be those that on average affect firms most forcibly. It should be noted that the strategies used are not mutually exclusive. Firms may combine more than one, and the most frequent combination is to cut other costs at the same time as adjusting prices.

Those firms where the strategy of cutting costs was deemed to be to be relevant or very relevant were asked to indicate the most likely way to reduce those costs, having in mind the three types of shocks and two skill levels. Firms could opt for one of six strategies: i) a cut in base wages; ii) a cut in the flexible components of wages; iii) a cut in the number of workers with permanent contracts; iv) a cut in the number of workers with temporary contracts; v) a cut in the number of working hours; vi) a cut in other costs. Other costs included advertising costs, administrative costs, or the costs of renegotiating prices with suppliers. The results are given in Table 8, which shows that most firms in Portugal put reduction in other costs as the most likely strategy in almost all the scenarios set out. Firms also seem to differentiate between workers according to their skill levels. Apart from cutting other costs, in the event of an adverse shock on demand or on the price of a relevant raw material, firms would opt more for a cut in the flexible components of wages for more qualified workers and a cut in the number of workers with temporary contracts in the case of less skilled workers. Where there is a shock to wages, the relationship between these two strategies and the level of qualifications is inverted.

Table 7

FIRMS' REACTION TO UNANTICIPATED SHOCKS

Adjustment strategies	Demand shock		Cost shock		Wage shock	
	Score [a]	Relevance [b]	Score [a]	Relevance [b]	Score [a]	Relevance [b]
Reduce other costs	3.7	80.9	3.1	71.8	3.1	68.4
Adjusting prices	3.0	64.0	3.0	62.7	2.8	58.1
Reduce margins	3.1	56.7	2.7	47.7	2.7	53.4
Reduce production	3.3	48.9	2.3	23.5	2.2	20.9

Source: Survey on wage setting in Portugal (2008).
Notes: (a) Average score on a scale from 1 ("Irrelevant") e 4 ("Very relevant") weighted by the number of workers in each firm. (b) Firms that consider the shock as being relevant or very relevant (as a percentage of total workers in the sample).

Table 8

STRATEGIES TO REDUCE COSTS: BY TYPE OF SHOCK AND WORKERS' QUALIFICATIONS
As a percentage of total workers in the sample

Strategies to reduce costs	After a demand shock		After a cost shock		After a wage shock	
	Skilled workers	Unskilled workers	Skilled workers	Unskilled workers	Skilled workers	Unskilled workers
Reduce base wages	2.0	1.2	1.5	1.2	_	_
Reduce flexible wage components	28.7	14.2	26.5	13.5	15.2	26.1
Reduce the number of workers with permanent contracts	5.5	10.2	5.9	9.7	9.1	7.9
Reduce the number of workers with temporary contracts	16.6	34.8	13.6	30.0	33.3	16.2
Reduce the number of hours per worker	7.2	9.1	5.5	8.0	6.9	4.8
Reduce other costs	40.0	30.5	47.0	37.5	35.5	44.9

Source: Survey on wage setting in Portugal (2008).

6. FINAL REMARKS

Recent research points to the existence of a negative relationship between price rigidity and firms' labour cost share. In particular, empirical evidence based on microeconomic data shows that sectors with higher labour cost share are those where changes to prices are less frequent. Other measurements of price rigidity based on qualitative information presented in this article are consistent with these findings. They include the frequency of price changes, the speed of price reaction to shocks or the importance of time-dependent pricing rules. This evidence suggests that a deeper knowledge of wage dynamics is crucial for a better understanding of how prices are determined and, in a more general way, how the monetary policy transmission mechanism works. There are other factors that justify the increasing interest in research in this area. They include the importance of the labour markets in explaining the cyclical behaviour of the economy and the persistence of structural rigidity factors in labour markets. Empirical research is fundamental for the definition of stylised facts on wage dynamics, while theoretical research is important to adequately incorporate the behaviour of labour markets in stochastic models of general equilibrium.

Based on a the information from a survey conducted by the Banco de Portugal in the first half of 2008, this article presented a number of stylised facts on price and wage dynamics in Portugal. These facts are summed up below:

1. *A small fraction of the firms surveyed state that, in the absence of legal or contractual constraints, would consider the possibility of reducing their base wages in 2006 or increase them below the inflation rate;*

2. *Apart from legal and contractual constraints, the impact on workers' morale or performance and the risk that the best workers leave the firm are other important obstacles to wage cuts or freezes;*

3. *Firms frequently make use of alternative mechanisms to reduce labour costs, rather than changes to base wages, with cuts in the number of workers being the most frequent form of adjustment;*

4. *In many firms the wage scale agreed in the context of collective wage agreements is taken in many cases merely as a reference, with a considerable percentage of workers receiving wages above the amount agreed in collective wage agreements;*

5. *Most wages are defined with the behaviour of inflation borne in mind, above all expected inflation, though without any formal rule;*

6. *Changes in wages occur less frequently than changes in prices. If frequencies are converted into durations, it can be seen that the average duration of wages is 13 months – about 2 months less than in the euro area and 2.5 months longer than the average duration of prices;*

7. *Sectoral variability of wage durations is significantly lower than that of prices. This is also found in most European countries;*

8. *Changes to wages are more closely synchronised than changes to prices. 81 per cent of firms concentrate their wage changes in specific months of the year (37 per cent in the case of prices), with a very significant fraction making these changes in January;*

Recent empirical evidence has thrown down a major challenge to researchers. New facts have come to light as a result of analysing large-scale microeconomic databases, either quantitative ones or those based on surveys of firms. This should act as a spur for the scientific community to develop theories that incorporate this new evidence in models of general equilibrium.

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Annex 1. Methodological Issues

Sample selection

The survey was carried out by the Banco de Portugal between September 2007 and June 2008 on a sample covering manufacturing, energy, construction, retail and wholesale trade, transport and communications, education, health, financial services and other business services. All told, there were 46 two-digit NACE sectors. There were 4,850 firms contacted to particpate in the survey.[13] Compared with survey conducted in 2006 in the context of the Banco de Portugal participation in the Inflation Persistence Network (see Martins, 2009), twice the number of firms were contacted and the number of sectors covered was increased significantly, particularly through the inclusion of trade, construction and financial services.

The firms were chosen from those on the Ministry for Labour and Social Solidarity Personnel Database (*Quadros de Pessoal*, QP). Given the prevalence of very small firms in the Portuguese production structure, a pure random selection of firms would clearly have led to over-representation of smaller-scale firms. To solve this, the survey targeted only firms with ten or more workers. Data collection was split into two stages. For the first, it was decided to include all firms with 100 or more workers in the sectors mentioned above. This provided 2,756 firms. The remaining 2,244 were chosen on the basis of random stratification. The total number of firms was divided into three groups according to the number of their workers: i) firms with 10 or more workers but less than 20; ii) firms with 20 or more workers but less than 50; and iii) firms with 50 or more workers but less than 100. Grouping these in the two-digit sectors chosen led to 138 mutually exclusive strata. The number of firms from which stratum was set on the basis of the relative frequency obtained in the QP for 2005. Once this figure was reached, the firms within each stratum were chosen randomly. The final sample included 1,872 firms from manufacturing, 25 from the energy sector, 657 from the construction, 841 from trade, 82 from financial services and 1,373 from other business services, such as education, health, transport and communications. In 2005, these firms represented around 35 per cent of total employment in Portugal (Table A).

Structure and methodology for carrying out the survey

The questionnaire was developed within the scope of the WDN and was based on a set of common questions for all 17 national central banks involved. This was organised in four sections, corresponding to 39 questions[14]. The opportunity provided by the survey was also used to include some additional questions, as a way to look into some specific aspects related to the price and wage setting practices in Portugal, among them the size and importance of the so-called wage cushion (the difference effective and contracted wages), the relevance of labour legislation and collective contracts as limiting factors in

(13) There were 5,000 chosen, but the survey was only sent to 4,850 because it was found à posteriori that some firms had merged and others had closed. In addition, some firms that took part in the pilot survey were not included in the final sample, given that the questionnaire they had received was different in some ways from the final version.

(14) A copy of the questionnaire could be provided upon request.

wage bargaining and questions on price setting (based on the 2004 survey), such as the speed of price reactions following significant changes in costs or demand. An attempt was made to avoid technical language in the questions so that as many people could understand them as possible.

After the sample was set up, in September 2007, a first version of the questionnaire was sent to 30 firms. As in 2004, the pilot questionnaire turned out to be very useful for an initial assessment of how the project was received and whether it was viable. A number of firms were contacted on the basis of the first replies and some questions were rephrased or cut out, making the questionnaire shorter and easier to understand.

In October, a revised version was sent to all the firms chosen, together with a letter signed by the Head of the Research Department. The letter made it clear, among other things, that the questionnaire should be answered by someone who was very well aware of the range of procedures underlying how wages and prices were determined. More than one person could answer it, as long as there was an overall consistency in the replies. In addition, there was a set of questions specifically for the banking sector. This contained a number of differences from the base version, especially as regards the concept of price in this sector. After receiving the questionnaire, the firms had 15 working days to send their replies, which could be either paper based or through an Internet site specially set up for this purpose.[15] In mid-January 2008, a reminder was sent to all the firms that had to that date not replied.

All the replies were received by June. There were 1,497 valid questionnaires received, a 31 per cent reply rate.[16] This percentage was lower than for the 2004 survey (which had been 55 per cent), but it was higher than original expectations, given that this was a more complex questionnaire, covering a topic that was especially sensitive for some firms, as it is the case of their wage setting practices.

(15) A help line was set up for firms to request clarification. They were able to use telephone, fax or e-mail.

(16) The number of firms that sent completed questionnaires was slightly higher but some had to be ruled out, either because of inconsistencies or because there were simply not enough valid replies.

Table A

SAMPLE COVERAGE (to be continued)

In terms of the number of firms:

		Total		By sectors:										Memo:	
				Manufacturing		Energy		Construction		Trade		Business Services		Financial Services			
		Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	% of total population of firms with 5 or more employees	% of total population
Population		107 371	100.0	24 881	23.2	132	0.1	19 804	18.4	26 252	24.4	31 499	29.3	341	0.3	100.0	33.7
Number of firms	[10 ; 20[	85 133	79.3	17 251	16.1	67	0.1	17 361	16.2	23 499	21.9	26 831	25.0	124	0.1	79.3	26.7
	[20 ; 50[	14 899	13.9	4 904	4.6	29	0.0	2 443	2.3	2 753	2.6	4 668	4.3	102	0.1	13.9	4.7
	[50 ; 100[	6 109	5.7	2 308	2.1	27	0.0	763	0.7	917	0.9	2 018	1.9	76	0.1	5.7	1.9
	[100 ; +∞[	1 230	1.1	418	0.4	9	0.0	99	0.1	155	0.1	510	0.5	39	0.0	1.1	0.4
Targeted sample		4 850	34.1	1 872	38.6	25	0.5	657	13.5	841	17.3	1 373	28.3	82	1.7	4.5	1.5
Number of firms	[10 ; 20[	805	16.6	227	4.7	1	0.0	173	3.6	205	4.2	196	4.0	3	0.1	0.7	0.3
	[20 ; 50[	848	17.5	311	6.4	4	0.1	153	3.2	165	3.4	208	4.3	7	0.1	0.8	0.3
	[50 ; 100[	2 055	42.4	917	18.9	11	0.2	240	4.9	322	6.6	533	11.0	32	0.7	1.9	0.6
	[100 ; +∞[	1 142	23.5	417	8.6	9	0.2	91	1.9	149	3.1	436	9.0	40	0.8	1.1	0.4
Realized sample		1 497	100.0	546	36.5	16	1.1	202	13.5	260	17.4	440	29.4	33	2.2	1.4	0.5
Number of firms	[10 ; 20[	231	15.4	59	3.9	1	0.1	40	2.7	67	4.5	63	4.2	1	0.1	0.2	0.1
	[20 ; 50[	267	17.8	100	6.7	1	0.1	58	3.9	48	3.2	57	3.8	3	0.2	0.2	0.1
	[50 ; 100[	626	41.8	253	16.9	8	0.5	72	4.8	109	7.3	170	11.4	14	0.9	0.6	0.2
	[100 ; +∞[	373	24.9	134	9.0	6	0.4	32	2.1	36	2.4	150	10.0	15	1.0	0.3	0.1

Table A

SAMPLE COVERAGE (continued)

In terms of the number of employees:

		Total		By sectors:										Memo:	
				Manufacturing		Energy		Construction		Trade		Business Services		Financial Services			
		Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	Number of firms	% of total	% of total population of firms with 5 or more employees	% of total population
Population		2 504 479	100.0	699 962	27.9	13 936	0.6	330 646	13.2	471 042	18.8	914 257	36.5	74 636	3.0	100.0	85.2
Number of employees	[10 ; 20[	732 617	29.3	162 179	6.5	639	0.0	150 022	6.0	192 323	7.7	226 032	9.0	1 422	0.1	29.3	24.9
	[20 ; 50[	446 907	17.8	149 645	6.0	865	0.0	71 424	2.9	81 411	3.3	140 327	5.6	3 235	0.1	17.8	15.2
	[50 ; 100[	544 140	21.7	207 806	8.3	2 568	0.1	65 978	2.6	79 103	3.2	181 570	7.2	7 115	0.3	21.7	18.5
	[100 ; +∞[	780 815	31.2	180 332	7.2	9 864	0.4	43 222	1.7	118 205	4.7	366 328	14.6	62 864	2.5	31.2	26.6
Targeted sample		1 027 215	100.0	302 550	29.5	11 300	1.1	74 719	7.3	161 651	15.7	409 318	39.8	67 677	6.6	41.0	34.9
Number of employees	[10 ; 20[	10 274	1.0	2 984	0.3	10	0.0	2 189	0.2	2 568	0.2	2 487	0.2	36	0.0	0.4	0.3
	[20 ; 50[	26 555	2.6	9 864	1.0	109	0.0	4 689	0.5	5 188	0.5	6 463	0.6	242	0.0	1.1	0.9
	[50 ; 100[	243 839	23.7	109 727	10.7	1 317	0.1	27 274	2.7	37 122	3.6	64 634	6.3	3 765	0.4	9.7	8.3
	[100 ; +∞[	746 547	72.7	179 975	17.5	9 864	1.0	40 567	3.9	116 773	11.4	335 734	32.7	63 634	6.2	29.8	25.4
Realized sample		327 969	100.0	89 434	27.3	9 127	2.8	23 873	7.3	31 264	9.5	144 274	44.0	29 997	9.1	13.1	11.2
Number of employees	[10 ; 20[	3 037	0.9	805	0.2	10	0.0	523	0.2	857	0.3	831	0.3	11	0.0	0.1	0.1
	[20 ; 50[	8 308	2.5	3 182	1.0	30	0.0	1 718	0.5	1 485	0.5	1 783	0.5	110	0.0	0.3	0.3
	[50 ; 100[	74 006	22.6	29 811	9.1	935	0.3	8 194	2.5	13 184	4.0	20 258	6.2	1 624	0.5	3.0	2.5
	[100 ; +∞[	242 618	74.0	55 636	17.0	8 152	2.5	13 438	4.1	15 738	4.8	121 402	37.0	28 252	8.6	9.7	8.3

Source: Survey on wage setting in Portugal (2008).

INTRA-INDUSTRY TRADE IN THE PORTUGUESE ECONOMY: PRODUCTS AND PARTNERS*

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Sónia Cabral**

1. INTRODUCTION

Intra-industry trade can be defined as the existence of simultaneous exports and imports within industries.[1] These simultaneous trade flows can be either associated with a specialization along quality ranges (intra-industry trade in vertically differentiated products) or associated with a specialization in varieties (intra-industry trade in similar, horizontally differentiated products).

This article analyses the evolution of Portuguese intra-industry trade over the 1995-2004 period, on a bilateral basis and with a very detailed product breakdown. The article adopts the methodology proposed by Fontagné and Freudenberg (1997), which allows elementary trade flows to be broken down into three categories according to similarity in unit values and trade overlap: inter-industry trade (insignificant overlap between exports and imports); horizontal intra-industry trade (significant overlap and limited differences in unit values); vertical intra-industry trade (significant overlap and large differences in unit values). The traditional Grubel-Lloyd index is also computed and the results of both methods for the Portuguese economy are compared.

The article is organized as follows. Section 2 discusses the methodologies for the measurement of intra-industry trade and describes the database. Section 3 examines the evolution of intra-industry trade in Portugal over the 1995-2004 period along the product and geographical dimensions. Section 4 presents some concluding remarks.

2. MEASURING INTRA-INDUSTRY TRADE: METHODOLOGY AND DATA

The standard definition of intra-industry trade (IIT) refers to the simultaneous import and export of differentiated products within the same industry. Nevertheless, a more detailed definition must take into consideration that products can be differentiated horizontally (different varieties) and vertically (different qualities). Horizontal intra-industry trade (HIIT) includes trade in similar products with differentiated varieties, for instance France and Germany bilateral trade in cars of similar class, cylinder capacity and price range. In vertical intra-industry trade (VIIT), products are distinguished by quality and price, in-

* The views expressed in the article are those of the authors, and not necessarily those of the Banco de Portugal or the Eurosystem. Any errors and omissions are the sole responsibility of the authors.

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(1) See Greenaway and Milner (1987), Greenaway and Torstensson (1997) and Greenaway and Milner (2003) for a review of the literature on intra-industry trade.

cluding for example exports from Italy to China of high-quality high-price shirts and, in the opposite direction, the import of low-quality low-price shirts.

The theoretical literature has established the determinants of the two types of IIT. As regards HIIT, goods are distinct due to certain attributes, but they are basically the same in terms of quality, cost and technology employed in their production. HIIT between countries with similar endowments is basically driven by consumers' preferences for diversified consumption bundles and by the existence of monopolistic competition with economies of scale in the production of each variety of the good (see, for instance, Dixit and Stiglitz (1977), Krugman (1979, 1980), Lancaster (1980) and Helpman (1981)). VIIT has been modelled in different ways in the theoretical trade literature, but this type of product differentiation usually takes place under perfect competition. Differences in factor endowments, technology and income distribution may explain VIIT using Heckscher-Ohlin-Ricardo type models, as in the works of Falvey (1981), Flam and Helpman (1987), Falvey and Kierzkowski (1987) and Stokey (1991). The results of these models can be interpreted as a "quality ladder" approach, as more advanced countries export higher-quality versions while lower-income countries export the lower-quality ones.

It is also important to establish the link between the international fragmentation of production and IIT. International fragmentation of production, *i.e.*, the cross-border dispersion of components' production/assembly within vertically integrated production processes, with countries specializing in particular stages of the production sequence, has become a new paradigm in the international organization of the production in recent decades.[2] These activities explain part of the increase in world trade, as more intermediate goods circulate between countries, and have consequences on the nature and measurement of IIT. In empirical terms, trade resulting from the international fragmentation of production can be classified either as inter-industry trade or as IIT. At a highly disaggregated product breakdown level, different intermediate and final goods are usually classified in distinct product categories and their trade flows are considered inter-industry trade. However, at a more aggregate level, intermediate and final goods tend be classified in the same category. In this case, the simultaneous exports and imports within the same category that correspond to different production stages (typically the result of international fragmentation) are classified as IIT.[3]

The classical measure of IIT was proposed by Grubel and Lloyd (1975). This measure, now known as the Grubel-Lloyd (GL) index, is simple to calculate and intuitively appealing. The GL approach is based on the intensity of trade overlap for each product. In fact, for each bilateral trade flow in a specific product, Grubel and Lloyd (1975) define the level of IIT as the difference between total trade and the trade imbalance. In order to facilitate the comparisons between industries and countries, IIT is presented as a percentage of total trade, that is:

(2) Important contributions to the theory of international fragmentation of production include the works of Arndt (1997), Venables (1999), Jones and Kierzkowski (1990, 2005), Deardorff (2001, 2005), Kohler (2004) and Grossman and Rossi-Hansberg (2006).

(3) See Jones *et al.* (2002) and Ando (2006) for a discussion on the link between international fragmentation and IIT.

$$GL_{ij} = \frac{(X_{ij} + M_{ij}) - |X_{ij} - M_{ij}|}{X_{ij} + M_{ij}} = 1 - \frac{|X_{ij} - M_{ij}|}{X_{ij} + M_{ij}} \quad (1)$$

where X_{ij} are exports of product i to country j in period t and M_{ij} are imports of product i from country j in period t. If a country only imports or exports within the same sector and trading partner, *i.e.*, either $X_{ij} = 0$ or $M_{ij} = 0$, there is no IIT and the expression reduces to zero. Similarly, if the bilateral export value is exactly equal to the bilateral import value, *i.e.*, $X_{ij} = M_{ij}$, the whole expression reduces to one. Therefore, the GL index varies between 0 (all trade is inter-industry) and 1 (all trade is intra-industry).

The expression for the whole economy is:

$$GL = \frac{\sum_{ij}(X_{ij} + M_{ij}) - \sum_{ij}|X_{ij} - M_{ij}|}{\sum_{ij}(X_{ij} + M_{ij})} \quad (2)$$

which is equivalent to a weighted average of the GL_{ij}, with weights given by the share of total trade of product i with partner j in total trade.

A large number of empirical studies divide total IIT flows into HIIT and VIIT. Starting from the assumption that differences in quality are reflected in differences in prices, information on unit values is used to empirically disentangle HIIT and VIIT. This approach has become popular after the works of Greenaway *et al*. (1994, 1995) who adapt the GL index to measure the intensity of VIIT and HIIT in the UK using information on the unit values of exports and imports.[4] If the difference in unit values is below a given threshold, goods are considered of the same quality, otherwise they are considered to be vertically differentiated, that is:

$$\frac{1}{1+\alpha} \leq \frac{UVX_{ij}}{UVM_{ij}} \leq 1+\alpha \quad (3)$$

If the unit value of exports of product i to partner j, UVX_{ij}, and the unit value of imports of product i from partner j, UVM_{ij}, do not differ by more than α per cent, then equation 3 holds and trade of product i with partner j is considered to be differentiated horizontally. If the export and import unit values differ by more than α per cent, trade of product i with partner j is considered to be differentiated vertically.[5] In this case, two situations can occur. Either the unit value of exports is relatively high in comparison with the unit value of imports, that is $\frac{UVX_{ij}}{UVM_{ij}} > 1+\alpha$, or the unit value of exports is relatively low compared with the unit value of imports, that is $\frac{UVX_{ij}}{UVM_{ij}} < \frac{1}{1+\alpha}$. The first case is usually denominated as superior VIIT or high-quality VIIT and relates to situations where exports are of higher quality than imports. It

(4) Empirical studies using the GL index with bilateral data and disentangling HIIT and VIIT include the works of Hu and Ma (1999), Durkin and Krygier (2000), Blanes and Martín (2000), Martín-Montaner and Ríos (2002) and Byun and Lee (2005).

(5) Originally Greenaway *et al*. (1994, 1995) defined the range of relative unit prices of exported and imported goods as $1-\alpha \leq \frac{UVX_{ij}}{UVM_{ij}} \leq 1+\alpha$. However, as discussed in Fontagné and Freudenberg (1997), the two sides of this condition are not compatible.

can also include trade resulting from international fragmentation within the same product category, with exports involving final goods and imports involving intermediate products. In turn, the second case is usually designated as inferior VIIT or low-quality VIIT and comprises situations where imports are of higher quality than exports. Again, international fragmentation can generate trade classified as inferior VIIT, if imports involve final goods and exports concern intermediates classified in the same product category. As discussed in Ando (2006), the international fragmentation of production can also result in HIIT, if the local value added to the imported parts and components is small, leading to minor unit-price differentials between imports and exports. In addition, the existence of transfer pricing within multinational firms can, to some extent, influence the relative trade prices of intermediate and final products involved in international fragmentation activities.

The choice of the dispersion factor α is crucial, but it has an arbitrary nature (see Davis and Weinstein (2001) for a discussion). Most of the literature has used $\alpha = 0.15$ or $\alpha = 0.25$, being that the higher the dispersion factor, the narrower the range of VIIT. Some authors have argued that a dispersion factor $\alpha = 0.15$ could be considered two low, given the differences in import and export values resulting solely from the distinct reporting of transport and freight costs. In fact, import values are reported CIF (cost, insurance and freight) and exports are reported FOB (free on board), which can account for a significant difference between the two flows. However, this issue does not apply in our case, as the BACI database that is used in this work provides reconciled bilateral trade flows on a FOB-FOB basis. Therefore, in this article we use $\alpha = 0.15$.[6]

An alternative approach to measure IIT was proposed by Fontagné and Freudenberg (1997) and Fontagné et al. (1998), based upon the work of Abd-el Rahman (1991), which we will denominate Fontagné-Freudenberg (FF) method. By using information on unit values at a very detailed level, this methodology breaks down total bilateral trade flows into three types of trade: one-way trade (*i.e.*, inter-industry trade), two-way trade in horizontally differentiated goods (*i.e.*, HIIT), and two-way trade in vertically differentiated goods (*i.e.*,VIIT). Trade at the elementary level is classified either as inter-industry or as IIT, according to condition 4:

$$\frac{Min\left(X_{ij}, M_{ij}\right)}{Max\left(X_{ij}, M_{ij}\right)} < 0.1 \qquad (4)$$

if the value of the minority flow (for example, imports) represents less than 10 per cent of the majority flow (exports in this case), then condition 4 holds and both bilateral flows are considered as inter-industry trade. Otherwise, total trade of product i with partner j is classified as IIT and will be broken down into VIIT or HIIT using the range of relative unit values defined in condition 3. As a result, in this method each elementary trade flow is totally associated with a unique trade type, which contrasts with the relation between IIT and balanced trade contained in the GL approach. For the overall economy, a measure of these three-types of trade is obtained by summing the figures at the most elementary level.[7] In

(6) As a robustness check, we have performed all the computations with $\alpha = 0.25$. These results are available from the authors upon request. The results obtained with the two dispersion factors are qualitatively similar, though, as expected, with a difference in levels.

(7) See Fontagné and Freudenberg (2002), Fontagné *et al.* (2006), Ecochard *et al.* (2006), Fukao *et al.* (2003) and Ando (2006) for applications of this method.

order to facilitate the analysis of the results, the different types of trade are shown as a percentage of total trade.

As previously described, IIT exists if a country simultaneously imports and exports similar goods. However, similarity is identified empirically by the goods being classified in the same sector or product category, according to standard industrial classifications. Consequently, the measurement of IIT has been subject to several controversies and criticisms in the literature (see Lloyd (2002)). One of the most relevant empirical shortcomings is that the measurement of IIT crucially depends on the level of product and country breakdown considered. In fact, the analysis can be applied at different product/geographical breakdown levels giving rise to the so-called aggregation problem (see, for instance, Gullstrand (2002)). In sectoral terms, an insufficient disaggregation in the trade classifications leads to a higher measure of IIT: the lesser the detail of the classification used, the more products are classified in the same sector (the issue of "categorical aggregation"). Similarly, the geographical bias arises from an insufficient disaggregation of partner countries. As discussed in Fontagné and Freudenberg (1997), empirical research on IIT should be done on a strict bilateral basis and using a very detailed product breakdown to minimize this problem. Still, caution must be used when comparing and interpreting IIT indices.

The international trade data used in this article comes from the BACI - CEPII database, which provides reconciled bilateral values (in US dollars), quantities and unit values at the 6-digit of the 1992 Harmonized System (HS) classification, including over 5000 products and 200 trading partners in each year. In this database, the detailed import and export values are fully comparable in a FOB-FOB basis since CIF costs were estimated and removed from CIF import values.[8] The sample period starts in 1995 and ends in 2004. We computed the IIT indexes at the HS 6-digit level in bilateral terms and then aggregated data at the industry level to allow sectoral analysis, using the 2-digits of the International Standard Industrial Classification (ISIC), rev.3. In addition, we used the CEPII classification by transformation level based on the Broad Economic Categories of the United Nations, which includes five different stages of production: primary goods, processed goods, parts and components, investment goods and consumption goods.

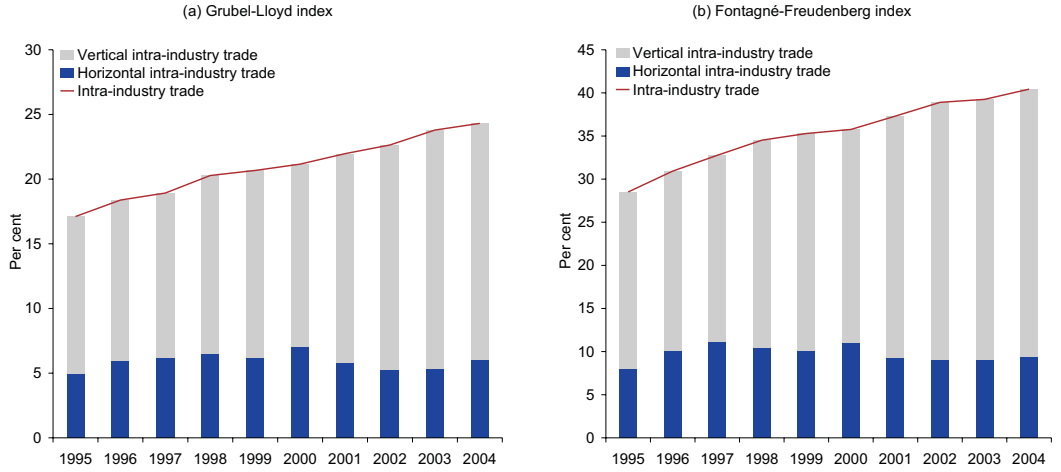
3. INTRA-INDUSTRY TRADE IN THE PORTUGUESE ECONOMY

Table 1 and Chart 1 display the evolution of the share of IIT in total Portuguese trade flows from 1995 to 2004 using the methodologies described in Section 2 with a dispersion factor of 15 per cent to disentangle VIIT and HIIT. The results of both methodologies have clear differences in levels, but the evolution over time is similar. The main type of trade in Portuguese economy is still inter-industry trade, but IIT rose steadily over this decade. From 1995 to 2004, there was an increase of the share of IIT in Portuguese international trade, from 28.5 to 40.4 per cent according to the FF approach and from 17.1 to 24.3 per cent according to the GL index. The results indicate that a significant and growing share of

(8) See Gaulier and Zignago (2008) for a detailed description of this database.

Chart 1

EVOLUTION OF INTRA-INDUSTRY TRADE IN PORTUGAL
As a percentage of total trade



Sources: BACI - CEPII database and authors' calculations.

Table 1

EVOLUTION OF TRADE TYPES IN PORTUGAL
As a percentage of total trade

Grubel-Lloyd index

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	1995-99	2000-04
Inter-industry trade	82.9	81.6	81.1	79.7	79.3	78.8	78.0	77.4	76.2	75.7	80.9	77.1
Intra-industry trade	17.1	18.4	18.9	20.3	20.7	21.2	22.0	22.6	23.8	24.3	19.1	22.9
Horizontal	4.9	6.0	6.2	6.5	6.1	7.0	5.8	5.3	5.3	6.0	6.0	5.9
Vertical	12.2	12.4	12.7	13.8	14.5	14.1	16.1	17.4	18.5	18.3	13.2	17.0
Superior	4.6	5.1	5.0	5.2	6.4	5.6	6.8	6.7	6.6	6.4	5.3	6.4
Inferior	7.7	7.3	7.7	8.6	8.2	8.5	9.4	10.7	11.9	11.8	7.9	10.6

Fontagné-Freudenberg index

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	1995-99	2000-04
Inter-industry trade	71.5	69.1	67.2	65.5	64.7	64.2	62.7	61.1	60.8	59.6	67.5	61.5
Intra-industry trade	28.5	30.9	32.8	34.5	35.3	35.8	37.3	38.9	39.2	40.4	32.5	38.5
Horizontal	8.1	10.2	11.1	10.5	10.1	11.0	9.3	9.0	9.1	9.4	10.0	9.5
Vertical	20.5	20.8	21.7	24.1	25.2	24.7	28.0	29.9	30.2	31.0	22.5	29.0
Superior	7.9	8.3	8.4	8.8	11.1	10.9	12.5	12.0	11.2	11.3	9.0	11.5
Inferior	12.6	12.5	13.2	15.2	14.1	13.8	15.6	17.9	19.0	19.7	13.6	17.5

Sources: BACI - CEPII database and authors' calculations.

Portuguese IIT corresponds to vertically differentiated products, while the share of HIIT has remained remarkably stable over this period.[9] In addition, VIIT in Portugal is mainly of products with export prices lower than import prices, accounting for 60.2 per cent of total VIIT in the 2000-04 period using the FF methodology (62.3 per cent with the GL index). This fact is in line with the "quality ladder" results of VIIT models that indicate that less advanced economies tend to export lower-price qualities of a given product. The increase in the share of VIIT in total Portuguese trade is more evident since 2000 and results mainly from the growth of inferior VIIT.

Fontagné and Freudenberg (2002) examine the evolution of IIT in the EU and conclude that this type of trade is particularly relevant for intra-EU trade, and this is true for each individual country. However, there are important differences among Member-States concerning the relative importance of IIT in 1999. In intra-EU trade, IIT is most pronounced for France, Germany, Belgium and the UK. In contrast, trade is mainly inter-industry for small periphery countries, like Greece, Finland and Portugal. They also find that there was an increase of the share of IIT in intra-EU trade between 1980 and 1999 in all member countries with the exception of Greece and Ireland. For most EU countries, the observed increase in IIT is almost entirely due to VIIT, which is in line with the results that we found for Portugal.

The next two subsections analyse in more detail the evolution of IIT in the Portuguese economy over the 1995-2004 decade, identifying the individual industries and trading partners where this type of trade is more relevant. The detailed analysis is done using the FF methodology. We choose this method because the value of each bilateral trade flow is totally classified in one of the three trade categories.

3.1. Product breakdown

This subsection examines the evolution of Portuguese IIT in the different industries, using two distinct classifications: an industrial classification and a broader classification by economic categories. Using the 2-digits of the ISIC rev.3, there are four industries were IIT appears to be especially relevant, in the sense that their share in total IIT is more than 1 percentage point higher than their share in total Portuguese trade over the whole period (Table 2). These industries are "motor vehicles" (ISIC 34), where the highest difference is found, "wearing apparel, dressing and dyeing of fur" (ISIC 18), "rubber and plastics products" (ISIC 25) and, to a lesser extent, "fabricated metal products" (ISIC 28). In the first three sectors, the proportion of IIT in total sectoral trade is above 60 per cent in the 2000-04 period, compared with an index of 38.5 per cent for the whole economy, and increased over time. In all of these industries, VIIT is more significant than HIIT in the most recent period and grew strongly since 2000. The recent increase of the share of VIIT in total sectoral trade is especially marked in "motor vehicles". VIIT in these four sectors comprises mostly products with export prices lower than import prices. In the 2000-04 period, HIIT is more significant than VIIT in "basic metals" (ISIC 27) and in "other transport equipment" (ISIC 35) and it increased over the 1995-2004 decade.

(9) Aturupane *et al.* (1999) examined trade between the European Union (EU) and eight Central and Eastern European economies in the first half of the nineties and also found that VIIT dominates HIIT in all countries.

Table 2 (to be continued)

PORTUGUESE SECTORAL TRADE BY TYPES OF TRADE
Shares as a percentage

ISIC rev.3		1995-1999							
		Shares in:		Share in total sectoral trade					
		Total trade	Total IIT	Inter-industry	Intra-industry				
					Total	Horizontal	Vertical		
							Total	Superior	Inferior
01	Agriculture, hunting and related service activities	3.4	1.2	88.3	11.7	3.5	8.2	4.3	3.9
02	Forestry, logging and related service activities	0.6	0.5	72.4	27.6	7.9	19.8	4.0	15.7
05	Fishing, aquaculture and service activities incidental to fishing	0.3	0.5	52.7	47.3	3.0	44.3	34.3	9.9
10	Mining of coal and lignite; extraction of peat	0.3	0.0	99.9	0.1	0.0	0.0	0.0	0.0
11	Extraction of crude petroleum and natural gas	2.5	0.0	100.0	0.0	0.0	0.0	0.0	0.0
12	Mining of uranium and thorium ores	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
13	Mining of metal ores	0.3	0.0	99.8	0.2	0.0	0.2	0.1	0.0
14	Other mining and quarrying	0.3	0.2	77.1	22.9	13.8	9.2	5.2	4.0
15	Manufacture of food products and beverages	7.6	4.5	80.7	19.3	7.6	11.7	5.7	6.1
16	Manufacture of tobacco products	0.1	0.0	83.8	16.2	0.6	15.6	8.3	7.4
17	Manufacture of textiles	8.3	7.8	69.1	30.9	6.3	24.6	7.9	16.7
18	Manufacture of wearing apparel; dressing and dyeing of fur	5.0	7.1	53.7	46.3	8.1	38.2	10.8	27.4
19	Tanning and dressing of leather; manufacture of luggage, handbags and footwear	4.5	2.5	82.0	18.0	3.3	14.7	7.5	7.2
20	Manufacture of wood and cork; manufacture of articles of straw and plaiting	2.3	1.4	80.2	19.8	4.4	15.4	3.2	12.2
21	Manufacture of paper and paper products	3.2	2.2	78.3	21.7	6.1	15.6	6.0	9.6
22	Publishing, printing and reproduction of recorded media	0.7	0.8	63.7	36.3	4.5	31.8	9.3	22.5
23	Manufacture of coke, refined petroleum products and nuclear fuel	1.8	2.2	60.7	39.3	6.7	32.6	13.9	18.7
24	Manufacture of chemicals and chemical products	8.3	6.3	75.3	24.7	6.3	18.4	7.5	10.9
25	Manufacture of rubber and plastics products	2.8	4.9	43.5	56.5	13.4	43.1	10.2	32.9
26	Manufacture of other non-metallic mineral products	2.5	2.1	72.2	27.8	5.1	22.7	6.3	16.4
27	Manufacture of basic metals	3.8	2.8	75.6	24.4	15.2	9.2	3.7	5.5
28	Manufacture of fabricated metal products, except machinery and equipment	2.5	3.5	53.5	46.5	7.5	38.9	15.8	23.1
29	Manufacture of machinery and equipment n.e.c.	7.3	6.8	69.9	30.1	4.4	25.8	9.5	16.3
30	Manufacture of office, accounting and computing machinery	1.7	1.1	79.2	20.8	4.3	16.6	6.5	10.1
31	Manufacture of electrical machinery and apparatus n.e.c.	5.0	5.7	63.0	37.0	5.7	31.3	14.4	16.8
32	Manufacture of radio, television and communication equipment and apparatus	4.9	4.2	71.8	28.2	2.7	25.5	15.5	10.0
33	Manufacture of medical, precision and optical instruments, watches and clocks	1.7	1.8	65.4	34.6	6.1	28.5	13.6	14.8
34	Manufacture of motor vehicles, trailers and semi-trailers	14.0	25.3	41.1	58.9	33.0	25.9	10.1	15.8
35	Manufacture of other transport equipment	2.0	1.4	77.3	22.7	4.5	18.2	8.3	10.0
36	Manufacture of furniture; manufacturing n.e.c.	2.1	2.8	56.0	44.0	10.5	33.5	19.6	14.0
37	Recycling	0.0	0.0	91.4	8.6	0.0	8.6	8.5	0.1
40	Electricity, gas, steam and hot water supply	0.1	0.1	32.2	67.8	67.8	0.0	0.0	0.0
74	Other business activities	0.0	0.0	78.7	21.3	0.7	20.6	12.6	8.0
92	Recreational, cultural and sporting activities	0.0	0.0	67.5	32.5	31.0	1.4	0.9	0.5
93	Other service activities	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Total		100.0	100.0	67.5	32.5	10.0	22.5	9.0	13.6

Table 2 (continued)

PORTUGUESE SECTORAL TRADE BY TYPES OF TRADE

Shares as a percentage

ISIC rev.3		2000-2004							
		Shares in:		Share in total sectoral trade					
		Total trade	Total IIT	Inter-industry	Intra-industry				
					Total	Horizontal	Vertical		
							Total	Superior	Inferior
01	Agriculture, hunting and related service activities	2.9	1.6	78.6	21.4	8.7	12.7	5.9	6.8
02	Forestry, logging and related service activities	0.4	0.5	57.8	42.2	8.5	33.7	2.2	31.6
05	Fishing, aquaculture and service activities incidental to fishing	0.4	0.6	43.5	56.5	1.5	55.0	43.7	11.3
10	Mining of coal and lignite; extraction of peat	0.3	0.0	99.2	0.8	0.0	0.8	0.3	0.4
11	Extraction of crude petroleum and natural gas	4.1	0.0	100.0	0.0	0.0	0.0	0.0	0.0
12	Mining of uranium and thorium ores	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
13	Mining of metal ores	0.2	0.0	100.0	0.0	0.0	0.0	0.0	0.0
14	Other mining and quarrying	0.3	0.2	76.6	23.4	3.5	19.9	3.0	16.9
15	Manufacture of food products and beverages	7.4	4.6	75.9	24.1	7.1	17.0	7.4	9.6
16	Manufacture of tobacco products	0.2	0.3	47.5	52.5	10.5	42.0	30.7	11.2
17	Manufacture of textiles	6.8	6.9	61.0	39.0	8.5	30.4	11.6	18.8
18	Manufacture of wearing apparel; dressing and dyeing of fur	3.6	5.7	39.4	60.6	14.9	45.6	15.6	30.0
19	Tanning and dressing of leather; manufacture of luggage, handbags and footwear	3.4	2.1	76.4	23.6	5.1	18.5	8.7	9.9
20	Manufacture of wood and cork; manufacture of articles of straw and plaiting	2.3	1.6	73.3	26.7	7.0	19.6	6.2	13.4
21	Manufacture of paper and paper products	3.2	2.1	75.1	24.9	10.2	14.7	4.8	9.9
22	Publishing, printing and reproduction of recorded media	0.6	0.4	75.1	24.9	2.3	22.5	7.3	15.2
23	Manufacture of coke, refined petroleum products and nuclear fuel	2.2	2.1	62.7	37.3	12.0	25.2	13.8	11.5
24	Manufacture of chemicals and chemical products	9.0	7.6	67.6	32.4	9.3	23.0	9.1	13.9
25	Manufacture of rubber and plastics products	3.1	5.3	35.2	64.8	9.6	55.2	16.1	39.1
26	Manufacture of other non-metallic mineral products	2.3	2.2	63.9	36.1	7.7	28.4	5.0	23.4
27	Manufacture of basic metals	4.6	3.5	70.6	29.4	16.7	12.7	4.1	8.6
28	Manufacture of fabricated metal products, except machinery and equipment	2.6	3.6	47.1	52.9	6.9	46.0	16.3	29.7
29	Manufacture of machinery and equipment n.e.c.	7.1	6.2	66.3	33.7	4.8	28.8	11.2	17.7
30	Manufacture of office, accounting and computing machinery	2.3	2.7	55.7	44.3	2.9	41.3	27.2	14.1
31	Manufacture of electrical machinery and apparatus n.e.c.	4.2	4.6	57.7	42.3	6.0	36.3	15.8	20.5
32	Manufacture of radio, television and communication equipment and apparatus	6.3	6.1	63.0	37.0	3.3	33.7	9.1	24.6
33	Manufacture of medical, precision and optical instruments, watches and clocks	1.8	1.7	63.7	36.3	6.1	30.1	12.5	17.7
34	Manufacture of motor vehicles, trailers and semi-trailers	13.8	21.8	39.0	61.0	16.9	44.1	18.5	25.5
35	Manufacture of other transport equipment	2.1	2.7	48.7	51.3	28.9	22.5	8.2	14.2
36	Manufacture of furniture; manufacturing n.e.c.	2.3	3.0	49.0	51.0	10.0	41.1	26.5	14.6
37	Recycling	0.0	0.0	85.8	14.2	0.4	13.8	12.1	1.7
40	Electricity, gas, steam and hot water supply	0.2	0.5	0.3	99.7	99.7	0.0	0.0	0.0
74	Other business activities	0.0	0.0	66.0	34.0	0.0	34.0	25.3	8.7
92	Recreational, cultural and sporting activities	0.0	0.0	70.0	30.0	28.6	1.4	0.7	0.7
93	Other service activities	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Total		100.0	100.0	61.5	38.5	9.5	29.0	11.5	17.5

Sources: BACI - CEPII database and authors' calculations.

Table 3

PORTUGUESE TRADE BY MAIN STAGES OF PRODUCTION AND TYPES OF TRADE
As a percentage of total trade of each stage

	1995-1999					
	Inter-industry	Intra-industry				
		Total	Horizontal	Vertical		
				Total	Superior	Inferior
Primary goods	90.9	9.1	3.3	5.9	2.5	3.4
Processed goods	71.4	28.6	7.7	20.9	8.0	12.9
Parts and components	51.5	48.5	10.1	38.4	16.2	22.2
Investment goods	73.2	26.8	7.7	19.1	8.8	10.3
Consumption goods	63.1	36.9	13.9	23.0	8.7	14.3
Total	67.5	32.5	10.0	22.5	9.0	13.6

	2000-2004					
	Inter-industry	Intra-industry				
		Total	Horizontal	Vertical		
				Total	Superior	Inferior
Primary goods	88.2	11.8	4.7	7.2	2.3	4.9
Processed goods	66.4	33.6	10.5	23.1	8.9	14.2
Parts and components	41.2	58.8	6.7	52.2	17.5	34.6
Investment goods	65.1	34.9	11.8	23.0	11.3	11.8
Consumption goods	58.0	42.0	10.0	32.0	13.6	18.4
Total	61.5	38.5	9.5	29.0	11.5	17.5

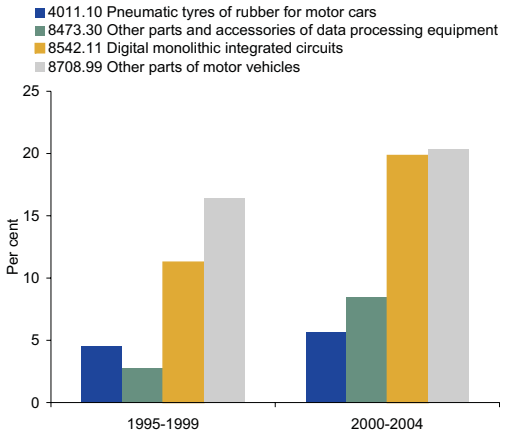
Sources: BACI - CEPII database and authors' calculations.

We also use the CEPII classification by transformation level based on the Broad Economic Categories of the United Nations to examine the groups of products where IIT is more relevant (Table 3). As expected, trade in primary goods is overwhelmingly dominated by inter-industry trade over the 1995-2004 period, corresponding to around 90 per cent of total. On the contrary, the highest share of IIT in Portugal is found in parts and components, representing 58.8 of total trade in these products in the 2000-04 period. A significant proportion of Portuguese trade in consumption goods is also IIT (42.0 per cent in the more recent period). IIT represent also more than 30 per cent of trade in intermediate processed goods and in investment goods. In all stages of production, Portuguese IIT is higher in vertically than in horizontally differentiated products and there was an increase of VIIT in all categories over this decade. These facts are especially striking in parts and components, where VIIT accounts for 52.2 percent of total trade and grew strongly in the last five-years considered. In all stages of production considered, Portuguese VIIT is mainly of products with export prices lower than import prices, as would

Chart 2

MAIN PRODUCTS IN PORTUGUESE VERTICAL INTRA-INDUSTRY TRADE IN PARTS AND COMPONENTS

As a share of total Portuguese VIIT in parts and components



Sources: BACI - CEPII database and authors´ calculations.
Note: The names of the items were taken directly, with some abbreviation, from the 6-digit 1992 Harmonized System (HS) classification.

be expected since VIIT in Portugal is mostly carried out with higher-income European countries (see subsection 3.2 below).

The strong increase of Portuguese VIIT in parts and components points to the existence of back-and-forth transactions associated with the international fragmentation of production. The link between international fragmentation and IIT can be better established empirically if trade flows are examined at the product level. Chart 2 displays the main items of VIIT in parts and components in the Portuguese economy using the 1992 HS classification at the 6-digit breakdown level. Portuguese VIIT in parts and components appears relatively concentrated in a few items, with the four main products representing together more than 50 per cent of total in the 2000-04 period and showing an increase over the decade. Two items of parts and components stand out for their high significance in terms of VIIT. The share of "other parts of motor vehicles" (HS 8708.99) in total Portuguese VIIT in parts and components increased from 16.5 per cent in the 1995-99 period to 20.3 per cent in the 2000-04 period. Similarly, "digital monolithic integrated circuits" (HS 8542.11) represents also a high and increasing share of VIIT in parts and components (11.3 per cent in 1995-99 and 19.8 per cent of total in 2000-04). The two other main products are also related with the industries of parts and components for motor vehicles and for data processing machines: "pneumatic tyres of rubber for motor cars" (HS 4011.10) and "other parts and accessories of data processing equipment" (HS 8473.30). The relevance of these intermediate products simultaneously on imports and exports signals the integration of Portugal in the international production networks of these industries.

3.2. Geographical breakdown

Following what was done in the previous subsection, we now turn to the geographical analysis of the different types of trade over the 1995-2004 period. Table 4 includes a geographical breakdown of Portuguese international trade, including the 14 partners with a share above 1 percent in the 2000-04 period, as well as an EU aggregate comprising the 15 initial Member-States (EU15). The results indicate that IIT in Portugal is mostly done with other EU15 countries. In fact, EU15 represents 76 per cent of total Portuguese trade in the 2000-04 period, but it accounts for 93.8 per cent of Portuguese IIT. In addition, the share of IIT in Portuguese bilateral trade with EU15 partners increased from 40 per cent in the 1995-99 period to 47.5 per cent in the 2000-04 period. The increase in IIT over this decade is also evident in the majority of the Portuguese 14 main trading partners, with Belgium, Austria, Brazil and Japan being the only countries where there was a decline.

The highest bilateral indices of IIT in the 2000-04 period occur in the two major trading partners of Portugal (Spain and Germany) and result mainly from IIT in vertically differentiated products. The results for Spain are especially striking, as total IIT and VIIT account for 63.2 per cent and 45.2 per cent of bilateral trade in the period 2000-04, respectively. On the contrary, in all non-EU15 partners considered the share of IIT in total bilateral trade is below 25 per cent. The lowest shares of IIT in bilateral trade in the 2000-04 period appear in Portuguese trade with Japan and Brazil (IIT shares of 4.2 and 7.4 per cent, respectively). In the 2000-04 period, VIIT is more important than HIIT in Portuguese bilateral trade with these 14 countries, with the exception of Norway. In addition, the share of VIIT in total bilateral trade over the 1995-2004 decade increased in all countries selected, except Austria and Brazil. The strongest increase in the VIIT bilateral share over this period occurred in Portuguese trade with Germany, from 27.2 per cent in 1995-99 to 42.4 per cent of total bilateral trade in 2000-04. Finally, Portuguese VIIT with these trading partners is mainly of products with export prices lower than import prices. The two exceptions in the 2000-04 period are the Netherlands and Switzerland, where superior VIIT has a higher share in total bilateral trade than inferior VIIT.

Table 4

PORTUGUESE BILATERAL TRADE WITH MAIN TRADING PARTNERS BY TYPES OF TRADE

Shares as a percentage

	1995-1999								2000-2004							
	Shares in:		Share in total bilateral trade						Shares in:		Share in total bilateral trade					
	Total trade	Total IIT	Inter-industry	Intra-industry					Total trade	Total IIT	Inter-industry	Intra-industry				
				Total	Horizontal	Vertical						Total	Horizontal	Vertical		
						Total	Superior	Inferior						Total	Superior	Inferior
Spain	20.1	34.5	44.0	56.0	17.6	38.4	13.2	25.3	24.7	40.5	36.8	63.2	18.0	45.2	17.5	27.7
France	11.9	14.7	59.8	40.2	10.3	29.9	13.5	16.4	10.8	13.7	51.0	49.0	11.1	37.9	17.1	20.8
Italy	6.5	6.1	69.5	30.5	8.6	21.9	8.4	13.6	5.8	5.2	64.9	35.1	6.1	28.9	13.6	15.3
United Kingdom	8.8	9.1	66.1	33.9	13.0	20.9	7.2	13.7	6.9	6.8	62.1	37.9	11.9	26.0	12.5	13.5
Germany	16.8	22.3	56.8	43.2	16.0	27.2	11.8	15.4	14.8	19.7	48.9	51.1	8.7	42.4	13.2	29.2
Belgium	3.5	3.4	68.1	31.9	10.5	21.4	7.2	14.2	4.2	3.1	71.4	28.6	5.5	23.1	8.5	14.5
Austria	1.0	0.6	79.4	20.6	2.8	17.8	10.6	7.3	1.0	0.5	80.2	19.8	6.5	13.3	6.2	7.0
Netherlands	4.7	3.3	77.3	22.7	4.3	18.3	9.9	8.4	4.2	3.1	71.6	28.4	6.2	22.2	12.2	10.0
Sweden	1.6	0.6	87.9	12.1	1.4	10.6	2.9	7.7	1.2	0.5	84.8	15.2	1.0	14.2	5.8	8.4
EU15	77.7	95.5	60.0	40.0	12.6	27.4	10.8	16.6	76.0	93.8	52.5	47.5	11.5	36.1	14.3	21.8
Switzerland	1.4	0.6	85.5	14.5	1.9	12.6	6.9	5.7	1.0	0.5	79.4	20.6	2.2	18.4	11.9	6.5
Norway	1.1	0.1	97.4	2.6	0.3	2.3	0.7	1.7	1.2	0.8	76.2	23.8	14.4	9.3	2.5	6.8
USA	3.8	1.6	86.7	13.3	1.3	11.9	4.5	7.4	4.1	2.2	79.2	20.8	6.6	14.2	3.1	11.1
Brazil	1.2	0.3	91.4	8.6	0.8	7.9	4.0	3.9	1.1	0.2	92.6	7.4	0.9	6.5	3.2	3.3
Japan	1.8	0.3	95.2	4.8	1.5	3.3	1.7	1.6	1.3	0.1	95.8	4.2	0.3	3.8	1.9	2.0
Total	100.0	100.0	67.5	32.5	10.0	22.5	9.0	13.6	100.0	100.0	61.5	38.5	9.5	29.0	11.5	17.5

Sources: BACI - CEPII database and authors' calculations.

4. CONCLUSIONS

This article measures and characterizes the intra-industry trade (IIT) in the Portuguese economy, disentangling horizontal intra-industry trade (HIIT) and vertical intra-industry trade (VIIT). Assuming that differences in unit values correspond to differences in the quality of products, HIIT relates with trade of similar products and VIIT captures trade of products that differ in quality. The Grubel-Lloyd and the Fontagné-Freudenberg indicators are the main measures of IIT suggested in the empirical trade literature. Both indicators are computed for the 1995-2004 period, on a bilateral basis and with a very detailed product breakdown. Nevertheless, in the detailed analysis only the results of the latter indicator are presented.

Inter-industry trade is still the dominant type of trade in the Portuguese economy, but our results point to a substantial increase of IIT, in particular since 2000. IIT in Portugal, measured with the Fontagné-Freudenberg method, accounts for around 40 per cent of total trade in 2004 (28.5 per cent in 1995). As observed in other EU countries, this increase mostly resulted from the growth of trade in vertically differentiated goods. VIIT in Portugal is mainly of products with export prices lower than import prices, representing around 60 per cent of the total. This fact is in line with the "quality ladder" results of VIIT models that indicate that less advanced economies tend to export lower-price qualities of a given product. Portuguese VIIT is mostly done with higher-income European countries, with Spain and Germany showing the highest proportions of this type of trade.

Additional conclusions arise when products are grouped according to their transformation level. Portuguese trade in primary goods is dominated by inter-industry trade, corresponding to around 90 per cent of total. On the contrary, the highest share of IIT in Portugal is found in parts and components, representing 58.8 per cent of total trade in these products in the 2000-04 period. This fact points to the existence of some intra-industry transactions associated with the international fragmentation of production, namely in parts and components for automobiles and for automatic data processing machines. At the industry level, significant and increasing shares of IIT, mostly vertical, are found in the industries of rubber and plastic products, motor vehicles, wearing apparel and metal products.

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QUARTERLY SERIES FOR THE PORTUGUESE ECONOMY

Updating 1977-2008

QUARTERLY SERIES FOR THE PORTUGUESE ECONOMY: 1977-2008

This section publishes an update of the quarterly series for the Portuguese economy, similarly to previous years. The series now presented are based on the annual figures underlying the macroeconomic projections presented in this Bulletin and on the quarterly indicators made available in the middle of June.

Due to the methodology used, the inclusion of a new year and the usual statistical revisions of the most recent data, implied changes to the quarterly series that, in some cases, do not only affect the recent years. However, these revisions are, in most cases, negligible, reflecting the absence of significant changes of the methodology presented in detail in the article “Quarterly series for the Portuguese economy: 1977-2003" of *Economic Bulletin*-June 2004.

Quarterly series for the 1977-2008 period are presented in the tables below, with a similar breakdown as in previous publications. An electronic version of the series is available on the Banco de Portugal’s website, at www.bportugal.pt/publish/bolecon/docs.

MAIN EXPENDITURE COMPONENTS

	1977				1978				1979			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	578.2	615.9	651.6	676.0	708.2	736.2	781.2	831.5	859.1	907.2	972.4	1 065.0
Public consumption	121.2	123.6	128.4	135.7	145.6	155.3	164.8	174.1	183.0	194.3	208.0	224.4
GFCF	262.7	296.8	304.2	313.3	301.0	323.3	343.8	378.2	428.4	482.6	525.4	532.0
Change in inventories	27.7	30.5	36.1	44.5	55.7	56.2	46.1	25.4	-6.0	-15.8	-4.1	29.2
Exports of goods and services	135.8	149.3	155.8	168.6	178.8	194.8	218.8	256.9	287.8	332.7	373.1	409.8
Goods	87.9	96.5	100.0	106.2	111.5	123.7	136.1	164.0	182.2	210.4	234.4	259.6
Services	47.8	52.7	55.8	62.3	67.3	71.1	82.7	93.0	105.6	122.3	138.7	150.2
Imports of goods and services	226.7	266.7	276.3	297.1	302.5	306.0	334.2	358.6	384.9	436.4	506.5	563.1
Goods	195.0	229.7	237.2	255.4	258.5	260.5	284.6	305.4	326.8	371.6	426.9	474.9
Services	31.7	37.0	39.1	41.7	44.0	45.4	49.6	53.2	58.1	64.8	79.6	88.2
GDP	899.0	949.3	999.8	1 041.0	1 086.9	1 159.9	1 220.5	1 307.4	1 367.5	1 464.6	1 568.3	1 697.3
Previous year prices (EUR million)												
Private consumption (residents)					654.9	654.0	662.3	670.4	785.7	795.1	808.4	824.1
Public consumption					130.6	132.6	134.6	136.7	166.4	169.5	173.0	176.9
GFCF					273.6	279.1	279.6	287.8	370.2	394.3	407.3	387.9
Change in inventories					52.3	54.3	46.5	28.7	1.2	-11.9	-10.5	5.4
Exports of goods and services					162.4	167.9	178.4	196.9	251.6	275.5	291.4	298.8
Goods					100.6	105.7	109.4	122.9	156.8	171.3	179.5	185.2
Services					61.8	62.1	69.0	74.0	94.8	104.3	111.9	113.6
Imports of goods and services					273.7	266.4	266.3	271.4	327.1	345.2	368.4	381.0
Goods					235.0	228.7	227.9	232.5	277.3	292.6	308.0	318.7
Services					38.7	37.7	38.4	39.0	49.8	52.7	60.4	62.3
GDP					1 000.1	1 021.3	1 035.0	1 049.2	1 247.9	1 277.2	1 301.1	1 312.1
Chain-linked volume (reference year 2000)												
Private consumption (residents)					7 718.5	7 706.9	7 805.1	7 900.8	8 001.2	8 096.6	8 232.0	8 392.3
Public consumption					2 159.8	2 191.7	2 225.3	2 260.7	2 297.8	2 340.6	2 389.2	2 443.5
GFCF					2 964.5	3 023.7	3 029.4	3 118.7	3 337.0	3 554.5	3 671.3	3 496.6
Exports of goods and services					1 346.8	1 392.0	1 479.3	1 632.7	1 733.0	1 898.1	2 007.3	2 058.5
Goods					740.8	778.9	805.6	905.3	946.5	1 033.8	1 083.7	1 117.7
Services					689.7	692.9	769.8	825.3	898.3	988.5	1 060.4	1 077.3
Imports of goods and services					1 769.4	1 722.1	1 721.4	1 754.4	1 751.5	1 848.6	1 972.5	2 040.0
Goods					1 429.5	1 390.9	1 386.2	1 413.9	1 405.6	1 482.9	1 561.1	1 615.3
Services					347.0	338.3	344.1	349.1	356.9	377.6	432.9	446.5
GDP					13 719.6	14 010.4	14 198.2	14 392.5	14 719.3	15 065.6	15 347.2	15 477.2
Deflator (2000=1)												
Private consumption (residents)					0.0918	0.0955	0.1001	0.1052	0.1074	0.1120	0.1181	0.1269
Public consumption					0.0674	0.0709	0.0741	0.0770	0.0797	0.0830	0.0871	0.0918
GFCF					0.1016	0.1069	0.1135	0.1213	0.1284	0.1358	0.1431	0.1521
Exports of goods and services					0.1328	0.1399	0.1479	0.1574	0.1661	0.1753	0.1859	0.1991
Goods					0.1505	0.1588	0.1689	0.1811	0.1924	0.2035	0.2163	0.2322
Services					0.0976	0.1026	0.1074	0.1126	0.1176	0.1237	0.1308	0.1395
Imports of goods and services					0.1709	0.1777	0.1941	0.2044	0.2197	0.2361	0.2568	0.2760
Goods					0.1808	0.1873	0.2053	0.2160	0.2325	0.2506	0.2735	0.2940
Services					0.1269	0.1343	0.1441	0.1524	0.1628	0.1717	0.1838	0.1975
GDP					0.0792	0.0828	0.0860	0.0908	0.0929	0.0972	0.1022	0.1097

MAIN EXPENDITURE COMPONENTS

	1980				1981				1982			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	1 144.6	1 228.7	1 293.1	1 351.3	1 430.3	1 503.2	1 596.5	1 681.4	1 756.0	1 845.9	1 912.7	1 984.5
Public consumption	243.7	262.3	280.0	296.6	312.1	328.0	344.1	360.5	377.1	396.8	419.7	446.0
GFCF	530.2	538.4	559.0	610.4	701.7	759.5	813.8	830.4	873.2	903.6	926.9	945.6
Change in inventories	84.0	117.8	130.4	122.0	92.5	77.2	76.1	89.3	116.7	128.0	123.1	102.0
Exports of goods and services	450.0	462.5	478.1	480.3	497.6	524.4	537.0	554.1	565.9	598.5	673.2	711.9
Goods	285.3	292.5	294.4	296.5	303.0	317.9	329.5	340.7	360.8	384.9	451.0	477.0
Services	164.6	170.0	183.6	183.8	194.6	206.5	207.4	213.4	205.1	213.5	222.1	234.9
Imports of goods and services	628.5	682.7	729.1	772.5	816.1	931.3	942.2	952.8	1 020.9	1 097.8	1 151.0	1 140.2
Goods	518.5	566.9	599.8	635.2	666.4	769.3	780.8	786.0	856.1	921.1	973.5	962.4
Services	110.0	115.8	129.3	137.3	149.7	162.0	161.3	166.7	164.8	176.7	177.5	177.8
GDP	1 823.9	1 927.0	2 011.5	2 088.1	2 218.0	2 261.0	2 425.4	2 563.0	2 668.0	2 775.0	2 904.5	3 049.8
Previous year prices (EUR million)												
Private consumption (residents)	1 008.0	1 032.2	1 048.6	1 056.2	1 277.9	1 288.2	1 294.1	1 301.4	1 582.3	1 597.2	1 600.2	1 597.7
Public consumption	214.0	218.7	222.8	226.5	281.9	285.2	287.9	290.0	342.5	345.1	348.4	352.6
GFCF	462.0	437.7	445.3	464.2	617.7	635.2	666.4	674.7	798.0	785.7	777.1	764.0
Change in inventories	35.7	56.8	68.6	71.1	64.3	65.7	75.4	93.4	119.7	125.2	110.1	74.2
Exports of goods and services	388.2	386.1	387.3	373.6	455.2	459.3	457.2	460.7	517.0	529.4	549.5	578.2
Goods	244.9	242.6	238.6	230.1	278.9	279.7	284.3	288.5	332.9	343.9	369.6	392.4
Services	143.3	143.4	148.7	143.5	176.3	179.6	172.8	172.2	184.1	185.5	179.9	185.8
Imports of goods and services	546.5	559.5	578.2	583.6	724.9	732.6	754.0	771.7	966.9	970.5	954.5	948.1
Goods	451.3	462.3	473.6	478.1	595.0	601.2	625.0	640.4	815.1	818.6	810.6	805.0
Services	95.1	97.2	104.6	105.6	129.9	131.4	129.0	131.2	151.7	151.8	143.9	143.1
GDP	1 561.6	1 572.1	1 594.4	1 608.0	1 972.1	2 001.0	2 027.0	2 048.7	2 392.6	2 412.1	2 430.8	2 418.7
Chain-linked volume (reference year 2000)												
Private consumption (residents)	8 671.7	8 880.1	9 020.8	9 086.4	9 081.3	9 154.8	9 196.7	9 248.6	9 344.0	9 432.2	9 449.6	9 435.2
Public consumption	2 503.6	2 557.9	2 606.5	2 649.3	2 686.4	2 717.9	2 743.9	2 764.4	2 779.3	2 800.4	2 827.8	2 861.4
GFCF	3 300.4	3 126.9	3 180.8	3 315.8	3 566.9	3 668.4	3 848.3	3 896.4	3 849.6	3 790.3	3 748.8	3 685.3
Exports of goods and services	2 129.1	2 117.3	2 123.9	2 048.9	2 048.7	2 066.8	2 057.4	2 073.4	2 017.6	2 065.9	2 144.4	2 256.5
Goods	1 155.1	1 144.4	1 125.4	1 085.3	1 076.3	1 079.3	1 097.2	1 113.3	1 125.7	1 162.9	1 249.8	1 326.9
Services	1 115.9	1 116.9	1 157.5	1 117.4	1 132.2	1 153.1	1 109.8	1 105.8	1 008.3	1 015.7	985.1	1 017.6
Imports of goods and services	2 200.1	2 252.4	2 327.8	2 349.7	2 352.8	2 377.9	2 447.4	2 504.7	2 570.3	2 579.9	2 537.3	2 520.4
Goods	1 710.6	1 752.3	1 794.9	1 812.0	1 812.8	1 831.6	1 904.4	1 951.3	2 036.0	2 044.9	2 024.7	2 010.7
Services	528.2	539.4	580.9	586.0	589.4	596.5	585.2	595.5	561.3	561.7	532.2	529.3
GDP	15 521.9	15 626.4	15 848.2	15 982.9	15 820.7	16 052.9	16 261.3	16 435.2	16 318.4	16 451.5	16 579.1	16 496.0
Deflator (2000=1)												
Private consumption (residents)	0.1320	0.1384	0.1434	0.1487	0.1575	0.1642	0.1736	0.1818	0.1879	0.1957	0.2024	0.2103
Public consumption	0.0973	0.1025	0.1074	0.1120	0.1162	0.1207	0.1254	0.1304	0.1357	0.1417	0.1484	0.1559
GFCF	0.1606	0.1722	0.1757	0.1841	0.1967	0.2070	0.2115	0.2131	0.2268	0.2384	0.2473	0.2566
Exports of goods and services	0.2113	0.2184	0.2251	0.2344	0.2429	0.2537	0.2610	0.2672	0.2805	0.2897	0.3139	0.3155
Goods	0.2470	0.2556	0.2616	0.2732	0.2815	0.2946	0.3003	0.3060	0.3206	0.3310	0.3609	0.3595
Services	0.1475	0.1522	0.1587	0.1645	0.1719	0.1791	0.1869	0.1930	0.2034	0.2102	0.2255	0.2308
Imports of goods and services	0.2857	0.3031	0.3132	0.3288	0.3469	0.3916	0.3850	0.3804	0.3972	0.4255	0.4536	0.4524
Goods	0.3031	0.3235	0.3342	0.3505	0.3676	0.4200	0.4100	0.4028	0.4205	0.4504	0.4808	0.4786
Services	0.2083	0.2146	0.2225	0.2343	0.2540	0.2716	0.2757	0.2800	0.2936	0.3146	0.3335	0.3358
GDP	0.1175	0.1233	0.1269	0.1306	0.1402	0.1408	0.1491	0.1559	0.1635	0.1687	0.1752	0.1849

MAIN EXPENDITURE COMPONENTS

	1983				1984				1985			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	2 132.6	2 246.5	2 411.8	2 589.5	2 698.2	2 860.9	3 051.3	3 116.7	3 260.2	3 377.8	3 465.5	3 628.4
Public consumption	476.1	505.1	532.8	558.8	582.8	611.4	645.1	684.4	729.7	775.2	820.9	866.7
GFCF	1 027.9	1 090.2	1 177.9	1 164.5	1 098.6	1 190.7	1 238.4	1 327.6	1 337.2	1 361.3	1 416.5	1 494.4
Change in inventories	64.8	35.1	12.8	-2.1	-9.5	-12.0	-9.8	-2.7	9.3	16.8	20.0	18.8
Exports of goods and services	791.1	873.5	999.5	1 101.9	1 206.4	1 322.1	1 444.8	1 551.1	1 691.7	1 761.4	1 774.9	1 835.9
Goods	530.9	597.2	687.1	761.5	840.0	917.4	1 011.1	1 081.4	1 169.4	1 228.6	1 234.9	1 268.8
Services	260.2	276.3	312.4	340.4	366.4	404.7	433.8	469.7	522.3	532.8	540.0	567.1
Imports of goods and services	1 172.6	1 221.3	1 361.2	1 475.8	1 534.2	1 616.0	1 752.6	1 818.3	1 916.7	1 942.1	1 905.9	2 002.8
Goods	980.1	1 024.5	1 143.4	1 247.4	1 284.4	1 355.8	1 470.4	1 522.5	1 601.4	1 610.9	1 583.6	1 661.5
Services	192.6	196.8	217.8	228.4	249.8	260.2	282.2	295.8	315.3	331.2	322.3	341.4
GDP	3 319.9	3 529.1	3 773.6	3 936.8	4 042.3	4 357.1	4 617.2	4 858.7	5 111.4	5 350.4	5 591.8	5 841.3
Previous year prices (EUR million)												
Private consumption (residents)	1 875.4	1 866.8	1 860.2	1 844.3	2 314.4	2 309.0	2 317.1	2 313.9	2 913.5	2 924.5	2 934.7	2 978.5
Public consumption	422.1	425.9	427.7	427.5	517.6	517.5	519.7	524.4	645.2	654.1	663.4	672.9
GFCF	916.5	921.7	912.5	833.3	974.5	1 004.8	988.9	996.9	1 200.1	1 187.7	1 206.2	1 224.2
Change in inventories	17.7	-21.0	-41.9	-44.9	-30.1	-21.0	-17.5	-19.7	-27.6	-25.6	-13.6	8.4
Exports of goods and services	720.3	739.8	766.5	794.2	1 020.7	1 068.6	1 103.9	1 140.6	1 505.3	1 516.6	1 505.8	1 528.2
Goods	491.0	508.7	528.3	549.6	703.5	732.6	761.4	784.3	1 041.4	1 061.3	1 052.9	1 066.8
Services	229.3	231.1	238.2	244.6	317.1	336.0	342.6	356.2	463.8	455.3	452.9	461.3
Imports of goods and services	1 078.5	1 039.2	1 026.2	986.7	1 260.6	1 267.3	1 304.5	1 305.8	1 728.2	1 753.5	1 744.3	1 810.7
Goods	911.8	878.0	863.8	829.6	1 046.9	1 053.5	1 081.2	1 082.5	1 446.8	1 468.2	1 472.1	1 528.2
Services	166.7	161.1	162.4	157.1	213.7	213.8	223.3	223.3	281.4	285.3	272.2	282.5
GDP	2 873.4	2 894.1	2 898.8	2 867.8	3 536.5	3 611.5	3 607.6	3 650.3	4 508.2	4 503.9	4 552.3	4 601.5
Chain-linked volume (reference year 2000)												
Private consumption (residents)	9 418.3	9 375.3	9 341.9	9 262.4	9 227.1	9 205.5	9 238.1	9 225.2	9 166.5	9 201.2	9 233.2	9 370.9
Public consumption	2 901.1	2 927.3	2 939.7	2 938.4	2 923.5	2 922.3	2 935.1	2 961.6	3 001.9	3 043.6	3 086.6	3 131.0
GFCF	3 785.6	3 807.2	3 769.4	3 442.0	3 234.3	3 334.8	3 282.1	3 308.7	3 252.8	3 219.2	3 269.2	3 318.2
Exports of goods and services	2 397.1	2 462.2	2 551.0	2 643.2	2 724.7	2 852.7	2 947.0	3 044.8	3 152.3	3 176.1	3 153.5	3 200.3
Goods	1 427.0	1 478.6	1 535.7	1 597.6	1 648.8	1 716.9	1 784.4	1 838.2	1 890.4	1 926.5	1 911.3	1 936.5
Services	1 054.6	1 063.0	1 095.4	1 124.9	1 156.7	1 225.7	1 249.5	1 299.5	1 366.0	1 340.8	1 333.7	1 358.6
Imports of goods and services	2 496.6	2 405.4	2 375.5	2 284.0	2 304.1	2 316.5	2 384.5	2 386.8	2 414.9	2 450.3	2 437.4	2 530.1
Goods	1 993.0	1 919.3	1 888.1	1 813.4	1 813.4	1 824.9	1 872.8	1 875.2	1 897.0	1 925.1	1 930.3	2 003.8
Services	522.8	505.1	509.2	492.6	519.1	519.4	542.5	542.4	549.2	556.8	531.1	551.3
GDP	16 600.1	16 719.7	16 747.2	16 567.6	16 185.6	16 529.0	16 511.2	16 706.4	16 628.4	16 612.5	16 790.7	16 972.3
Deflator (2000=1)												
Private consumption (residents)	0.2264	0.2396	0.2582	0.2796	0.2924	0.3108	0.3303	0.3378	0.3557	0.3671	0.3753	0.3872
Public consumption	0.1641	0.1726	0.1812	0.1902	0.1994	0.2092	0.2198	0.2311	0.2431	0.2547	0.2659	0.2768
GFCF	0.2715	0.2864	0.3125	0.3383	0.3397	0.3571	0.3773	0.4012	0.4111	0.4229	0.4333	0.4504
Exports of goods and services	0.3300	0.3548	0.3918	0.4169	0.4428	0.4634	0.4903	0.5094	0.5367	0.5546	0.5628	0.5737
Goods	0.3721	0.4039	0.4474	0.4766	0.5094	0.5343	0.5666	0.5883	0.6186	0.6377	0.6461	0.6552
Services	0.2467	0.2599	0.2852	0.3026	0.3167	0.3302	0.3471	0.3615	0.3824	0.3974	0.4048	0.4174
Imports of goods and services	0.4697	0.5077	0.5730	0.6462	0.6659	0.6976	0.7350	0.7618	0.7937	0.7926	0.7819	0.7916
Goods	0.4917	0.5338	0.6056	0.6879	0.7083	0.7429	0.7851	0.8119	0.8442	0.8368	0.8204	0.8292
Services	0.3683	0.3896	0.4276	0.4637	0.4812	0.5010	0.5202	0.5455	0.5742	0.5948	0.6068	0.6192
GDP	0.2000	0.2111	0.2253	0.2376	0.2497	0.2636	0.2796	0.2908	0.3074	0.3221	0.3330	0.3442

MAIN EXPENDITURE COMPONENTS

	1986				1987				1988			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	3 830.1	4 078.0	4 214.0	4 418.6	4 533.0	4 776.8	4 902.4	5 104.3	5 482.6	5 765.8	6 061.9	6 417.0
Public consumption	912.7	955.1	993.5	1 027.8	1 057.7	1 096.8	1 145.9	1 205.4	1 276.3	1 349.7	1 425.5	1 503.9
GFCF	1 468.1	1 596.1	1 667.1	1 820.4	1 932.3	2 098.9	2 190.7	2 378.8	2 528.0	2 705.8	2 861.9	2 976.0
Change in inventories	13.2	18.8	35.8	64.1	103.7	134.4	156.2	169.1	173.1	163.0	138.8	100.6
Exports of goods and services	1 862.8	1 945.0	2 034.8	2 167.8	2 254.2	2 417.4	2 510.6	2 632.1	2 736.4	2 781.1	2 979.1	3 153.1
Goods	1 263.7	1 332.3	1 378.3	1 469.0	1 526.8	1 611.5	1 681.5	1 766.3	1 849.3	1 910.3	2 042.0	2 149.4
Services	599.0	612.6	656.5	698.8	727.4	805.9	829.1	865.8	887.1	870.8	937.1	1 003.7
Imports of goods and services	1 989.1	2 018.9	2 075.2	2 334.5	2 494.0	2 706.5	2 951.2	3 157.9	3 420.9	3 524.1	3 845.3	3 925.6
Goods	1 670.8	1 667.7	1 728.3	1 946.2	2 095.0	2 269.0	2 494.5	2 668.2	2 893.3	2 984.5	3 265.4	3 299.9
Services	318.3	351.2	346.9	388.3	399.0	437.5	456.7	489.8	527.5	539.6	579.9	625.7
GDP	6 097.7	6 574.1	6 870.1	7 164.2	7 386.9	7 817.8	7 954.5	8 331.7	8 775.6	9 241.2	9 621.9	10 225.0
Previous year prices (EUR million)												
Private consumption (residents)	3 533.2	3 652.4	3 697.0	3 798.7	4 312.9	4 448.3	4 466.9	4 538.0	5 146.9	5 254.7	5 326.0	5 462.0
Public consumption	827.0	837.1	845.4	852.0	991.3	1 001.4	1 016.0	1 035.2	1 179.9	1 206.3	1 232.6	1 258.8
GFCF	1 394.0	1 439.4	1 491.4	1 553.7	1 837.6	1 943.2	2 019.3	2 106.5	2 383.1	2 492.4	2 524.1	2 601.5
Change in inventories	40.3	71.8	102.9	133.6	164.0	181.3	185.7	177.0	155.2	135.4	117.5	101.5
Exports of goods and services	1 810.0	1 857.7	1 929.0	2 000.6	2 163.9	2 254.0	2 276.6	2 300.2	2 526.5	2 554.7	2 684.1	2 817.2
Goods	1 247.0	1 292.7	1 332.2	1 379.4	1 471.3	1 501.3	1 519.3	1 531.4	1 699.8	1 759.4	1 848.4	1 946.5
Services	563.1	564.9	596.8	621.2	692.6	752.8	757.2	768.8	826.7	795.4	835.7	870.7
Imports of goods and services	2 075.9	2 219.8	2 348.7	2 556.7	2 451.6	2 599.5	2 736.7	2 881.4	3 248.3	3 393.3	3 512.9	3 599.6
Goods	1 767.2	1 889.4	2 023.7	2 200.0	2 070.8	2 192.2	2 319.0	2 435.0	2 743.7	2 883.1	2 973.6	3 032.1
Services	308.7	330.4	324.9	356.7	380.8	407.3	417.7	446.4	504.5	510.3	539.3	567.5
GDP	5 528.5	5 638.5	5 717.0	5 781.8	7 018.1	7 228.7	7 227.7	7 275.4	8 143.5	8 250.3	8 371.5	8 641.6
Chain-linked volume (reference year 2000)												
Private consumption (residents)	9 512.7	9 833.7	9 953.9	10 227.5	10 306.8	10 630.3	10 674.7	10 844.5	11 312.6	11 549.5	11 706.1	12 005.1
Public consumption	3 176.6	3 215.5	3 247.5	3 272.8	3 291.2	3 324.7	3 373.4	3 437.2	3 516.0	3 594.6	3 673.0	3 751.1
GFCF	3 245.3	3 351.2	3 472.1	3 617.1	3 838.6	4 059.1	4 218.1	4 400.2	4 576.3	4 786.3	4 847.1	4 995.8
Exports of goods and services	3 249.7	3 335.2	3 463.3	3 591.7	3 684.7	3 838.1	3 876.5	3 916.8	3 942.9	3 986.9	4 188.8	4 396.5
Goods	1 949.9	2 021.4	2 083.1	2 157.0	2 219.5	2 264.7	2 291.9	2 310.2	2 345.2	2 427.3	2 550.1	2 685.5
Services	1 406.0	1 410.7	1 490.3	1 551.1	1 580.6	1 717.9	1 728.1	1 754.5	1 736.5	1 670.7	1 755.5	1 828.9
Imports of goods and services	2 627.8	2 810.0	2 973.1	3 236.4	3 392.3	3 596.9	3 786.7	3 987.0	4 240.1	4 429.4	4 585.4	4 698.6
Goods	2 122.6	2 269.5	2 430.8	2 642.6	2 794.9	2 958.8	3 129.9	3 286.6	3 505.1	3 683.1	3 798.7	3 873.5
Services	515.7	551.9	542.7	595.7	598.1	639.7	656.1	701.1	734.3	742.6	784.9	825.9
GDP	16 918.6	17 255.1	17 495.5	17 693.7	18 227.9	18 775.0	18 772.4	18 896.3	19 309.8	19 563.3	19 850.5	20 491.0
Deflator (2000=1)												
Private consumption (residents)	0.4026	0.4147	0.4234	0.4320	0.4398	0.4494	0.4593	0.4707	0.4846	0.4992	0.5178	0.5345
Public consumption	0.2873	0.2970	0.3059	0.3141	0.3214	0.3299	0.3397	0.3507	0.3630	0.3755	0.3881	0.4009
GFCF	0.4524	0.4763	0.4802	0.5033	0.5034	0.5171	0.5193	0.5406	0.5524	0.5653	0.5904	0.5957
Exports of goods and services	0.5732	0.5832	0.5875	0.6036	0.6118	0.6299	0.6477	0.6720	0.6940	0.6976	0.7112	0.7172
Goods	0.6481	0.6591	0.6616	0.6811	0.6879	0.7116	0.7337	0.7646	0.7886	0.7870	0.8008	0.8004
Services	0.4261	0.4343	0.4405	0.4505	0.4602	0.4691	0.4798	0.4935	0.5109	0.5212	0.5338	0.5488
Imports of goods and services	0.7569	0.7185	0.6980	0.7213	0.7352	0.7525	0.7794	0.7921	0.8068	0.7956	0.8386	0.8355
Goods	0.7871	0.7348	0.7110	0.7365	0.7496	0.7668	0.7970	0.8118	0.8255	0.8103	0.8596	0.8519
Services	0.6171	0.6363	0.6391	0.6518	0.6671	0.6840	0.6960	0.6986	0.7184	0.7266	0.7388	0.7577
GDP	0.3604	0.3810	0.3927	0.4049	0.4053	0.4164	0.4237	0.4409	0.4545	0.4724	0.4847	0.4990

MAIN EXPENDITURE COMPONENTS

	1989				1990				1991			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	6 531.9	6 717.9	6 999.6	7 205.4	7 597.6	8 003.3	8 413.0	8 809.9	9 274.6	9 731.0	10 136.3	10 439.1
Public consumption	1 584.8	1 665.5	1 745.8	1 825.3	1 903.7	2 003.2	2 125.8	2 273.7	2 449.3	2 603.1	2 732.1	2 833.6
GFCF	3 013.5	3 102.6	3 212.3	3 351.9	3 450.2	3 581.1	3 700.6	3 800.3	3 848.1	3 928.9	4 110.4	4 241.9
Change in inventories	48.2	43.0	84.9	173.9	310.0	367.9	347.6	248.9	72.1	-45.6	-104.2	-103.7
Exports of goods and services	3 420.1	3 530.5	3 758.3	3 974.7	4 187.5	4 318.4	4 350.4	4 441.1	4 345.0	4 457.0	4 504.6	4 524.3
Goods	2 345.1	2 457.9	2 591.0	2 740.8	2 868.2	2 943.1	2 971.3	2 950.9	2 918.2	2 910.8	2 983.0	3 026.9
Services	1 075.0	1 072.6	1 167.4	1 233.9	1 319.4	1 375.3	1 379.1	1 490.2	1 426.8	1 546.2	1 521.7	1 497.3
Imports of goods and services	4 087.4	4 182.8	4 422.3	4 603.9	5 032.5	4 952.3	5 250.3	5 473.2	5 450.3	5 510.6	5 756.4	5 762.9
Goods	3 491.9	3 508.5	3 708.1	3 889.0	4 225.1	4 144.8	4 359.6	4 605.7	4 585.2	4 590.2	4 730.1	4 761.1
Services	595.5	674.3	714.2	714.8	807.4	807.5	890.7	867.5	865.1	920.4	1 026.3	1 001.9
GDP	10 511.0	10 876.6	11 378.7	11 927.3	12 416.6	13 321.6	13 687.0	14 100.7	14 538.7	15 163.8	15 622.8	16 172.3
Previous year prices (EUR million)												
Private consumption (residents)	6 065.3	6 114.2	6 212.6	6 303.8	7 181.4	7 355.7	7 537.8	7 680.8	8 691.5	8 918.4	9 112.3	9 217.3
Public consumption	1 463.5	1 488.7	1 509.5	1 525.8	1 751.7	1 778.9	1 819.8	1 874.4	2 233.5	2 289.9	2 324.1	2 336.1
GFCF	2 806.4	2 843.0	2 833.4	2 911.3	3 260.0	3 342.1	3 383.8	3 455.2	3 680.8	3 707.7	3 801.3	3 881.4
Change in inventories	87.4	103.5	149.9	226.5	333.3	381.4	370.8	301.5	173.5	89.2	48.5	51.5
Exports of goods and services	3 254.2	3 302.2	3 476.9	3 622.5	4 047.1	4 132.9	4 118.3	4 163.4	4 239.4	4 353.8	4 363.4	4 404.1
Goods	2 245.9	2 320.2	2 429.5	2 532.8	2 794.0	2 856.1	2 871.1	2 857.1	2 903.3	2 931.8	2 990.6	3 063.0
Services	1 008.3	982.0	1 047.4	1 089.8	1 253.1	1 276.8	1 247.1	1 306.4	1 336.1	1 422.0	1 372.8	1 341.1
Imports of goods and services	3 816.7	3 921.0	4 055.2	4 201.7	4 832.4	4 972.2	5 163.9	5 212.1	5 366.1	5 521.4	5 746.1	5 868.9
Goods	3 252.5	3 297.4	3 407.3	3 562.0	4 055.5	4 205.0	4 332.8	4 411.8	4 529.3	4 641.4	4 768.8	4 915.9
Services	564.2	623.7	647.9	639.7	776.9	767.3	831.1	800.3	836.8	879.9	977.3	953.0
GDP	9 860.0	9 930.6	10 127.0	10 388.2	11 741.2	12 018.8	12 066.5	12 263.2	13 652.7	13 837.6	13 903.5	14 021.5
Chain-linked volume (reference year 2000)												
Private consumption (residents)	11 905.3	12 001.4	12 194.4	12 373.5	12 679.6	12 987.4	13 308.8	13 561.3	13 911.4	14 274.6	14 584.9	14 752.9
Public consumption	3 828.9	3 895.0	3 949.4	3 992.0	4 022.8	4 085.2	4 179.1	4 304.5	4 461.4	4 574.0	4 642.3	4 666.3
GFCF	4 868.0	4 931.5	4 914.9	5 050.1	5 081.4	5 209.2	5 274.3	5 385.6	5 306.5	5 345.2	5 480.1	5 595.7
Exports of goods and services	4 613.3	4 681.4	4 929.0	5 135.5	5 335.8	5 448.9	5 429.6	5 489.2	5 319.3	5 462.8	5 474.8	5 525.9
Goods	2 826.9	2 920.5	3 058.0	3 188.0	3 306.4	3 380.0	3 397.7	3 381.1	3 331.8	3 364.4	3 431.9	3 515.1
Services	1 906.0	1 856.2	1 979.8	2 060.0	2 149.3	2 189.9	2 139.0	2 240.7	2 093.6	2 228.4	2 151.2	2 101.5
Imports of goods and services	4 656.4	4 783.7	4 947.4	5 126.2	5 451.9	5 609.6	5 825.9	5 880.2	5 899.8	6 070.4	6 317.5	6 452.5
Goods	3 884.4	3 937.9	4 069.2	4 254.0	4 485.6	4 650.9	4 792.3	4 879.6	4 914.2	5 035.8	5 174.1	5 333.6
Services	766.4	847.3	880.2	869.1	968.1	956.1	1 035.7	997.3	981.7	1 032.3	1 146.5	1 118.0
GDP	20 628.0	20 775.8	21 186.7	21 733.1	22 152.1	22 675.9	22 765.9	23 137.1	23 142.4	23 455.9	23 567.5	23 767.6
Deflator (2000=1)												
Private consumption (residents)	0.5487	0.5598	0.5740	0.5823	0.5992	0.6162	0.6321	0.6496	0.6667	0.6817	0.6950	0.7076
Public consumption	0.4139	0.4276	0.4420	0.4573	0.4732	0.4904	0.5087	0.5282	0.5490	0.5691	0.5885	0.6073
GFCF	0.6190	0.6291	0.6536	0.6637	0.6790	0.6875	0.7016	0.7056	0.7252	0.7350	0.7500	0.7581
Exports of goods and services	0.7414	0.7542	0.7625	0.7740	0.7848	0.7925	0.8012	0.8091	0.8168	0.8159	0.8228	0.8187
Goods	0.8296	0.8416	0.8473	0.8597	0.8675	0.8707	0.8745	0.8728	0.8759	0.8652	0.8692	0.8611
Services	0.5640	0.5778	0.5896	0.5990	0.6139	0.6280	0.6447	0.6651	0.6815	0.6939	0.7073	0.7125
Imports of goods and services	0.8778	0.8744	0.8939	0.8981	0.9231	0.8828	0.9012	0.9308	0.9238	0.9078	0.9112	0.8931
Goods	0.8990	0.8909	0.9113	0.9142	0.9419	0.8912	0.9097	0.9439	0.9330	0.9115	0.9142	0.8926
Services	0.7770	0.7958	0.8114	0.8225	0.8340	0.8446	0.8600	0.8699	0.8813	0.8916	0.8952	0.8961
GDP	0.5095	0.5235	0.5371	0.5488	0.5605	0.5875	0.6012	0.6094	0.6282	0.6465	0.6629	0.6804

MAIN EXPENDITURE COMPONENTS

	1992				1993				1994			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	10 716.2	11 173.7	11 378.8	11 632.8	11 818.9	11 923.2	12 222.1	12 473.2	12 616.9	12 924.3	13 107.6	13 381.3
Public consumption	2 905.0	2 975.4	3 044.9	3 114.1	3 183.2	3 246.7	3 304.9	3 357.6	3 405.0	3 460.4	3 524.2	3 596.4
GFCF	4 487.1	4 570.3	4 616.1	4 536.1	4 326.3	4 410.8	4 179.9	4 200.8	4 294.5	4 395.2	4 371.2	4 832.4
Change in inventories	-44.0	-20.6	-33.5	-82.6	-168.1	-194.3	-161.3	-69.1	82.3	184.9	238.7	243.7
Exports of goods and services	4 625.0	4 623.9	4 529.6	4 424.2	4 415.5	4 414.5	4 725.4	4 857.2	4 894.3	5 158.8	5 344.6	5 575.8
Goods	3 135.6	3 158.5	3 098.5	3 053.2	3 053.6	3 094.6	3 275.6	3 396.7	3 533.4	3 752.2	3 983.0	4 192.0
Services	1 489.4	1 465.4	1 431.1	1 371.0	1 361.9	1 319.9	1 449.9	1 460.5	1 360.9	1 406.6	1 361.6	1 383.8
Imports of goods and services	5 931.4	5 933.0	5 977.5	5 863.8	5 921.3	5 804.4	5 988.3	6 268.7	6 310.2	6 500.2	6 786.8	7 207.5
Goods	4 933.2	4 954.4	4 923.3	4 858.9	4 715.8	4 682.1	4 808.3	4 993.8	5 237.2	5 419.1	5 712.2	5 944.1
Services	998.1	978.6	1 054.2	1 004.9	1 205.5	1 122.3	1 180.0	1 274.9	1 073.0	1 081.2	1 074.6	1 263.5
GDP	16 758.0	17 389.7	17 558.5	17 760.8	17 654.5	17 996.5	18 282.7	18 551.0	18 982.8	19 623.4	19 799.5	20 422.1
Previous year prices (EUR million)												
Private consumption (residents)	10 254.2	10 422.7	10 478.5	10 616.4	11 466.7	11 435.9	11 514.5	11 523.6	12 070.3	12 196.9	12 212.4	12 304.7
Public consumption	2 689.2	2 681.0	2 676.5	2 675.6	3 007.3	3 015.1	3 027.7	3 045.2	3 320.3	3 341.6	3 360.0	3 375.7
GFCF	4 369.4	4 429.2	4 426.0	4 294.5	4 261.3	4 267.2	4 009.8	3 935.9	4 172.2	4 256.0	4 238.2	4 619.5
Change in inventories	98.2	121.5	121.3	97.8	50.8	24.4	18.6	33.4	68.9	97.7	119.9	135.5
Exports of goods and services	4 615.1	4 602.9	4 565.1	4 473.6	4 425.4	4 378.9	4 555.7	4 637.8	4 755.9	4 914.6	5 084.5	5 222.1
Goods	3 152.9	3 198.6	3 198.9	3 162.3	3 091.5	3 090.2	3 172.0	3 272.2	3 451.4	3 582.5	3 797.7	3 928.9
Services	1 462.2	1 404.2	1 366.2	1 311.4	1 333.9	1 288.8	1 383.7	1 365.7	1 304.6	1 332.2	1 286.8	1 293.2
Imports of goods and services	6 084.8	6 230.9	6 378.7	6 308.1	6 069.1	5 880.2	5 879.7	6 060.7	6 119.6	6 309.9	6 621.7	6 978.6
Goods	5 077.2	5 226.0	5 291.7	5 245.7	4 834.8	4 735.5	4 734.2	4 832.9	5 077.3	5 263.9	5 570.7	5 740.6
Services	1 007.6	1 004.9	1 087.0	1 062.4	1 234.3	1 144.8	1 145.5	1 227.8	1 042.3	1 046.0	1 051.0	1 238.0
GDP	15 941.2	16 026.3	15 888.8	15 849.7	17 142.4	17 241.3	17 246.6	17 115.2	18 268.0	18 496.9	18 393.3	18 678.9
Chain-linked volume (reference year 2000)												
Private consumption (residents)	14 902.5	15 147.5	15 228.6	15 428.9	15 503.1	15 461.5	15 567.8	15 580.0	15 478.0	15 640.3	15 660.2	15 778.7
Public consumption	4 645.9	4 631.8	4 623.9	4 622.4	4 627.0	4 639.1	4 658.5	4 685.3	4 719.6	4 749.8	4 776.0	4 798.3
GFCF	5 885.9	5 966.5	5 962.3	5 785.1	5 522.7	5 530.3	5 196.7	5 100.9	5 203.9	5 308.5	5 286.3	5 761.9
Exports of goods and services	5 637.9	5 623.0	5 576.9	5 465.1	5 422.3	5 365.3	5 581.9	5 682.5	5 696.0	5 886.0	6 089.4	6 254.3
Goods	3 633.4	3 686.1	3 686.5	3 644.2	3 639.1	3 637.5	3 733.9	3 851.8	4 001.0	4 153.0	4 402.5	4 554.7
Services	2 092.4	2 009.5	1 955.0	1 876.6	1 838.3	1 776.0	1 906.8	1 882.0	1 727.0	1 763.6	1 703.4	1 712.0
Imports of goods and services	6 696.5	6 857.3	7 019.9	6 942.2	7 044.7	6 825.4	6 824.8	7 034.8	7 075.7	7 295.7	7 656.3	8 069.0
Goods	5 564.4	5 727.5	5 799.5	5 749.1	5 614.2	5 498.8	5 497.3	5 611.9	5 876.5	6 092.5	6 447.6	6 644.3
Services	1 130.4	1 127.4	1 219.4	1 191.8	1 428.0	1 324.4	1 325.2	1 420.4	1 198.2	1 202.4	1 208.2	1 423.1
GDP	24 349.2	24 479.2	24 269.1	24 209.4	24 012.4	24 151.0	24 158.4	23 974.4	24 269.0	24 573.1	24 435.5	24 814.9
Deflator (2000=1)												
Private consumption (residents)	0.7191	0.7377	0.7472	0.7540	0.7624	0.7712	0.7851	0.8006	0.8151	0.8263	0.8370	0.8481
Public consumption	0.6253	0.6424	0.6585	0.6737	0.6880	0.6999	0.7094	0.7166	0.7215	0.7285	0.7379	0.7495
GFCF	0.7623	0.7660	0.7742	0.7841	0.7834	0.7976	0.8043	0.8235	0.8253	0.8280	0.8269	0.8387
Exports of goods and services	0.8203	0.8223	0.8122	0.8095	0.8143	0.8228	0.8466	0.8548	0.8593	0.8764	0.8777	0.8915
Goods	0.8630	0.8569	0.8405	0.8378	0.8391	0.8507	0.8773	0.8819	0.8831	0.9035	0.9047	0.9204
Services	0.7118	0.7293	0.7320	0.7306	0.7409	0.7432	0.7604	0.7760	0.7880	0.7976	0.7993	0.8083
Imports of goods and services	0.8857	0.8652	0.8515	0.8447	0.8405	0.8504	0.8774	0.8911	0.8918	0.8910	0.8864	0.8932
Goods	0.8866	0.8650	0.8489	0.8452	0.8400	0.8515	0.8747	0.8899	0.8912	0.8895	0.8859	0.8946
Services	0.8830	0.8680	0.8645	0.8431	0.8442	0.8474	0.8904	0.8976	0.8955	0.8992	0.8895	0.8878
GDP	0.6882	0.7104	0.7235	0.7336	0.7352	0.7452	0.7568	0.7738	0.7822	0.7986	0.8103	0.8230

MAIN EXPENDITURE COMPONENTS

	1995				1996				1997			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	13 641.8	13 958.8	13 915.0	14 100.4	14 445.0	14 569.9	14 914.6	15 103.6	15 401.4	15 509.1	15 920.9	16 121.7
Public consumption	3 676.9	3 758.4	3 841.1	3 923.3	4 002.0	4 076.9	4 151.2	4 224.8	4 294.8	4 377.0	4 474.8	4 586.2
GFCF	4 686.3	4 820.4	4 786.3	4 865.7	4 880.6	5 040.8	5 358.6	5 560.9	5 902.7	6 085.0	6 329.5	6 374.6
Change in inventories	179.4	165.0	152.9	142.3	133.1	122.4	112.1	103.2	96.3	91.6	90.3	95.2
Exports of goods and services	5 997.9	5 909.2	6 062.5	6 386.8	6 394.6	6 405.0	6 309.2	6 397.0	6 491.3	6 950.2	7 077.1	7 462.7
Goods	4 483.6	4 392.7	4 493.1	4 825.8	4 887.7	4 918.3	4 819.1	4 857.9	4 942.8	5 272.1	5 356.6	5 657.8
Services	1 514.3	1 516.5	1 569.4	1 561.0	1 506.9	1 486.7	1 490.1	1 539.1	1 548.5	1 678.1	1 720.4	1 804.8
Imports of goods and services	7 442.2	7 504.9	7 269.5	7 581.4	7 721.8	7 789.1	7 980.8	8 305.9	8 375.8	8 714.5	9 182.4	9 561.7
Goods	6 200.1	6 287.7	6 062.6	6 288.5	6 490.4	6 523.4	6 694.9	6 951.8	7 106.4	7 358.5	7 758.3	7 982.2
Services	1 242.1	1 217.3	1 206.9	1 292.9	1 231.4	1 265.7	1 285.9	1 354.2	1 269.4	1 356.0	1 424.2	1 579.5
GDP	20 740.2	21 106.9	21 488.2	21 837.1	22 133.6	22 425.8	22 865.0	23 083.6	23 810.8	24 298.4	24 710.2	25 078.8
Previous year prices (EUR million)												
Private consumption (residents)	13 155.5	13 334.6	13 215.7	13 288.1	14 180.7	14 205.2	14 451.5	14 525.5	15 089.9	15 153.3	15 432.3	15 520.9
Public consumption	3 537.4	3 559.4	3 590.1	3 629.4	3 904.3	3 941.2	3 964.1	3 973.0	4 141.4	4 161.6	4 203.6	4 267.4
GFCF	4 589.7	4 688.1	4 616.9	4 649.3	4 762.3	4 921.9	5 182.3	5 371.5	5 750.4	5 905.5	6 034.0	6 127.0
Change in inventories	144.4	146.8	142.7	132.1	116.2	101.5	89.2	79.4	88.0	82.2	80.3	84.5
Exports of goods and services	5 816.1	5 645.2	5 818.0	6 160.6	6 336.6	6 468.4	6 483.7	6 492.5	6 436.5	6 785.8	6 781.0	7 074.9
Goods	4 347.8	4 170.8	4 283.7	4 641.8	4 867.5	5 026.5	5 046.7	5 000.2	4 917.8	5 163.8	5 143.9	5 404.4
Services	1 468.3	1 474.4	1 534.4	1 518.8	1 469.1	1 442.0	1 437.0	1 492.3	1 518.7	1 622.1	1 637.1	1 670.5
Imports of goods and services	7 330.0	7 416.7	7 186.4	7 425.0	7 598.6	7 632.3	7 907.4	8 186.4	8 321.2	8 572.8	8 824.1	9 191.6
Goods	6 084.0	6 194.4	5 975.2	6 142.7	6 367.3	6 383.5	6 659.2	6 915.8	7 040.9	7 279.1	7 447.8	7 755.5
Services	1 245.9	1 222.3	1 211.2	1 282.3	1 231.3	1 248.8	1 248.2	1 270.6	1 280.3	1 293.7	1 376.3	1 436.1
GDP	19 913.1	19 957.4	20 197.0	20 434.5	21 701.4	22 005.9	22 263.4	22 255.5	23 185.0	23 515.7	23 707.1	23 883.2
Chain-linked volume (reference year 2000)												
Private consumption (residents)	15 817.2	16 032.5	15 889.6	15 976.7	16 245.9	16 274.0	16 556.2	16 641.0	16 798.4	16 869.0	17 179.7	17 278.3
Public consumption	4 816.6	4 846.6	4 888.3	4 941.9	5 007.2	5 054.5	5 083.9	5 095.3	5 094.3	5 119.1	5 170.8	5 249.2
GFCF	5 530.3	5 648.9	5 563.1	5 602.1	5 554.2	5 740.4	6 044.0	6 264.7	6 512.6	6 688.3	6 833.7	6 939.1
Exports of goods and services	6 634.8	6 439.9	6 637.0	7 027.8	6 956.5	7 101.3	7 118.0	7 127.7	7 142.5	7 530.2	7 524.7	7 850.9
Goods	4 812.0	4 616.2	4 741.0	5 137.4	5 164.8	5 333.5	5 355.0	5 305.6	5 340.8	5 607.9	5 586.3	5 869.2
Services	1 839.3	1 847.0	1 922.1	1 902.6	1 790.9	1 757.9	1 751.8	1 819.2	1 795.3	1 917.5	1 935.3	1 974.8
Imports of goods and services	8 230.2	8 327.6	8 069.0	8 336.8	8 405.8	8 443.1	8 747.4	9 056.0	9 068.2	9 342.4	9 616.3	10 016.8
Goods	6 833.4	6 957.4	6 711.2	6 899.3	7 024.1	7 042.1	7 346.2	7 629.2	7 669.7	7 929.2	8 113.0	8 448.2
Services	1 395.6	1 369.1	1 356.6	1 436.3	1 379.9	1 399.5	1 398.8	1 424.0	1 396.2	1 410.8	1 500.9	1 566.1
GDP	24 779.7	24 834.8	25 133.0	25 428.6	25 524.3	25 882.4	26 185.3	26 176.0	26 581.8	26 960.9	27 180.3	27 382.2
Deflator (2000=1)												
Private consumption (residents)	0.8625	0.8707	0.8757	0.8826	0.8891	0.8953	0.9008	0.9076	0.9168	0.9194	0.9267	0.9331
Public consumption	0.7634	0.7755	0.7858	0.7939	0.7993	0.8066	0.8165	0.8292	0.8431	0.8550	0.8654	0.8737
GFCF	0.8474	0.8533	0.8604	0.8685	0.8787	0.8781	0.8866	0.8877	0.9064	0.9098	0.9262	0.9186
Exports of goods and services	0.9040	0.9176	0.9134	0.9088	0.9192	0.9019	0.8864	0.8975	0.9088	0.9230	0.9405	0.9505
Goods	0.9317	0.9516	0.9477	0.9393	0.9464	0.9222	0.8999	0.9156	0.9255	0.9401	0.9589	0.9640
Services	0.8233	0.8211	0.8165	0.8205	0.8414	0.8457	0.8506	0.8460	0.8625	0.8751	0.8890	0.9139
Imports of goods and services	0.9043	0.9012	0.9009	0.9094	0.9186	0.9225	0.9124	0.9172	0.9236	0.9328	0.9549	0.9546
Goods	0.9073	0.9037	0.9034	0.9115	0.9240	0.9263	0.9113	0.9112	0.9266	0.9280	0.9563	0.9448
Services	0.8900	0.8891	0.8896	0.9001	0.8923	0.9044	0.9192	0.9510	0.9091	0.9611	0.9489	1.0086
GDP	0.8370	0.8499	0.8550	0.8588	0.8672	0.8664	0.8732	0.8819	0.8958	0.9012	0.9091	0.9159

MAIN EXPENDITURE COMPONENTS

	1998				1999				2000			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	16 419.1	16 720.1	17 028.1	17 470.5	17 799.8	18 024.2	18 339.5	18 656.1	19 177.5	19 309.9	19 714.9	19 898.0
Public consumption	4 703.9	4 810.9	4 914.6	5 018.1	5 120.4	5 237.9	5 373.0	5 526.2	5 696.7	5 848.3	5 981.6	6 097.0
GFCF	6 855.5	6 991.8	7 086.7	7 310.1	7 382.8	7 520.4	7 794.9	7 918.6	8 328.4	8 124.6	8 345.4	8 304.9
Change in inventories	110.3	140.5	184.2	233.4	274.1	295.1	291.5	265.1	225.2	188.2	169.9	174.2
Exports of goods and services	7 570.9	7 794.1	7 866.6	7 611.6	7 721.6	7 828.5	8 046.2	8 276.3	8 806.9	8 746.0	9 198.6	9 635.2
Goods	5 607.7	5 796.2	5 725.4	5 604.7	5 639.0	5 732.7	5 913.8	6 060.2	6 490.6	6 372.4	6 807.9	7 039.0
Services	1 963.2	1 997.9	2 141.2	2 006.9	2 082.6	2 095.8	2 132.4	2 216.2	2 316.3	2 373.6	2 390.7	2 596.3
Imports of goods and services	9 899.1	10 143.7	10 116.4	10 184.1	10 371.6	10 540.1	11 123.8	11 464.5	12 462.6	11 942.6	12 429.0	12 867.1
Goods	8 234.7	8 604.2	8 597.4	8 576.2	8 799.0	8 980.0	9 507.7	9 793.6	10 680.2	10 110.1	10 614.3	10 995.1
Services	1 664.3	1 539.5	1 519.0	1 607.8	1 572.6	1 560.1	1 616.1	1 671.0	1 782.3	1 832.5	1 814.6	1 872.0
GDP	25 760.6	26 313.7	26 963.7	27 459.7	27 927.1	28 366.0	28 721.4	29 177.8	29 772.0	30 274.5	30 981.5	31 242.2
Previous year prices (EUR million)												
Private consumption (residents)	16 173.4	16 403.6	16 597.8	16 926.0	17 596.2	17 677.4	17 885.6	18 055.4	18 834.7	18 751.4	18 941.2	18 985.8
Public consumption	4 603.4	4 681.6	4 746.4	4 797.7	4 996.5	5 040.3	5 084.4	5 128.7	5 431.9	5 479.6	5 527.0	5 574.4
GFCF	6 772.3	6 826.3	6 886.5	7 100.0	7 372.3	7 401.9	7 569.7	7 639.4	8 104.8	7 816.6	7 959.2	7 801.8
Change in inventories	109.8	141.2	187.7	242.6	287.1	313.2	308.5	275.4	215.4	177.4	159.8	165.4
Exports of goods and services	7 453.6	7 571.3	7 761.4	7 564.8	7 778.0	7 840.2	8 010.2	8 135.4	8 607.2	8 328.1	8 651.8	8 963.8
Goods	5 563.2	5 676.1	5 761.0	5 701.2	5 728.5	5 780.3	5 931.9	5 990.1	6 343.5	6 048.3	6 365.5	6 495.9
Services	1 890.3	1 895.2	2 000.4	1 863.6	2 049.4	2 059.9	2 078.4	2 145.3	2 263.8	2 279.8	2 286.3	2 468.0
Imports of goods and services	9 946.2	10 200.0	10 284.6	10 483.6	10 688.1	10 762.3	11 068.2	11 307.6	11 816.5	11 204.7	11 299.7	11 496.9
Goods	8 316.9	8 657.1	8 748.3	8 842.1	9 068.3	9 151.9	9 415.3	9 637.7	10 109.7	9 484.4	9 615.3	9 774.7
Services	1 629.3	1 542.9	1 536.2	1 641.5	1 619.8	1 610.5	1 652.9	1 669.9	1 706.8	1 720.3	1 684.3	1 722.1
GDP	25 166.2	25 424.1	25 895.2	26 147.4	27 342.0	27 510.6	27 790.2	27 926.7	29 377.6	29 348.4	29 939.5	29 994.4
Chain-linked volume (reference year 2000)												
Private consumption (residents)	17 502.2	17 751.3	17 961.5	18 316.6	18 609.2	18 695.0	18 915.3	19 094.9	19 477.4	19 394.3	19 590.5	19 638.0
Public consumption	5 356.3	5 447.4	5 522.7	5 582.4	5 628.9	5 678.2	5 727.9	5 777.9	5 831.6	5 881.3	5 930.7	5 980.0
GFCF	7 398.2	7 457.2	7 522.9	7 756.1	7 865.7	7 897.2	8 076.2	8 150.7	8 470.8	8 169.0	8 314.9	8 148.5
Exports of goods and services	8 004.2	8 130.7	8 334.7	8 123.7	8 219.3	8 285.1	8 464.7	8 597.0	9 065.5	8 770.1	9 112.4	9 438.8
Goods	5 871.1	5 990.2	6 079.8	6 016.8	6 036.9	6 091.5	6 251.2	6 312.6	6 709.4	6 397.2	6 732.7	6 870.6
Services	2 134.2	2 139.7	2 258.4	2 104.0	2 182.7	2 193.8	2 213.5	2 284.7	2 356.1	2 372.9	2 379.7	2 568.2
Imports of goods and services	10 559.5	10 828.8	10 918.6	11 130.0	11 507.8	11 587.7	11 917.0	12 174.7	12 819.1	12 153.4	12 257.5	12 471.2
Goods	8 855.1	9 217.3	9 314.5	9 414.3	9 811.8	9 902.2	10 187.2	10 427.9	10 995.4	10 315.3	10 457.8	10 631.2
Services	1 700.3	1 610.1	1 603.1	1 713.0	1 695.5	1 685.7	1 730.1	1 747.9	1 823.7	1 838.1	1 799.7	1 840.0
GDP	27 790.1	28 074.8	28 595.0	28 873.6	29 097.0	29 276.4	29 574.0	29 719.3	30 253.5	30 248.4	30 859.7	30 908.6
Deflator (2000=1)												
Private consumption (residents)	0.9381	0.9419	0.9480	0.9538	0.9565	0.9641	0.9696	0.9770	0.9846	0.9956	1.0063	1.0132
Public consumption	0.8782	0.8832	0.8899	0.8989	0.9096	0.9225	0.9380	0.9564	0.9769	0.9944	1.0086	1.0196
GFCF	0.9266	0.9376	0.9420	0.9425	0.9386	0.9523	0.9652	0.9715	0.9832	0.9946	1.0037	1.0192
Exports of goods and services	0.9459	0.9586	0.9438	0.9370	0.9395	0.9449	0.9506	0.9627	0.9715	0.9973	1.0095	1.0208
Goods	0.9551	0.9676	0.9417	0.9315	0.9341	0.9411	0.9460	0.9600	0.9674	0.9961	1.0112	1.0245
Services	0.9199	0.9337	0.9481	0.9538	0.9542	0.9553	0.9634	0.9700	0.9831	1.0003	1.0046	1.0109
Imports of goods and services	0.9375	0.9367	0.9265	0.9150	0.9013	0.9096	0.9334	0.9417	0.9722	0.9827	1.0140	1.0317
Goods	0.9299	0.9335	0.9230	0.9110	0.8968	0.9069	0.9333	0.9392	0.9713	0.9801	1.0150	1.0342
Services	0.9789	0.9562	0.9475	0.9386	0.9275	0.9255	0.9341	0.9560	0.9773	0.9970	1.0083	1.0174
GDP	0.9270	0.9373	0.9430	0.9510	0.9598	0.9689	0.9712	0.9818	0.9841	1.0009	1.0039	1.0108

MAIN EXPENDITURE COMPONENTS

	2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	20 179.3	20 438.0	20 499.4	20 682.9	21 090.0	21 257.9	21 535.2	21 501.9	21 705.6	21 774.9	22 039.7	22 301.5
Public consumption	6 195.3	6 300.3	6 411.4	6 528.8	6 653.2	6 756.6	6 837.5	6 896.4	6 936.2	6 991.2	7 060.0	7 141.7
GFCF	8 164.4	8 545.8	8 697.1	8 811.0	8 588.3	8 687.3	8 401.5	8 164.2	8 008.2	7 903.8	7 939.0	7 883.5
Change in inventories	238.0	206.6	314.1	54.5	100.4	74.4	130.0	14.2	-34.9	-20.2	-5.3	41.5
Exports of goods and services	9 430.3	9 428.2	9 108.5	9 393.4	9 216.5	9 596.3	9 552.9	9 513.6	9 757.8	9 509.4	9 730.7	9 791.9
Goods	7 003.4	6 927.3	6 643.1	6 773.2	6 650.1	7 016.2	6 932.0	6 974.9	7 209.0	7 004.5	7 109.7	7 191.2
Services	2 426.9	2 500.9	2 465.4	2 620.1	2 566.4	2 580.1	2 621.0	2 538.7	2 548.7	2 504.9	2 621.0	2 600.7
Imports of goods and services	12 696.9	12 809.4	12 615.4	12 197.2	12 243.7	12 338.9	12 439.9	12 112.3	12 157.7	11 549.5	12 089.4	12 077.3
Goods	10 855.4	10 902.7	10 772.7	10 406.6	10 397.8	10 458.9	10 603.9	10 324.4	10 408.2	9 814.2	10 334.4	10 271.4
Services	1 841.5	1 906.6	1 842.8	1 790.6	1 845.9	1 879.9	1 836.0	1 788.0	1 749.5	1 735.2	1 755.0	1 805.9
GDP	31 510.3	32 109.5	32 415.2	33 273.2	33 404.8	34 033.7	34 017.2	33 978.0	34 215.1	34 609.5	34 674.7	35 082.7
Previous year prices (EUR million)												
Private consumption (residents)	19 681.7	19 819.2	19 782.5	19 853.2	20 748.7	20 743.8	20 805.6	20 586.8	21 207.8	21 203.3	21 349.6	21 443.5
Public consumption	6 029.1	6 078.5	6 128.1	6 178.0	6 489.0	6 524.9	6 544.5	6 547.9	6 784.4	6 782.1	6 796.5	6 827.8
GFCF	8 018.8	8 369.1	8 471.7	8 570.0	8 508.3	8 509.0	8 145.0	7 863.6	7 885.2	7 809.0	7 875.0	7 769.1
Change in inventories	243.8	215.8	333.9	58.7	104.6	79.2	142.3	16.2	-38.8	-22.6	-5.8	44.6
Exports of goods and services	9 354.6	9 234.9	9 087.9	9 370.8	9 317.1	9 575.7	9 503.7	9 504.2	9 819.7	9 629.7	9 931.0	9 963.9
Goods	6 942.2	6 753.4	6 644.8	6 807.3	6 769.0	7 053.1	6 975.7	7 045.7	7 334.9	7 173.4	7 369.6	7 444.9
Services	2 412.4	2 481.5	2 443.1	2 563.5	2 548.2	2 522.6	2 528.0	2 458.5	2 484.8	2 456.4	2 561.4	2 519.0
Imports of goods and services	12 467.1	12 566.8	12 576.9	12 534.1	12 472.9	12 548.3	12 618.6	12 330.4	12 065.9	11 875.2	12 351.8	12 418.9
Goods	10 673.2	10 725.3	10 812.7	10 755.0	10 650.4	10 704.0	10 860.0	10 579.0	10 315.3	10 145.1	10 612.1	10 659.9
Services	1 793.8	1 841.5	1 764.2	1 779.1	1 822.5	1 844.3	1 758.6	1 751.4	1 750.6	1 730.2	1 739.7	1 759.0
GDP	30 861.0	31 150.6	31 227.2	31 496.5	32 694.8	32 884.3	32 522.5	32 188.4	33 592.3	33 526.2	33 594.6	33 630.1
Chain-linked volume (reference year 2000)												
Private consumption (residents)	19 681.7	19 819.2	19 782.5	19 853.2	20 073.3	20 068.5	20 128.3	19 916.6	19 916.6	19 912.5	20 049.9	20 138.0
Public consumption	6 029.1	6 078.5	6 128.1	6 178.0	6 228.2	6 262.7	6 281.6	6 284.8	6 262.9	6 260.7	6 274.1	6 303.0
GFCF	8 018.8	8 369.1	8 471.7	8 570.0	8 312.2	8 312.9	7 957.2	7 682.4	7 517.8	7 445.2	7 508.1	7 407.1
Exports of goods and services	9 354.6	9 234.9	9 087.9	9 370.8	9 239.2	9 495.6	9 424.3	9 424.8	9 743.1	9 554.6	9 853.6	9 886.2
Goods	6 942.2	6 753.4	6 644.8	6 807.3	6 719.6	7 001.7	6 924.9	6 994.3	7 352.8	7 190.8	7 387.6	7 463.1
Services	2 412.4	2 481.5	2 443.1	2 563.5	2 519.4	2 494.2	2 499.5	2 430.8	2 397.4	2 370.0	2 471.4	2 430.5
Imports of goods and services	12 467.1	12 566.8	12 576.9	12 534.1	12 429.7	12 504.9	12 575.0	12 287.8	12 228.6	12 035.4	12 518.4	12 586.4
Goods	10 673.2	10 725.3	10 812.7	10 755.0	10 657.6	10 711.2	10 867.3	10 586.1	10 571.3	10 396.9	10 875.5	10 924.5
Services	1 793.8	1 841.5	1 764.2	1 779.1	1 772.4	1 793.6	1 710.3	1 703.3	1 662.4	1 643.0	1 652.1	1 670.4
GDP	30 861.0	31 150.6	31 227.2	31 496.5	31 538.6	31 721.3	31 372.3	31 050.1	31 173.7	31 112.3	31 175.7	31 208.7
Deflator (2000=1)												
Private consumption (residents)	1.0253	1.0312	1.0362	1.0418	1.0507	1.0593	1.0699	1.0796	1.0898	1.0935	1.0992	1.1074
Public consumption	1.0276	1.0365	1.0462	1.0568	1.0682	1.0789	1.0885	1.0973	1.1075	1.1167	1.1253	1.1331
GFCF	1.0182	1.0211	1.0266	1.0281	1.0332	1.0450	1.0558	1.0627	1.0652	1.0616	1.0574	1.0643
Exports of goods and services	1.0081	1.0209	1.0023	1.0024	0.9975	1.0106	1.0136	1.0094	1.0015	0.9953	0.9875	0.9905
Goods	1.0088	1.0258	0.9998	0.9950	0.9897	1.0021	1.0010	0.9972	0.9804	0.9741	0.9624	0.9636
Services	1.0060	1.0078	1.0091	1.0221	1.0186	1.0345	1.0486	1.0444	1.0631	1.0569	1.0605	1.0700
Imports of goods and services	1.0184	1.0193	1.0031	0.9731	0.9850	0.9867	0.9893	0.9857	0.9942	0.9596	0.9657	0.9596
Goods	1.0171	1.0165	0.9963	0.9676	0.9756	0.9764	0.9758	0.9753	0.9846	0.9440	0.9502	0.9402
Services	1.0265	1.0354	1.0445	1.0065	1.0415	1.0481	1.0735	1.0497	1.0524	1.0561	1.0623	1.0812
GDP	1.0210	1.0308	1.0380	1.0564	1.0592	1.0729	1.0843	1.0943	1.0976	1.1124	1.1122	1.1241

MAIN EXPENDITURE COMPONENTS

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption (residents)	22 648.2	22 950.0	23 244.1	23 480.6	23 766.7	24 150.4	24 171.0	24 618.7	25 000.0	25 313.1	25 534.2	25 752.0
Public consumption	7 235.8	7 353.6	7 495.5	7 661.9	7 853.2	7 986.4	8 060.3	8 074.3	8 028.0	8 011.4	8 024.8	8 068.5
GFCF	7 982.3	8 176.7	8 214.0	8 208.0	8 170.7	8 308.2	8 267.2	8 352.0	8 463.2	8 596.0	8 368.7	8 330.4
Change in inventories	100.0	193.9	202.8	241.2	183.5	87.7	160.4	119.7	288.2	9.4	245.2	180.0
Exports of goods and services	10 078.8	10 378.2	10 183.3	10 312.5	10 202.6	10 543.7	10 805.3	11 015.5	11 487.3	11 917.0	12 288.3	12 511.8
Goods	7 354.3	7 473.8	7 452.9	7 533.0	7 442.1	7 703.0	7 907.5	7 971.6	8 328.5	8 665.3	8 900.3	9 044.8
Services	2 724.5	2 904.4	2 730.3	2 779.5	2 760.5	2 840.7	2 897.8	3 043.9	3 158.8	3 251.7	3 388.0	3 467.0
Imports of goods and services	12 526.4	12 954.5	13 223.3	13 509.2	13 562.8	13 801.6	14 104.4	14 305.2	15 262.0	15 036.9	15 423.0	15 249.2
Goods	10 712.7	11 087.9	11 312.4	11 485.9	11 593.3	11 722.1	12 020.1	12 071.9	12 964.9	12 732.9	13 134.2	12 848.0
Services	1 813.7	1 866.6	1 910.8	2 023.3	1 969.5	2 079.5	2 084.3	2 233.3	2 297.1	2 304.0	2 288.8	2 401.2
GDP	35 518.8	36 097.9	36 116.4	36 394.9	36 613.9	37 274.8	37 359.8	37 874.9	38 004.5	38 810.0	39 038.2	39 593.5
Previous year prices (EUR million)												
Private consumption (residents)	22 313.1	22 442.7	22 597.3	22 695.8	23 418.4	23 652.2	23 402.0	23 649.4	24 506.4	24 610.7	24 667.1	24 740.4
Public consumption	7 114.6	7 173.5	7 241.7	7 318.9	7 635.8	7 687.7	7 702.3	7 679.8	7 934.4	7 889.8	7 863.0	7 854.0
GFCF	7 935.4	7 996.6	7 987.3	7 889.2	8 092.8	8 189.9	8 003.8	7 994.5	8 348.7	8 376.3	8 122.4	8 009.5
Change in inventories	91.9	181.8	192.8	231.2	186.0	87.5	156.2	112.3	263.4	8.7	229.3	179.2
Exports of goods and services	10 087.6	10 225.2	9 996.0	10 031.3	10 158.8	10 495.0	10 548.8	10 620.6	11 223.9	11 477.2	11 684.4	11 867.6
Goods	7 407.9	7 384.5	7 335.6	7 344.2	7 397.7	7 673.9	7 706.6	7 668.5	8 157.8	8 331.3	8 386.8	8 489.4
Services	2 679.7	2 840.7	2 660.3	2 687.1	2 761.1	2 821.2	2 842.2	2 952.1	3 066.1	3 145.9	3 297.6	3 378.3
Imports of goods and services	12 427.2	12 704.7	12 849.3	13 080.4	13 397.7	13 600.4	13 482.6	13 553.6	14 699.0	14 539.4	14 754.8	14 697.3
Goods	10 651.1	10 876.5	10 988.0	11 130.2	11 476.2	11 585.2	11 495.6	11 446.4	12 441.3	12 302.1	12 539.8	12 378.8
Services	1 776.2	1 828.2	1 861.3	1 950.1	1 921.5	2 015.2	1 987.0	2 107.2	2 257.7	2 237.3	2 215.0	2 318.5
GDP	35 115.4	35 315.2	35 165.8	35 086.0	36 094.0	36 511.8	36 330.5	36 503.0	37 577.8	37 823.3	37 811.4	37 953.4
Chain-linked volume (reference year 2000)												
Private consumption (residents)	20 330.1	20 448.2	20 589.1	20 678.8	20 811.6	21 019.4	20 797.0	21 016.9	21 196.4	21 286.6	21 335.4	21 398.8
Public consumption	6 348.7	6 401.3	6 462.1	6 531.0	6 608.1	6 652.9	6 665.6	6 646.1	6 594.0	6 557.0	6 534.7	6 527.2
GFCF	7 471.2	7 528.9	7 520.1	7 427.7	7 438.7	7 528.0	7 356.9	7 348.5	7 484.5	7 509.3	7 281.6	7 180.5
Exports of goods and services	10 152.1	10 290.5	10 059.8	10 095.4	10 070.8	10 404.1	10 457.4	10 528.5	10 932.2	11 178.9	11 380.7	11 559.2
Goods	7 636.5	7 612.4	7 562.0	7 570.8	7 538.6	7 820.0	7 853.3	7 814.5	8 158.4	8 331.9	8 387.4	8 490.0
Services	2 521.7	2 673.2	2 503.4	2 528.6	2 535.1	2 590.2	2 609.6	2 710.4	2 774.5	2 846.8	2 984.0	3 057.0
Imports of goods and services	12 815.3	13 101.5	13 250.5	13 488.8	13 511.3	13 715.8	13 596.9	13 668.5	14 361.2	14 205.3	14 415.8	14 359.6
Goods	11 157.2	11 393.3	11 510.2	11 659.1	11 764.6	11 876.3	11 784.5	11 734.1	12 376.3	12 237.8	12 474.2	12 314.1
Services	1 670.9	1 719.8	1 750.9	1 834.5	1 760.4	1 846.3	1 820.4	1 930.5	1 985.4	1 967.5	1 947.9	2 038.9
GDP	31 590.3	31 770.0	31 635.6	31 563.9	31 694.4	32 061.3	31 902.0	32 053.6	32 182.1	32 392.4	32 382.2	32 503.8
Deflator (2000=1)												
Private consumption (residents)	1.1140	1.1223	1.1290	1.1355	1.1420	1.1490	1.1622	1.1714	1.1794	1.1892	1.1968	1.2034
Public consumption	1.1397	1.1488	1.1599	1.1732	1.1884	1.2004	1.2092	1.2149	1.2175	1.2218	1.2280	1.2361
GFCF	1.0684	1.0860	1.0923	1.1050	1.0984	1.1036	1.1237	1.1366	1.1308	1.1447	1.1493	1.1601
Exports of goods and services	0.9928	1.0085	1.0123	1.0215	1.0131	1.0134	1.0333	1.0463	1.0508	1.0660	1.0797	1.0824
Goods	0.9630	0.9818	0.9856	0.9950	0.9872	0.9850	1.0069	1.0201	1.0208	1.0400	1.0612	1.0653
Services	1.0804	1.0865	1.0906	1.0992	1.0889	1.0967	1.1105	1.1230	1.1385	1.1422	1.1354	1.1341
Imports of goods and services	0.9775	0.9888	0.9979	1.0015	1.0038	1.0063	1.0373	1.0466	1.0627	1.0585	1.0699	1.0619
Goods	0.9602	0.9732	0.9828	0.9851	0.9854	0.9870	1.0200	1.0288	1.0476	1.0405	1.0529	1.0434
Services	1.0855	1.0854	1.0913	1.1029	1.1188	1.1263	1.1449	1.1569	1.1570	1.1710	1.1750	1.1777
GDP	1.1244	1.1362	1.1416	1.1531	1.1552	1.1626	1.1711	1.1816	1.1809	1.1981	1.2055	1.2181

MAIN EXPENDITURE COMPONENTS

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)								
Private consumption (residents)	26 076.3	26 423.6	26 542.4	27 017.5	27 470.5	27 540.3	27 884.5	27 791.1
Public consumption	8 142.3	8 219.9	8 301.4	8 386.7	8 476.0	8 561.3	8 642.3	8 718.7
GFCF	8 567.6	8 713.5	8 981.7	9 309.4	9 034.8	9 286.7	9 136.4	8 621.7
Change in inventories	153.9	81.2	224.3	166.2	255.5	150.0	394.0	144.7
Exports of goods and services	13 140.9	13 296.4	13 387.4	13 605.6	14 108.1	14 019.9	14 073.1	12 485.5
Goods	9 442.2	9 501.6	9 471.6	9 596.1	9 962.6	9 964.0	10 002.9	8 528.9
Services	3 698.7	3 794.8	3 915.8	4 009.5	4 145.5	4 055.9	4 070.2	3 956.6
Imports of goods and services	15 747.6	16 049.4	16 646.0	17 115.9	17 949.4	17 932.4	18 490.7	16 196.0
Goods	13 389.9	13 593.3	14 156.0	14 462.2	15 290.9	15 225.1	15 740.6	13 451.9
Services	2 357.7	2 456.1	2 490.0	2 653.7	2 658.5	2 707.3	2 750.1	2 744.1
GDP	40 333.4	40 685.1	40 791.1	41 369.4	41 395.5	41 625.8	41 639.6	41 565.6
Previous year prices (EUR million)								
Private consumption (residents)	25 658.1	25 794.5	25 805.3	25 997.1	26 948.0	26 872.0	27 081.5	27 002.7
Public consumption	8 013.6	8 026.3	8 041.0	8 057.6	8 306.8	8 318.3	8 321.8	8 317.2
GFCF	8 516.4	8 575.9	8 683.2	8 883.5	8 955.3	8 995.9	8 760.6	8 390.6
Change in inventories	181.5	103.9	306.2	225.5	250.6	141.5	360.7	131.5
Exports of goods and services	12 952.2	12 988.2	12 988.9	13 084.3	13 857.9	13 641.2	13 474.6	12 250.7
Goods	9 293.3	9 290.4	9 180.5	9 263.3	9 851.8	9 752.1	9 586.4	8 384.5
Services	3 658.9	3 697.8	3 808.4	3 820.9	4 006.1	3 889.1	3 888.2	3 866.2
Imports of goods and services	15 845.9	15 971.6	16 340.2	16 548.4	17 266.1	16 917.2	17 122.1	15 971.5
Goods	13 487.6	13 560.9	13 910.3	14 012.7	14 732.3	14 335.6	14 541.4	13 344.3
Services	2 358.3	2 410.7	2 429.9	2 535.7	2 533.8	2 581.7	2 580.6	2 627.2
GDP	39 475.9	39 517.3	39 484.4	39 699.5	41 052.6	41 051.6	40 877.2	40 121.2
Chain-linked volume (reference year 2000)								
Private consumption (residents)	21 521.0	21 635.4	21 644.4	21 805.3	22 005.2	21 943.1	22 114.1	22 049.8
Public consumption	6 537.3	6 547.7	6 559.6	6 573.2	6 589.5	6 598.7	6 601.4	6 597.8
GFCF	7 431.0	7 482.9	7 576.5	7 751.3	7 613.3	7 647.9	7 447.8	7 133.3
Exports of goods and services	12 104.9	12 138.5	12 139.2	12 228.3	12 608.0	12 410.7	12 259.2	11 145.7
Goods	8 875.4	8 872.6	8 767.7	8 846.8	9 165.2	9 072.4	8 918.3	7 800.1
Services	3 216.7	3 250.9	3 348.2	3 359.2	3 423.1	3 323.1	3 322.4	3 303.6
Imports of goods and services	14 902.7	15 020.9	15 367.6	15 563.5	16 027.1	15 703.3	15 893.4	14 825.4
Goods	12 893.1	12 963.2	13 297.3	13 395.1	13 923.4	13 548.5	13 743.1	12 611.6
Services	2 015.3	2 060.1	2 076.5	2 166.9	2 116.8	2 156.8	2 155.9	2 194.9
GDP	32 876.8	32 911.3	32 883.9	33 063.0	33 141.9	33 141.1	33 000.3	32 390.0
Deflator (2000=1)								
Private consumption (residents)	1.2117	1.2213	1.2263	1.2390	1.2484	1.2551	1.2609	1.2604
Public consumption	1.2455	1.2554	1.2655	1.2759	1.2863	1.2974	1.3092	1.3215
GFCF	1.1530	1.1644	1.1855	1.2010	1.1867	1.2143	1.2267	1.2087
Exports of goods and services	1.0856	1.0954	1.1028	1.1126	1.1190	1.1297	1.1480	1.1202
Goods	1.0639	1.0709	1.0803	1.0847	1.0870	1.0983	1.1216	1.0934
Services	1.1498	1.1673	1.1695	1.1936	1.2110	1.2205	1.2251	1.1977
Imports of goods and services	1.0567	1.0685	1.0832	1.0998	1.1199	1.1420	1.1634	1.0924
Goods	1.0385	1.0486	1.0646	1.0797	1.0982	1.1237	1.1453	1.0666
Services	1.1699	1.1922	1.1992	1.2247	1.2559	1.2552	1.2756	1.2503
GDP	1.2268	1.2362	1.2405	1.2512	1.2490	1.2560	1.2618	1.2833

PRIVATE CONSUMPTION (RESIDENTS)

	1977				1978				1979			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	578.2	615.9	651.6	676.0	708.2	736.2	781.2	831.5	859.1	907.2	972.4	1 065.0
Durables	67.2	74.7	75.3	75.0	80.2	82.6	88.7	89.3	97.6	99.7	111.6	127.7
Non-durables	511.0	541.2	576.3	601.0	628.0	653.7	692.5	742.1	761.5	807.4	860.8	937.3
Previous year prices (EUR million)												
Private consumption					654.9	654.0	662.3	670.4	785.7	795.1	808.4	824.1
Durables					74.3	74.0	76.9	75.4	92.9	90.3	94.6	99.5
Non-durables					580.6	580.0	585.4	595.0	692.8	704.8	713.8	724.6
Chain-linked volume (reference year 2000)												
Private consumption					7 718.5	7 706.9	7 805.1	7 900.8	8 001.2	8 096.6	8 232.0	8 392.3
Durables					770.3	766.8	797.3	781.8	849.7	825.6	865.0	910.0
Non-durables					6 981.5	6 973.8	7 038.6	7 154.2	7 179.2	7 303.6	7 396.7	7 508.9
Deflator (2000=1)												
Private consumption					0.0918	0.0955	0.1001	0.1052	0.1074	0.1120	0.1181	0.1269
Durables					0.1041	0.1077	0.1112	0.1143	0.1149	0.1208	0.1290	0.1403
Non-durables					0.0900	0.0937	0.0984	0.1037	0.1061	0.1106	0.1164	0.1248

GROSS FIXED CAPITAL FORMATION

	1977				1978				1979			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	262.7	296.8	304.2	313.3	301.0	323.3	343.8	378.2	428.4	482.6	525.4	532.0
Machinery and equipment	51.3	68.2	73.7	80.4	78.2	85.9	88.5	85.1	88.8	99.6	112.8	118.2
Transport material	36.8	40.7	41.4	43.6	42.5	45.1	43.0	46.0	44.7	49.0	49.0	53.1
Construction	142.6	148.0	148.3	146.1	140.2	148.8	169.6	204.4	251.9	285.5	311.3	305.8
Others	32.1	40.0	40.8	43.2	40.1	43.5	42.7	42.7	42.9	48.5	52.3	54.9
Previous year prices (EUR million)												
Gross fixed capital formation					273.6	279.1	279.6	287.8	370.2	394.3	407.3	387.9
Machinery and equipment					70.9	75.0	73.6	67.4	79.2	85.7	91.6	88.7
Transport material					35.9	35.3	30.8	30.2	36.2	37.6	35.7	36.7
Construction					131.7	132.6	142.2	159.6	218.8	231.7	239.5	222.8
Others					35.1	36.1	32.9	30.6	36.0	39.2	40.4	39.6
Chain-linked volume (reference year 2000)												
Gross fixed capital formation					2 964.5	3 023.7	3 029.4	3 118.7	3 337.0	3 554.5	3 671.3	3 496.6
Machinery and equipment					485.5	514.0	504.4	461.8	461.0	499.1	533.4	516.4
Transport material					294.6	289.6	252.9	247.6	222.5	231.0	219.4	225.5
Construction					1 879.7	1 891.7	2 029.6	2 277.4	2 666.5	2 824.0	2 918.5	2 715.7
Others					441.7	455.2	414.3	385.6	360.9	393.8	405.7	397.6
Deflator (2000=1)												
Gross fixed capital formation					0.1016	0.1069	0.1135	0.1213	0.1284	0.1358	0.1431	0.1521
Machinery and equipment					0.1611	0.1671	0.1754	0.1842	0.1927	0.1995	0.2114	0.2288
Transport material					0.1444	0.1558	0.1702	0.1859	0.2011	0.2121	0.2234	0.2354
Construction					0.0746	0.0786	0.0836	0.0898	0.0945	0.1011	0.1067	0.1126
Others					0.0909	0.0956	0.1031	0.1108	0.1189	0.1233	0.1288	0.1381

PRIVATE CONSUMPTION (RESIDENTS)

	1980				1981				1982			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	1 144.6	1 228.7	1 293.1	1 351.3	1 430.3	1 503.2	1 596.5	1 681.4	1 756.0	1 845.9	1 912.7	1 984.5
Durables	147.4	159.3	177.9	182.1	191.0	197.8	200.4	211.6	207.8	226.8	223.5	230.3
Non-durables	997.2	1 069.4	1 115.3	1 169.2	1 239.4	1 305.4	1 396.1	1 469.8	1 548.2	1 619.1	1 689.2	1 754.2
Previous year prices (EUR million)												
Private consumption	1 008.0	1 032.2	1 048.6	1 056.2	1 277.9	1 288.2	1 294.1	1 301.4	1 582.3	1 597.2	1 600.2	1 597.7
Durables	121.9	124.9	131.3	129.3	168.0	166.8	160.5	162.4	191.5	200.8	191.3	190.9
Non-durables	886.1	907.4	917.3	927.0	1 109.8	1 121.4	1 133.6	1 139.0	1 390.8	1 396.4	1 408.8	1 406.8
Chain-linked volume (reference year 2000)												
Private consumption	8 671.7	8 880.1	9 020.8	9 086.4	9 081.3	9 154.8	9 196.7	9 248.6	9 344.0	9 432.2	9 449.6	9 435.2
Durables	963.2	986.8	1 037.4	1 021.4	1 010.5	1 002.8	964.9	976.6	945.6	991.6	945.0	943.0
Non-durables	7 734.4	7 919.7	8 006.5	8 090.8	8 098.8	8 183.6	8 272.6	8 311.7	8 448.3	8 482.5	8 557.6	8 545.2
Deflator (2000=1)												
Private consumption	0.1320	0.1384	0.1434	0.1487	0.1575	0.1642	0.1736	0.1818	0.1879	0.1957	0.2024	0.2103
Durables	0.1530	0.1614	0.1715	0.1783	0.1890	0.1972	0.2077	0.2167	0.2197	0.2288	0.2365	0.2442
Non-durables	0.1289	0.1350	0.1393	0.1445	0.1530	0.1595	0.1688	0.1768	0.1833	0.1909	0.1974	0.2053

GROSS FIXED CAPITAL FORMATION

	1980				1981				1982			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	530.2	538.4	559.0	610.4	701.7	759.5	813.8	830.4	873.2	903.6	926.9	945.6
Machinery and equipment	133.5	144.0	154.1	166.2	183.5	191.2	212.2	211.3	224.3	236.5	240.5	237.5
Transport material	53.8	58.1	64.1	69.9	87.8	92.8	98.0	98.5	94.1	95.5	95.3	96.2
Construction	283.7	272.1	272.6	300.8	343.5	383.7	404.3	422.1	457.4	466.0	485.3	505.3
Others	59.1	64.2	68.1	73.5	86.8	91.8	99.2	98.5	97.4	105.6	105.8	106.6
Previous year prices (EUR million)												
Gross fixed capital formation	462.0	437.7	445.3	464.2	617.7	635.2	666.4	674.7	798.0	785.7	777.1	764.0
Machinery and equipment	114.5	113.9	122.0	128.5	168.4	168.1	184.9	185.5	203.0	200.3	197.7	191.7
Transport material	48.2	48.9	53.0	54.8	76.4	76.4	79.9	82.4	91.0	90.0	88.6	87.8
Construction	246.0	222.0	213.0	221.9	297.3	316.4	320.8	325.2	412.5	403.6	400.3	396.2
Others	53.4	53.0	57.3	59.0	75.6	74.3	80.8	81.7	91.6	91.8	90.5	88.2
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	3 300.4	3 126.9	3 180.8	3 315.8	3 566.9	3 668.4	3 848.3	3 896.4	3 849.6	3 790.3	3 748.8	3 685.3
Machinery and equipment	548.6	545.7	584.5	615.8	646.3	645.3	709.7	712.1	689.8	680.9	671.9	651.7
Transport material	221.1	224.4	243.3	251.5	292.1	292.0	305.5	314.8	290.6	287.6	283.1	280.5
Construction	2 370.4	2 138.9	2 052.4	2 138.6	2 290.3	2 437.7	2 471.4	2 505.2	2 576.6	2 521.0	2 500.3	2 475.0
Others	418.9	415.9	449.6	462.5	498.5	490.0	532.7	538.6	501.3	502.3	495.5	482.7
Deflator (2000=1)												
Gross fixed capital formation	0.1606	0.1722	0.1757	0.1841	0.1967	0.2070	0.2115	0.2131	0.2268	0.2384	0.2473	0.2566
Machinery and equipment	0.2433	0.2639	0.2636	0.2699	0.2840	0.2963	0.2991	0.2968	0.3252	0.3473	0.3580	0.3645
Transport material	0.2434	0.2592	0.2636	0.2778	0.3007	0.3178	0.3207	0.3128	0.3237	0.3322	0.3366	0.3428
Construction	0.1197	0.1272	0.1328	0.1406	0.1500	0.1574	0.1636	0.1685	0.1775	0.1849	0.1941	0.2042
Others	0.1412	0.1543	0.1515	0.1590	0.1742	0.1873	0.1863	0.1828	0.1943	0.2103	0.2135	0.2208

PRIVATE CONSUMPTION (RESIDENTS)

	1983				1984				1985			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	2 132.6	2 246.5	2 411.8	2 589.5	2 698.2	2 860.9	3 051.3	3 116.7	3 260.2	3 377.8	3 465.5	3 628.4
Durables	261.2	267.3	280.1	289.7	285.1	302.4	332.6	336.2	354.7	363.7	376.6	395.8
Non-durables	1 871.4	1 979.2	2 131.7	2 299.8	2 413.1	2 558.6	2 718.7	2 780.5	2 905.5	3 014.2	3 088.9	3 232.6
Previous year prices (EUR million)												
Private consumption	1 875.4	1 866.8	1 860.2	1 844.3	2 314.4	2 309.0	2 317.1	2 313.9	2 913.5	2 924.5	2 934.7	2 978.5
Durables	227.7	221.8	217.1	209.6	254.2	256.5	266.7	263.4	312.3	309.1	311.4	318.0
Non-durables	1 647.7	1 645.1	1 643.1	1 634.8	2 060.2	2 052.5	2 050.5	2 050.5	2 601.2	2 615.4	2 623.3	2 660.5
Chain-linked volume (reference year 2000)												
Private consumption	9 418.3	9 375.3	9 341.9	9 262.4	9 227.1	9 205.5	9 238.1	9 225.2	9 166.5	9 201.2	9 233.2	9 370.9
Durables	980.5	954.9	934.7	902.3	873.2	881.1	916.1	904.9	888.8	879.7	886.2	905.0
Non-durables	8 482.6	8 469.2	8 459.0	8 416.3	8 414.5	8 383.0	8 374.8	8 374.8	8 333.9	8 379.5	8 404.8	8 523.8
Deflator (2000=1)												
Private consumption	0.2264	0.2396	0.2582	0.2796	0.2924	0.3108	0.3303	0.3378	0.3557	0.3671	0.3753	0.3872
Durables	0.2664	0.2799	0.2997	0.3210	0.3265	0.3432	0.3630	0.3715	0.3991	0.4134	0.4249	0.4374
Non-durables	0.2206	0.2337	0.2520	0.2733	0.2868	0.3052	0.3246	0.3320	0.3486	0.3597	0.3675	0.3792

GROSS FIXED CAPITAL FORMATION

	1983				1984				1985			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	1 027.9	1 090.2	1 177.9	1 164.5	1 098.6	1 190.7	1 238.4	1 327.6	1 337.2	1 361.3	1 416.5	1 494.4
Machinery and equipment	252.4	264.5	299.9	286.0	260.3	304.5	314.2	348.4	336.3	330.8	343.9	386.1
Transport material	111.2	113.6	119.8	118.3	99.1	97.4	98.9	105.3	106.7	104.6	114.7	123.2
Construction	544.6	587.9	615.2	634.2	633.1	675.7	709.9	745.0	765.8	796.3	818.5	823.7
Others	119.7	124.2	143.0	126.0	106.1	113.1	115.3	128.8	128.4	129.6	139.3	161.4
Previous year prices (EUR million)												
Gross fixed capital formation	916.5	921.7	912.5	833.3	974.5	1 004.8	988.9	996.9	1 200.1	1 187.7	1 206.2	1 224.2
Machinery and equipment	231.0	232.4	234.9	196.8	224.8	251.7	243.9	250.4	305.0	300.9	305.1	323.5
Transport material	103.0	100.7	96.1	85.3	87.7	83.6	80.8	80.6	98.2	96.6	103.6	105.6
Construction	475.4	483.9	475.8	470.1	570.7	575.9	573.9	574.4	679.3	672.7	675.2	664.8
Others	107.1	104.8	105.8	81.1	91.2	93.6	90.3	91.5	117.6	117.6	122.3	130.3
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	3 785.6	3 807.2	3 769.4	3 442.0	3 234.3	3 334.8	3 282.1	3 308.7	3 252.8	3 219.2	3 269.2	3 318.2
Machinery and equipment	663.0	666.9	674.1	564.8	523.6	586.3	568.1	583.4	561.9	554.4	562.1	595.9
Transport material	308.7	301.6	288.0	255.7	218.8	208.5	201.4	200.9	203.3	199.9	214.4	218.6
Construction	2 501.7	2 546.6	2 503.9	2 473.9	2 402.3	2 423.9	2 415.7	2 417.7	2 374.3	2 351.2	2 360.0	2 323.8
Others	510.7	499.8	504.7	386.8	338.3	347.0	334.9	339.3	345.0	344.8	358.8	382.3
Deflator (2000=1)												
Gross fixed capital formation	0.2715	0.2864	0.3125	0.3383	0.3397	0.3571	0.3773	0.4012	0.4111	0.4229	0.4333	0.4504
Machinery and equipment	0.3807	0.3966	0.4450	0.5064	0.4971	0.5193	0.5531	0.5972	0.5985	0.5967	0.6119	0.6479
Transport material	0.3602	0.3766	0.4159	0.4627	0.4529	0.4672	0.4913	0.5243	0.5250	0.5235	0.5352	0.5634
Construction	0.2177	0.2309	0.2457	0.2564	0.2635	0.2787	0.2939	0.3082	0.3225	0.3387	0.3468	0.3545
Others	0.2344	0.2485	0.2833	0.3257	0.3137	0.3260	0.3444	0.3798	0.3723	0.3757	0.3882	0.4223

PRIVATE CONSUMPTION (RESIDENTS)

	1986				1987				1988			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	3 830.1	4 078.0	4 214.0	4 418.6	4 533.0	4 776.8	4 902.4	5 104.3	5 482.6	5 765.8	6 061.9	6 417.0
Durables	378.7	431.4	460.2	494.1	548.8	609.0	604.4	637.4	750.9	850.0	893.1	988.3
Non-durables	3 451.4	3 646.6	3 753.8	3 924.5	3 984.2	4 167.8	4 298.0	4 466.9	4 731.7	4 915.7	5 168.8	5 428.7
Previous year prices (EUR million)												
Private consumption	3 533.2	3 652.4	3 697.0	3 798.7	4 312.9	4 448.3	4 466.9	4 538.0	5 146.9	5 254.7	5 326.0	5 462.0
Durables	351.0	384.0	396.9	422.4	506.4	544.2	524.9	552.1	688.0	754.8	766.0	825.2
Non-durables	3 182.2	3 268.4	3 300.1	3 376.3	3 806.6	3 904.1	3 942.0	3 985.8	4 458.9	4 499.9	4 560.0	4 636.9
Chain-linked volume (reference year 2000)												
Private consumption	9 512.7	9 833.7	9 953.9	10 227.5	10 306.8	10 630.3	10 674.7	10 844.5	11 312.6	11 549.5	11 706.1	12 005.1
Durables	838.1	916.9	947.8	1 008.5	1 065.2	1 144.8	1 104.2	1 161.4	1 283.3	1 407.7	1 428.6	1 539.0
Non-durables	8 745.5	8 982.4	9 069.6	9 279.0	9 293.7	9 531.9	9 624.4	9 731.5	10 063.8	10 156.3	10 291.9	10 465.4
Deflator (2000=1)												
Private consumption	0.4026	0.4147	0.4234	0.4320	0.4398	0.4494	0.4593	0.4707	0.4846	0.4992	0.5178	0.5345
Durables	0.4518	0.4705	0.4856	0.4899	0.5153	0.5320	0.5474	0.5488	0.5852	0.6038	0.6251	0.6422
Non-durables	0.3946	0.4060	0.4139	0.4229	0.4287	0.4372	0.4466	0.4590	0.4702	0.4840	0.5022	0.5187

GROSS FIXED CAPITAL FORMATION

	1986				1987				1988			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	1 468.1	1 596.1	1 667.1	1 820.4	1 932.3	2 098.9	2 190.7	2 378.8	2 528.0	2 705.8	2 861.9	2 976.0
Machinery and equipment	370.8	436.9	455.8	518.3	536.4	598.2	641.8	700.7	751.0	799.1	851.2	856.8
Transport material	135.1	153.2	179.7	198.3	230.8	254.9	234.3	274.4	283.6	303.2	313.5	340.9
Construction	806.8	817.8	831.7	873.7	925.9	976.7	1 035.1	1 093.6	1 147.0	1 237.1	1 300.7	1 371.0
Others	155.4	188.1	200.0	230.1	239.1	269.1	279.5	310.2	346.5	366.5	396.5	407.4
Previous year prices (EUR million)												
Gross fixed capital formation	1 394.0	1 439.4	1 491.4	1 553.7	1 837.6	1 943.2	2 019.3	2 106.5	2 383.1	2 492.4	2 524.1	2 601.5
Machinery and equipment	354.8	394.5	412.6	445.8	518.3	570.2	619.2	634.3	709.4	736.5	741.5	752.5
Transport material	129.6	138.5	160.5	165.9	213.9	229.2	210.1	232.4	267.1	282.3	282.5	309.8
Construction	767.7	749.0	751.1	765.4	876.4	894.6	926.7	967.3	1 086.4	1 139.1	1 160.3	1 182.0
Others	142.0	157.4	167.2	176.6	229.1	249.3	263.3	272.5	320.1	334.5	339.7	357.1
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	3 245.3	3 351.2	3 472.1	3 617.1	3 838.6	4 059.1	4 218.1	4 400.2	4 576.3	4 786.3	4 847.1	4 995.8
Machinery and equipment	577.5	642.1	671.6	725.6	761.2	837.4	909.4	931.5	985.0	1 022.7	1 029.6	1 044.9
Transport material	241.2	257.8	298.7	308.9	355.2	380.6	348.9	386.0	395.1	417.5	417.7	458.2
Construction	2 254.3	2 199.5	2 205.7	2 247.5	2 344.1	2 392.7	2 478.6	2 587.3	2 641.7	2 769.9	2 821.6	2 874.2
Others	363.6	403.1	428.1	452.2	487.7	530.8	560.7	580.2	629.7	658.0	668.3	702.5
Deflator (2000=1)												
Gross fixed capital formation	0.4524	0.4763	0.4802	0.5033	0.5034	0.5171	0.5193	0.5406	0.5524	0.5653	0.5904	0.5957
Machinery and equipment	0.6421	0.6804	0.6786	0.7143	0.7048	0.7144	0.7057	0.7522	0.7624	0.7813	0.8267	0.8199
Transport material	0.5602	0.5944	0.6017	0.6420	0.6497	0.6699	0.6715	0.7109	0.7178	0.7262	0.7504	0.7438
Construction	0.3579	0.3718	0.3771	0.3888	0.3950	0.4082	0.4176	0.4227	0.4342	0.4466	0.4610	0.4770
Others	0.4273	0.4667	0.4670	0.5088	0.4903	0.5068	0.4985	0.5346	0.5502	0.5569	0.5933	0.5800

PRIVATE CONSUMPTION (RESIDENTS)

	1989				1990				1991			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	6 531.9	6 717.9	6 999.6	7 205.4	7 597.6	8 003.3	8 413.0	8 809.9	9 274.6	9 731.0	10 136.3	10 439.1
Durables	982.7	907.4	938.8	965.2	1 025.6	1 082.3	1 149.7	1 180.1	1 250.4	1 310.6	1 389.6	1 398.9
Non-durables	5 549.2	5 810.6	6 060.8	6 240.2	6 572.1	6 921.0	7 263.3	7 629.8	8 024.2	8 420.5	8 746.7	9 040.3
Previous year prices (EUR million)												
Private consumption	6 065.3	6 114.2	6 212.6	6 303.8	7 181.4	7 355.7	7 537.8	7 680.8	8 691.5	8 918.4	9 112.3	9 217.3
Durables	940.3	866.2	879.1	887.8	997.3	1 027.7	1 074.4	1 083.8	1 197.7	1 241.2	1 307.0	1 301.1
Non-durables	5 125.0	5 248.1	5 333.4	5 416.0	6 184.1	6 328.1	6 463.4	6 596.9	7 493.8	7 677.3	7 805.3	7 916.2
Chain-linked volume (reference year 2000)												
Private consumption	11 905.3	12 001.4	12 194.4	12 373.5	12 679.6	12 987.4	13 308.8	13 561.3	13 911.4	14 274.6	14 584.9	14 752.9
Durables	1 527.9	1 407.5	1 428.5	1 442.6	1 526.3	1 572.8	1 644.3	1 658.7	1 728.0	1 790.6	1 885.6	1 877.1
Non-durables	10 373.5	10 622.5	10 795.3	10 962.4	11 174.4	11 434.4	11 678.9	11 920.3	12 198.6	12 497.3	12 705.7	12 886.2
Deflator (2000=1)												
Private consumption	0.5487	0.5598	0.5740	0.5823	0.5992	0.6162	0.6321	0.6496	0.6667	0.6817	0.6950	0.7076
Durables	0.6432	0.6447	0.6572	0.6691	0.6719	0.6881	0.6992	0.7114	0.7236	0.7319	0.7369	0.7452
Non-durables	0.5349	0.5470	0.5614	0.5692	0.5881	0.6053	0.6219	0.6401	0.6578	0.6738	0.6884	0.7015

GROSS FIXED CAPITAL FORMATION

	1989				1990				1991			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	3 013.5	3 102.6	3 212.3	3 351.9	3 450.2	3 581.1	3 700.6	3 800.3	3 848.1	3 928.9	4 110.4	4 241.9
Machinery and equipment	843.2	886.0	917.7	972.6	1 024.4	1 037.1	1 108.3	1 129.2	1 164.4	1 161.1	1 172.7	1 177.3
Transport material	319.9	306.4	331.7	362.5	347.8	370.4	348.9	382.3	351.6	384.4	397.2	404.8
Construction	1 456.3	1 500.1	1 535.5	1 557.7	1 610.2	1 696.5	1 742.7	1 768.7	1 804.8	1 849.8	1 985.6	2 102.2
Others	394.2	410.0	427.4	459.1	467.8	477.0	500.7	520.1	527.3	533.6	554.8	557.5
Previous year prices (EUR million)												
Gross fixed capital formation	2 806.4	2 843.0	2 833.4	2 911.3	3 260.0	3 342.1	3 383.8	3 455.2	3 680.8	3 707.7	3 801.3	3 881.4
Machinery and equipment	791.5	826.7	842.0	900.5	1 011.6	1 037.4	1 097.1	1 145.0	1 126.6	1 131.5	1 139.7	1 142.8
Transport material	300.5	294.5	291.7	311.4	339.3	358.7	333.0	361.8	364.5	392.9	390.7	398.0
Construction	1 345.9	1 339.0	1 321.0	1 296.5	1 467.6	1 496.9	1 489.9	1 458.3	1 663.5	1 645.8	1 723.0	1 789.2
Others	368.4	382.7	378.6	402.9	441.5	449.1	463.8	490.1	526.2	537.5	547.9	551.5
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	4 868.0	4 931.5	4 914.9	5 050.1	5 081.4	5 209.2	5 274.3	5 385.6	5 306.5	5 345.2	5 480.1	5 595.7
Machinery and equipment	991.8	1 035.9	1 055.0	1 128.3	1 176.9	1 206.9	1 276.4	1 332.1	1 308.3	1 314.0	1 323.4	1 327.1
Transport material	408.9	400.7	396.9	423.7	418.9	442.8	411.1	446.7	432.4	466.1	463.5	472.1
Construction	2 957.0	2 941.9	2 902.2	2 848.4	2 826.1	2 882.4	2 869.0	2 808.1	2 777.9	2 748.3	2 877.3	2 987.8
Others	645.6	670.7	663.6	706.1	701.5	713.6	737.0	778.7	784.6	801.4	816.9	822.3
Deflator (2000=1)												
Gross fixed capital formation	0.6190	0.6291	0.6536	0.6637	0.6790	0.6875	0.7016	0.7056	0.7252	0.7350	0.7500	0.7581
Machinery and equipment	0.8502	0.8553	0.8698	0.8621	0.8704	0.8593	0.8683	0.8477	0.8900	0.8836	0.8861	0.8871
Transport material	0.7823	0.7647	0.8358	0.8554	0.8303	0.8366	0.8487	0.8560	0.8131	0.8248	0.8570	0.8576
Construction	0.4925	0.5099	0.5291	0.5469	0.5698	0.5886	0.6074	0.6298	0.6497	0.6731	0.6901	0.7036
Others	0.6105	0.6112	0.6440	0.6501	0.6669	0.6685	0.6794	0.6679	0.6721	0.6659	0.6792	0.6780

PRIVATE CONSUMPTION (RESIDENTS)

	1992				1993				1994			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	10 716.2	11 173.7	11 378.8	11 632.8	11 818.9	11 923.2	12 222.1	12 473.2	12 616.9	12 924.3	13 107.6	13 381.3
Durables	1 493.6	1 591.3	1 543.4	1 642.6	1 564.9	1 519.2	1 540.4	1 527.8	1 573.7	1 619.0	1 584.3	1 688.8
Non-durables	9 222.6	9 582.4	9 835.4	9 990.2	10 254.0	10 404.0	10 681.7	10 945.5	11 043.2	11 305.4	11 523.2	11 692.5
Previous year prices (EUR million)												
Private consumption	10 254.2	10 422.7	10 478.5	10 616.4	11 466.7	11 435.9	11 514.5	11 523.6	12 070.3	12 196.9	12 212.4	12 304.7
Durables	1 466.2	1 534.3	1 467.9	1 537.2	1 504.6	1 437.6	1 429.4	1 395.9	1 504.8	1 533.5	1 481.9	1 554.6
Non-durables	8 788.0	8 888.4	9 010.6	9 079.2	9 962.1	9 998.3	10 085.2	10 127.6	10 565.5	10 663.4	10 730.5	10 750.1
Chain-linked volume (reference year 2000)												
Private consumption	14 902.5	15 147.5	15 228.6	15 428.9	15 503.1	15 461.5	15 567.8	15 580.0	15 478.0	15 640.3	15 660.2	15 778.7
Durables	1 995.7	2 088.4	1 998.0	2 092.3	1 961.3	1 874.0	1 863.2	1 819.7	1 838.9	1 874.0	1 810.9	1 899.8
Non-durables	12 909.9	13 057.4	13 236.9	13 337.8	13 549.6	13 598.8	13 717.0	13 774.7	13 652.5	13 779.0	13 865.7	13 891.0
Deflator (2000=1)												
Private consumption	0.7191	0.7377	0.7472	0.7540	0.7624	0.7712	0.7851	0.8006	0.8151	0.8263	0.8370	0.8481
Durables	0.7484	0.7620	0.7725	0.7851	0.7979	0.8107	0.8267	0.8396	0.8558	0.8639	0.8749	0.8889
Non-durables	0.7144	0.7339	0.7430	0.7490	0.7568	0.7651	0.7787	0.7946	0.8089	0.8205	0.8311	0.8417

GROSS FIXED CAPITAL FORMATION

	1992				1993				1994			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	4 487.1	4 570.3	4 616.1	4 536.1	4 326.3	4 410.8	4 179.9	4 200.8	4 294.5	4 395.2	4 371.2	4 832.4
Machinery and equipment	1 163.6	1 157.8	1 174.2	1 150.0	1 095.1	1 181.5	1 103.0	1 111.1	1 094.3	1 048.7	1 006.7	1 060.5
Transport material	449.4	457.0	447.4	413.4	388.9	395.8	353.8	366.6	386.1	435.2	389.3	578.5
Construction	2 284.8	2 367.5	2 395.5	2 407.5	2 322.6	2 275.3	2 203.1	2 186.5	2 232.9	2 320.3	2 407.7	2 534.1
Others	589.4	588.1	599.0	565.3	519.7	558.1	520.0	536.6	581.2	591.0	567.5	659.3
Previous year prices (EUR million)												
Gross fixed capital formation	4 369.4	4 429.2	4 426.0	4 294.5	4 261.3	4 267.2	4 009.8	3 935.9	4 172.2	4 256.0	4 238.2	4 619.5
Machinery and equipment	1 184.3	1 205.1	1 235.5	1 206.6	1 129.2	1 181.6	1 111.4	1 079.9	1 043.9	1 003.1	982.7	1 012.3
Transport material	440.0	437.7	424.0	387.5	391.9	402.1	353.2	347.9	390.0	436.2	388.7	567.8
Construction	2 174.1	2 210.6	2 193.2	2 165.1	2 222.9	2 143.1	2 039.9	2 008.3	2 167.6	2 233.6	2 295.5	2 381.6
Others	571.0	575.7	573.3	535.3	517.3	540.3	505.2	499.8	570.6	583.1	571.4	657.9
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	5 885.9	5 966.5	5 962.3	5 785.1	5 522.7	5 530.3	5 196.7	5 100.9	5 203.9	5 308.5	5 286.3	5 761.9
Machinery and equipment	1 335.6	1 359.1	1 393.4	1 360.7	1 324.4	1 385.9	1 303.6	1 266.6	1 227.5	1 179.6	1 155.5	1 190.4
Transport material	524.7	521.9	505.7	462.1	446.7	458.4	402.7	396.6	441.6	494.0	440.1	642.9
Construction	3 198.7	3 252.5	3 226.8	3 185.5	3 024.2	2 915.7	2 775.2	2 732.2	2 760.9	2 844.9	2 923.7	3 033.4
Others	847.3	854.4	850.8	794.3	739.3	772.3	722.0	714.3	788.1	805.3	789.2	908.6
Deflator (2000=1)												
Gross fixed capital formation	0.7623	0.7660	0.7742	0.7841	0.7834	0.7976	0.8043	0.8235	0.8253	0.8280	0.8269	0.8387
Machinery and equipment	0.8712	0.8519	0.8427	0.8452	0.8268	0.8525	0.8461	0.8772	0.8915	0.8890	0.8712	0.8909
Transport material	0.8565	0.8755	0.8848	0.8945	0.8705	0.8636	0.8787	0.9243	0.8742	0.8809	0.8846	0.8998
Construction	0.7143	0.7279	0.7424	0.7557	0.7680	0.7804	0.7939	0.8003	0.8088	0.8156	0.8235	0.8354
Others	0.6956	0.6883	0.7041	0.7116	0.7029	0.7227	0.7202	0.7513	0.7375	0.7340	0.7191	0.7256

PRIVATE CONSUMPTION (RESIDENTS)

	1995				1996				1997			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	13 641.8	13 958.8	13 915.0	14 100.4	14 445.0	14 569.9	14 914.6	15 103.6	15 401.4	15 509.1	15 920.9	16 121.7
Durables	1 617.5	1 740.9	1 701.5	1 641.5	1 782.5	1 768.7	1 872.6	1 877.0	1 934.1	1 954.6	2 049.4	2 052.6
Non-durables	12 024.4	12 217.9	12 213.5	12 458.9	12 662.5	12 801.2	13 042.0	13 226.6	13 467.3	13 554.4	13 871.5	14 069.1
Previous year prices (EUR million)												
Private consumption	13 155.5	13 334.6	13 215.7	13 288.1	14 180.7	14 205.2	14 451.5	14 525.5	15 089.9	15 153.3	15 432.3	15 520.9
Durables	1 569.3	1 662.8	1 613.5	1 544.3	1 758.3	1 734.4	1 830.1	1 819.9	1 904.0	1 917.8	2 007.3	2 000.9
Non-durables	11 586.2	11 671.7	11 602.1	11 743.9	12 422.3	12 470.7	12 621.4	12 705.5	13 185.9	13 235.5	13 425.1	13 520.1
Chain-linked volume (reference year 2000)												
Private consumption	15 817.2	16 032.5	15 889.6	15 976.7	16 245.9	16 274.0	16 556.2	16 641.0	16 798.4	16 869.0	17 179.7	17 278.3
Durables	1 801.8	1 909.1	1 852.5	1 773.0	1 925.0	1 898.8	2 003.6	1 992.4	2 039.3	2 054.1	2 150.0	2 143.1
Non-durables	14 033.4	14 137.0	14 052.7	14 224.4	14 335.3	14 391.2	14 565.0	14 662.1	14 771.7	14 827.2	15 039.6	15 146.0
Deflator (2000=1)												
Private consumption	0.8625	0.8707	0.8757	0.8826	0.8891	0.8953	0.9008	0.9076	0.9168	0.9194	0.9267	0.9331
Durables	0.8977	0.9119	0.9185	0.9258	0.9260	0.9315	0.9346	0.9421	0.9484	0.9516	0.9532	0.9578
Non-durables	0.8568	0.8642	0.8691	0.8759	0.8833	0.8895	0.8954	0.9021	0.9117	0.9142	0.9223	0.9289

GROSS FIXED CAPITAL FORMATION

	1995				1996				1997			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	4 686.3	4 820.4	4 786.3	4 865.7	4 880.6	5 040.8	5 358.6	5 560.9	5 902.7	6 085.0	6 329.5	6 374.6
Machinery and equipment	1 104.0	1 129.0	1 127.2	1 181.5	1 199.4	1 205.8	1 254.0	1 275.1	1 365.7	1 406.1	1 466.9	1 478.5
Transport material	382.5	450.6	431.8	458.3	462.9	484.9	539.6	541.2	600.3	646.0	687.9	725.0
Construction	2 611.8	2 644.5	2 620.9	2 609.6	2 586.2	2 706.8	2 900.4	3 058.1	3 233.7	3 303.6	3 410.6	3 374.4
Others	588.0	596.3	606.4	616.2	632.2	643.3	664.6	686.6	703.0	729.4	764.1	796.7
Previous year prices (EUR million)												
Gross fixed capital formation	4 589.7	4 688.1	4 616.9	4 649.3	4 762.3	4 921.9	5 182.3	5 371.5	5 750.4	5 905.5	6 034.0	6 127.0
Machinery and equipment	1 101.4	1 111.5	1 113.4	1 169.4	1 156.6	1 145.6	1 175.6	1 223.4	1 340.2	1 368.3	1 390.6	1 470.3
Transport material	367.9	448.6	417.4	432.0	451.7	507.4	552.2	539.0	569.8	642.9	665.0	708.2
Construction	2 535.2	2 543.4	2 508.9	2 461.9	2 526.8	2 638.4	2 817.6	2 953.6	3 156.8	3 194.6	3 263.1	3 208.8
Others	585.2	584.6	577.3	586.0	627.3	630.6	636.8	655.6	683.5	699.7	715.2	739.7
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	5 530.3	5 648.9	5 563.1	5 602.1	5 554.2	5 740.4	6 044.0	6 264.7	6 512.6	6 688.3	6 833.7	6 939.1
Machinery and equipment	1 243.4	1 254.8	1 256.9	1 320.2	1 292.4	1 280.2	1 313.7	1 367.1	1 426.9	1 456.8	1 480.6	1 565.4
Transport material	415.1	506.2	470.9	487.4	492.7	553.5	602.4	587.9	628.2	708.8	733.2	780.8
Construction	3 087.3	3 097.3	3 055.3	2 998.0	2 948.8	3 078.9	3 288.2	3 446.8	3 580.8	3 623.7	3 701.3	3 639.8
Others	802.8	802.0	792.0	803.9	834.1	838.5	846.9	871.7	882.5	903.3	923.4	955.0
Deflator (2000=1)												
Gross fixed capital formation	0.8474	0.8533	0.8604	0.8685	0.8787	0.8781	0.8866	0.8877	0.9064	0.9098	0.9262	0.9186
Machinery and equipment	0.8879	0.8998	0.8968	0.8950	0.9280	0.9419	0.9546	0.9327	0.9571	0.9652	0.9908	0.9444
Transport material	0.9213	0.8902	0.9169	0.9403	0.9396	0.8760	0.8958	0.9205	0.9556	0.9113	0.9382	0.9285
Construction	0.8460	0.8538	0.8578	0.8704	0.8770	0.8791	0.8821	0.8872	0.9031	0.9117	0.9215	0.9271
Others	0.7325	0.7435	0.7657	0.7665	0.7579	0.7672	0.7848	0.7876	0.7966	0.8074	0.8275	0.8343

PRIVATE CONSUMPTION (RESIDENTS)

	1998				1999				2000			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	16 419.1	16 720.1	17 028.1	17 470.5	17 799.8	18 024.2	18 339.5	18 656.1	19 177.5	19 309.9	19 714.9	19 898.0
Durables	2 192.5	2 285.8	2 393.6	2 504.5	2 626.6	2 667.5	2 687.5	2 651.2	2 887.5	2 738.2	2 792.3	2 816.8
Non-durables	14 226.6	14 434.3	14 634.4	14 966.1	15 173.2	15 356.7	15 652.0	16 004.9	16 290.0	16 571.7	16 922.6	17 081.2
Previous year prices (EUR million)												
Private consumption	16 173.4	16 403.6	16 597.8	16 926.0	17 596.2	17 677.4	17 885.6	18 055.4	18 834.7	18 751.4	18 941.2	18 985.8
Durables	2 181.1	2 253.8	2 353.3	2 458.8	2 612.4	2 628.1	2 648.0	2 600.5	2 855.3	2 694.7	2 726.5	2 726.9
Non-durables	13 992.3	14 149.8	14 244.5	14 467.2	14 983.8	15 049.3	15 237.7	15 455.0	15 979.4	16 056.7	16 214.7	16 258.9
Chain-linked volume (reference year 2000)												
Private consumption	17 502.2	17 751.3	17 961.5	18 316.6	18 609.2	18 695.0	18 915.3	19 094.9	19 477.4	19 394.3	19 590.5	19 638.0
Durables	2 289.1	2 365.5	2 469.8	2 580.5	2 704.0	2 720.1	2 740.7	2 691.6	2 914.7	2 751.8	2 783.9	2 784.4
Non-durables	15 219.9	15 391.2	15 494.2	15 736.5	15 904.6	15 974.2	16 174.1	16 404.8	16 562.7	16 642.6	16 806.6	16 853.6
Deflator (2000=1)												
Private consumption	0.9381	0.9419	0.9480	0.9538	0.9565	0.9641	0.9696	0.9770	0.9846	0.9956	1.0063	1.0132
Durables	0.9578	0.9663	0.9691	0.9705	0.9714	0.9806	0.9806	0.9850	0.9907	0.9951	1.0030	1.0116
Non-durables	0.9347	0.9378	0.9445	0.9510	0.9540	0.9613	0.9677	0.9756	0.9835	0.9957	1.0069	1.0135

GROSS FIXED CAPITAL FORMATION

	1998				1999				2000			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	6 855.5	6 991.8	7 086.7	7 310.1	7 382.8	7 520.4	7 794.9	7 918.6	8 328.4	8 124.6	8 345.4	8 304.9
Machinery and equipment	1 595.1	1 728.3	1 725.3	1 714.2	1 734.5	1 787.7	1 877.8	1 888.2	1 949.6	1 965.3	2 031.6	2 019.0
Transport material	746.7	769.7	789.5	871.9	837.3	834.9	909.2	914.6	961.3	893.6	908.7	940.3
Construction	3 667.0	3 606.1	3 649.9	3 767.6	3 789.8	3 824.0	3 914.3	3 997.2	4 267.0	4 145.2	4 273.1	4 227.6
Others	846.8	887.7	922.0	956.4	1 021.2	1 073.8	1 093.6	1 118.6	1 150.5	1 120.6	1 131.9	1 117.9
Previous year prices (EUR million)												
Gross fixed capital formation	6 772.3	6 826.3	6 886.5	7 100.0	7 372.3	7 401.9	7 569.7	7 639.4	8 104.8	7 816.6	7 959.2	7 801.8
Machinery and equipment	1 610.9	1 683.7	1 679.2	1 726.4	1 790.1	1 809.1	1 877.8	1 936.8	1 905.3	1 883.4	1 934.2	1 897.6
Transport material	745.2	782.1	801.2	853.3	811.2	803.0	861.1	874.0	940.1	871.2	886.2	904.0
Construction	3 603.1	3 529.1	3 560.9	3 652.5	3 790.5	3 783.8	3 827.3	3 831.2	4 148.7	3 983.1	4 064.3	3 971.6
Others	813.1	831.3	845.2	867.8	980.5	1 006.0	1 003.5	997.5	1 110.7	1 078.9	1 074.6	1 028.7
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	7 398.2	7 457.2	7 522.9	7 756.1	7 865.7	7 897.2	8 076.2	8 150.7	8 470.8	8 169.0	8 314.9	8 148.5
Machinery and equipment	1 670.8	1 746.3	1 741.6	1 790.6	1 839.4	1 859.0	1 929.5	1 990.2	1 991.6	1 968.7	2 021.7	1 983.5
Transport material	799.0	838.5	859.0	914.8	870.8	862.0	924.4	938.3	966.8	896.0	911.4	929.7
Construction	3 934.0	3 853.2	3 887.9	3 987.9	4 041.4	4 034.3	4 080.6	4 084.7	4 342.7	4 168.2	4 250.1	4 152.0
Others	995.3	1 017.7	1 034.7	1 062.3	1 115.5	1 144.4	1 141.5	1 134.7	1 169.7	1 136.2	1 131.7	1 083.3
Deflator (2000=1)												
Gross fixed capital formation	0.9266	0.9376	0.9420	0.9425	0.9386	0.9523	0.9652	0.9715	0.9832	0.9946	1.0037	1.0192
Machinery and equipment	0.9547	0.9897	0.9906	0.9573	0.9430	0.9617	0.9732	0.9488	0.9789	0.9983	1.0049	1.0179
Transport material	0.9345	0.9179	0.9191	0.9531	0.9614	0.9686	0.9836	0.9748	0.9943	0.9973	0.9971	1.0114
Construction	0.9321	0.9359	0.9388	0.9448	0.9378	0.9479	0.9592	0.9786	0.9826	0.9945	1.0054	1.0182
Others	0.8507	0.8722	0.8911	0.9003	0.9155	0.9383	0.9581	0.9858	0.9835	0.9862	1.0003	1.0319

PRIVATE CONSUMPTION (RESIDENTS)

	2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	20 179.3	20 438.0	20 499.4	20 682.9	21 090.0	21 257.9	21 535.2	21 501.9	21 705.6	21 774.9	22 039.7	22 301.5
Durables	2 699.9	2 728.1	2 666.5	2 614.9	2 666.3	2 700.4	2 597.1	2 471.7	2 383.1	2 371.6	2 435.9	2 471.9
Non-durables	17 479.4	17 709.9	17 832.9	18 067.9	18 423.7	18 557.5	18 938.1	19 030.2	19 322.5	19 403.3	19 603.8	19 829.7
Previous year prices (EUR million)												
Private consumption	19 681.7	19 819.2	19 782.5	19 853.2	20 748.7	20 743.8	20 805.6	20 586.8	21 207.8	21 203.3	21 349.6	21 443.5
Durables	2 650.3	2 662.1	2 589.3	2 538.0	2 638.4	2 663.2	2 537.3	2 400.0	2 351.2	2 338.0	2 399.7	2 430.8
Non-durables	17 031.4	17 157.1	17 193.2	17 315.2	18 110.4	18 080.6	18 268.3	18 186.9	18 856.6	18 865.4	18 949.9	19 012.7
Chain-linked volume (reference year 2000)												
Private consumption	19 681.7	19 819.2	19 782.5	19 853.2	20 073.3	20 068.5	20 128.3	19 916.6	19 916.6	19 912.5	20 049.9	20 138.0
Durables	2 650.3	2 662.1	2 589.3	2 538.0	2 571.9	2 596.1	2 473.4	2 339.5	2 248.8	2 236.1	2 295.2	2 324.9
Non-durables	17 031.4	17 157.1	17 193.2	17 315.2	17 500.7	17 471.9	17 653.3	17 574.6	17 661.8	17 670.0	17 749.2	17 808.0
Deflator (2000=1)												
Private consumption	1.0253	1.0312	1.0362	1.0418	1.0507	1.0593	1.0699	1.0796	1.0898	1.0935	1.0992	1.1074
Durables	1.0187	1.0248	1.0298	1.0303	1.0367	1.0402	1.0500	1.0565	1.0597	1.0606	1.0613	1.0632
Non-durables	1.0263	1.0322	1.0372	1.0435	1.0527	1.0621	1.0728	1.0828	1.0940	1.0981	1.1045	1.1135

GROSS FIXED CAPITAL FORMATION

	2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	8 164.4	8 545.8	8 697.1	8 811.0	8 588.3	8 687.3	8 401.5	8 164.2	8 008.2	7 903.8	7 939.0	7 883.5
Machinery and equipment	2 089.1	2 084.8	2 031.3	2 002.3	1 940.4	1 953.1	1 885.4	1 872.4	1 798.6	1 752.1	1 802.2	1 835.8
Transport material	812.7	870.1	840.1	815.8	751.6	733.5	729.5	673.9	640.4	663.1	672.6	649.8
Construction	4 183.0	4 468.2	4 649.0	4 755.5	4 634.8	4 694.7	4 485.3	4 319.3	4 281.4	4 213.6	4 209.1	4 136.2
Others	1 079.6	1 122.8	1 176.7	1 237.3	1 261.5	1 306.0	1 301.4	1 298.6	1 287.8	1 274.9	1 255.1	1 261.7
Previous year prices (EUR million)												
Gross fixed capital formation	8 018.8	8 369.1	8 471.7	8 570.0	8 508.3	8 509.0	8 145.0	7 863.6	7 885.2	7 809.0	7 875.0	7 769.1
Machinery and equipment	2 068.8	2 077.9	2 071.6	2 111.3	1 968.7	1 962.2	1 905.8	1 896.6	1 834.1	1 804.2	1 881.9	1 925.6
Transport material	788.5	846.2	805.8	773.6	766.1	735.7	688.8	658.5	637.5	654.1	667.0	648.1
Construction	4 117.6	4 363.5	4 470.6	4 528.9	4 536.8	4 533.4	4 292.8	4 085.8	4 157.4	4 111.1	4 118.0	4 014.4
Others	1 043.9	1 081.5	1 123.7	1 156.2	1 236.7	1 277.8	1 257.5	1 222.6	1 256.2	1 239.6	1 208.1	1 181.0
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	8 018.8	8 369.1	8 471.7	8 570.0	8 312.2	8 312.9	7 957.2	7 682.4	7 517.8	7 445.2	7 508.1	7 407.1
Machinery and equipment	2 068.8	2 077.9	2 071.6	2 111.3	1 997.9	1 991.4	1 934.2	1 924.8	1 881.3	1 850.7	1 930.4	1 975.1
Transport material	788.5	846.2	805.8	773.6	737.5	708.2	663.1	633.9	605.4	621.1	633.3	615.4
Construction	4 117.6	4 363.5	4 470.6	4 528.9	4 392.3	4 389.0	4 156.0	3 955.7	3 872.9	3 829.7	3 836.2	3 739.7
Others	1 043.9	1 081.5	1 123.7	1 156.2	1 180.2	1 219.4	1 200.0	1 166.7	1 158.6	1 143.3	1 114.3	1 089.3
Deflator (2000=1)												
Gross fixed capital formation	1.0182	1.0211	1.0266	1.0281	1.0332	1.0450	1.0558	1.0627	1.0652	1.0616	1.0574	1.0643
Machinery and equipment	1.0098	1.0033	0.9806	0.9484	0.9712	0.9808	0.9748	0.9728	0.9560	0.9468	0.9336	0.9295
Transport material	1.0307	1.0282	1.0427	1.0545	1.0191	1.0357	1.1001	1.0630	1.0578	1.0676	1.0620	1.0559
Construction	1.0159	1.0240	1.0399	1.0500	1.0552	1.0697	1.0792	1.0919	1.1055	1.1002	1.0972	1.1060
Others	1.0342	1.0382	1.0471	1.0702	1.0689	1.0710	1.0844	1.1130	1.1115	1.1150	1.1264	1.1582

PRIVATE CONSUMPTION (RESIDENTS)

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Private consumption	22 648.2	22 950.0	23 244.1	23 480.6	23 766.7	24 150.4	24 171.0	24 618.7	25 000.0	25 313.1	25 534.2	25 752.0
Durables	2 464.5	2 560.9	2 589.8	2 652.1	2 648.7	2 819.4	2 577.2	2 726.8	2 727.7	2 775.8	2 716.9	2 788.4
Non-durables	20 183.7	20 389.1	20 654.3	20 828.5	21 118.0	21 331.0	21 593.8	21 891.9	22 272.3	22 537.3	22 817.3	22 963.5
Previous year prices (EUR million)												
Private consumption	22 313.1	22 442.7	22 597.3	22 695.8	23 418.4	23 652.2	23 402.0	23 649.4	24 506.4	24 610.7	24 667.1	24 740.4
Durables	2 460.3	2 547.1	2 570.4	2 614.9	2 628.3	2 793.1	2 536.1	2 660.1	2 691.4	2 725.8	2 660.5	2 721.6
Non-durables	19 852.8	19 895.6	20 026.9	20 080.9	20 790.1	20 859.1	20 865.9	20 989.3	21 814.9	21 884.9	22 006.6	22 018.8
Chain-linked volume (reference year 2000)												
Private consumption	20 330.1	20 448.2	20 589.1	20 678.8	20 811.6	21 019.4	20 797.0	21 016.9	21 196.4	21 286.6	21 335.4	21 398.8
Durables	2 318.4	2 400.2	2 422.1	2 464.1	2 458.6	2 612.8	2 372.4	2 488.4	2 481.6	2 513.3	2 453.1	2 509.4
Non-durables	18 006.1	18 045.0	18 164.1	18 213.0	18 350.9	18 411.8	18 417.7	18 526.7	18 710.9	18 770.9	18 875.3	18 885.8
Deflator (2000=1)												
Private consumption	1.1140	1.1223	1.1290	1.1355	1.1420	1.1490	1.1622	1.1714	1.1794	1.1892	1.1968	1.2034
Durables	1.0630	1.0670	1.0692	1.0763	1.0773	1.0791	1.0863	1.0958	1.0992	1.1044	1.1075	1.1112
Non-durables	1.1209	1.1299	1.1371	1.1436	1.1508	1.1586	1.1724	1.1816	1.1903	1.2007	1.2088	1.2159

GROSS FIXED CAPITAL FORMATION

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Gross fixed capital formation	7 982.3	8 176.7	8 214.0	8 208.0	8 170.7	8 308.2	8 267.2	8 352.0	8 463.2	8 596.0	8 368.7	8 330.4
Machinery and equipment	1 875.9	1 907.0	1 918.6	1 957.6	1 924.7	1 925.5	1 931.7	1 966.5	1 950.7	1 966.1	1 969.2	2 106.9
Transport material	656.8	631.3	628.9	687.9	620.1	616.3	657.1	676.7	684.9	898.2	742.0	654.9
Construction	4 214.7	4 371.7	4 388.8	4 281.3	4 298.7	4 418.3	4 321.2	4 322.6	4 432.5	4 341.8	4 272.2	4 177.6
Others	1 234.9	1 266.7	1 277.8	1 281.1	1 327.2	1 348.1	1 357.2	1 386.2	1 395.0	1 390.0	1 385.3	1 391.0
Previous year prices (EUR million)												
Gross fixed capital formation	7 935.4	7 996.6	7 987.3	7 889.2	8 092.8	8 189.9	8 003.8	7 994.5	8 348.7	8 376.3	8 122.4	8 009.5
Machinery and equipment	1 903.1	1 911.9	1 949.1	1 967.1	1 948.9	1 967.1	1 941.6	1 986.7	1 978.1	1 992.9	2 063.9	2 123.6
Transport material	655.6	641.3	616.8	679.4	617.6	625.7	628.6	651.4	689.8	876.2	715.3	636.9
Construction	4 164.9	4 203.8	4 186.1	4 034.9	4 230.5	4 288.0	4 138.5	4 075.4	4 333.8	4 174.8	4 033.3	3 965.9
Others	1 211.8	1 239.7	1 235.3	1 207.8	1 295.7	1 309.0	1 295.0	1 281.0	1 347.1	1 332.4	1 309.9	1 283.1
Chain-linked volume (reference year 2000)												
Gross fixed capital formation	7 471.2	7 528.9	7 520.1	7 427.7	7 438.7	7 528.0	7 356.9	7 348.5	7 484.5	7 509.3	7 281.6	7 180.5
Machinery and equipment	2 021.9	2 031.2	2 070.8	2 089.9	2 090.0	2 109.5	2 082.2	2 130.6	2 147.6	2 163.7	2 240.8	2 305.7
Transport material	618.0	604.5	581.4	640.4	579.5	587.1	589.8	611.2	635.5	807.2	659.0	586.7
Construction	3 778.6	3 813.9	3 797.9	3 660.7	3 689.8	3 740.0	3 609.6	3 554.6	3 643.1	3 509.4	3 390.5	3 333.8
Others	1 074.9	1 099.6	1 095.8	1 071.3	1 111.7	1 123.1	1 111.1	1 099.0	1 105.0	1 092.9	1 074.5	1 052.5
Deflator (2000=1)												
Gross fixed capital formation	1.0684	1.0860	1.0923	1.1050	1.0984	1.1036	1.1237	1.1366	1.1308	1.1447	1.1493	1.1601
Machinery and equipment	0.9278	0.9389	0.9265	0.9367	0.9209	0.9128	0.9277	0.9229	0.9083	0.9087	0.8788	0.9138
Transport material	1.0628	1.0444	1.0816	1.0742	1.0700	1.0497	1.1141	1.1071	1.0778	1.1127	1.1260	1.1162
Construction	1.1154	1.1463	1.1556	1.1696	1.1650	1.1814	1.1972	1.2161	1.2167	1.2372	1.2601	1.2531
Others	1.1488	1.1519	1.1661	1.1958	1.1939	1.2003	1.2215	1.2613	1.2625	1.2718	1.2893	1.3216

PRIVATE CONSUMPTION (RESIDENTS)

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)								
Private consumption								
Durables	26 076.3	26 423.6	26 542.4	27 017.5	27 470.5	27 540.3	27 884.5	27 791.1
Non-durables	2 810.3	3 001.5	2 846.1	2 918.2	2 875.8	2 836.1	2 870.0	2 883.7
Previous year prices (EUR million)	23 266.0	23 422.1	23 696.3	24 099.3	24 594.7	24 704.2	25 014.5	24 907.3
Private consumption								
Durables	25 658.1	25 794.5	25 805.3	25 997.1	26 948.0	26 872.0	27 081.5	27 002.7
Non-durables	2 789.5	2 972.4	2 825.3	2 904.1	2 899.0	2 861.8	2 899.0	2 909.9
Chain-linked volume (reference year 2000)	22 868.6	22 822.1	22 980.0	23 093.0	24 049.0	24 010.3	24 182.5	24 092.8
Private consumption								
Durables	21 521.0	21 635.4	21 644.4	21 805.3	22 005.2	21 943.1	22 114.1	22 049.8
Non-durables	2 523.1	2 688.5	2 555.5	2 626.7	2 603.0	2 569.5	2 602.9	2 612.7
Deflator (2000=1)	18 994.3	18 955.7	19 086.8	19 180.7	19 399.7	19 368.4	19 507.3	19 435.0
Private consumption								
Durables	1.2117	1.2213	1.2263	1.2390	1.2484	1.2551	1.2609	1.2604
Non-durables	1.1138	1.1164	1.1137	1.1110	1.1048	1.1038	1.1026	1.1037
	1.2249	1.2356	1.2415	1.2564	1.2678	1.2755	1.2823	1.2816

GROSS FIXED CAPITAL FORMATION

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)								
Gross fixed capital formation	8 567.6	8 713.5	8 981.7	9 309.4	9 034.8	9 286.7	9 136.4	8 621.7
Machinery and equipment	2 076.2	2 089.1	2 237.6	2 290.9	2 196.5	2 267.9	2 270.7	2 136.2
Transport material	707.7	877.9	905.4	890.3	911.9	898.8	767.2	760.8
Construction	4 360.6	4 330.8	4 402.8	4 636.1	4 458.3	4 624.5	4 596.1	4 255.6
Others	1 423.1	1 415.6	1 436.0	1 492.1	1 468.1	1 495.4	1 502.4	1 469.1
Previous year prices (EUR million)								
Gross fixed capital formation	8 516.4	8 575.9	8 683.2	8 883.5	8 955.3	8 995.9	8 760.6	8 390.6
Machinery and equipment	2 079.5	2 114.3	2 166.6	2 221.1	2 299.3	2 309.6	2 348.2	2 251.7
Transport material	705.0	855.1	881.8	852.7	934.0	929.2	784.1	753.1
Construction	4 336.7	4 222.0	4 241.6	4 394.2	4 280.6	4 285.5	4 161.7	3 983.2
Others	1 395.2	1 384.4	1 393.2	1 415.5	1 441.4	1 471.6	1 466.6	1 402.6
Chain-linked volume (reference year 2000)								
Gross fixed capital formation	7 431.0	7 482.9	7 576.5	7 751.3	7 613.3	7 647.9	7 447.8	7 133.3
Machinery and equipment	2 304.5	2 343.1	2 401.1	2 461.4	2 515.2	2 526.5	2 568.7	2 463.1
Transport material	636.0	771.4	795.5	769.2	821.0	816.8	689.2	662.0
Construction	3 493.9	3 401.5	3 417.3	3 540.3	3 344.5	3 348.3	3 251.6	3 112.2
Others	1 085.0	1 076.6	1 083.4	1 100.8	1 086.2	1 109.0	1 105.2	1 057.0
Deflator (2000=1)								
Gross fixed capital formation	1.1530	1.1644	1.1855	1.2010	1.1867	1.2143	1.2267	1.2087
Machinery and equipment	0.9009	0.8916	0.9319	0.9307	0.8733	0.8976	0.8840	0.8673
Transport material	1.1127	1.1381	1.1382	1.1574	1.1107	1.1005	1.1131	1.1493
Construction	1.2481	1.2732	1.2884	1.3095	1.3330	1.3811	1.4135	1.3674
Others	1.3116	1.3148	1.3254	1.3555	1.3516	1.3485	1.3594	1.3899

HOUSEHOLD'S DISPOSABLE INCOME

	1977				1978				1979			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	591.3	596.3	614.0	630.5	669.7	693.8	726.7	753.2	777.7	812.6	858.3	908.9
Domestic transfers	94.4	95.8	98.6	102.8	108.5	113.6	118.2	122.2	125.7	132.7	143.2	157.2
External transfers	51.9	56.3	55.4	55.4	64.3	83.6	92.3	117.1	135.5	141.8	163.2	158.4
Corporate and property income	155.0	162.2	177.2	201.3	214.8	239.4	260.7	280.4	293.9	314.2	334.5	358.8
Direct taxes	29.8	30.4	31.5	33.2	35.6	38.3	41.5	45.2	49.3	52.9	56.0	58.5
Social Security contributions	92.8	94.5	97.8	102.8	109.4	115.3	120.4	124.9	128.6	135.3	145.1	158.0
Disposable income	770.1	785.8	816.0	854.0	912.4	976.8	1 035.9	1 102.8	1 154.9	1 213.0	1 298.1	1 366.8

LABOUR MARKET

	1977				1978				1979			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 045.3	4 040.5	4 073.8	4 075.7	4 147.4	4 154.8	4 212.2	4 226.0	4 253.0	4 272.5	4 305.4	4 329.4
Total employment	3 850.4	3 842.9	3 869.8	3 858.3	3 931.6	3 928.0	3 980.9	3 992.7	4 018.6	4 038.2	4 070.8	4 093.8
Unemployment	194.9	197.5	204.0	217.3	215.8	226.8	231.2	233.3	234.4	234.3	234.6	235.6
Employment in full-time equivalent	3 721.1	3 714.3	3 740.6	3 729.2	3 798.3	3 797.3	3 843.2	3 863.8	3 880.5	3 905.5	3 937.8	3 952.6
Employees	3 060.8	3 057.1	3 089.1	3 085.3	3 162.1	3 165.3	3 209.3	3 223.8	3 230.6	3 249.7	3 280.7	3 299.4
Other forms of employment	660.3	657.2	651.5	643.9	636.3	632.1	634.0	639.9	650.0	655.9	657.1	653.2
EUR thousand												
Compensation per employee	0.193	0.195	0.199	0.204	0.212	0.219	0.226	0.234	0.241	0.250	0.262	0.275
Per cent												
Unemployment rate	4.8	4.9	5.0	5.3	5.2	5.5	5.5	5.5	5.5	5.5	5.4	5.4

HOUSEHOLD'S DISPOSABLE INCOME

	1980				1981				1982			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	975.8	1 034.6	1 097.0	1 160.3	1 212.3	1 279.9	1 343.9	1 415.5	1 500.2	1 584.6	1 667.4	1 762.2
Domestic transfers	174.7	191.6	208.1	224.0	239.3	255.1	271.1	287.5	304.3	323.0	343.9	366.7
External transfers	178.6	179.8	190.7	191.1	202.8	228.2	220.0	226.8	233.6	257.6	270.7	287.0
Corporate and property income	381.4	412.0	445.0	483.2	524.5	568.2	612.9	665.2	710.6	762.0	812.3	861.8
Direct taxes	60.6	64.2	69.4	76.3	84.6	92.7	100.5	107.9	115.0	122.6	130.9	139.7
Social Security contributions	173.8	188.1	200.8	211.8	221.3	234.1	250.3	269.8	292.7	315.8	339.0	362.4
Disposable income	1 476.0	1 565.7	1 670.5	1 770.5	1 873.0	2 004.5	2 097.1	2 217.3	2 341.0	2 488.7	2 624.4	2 775.7

LABOUR MARKET

	1980				1981				1982			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 352.1	4 357.7	4 367.7	4 387.7	4 369.4	4 385.9	4 377.9	4 369.7	4 405.5	4 409.1	4 384.2	4 387.4
Total employment	4 121.4	4 135.5	4 142.7	4 163.3	4 133.8	4 145.5	4 137.9	4 127.8	4 171.7	4 169.8	4 157.2	4 154.7
Unemployment	230.8	222.2	225.0	224.4	235.6	240.4	239.9	241.8	233.9	239.3	227.0	232.7
Employment in full-time equivalent	3 990.5	3 993.2	4 005.4	4 017.0	3 991.9	4 003.4	3 994.1	3 998.2	4 027.2	4 034.8	4 019.8	4 010.6
Employees	3 347.0	3 359.0	3 378.1	3 395.4	3 375.3	3 386.3	3 373.4	3 368.1	3 381.7	3 380.5	3 364.6	3 362.5
Other forms of employment	643.5	634.2	627.3	621.6	616.6	617.1	620.7	630.1	645.5	654.3	655.2	648.1
EUR thousand												
Compensation per employee	0.292	0.308	0.325	0.342	0.359	0.378	0.398	0.420	0.444	0.469	0.496	0.524
Per cent												
Unemployment rate	5.3	5.1	5.2	5.1	5.4	5.5	5.5	5.5	5.3	5.4	5.2	5.3

HOUSEHOLD'S DISPOSABLE INCOME

	1983				1984				1985			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	1 836.9	1 917.4	1 974.6	2 018.1	2 061.5	2 116.7	2 195.5	2 302.3	2 415.9	2 548.0	2 668.6	2 802.2
Domestic transfers	391.7	414.3	434.6	452.6	468.3	491.1	521.0	558.0	602.0	637.4	664.0	681.9
External transfers	283.6	280.0	303.7	311.4	369.9	366.8	397.7	416.1	394.3	414.9	448.6	505.2
Corporate and property income	896.5	989.2	1 102.8	1 206.9	1 304.8	1 397.2	1 467.4	1 548.5	1 593.9	1 667.3	1 756.6	1 817.7
Direct taxes	149.1	158.8	168.8	179.1	189.7	203.6	220.6	240.9	264.4	278.2	282.3	276.8
Social Security contributions	386.0	407.1	425.8	442.1	456.0	473.4	494.2	518.5	546.2	575.3	605.6	637.3
Disposable income	2 873.7	3 035.0	3 221.2	3 367.8	3 558.7	3 694.9	3 866.7	4 065.5	4 195.5	4 414.2	4 649.9	4 892.8

LABOUR MARKET

	1983				1984				1985			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 329.7	4 341.4	4 345.8	4 355.6	4 408.9	4 422.4	4 448.4	4 463.3	4 454.9	4 456.3	4 440.4	4 441.2
Total employment	4 079.8	4 078.0	4 067.4	4 065.0	4 117.1	4 125.3	4 142.9	4 150.7	4 137.5	4 139.2	4 121.5	4 116.4
Unemployment	249.8	263.4	278.4	290.6	291.8	297.1	305.4	312.6	317.4	317.1	319.0	324.9
Employment in full-time equivalent	3 946.9	3 937.0	3 926.1	3 930.0	3 971.6	3 989.6	4 001.0	4 014.9	3 997.8	4 001.3	3 982.6	3 973.4
Employees	3 313.4	3 312.6	3 305.0	3 306.4	3 339.3	3 348.3	3 353.2	3 361.0	3 340.3	3 343.8	3 328.4	3 327.6
Other forms of employment	633.5	624.4	621.1	623.7	632.3	641.2	647.8	653.9	657.5	657.5	654.2	645.9
EUR thousand												
Compensation per employee	0.554	0.579	0.597	0.610	0.617	0.632	0.655	0.685	0.723	0.762	0.802	0.842
Per cent												
Unemployment rate	5.8	6.1	6.4	6.7	6.6	6.7	6.9	7.0	7.1	7.1	7.2	7.3

HOUSEHOLD'S DISPOSABLE INCOME

	1986				1987				1988			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	2 920.2	3 057.9	3 195.0	3 333.3	3 469.9	3 611.0	3 749.7	3 878.7	4 018.6	4 163.5	4 356.6	4 558.2
Domestic transfers	691.0	712.1	745.3	790.4	847.5	894.9	932.5	960.4	978.5	1 006.1	1 043.2	1 089.8
External transfers	482.5	484.3	483.0	496.7	563.6	581.1	601.4	615.3	625.7	635.6	644.7	655.5
Corporate and property income	1 907.6	2 001.4	2 049.9	2 122.0	2 216.2	2 270.9	2 343.4	2 401.8	2 453.6	2 535.1	2 648.8	2 807.7
Direct taxes	261.7	249.0	238.8	231.1	225.9	231.2	246.9	273.1	309.7	351.4	398.3	450.3
Social Security contributions	670.3	706.6	746.1	788.9	835.0	875.5	910.4	939.6	963.3	995.7	1 037.0	1 087.1
Disposable income	5 069.2	5 300.2	5 488.2	5 722.4	6 036.3	6 251.2	6 469.7	6 643.4	6 803.4	6 993.2	7 258.0	7 573.8

LABOUR MARKET

	1986				1987				1988			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 406.8	4 416.0	4 429.5	4 438.8	4 468.6	4 493.4	4 515.5	4 525.5	4 536.7	4 546.2	4 572.7	4 591.5
Total employment	4 075.1	4 081.8	4 101.3	4 121.1	4 161.7	4 194.4	4 225.5	4 246.8	4 266.4	4 281.2	4 314.7	4 340.9
Unemployment	331.7	334.2	328.2	317.7	307.0	299.0	290.0	278.7	270.3	265.0	258.0	250.6
Employment in full-time equivalent	3 938.9	3 942.0	3 957.8	3 984.2	4 017.7	4 054.9	4 084.5	4 100.2	4 123.8	4 132.6	4 167.5	4 194.6
Employees	3 305.1	3 311.8	3 321.8	3 336.8	3 353.4	3 377.5	3 401.9	3 419.8	3 450.7	3 465.8	3 503.3	3 527.4
Other forms of employment	633.9	630.3	636.0	647.4	664.3	677.4	682.6	680.4	673.1	666.8	664.2	667.2
EUR thousand												
Compensation per employee	0.884	0.923	0.962	0.999	1.035	1.069	1.102	1.134	1.165	1.201	1.244	1.292
Per cent												
Unemployment rate	7.5	7.6	7.4	7.2	6.9	6.7	6.4	6.2	6.0	5.8	5.6	5.5

HOUSEHOLD'S DISPOSABLE INCOME

	1989				1990				1991			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	4 828.7	5 059.8	5 312.1	5 547.3	5 768.2	6 032.6	6 277.1	6 617.3	6 876.5	7 222.1	7 504.0	7 840.3
Domestic transfers	1 145.8	1 204.1	1 264.5	1 327.1	1 391.9	1 466.3	1 550.5	1 644.3	1 747.8	1 857.7	1 973.8	2 096.3
External transfers	723.4	718.8	729.2	721.4	719.2	796.5	824.3	800.7	762.8	898.2	798.1	818.7
Corporate and property income	2 999.7	3 177.4	3 323.8	3 467.7	3 575.2	3 706.0	3 843.5	4 029.8	4 206.4	4 389.8	4 530.4	4 670.2
Direct taxes	507.5	552.4	585.1	605.6	613.9	630.7	656.1	690.1	732.6	787.9	856.0	936.8
Social Security contributions	1 145.9	1 204.4	1 262.3	1 319.8	1 376.8	1 438.3	1 504.3	1 574.9	1 649.9	1 736.5	1 834.6	1 944.2
Disposable income	8 044.2	8 403.3	8 782.1	9 138.1	9 463.7	9 932.5	10 335.0	10 827.1	11 211.1	11 843.4	12 115.9	12 544.6

LABOUR MARKET

	1989				1990				1991			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 660.6	4 682.8	4 712.6	4 721.5	4 708.5	4 726.0	4 726.1	4 776.7	4 780.6	4 797.1	4 770.1	4 762.5
Total employment	4 412.4	4 434.0	4 466.1	4 478.5	4 466.1	4 484.5	4 484.5	4 537.1	4 540.6	4 567.0	4 549.3	4 550.0
Unemployment	248.2	248.8	246.5	243.0	242.5	241.6	241.6	239.7	240.0	230.1	220.8	212.5
Employment in full-time equivalent	4 260.8	4 284.7	4 315.9	4 324.5	4 316.5	4 331.5	4 329.3	4 382.8	4 379.1	4 412.2	4 395.7	4 399.1
Employees	3 587.4	3 607.5	3 637.1	3 648.0	3 644.0	3 658.3	3 648.5	3 687.3	3 665.8	3 687.3	3 666.2	3 668.5
Other forms of employment	673.5	677.3	678.7	676.5	672.5	673.2	680.9	695.5	713.3	724.9	729.6	730.6
EUR thousand												
Compensation per employee	1.346	1.403	1.461	1.521	1.583	1.649	1.720	1.795	1.876	1.959	2.047	2.137
Per cent												
Unemployment rate	5.3	5.3	5.2	5.1	5.1	5.1	5.1	5.0	5.0	4.8	4.6	4.5

HOUSEHOLD'S DISPOSABLE INCOME

	1992				1993				1994			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	8 236.6	8 523.7	8 784.1	8 972.7	9 048.5	9 158.0	9 151.0	9 240.2	9 205.8	9 336.7	9 501.1	9 702.8
Domestic transfers	2 225.1	2 332.6	2 418.9	2 483.9	2 527.6	2 572.5	2 618.6	2 665.8	2 714.2	2 773.8	2 844.6	2 926.7
External transfers	817.8	781.2	785.9	771.6	840.8	690.4	735.8	759.4	734.5	721.1	630.0	740.8
Corporate and property income	4 772.2	4 884.1	4 957.4	5 002.0	5 045.6	5 118.9	5 144.9	5 149.8	5 206.5	5 302.6	5 440.4	5 587.0
Direct taxes	1 030.3	1 095.6	1 132.7	1 141.5	1 122.0	1 112.1	1 112.0	1 121.5	1 140.6	1 158.1	1 173.9	1 188.0
Social Security contributions	2 065.2	2 172.5	2 265.8	2 345.3	2 411.0	2 452.4	2 469.7	2 462.8	2 431.7	2 447.7	2 510.8	2 621.0
Disposable income	12 956.1	13 253.5	13 547.7	13 743.4	13 929.6	13 975.3	14 068.6	14 231.0	14 288.7	14 528.3	14 731.5	15 148.3

LABOUR MARKET

	1992				1993				1994			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 768.3	4 753.2	4 772.6	4 756.6	4 749.2	4 747.3	4 731.4	4 747.6	4 756.9	4 780.2	4 818.6	4 817.8
Total employment	4 582.7	4 570.7	4 587.3	4 568.9	4 541.9	4 520.2	4 487.6	4 489.2	4 485.1	4 498.0	4 526.6	4 520.4
Unemployment	185.7	182.6	185.3	187.7	207.3	227.1	243.8	258.4	271.7	282.2	292.1	297.4
Employment in full-time equivalent	4 427.4	4 418.5	4 424.0	4 415.2	4 376.5	4 370.8	4 328.2	4 347.4	4 327.4	4 353.3	4 367.4	4 367.3
Employees	3 694.4	3 686.7	3 686.9	3 674.0	3 630.4	3 614.5	3 559.9	3 558.5	3 515.3	3 520.0	3 516.4	3 506.8
Other forms of employment	732.9	731.8	737.1	741.2	746.1	756.3	768.3	788.9	812.1	833.3	851.0	860.5
EUR thousand												
Compensation per employee	2.229	2.312	2.383	2.442	2.492	2.534	2.571	2.597	2.619	2.652	2.702	2.767
Per cent												
Unemployment rate	3.9	3.8	3.9	3.9	4.4	4.8	5.2	5.4	5.7	5.9	6.1	6.2

HOUSEHOLD'S DISPOSABLE INCOME

	1995				1996				1997			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	9 973.1	10 194.2	10 398.1	10 598.5	10 791.0	10 902.7	11 142.6	11 324.8	11 622.2	11 898.0	12 191.3	12 426.5
Domestic transfers	3 019.9	3 099.5	3 165.3	3 217.4	3 255.7	3 299.4	3 348.4	3 402.8	3 462.5	3 532.7	3 613.4	3 704.6
External transfers	591.3	613.3	631.4	672.9	676.6	659.5	661.7	654.2	707.7	735.4	739.6	729.0
Corporate and property income	5 740.8	5 861.3	5 955.0	5 992.6	6 018.4	5 939.5	5 922.6	5 886.1	5 881.6	5 847.8	5 868.2	5 903.8
Direct taxes	1 200.4	1 221.4	1 250.9	1 289.0	1 335.6	1 370.1	1 392.5	1 402.7	1 400.8	1 404.4	1 413.4	1 427.9
Social Security contributions	2 778.2	2 898.2	2 980.8	3 026.1	3 034.1	3 063.6	3 114.4	3 186.7	3 280.3	3 371.7	3 460.9	3 547.9
Disposable income	15 346.6	15 648.7	15 918.0	16 166.3	16 372.0	16 367.4	16 568.4	16 678.5	16 992.8	17 237.8	17 538.2	17 788.1

LABOUR MARKET

	1995				1996				1997			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	4 822.8	4 818.6	4 829.1	4 861.9	4 912.6	4 897.3	4 940.2	4 936.2	4 976.6	5 002.7	5 049.1	5 057.0
Total employment	4 522.4	4 519.3	4 530.0	4 552.4	4 600.9	4 581.6	4 626.4	4 627.1	4 672.0	4 713.3	4 752.6	4 774.1
Unemployment	300.4	299.4	299.1	309.4	311.7	315.6	313.8	309.2	304.7	289.3	296.5	282.9
Employment in full-time equivalent	4 367.4	4 367.2	4 373.7	4 399.7	4 436.5	4 429.8	4 467.8	4 473.9	4 516.4	4 555.7	4 600.4	4 627.5
Employees	3 504.2	3 497.8	3 499.7	3 514.2	3 539.5	3 529.7	3 560.9	3 565.8	3 605.5	3 637.5	3 675.3	3 693.7
Other forms of employment	863.2	869.3	874.1	885.4	897.0	900.1	906.8	908.1	910.9	918.2	925.1	933.8
EUR thousand												
Compensation per employee	2.846	2.914	2.971	3.016	3.049	3.089	3.129	3.176	3.223	3.271	3.317	3.364
Per cent												
Unemployment rate	6.2	6.2	6.2	6.4	6.3	6.4	6.4	6.3	6.1	5.8	5.9	5.6

HOUSEHOLD'S DISPOSABLE INCOME

	1998				1999				2000			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	12 743.5	13 029.7	13 205.9	13 477.8	13 665.7	13 919.2	14 198.6	14 485.5	14 868.2	15 139.5	15 418.8	15 656.7
Domestic transfers	3 806.3	3 906.4	4 004.8	4 101.5	4 196.6	4 299.0	4 408.9	4 526.2	4 650.9	4 772.9	4 892.2	5 008.8
External transfers	758.0	756.2	763.5	737.4	765.7	762.4	838.1	768.5	811.4	883.1	823.4	958.7
Corporate and property income	5 945.8	5 979.2	6 065.9	6 129.6	6 240.4	6 284.0	6 380.5	6 468.5	6 598.7	6 673.2	6 793.9	6 857.4
Direct taxes	1 447.8	1 469.5	1 492.8	1 517.9	1 544.7	1 579.1	1 621.1	1 670.7	1 727.9	1 776.9	1 817.6	1 850.1
Social Security contributions	3 632.6	3 703.6	3 760.9	3 804.5	3 834.3	3 890.6	3 973.5	4 082.9	4 218.9	4 332.7	4 424.4	4 494.0
Disposable income	18 173.2	18 498.3	18 786.4	19 123.9	19 489.3	19 794.9	20 231.5	20 495.1	20 982.5	21 359.2	21 686.3	22 137.4

LABOUR MARKET

	1998				1999				2000			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	5 105.0	5 109.2	5 102.3	5 131.7	5 133.2	5 149.3	5 157.8	5 166.3	5 201.2	5 205.3	5 255.1	5 263.7
Total employment	4 822.7	4 867.2	4 857.5	4 888.7	4 899.4	4 913.6	4 934.9	4 952.1	4 986.6	5 002.7	5 044.4	5 070.4
Unemployment	282.4	242.0	244.9	242.9	233.9	235.8	222.9	214.2	214.6	202.6	210.8	193.4
Employment in full-time equivalent	4 686.1	4 730.8	4 725.5	4 753.7	4 748.3	4 761.7	4 781.4	4 800.7	4 848.2	4 869.1	4 904.2	4 934.5
Employees	3 739.4	3 774.2	3 772.6	3 801.8	3 804.4	3 821.9	3 841.2	3 856.5	3 894.2	3 907.2	3 931.1	3 951.5
Other forms of employment	946.6	956.6	952.8	952.0	943.9	939.8	940.2	944.1	954.0	961.9	973.1	982.9
EUR thousand												
Compensation per employee	3.408	3.452	3.500	3.545	3.592	3.642	3.696	3.756	3.818	3.875	3.922	3.962
Per cent												
Unemployment rate	5.5	4.7	4.8	4.7	4.6	4.6	4.3	4.1	4.1	3.9	4.0	3.7

HOUSEHOLD'S DISPOSABLE INCOME

	2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	15 789.4	15 960.0	16 175.6	16 423.7	16 722.1	16 907.1	17 017.6	16 975.3	17 194.6	17 231.5	17 303.3	17 410.2
Domestic transfers	5 122.7	5 245.0	5 375.7	5 514.8	5 662.3	5 785.5	5 884.4	5 958.9	6 009.2	6 075.4	6 157.5	6 255.5
External transfers	898.8	938.4	887.7	897.9	761.5	666.6	689.8	643.6	662.2	560.8	588.0	597.1
Corporate and property income	6 965.3	7 021.3	7 069.3	7 104.1	7 084.2	7 130.0	7 220.0	7 265.3	7 389.8	7 463.6	7 529.6	7 657.9
Direct taxes	1 874.4	1 895.5	1 913.3	1 927.9	1 939.2	1 944.4	1 943.4	1 936.2	1 922.8	1 916.7	1 918.0	1 926.5
Social Security contributions	4 541.5	4 595.2	4 655.2	4 721.3	4 793.7	4 859.6	4 919.1	4 972.3	5 019.0	5 062.9	5 104.1	5 142.5
Disposable income	22 360.3	22 674.0	22 939.8	23 291.3	23 497.2	23 685.1	23 949.2	23 934.7	24 314.0	24 351.7	24 556.4	24 851.8

LABOUR MARKET

	2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	5 310.6	5 317.9	5 343.4	5 369.8	5 383.4	5 418.9	5 440.2	5 429.1	5 458.2	5 462.0	5 461.7	5 467.6
Total employment	5 102.6	5 106.8	5 126.0	5 152.6	5 152.3	5 163.2	5 160.0	5 112.6	5 124.2	5 118.8	5 120.3	5 120.7
Unemployment	208.0	211.1	217.4	217.2	231.1	255.7	280.2	316.5	334.0	343.3	341.4	346.9
Employment in full-time equivalent	4 942.2	4 951.1	4 966.2	4 984.5	5 004.4	5 004.0	4 991.3	4 940.3	4 950.8	4 933.7	4 922.2	4 913.3
Employees	3 950.7	3 958.6	3 976.9	4 001.9	4 037.0	4 045.7	4 038.5	3 994.8	3 998.1	3 981.1	3 972.6	3 972.2
Other forms of employment	991.5	992.5	989.3	982.6	967.4	958.3	952.8	945.5	952.7	952.6	949.7	941.1
EUR thousand												
Compensation per employee	3.997	4.032	4.067	4.104	4.142	4.179	4.214	4.249	4.301	4.328	4.356	4.383
Per cent												
Unemployment rate	3.9	4.0	4.1	4.0	4.3	4.7	5.2	5.8	6.1	6.3	6.3	6.3

HOUSEHOLD'S DISPOSABLE INCOME

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)												
Compensation of employees	17 626.8	17 779.8	18 000.8	18 285.9	18 514.1	18 739.9	18 905.5	19 038.0	19 258.2	19 362.3	19 477.0	19 532.3
Domestic transfers	6 369.5	6 477.7	6 580.1	6 676.8	6 767.7	6 863.2	6 963.3	7 068.1	7 177.5	7 284.4	7 388.8	7 490.8
External transfers	580.4	617.9	628.3	605.5	545.8	589.6	503.1	509.6	637.2	612.9	601.4	660.6
Corporate and property income	7 610.3	7 722.5	7 743.4	7 807.1	7 912.6	7 965.5	8 030.8	8 132.5	8 149.3	8 239.1	8 261.5	8 316.6
Direct taxes	1 942.4	1 960.5	1 981.0	2 003.7	2 028.8	2 055.1	2 082.5	2 111.1	2 140.9	2 180.0	2 228.5	2 286.3
Social Security contributions	5 178.1	5 243.8	5 339.5	5 465.2	5 621.0	5 740.5	5 823.7	5 870.7	5 881.4	5 921.4	5 990.8	6 089.5
Disposable income	25 066.5	25 393.5	25 632.2	25 906.3	26 090.3	26 362.7	26 496.4	26 766.3	27 200.0	27 397.2	27 509.4	27 624.5

LABOUR MARKET

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads												
Labour force	5 463.9	5 475.5	5 483.5	5 503.2	5 499.5	5 514.4	5 521.7	5 542.3	5 536.2	5 553.5	5 555.3	5 557.0
Total employment	5 121.4	5 115.4	5 105.8	5 125.5	5 094.8	5 101.9	5 092.6	5 110.6	5 116.2	5 134.6	5 137.1	5 115.6
Unemployment	342.5	360.2	377.7	377.7	404.7	412.4	429.1	431.7	420.0	418.9	418.2	441.4
Employment in full-time equivalent	4 926.3	4 915.5	4 916.3	4 929.9	4 909.4	4 909.5	4 903.1	4 901.5	4 914.8	4 914.5	4 913.5	4 893.2
Employees	3 997.1	3 998.3	4 007.9	4 024.7	4 011.5	4 016.9	4 020.0	4 027.5	4 053.1	4 058.4	4 058.9	4 038.4
Other forms of employment	929.2	917.3	908.3	905.2	897.9	892.6	883.0	874.0	861.7	856.1	854.6	854.8
EUR thousand												
Compensation per employee	4.410	4.447	4.491	4.543	4.615	4.665	4.703	4.727	4.751	4.771	4.799	4.837
Per cent												
Unemployment rate	6.3	6.6	6.9	6.9	7.4	7.5	7.8	7.8	7.6	7.5	7.5	7.9

HOUSEHOLD'S DISPOSABLE INCOME

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices (EUR million)								
Compensation of employees	19 782.9	19 888.6	20 154.0	20 322.0	20 615.4	20 763.8	20 909.8	21 055.2
Domestic transfers	7 590.2	7 689.6	7 788.9	7 888.2	7 987.4	8 081.9	8 171.7	8 256.7
External transfers	699.8	753.2	697.6	667.9	658.8	616.8	773.6	828.6
Corporate and property income	8 337.0	8 395.3	8 488.4	8 609.4	8 791.0	8 914.5	8 985.9	9 034.3
Direct taxes	2 353.5	2 407.5	2 448.4	2 476.1	2 490.7	2 504.4	2 517.3	2 529.3
Social Security contributions	6 217.5	6 322.2	6 403.8	6 462.1	6 497.1	6 544.3	6 603.5	6 674.9
Disposable income	27 839.1	27 997.0	28 276.7	28 549.2	29 064.8	29 328.3	29 720.1	29 970.7

LABOUR MARKET

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10^3 heads								
Labour force	5 572.3	5 553.8	5 582.9	5 577.6	5 576.2	5 581.5	5 561.7	5 559.4
Total employment	5 115.1	5 101.9	5 139.2	5 147.5	5 156.6	5 159.0	5 133.1	5 136.9
Unemployment	457.2	452.0	443.7	430.0	419.6	422.5	428.6	422.5
Employment in full-time equivalent	4 902.1	4 891.0	4 921.7	4 921.2	4 942.4	4 934.0	4 922.2	4 916.0
Employees	4 038.1	4 024.1	4 047.9	4 050.0	4 077.6	4 076.6	4 075.8	4 075.5
Other forms of employment	864.0	866.9	873.8	871.1	864.8	857.3	846.3	840.4
EUR thousand								
Compensation per employee	4.899	4.942	4.979	5.018	5.056	5.093	5.130	5.166
Per cent								
Unemployment rate	8.2	8.1	7.9	7.7	7.5	7.6	7.7	7.6

CHRONOLOGY OF MAJOR FINANCIAL MEASURES

January to June 2009

2009

January

- 9 January (Circular Letter of Banco de Portugal No. 4/2009/DET, Treasury and Issue Department)

  Informs on the implementation by cash-in-transit companies of the regulations applicable to euro banknote recycling, and on which companies are qualified for such activity in 2009, pursuant to Decree-Law No. 195/2007 of 15 May.

- 14 January (Circular Letter of Banco de Portugal No. 9/09/DSBDR, Banking Supervision Department)

  Credit institutions are requested to send to Banco de Portugal, within 10 working days, a summary evaluation of the implementation of Decree-Law No. 171/2008 of 26 August, which approved borrower protection measures in housing credit regarding the renegotiation of loan conditions.

- 14 January (Circular Letter of Banco de Portugal No. 10/09/DSBDR, Banking Supervision Department)

  Provides clarification on the implementation of Decree-Law No. 51/2007 of 7 March as regards advance payments in credit agreements concluded for the purchase, construction and improvement of permanent or secondary residential property or residential leased property, as well as for the acquisition of land for the construction of owner-occupied housing.

- 15 January (Instruction of Banco de Portugal No. 21/2008, BNBP 1/2009)

  Regulates reporting to Banco de Portugal of actual or contingent liabilities arising from credit operations, under any form, to be centralised and published by this central bank. Revokes Instruction No. 7/2006, published in the Official Bulletin No. 6 of 16 June 2006.

- 26 January (Circular Letter of Banco de Portugal No. 14/09/DSBDR, Banking Supervision Department)

  Following the conclusions of the meeting held by the Committee of Experts as regards the evaluation of measures against money laundering and terrorist financing (MONEYVAL), credit institutions and financial companies are advised to maintain enhanced surveillance procedures, and to examine with special caution all operations undertaken or intermediated by entities or institutions established in Azerbaijan.

- 28 January (Circular Letter of Banco de Portugal No. 15/09/DSBDR, Banking Supervision Department)

  Provides clarification on the procedures to be adopted by the institutions subject to the supervision of Banco de Portugal as regards the register of write-offs of loans in off-balance-sheet items.

- 28 January (Instruction of Banco de Portugal No. 1/2009, BNBP 2/2009)

  Introduces changes in Instruction No. 1/99, published in the Official Bulletin No. 1 of 15 January 1999, which laid down the general rules governing the Intervention Operations Market.

- 29 January (Circular Letter of Banco de Portugal No. 16/09/DSBDR, Banking Supervision Department)

  Informs that the list in Annex 1 of Instruction of Banco de Portugal No. 26/2005 should be replaced by the list of countries or jurisdictions integrating the concept “equivalent third country”, for the purposes of the implementation of Law No. 25/2008 of 5 June, defined in the Executive Order No. 41/2009 of 17 December 2008, published in the Official Gazette, Series II, Part C, No. 8 of 13 January 2009.

February

- 3 February (Circular Letter of Banco de Portugal No. 19/09/DSBDR, Banking Supervision Department)

  Provides clarification on interest charged after total early repayment of lending for house purchase and, as a result, on the interpretation of Article 5 (2) of Decree-Law No. 51/2007 of 7 March, as reworded by Decree-Law No. 88/2008 of 29 May.

- 09 February (Instruction of Banco de Portugal No. 4/2009, BNBP 3/2009)

  Defines the locations, schedules, rules and conditions for euro banknote deposits and withdrawals over the counter at Banco de Portugal.

- 16 February (Instruction of Banco de Portugal No. 2/2009, BNBP 2/2009)

  Regulates the opening and operation of current accounts with Banco de Portugal and creates the AGIL (Portuguese acronym for: Integrated Settlement Management Application), for the local management of access to current accounts held with Banco de Portugal by institutions that are not direct participants in TARGET2-PT.

- 16 February (Instruction of Banco de Portugal No. 3/2009, BNBP 2/2009)

  Regulates the Interbank Clearing System (SICOI), which comprises the following sub-systems: cheques, bills of exchange, direct debits, Interbank Electronic Transfers and transactions via ATMs.

- 17 February (Circular Letter of Banco de Portugal No. 2/2009/DMR, Market and Reserve Management Department)

  Discloses, effective as of 1 March 2009, the new price list of the services provided by SITEME (market electronic transfer system), which replaces the one annexed to Circular Letter of Banco de Portugal No. 9/DMR of 15 December 2006. The changes introduced in the price list are mainly a consequence of the closure of the interbank money market (*Mercado Monetário Interbancário – MMI*) on 31 December 2008.

- 20 February (Circular Letter of Banco de Portugal No. 20/2009/DSB, Banking Supervision Department)

  Makes known that the understanding presented in Circular Letter of Banco de Portugal No. 49/2001/DSB of 29 November 2001 is no longer applicable, given the accounting framework established in Notice of Banco de Portugal No. 1/2005 of 28 February 2005.

- 26 February (Instruction of Banco de Portugal No. 5/2009, BNBP 03/2009)

  Amends Instruction of Banco de Portugal No. 1/99 of 15 January 1999, which regulated the intervention transactions market (*Mercado de Operações de Intervenção – MOI*).

- 26 February (Circular Letter of Banco de Portugal No. 06/2009/DMR, Market and Reserve Management Department)

  Makes known the alterations introduced in Instruction of Banco de Portugal No. 1/99 of 15 January 1999, relating to the end of the period of transition to TARGET2, on 2 March 2009.

- 27 February (Circular Letter of Banco de Portugal No. 24/2009/DSB, Banking Supervision Department)

  Transmits some recommendations regarding the professional qualification and independence of management and auditing bodies.

March

- 2 March (Circular Letter of Banco de Portugal No. 10/2009/DET, Treasury and Issue Department)

  Informs that the cash-in-transit company ESEGUR, S.A., has set up in the Autonomous Region of Madeira - Funchal, a Cash Recycling Centre for the recycling of euro banknotes.

• 5 March (Notice of Banco de Portugal No. 1/2009, Official Gazette No. 45, Series II)	Amends some paragraphs of Notice of Banco de Portugal No. 5/2007 of 27 April (regulatory framework governing own funds requirements and solvency ratio).
• 19 March (Circular Letter of Banco de Portugal No 32/09/DSBDR, Banking Supervision Department)	Following the introduction of regulatory amendments, conveys the understanding of Banco de Portugal as to the recognition of significant credit risk transfer
• 20 March (Decree Law No 64/2009, Official Gazette No 56, Series 1, Ministry of Finance and Public Administration)	Establishes extraordinary mechanisms to reduce the nominal value of shares of public limited companies.
• 23 March (Circular Letter of Banco de Portugal No 33/09/DSBDR, Banking Supervision Department)	Conveys the understanding of Banco de Portugal and of the Securities Market Commission as to the delimitation of competences in the supervision of complex financial products.

April

• 1 April (Executive Order No 333-B/2009, Ministry of Finance and Public Administration)	In accordance with the provisions laid down in Article 3 of Decree-Law No 8/2007 of 17 January, approves new forms (Annexes C and F) for the annexes to the statement on Simplified Corporate Information to be used from 1 January 2009 irrespective of the year/fiscal year the statement refers to
• 14 April (Circular Letter of Banco de Portugal No 33/09/DSB, Banking Supervision Department)	Conveys the understanding of Banco de Portugal and of the Securities Market Commission as to the delimitation of competences in the supervision of complex financial products

May

• 7 May Guideline of the European Central Bank (2009/391/EC) Official Journal of the European Union No 123 Series L	Amends Guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem (ECB/2009/10). Section 2.1, first paragraph, second indent, third period is hence replaced accordingly. The present Guideline enters into force on 11 May 2009. The NCB of participating Member States are the addressees of the Guideline. The NCB mentioned in No 1 must report to the ECB, by 11 May 2009, the measures they intend to adopt in order to implement the provisions laid down in this Guideline
• 8 May (Executive Order No 493-A/2009, Official Gazette No 89, Supplement, Ministry of Finance and Public Administration)	In compliance with the provisions laid down in Article 23 of Law No 63-A/2008 of 24 November 2008, defines the necessary procedures to implement said law as regards the capitalisation of credit institutions with recourse to public investment. Empowers Banco de Portugal to monitor and audit the fulfilment by the beneficiary credit institutions of requirements established under this scheme. This executive order shall enter into force on the day following its publication.
• 12 May (Decree-Law No 103/2009 in the Official Gazette No 91, Series I, Ministry of Finance and Public Administration)	Creates an extraordinary credit line to protect own permanent homes in case at least one of the borrowers of a loan for the purchase of own permanent home becomes unemployed. This rule shall apply irrespective of the type of credit or its credit system, as long as these loans are, in every respect, for the purchase of own permanent homes. This credit line supports a 50 percent reduction

in the monthly principal and interest instalment by the borrower for a maximum period of 24 months. This Decree-Law shall enter into force on the day following its publication.

- 19 May (Instruction of Banco de Portugal No 6/2009, BNBP)

Determines which items are to be included by applicant institutions in their plan to raise own funds, to be submitted to Banco de Portugal within the scope of the application to the capitalisation operations envisaged in Law nº 63-A/2008 of 4 November.

- 19 May (Circular-Letter No 44/09/DSBDR, Banco de Portugal. Banking Supervision Department)

Recommends that institutions, when revaluating real estate acquired as a result of mortgage credit repayment, shall identify any signs of significant changes in value and adjust the values of the latest evaluations available accordingly, or obtain new evaluations, within the scope of a systematic monitoring procedure through a dedicated structure, thereby complying with a range of minimum requirements, similar to those defined in Part 2, point 8, b) and c) of Annex VI to Notice No 5/2007.

- 19 May (Circular-Letter No 45/09/DSBDR, Banco de Portugal. Banking Supervision Department)

Publishes assessment criteria regarding the eligibility of certain items for original own funds.

- 20 May (Circular-Letter No 47/09/DSBDR, Banco de Portugal. Banking Supervision Department)

Provides clarification on the opinion conveyed by Banco de Portugal in its Circular-Letter No 61/2008/DSB of 30 September, confirming that Decree-Law No 171/2008 of 26 August prohibits the collection of any fees associated with the renegotiation of loan conditions, specifying that this prohibition covers any change in the insurance company.

June

- 2 June (Decree-Law No 133/2009 of the Ministry of the Economy and Innovation, Official Gazette No 106 Series 1)

Transposes into the national law Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers. This Decree-Law enters into force on 1 July 2009. At the end of the first year after the date of its entry into force, and biannually in subsequent years, Banco de Portugal shall prepare an evaluation report on the impact of its implementation, and, making use of all the means at its disposal, shall make that information public.

- 3 June (Circular-Letter No 50/09/DSBDR Banco de Portugal. Banking Supervision Department)

Provides clarification on the internal control reports of the financial group to be submitted by offshore entities, pursuant to Notice No 5/2008.

- 5 June (Decision No 13364-A/2009 Ministry of Finance and Public Administration. Secretary of State for Treasury and Finance's Office, Official Gazette No 109 Supplement. Series 2, Part C)

Authorises that the State personal guarantee continues to be used within the scope of the bank loan granted to Banco Privado Português, S.A., by a group of credit institutions. Its maturity is extended for six months. The other terms and conditions of the guarantee granted under Decision No 31268-A/2008 of 1 December remain unchanged.