



**A COMPLETE AND CONSISTENT MACRO-ECONOMIC  
DATA SET OF THE EURO AREA, METHODOLOGICAL  
ISSUES AND RESULTS**

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## Introduction and summary<sup>1</sup>

The introduction of the euro since the first of January 1999 made a complete set of macro-economic statistics for the euro-area essential. Eurostat and the European Central Bank (ECB) already produce certain statistics for the euro area<sup>2</sup>. These are available for a relatively short time period and so far, have only a limited coverage. To fill this gap a number of organisations, such as the IMF, the European Commission, investment banks as well as the OECD have constructed series based on aggregating available statistics for the twelve participating countries.

The data set compiled by the OECD Economics Department comprises annual series, in most cases extending over the past 25 years. It covers demand and output (volumes, deflators and values), potential output and output gap, the appropriation account for households, the general government appropriation account, the cyclically-adjusted general government account, the labour market, the current account, interest rates, exchange rates and competitiveness indicators (see Table 1).<sup>3</sup>

The methodological issues involved in constructing the series for the euro-area and the method chosen are described in this document. The annex provides all details on the construction of the series and some results<sup>4</sup>.

### *The need for a specific aggregation method for the euro area*

The OECD Secretariat regularly aggregates historical data and projections for the European Union and the OECD area and reports them in the OECD Economic Outlook. The aggregates presented in the Economic Outlook are calculated as weighted averages of country series, with weights based on nominal GDP levels in 1995 and measured in 1995 purchasing power parities (PPPs).<sup>5</sup> However, with a common currency in place in 1999, this PPP method is not suitable for the euro-area which should be treated statistically as other economies. Thus, despite substantial PPP differences between regions, PPPs are not relevant for the construction of national account series for the United States and should therefore also not play a role in the construction of euro area data series.<sup>6</sup>

Moreover, the standard aggregation method of the OECD Economic Outlook is applied for only a limited number of variables and provides only index series and growth rates. The major disadvantage of having only index series is that ratios of variables can not be calculated. For economic analysis, a complete and consistent set of series with variables expressed in euros is needed.<sup>7</sup>

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<sup>1</sup> This document has been prepared by the Macro-economic Analysis and Systems Management Division (MASD) of the Economics Department.

<sup>2</sup> The euro was launched in January 1999. The eleven original members were Germany, France, Italy, Spain, Portugal, Netherlands, Belgium, Luxembourg, Finland, Austria and Ireland. Greece joined the euro area in January 2001. More information on the Eurostat series, and their method of calculation is available from the internet site:

<http://europa.eu.int/en/comm/eurostat>. ECB statistics can be also accessed on the internet site: <http://www.ecb.int>.

<sup>3</sup> Halfyearly data are available only for a limited number of variables.

<sup>4</sup> All relevant series for the euro area are presented on the electronic data products related to the Economic Outlook (see <http://www.oecd.org/eco/>).

<sup>5</sup> Employment and other labour market aggregates are calculated as the sum of the country series. Current account aggregates are calculated as the sum of the country series in US dollars.

<sup>6</sup> PPPs will be relevant to compare the income per capita of the euro area with other parts of the OECD.

<sup>7</sup> A minor disadvantage of the standard aggregation method is that weighting is based on GDP and not on the variable itself. This can lead to a bias in the aggregate. Another source of distortion is the use of fixed (1995) weights which can create a bias for recent years if since the base year developments in the member countries are significantly

### *The aggregation method*

Aggregation for the years from 1999 onwards is straightforward. The irrevocable conversion rates make it possible to calculate euro aggregates by simply summing up the value and volume series of the 12 member countries after converting the series in euros.<sup>8</sup>

The aggregation problem lies in the years before 1999, for which no exchange rates vis-à-vis the euro are available and the bilateral exchange rates of the euro member countries are not constant. Using ECU's instead to convert is not correct, as its value depends on the currency development of non-euro countries, mainly the United Kingdom, and the ECU basket does not include the Finnish markka or the Austrian schilling. It is important to use the same method for the years before 1999 as for the years from 1999 onwards. Applying different methods would lead to a rupture in the series in 1998/1999, reducing substantially the value of the series for macro-economic analysis. It is also crucial that aggregates express accurately the average development in the euro-area. Some methods, which appeal to intuition, give aggregates not representing the average inflation development.<sup>9</sup> To prevent ruptures in the series and to get appropriate measures of inflation, value and volume series for the euro area are calculated as weighted averages of the twelve countries series using previous period value levels converted in a common currency as weights. This calculation method is applied to growth rates. Corresponding level series are constructed on the basis of these calculated average growth rates and corresponding 1999 values, calculated as the sum of the in euros converted values of the 12 member countries. Price series are obtained by dividing the value series by the volume series.

The starting year differs by series (see also Table 1). Demand and output data are available from 1960 onwards, while labour market data start in 1965, household and government appropriation account data in 1963, the long-term interest rate in 1966, the short-term interest rate in 1977, effective exchange rates in 1970, current account data in 1975 and potential output and output gap in 1980.

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different. There will also be a bias for years before the baseyear if the developments till the baseyear are significantly different between member countries.

<sup>8</sup> The available volume series for the 12 euro countries do not have the same baseyear. Therefore, they have to be rebased to a common base year (1999) before calculating the sum. Also, export and import series have to be corrected for trade within the euro-area.

<sup>9</sup> See Winder, C.C. A (1997), "On the construction of European area-wide aggregates: a review of the issues and empirical evidence", De Nederlandsche Bank Research Memorandum, No 499.

**Table 1. Key data 1960- 2003**

	Demand and output					Labour market			
	GDP volume (a)	GDP deflator (a)	GDP value (a)	Private consumption deflator (a)	output GAP (b)	Employment (a)	Labour force (a)	Unemployment rate (c)	Compensation per employee (a)
1960									
1961	6.1	3.7	10.0	2.9					
1962	5.4	4.0	9.6	3.2					
1963	4.5	4.9	9.6	4.5					
1964	5.8	4.7	10.8	3.9					
1965	4.8	4.1	9.1	3.8					
1966	4.4	3.6	8.2	3.7					
1967	3.5	3.1	6.8	2.9					
1968	5.4	3.3	8.9	2.9					
1969	7.1	5.0	12.5	4.0					
1970	5.5	6.4	12.2	4.4				2.3	
1971	3.6	7.0	10.9	5.7		0.4	0.5	2.4	
1972	4.6	6.6	11.5	6.3		-0.0	0.2	2.6	11.5
1973	5.7	9.3	15.5	8.9		1.1	1.0	2.5	15.3
1974	2.5	12.2	15.0	13.5		0.7	0.9	2.7	16.8
1975	-0.7	11.0	10.2	11.1		-0.7	0.5	3.9	14.9
1976	5.0	10.1	15.6	10.1		0.2	0.7	4.3	15.0
1977	2.9	9.9	13.1	9.8		0.4	0.8	4.7	12.8
1978	3.0	9.0	12.3	8.0		0.2	0.6	5.0	11.5
1979	3.7	8.8	12.8	9.3	2.8	1.0	1.3	5.2	11.9
1980	1.8	10.3	12.3	11.7	2.0	0.6	1.0	5.6	14.4
1981	0.4	9.9	10.4	11.6	-0.3	-0.5	0.9	6.9	11.3
1982	0.6	10.3	11.0	10.6	-2.2	-0.6	0.8	8.2	11.1
1983	1.4	8.4	9.9	8.7	-3.1	-0.5	0.7	9.3	9.7
1984	2.3	6.7	9.2	7.2	-2.9	-0.3	0.5	10.0	7.9
1985	2.2	5.4	7.8	5.7	-2.4	0.3	0.5	10.2	6.6
1986	2.4	5.5	8.0	3.4	-1.9	0.9	1.1	10.3	5.8
1987	2.5	3.5	6.0	3.1	-1.4	0.8	0.7	10.3	4.6
1988	4.1	3.8	8.0	3.4	0.5	1.2	0.9	10.0	4.5
1989	3.9	4.3	8.3	4.6	1.8	1.5	0.6	9.2	5.8
1990	3.6	4.9	8.6	4.5	2.9	1.9	1.1	8.4	5.5
1991 (d)	4.8	4.9	9.9	5.0	1.4	9.3	8.9	8.1	0.6
1992	1.4	4.3	5.8	4.6	0.3	-1.0	0.0	9.0	8.1
1993	-0.8	3.6	2.8	4.1	-2.4	-1.8	0.1	10.7	5.5
1994	2.3	2.8	5.2	3.4	-1.9	-0.4	0.4	11.4	3.3
1995	2.2	2.9	5.2	3.1	-1.6	0.6	0.2	11.1	3.8
1996	1.4	2.1	3.6	2.5	-2.2	0.3	0.6	11.4	1.9
1997	2.3	1.6	3.9	2.0	-1.9	0.8	0.8	11.4	1.7
1998	2.9	1.7	4.6	1.4	-1.3	1.8	1.0	10.8	1.1
1999	2.7	1.1	3.8	1.1	-0.9	1.9	0.9	9.9	1.6
2000	3.5	1.3	4.8	2.1	0.2	2.1	1.0	8.9	1.9
2001	1.6	2.5	4.1	2.5	-0.5	1.1	0.7	8.5	2.8
2002	1.4	2.1	3.6	1.6	-1.4	0.3	0.7	8.9	3.0
2003	3.0	1.6	4.7	1.7	-0.8	0.9	0.7	8.8	3.0

(a) percentage change from the previous period

(b) deviation of actual GDP from potential GDP, as a percentage of potential GDP

(c) as a percentage of labour force

(d) influenced by German reunification

**Table 1. Key data 1960- 2003 (continued)**

	Households			General government			
	Real disposable income (a)	Private consumption (volume) (a)	Saving ratio (b)	Receipts (c)	Outlays (c)	Net lending (c)	Debt (c)
1960							
1961		6.1					
1962		6.3					
1963		5.6	13.9	32.3	32.3	-0.0	
1964	6.4	4.8	15.2	32.6	32.3	0.3	
1965	6.2	5.3	15.9	32.4	33.0	-0.6	
1966	4.2	4.6	15.5	32.5	33.1	-0.5	
1967	3.9	4.1	15.2	32.9	33.7	-0.8	
1968	6.1	5.0	16.0	33.5	34.5	-1.0	
1969	7.6	6.9	16.5	34.0	33.9	0.1	
1970	7.5	6.1	16.6	33.7	34.0	-0.3	27.0
1971	5.4	4.9	17.0	34.2	35.0	-0.8	27.6
1972	5.6	5.0	17.6	34.4	35.7	-1.3	28.4
1973	4.7	5.2	17.3	35.4	35.7	-0.3	27.6
1974	2.2	2.1	17.4	35.6	37.0	-1.4	27.7
1975	2.8	2.5	17.8	36.7	41.1	-4.5	30.9
1976	2.7	4.6	16.4	38.2	41.1	-3.0	31.5
1977	2.6	3.6	15.9	38.9	41.4	-2.5	32.5
1978	3.7	3.2	16.4	39.1	42.5	-3.4	34.4
1979	2.7	3.7	15.7	39.4	42.6	-3.2	34.8
1980	1.0	1.7	15.1	40.1	43.3	-3.2	36.3
1981	1.3	0.1	16.1	40.6	45.8	-5.2	39.0
1982	-0.3	0.7	15.3	41.5	46.9	-5.3	43.4
1983	0.0	0.8	14.6	42.3	47.3	-5.0	47.1
1984	0.5	1.4	13.9	42.5	47.3	-4.8	50.2
1985	1.6	2.1	13.5	42.8	47.7	-4.8	53.2
1986	3.2	3.4	13.4	42.6	47.5	-4.9	54.9
1987	3.0	3.5	13.0	42.7	47.2	-4.5	56.9
1988	3.3	3.2	13.1	42.2	46.6	-4.4	57.3
1989	4.2	3.6	12.7	42.9	46.3	-3.5	57.8
1990	4.7	3.5	14.0	42.6	47.3	-4.7	60.3
1991 (d)	4.6	6.8	12.7	42.8	47.8	-5.0	60.4
1992	1.5	1.9	12.6	43.4	48.5	-5.1	64.3
1993	-1.3	-0.9	12.0	44.6	50.4	-5.8	68.8
1994	0.1	1.3	11.3	44.2	49.3	-5.1	71.6
1995	1.6	1.9	11.8	44.0	49.0	-5.0	75.5
1996	1.2	1.6	11.2	44.9	49.2	-4.3	78.2
1997	1.1	1.6	10.7	45.1	47.8	-2.6	78.5
1998	2.1	3.1	10.1	44.8	47.0	-2.2	77.1
1999	2.5	3.3	9.4	45.4	46.7	-1.3	75.3
2000	2.1	2.6	9.0	45.0	44.8	0.2	73.1
2001	2.2	1.9	9.4	44.3	45.5	-1.2	71.9
2002	2.1	1.7	9.8	44.2	45.5	-1.3	71.4
2003	2.4	2.7	9.6	44.1	45.0	-0.9	70.0

- (a) percentage change from the previous period  
(b) as a percentage of disposable income  
(c) as a percentage of GDP  
(d) influenced by German reunification

**Table 1. Key data 1960- 2003** (continued)

	Interest rates		Exchange rates			Current account		
	Long-term (b)	Short-term (b)	Euro/US\$ (b)	Nominal effective (a)	Real effective (CPI based) (a)	Ratio of Euro/US\$ and PPP (c)	In billion US dollars	As a percentage of GDP
1960			0.85					
1961			0.83			1.46		
1962			0.83			1.43		
1963			0.83			1.39		
1964			0.83			1.28		
1965			0.83			1.27		
1966			0.83			1.27		
1967			0.83			1.28		
1968			0.85			1.32		
1969			0.85			1.33		
1970			0.85			1.31		
1971			0.83	0.8	0.8	1.26		
1972			0.77	4.7	5.3	1.14		
1973			0.69	9.3	9.3	0.98		
1974			0.70	1.5	-3.0	0.97		
1975			0.67	7.1	2.8	0.91	1	0.1
1976			0.74	-1.1	-2.0	0.97	-8	-0.6
1977		8.5	0.73	2.9	1.7	0.93	-1	-0.1
1978		7.9	0.67	2.2	1.0	0.84	19	0.9
1979		9.5	0.63	5.9	2.1	0.79	-2	-0.1
1980		12.6	0.63	0.8	-4.0	0.79	-47	-1.7
1981		14.7	0.80	-12.2	-13.9	1.02	-35	-1.5
1982		13.4	0.93	-2.1	-1.2	1.14	-22	-1.0
1983		11.6	1.04	-2.0	-0.7	1.23	-3	-0.1
1984		11.1	1.19	-3.1	-4.0	1.37	11	0.5
1985		9.9	1.25	1.6	-0.4	1.42	17	0.8
1986		8.5	0.96	16.2	14.5	1.06	54	1.7
1987		8.2	0.82	9.2	6.3	0.90	42	1.1
1988		7.7	0.81	0.1	-4.4	0.89	43	1.0
1989	9.8	10.0	0.87	3.2	-4.2	0.96	35	0.8
1990	11.2	10.7	0.75	18.7	9.3	0.83	7	0.1
1991 (d)	10.5	10.6	0.77	0.6	-3.3	0.85	-63	-1.1
1992	10.0	11.1	0.74	6.5	3.9	0.82	-53	-0.8
1993	8.3	8.6	0.83	-1.3	-6.0	0.90	26	0.4
1994	8.2	6.3	0.83	6.2	-1.0	0.88	16	0.3
1995	8.6	6.6	0.76	8.0	3.5	0.81	56	0.8
1996	7.1	4.9	0.78	1.9	-0.5	0.82	82	1.1
1997	6.0	4.2	0.88	-6.3	-8.5	0.93	102	1.6
1998	4.8	3.8	0.90	5.9	2.4	0.95	71	1.1
1999	4.7	3.0	0.94	-1.1	-3.7	1.00	26	0.4
2000	5.4	4.4	1.09	-9.0	-10.1	1.17	-10	-0.2
2001	5.0	4.2	1.11	2.6	2.0		2	0.0
2002	4.8	3.0	1.11	1.1			22	0.3
2003	5.2	3.8	1.11	0.1			27	0.4

(a) percentage change from the previous period

(b) level

(c) Less than 1 : Euro overvalued vis-à-vis the US dollar on a PPP basis

(d) influenced by German reunification

## Annex: Detailed description of the construction of euro area series

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## 1. Introduction

This annex describes in detail the way the aggregate euro area series have been constructed.

For most variables, changes in the euro area aggregates are a weighted average of the changes in local currency for the 12 euro countries; with weights based on the values of the variable in the previous period.

The aggregates are calculated using data for western Germany up to end-1990 and data for the whole of Germany from 1991 onwards. As a consequence, there is a rupture in the aggregates in 1990/1991<sup>10</sup>.

## 2. Expenditures and GDP

### 2.1. Value series

Value aggregates for private consumption (CP), government consumption (CG), total investment (IT), residential investment (IH), government investment (IG), total domestic demand (TDD), exports of goods and services (XGS), imports of goods and services (MGS), and GDP (GDP) are based on weighting growth rates of the 12 euro area countries with moving weights based on the levels of the variable in the previous period expressed in a common currency<sup>11 12 13</sup>. Aggregate 1999 levels are based on the local currency levels and conversion rates based on exchange rate assumptions for 1999<sup>14</sup>.

In formulae:

$$\text{Equation 1: } Z_t^{eu12} / Z_{t-1}^{eu12} = \sum_{i \in eu12} \tau_{t-1}^{i, eu12} [Z_t^i / Z_{t-1}^i]$$

Z: value series in local currency (CP, CG, IT, TDD, XGS, MGS, GDP, IH, IG)

$$\text{Equation 2: } \tau_{t-1}^{i, eu12} = \{Z_{t-1}^i / EXCHUD_{t-1}^i\} / \left\{ \sum_{k \in eu12} Z_{t-1}^k / EXCHUD_{t-1}^k \right\} \quad \forall i \in eu12$$

EXCHUD: exchange rate, local currency per US\$

$$\text{Equation 3: } Z_{1999}^{eu12} = \sum_{i \in eu12} \{Z_{1999}^i / EUROCONV_{1999}^i\}$$

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<sup>10</sup> This rupture in the aggregated series is however not shown in the Economic Outlook publication. In this publication growth rate of the euro aggregates in 1991 are estimated on the basis of western German data.

<sup>11</sup> For early years, in case no data is available for some countries, changes in the euro-12 aggregate are based on weighting growth rates of (the major) countries for which data are available.

<sup>12</sup> For Luxembourg and Portugal, no data are available for residential and government investment. To get euro-12 aggregates, it is assumed that the share of residential (government) investment in total investment of Luxembourg is the same as for Belgium, while the Portuguese share is assumed equal to the Spanish one.

<sup>13</sup> The growth rate approach may make it easier in the future to link historical data of Eurostat on the euro area with projections calculated on the basis of projections of the twelve participating countries.

<sup>14</sup> The method to calculate conversion rates is described in European Union, "Joint communiqué on the determination of the irrevocable conversion rates for the Euro", 2 May 1998. See also section 5.



EUROCONV: conversion rates for the euro, local currency per euro<sup>15</sup>

It can easily be shown that this aggregation method for the years from 1999 onwards simply means the summing-up of the value (and volume series ) of the 12 euro countries after converting the series in euros. The following equation holds from 1999 onwards:

**Equation 4 :**  $EXCHUD_t^i = EXCHUD_t^{eu12} * EUROCONV_{1999}^i \quad \forall i \in eu12 ; t \geq 1999$

This means that the weight defined in Equation 2 can be rewritten:

**Equation 5 :**

$$\tau_{t-1}^{i,eu12} = \{Z_{t-1}^i / (EXCHUD_{t-1}^{eu12} * EUROCONV_{1999}^i)\} / \{ \sum_{k \in eu12} Z_{t-1}^k / (EXCHUD_{t-1}^{eu12} * EUROCONV_{1999}^k) \}$$

$$= Z_{t-1}^{*,j} / \{ \sum_{k \in eu12} Z_{t-1}^{*,k} \} = Z_{t-1}^{*,i} / Z_{t-1}^{*,eu12} \quad t \geq 2000$$

$Z^{*,j}$ : values series in euros [ $Z_{t-1}^{*,j} = Z_{t-1}^j / EUROCONV_{1999}^j$  ]

Rewriting Equation 1 and substituting in Equation 5 gives

**Equation 6 :**  $Z_t^{eu12} = Z_t^{*,eu12} = Z_{t-1}^{*,eu12} * \sum_{i \in eu12} \tau_{t-1}^{i,eu12} [Z_t^i / Z_{t-1}^i] =$

$$Z_{t-1}^{*,eu12} * \sum_{i \in eu12} \{ Z_{t-1}^{*,i} / Z_{t-1}^{*,eu12} \} [Z_t^{*,i} / Z_{t-1}^{*,i}] = \sum_{i \in eu12} Z_t^{*,i}$$

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<sup>15</sup> For Greece, the average of daily exchange rates between the drachma and the euro for the year 1999 has been used.

It is important to recognise that the aggregate measures of imports and exports derived in this way *include* trade between euro area countries.<sup>16</sup> Nevertheless, taking the difference between exports and imports nets out intra-trade (because intra-exports should equal intra-imports) and this difference is used in calculating other series such as the net foreign balance (see below).

The other value series - final domestic demand (FDD), total domestic demand (TDD), stockbuilding (ISK)<sup>17</sup>, net foreign balance (FBGS), private non-residential investment (IB) - are calculated on the basis of the constructed aggregates.

In formulae:

$$\text{Equation 7 : } FDD_t^{eu12} = CP_t^{eu12} + CG_t^{eu12} + IT_t^{eu12}$$

$$\text{Equation 8 : } FBGS_t^{eu12} = XGS_t^{eu12} - MGS_t^{eu12}$$

$$\text{Equation 9 : } TDD_t^{eu12} = GDP_t^{eu12} - FBGS_t^{eu12}$$

$$\text{Equation 10: } ISK_t^{eu12} = TDD_t^{eu12} - FDD_t^{eu12}$$

$$\text{Equation 11: } IB_t^{eu12} = IT_t^{eu12} - IH_t^{eu12} - IG_t^{eu12}$$

## 2.2. Volume series

Volume aggregates for private consumption (CPV), government consumption (CGV), total investment (ITV), residential investment (IHV), government investment (IGV), total domestic demand (TDDV), exports of goods and services (XGSV), imports of goods and services (MGSV), and GDP (GDPV) are based on weighting growth rates of the 12 euro area countries with moving weights based on exchange rates and local currency **value** levels in the previous period. Aggregate 1999 volume levels are equal to aggregate 1999 value levels as the baseyear of volume and price series is 1999.

In formulae:

$$\text{Equation 12: } Z_t^{eu12} / Z_{t-1}^{eu12} = \sum_{i \in eu12} \tau_{t-1}^{i, eu12} [Z_t^i / Z_{t-1}^i]$$

$Z$  : volume series (CPV, CGV, ITV, XGSV, MGSV, GDPV, IHV, IGV)

See Equation 2 for  $\tau_{t-1}^{i, eu12}$

$$\text{Equation 13: } Z_{1999}^{eu12} = Z_{1999}^{eu12}$$

$Z$  : value series (CP, CG, IT, XGS, MGS, GDP, IH, IG)

It is important to recognise that the volume series for exports and imports derived in this way *includes* trade between euro countries.

<sup>16</sup> At present there is data available providing a split of euro area trade in goods and services between intra- and extra-trade.

<sup>17</sup> The GDP statistical discrepancy is included in ISK, as a consequence of equations 9 and 10.

The other volume series - final domestic demand (FDDV), stockbuilding (ISKV)<sup>18</sup>, net foreign balance (FBGSV), private non-residential investment (IB) - are calculated on the basis of the constructed aggregates.

In formulae:

$$\text{Equation 14 : } FDDV^{eu12} = CPV^{eu12} + CGV^{eu12} + ITV^{eu12}$$

$$\text{Equation 15 : } FBGSV^{eu12} = XGSV^{eu12} - MGSV^{eu12}$$

$$\text{Equation 16 : } TDDV^{eu12} = GDPV^{eu12} - FBGSV^{eu12}$$

$$\text{Equation 17 : } ISKV_t^{eu12} = TDDV_t^{eu12} - FDDV_t^{eu12}$$

$$\text{Equation 18 : } IBV_t^{eu12} = ITV_t^{eu12} - IHV_t^{eu12} - IGV_t^{eu12}$$

### 2.3. Deflator series

Aggregate deflator series are constructed on the basis of the aggregate value and volume series.

In formulae:

$$\text{Equation 719 : } pZ_t^{eu12} = Z_t^{eu12} / Z_t^{eu12}$$

$pZ$  : deflator series (PCP, PCG, PIT, PXGS, PMGS, PGDP, PISK, PFDD, PTDD, PIH, FIG, PIB)

$Z$  : volume series (CPV, CGV, ITV, XGSV, MGSV, GDPV, ISKV, FDDV, TDDV, IHV, IGV, IBV)

$Z$  : value series (CP, CG, IT, XGS, MGS, GDP, ISK, FDD, TDD, IH, IG, IB)

It is again important to emphasise that the deflators for imports and exports are calculated on the basis of trade flows that *include* trade between euro member countries.

## 3. Government and household appropriation accounts

The aggregates of some of these series are biased by differences in definitions across countries, cf. Sources and Methods for the Economic Outlook (<http://www.oecd.org/eo/sources-and-methods/>). Moreover, there is a minor upward bias in the aggregate transfer series due to the non-consolidation of transfers to and from the EU budget. Consolidation is hampered by the countries' statistical treatment of these transfers, with half of the countries including EU transfers in the budget account, with the other half channeling them through the external accounts and the business sector only. The same holds for subsidies.

<sup>18</sup> The GDP statistical discrepancy is included in ISKV, as a consequence of equations 16 and 17.

For the government and household appropriation account series, due to lack of data for Luxembourg, euro-11 aggregates are calculated and then multiplied by one plus Luxembourg's share in total GDP (1.002) to get euro-12 aggregates.

Aggregation method in formulae:

$$\text{Equation 20 : } Z_t^{eu11} = \sum_{i \in eu11} [Z_t^i / \{EXCHUD_t^i / \{EXCHUD_t^{eu12}\}}]$$

Z<sup>19</sup>: WSSS, YOTH<sup>20</sup>, TRRH, TYH, TRPH, CPAA, TY, TYH, TIND, SSRG, TRRG, YPERG, CGAA, CGW, YPEPG, TSUB, SSPG, TRPG, IGAA, CAPOG, CFKG, GGINTP, GGINTR, GGFLM<sup>21</sup>

EXCHUD: exchange rate, local currency per US\$

$$\text{Equation 21 : } Z_t^{eu12} = 1.002 * Z_t^{eu11}$$

The other account series<sup>22</sup> - YRH, YDH, YDRH, SAVH, SRATIO, TYB<sup>23</sup>, YRG, YPG, SAVG, RESTG<sup>24</sup>, YPGT, NLG, NLGQ, GGFLMQ, YRGTQ, YPGTQ, GNINTP, GNINTQ, NLGX, NLGXQ, EQPF - are calculated on the basis of the constructed aggregates.

### 3.1. *Cyclically-adjusted government deficit*

Cyclically-adjusted government receipts, outlays and net lending have been calculated on the basis of aggregate tax and outlays elasticities, receipts and outlays and the calculated aggregate output gap.<sup>25</sup>

Aggregate elasticities are a GDP weighted average of the elasticities of the countries.

Tax elasticities	Code	Value
Direct tax on households	XTYHEL	1.0
Direct tax on business <sup>26</sup>	XTYBEL	1.2
Indirect tax	XTINDE	1.0
Social security contributions	XSSRGE	0.8
Current outlays (excluding interest payments)	XYPGEL	-0.2

<sup>19</sup> See section 0 for variable descriptions.

<sup>20</sup> YOTH is consolidated with interest paid on consumer debt (INTDBT) before aggregation.

<sup>21</sup> Data on general government gross financial liabilities (GGFL) have been used for some countries to get longer aggregate series for gross public debt (GGFLM).

<sup>22</sup> See section 0 for variable descriptions.

<sup>23</sup> TYB is calculated as TYB=TY-TYH. As a consequence, other direct taxes of Germany (ADB/INTERLINK code: ZCS020) and of the Netherlands (ZCS002) are included in TYB.

<sup>24</sup> RESTG is calculated as RESTG = CAPOG - IGAA + CFKG. As a consequence, net government capital transfers (Outlook code: KTRRG) is included in RESTG.

<sup>25</sup> For the calculation of the output gap see section 7. The calculation of country-specific elasticities is documented in Paul van den Noord: "The Size and Role of Automatic Stabilisers in the 1990s and Beyond", Economics Department Working Papers no. 230, 2000. The average is weighted by GDP weights.

<sup>26</sup> Lag coefficient XALPHA is 1.0 (see equation 25).

Calculations in formulae:<sup>27</sup>

**Equation 22:**  $IFU3 = GDPVTR / GDPV$

**Equation 23 :**  $GDPTR = GDP * IFU3$

**Equation 24 :**  $TYHA = TYH * IFU3^{**XYHEL}$

**Equation 25 :**  $TYBA = TYB * (XALPHA * IFU3^{**XYBEL} + (1 - XALPHA) * IFU3^{(-1)**XYBEL})$

**Equation 26 :**  $TINDA = TIND * IFU3^{**XTINDE}$

**Equation 27 :**  $SSRGA = SSRG * IFU3^{**XSSRGE}$

**Equation 28 :**  $YRGA = TYHA + TYBA + TINDA + SSRGA + TRRG + YPERG$

**Equation 29 :**  $YRQA = YRGA / GDPTR * 100$

**Equation 30 :**  $YPGA = (YPG - GGINTP) * IFU3^{**XYPGEL}$

**Equation 31 :**  $YPGQA = YPGA / GDPTR * 100$

**Equation 32 :**  $YPGA = YPGQA + GGINTP$

**Equation 33 :**  $YPGQA = YPGA / GDPTR * 100$

**Equation 34 :**  $NLGA = YRGA - YPGA - CAPOG$

**Equation 35 :**  $NLGA = NLGQA + GNINTP$

**Equation 36 :**  $NLGA = NLGQA / GDPTR * 100$

**Equation 37 :**  $NLGA = NLGQA / GDPTR * 100$

#### 4. Labour market

Aggregate series for total employment (ET), self-employed (ES), government employment (EG), unemployment (UN) and working-age population (POPT) are simply the sum of the series of the 12 euro-countries.<sup>28 29 30</sup>

In formulae:

**Equation 38 :**  $A_t^{eu12} = \sum_{i \in eu12} A_t^i$

---

<sup>27</sup> See section 0 for description of variables.

<sup>28</sup> Italy, Finland and the Netherlands have two total employment series: one based on labour market surveys (ET) and used to calculate unemployment and one based on national account series (ETNIA) and used to calculate wage rates. For these three countries, EG and ES are also national account series and therefore consistent with ETNIA. For the Netherlands, ET is in persons and ETNIA is in man years. As a consequence of this measurement in man years, EE, EEP and ETB will be marginally overestimated for the euro area.

<sup>29</sup> No adjustments have been made for the different statistical treatment of border workers. The employment series for Belgium are the numbers of persons employed in Belgium while the series for the other countries probably present the number of residents employed (including border workers). There is also a border worker problem for the series for Luxembourg.

<sup>30</sup> To have the euro area employment series starting in 1965, estimates have been made for the Netherlands and Luxembourg for early years because data are not available.

A: employment series (ET, ES, EG, UN, POPT)

The other employment series - total dependent employment (EE), dependent employment of the business sector (EEP), total employment of the business sector (ETB), labour force (LF), unemployment rate (UNR)<sup>31</sup> and participation rate (LFPR) are calculated on the basis of the other employment series<sup>32</sup>.

In formulae:

**Equation 39 :**  $EE = ET - ES$

**Equation 40 :**  $ETB = ET - EG$

**Equation 41 :**  $EEP = ET - ES - EG$

**Equation 42 :**  $LF = UN + ET$

**Equation 43 :**  $UNR = UN/LF*100$

**Equation 44 :**  $LFPR = LF / POPT *100$

A productivity series (PDTY) has been calculated using the euro area aggregate series for real GDP (GDPV) and total employment (ET). Aggregate series for the compensation rate of the business sector (WSSE) and unit labour costs of the total economy (ULC) have also been calculated.

In formulae:

**Equation 45 :**  $PDTY = [\{GDPV/ET\}/\{GDPV(1999)/ET(1999)\}]$

**Equation 46 :**  $WSSE = (WSSS-CGW)/EEP$

**Equation 47 :**  $ULC = [\{WSSS/GDPV\}/\{WSSS(1999)/GDPV(1999)\}]$

X(1999) is the value of the variable X in 1999 (the baseyear used for index series).

A government wage and a price deflator series (WRG and PCGW) as well as an indicator of net indirect taxes in volume (NITV) have been estimated. These series are then used to derive series for GDP in the business sector at factor cost (volume terms and deflator) (GDPBV and PGDPB) and unit labour costs in the business sector (ULCB).

In formulae:

**Equation 48 :**  $WRG = CGW/EG$

**Equation 49 :**  $PCGW = WRG/WRG(1999)$

**Equation 50 :**  $NITV = [TIND(1999)-TSUB(1999)]/[GDP(1999)-CGW(1999)] * [GDPV-CGW/PCGW]$

---

<sup>31</sup> The euro area unemployment rate is calculated on the basis of the unemployment data of the 12 countries according to the commonly used definitions. Therefore, it differs from the rate published by Eurostat based on standardised unemployment data. (See also 'Sources and Methods' of the OECD Economic Outlook, <http://www.oecd.org/pdf/M00009000/M00009635.pdf>).

<sup>32</sup> For EE, EEP and ETB, the euro-12 aggregates are not equal to the sum of the series of the twelve euro countries due to the existence of two total employment series for Italy, Finland and the Netherlands. See also footnote 28.

**Equation 51 :**  $GDPBV = GDPV - CGW / PCGW - NITV - CFKG / PIG$

**Equation 52:**  $ULCB = [\{WSSE * ETB\} / GDPBV]$

**Equation 53 :**  $PGDPB = [GDP - (TIND - TSUB) - CGW - CFKG] / GDPBV$

## 5. Interest rates and exchange rates

### 5.1. Interest rates and money supply

Short-term (IRS) and long-term (IRL) interest rates for the euro area are calculated as GDP weighted averages of the rates of the twelve countries.<sup>33</sup>

In formulae:

$$\text{Equation 54 : } IRX_t^{eu12} = \sum_{i \in eu12} \sigma_{t-1}^{i, eu12} IRX_t^{i, eu12}$$

IRX: interest rates (IRL, IRS)

$$\text{Equation 55 : } \sigma_{t-1}^{i, eu12} = \{GDP_{t-1}^i / EXCHUD_{t-1}^i\} / \left\{ \sum_{k \in eu12} GDP_{t-1}^k / EXCHUD_{t-1}^k \right\} \quad \forall i \in eu12$$

Euro area money supply indicator (M3) is directly extracted from ECB sources. Since September 1997, these series are compiled by the ECB based on the consolidation of balance sheets of the relevant institutions. Before that date this series is spliced with another estimated monthly series (starting in 1980) published by the ECB in its February 1999 Bulletin.

### 5.2. Exchange rate vis-à-vis the US dollar

Since January 1999 (for Greece, January 2001) we used the official euro/US\$. Before that date changes in this bilateral exchange rate are calculated as the GDP weighted average of the changes in the bilateral exchange rates of the euro countries.

In formulae:

**Equation 56 :**

$$EXCHUD_t^{eu12} / EXCHUD_{t-1}^{eu12} = \sum_{i \in eu12} \sigma_{t-1}^{i, eu12} [EXCHUD_t^i / EXCHUD_{t-1}^i]$$

---

<sup>33</sup> Since January 1999, short-term interest rates have been identical in all the original 11 euro-countries. Since Greece has only been a member since January 2001, the aggregate short-term interest rate for the years 1999 and 2000 reflects a weighted average of the euro11-rate and that of Greece.

Since the 1<sup>st</sup> January 1999, the euro conversion rates are the following:

<b>Currency</b>	<b>Units of national currency for 1 euro</b>
Belgian franc	40.3399
Deutsche Mark	1.95583
Spanish peseta	166.386
French franc	6.55957
Irish pound	0.787564
Italian lira	1936.27
Luxembourg franc	40.3399
Dutch guilder	2.20371
Austrian schilling	13.7603
Portuguese escudo	200.482
Finnish markka	5.94573
Greek drachma	340.75

The implied Greek Conversion rate used in the calculations is the average of the daily 1999 Drachma/Euro exchange rates (325.8). The official conversion rate as of January 2001 is 340.75.



### 5.3. Nominal effective exchange rate

The nominal effective exchange rate (EXCHEB) is calculated as well.

**Equation 57:**

$$EXCHEB_{i,t} = EXCHEB_{i,t-1} * \exp[\ln\{EXCH_{i,t} / EXCH_{i,t-1}\} - \sum_{j \in OECD, NON12} w1_{ij,t-1} * \ln\{EXCH_{j,t} / (EXCH_{j,t-1})\}]$$

NON12=[Singapore, Chinese Tapei, Hong Kong China, China, Indonesia, Malaysia, the Philippines, Thailand, India, Argentina, Brazil, Russia (from 1993 onwards)]

### 5.4. Real effective exchange rates / competitiveness indicators

Three real effective exchange rates (competitiveness indicators) are calculated. One is based on relative consumer price developments (CPIDR), one is based on relative unit labour cost in the manufacturing sector (ULCMDR), and one is based on relative export prices of manufactured goods (PXMDR). The indicators for the euro area are not calculated as a weighted average of the indicators for the twelve euro member countries but calculated directly using weights based on bilateral trade data of the euro area with other countries and regions<sup>34</sup>.

In formulae:

**Equation 58:**

$$XDR_{i,t} = XDR_{i,t-1} * \exp[\ln\{(X_{i,t} * EXCHIN_{i,t}) / (X_{i,t-1} * EXCHIN_{i,t-1})\} - \sum_{j \in OECD, NON12} w1_{ij,t-1} * \ln\{(X_{j,t} * EXCHIN_{j,t}) / (X_{j,t-1} * EXCHIN_{j,t-1})\}]$$

XDR = ULCMDR if X = ULCM

XDR = CPIDR if X = CPI

XDR = PXMDR if X = PXM

with:

CPI consumer price

CPIDR competitiveness,relative consumer prices (CPI),overall weights

PXM manufactured goods exports, unit value, customs basis

PXMDR competitiveness,relative exp.price manufact,overall weights

ULCM unit labour cost of the manufacturing sector

ULCMDR competitiveness,rel.unit labour costs manufacturing sector,overall weights

**Equation 59:**

$$w1_{ij,t-1} = \sum_{k=1, \dots, N} [T_{ik,t-1} / \sum_{k'=1, \dots, N} T_{ik',t-1}] [T_{jk,t-1} / \sum_{j'=1, \dots, N} T_{j'k,t-1}] \quad w1_{ij,t-1} = 0 \text{ if } i=j$$

<sup>34</sup> See for more information:

Durand, M., C. Madaschi and F. Terribile (1998), "Trends in OECD countries' international competitiveness: the influence of emerging market economies" *OECD Economics Department working paper*, No. 195

(<http://www.oecd.org/pdf/M00001000/M00001292.pdf>) and wp 120

(<http://www.oecd.org/pdf/M00007000/M00007153.pdf>).

- Durand, M., J. Simon and C. Webb (1992), "OECD's indicators of international trade and competitiveness", *OECD Economics Department working paper*, No. 120

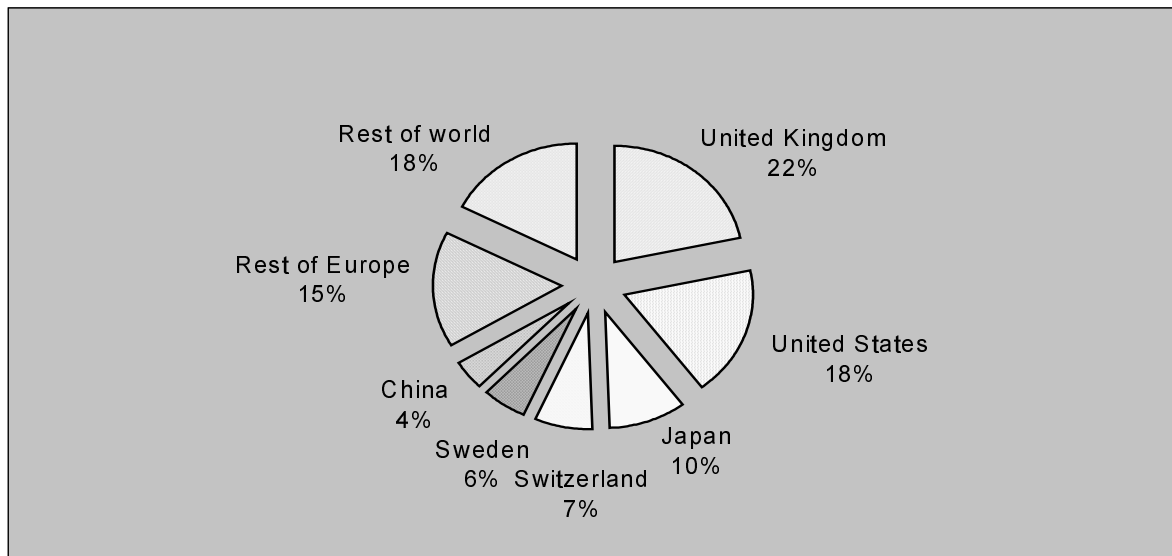
$$\sum_{j \in OECD, NON12} w_{ij,t-1} = 1 \forall i$$

$T_{ik}$  : export of manufactured goods from country i to country k (if i≠k); production of the manufacturing sector (net of exports) (if i=k)

M: number of competitors

N: number of markets (countries and regions)

**Figure 1: Major competitors of the euro area (1999)**



**Table 1: The competitors of the euro area (1999)**

Country	share
United Kingdom	21.6
United States	18.0
Japan	9.6
Switzerland	7.2
Sweden	5.6
China	3.9
Hong Kong, China	3.1
Hungary	2.8
Czech Republic	2.7
Poland	2.7
Korea	2.5
Denmark	2.5
Chinese Taipei	2.5
Singapore	1.9
Turkey	1.7
Russia	1.5
Malaysia	1.3
Norway	1.2
India	1.1
Canada	1.0
Slovak Republic	0.9
Thailand	0.9
Brazil	0.9
Philippines	0.7
Mexico	0.7
Indonesia	0.6
Australia	0.6
Argentina	0.2
New Zealand	0.1
Iceland	0.1

## 6. Current account of the balance of payments

Aggregate current account series in US\$ are the sum of the series of the twelve euro area countries<sup>35</sup>. The aggregate series in euros are based on the US\$ aggregates and the calculated bilateral euro/US\$ exchange rates.

In formulae:

$$\text{Equation 60 : } Cd_t^{eu12} = \sum_{i \in eu12} Cd_t^i$$

$$\text{Equation 61 : } Cl_t^{eu12} = Cd_t^{eu12} * EXCHUD_t^{eu12}$$

$Cd$ <sup>36</sup>: current account series in US\$ (XGBD, MGBD, XSRD, MSRD, XSIID, MSIID, OFTD, NTTROD, TBD, BSRD, BSIID, INVBD, CBD, BSD, BGSD, SPTD)<sup>37</sup>.

$Cl$ : current account series in euros (XGB, MGB, XSR, MSR, XSII, MSII, OFT, NTTRO, TB, BSR, BSII, INVB, CB, BS, BGS, SPT)

Export and import series for goods, non-factor services and factor services include intra-euro trade as is the case for the national account series for exports and imports of goods and services.

The current account as a percentage of GDP (CBGDPR) has also been calculated.

$$\text{Equation 62 : } CBGDPR_t^{eu12} = CB_t^{eu12} / GDP_t^{eu12} * 100$$

## 7. Potential output, output gap and NAIRU

Aggregate potential output (GDPVTR) is based on weighting potential output growth rates of the 12 euro area countries with moving weights based on exchange rates and local currency **GDP value** levels in the previous period.

In formulae:

$$\text{Equation 63 : } GDPVTR_t^{eu12} / GDPVTR_{t-1}^{eu12} = \sum_{i \in eu12} \sigma_{t-1}^{i, eu12} [GDPVTR_t^i / GDPVTR_{t-1}^i]$$

$$\text{Equation 64 : } \sigma_{t-1}^{i, eu12} = \{GDP_{t-1}^i / EXCHUD_{t-1}^i\} / \left\{ \sum_{k \in eu12} GDP_{t-1}^k / EXCHUD_{t-1}^k \right\} \quad \forall i \in eu12$$

$$\text{Equation 65 : } GDPVTR_{1999}^{eu12} = \sum_{i \in eu12} [\{GDPVTR_{1999}^i * PGDP_{1999}^i\} / EUROCONV_{1999}^i]$$

EUROCONV: conversion rates for the euro, local currency per Euro

The output gap for euro area (GAP) is calculated on the basis of aggregate actual and potential real GDP:

<sup>35</sup> Note that the ECB has started publishing monthly balance of payment data of the euro area since the end of April 1999. These statistics, which are directly compiled by the ECB on the basis of data on extra-euro transactions reported by euro area countries, cover however only 1998 and the first months of 1999.

<sup>36</sup> See section 9.2.5 for description of variables.

<sup>37</sup> Equation can also be applied for balance variables such as TBD given the consistency of the current account series by country.

**Equation 66 :**  $GAP_{1999}^{eu12} = [\{GDPV_{1999}^{eu12} / GDPVTR_{1999}^{eu12}\} - 1] * 100$

The NAIRU (UNRMIN) is calculated on the basis of the NAIRU's of the 12 countries and the euro area aggregate labour force<sup>38</sup>:

**Equation 67 :**  $UNRMIN_{1999}^{eu12} = \sum_{i \in eu12} [\{UNRMIN_{1999}^i / 100 * LF_{1999}^i\}] / LF_{1999}^{eu12} * 100$

---

<sup>38</sup> For Luxembourg, it is assumed that the NAIRU is equal to the actual unemployment rate (UNRMIN = UNR). The same assumption is made for Portugal before 1985. The methodology for estimating the NAIRU's for individual countries is documented in the Economic Department Working Paper No. 250 by P. Richardson, L. Boone, C. Giorno, M. Meacci, D. Rae and D. Turner (2000), "The concept, policy use and measurement of structural unemployment: Estimating a time varying NAIRU across 21 OECD countries" (<http://www.oecd.org/pdf/M00002000/M00002049.pdf>).

## 8. Euro area Projection Tables

### 8.1 Demand, output and prices

#### 8.1.1 Yearly

Percentage changes from previous period, volume (1999 prices), seasonally adjusted at annual rates

	1999		1996	1997	1998	1999	2000	2001	2002	2003
	current prices euro billion	% gdp								
Private consumption	3582	57.3	1.6	1.6	3.1	3.3	2.6	1.9	1.7	2.7
Government consumption	1247	19.9	1.6	1.3	1.2	2.1	2.0	1.6	1.5	1.5
Gross fixed capital formation	1311	21.0	1.4	2.4	5.3	5.4	4.5	0.6	0.7	3.8
Private residential	363	5.8	0.9	1.1	2.0	3.7	0.8	-1.9	-0.0	2.1
Private non residential	791	12.6	2.2	4.4	7.0	6.3	6.7	1.3	0.7	4.8
Public	157	2.5	-1.4	-3.4	4.9	5.2	1.9	2.7	2.4	2.5
Final domestic expenditure	6140	98.2	1.6	1.7	3.2	3.5	2.9	1.6	1.5	2.7
* stockbuilding	20	0.3	-0.5	0.1	0.4	-0.2	0.0	-0.4	0.1	0.2
Total domestic expenditure	6160	98.5	1.1	1.8	3.6	3.2	2.9	1.2	1.5	2.9
Exports of goods and services	2076	33.2	4.4	10.5	7.3	5.2	12.1	4.0	2.7	7.3
Imports of goods and services	1980	31.7	3.3	9.2	10.0	7.1	10.9	2.9	3.0	7.2
* net exports	95	1.5	0.4	0.6	-0.6	-0.5	0.6	0.4	-0.0	0.2
GDP at market prices	6255	100.0	1.4	2.3	2.9	2.7	3.5	1.6	1.4	3.0
GDP price deflator			2.1	1.6	1.7	1.1	1.3	2.5	2.1	1.6
GDP at current prices			3.6	3.9	4.6	3.8	4.8	4.1	3.6	4.7
<b>Memorandum items</b>										
Private consumption deflator			2.5	2.0	1.4	1.1	2.1	2.5	1.6	1.7
Potential output			2.0	2.1	2.3	2.2	2.3	2.4	2.4	2.3
Output gap (level)			-2.2	-1.9	-1.3	-0.9	0.2	-0.5	-1.4	-0.8

\* contributions to changes in real gdp (as a per cent of real gdp in the previous period)

## 8.1.2 Halfyearly

### Demand and output, inflation, employment, interest rates

Percentage changes from previous period, volume (1999 prices), seasonally adjusted at annual rates

	1999:2	2000:1	2000:2	2001:1	2001:2	2002:1	2002:2	2003:1	2003:2
<b>Demand and output</b>									
Private consumption	2.9	3.2	1.4	2.4	1.4	1.5	2.4	2.7	2.8
Government consumption	2.5	2.0	1.3	2.0	1.1	1.6	1.6	1.5	1.5
Gross fixed capital formation	5.8	4.8	2.6	0.2	-0.3	0.2	2.8	4.0	4.4
Private residential	3.6	1.2	-2.1	-2.6	0.1	-0.6	1.2	2.3	2.6
Private non residential	7.3	7.2	4.9	1.0	-1.5	0.3	3.6	5.0	5.5
Public	3.7	1.3	1.6	2.4	4.9	1.4	2.3	2.6	2.7
Final domestic expenditure	3.4	3.3	1.6	1.8	1.0	1.3	2.3	2.7	2.9
* stockbuilding	-0.4	0.2	0.1	-0.8	-0.1	0.1	0.2	0.2	0.1
Total domestic expenditure	3.0	3.5	1.8	1.0	0.9	1.3	2.5	3.0	3.0
Exports of goods and services	11.5	12.3	12.4	2.4	-0.5	2.6	6.2	7.5	7.9
Imports of goods and services	9.2	11.6	11.0	0.3	0.8	2.7	6.0	7.5	7.7
* net exports	0.8	0.4	0.7	0.8	-0.4	0.0	0.2	0.2	0.3
GDP at market prices	3.7	3.9	2.4	1.8	0.4	1.4	2.7	3.1	3.2
<b>Memorandum items</b>									
GDP at current prices	4.7	5.3	4.0	4.7	3.0	3.4	4.5	4.7	4.9
<b>Inflation</b>									
GDP price deflator	0.9	1.4	1.5	2.9	2.6	2.0	1.8	1.6	1.7
Private consumption deflator	1.7	2.1	2.4	2.7	2.3	1.4	1.5	1.7	1.8
Government consumption	1.8	2.1	1.9	2.7	2.1	2.1	2.1	2.1	2.1
Gross fixed investment	1.6	2.9	2.5	2.0	1.8	1.6	1.5	1.6	1.6
Final domestic demand	1.7	2.3	2.3	2.6	2.2	1.6	1.6	1.8	1.9
Total domestic demand	2.0	2.7	2.5	2.4	2.1	1.6	1.6	1.8	1.8
Exports of goods and services	3.2	5.9	4.3	1.2	0.2	0.1	1.0	1.9	1.7
Imports of goods and services	6.7	9.8	6.9	0.0	-1.1	-1.2	0.3	2.4	2.0
<b>Employment and unemployment</b>									
Total employment	2.1	2.3	1.9	1.2	0.0	0.3	0.4	1.0	1.2
Labour force	1.1	1.0	0.9	0.6	0.8	0.6	0.8	0.7	0.7
Unemployment	-7.3	-10.5	-9.2	-6.1	9.5	4.3	4.1	-2.1	-4.2
Unemployment ( level in millions)	13.2	12.5	11.9	11.6	12.1	12.4	12.6	12.5	12.2
Unemployment rate (level)	9.7	9.1	8.6	8.3	8.7	8.8	9.0	8.9	8.6
<b>Interest rates</b>									
Short-term interest rate (level)	3.1	3.9	4.9	4.5	3.8	2.8	3.1	3.5	4.0
Long-term interest rate (level)	5.2	5.5	5.4	5.1	4.9	4.7	4.9	5.1	5.3
<b>Memorandum items</b>									
Current account balance (level, \$ billion)	4.0	15.7	-36.4	0.3	3.4	17.6	26.6	25.0	29.2

\* contributions to changes in real gdp (as a per cent of real gdp in the previous period)

## 8.2 Employment, income and inflation

Percentage changes from previous period

	1999 Millions	% total	1996	1997	1998	1999	2000	2001	2002	2003
<b>Employment and Unemployment</b>										
Government Employment	19.7	16.0	-0.2	-0.0	-0.4	0.4	0.7	0.4	0.4	0.1
Employment of the business sector	103.5	84.0	0.5	0.9	2.2	2.2	2.4	1.2	0.2	1.1
Dependent business employment	82.1	66.6	0.5	1.1	2.6	2.9	3.0	1.4	0.3	1.1
Self-employed	21.5	17.4	0.3	0.2	0.7	-0.5	0.2	0.5	0.1	0.7
Total employment	123.2	100.0	0.3	0.8	1.8	1.9	2.1	1.1	0.3	0.9
Labour force	136.7		0.6	0.8	1.0	0.9	1.0	0.7	0.7	0.7
Unemployment	13.5		2.9	0.9	-4.7	-7.4	-9.4	-3.2	5.5	-1.1
Unemployment rate (level)			11.4	11.4	10.8	9.9	8.9	8.5	8.9	8.8
<b>Wages</b>										
Compensation rate of the business sector			1.9	1.7	1.1	1.6	1.9	2.8	3.0	3.0
<b>Memorandum items</b>										
Nairu estimate (level)			9.2	9.1	8.9	8.8	8.7	8.5	8.3	8.2
Actual participation rate (level)			66.2	66.6	67.2	67.8	68.4	68.8	69.2	69.7
Labour share in GDP (level)			50.5	50.0	49.3	49.6	49.5	49.4	49.2	48.9
Real compensation per employee, private			-0.6	-0.3	-0.4	0.5	-0.1	0.2	1.4	1.3
Labour productivity of total economy			1.1	1.6	1.1	0.8	1.3	0.5	1.2	2.1
GDP at market prices, volume			1.4	2.3	2.9	2.7	3.5	1.6	1.4	3.0



### 8.3 Appropriation account for households

	1999		1996	1997	1998	1999	2000	2001	2002	2003
	euro billion	% total								
Contributions to nominal disposable income growth Percentage points										
Compensation of employees	3101	52.6	2.2	2.2	2.6	3.4	3.6	3.1	2.6	3.1
Other income ( including property income)	1531	25.9	1.8	1.4	1.6	1.4	1.6	1.5	1.4	1.7
Current transfer received	1269	21.5	2.0	1.1	0.9	1.1	0.9	1.2	1.4	1.2
Less : Direct taxes	618	10.5	0.8	0.6	1.0	0.9	0.8	0.1	0.5	0.6
Current transfers paid	1357	23.0	1.5	1.1	0.4	1.3	1.2	0.9	1.1	1.2
Disposable income	3926	66.5	3.7	3.1	3.6	3.6	4.2	4.8	3.8	4.2
Percentage changes from previous period										
Compensation of employees	3101	52.6	2.8	2.8	3.3	4.3	4.6	4.0	3.3	3.9
of which : Wages	2364	40.1	2.4	2.5	3.5	4.4	4.7	4.0	3.2	3.9
Employers contributions										
Other income ( including property income)	1531	25.9	4.8	3.7	4.1	3.6	4.2	3.8	3.6	4.5
Current transfer received	1269	21.5	6.2	3.4	2.7	3.4	2.9	3.7	4.4	3.7
Total income	5901	100.0	4.0	3.2	3.3	3.9	4.1	3.9	3.6	4.0
Direct taxes	618	10.5	5.4	3.9	6.4	5.8	5.0	0.9	3.0	3.8
Current transfers paid	1357	23.0	4.4	3.0	1.2	3.9	3.4	2.7	3.4	3.7
Disposable income	3926	66.5	3.7	3.1	3.6	3.6	4.2	4.8	3.8	4.2
Consumers' expenditure	3585	60.8	4.4	3.6	4.4	4.4	4.7	4.3	3.4	4.4
Saving ratio (level)			11.2	10.7	10.1	9.4	9.0	9.4	9.8	9.6
Real disposable income			1.2	1.1	2.1	2.5	2.1	2.2	2.1	2.4
Real private consumption			1.6	1.6	3.1	3.3	2.6	1.9	1.7	2.7

## 8.4 General government income and outlay account

% of GDP

	1999		1996	1997	1998	1999	2000	2001	2002	2003
	Euro Billion	% total								
<b>Receipts</b>										
Direct taxes	797	28.1	11.9	12.1	12.4	12.7	12.9	12.5	12.4	12.3
Household direct taxes	618	21.8	9.5	9.5	9.7	9.9	9.9	9.6	9.5	9.4
Corporate direct taxes	180	6.3	2.4	2.6	2.7	2.9	3.0	2.9	2.8	2.9
Indirect taxes	861	30.4	12.7	12.9	13.5	13.8	13.6	13.5	13.6	13.7
Social security contributions	1022	36.0	17.5	17.5	16.4	16.3	16.1	15.9	15.8	15.7
Other current transfers received	67	2.4	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0
Property and entrepreneurial income	91	3.2	1.7	1.6	1.5	1.4	1.4	1.5	1.4	1.3
Total current receipts	2838	100.0	44.9	45.1	44.8	45.4	45.0	44.3	44.2	44.1
<b>Disbursements</b>										
Government consumption	1249	44.8	20.6	20.3	19.9	20.0	19.8	19.8	19.8	19.6
Subsidies	92	3.3	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.3
Social security outlays	1061	38.1	17.5	17.5	17.0	17.0	16.6	16.5	16.7	16.5
Other current transfers paid	114	4.1	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9
Property income paid	271	9.7	5.7	5.2	4.8	4.3	4.1	3.9	3.7	3.7
Total current disbursements	2787	100.0	47.1	46.1	45.0	44.6	43.8	43.4	43.5	42.9
Savings	51		-2.2	-1.0	-0.2	0.8	1.3	0.9	0.8	1.2
Gross investment	157		2.6	2.4	2.4	2.5	2.5	2.5	2.6	2.5
Consumption of fixed capital	69		1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Other capital transactions (a)	45		0.7	0.3	0.7	0.7	-0.4	0.6	0.6	0.6
Net capital outlays	134		2.1	1.6	2.0	2.1	1.0	2.1	2.1	2.0
Total outlays	2921		49.2	47.8	47.0	46.7	44.8	45.5	45.5	45.0
Net lending	-83		-4.3	-2.6	-2.2	-1.3	0.2	-1.2	-1.3	-0.9
<b>Memorandum items</b>										
Net primary balance	159		0.9	2.0	2.1	2.5	3.9	2.3	2.0	2.3
Net interest payments	242		5.2	4.6	4.3	3.9	3.7	3.4	3.3	3.2
Gross government debt	4708		78.4	78.5	77.1	75.3	73.1	71.9	71.4	70.0
Gross financial liabilities	4709		78.2	78.5	77.1	75.3	73.1	71.9	71.4	70.0
Net financial liabilities			57.6	57.6	57.0	55.4	52.7	51.4	51.0	49.8
<b>Cyclically adjusted revenues, outlays and net lending (b)</b>										
Current receipts			44.8	45.0	44.7	45.3	45.0	44.3	44.2	44.0
Current disbursements			45.9	45.1	44.3	44.1	43.9	43.1	42.7	42.5
Net lending			-3.2	-1.7	-1.5	-0.9	-0.9	-0.9	-0.6	-0.5
Primary balance			1.8	2.9	2.7	3.0	2.7	2.5	2.6	2.7

(a) Including net capital transfers.

(b) As a percentage of potential GDP.

## 8.5 Prices and costs

Percentage changes from previous period

	1996	1997	1998	1999	2000	2001	2002	2003
<b>Prices deflator</b>								
Private consumption	2.5	2.0	1.4	1.1	2.1	2.5	1.6	1.7
Government consumption	2.2	1.4	1.5	1.8	2.0	2.4	2.1	2.1
Gross fixed investment	1.0	1.0	0.9	0.9	2.5	2.1	1.6	1.6
Private residential investment	1.2	1.5	1.2	1.6	2.6	2.7	1.8	1.8
Private non-residential investment	0.9	0.8	0.7	0.6	2.2	1.8	1.4	1.5
Government investment	0.8	1.0	0.8	1.2	3.5	2.5	2.1	1.6
Final domestic demand	2.1	1.7	1.3	1.2	2.1	2.4	1.7	1.8
Total domestic demand	2.1	1.8	1.3	1.2	2.5	2.4	1.7	1.7
Exports of goods and services	0.8	1.8	-0.1	-0.4	4.8	1.7	0.4	1.6
Imports of goods and services	0.8	2.6	-1.4	-0.1	8.3	1.4	-0.8	1.8
GDP	2.1	1.6	1.7	1.1	1.3	2.5	2.1	1.6
Terms of trade (goods&services)	0.0	-0.7	1.4	-0.3	-3.2	0.3	1.2	-0.2
<b>Wages costs</b>								
Compensation rate of the business sector	1.9	1.7	1.1	1.6	1.9	2.8	3.0	3.0
Wage rate of the business sector	1.1	1.3	1.6	1.9	2.3	3.0	2.9	3.1
Labour productivity of total economy	1.1	1.6	1.1	0.8	1.3	0.5	1.2	2.1
Unit labour costs, total economy	1.4	0.5	0.4	1.6	1.1	2.3	1.8	0.9
<b>Memorandum items</b>								
Output gap (level)	-2.2	-1.9	-1.3	-0.9	0.2	-0.5	-1.4	-0.8
Net indirect tax rate (level)	11.0	11.4	12.0	12.3	12.2	12.1	12.3	12.4

## 8.6 Financial data

	1996	1997	1998	1999	2000	2001	2002	2003
Short-term interest rate	4.9	4.2	3.8	3.0	4.4	4.2	3.0	3.8
Long-term interest rate	7.1	6.0	4.8	4.7	5.4	5.0	4.8	5.2
Real short-term interest rate	2.6	2.1	2.7	1.7	2.1	1.6	1.5	2.0
Real long-term interest rate	4.9	3.9	3.6	3.4	3.2	2.5	3.3	3.4
Euro/US\$ rate (level)	0.78	0.88	0.90	0.94	1.09	1.11	1.11	1.11
Euro/US\$ rate (% change)	2.5	14.0	1.6	4.4	15.6	2.7	-0.6	-0.0
US\$/euro rate (level)	1.29	1.13	1.11	1.07	0.92	0.90	0.90	0.90
Short-term rate differential vis-à-vis the US	-0.5	-1.4	-1.7	-2.4	-2.1	0.4	0.8	0.7
Long-term rate differential vis-à-vis the US	0.7	-0.3	-0.5	-1.0	-0.6	0.1	0.3	0.2
PPP (vis-à-vis US dollar; level)	0.94	0.95	0.95	0.94	0.93			
Euro/US\$ rate relative to PPP (a)	-17.7	-6.7	-5.0	0.3	17.0			
Net government lending, % of GDP	-4.3	-2.6	-2.2	-1.3	0.2	-1.2	-1.3	-0.9
Output gap	-2.2	-1.9	-1.3	-0.9	0.2	-0.5	-1.4	-0.8
Private consumption deflator	2.5	2.0	1.4	1.1	2.1	2.5	1.6	1.7
GDP price deflator	2.1	1.6	1.7	1.1	1.3	2.5	2.1	1.6

(a) Negative value means that euro is overvalued vis-à-vis the US dollar on a PPP basis

## 8.7 Competitiveness indicators

	1996	1997	1998	1999	2000	2001	01 Q1	01 Q2	01 Q3	01 Q4
<b>Index levels ( 1995=100)</b>										
Indicator based on :										
Consumer prices	99.5	91.0	93.2	89.7	80.7	82.3	83.0	81.0	82.3	82.8
Unit labour costs of manufacturing sector	100.6	91.0	93.2	92.9	83.7	84.7	85.5	83.4	84.6	85.3
Export price of manufactured goods	100.0	93.9	96.6	93.7	87.6	90.1	90.5	88.4	90.0	91.3
<b>Memorandum items</b>										
Nominal effective exchange rate	101.9	95.6	101.2	100.0	91.1	93.4	93.9	91.9	93.4	
<b>Percentage changes from previous period</b>										
Indicator based on :										
Consumer prices	-0.5	-8.5	2.4	-3.7	-10.1	2.0	6.0	-2.4	1.6	0.5
Unit labour costs of manufacturing sector	0.6	-9.6	2.4	-0.3	-9.9	1.2	5.5	-2.5	1.5	0.9
Export price of manufactured goods	-0.0	-6.1	2.9	-2.9	-6.5	2.8	6.3	-2.3	1.9	1.3
<b>Memorandum items</b>										
Nominal effective exchange rate	1.9	-6.3	5.9	-1.1	-9.0	2.6	6.0	-2.2	1.7	

1. A fall in a competitiveness indicator indicates an improvement in the competitive position

2. 2001 Q2 based on unchanged exchange rates from 2 November 2001 onwards

## 8.8 Current account balances

	1996	1997	1998	1999	2000	2001	2002	2003
<b>Level in bln of US dollars</b>								
Export of goods	919.6	926.8	962.8	948.1	943.1	989.6	1034.0	1127.8
Import of goods	771.9	775.2	812.4	840.0	880.2	892.2	912.9	999.7
Trade balance	147.7	151.5	150.5	108.1	62.8	97.3	121.0	128.1
Export of non-factor services	211.5	216.1	220.8	229.4	229.2	228.5	239.2	258.7
Import of non-factor services	205.8	208.5	220.2	236.0	237.1	242.4	253.9	273.3
Net export of non-factor services	5.7	7.6	0.6	-6.7	-7.9	-13.9	-14.7	-14.6
Investment income received	145.6	159.9	163.3	180.5	196.3	204.7	217.1	225.7
Investment income paid	172.0	173.5	194.4	210.6	217.2	248.5	261.8	271.7
Net investment income received	-26.4	-13.6	-31.2	-30.1	-20.9	-43.7	-44.7	-46.1
Net private transfers	0.6	-0.7	-0.3	-1.4	-0.3	0.8	0.3	-0.4
Net official transfers	-45.7	-43.2	-48.2	-44.2	-44.1	-38.6	-39.7	-39.9
Balance of invisibles	-65.9	-50.0	-79.1	-82.4	-73.2	-95.5	-98.9	-101.0
Current account	81.9	101.6	71.3	25.7	-10.4	1.9	22.1	27.1
<b>Change in bln of US dollars</b>								
Export of goods	42.6	7.2	36.0	-14.7	-5.1	46.5	44.4	93.9
Import of goods	19.1	3.4	37.1	27.7	40.2	12.0	20.7	86.8
Trade balance	23.4	3.8	-1.1	-42.3	-45.3	34.5	23.7	7.1
Export of non-factor services	14.4	4.6	4.7	8.6	-0.2	-0.7	10.7	19.6
Import of non-factor services	9.1	2.7	11.7	15.8	1.0	5.3	11.5	19.4
Net export of non-factor services	5.2	1.9	-7.0	-7.2	-1.2	-6.0	-0.9	0.1
Investment income received	3.9	14.3	3.4	17.2	15.8	8.4	12.3	8.6
Investment income paid	2.2	1.5	20.9	16.2	6.5	31.3	13.4	9.9
Net investment income received	1.7	12.8	-17.6	1.0	9.3	-22.9	-1.0	-1.3
Net private transfers	-1.1	-1.3	0.4	-1.1	1.1	1.1	-0.5	-0.7
Net official transfers	-3.5	2.4	-4.9	4.0	0.1	5.5	-1.1	-0.2
Balance of invisibles	2.3	15.9	-29.1	-3.3	9.2	-22.3	-3.4	-2.1
Current account	25.8	19.7	-30.2	-45.6	-36.1	12.2	20.2	5.0
<b>Percentage changes from previous period</b>								
Export of goods	4.9	0.8	3.9	-1.5	-0.5	4.9	4.5	9.1
Import of goods	2.5	0.4	4.8	3.4	4.8	1.4	2.3	9.5
Export of non-factor services	7.3	2.2	2.2	3.9	-0.1	-0.3	4.7	8.2
Import of non-factor services	4.6	1.3	5.6	7.2	0.4	2.2	4.8	7.7
<b>Memorandum items</b>								
Current account as a percentage of GDP	1.1	1.6	1.1	0.4	-0.2	0.0	0.3	0.4
Current account (bln of euro)	63.5	89.8	64.1	24.1	-11.3	2.1	24.5	30.0
Euro/US\$ rate (level)	0.78	0.88	0.90	0.94	1.09	1.11	1.11	1.11
Euro/US\$ rate (% change)	2.5	14.0	1.6	4.4	15.6	2.7	-0.6	-0.0

## 9. Lists of available euro area aggregates

The variables for which euro area aggregates are available on a yearly basis are listed in this section. On a half-yearly basis, euro-aggregates are only available for the expenditures, GDP, key labour force series, interest rates and the current account in US dollars.

### 9.1. *In alphabetical order*

Nr. Code	Description
1 BGSD	balance of goods, services & income, value in US\$, BOP basis
2 BSD	balance of services and income, value in US\$, BOP basis
3 BSII	balance of income, value, balance of payments basis
4 BSIID	balance of income, value in US\$, balance of payments basis
5 BSR	balance of services, value, balance of payments basis
6 BSRD	balance of services, value in US\$, balance of payments basis
7 CAPOG	net capital outlays of the government, value
8 CB	current account, value
9 CBD	current account, value in US\$
10 CBGDPR	current account, as a percentage of GDP
11 CFKG	government consumption of fixed capital, value
12 CG	government consumption expenditure, value
13 CGAA	government final consumption expenditure, value, appr. account
14 CGV	government final consumption expenditure, volume
15 CGW	government final wage consumption expenditure, value
16 CP	private final consumption expenditure, value
17 CCAA	private final consumption expenditure, value, appr. account
18 CPIDR	competitiveness, relative consumer prices (CPI), overall weights
19 CPV	private final consumption expenditure, volume
20 EE	dependent employment
21 EEP	dependent employment of the business sector
22 EG	government employment
23 ES	self-employed
24 EQPF	adjustment for change in equity of households in pension fund reserves, value
25 ET	total employment
26 ETB	employment of the business sector
27 EXCHEB	nominal effective exchange rate, chain-linked, overall weights
28 EXCHUD	exchange rate, local currency per US\$
29 FBGS	net exports of goods & services, value
30 FBGSV	net exports of goods & services, volume
31 FDD	final domestic expenditure, value
32 FDDV	final domestic expenditure, volume
33 GAP	output gap of the total economy
34 GDP	gross domestic product, value, market prices
35 GDPTR	potential output of total economy, value
36 GDPV	gross domestic product, volume, market prices
37 GDPBV	gross domestic product, volume, factor costs, business sector
38 GDPVTR	potential output of total economy, volume
39 GGFL	general government gross financial liabilities, value
40 GGFLM	gross public debt, Maastricht criterion, value
41 GGFLMQ	gross public debt, Maastricht criterion, as a % of GDP
42 GGFLQ	general government gross financial liabilities, % of GDP
43 GGINTP	gross government interest payments, value
44 GGINTR	gross government interest receipts, value
45 GNFL	general government net financial liabilities, value
46 GNFLQ	general government net financial liabilities, as a % of GDP

47 GNINTP	net government interest payments, value
48 GNINTQ	net government interest payments, as a percentage of GDP
49 IB	private non-residential fixed capital formation, value
50 IBV	private non-residential fixed capital formation, volume
51 IFU3	ratio of actual and potential real GDP of the total economy
52 IG	government fixed capital formation, value
53 IGAA	government fixed capital formation, value, approp. account
54 IGV	government fixed capital formation, volume
55 IH	private residential fixed capital formation, value
56 IHV	private residential fixed capital formation, volume
57 INDPRO	industrial production
58 INVB	balance of invisibles, value, balance of payments basis
59 INVBD	balance of invisibles, value in US\$, BOP basis
60 IRL	long-term interest rate on government bonds
61 IRLDFU	long-term interest rate differential vis-a-vis the USA
62 IRLRC	real long-term interest rate, based on PCP deflator
63 IRS	short-term interest rate
64 IRSDFU	short-term interest rate differential vis-a-vis the USA
65 IRSRC	real short-term interest rate, based on PCP deflator
66 ISK	increase in stocks, value
67 ISKV	increase in stocks, volume
68 IT	gross total fixed capital formation, value
69 ITV	gross total fixed capital formation, volume
70 LF	labour force
71 LFPR	labour force participation rate
72 MGB	goods imports, value, balance of payments basis
73 MGBD	goods imports, value in US\$, balance of payments basis
74 MGS	imports of goods & services, including intra-trade, value, national accounts basis
75 MGSV	imports of goods&services, including intra_trade, volume, national accounts basis
76 MONEYS	money supply, broad definition: M2 or M3
77 MSBD	services imports and income paid, value in US\$, BOP basis
78 MSII	factor income paid abroad, value, balance of payments basis
79 MSIID	factor income paid abroad, value in US\$, BOP basis
80 MSR	services imports, value, BOP basis
81 MSRD	services imports, value in US\$, BOP basis
82 NITV	Net indirect taxes, volume
83 NLG	government net lending, value
84 NLGA	cyclically adjusted government net lending, value
85 NLGQ	government net lending, as a percentage of GDP
86 NLGQA	cyclically adjusted government net lending, % of potential GDP
87 NLGX	government primary balance, value
88 NLGXA	cyclically adjusted government primary balance, value
89 NLGXQ	government primary balance, as a percentage of GDP
90 NLXLQA	cyclically adj.state&local govern.primary balance,% pot.GDP
91 NTTRO	net private unrequited transfers, value, BOP basis
92 NTTROD	net private unrequited transfers, value in US\$, BOP basis
93 OFT	net official unrequited transfers, value, BOP basis
94 OFTD	net official unrequited transfers, value in US\$, BOP basis
95 PCG	government final consumption expenditure, deflator
96 PCGW	government wage consumption, deflator
97 PCP	private final consumption expenditure, deflator
98 PDTY	labour productivity of the total economy
99 PFDD	final domestic expenditure, deflator
100 PGDP	gross domestic product, deflator, market prices
101 PGDPB	gross domestic product, deflator, factor costs, business sector
102 PIB	private non-residential fixed capital formation, deflator
103 PIG	government fixed capital formation, deflator

104	PIH	private residential fixed capital formation, deflator
105	PISK	increase in stocks, deflator
106	PIT	gross total fixed capital formation, deflator
107	PMGS	imports of goods&services deflator,national accounts basis
108	POPT	working-age population
109	PROD	labour productivity, business sector
110	PPP	purchasing power parity, local currency per US\$
111	PTDD	total domestic expenditure, deflator
112	PXGS	exports of goods&services deflator, including intra-trade, national accounts basis
113	PXMDR	competitiveness,relative exp.price manufact,overall weights
114	RESTG	government other capital transactions, value
115	SAVG	government saving, value
116	SAVH	household saving, value
117	SPTD	balance of services,income&private transfers,US\$, BOP basis
118	SRATIO	household saving ratio
119	SSPG	social security benefits paid by government, value
120	SSRG	social security contributions received by government, value
121	SSRGA	cyclically adjusted social security contributions, value
122	TB	trade balance, value, balance of payments basis
123	TBD	trade balance, value in US\$, balance of payments basis
124	TDD	total domestic expenditure, value
125	TDDV	total domestic expenditure, volume
126	TIND	indirect taxes, value
127	TINDA	cyclically adjusted indirect taxes, value
128	TRPBTH	private employers contributions to social security and pension funds, value
129	TRPG	other current transfers paid by government, value
130	TRPH	total transfers paid by households, value
131	TRRG	other current transfers received by government, value
132	TRRH	current transfers received by households, value
133	TSUB	subsidies, value
134	TY	total direct taxes, value
135	TYB	direct taxes on business, value
136	TYBA	cyclically adjusted direct taxes on business, value
137	TYH	direct taxes on households, value
138	TYHA	cyclically adjusted direct taxes on households, value
139	ULC	unit labour cost of the total economy
140	ULCB	unit labour cost of the business sector
141	ULCMDR	competitiveness,rel.unit labour costs manufacturing sector,overall weights
142	UN	unemployment
143	UNR	unemployment rate
144	UNRMIN	NAIRU, unemployment rate consistent with constant inflation
145	VLCTY	velocity of money
146	WAGE	wages, value
147	WR	wage rate of the business sector
148	WRG	wage rate of the government sector
149	WSSE	compensation rate of the business sector
150	WSSS	compensation of employees, value
151	XGB	goods exports, value, balance of payments basis
152	XGBD	goods exports, value in US\$, balance of payments basis
153	XGS	exports of goods & services including intra-trade, value, national accounts basis
154	XGSV	exports of goods & services including intra-trade, volume, national accounts basis
155	XSBD	services exports and income received,value in US\$,BOP basis
156	XSII	factor income from abroad, value, balance of payments basis
157	XSIID	factor income from abroad, value in US\$, BOP basis
158	XSR	services exports, value, BOP basis
159	XSRD	services exports, value in US\$, BOP basis
160	YDH	household disposable income, value



161 YDRH	household disposable income, real
162 YOTH	selfemployment&property income received by households,value
163 YPEPG	property income paid by government, value
164 YPERG	property income received by government, value
165 YPG	government current disbursements, value
166 YPGA	cyclically adjusted government current disbursements, value
167 YPGQA	cyclically adjusted governm.current disbursements,% pot.GDP
168 YPGT	government total disbursements, value
169 YPGTQ	government total disbursements, as a percentage of GDP
170 YPGXA	cycl.adj.governm.current disbursements excl.interest,value
171 YPGXQA	cycl.adj.gov. current disbursements excl.interest,% pot.GDP
172 YRG	government current receipts, value
173 YRGA	cyclically adjusted government current receipts, value
174 YRGQ	government current receipts, as a percentage of GDP
175 YRGQA	cyclically adjusted government current receipts, % pot.GDP
176 YRGX	government current receipts excl. gross interest receipts
177 YRH	current receipts of households, value

## 9.2. In alphabetical order by category of variables

### 9.2.1. Expenditures and GDP<sup>39</sup>

#### *Expenditures and GDP (volume)*

Nr.	Code	Description
1	CGV	government final consumption expenditure, volume
2	CPV	private final consumption expenditure, volume
3	FBGSV	net exports of goods & services, volume
4	FDDV	final domestic expenditure, volume
5	GDPV	gross domestic product, volume, market prices
6	IBV	private non-residential fixed capital formation, volume
7	IGV	government fixed capital formation, volume
8	IHV	private residential fixed capital formation, volume
9	ISKV	increase in stocks, volume
10	INDPRO	industrial production
11	ITV	gross total fixed capital formation, volume
12	MGSV	imports of goods & services, including intra-trade, volume, national accounts basis
13	TDDV	total domestic expenditure, volume
14	XGSV	exports of goods & services, including intra-trade, volume, national accounts basis

#### *Expenditures and GDP (deflators)*

Nr.	Code	Description
1	PCG	government final consumption expenditure, deflator
2	PCGW	government wage consumption, deflator
3	PCP	private final consumption expenditure, deflator
4	PFDD	final domestic expenditure, deflator
5	PGDP	gross domestic product, deflator, market prices
6	PIB	private non-residential fixed capital formation, deflator
7	PIG	government fixed capital formation, deflator
8	PIH	private residential fixed capital formation, deflator
9	PISK	increase in stocks, deflator
10	PIT	gross total fixed capital formation, deflator
11	PGDPB	gross domestic product, deflator, factor costs, business sector
12	PMGS	imports of goods & services, including intra-trade, deflator, national accounts basis
13	PTDD	total domestic expenditure, deflator
14	PXGS	exports of goods & services, including intra-trade, deflator, national accounts basis

#### *Expenditures and GDP (values)*

Nr.	Code	Description
1	CP	private final consumption expenditure, value
2	CG	government consumption expenditure, value
3	FBGS	net exports of goods & services, value
4	FDD	final domestic expenditure, value
5	GDP	gross domestic product, value, market prices
6	IB	private non-residential fixed capital formation, value
7	IG	government fixed capital formation, value
8	IH	private residential fixed capital formation, value
9	ISK	increase in stocks, value
10	IT	gross total fixed capital formation, value
11	MGS	imports of goods & services including intra-trade, value, national accounts basis
12	TDD	total domestic expenditure, value
13	XGS	exports of goods & services including intra-trade, value, national accounts basis

<sup>39</sup> The variables of this section are also calculated on a half yearly basis.

## 9.2.2. Government and Households appropriation accounts

### *Households appropriation account*

Nr.	Code	Description
1	CPAA	private final consumption expenditure, value, appr. Account
2	SAVH	household saving, value
3	SRATIO	household saving ratio
4	TRPBTH	private employers contributions to social security and pension funds, value
5	TRPH	total transfers paid by households, value
6	TRRH	current transfers received by households, value
7	TYH	direct taxes on households, value
8	WAGE	wages, value
9	WSSS	compensation of employees, value
10	YDH	household disposable income, value
11	YDRH	household disposable income, real
12	YOTH	selfemployment&property income received by households, value
13	YRH	current receipts of households, value
14	EQPF	adjustment for change in equity of households in pension fund reserves, value

### *Government appropriation account*

Nr.	Code	Description
1	CAPOG	net capital outlays of the government, value
2	CFKG	government consumption of fixed capital, value
3	CGAA	government final consumption expenditure, value, appr. account
4	CGW	government final wage consumption expenditure, value
5	GGINTP	gross government interest payments, value
6	GGINTR	gross government interest receipts, value
7	GNINTP	net government interest payments, value
8	GNINTQ	net government interest payments, as a percentage of GDP
9	IGAA	government fixed capital formation, value, appr. account
10	NLG	government net lending, value
11	NLGQ	government net lending, as a percentage of GDP
12	NLGX	government primary balance, value
13	NLGXQ	government primary balance, as a percentage of GDP
14	RESTG	government other capital transactions, value
15	SAVG	government saving, value
16	SSPG	social security benefits paid by government, value
17	SSRG	social security contributions received by government, value
18	TIND	indirect taxes, value
19	TRPG	other current transfers paid by government, value
20	TRRG	other current transfers received by government, value
21	TSUB	subsidies, value
22	TY	total direct taxes, value
23	TYB	direct taxes on business, value
24	TYH	direct taxes on households, value
25	YPEPG	property income paid by government, value
26	YPERG	property income received by government, value
27	YPG	government current disbursements, value
28	YPGT	government total disbursements, value
29	YPGTQ	government total disbursements, as a percentage of GDP
30	YRG	government current receipts, value
31	YRGQ	government current receipts, as a percentage of GDP
32	YRGX	government current receipts excl. gross interest receipts

### *Government debt*

Nr.	Code	Description
1	GGFL	general government gross financial liabilities, value
2	GGFL	general government gross financial liabilities, value
3	GGFLM	gross public debt, Maastricht criterion, value
4	GGFLQ	general government gross financial liabilities, % of GDP
5	GNFL	general government net financial liabilities, value
6	GNFLQ	general government net financial liabilities, as a % of GDP

### *Government account, cyclically-adjusted*

Nr.	Code	Description
1	NLGA	cyclically adjusted government net lending, value
2	NLGQA	cyclically adjusted governm.net lending, % of potential GDP
3	NLGA	cyclically adjusted government primary balance, value
4	NLXLQA	cyclically adj.state&local govern.primary balance,% pot.GDP
5	SSRGA	cyclically adjusted social security contributions, value
6	TINDA	cyclically adjusted indirect taxes, value
7	TYBA	cyclically adjusted direct taxes on business, value
8	TYHA	cyclically adjusted direct taxes on households, value
9	YPGA	cyclically adjusted government current disbursements, value
10	YPGQA	cyclically adjusted governm.current disbursements,% pot.GDP
11	YPGXA	cycl.adj.governm.current disbursements excl.interest,value
12	YPGXQA	cycl.adj.gov.current disbursements excl.interest,% pot.GDP
13	YRGA	cyclically adjusted government current receipts, value
14	YRGQA	cyclically adjusted government current receipts, % pot.GDP

### 9.2.3. Labour market

#### *Employment, labour force and unemployment*

Nr.	Code	Description
1	EE	dependent employment
2	EEP	dependent employment of the business sector
3	EG	government employment
4	ES	self-employed
5	ET (1)	total employment
6	ETB	employment of the business sector
7	LF (1)	labour force
8	LFPR	labour force participation rate
9	PDTY	labour productivity of the total economy
10	POPT	working-age population
11	PROD	labour productivity, business sector
12	UN (1)	Unemployment
13	UNR (1)	unemployment rate
14	UNRMIN	NAIRU, unemployment rate consistent with constant inflation

(1) Also available on a halfyearly basis.

#### *Wage rates and labour costs*

Nr.	Code	Description
1	ULC	unit labour cost of the total economy
2	ULCB	unit labour cost of the business sector
3	WR	wage rate of the business sector
4	WRG	wage rate of the government sector
5	WSSE	compensation rate of the business sector

### 9.2.4. Interest rates and exchange rates

Nr.	Code	Description
1	CPIDR	competitiveness, relative consumer prices (CPI), overall weights
2	EXCHEB	nominal effective exchange rate, chain-linked, overall weights
3	EXCHUD	exchange rate, local currency per US\$
4	IRL (1)	long-term interest rate on government bonds
5	IRLDFU	long-term interest rate differential vis-a-vis the USA
6	IRLRC	real long-term interest rate, based on PCP deflator
7	IRS (1)	short-term interest rate
8	IRSDFU	short-term interest rate differential vis-a-vis the USA
9	IRSRC	real short-term interest rate, based on PCP deflator
10	MONEYS	money supply, broad definition: M2 or M3
11	PXMDR	competitiveness, relative exp price manufact, overall weights
12	ULCMDR	competitiveness, rel. unit labour costs manufacturing sector, overall weights
13	VLCTY	velocity of money

(1) Also available on a halfyearly basis.

### 9.2.5. Current account of the balance of payments

Nr.	Code	Description
1	BGSD	balance of goods, services & income, value in US\$, BOP basis
2	BSD	balance of services and income, value in US\$, BOP basis
3	BSII	balance of income, value, balance of payments basis
4	BSIID	balance of income, value in US\$, balance of payments basis
5	BSR	balance of services, value, balance of payments basis
6	BSRD	balance of services, value in US\$, balance of payments basis
7	CB	current account, value
8	CBD (1)	current account, value in US\$
9	CBGDPR	current account, as a percentage of GDP
10	INVB	balance of invisibles, value, balance of payments basis
11	INVBD	balance of invisibles, value in US\$, BOP basis
12	MGB	goods imports, value, balance of payments basis
13	MGBD	goods imports, value in US\$, balance of payments basis
15	MSBD	services imports and income paid, value in US\$, BOP basis
17	MSII	factor income paid abroad, value, balance of payments basis
18	MSIID	factor income paid abroad, value in US\$, BOP basis
20	MSR	services imports, value, BOP basis
21	MSRD	services imports, value in US\$, BOP basis
23	NTTRO	net private unrequited transfers, value, BOP basis
24	NTTOD	net private unrequited transfers, value in US\$, BOP basis
25	OFT	net official unrequited transfers, value, BOP basis
26	OFTD	net official unrequited transfers, value in US\$, BOP basis
27	SPTD	balance of services, income & private transfers, US\$, BOP basis
28	TB	trade balance, value, balance of payments basis
29	TBD	trade balance, value in US\$, balance of payments basis
30	XGB	goods exports, value, balance of payments basis
31	XGBD	goods exports, value in US\$, balance of payments basis
33	XSBD	services exports and income received, value in US\$, BOP basis
35	XSII	factor income from abroad, value, balance of payments basis
36	XSIID	factor income from abroad, value in US\$, BOP basis
38	XSR	services exports, value, BOP basis
39	XSRD	services exports, value in US\$, BOP basis

(1) Also available on a half yearly basis.

### 9.2.6. Potential output, output gap and NAIRU

Nr.	Code	Description
1	GAP	output gap of the total economy
2	GDPTR	potential output of total economy, value
3	GDPVTR	potential output of total economy, volume
4	IFU3	ratio of actual and potential real GDP of the total economy
5	NITV	Net indirect taxes, volume
5	UNRMIN	NAIRU, unemployment rate consistent with constant inflation