EUROPEAN CENTRAL BANK

EURO AREA AND EUROPEAN UNION ACCOUNTS FOR INSTITUTIONAL SECTORS

I. Introduction

The European Central Bank (ECB) and Eurostat are for the first time publishing annual euro area and European Union (EU25) accounts for institutional sectors (European sector accounts), covering the period 1999-2004.[1] The sector accounts follow the methodology of the European System of Accounts 1995 (ESA 95)[2]. They provide a comprehensive overview of the euro area/EU25 as a single economy and allow for a wide-ranging analysis of the interactions among the institutional sectors.

The release of European sector accounts is the outcome of a joint project by Eurostat and the ECB, in close cooperation with the national statistical institutes and national central banks. Eurostat is publishing the non-financial accounts for the euro area, the EU25 and the individual Member States. The ECB is publishing integrated non-financial and financial accounts, including financial balance sheets, for the euro area. As this is the first release, the estimates may be somewhat less reliable than well-established accounts.

The compilation of *annual* European accounts for institutional sectors will be followed, from spring 2007, by the regular publication of *quarterly* sector accounts for the euro area and EU25.

This document provides further background information. Section II outlines the basic features of European accounts for institutional sectors. Section III presents selected results for the euro area and the EU25, in particular for the sectors households and non-financial corporations. The annexes ("From national to European sector accounts" and "The sequence of accounts") provide additional methodological details.

II. European sector accounts

The European sector accounts aim to provide a comprehensive and comparable overview of the European economy as a whole. They record all "transactions" between economic agents grouped by "sector". Stocks of assets and liabilities are recorded in balance sheets. The system forms a sequence of interlinked accounts.

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1 Detailed figures for non-financial accounts of the euro area, the European Union and Member States are available at http://ec.europa.eu/eurostat (Eurostat). The euro area accounts are available at http:www.ecb.int (ECB).

2 For more details, see http://forum.europa.eu.int/irc/dsis/nfaccount/info/data/esa95/en/titelen.htm).

1. Institutional sectors

The institutional sectors bring together economic agents with broadly similar behaviour: non-financial corporations (code S.11), financial corporations (S.12), general government (S.13), households and non-profit institutions serving households (S.14 + S.15). Transactions and financial claims between economic agents resident in the euro area/EU25 and economic agents resident elsewhere are recorded in the "rest of the world" (S.2) accounts.

The sector accounts thus show the interactions among the different sectors of the European economy, and between them and the rest of the world.

2. Transactions

Transactions are classified according to their economic nature (e.g.: payment and receipt of wages or taxes, consumption, assumption of a loan, etc.).

For each transaction in the current accounts (and for capital transfers) "resources" and "uses" are recorded. For instance, the resources side of the transaction category "interest" records the amounts of interest receivable by the different sectors of the economy. The uses side shows interest payable. For each type of transaction, total resources of all sectors and the rest of the world equal total uses. For the transactions in the capital accounts (other than capital transfers) and the financial accounts, the distinction is between "changes in liabilities" and "changes in assets".

Transactions are grouped into a sequence of accounts covering a specific aspect of the economic process, ranging from production, generation and (re)distribution of income through consumption and investment to borrowing and lending. Each account leads to a balancing item, which is calculated as total resources minus total uses or total changes in financial assets minus total changes in liabilities.

3. Balance sheets and changes other than transactions

Balance sheets record for each domestic sector the (non-financial and financial) assets and liabilities valued at market prices on the date to which the balance sheet relates. At present, only financial balance sheets are available, and these are only available for the euro area. The external financial assets and liabilities account shows the financial position of the euro area vis-à-vis the rest of the world and vice versa. The financial balance sheets group similar types of financial instrument into financial asset and liability categories, such as holdings of deposits, loans and shares.

The changes in financial balance sheets can be divided into changes arising from financial transactions and other changes. The financial transactions cover net acquisitions of financial assets and net incurrence of liabilities, while the other changes mainly reflect revaluations due to changes in the market prices of financial instruments.

More details on the sequence of accounts are provided in Annex 2.

III. Selected results

European sector accounts allow both detailed analyses of the interactions among institutional sectors and between them and the rest of the world, and the derivation of key macroeconomic indicators for the economy as a whole. The charts included in this note present some salient characteristics of the euro area/EU25 economy as a whole and specific features of the households and non-financial corporations sectors.

1. The sectors at a glance

In the European economy, both the euro area and the EU25, most ***value added*** (60%) is created in non-financial corporations, while slightly less than one-quarter is generated in household enterprises and by the imputed rent minus the costs of owner-occupied dwellings (**Chart 1**). General government accounts for slightly more than 10%. Most value added created in the corporate and government sectors is then passed on to households as compensation of employees. The largest share of ***national income*** thus accrues to the household sector. This share is somewhat reduced by net taxes and other transfers, which are largely paid to the government. This can be seen when comparing the distributions of gross national income and of gross disposable income in Chart 1.

Disposable income is available for consumption or ***saving***. Since households account for the bulk of consumption, their share in euro area saving is much smaller than their share in income. Finally, more than 30% of fixed ***capital formation*** is accounted for by households. This mainly relates to the construction of dwellings.

Charts 2, 3 and **4** present the annual nominal ***growth rates*** of ***euro area GDP, net disposable income*** and ***gross capital formation*** between 1999 and 2004, and the contribution of each of the sectors to this growth. From **Chart 2**, it is clear that the fluctuations in the GDP growth rates predominantly stem from changes in the contribution of the non-financial corporations sector. The growth rate of value added generated in the households sector is more stable.

Chart 3 shows that from 2000 to 2004 the contribution of the government sector to the ***growth of net euro area disposable income*** was higher in years with a higher overall growth rate. The contribution of households to the growth of disposable income was highest at the beginning of this period.

The ***growth rate of capital formation*** (in current prices) declined to zero between 1999 and 2002, but increased again subsequently (see **Chart 4)**. To a large extent, this reflects the behaviour of the non-financial corporations sector. While the government's contribution to overall investment growth also varied, the contribution from the households sector was positive in all years except 2001.

2. Households

The ***households sector*** comprises all natural persons resident in the European economy and household enterprises. In the European accounts, the non-profit institutions serving households (NPISHs), such as charitable organisations, trade unions, etc., are grouped together with households; their economic weight is fairly limited.

Chart 5 shows the origin of the ***growth rates*** of ***gross disposable income*** of households. The most important source of households' income growth is the growth of compensation of employees (that is, their receipts of wages and salaries plus employers' social contributions). The contribution from gross operating surplus and mixed income (which accrues to self-employed households) was fairly stable during the years under review. The growth of net receipts of property income (interest, dividends, etc.) by households was highest in years when growth of their total disposable income was high.

The ***household saving rate*** is an important indicator for the households sector (**Chart 6**). When saving and disposable income are measured gross, consumption of fixed capital is not deducted. The saving rate shows what proportion of households' disposable income is saved, including contributions to pension fund and life insurance reserves. Over the whole period under review, the gross saving rate of households in the euro area was more than 2 percentage points higher than that in the EU25.

Households invest their savings in either financial or non-financial assets (mainly housing and capital formation of household enterprises). They also finance some ***investment*** by incurring debt in the form of loans (**Chart 7**). Between 1999 and 2004, euro area households invested about 15% of their gross disposable income in assets, of which about one-third was invested in non-financial assets and two-thirds in financial assets. Typically, somewhat less than 40% of the financial investment is in net equity in life insurance reserves and in pension fund reserves. The relative increase of household deposits, mainly with MFIs, was somewhat higher at the end of the period under review, while the proportion of household income spent on the net purchase of securities was higher at the beginning of the period. On balance, the household sector sold securities in 2002. The increase in households' debt (as a proportion of their income) declined between 1999 and 2002 and rose thereafter.

The households sector is by far the richest sector in the economy. Its wealth is composed of non-financial assets, mainly housing, and net financial wealth, which equals the difference in value between financial assets and liabilities, at market prices. The financial wealth is presented in the financial balance sheets (**Chart 8**). At the end of 2004, the ***net financial***

wealth of euro area households was €10 trillion; this is close to 200% of their gross disposable income. While the ***indebtedness*** of the euro area household sector equalled about 90% of its gross disposable income, its ***financial wealth*** was almost 290% of gross disposable income at the end of 2004. The financial wealth was mainly invested in deposits, shares and other equity (including mutual funds shares), and net equity in life insurance reserves and pension fund reserves.

The ***changes in the net financial wealth*** of households are due to net acquisitions of financial assets, the incurrence minus redemption of loans, and changes in the prices of financial assets (**Chart 9**). Between 2000 and 2004, the net financial wealth of euro area households fluctuated in particular because of the changes in share prices, while their net lending as a percentage of gross disposable income was fairly stable.

3. Non-financial corporations

The ***non-financial corporations sector*** comprises all private and public corporate enterprises that produce goods and non-financial services for the market.

Net entrepreneurial income is a core indicator for corporations. It is an income concept that approximates the concept of current profits in business accounting (before payment of dividends and taxes, but net of depreciation). Entrepreneurial income is derived by adding to net operating surplus the property income received in connection with the assets owned by the corporation and deducting interest and (land) rents payable.

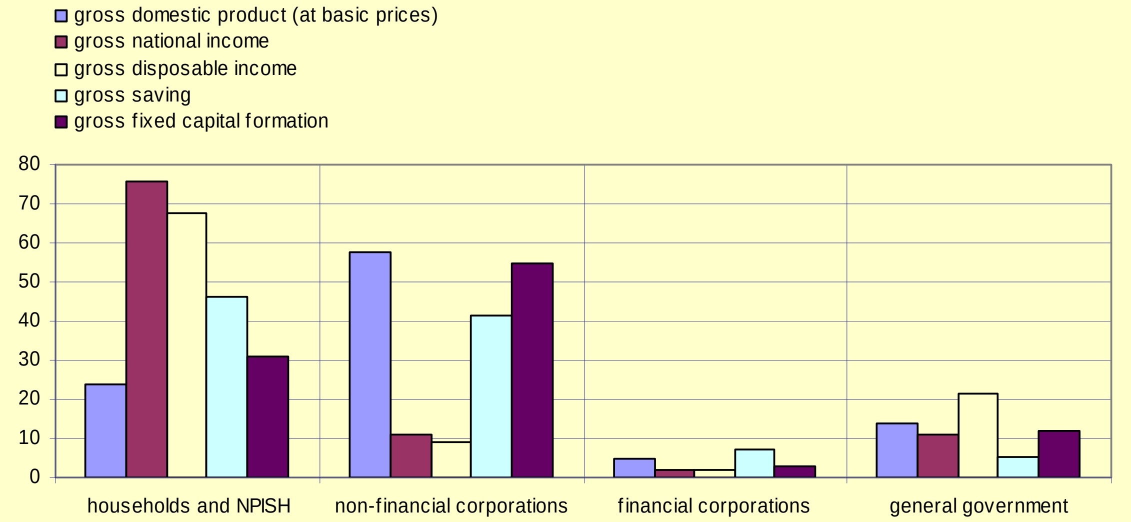
The ***entrepreneurial income shares*** measure net entrepreneurial income as a percentage of the net value added generated in non-financial corporations (**Chart 10**). These shares are similar in the euro area and the EU25 and increased over the reference period by more than 2 percentage points.

Non-financial corporations finance their (financial and non-financial) ***investment*** internally via net saving and externally via the net issuance of debt and equity (**Chart 11**). Between 1999 and 2001, euro area non-financial corporations were active in mergers and acquisitions, entailing much financing and financial investment. Their financial investment (including foreign direct investment) has continued to exceed their gross fixed capital formation.

Charts across sectors

Chart 1: Share of domestic sectors in gross domestic product in basic prices, national and disposable income, saving and fixed capital formation in the euro area, average 1999 – 2004

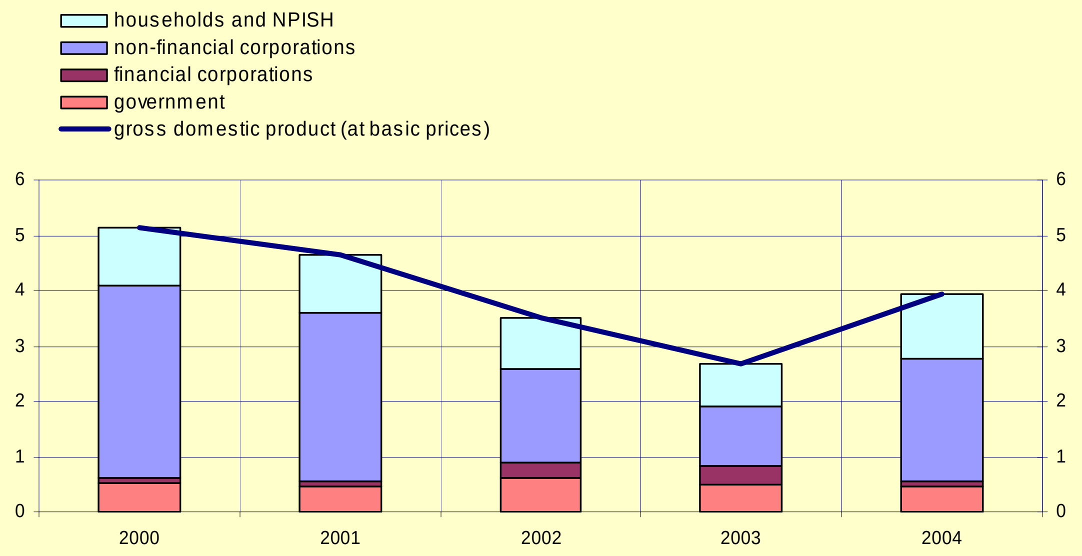
(percentage of the total)



Source: Eurostat and ECB

Chart 2: Contributions of sectors to the nominal growth rate of gross domestic product in the euro area

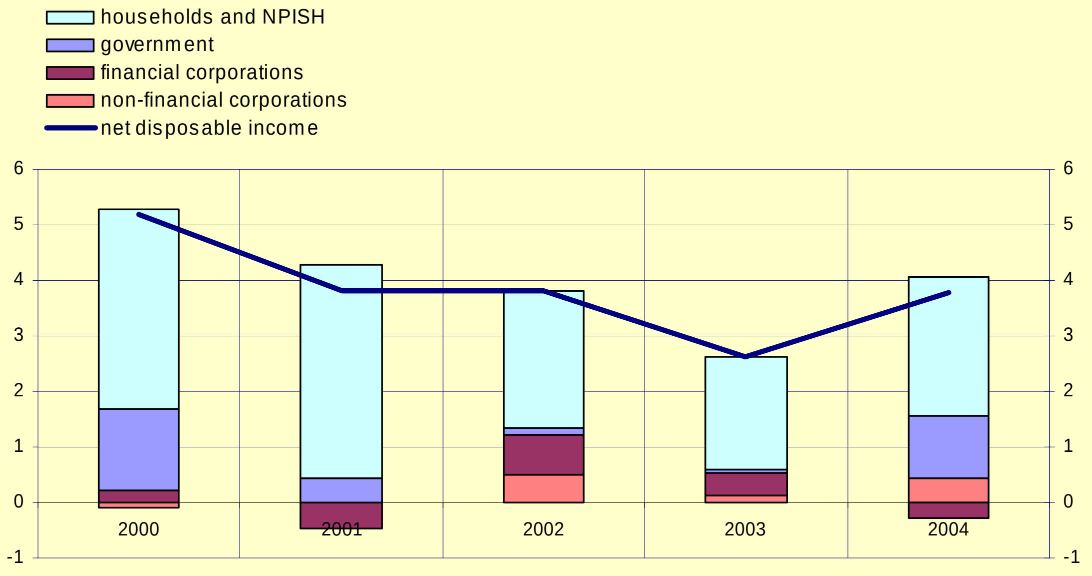
(annual growth rate and percentage point contributions)



Source: Eurostat and ECB

Chart 3: Contributions of sectors to the nominal growth rate of net disposable income in the euro area

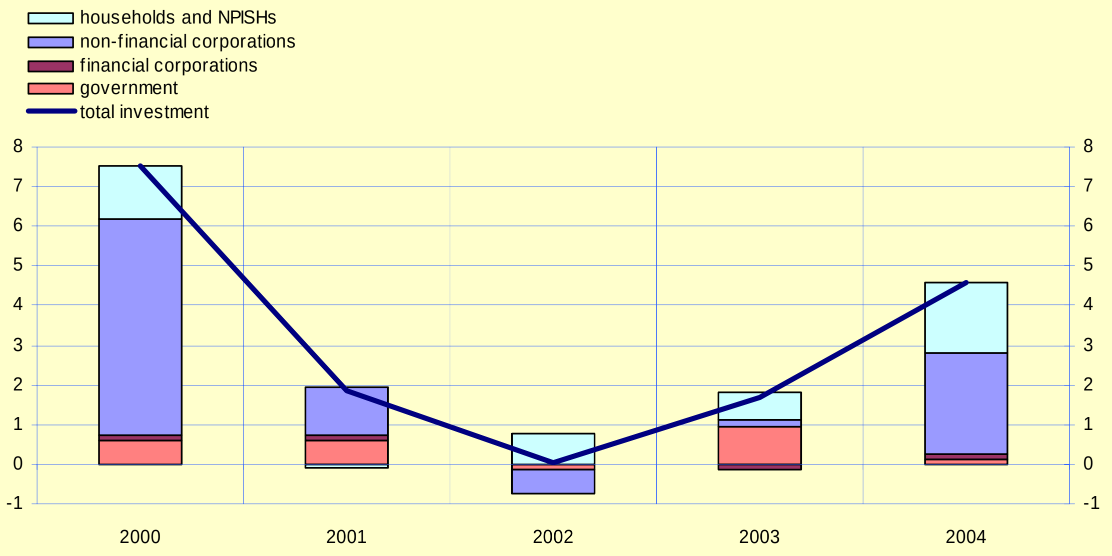
(annual growth rate and percentage point contributions)



Source: Eurostat and ECB

Chart 4: Contributions of sectors to the nominal growth rate of gross fixed capital formation in the euro area

(annual growth rate and percentage point contributions)

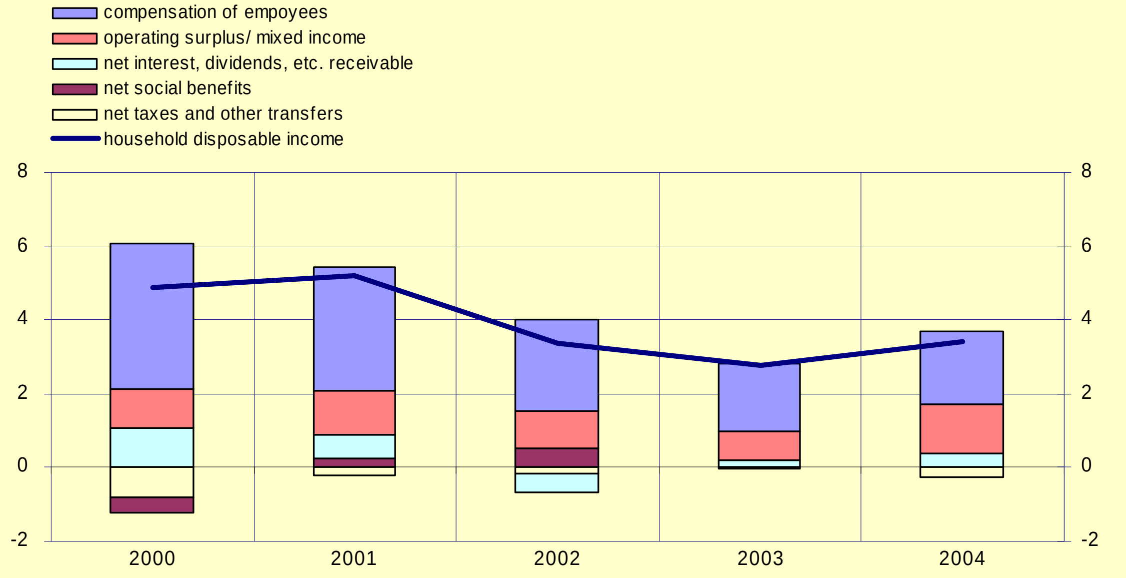


Source: Eurostat and ECB

Charts on households

Chart 5: Growth rate and contributions to the nominal growth rate of gross disposable income of households in the euro area

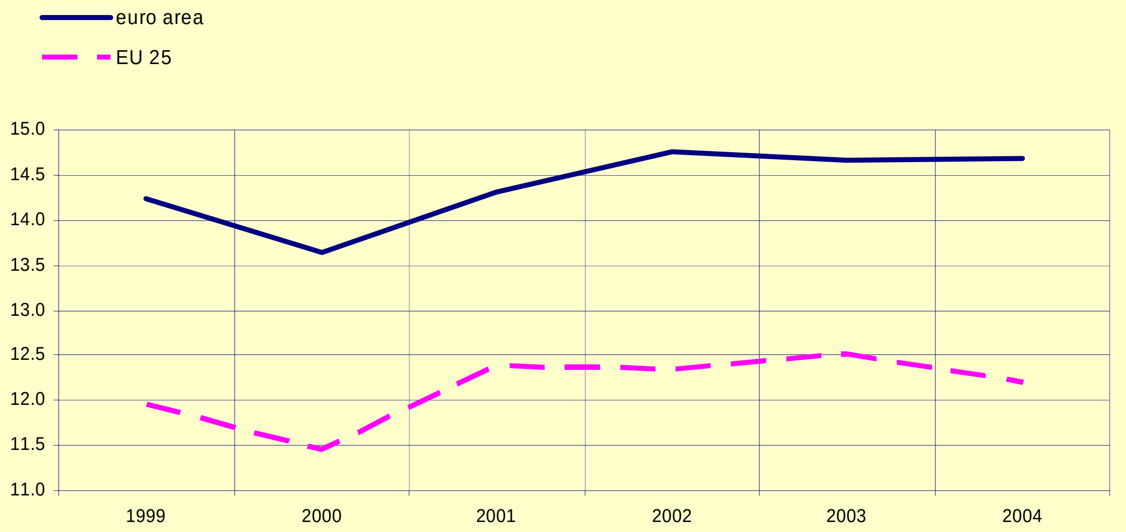
(annual growth rate and percentage point contributions)



Source: Eurostat and ECB

Chart 6: Gross saving rate of households in the euro area and the European Union

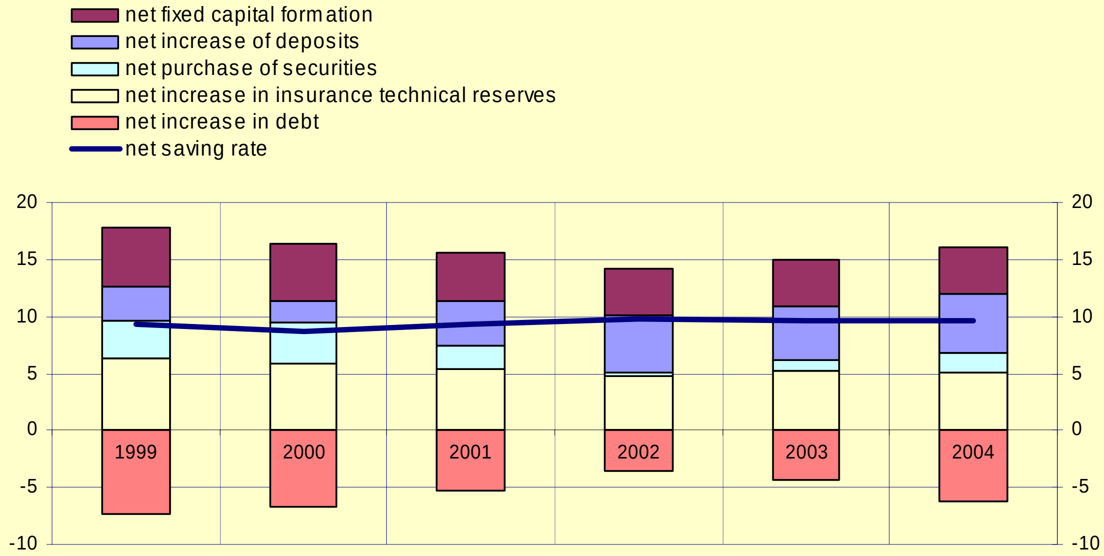
(gross household saving divided by gross disposable income and households' net increase in claims on pension funds reserves)



Source: Eurostat and ECB

Chart 7: Investment, acquisition of financial assets and incurrence of debt by households in the euro area

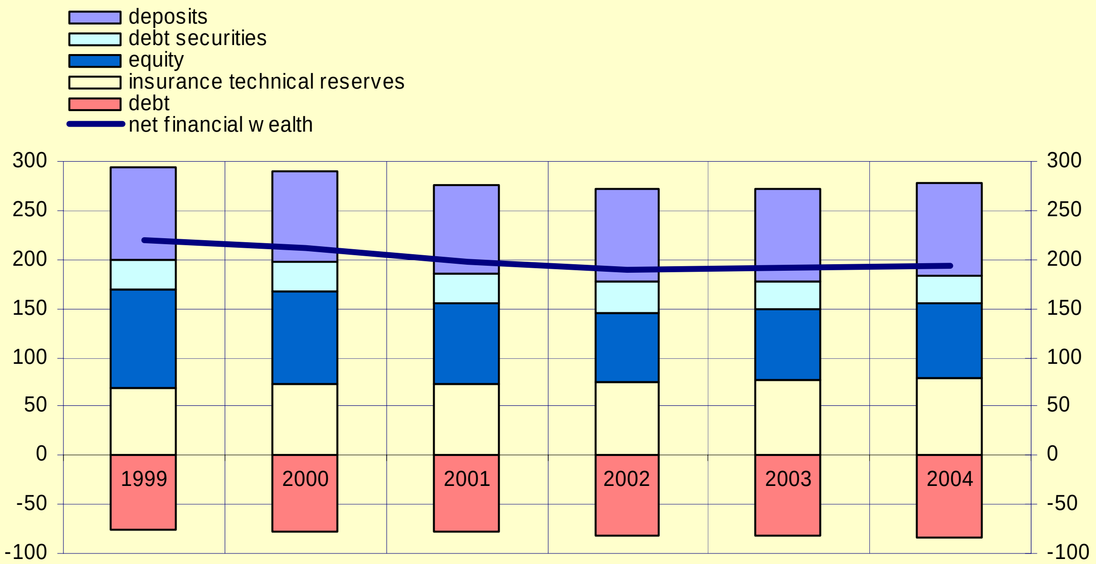
(percentage of net disposable income and net increase in claims on pension funds reserves of households)



Source: ECB and Eurostat

Chart 8: Financial assets, debt and net financial wealth of households in the euro area

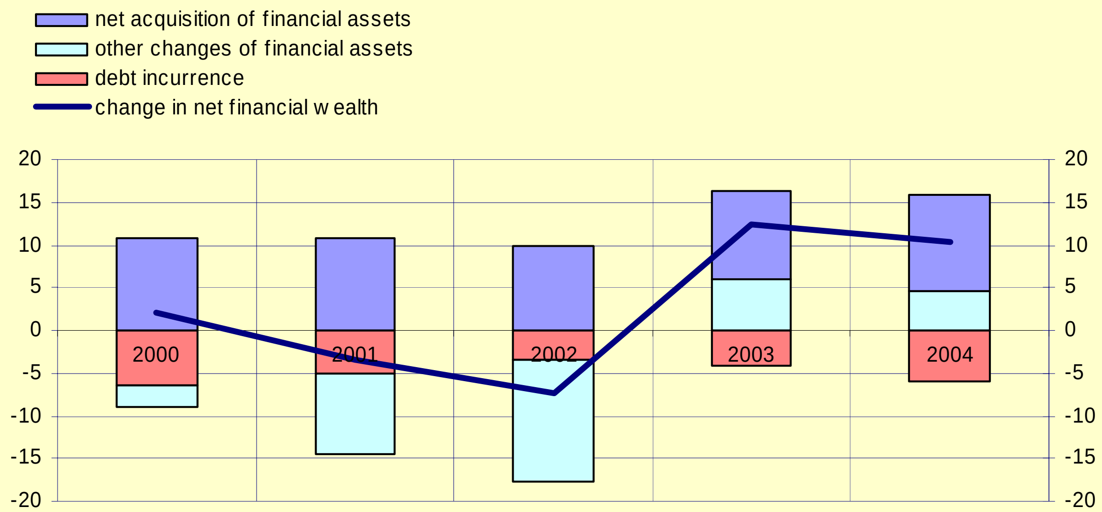
(percentage of gross disposable income of households)



Source: ECB and Eurostat

Chart 9: Changes in financial assets, debt and net financial wealth of households in the euro area

(percentage of gross disposable income of households)

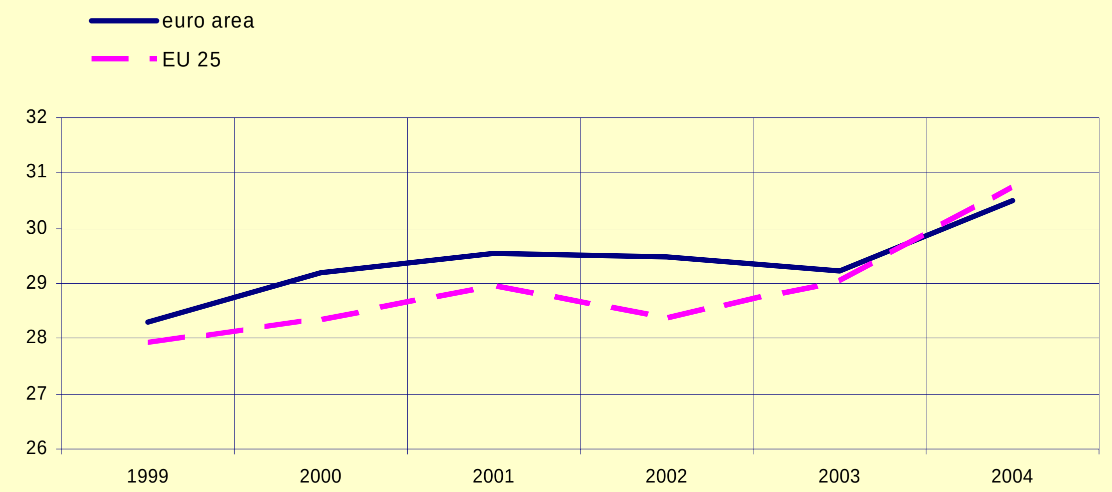


Source: ECB and Eurostat

Charts on non-financial corporations

Chart 10: Entrepreneurial income share of non-financial corporations in the euro area and the European Union

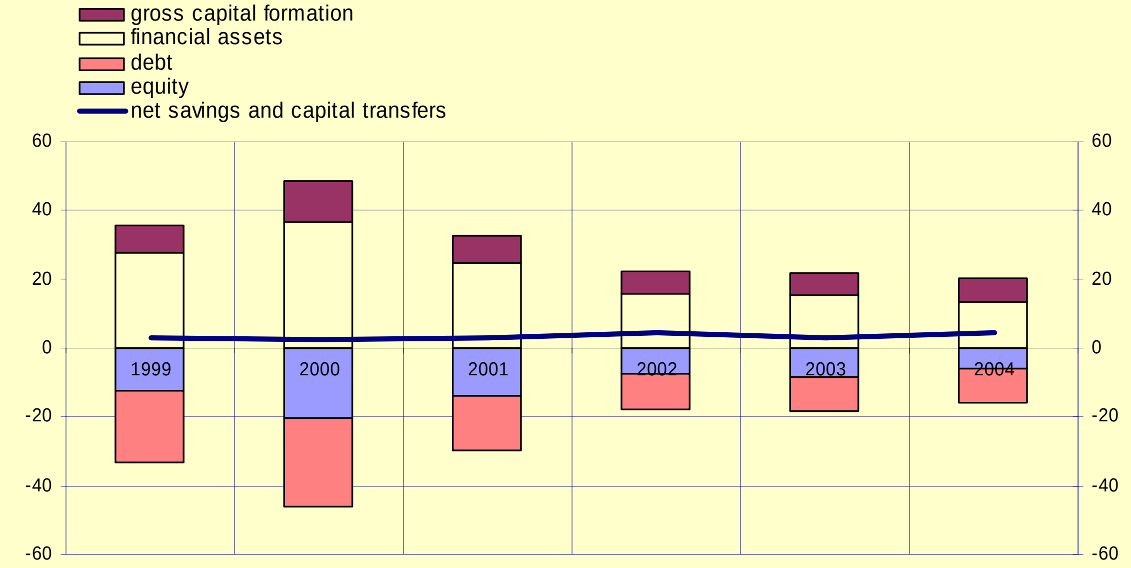
(percentage of net value added of non-financial corporations)



Source: Eurostat and ECB

Chart 11: Investment, acquisition of financial assets and incurrence of debt by non-financial corporations in the euro area

(percentage of net value added of non-financial corporations)



Source: ECB and Eurostat

Annex 1: From national to European accounts

The national accounts for institutional sectors transmitted by Member States record economic transactions and financial balance sheets in the national currency. The same applies to the balance of payments and the international investment position. Several steps are necessary to convert these national data sets into European accounts.

Conversion to euro

For the Member States not participating in the euro area, and for Greece in 1999 and 2000, transactions have been converted into euro using the average exchange rates in the reference period. The growth rates of transactions for the EU25 are thus affected by movements in exchange rates and should be viewed with caution. There is no impact on ratios such as entrepreneurial income shares or saving rates. Exchange rate movements hardly affect the euro area accounts (Greece joined the euro area in 2001, but the drachma was stable against the euro in 1999 and 2000).

EU institutions and other European bodies

The EU institutions and other European bodies are not considered to be part of the domestic economy in the *national* accounts of Member States. By contrast, the European institutions are part of the domestic sectors of the *euro area/ EU25* economies.

The ECB is included in the financial corporations sector (S.12) in both the euro area and the EU25 accounts. All other European institutions are treated as non-resident in the euro area accounts as their administrative competence goes beyond the euro area; they are, however, treated as resident in the EU25 accounts. With the exception of the European Investment Bank, which is classified in the financial corporations sector (S.12), all European institutions are classified in the EU25 general government sector (S.13).

The rest of the world in the European accounts

The rest of the world in accounts compiled by Member States records transactions and financial balance sheets between the national economy and all non-resident units, including those in other EU Member States. To measure the external transactions and financial balance sheets of the euro area/EU25, it is necessary to remove cross-border flows and financial claims within the area concerned. In this respect, the European accounts draw on the national and European balance of payments and international investment position statistics.

For cross-border transactions within the area, total resources should equal total uses. For instance, exports within the euro area should equal imports. The same applies to the financial claims and liabilities outstanding. In practice a comparison of the national statistics reveals discrepancies ("asymmetries") which have been eliminated to obtain a consistent set of accounts.

Euro area accounts - integrated non-financial and financial accounts

The euro area accounts integrate non-financial and financial accounts, including financial balance sheets. These accounts are integrated in three dimensions. First, as explained in section II, total uses equal total resources, or total financial assets equal total liabilities, for each (non-financial or financial) transaction category and each financial balance sheet category, when summed over all institutional sectors and the rest of the world (*horizontal consistency*)[3]. For example, total interest revenue over all sectors and the rest of the world is equal to total interest expenditure. Second, for each sector and the rest of the world the sum of all current and capital transactions is equal to the sum of all financial transactions (*vertical consistency*). For example, the difference between total government expenditure and revenue is equal to the difference between the incurrence of liabilities by government and the net acquisition of financial assets by government. In the euro area accounts this is the case for the government and financial corporations sectors and the rest of the world. There are still discrepancies, equal in amount but opposite in sign, for the households and non-financial corporations sectors, which is partly due to the use of different statistical sources for the non-financial and financial accounts. Third, the change in financial balance sheets is for each financial asset category equal to the financial flows (*stock-flow consistency*). For example, the change in the value of quoted shares held by the households sector is equal to the difference between sales and purchases of shares and revaluations due to changes in share prices.

European accounts and national accounts of the Member States

The euro area/EU25 accounts are based on, but are not the simple sum of, the national accounts of the Member States. First, cross-border transactions and financial claims between European countries have to be eliminated from the rest of the world accounts. Second, the European institutions and bodies need to be added. Third, inconsistencies in country data, such as the “asymmetries”, need to be eliminated.

Annex 2: The sequence of accounts

Transactions are classified in two categories of accounts: current accounts and accumulation accounts. Each *current account* is closed by a balancing item defined as total resources minus total uses, and this is carried over to the next account. The *accumulation*

[3] Monetary gold and special drawing rights (AF.1) is the only exception.

accounts which show transactions (the capital and financial accounts) record the net acquisition of non-financial and financial assets and the net incurrence of liabilities. The remaining accumulation accounts show other changes in balance sheets, such as revaluations and write-offs of bad debts. The accumulation accounts accordingly explain all the changes in (non-financial and financial) balance sheets. *Balance sheets* record the value of assets and liabilities at a particular point in time.

Current accounts

The *production account* shows transactions relating to the production process. Resources include output, and uses include intermediate consumption and taxes less subsidies on products. The balancing item of the production account is value added (B.1). The sum of value added over all domestic sectors plus taxes less subsidies on products is equal to Gross Domestic Product (GDP) (B.1*g) of the economy as a whole.

The *generation of income* account shows how this production activity translates into various categories of income, including for example compensation of employees. The balancing item is split into mixed income (B.3), which accrues to self-employed households, and gross operating surplus (B.2), which mainly accrues to corporations.

Subsequently the income earned in production is distributed. The *allocation of primary income account* records receipts and expenses relating to various forms of property income such as interest, dividends and (land) rent, including an income imputed to households on their reserves with insurance corporations and pension funds. The balancing item is the balance of primary incomes (B.5). For the economy as a whole, the balancing item of the primary income account is Gross National Income (B.5g).

The *entrepreneurial income account* is a sub-account of the allocation of primary income account. Its purpose is to derive entrepreneurial income (B.4) (as a balancing item), which corresponds to operating surplus/mixed income (B.2) plus property income received, minus interest and (land) rents paid. Dividends distributed to other sectors and retained earnings on foreign direct investment are not deducted.

The *secondary distribution of income account* shows how the balance of the primary income of an institutional sector changes because of current taxes on income and wealth, social contributions and benefits, and other current transfers. The balancing item is disposable income (B.6).

The *use of disposable income account* shows how disposable income is spent on consumption or saved. The balancing item is saving (B.8) (for corporations, gross saving equals retained earnings).

Balancing items are often expressed as *gross* amounts. However, capital goods deteriorate over time. Capital consumption may be deducted from gross value added, operating surplus/mixed income, national income, disposable income and savings to yield *net* amounts. These amounts better reflect that at some stage the capital goods used in production will need to be replaced.

The *external account* brings together all transactions involving both euro area/EU25 residents and non-residents, viewed from the perspective of the non-residents. The current external account records imports (as resources) and exports (as uses) of goods and services, compensation of employees to and from abroad, payments of property income and taxes to and from abroad, and other transfers to and from abroad.

Accumulation accounts

The *capital account* is divided into a *change in net worth due to saving and capital transfers account* and an *acquisition of non-financial assets account*. The first adds any net receipts of capital transfers to net saving. The balancing item is change in net worth due to transactions (B.10.1). The acquisition of non-financial assets account records gross fixed capital formation (investment in non-financial assets), changes in inventories, and any net acquisition of valuables and other non-produced, non-financial assets (e.g. land). The balancing item of the capital account is net lending/net borrowing (B.9).

The *financial account* records net acquisitions (purchases minus sales) of financial assets and net incurrence (issues minus redemptions) of liabilities.

The financial account is the last in the sequence of transaction accounts. Its balancing item therefore equals the balancing item of the capital account, net lending/ net borrowing (B.9). A negative balance between all receipts and expenses of a sector must be financed, either by borrowing or by a reduction in financial assets. Conversely, a positive balance implies either an investment in financial assets or redemptions of liabilities.

The *other changes in financial assets and liabilities account* records the changes in financial balance sheets that are not due to financial transactions. These are mainly revaluations (holding gains and losses) due to changes in the market prices of financial assets or liabilities, but the account also includes write-offs of bad debts. The balancing item is changes in net worth due to other changes in financial assets and liabilities (B.10.2 + B10.3).

Financial balance sheets

The annual euro area accounts also provide *opening and closing financial balance sheets* showing the stocks of financial assets and liabilities valued at market prices at the beginning and end of a year. The balancing item is net financial assets (BF.90) or net financial wealth. Balance sheets for non-financial assets, e.g. residential housing, are not yet available.