

## Section 3: Explanatory notes

### Chart 1

The chart breaks the annual growth of **households' nominal disposable income per capita** down into the **contributions of the income components**, and supplements this with data on the annual growth of **households' real disposable income per capita**. Nominal disposable income is deflated using the deflator of household final consumption expenditure. This gives a measure of the volume of final consumption that can be purchased with that income after accounting for the effect of price changes.

Households' disposable income is a major determinant of their consumption. It is also a major determinant of the ability of indebted households to repay their debt.

Over the typical business cycle marked by growth, **compensation of employees, operating surpluses/mixed income and property income** tend to increase, as the economy generates more jobs, real wages are bid upwards and the business of the self-employed is buoyant. In a recession, the opposite patterns tend to take hold.

By contrast, **net social transfers** tend to behave in a counter-cyclical fashion, with unemployment and other benefits rising in a recession and social security contributions declining with the reduction of employment levels. Net social transfers are a key element in helping to stabilise households' disposable income and, thereby, household consumption over the cycle. Together with direct taxes, they are a key component of what are known as automatic stabilisers.

### Notes to Chart 1:

In comparing the level of net social transfers across countries (Chart 1.3), the specific institutional arrangements for the funding of social benefits may contribute to significant differences. Net social transfers are the difference between social benefits (except those in kind) and social contributions. In some countries, a large share of benefits may be funded comparatively more through general taxation and less through contributions, so that they will tend to show higher net social transfers. In some countries, social security pensions may be partly funded by income from pension assets built up in the past, requiring lower current contributions and thereby also showing higher net transfers. In addition, it should be noted that an important part of social benefits are provided as transfers in kind (e.g. health services) so that they do not increase disposable income, whereas the corresponding contributions paid by households reduce disposable income. Thus, other things being equal, countries with large health expenditures may tend to show lower net social transfers or even net contributions. Below is some country-specific information of relevance to these issues:

**Belgium:** Around 13.5% of total contributions correspond to private pension schemes, of which the largest part flow into the build-up of actuarial reserves instead of paid benefits. In addition, a large part of social benefits paid by the government, such as health services, are provided in kind. This explains why households are in general net contributors.

**Germany:** The fact that households are persistent net contributors to the social security system is mainly related to the institutional arrangement of the health insurance system. That is, benefits from the statutory health insurance schemes, which cover about 90% of households, are predominantly transfers in kind and therefore not part of net social transfers as defined here.

**Italy:** Some social benefits are not conditional on the previous payment of contributions. Inter alia, the unemployment compensation does not have an equivalent counterpart in contributions, and is largely financed by higher taxation.

**Netherlands:** In the Netherlands, the pension system has a contribution-based pillar where contributions are still significantly larger than pension receipts. This, together with the fact that net social contributions exclude benefits paid out in kind, such as healthcare, explains that households in the Netherlands are in general net contributors.

**Austria:** Social security pensions are not only financed by social contributions but also from the general budget of the central government. Non-contributory social benefits are also of a certain importance.

**Finland:** The Finnish earnings-related pension funds are part of the social security system and the general government sector. Paid pension benefits are partially financed with taxes, as well as investment revenues, which are not imputed as social contributions. This explains why households are in general net beneficiaries.

## Chart 2

The chart plots the annual growth of **households' disposable income and its use for consumption and saving**. Consumption is broken down into changes in **real consumption** and the effects of price changes, with the latter being represented by the **deflator of final consumption expenditure**.

Disposable income is a key indicator of the economic situation faced by households. It determines how much of the current income that a household has can be used for consumption and saving. Households' disposable income is typically pro-cyclical. It is more volatile than households' consumption because savings work as a buffer that stabilises the development of the latter. Households' real consumption is a key measure of the material well-being of households.

In addition, the chart breaks down the changes in households' nominal consumption expenditure into changes in their real consumption, or the quantity of goods and services consumed by the households, and changes in the consumption deflator, or the price of those goods and services. Of course, only the former have a bearing on the material well-being of households. Developments in the consumption deflator are

closely related to developments in the Harmonised Index of Consumer Prices (HICP), the headline measure used for the ECB's definition of price stability.

### Chart 3

The chart plots the development of **compensation of employees** and breaks it down into changes in **employment, real compensation and price changes**.

Compensation is an important economic indicator as it accounts for the largest part of households' disposable income.

One of the important factors behind the development of total compensation is the change in the total number of **employees** in the economy concerned. Due consideration of this factor, and of the effect of price changes, as measured by the deflator of households' final consumption, allows a measure of real compensation per employee to be derived.

#### Notes to Chart 3:

The employment concept used in this chart corresponds to the number of, and compensation received by, employees that work for production units resident in the country concerned. This is the "domestic" concept of compensation and employment, and it is typically given more prominence in national accounts. It is used here for reasons of comparability with similar presentations elsewhere. In most countries, this concept of employment and compensation almost coincides with the "national" concept, which corresponds to the number of, and compensation received by, resident employed persons. However, the following country-specific notes are of relevance here:

**Luxembourg:** The employment and compensation figures presented in Chart 3 refer to the corresponding domestic concepts and therefore include employees that work but do not reside in Luxembourg (cross-border workers). Since the number of cross-border workers in Luxembourg is high, the growth figures presented might significantly differ from those that would correspond to households that reside in Luxembourg (national concept).

### Chart 4

The chart presents the changes of **labour market status for people aged 15 to 64**. This includes the dynamics of **total employment, unemployment and the inactive working age population**. The sum of the changes in the three labour market categories gives the overall **change in the working age population**.

The presented breakdown into categories is useful in presenting an encompassing view of the labour market. Crucially, going beyond the most common measures of

unemployment and employment, the chart also illustrates the changes occurring outside the labour force. While there are a number of reasons why a person would not be seeking employment, the dynamics of the inactive working age population are closely observed to track phenomena such as discouraged workers exiting the active population.

A further benefit of presenting the three categories in conjunction is that their sum total captures the demographic context necessary for the labour market analysis. Firstly, the change in the working age population can help in assessing the interactions of the movements between the categories. Secondly, it serves as a reminder of the necessity to view labour market shifts with the background of ageing populations and varying migration trends in mind.

The employment data used in Chart 4 cover resident persons as measured by the EU's Labour Force Survey. This survey is the only source of data for the breakdowns presented there.

## Chart 5

The chart reflects the development of funds, or resources, that become available for investment during the period. These are obtained by consuming less than disposable income (**gross savings**), by reducing **financial assets** or by incurring **financial liabilities** (mostly, but not exclusively, loans received).<sup>1</sup> These funds are then compared with the investment purposes for which they are used. The funds may flow into **non-financial investment** (known also as gross capital formation, which includes items such as acquisitions of housing, home improvements and capital goods acquired by self-employed business owners and non-profit institutions that serve households) or into financial investment (additions to financial assets such as bank deposits, shares, bonds, etc. - for a breakdown of financial investment, see also Chart 6).

For the household sector it is often the case that, on aggregate, the sector's own savings are sufficient to finance its non-financial investment in any given period. As a result, it has spare funds to lend to other sectors or, in the language of the financial accounts, is a net lender to the other sectors during the period. A net lending balance for the sector manifests itself in a net acquisition of financial assets (generally claims on other sectors), or in a net reduction of financial liabilities (generally claims of other sectors on the households), or both. The household sector, however, is not homogeneous in structure, so that those households that accumulate significant amounts of financial assets are not typically the same as those that incur financial liabilities. At the level of individual households, debt is typically incurred to finance non-financial investment or current expenditure, rather than to acquire financial

<sup>1</sup> Further resources available to households are capital transfers, such as house purchase subsidies, and financial liabilities other than loans. In the chart, capital transfers are presented together with savings, since the recipients do not incur any financial obligation or provide anything in return for the transfer. Financial liabilities other than loans are, in the case of households, generally unimportant and typically restricted to either trade credit (the direct extension of credit by the suppliers of goods and services to their customers), or other accounts except trade credit (a residual item that includes the timing difference between accrued taxes, rents, wages, etc. and their payment).

assets. It is thus possible for both financial assets and financial liabilities to accumulate within the sector as a whole.

Theoretically, the sum total of funds/resources available should equal that of the investments/uses made during the period. On account of the diverse statistical sources used, however, a statistical discrepancy often occurs between total use of funds and total resources available.

The chart generally shows resources as negative values, and uses as positive values. However, these signs may be reversed for a given entry if the net outcome of all its transactions is such that more dispositions occur than acquisitions. For instance, when the repayment of liabilities by households exceeds the volume of liabilities newly incurred, the entry "Financial liabilities" will appear as a positive value.

## Chart 6

The chart breaks investment flows in **financial assets and the components thereof** down per capita (for non-financial investment, see Chart 5). Total transactions show how much the average household invests in different financial assets in net terms. The bars show how much households invest in individual instruments. Net investment is negative whenever sales of assets exceed purchases of assets.

The chart shows the proportion of the savings within the period in question that is used for financial investment. The contribution of individual components depends, amongst other things, on the return on assets (i.e. interest rates), on households' liquidity preferences and degree of risk aversion, and on the liquidity of the asset itself. Institutional factors, especially those relating to tax treatment, may also play a major role in explaining cross-country variations, as can one-off shifts in portfolio allocations.

While financial investment is given on the basis of a flow concept, **financial wealth** is depicted in the form of a stock concept and shows the wealth accumulated through investment flows and changes in prices (revaluations) of financial assets in the current and past periods.

## Notes to Chart 6:

In comparing the level of household investment in life insurance and pension schemes across countries, the institutional arrangements with regard to pension provision may explain a large part of the observed differences. In some countries, the participation in employment-related pension schemes other than social security is mandatory or strongly encouraged, thereby generating significant flows into households' pension fund assets. Other countries may have economically similar (e.g. earnings-related) pension schemes but, in application of the international statistical standards, show no build-up of household pension assets due to the inclusion of the schemes within the government sector. Below is some country-specific information of relevance:

**Ireland:** The country has a relatively small flat-rate social insurance pension ("basic pension"). To complement it, private occupational pensions are strongly encouraged by means of a favourable tax treatment of contributions, which helps explain the high level of household pension assets.

**Latvia:** the developments of indicators based on the household financial accounts are affected by Latvia joining the Eurozone on 1 January 2014.

**Netherlands:** Participation in employment-related pension schemes other than social security is compulsory in industries that have an industry-wide scheme, or as laid out in collective labour agreements, leading to a high degree of participation in such schemes and a corresponding high volume of household pension assets.

**Finland:** The Finnish earnings-related pension funds are part of the social security system and the general government sector. The funds are accumulated from statutory payments collected from household income and do not show up as assets of the household sector.

## Chart 7

The chart presents the **ratios of household savings, non-financial investment, external financing and debt**. All are expressed as a percentage of nominal (gross) disposable income. These four ratios are key indicators for the household sector. The first three are based on flows.

The **savings ratio** captures households' relative allocation of disposable income flows to savings over the period, while the **non-financial investment ratio** captures the period's flow of capital formation, such as purchases of, and improvements to, housing as well as capital goods acquired by self-employed business owners and non-profit institutions serving households, relative to the income over the period. The **external financing ratio** captures the net recourse by households over the period to finance in the form of loans. If it is negative, households are, all in all, paying back existing loan debt, rather than incurring new debt.

The **debt ratio**, by contrast, is based on the stock of loan liabilities outstanding, thereby measuring households' main source of indebtedness as a percentage of their disposable income. Whenever, as is often the case, the savings ratio is higher than the proportion of disposable income that is used for non-financial investment, households are net lenders to the rest of the economy, i.e. are lending their surplus savings to other sectors. A sustained net lending position of households may coincide with a low or even negative share of external financing in their available resources and stable or decreasing levels of household indebtedness. Conversely, whenever the share of non-financial investment in their disposable income is larger than the savings ratio, households are net borrowers, i.e. they must borrow from the other sectors in order to cover their savings deficit. A sustained net borrowing position of households often coincides with a large proportion of external financing and rising household indebtedness.

## Notes to Chart 7:

In comparing the debt ratio of households across countries, it should be noted that mortgage debt typically accounts for the largest part of household debt, and that the proportion of households with a mortgage, as well as its average size, varies substantially from country to country reflecting, amongst other things, different shares of home ownership. The following country-specific notes are of relevance here:

**Netherlands:** In the Netherlands, certain features of the mortgage market, such as the tax deductibility of mortgage interest payments, as well as the prevalence of interest-only mortgages and contractual savings mortgages which delay redemption of the principal, may contribute to a higher volume of outstanding mortgage debt.

## Chart 8

This chart presents **changes in household net worth per capita** and a breakdown thereof into transactions and other changes. Household net worth measures the excess of the value of households' assets (both financial and non-financial) over their financial liabilities or debt. Household net worth can rise or fall in two ways. First, it can increase as a result of **transactions** that cause asset holdings to be raised more during the period in question (e.g. through acquisitions of financial and non-financial assets) than borrowing (as usually occurs through e.g. loans for house purchase). Any such increase in net worth will reflect the savings (plus capital transfers) generated over the period, as any income in excess of consumption either flows into financial and/or non-financial investments, or is used to pay back debt. Conversely, the net worth decreases if transactions that add to assets (financial or non-financial) are smaller than transactions that add to borrowing. Again, this decline in net worth will reflect the amount of the period's negative saving: consumption exceeding income calls either for borrowing to be increased or for assets to be sold.

Second, net worth can change on account of changes in the household sector balance sheet that are not due to any transactions undertaken by households. These changes are known as "**other changes**", i.e. changes that are due to factors other than transactions. The most important of these "other changes" are **revaluations as a consequence of changes in the prices of assets** owned by households. For instance, increases in the value of the homes (included in the dark brown bar), or in the debt securities and shares held by households (included in the green bar), imply increases in household net worth. Unlike in the case of transactions, there is no accounting connection between other changes in net worth and household saving during the period.

In the short term, other changes, mainly revaluations, typically contribute to a far larger proportion of the overall changes in household net worth than transactions. In the long term, however, the overall effect of revaluations may be smaller as parts thereof may be cancelled out over time, and the contributions of transactions in financial and non-financial assets to the change in household net worth tend to be

more significant.<sup>2</sup>

### Notes to Chart 8:

**Netherlands:** A significant portion of the value of household's pension assets is quite sensitive to the evolution of long-term interest rates. The steep decline in such rates starting in 2014Q1 and the related revaluation of household financial investment in life insurance and pension schemes explain a significant proportion of the increases in net worth of Dutch households during this period.

**Denmark:** The increase in household net worth stems from life insurance and pension schemes but also from investment funds and shares in the non-financial sector. Most of the Danish life insurance and pension schemes are market-based, and thus the increase in Danish stock prices over the last years have had positive effects on both net worth of pensions and life insurance, and private investments - in stocks and via investment funds.

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<sup>2</sup> "Other changes" also include some non-transactions that are not related to changes in prices, namely extraordinary events that affect households' assets such as the loan write-offs, expropriation, theft, damage through natural disasters, etc., but their quantitative importance is relatively insignificant.



## Section 4: Glossary

### **capital transfers**

Capital transfers are transactions in cash or in kind in which the ownership of an asset (other than cash and inventories) is transferred or in which cash is transferred to enable the recipient to acquire another asset, or in which the funds realised by the disposal of another asset are transferred.

### **compensation of employees**

The total remuneration, including gross wages and salaries as well as bonuses, overtime payments and employers' social security contributions, that is payable, in cash or in kind, by employers to employees in return for work done by the latter during the accounting period.

### **consumption deflator (deflator of final consumption expenditure)**

The deflator of final consumption expenditure reflects the ratio of final consumption in current prices to that in volume terms. These ratios are usually referred to as "implicit deflators" and are used to compute income flows in real terms (e.g. real disposable income).

### **currency**

Banknotes and coins in circulation that are commonly used to make payments.

### **debt ratio**

Household debt (outstanding amounts of loans received) as a percentage of disposable income, the latter being adjusted for the change in the net equity of households in pension schemes.

### **debt security**

A promise on the part of the issuer (the borrower) to make one or more payment(s) to the holder (the lender) on a specified future date or dates. Such securities usually carry a specific rate of interest and/or are sold at a discount to the amount that will be repaid at maturity.

### **deposits**

Deposits are sums placed with a financial institution (usually a bank) which are credited to a customer's account.

### **direct taxes**

A direct tax is one imposed upon an individual person or property. Typical direct taxes are: income taxes, capital taxes, holding gain taxes, etc. These are distinguished from indirect taxes which are imposed upon transactions (e.g. value added tax).

### **disposable income**

The amount of resources that accrue to households during a given period as a result of their participation as suppliers of labour or capital, after income taxes and after the net result of all transfers (except capital transfers). Disposable income is equal to the sum of household final consumption expenditure and saving.

### **employment and employees**

Persons in employment comprise all persons who during a specified brief period were in the following categories: (1) paid employment (employees) and (2) self-employment, and were working for at least one hour per week.

### **employment rate**

Persons in employment as a percentage of the population of working age (15-64 years).

### **equity**

Securities representing ownership of a stake in a corporation, i.e. shares traded on a stock exchange (quoted or listed shares), unquoted or unlisted shares and other forms of equity. Equities usually produce income in the form of dividends.

### **external financing share**

Ratio of loan liabilities to nominal disposable income.

### **financial investment**

Financial investment is the money flow which is invested in financial assets. See also: financial wealth.

### **financial liability**

A financial liability requires a debtor to make a payment, or payments, to a creditor in circumstances specified in a contract between them. For households, financial liabilities consist mainly of loans received, but also cover delayed payments and trade credit.

### **financial wealth (gross)**

The value of all financial assets owned by an institutional unit or sector (e.g. households). A financial asset is any asset that is either cash or a contractual right to receive cash or a financial instrument or to exchange financial instruments. Financial liabilities are not deducted.

### **households**

The household sector covers individuals or groups of individuals not only as consumers, but also as entrepreneurs (i.e. sole proprietorships and partnerships). For practical reasons, non-profit institutions serving households (e.g. churches, charities, trade unions) are reported together with households for all data shown in this publication.

### **investment fund share**

An investment vehicle that is made up of a pool of funds collected from many investors for the purpose of investing in securities such as debt securities, equity, money market instruments and similar assets as well as real estate.

### **life insurance and pension schemes**

Financial assets representing claims against the technical reserves of corporations providing life insurance, as well as financial assets that existing and future pensioners hold against pension funds set up by the employer. Social security pensions are not included.

### **net social transfers**

For the purposes of this publication, net social transfers amount to the difference between social benefits other than social transfers in kind (e.g.

pensions, maternity and family allowances, unemployment benefits) and social contributions made by households, directly or by employers for the benefit of their employees, to social insurance schemes to make provision for social benefits to be paid.

#### **non-financial investment (gross fixed capital formation)**

Consists of acquisitions, less disposals, of produced and non-produced assets during a given period. For households, this item mainly contains investment in dwellings and land.

#### **non-financial investment ratio**

Non-financial investment as a percentage of disposable income.

#### **net lending/net borrowing**

Net lending is the net amount available to finance, directly or indirectly, other sectors. It is the balancing item in the capital account and is defined as: net saving plus capital transfers receivable less capital transfers payable *minus* the value of acquisitions less disposals of non-financial assets, less consumption of fixed capital. Negative net lending may also be described as "net borrowing".

#### **net worth (changes in net worth)**

The net worth (wealth) of the household sector comprises its non-financial assets and net financial worth (wealth). Changes in net worth reflect the differences between the opening and closing balance sheets. See also: other changes.

#### **operating surplus and mixed income**

The surplus (or deficit) on the value of output of production activities after the costs of intermediate consumption, compensation of employees and taxes less subsidies on production have been deducted, but before payments and receipts of income related to the borrowing/renting or owning of financial and non-produced assets have been taken into account. The main components are profits of self-employed business owners and imputed rental income from owned-occupied housing, both recorded in the household sector. See also: households.

#### **other current transfers**

Other current transfers consist of net premiums and claims for non-life insurance. Household current transfers cover additionally current transfers in cash or in kind between households, fines and penalties excluding the ones imposed by the tax authorities, lottery and gambling winnings and current transfers to non-profit institutions serving households (NPISHs) like voluntary contributions, membership subscriptions and financial assistance which NPISHs receive from households.

#### **other financial assets**

This contains other accounts payable and receivable. For the household sector, this is mostly composed of delayed payments.

#### **property income and other transfers**

This item combines property income and other current transfers (for the latter see above). Property income is the income receivable by the owner of a financial asset or a tangible non-produced asset in return for providing funds to,

or putting the tangible non-produced asset at the disposal of, another institutional unit; it consists of interest, the distributed income of corporations (i.e. dividends and withdrawals from income of quasi-corporations), reinvested earnings on direct foreign investment, property income attributed to insurance policy-holders, and rent.

#### **reevaluations (financial and non-financial)**

Differences between opening and closing balance sheets that are not due to transactions but due to the price changes of assets and liabilities. Changes in the volume of assets and liabilities that are not due to transactions (e.g. write-offs, statistical reclassifications) are also included.

#### **real**

Current expenditures such as consumption can be expressed in real terms by deflating them with the appropriate (private consumption) deflator.

Furthermore, measures of income (e.g. compensation) and balancing items in the national accounts (e.g. disposable income), though not having a price and volume dimension, can be expressed "in real terms" by dividing them by the implicit index of household consumption expenditure.

#### **saving**

Saving is disposable income less final consumption expenditure, after taking account of an adjustment for pension funds. Since households are treated in the financial accounts and balance sheet of the system as owning the reserves of private funded schemes, the adjustment item is necessary to ensure that any excess of pension contributions over pension receipts does not affect household saving.

#### **savings ratio**

The savings ratio is the share of disposable income that is not consumed. It is presented as a percentage of disposable income.

#### **shares (and other equity)**

Shares and other equity are financial assets which represent property rights on corporations or quasi-corporations.

#### **short-term/long-term loans**

Loans with an original maturity of up to one year and over one year, respectively.

#### **social contributions**

Contributions made by households, directly or by employers for the benefit of their employees, to social insurance schemes to make provision for social benefits to be paid.

#### **statistical discrepancy**

As a generic term, in the accounting framework this refers to a difference between two items, which are conceptually identical, but different in terms of data, due e.g. to differences in statistical sources. In the context of the report, this refers to the differences between net lending/borrowing calculated from the financial and the non-financial accounts respectively.

**unemployment rate**

The percentage of the total labour force that is unemployed but actively seeking employment and willing to work. The labour force is the actual number of people available for work, i.e. both the employed and the unemployed.