

## Methodological notes

### Preliminary remarks

This publication contains the results of the financial accounts of the Deutsche Bundesbank for the period from 2017 to 2022. The following notes provide an overview of the subject matter and methodology of these accounts, helping to create a better understanding of these results. Selected results are then discussed.<sup>1</sup>

### Content, objective and purpose of the financial accounts

*Complexity of the national accounts*

In modern, specialised economies, the production process is made up of countless interactions between economic agents and is therefore extremely complex. The statistical recording of these interactions is nonetheless essential for various purposes, including empirical analysis and the provision of information for economic policy decisions. Such data must be recorded systematically and consistently to ensure historical and geographic comparability. The geography, subject matter and time of an economic interest can be collated and made available as macroeconomic data by aggregating economic entities into sectors, transactions into accounts and instruments, and dynamics into time periods (quarters). This is the purpose of the national accounts, which systematically record and describe the economic activities of a national economy in the form of standardised accounts.

*Financial accounts as part of the national accounts*

A complex economy consists of the production, distribution and utilisation of goods (real economy) and the corresponding financial activities and intermediation (financial economy). The traditional (real economic) part of the national accounts reflects the goods and services produced during a specific period as well as the associated income. By contrast, the financial accounts – an integral part of the national accounts – reflect financial activities. The results of the financial accounts show who provided or took up financial resources on what scale and in which form in an economy, and which financial intermediaries were involved in the financing cycle.

*Financing ...*

Financing (financial activity) is essentially understood to be the provision of funds for use in financial (intermediate financing) or real economic activity (consumption or investment). In the case of external financing, external funds are raised for this purpose, while for internal financing, recourse is taken to internally generated financial surpluses (e.g. profit).

The acquisition of assets is the counterpart of financing. It essentially comprises financial and non-financial assets, with non-financial assets consisting primarily of real estate and financial assets of financial lending and money creation. From a global perspective, the source for the acquisition of financial assets is therefore always external financing, which ultimately leads to utilisation in consumption and investment. The real economy and financial economy are therefore closely linked.

*... and acquisition of assets*

The starting point for the compilation of the financial accounts is data regarding the acquisition of non-financial assets and saving by individual sectors, which are based on the corresponding real economic figures from the national accounts. The balances resulting from saving plus capital transfers, on the one hand, and from the acquisition of non-financial assets, on the other, show to what extent a sector was a lender to or borrower from other sectors (net borrowing/lending) (see the chart on p. 6). These net lending and net borrowing aggregates correspond conceptually to the balances arising from the acquisition of financial assets and external financing of the individual sectors, the calculation of which lies at the heart of the financial accounts. Any deviations are normally due to statistical discrepancies. The financial accounts therefore provide an impression of the basic structure of the financial system (i.e. the domestic channels through which financial assets are acquired and financial resources are obtained) as well as the financial behaviour of households, non-financial corporations and general government.

*Linkage of financial accounts and national accounts*

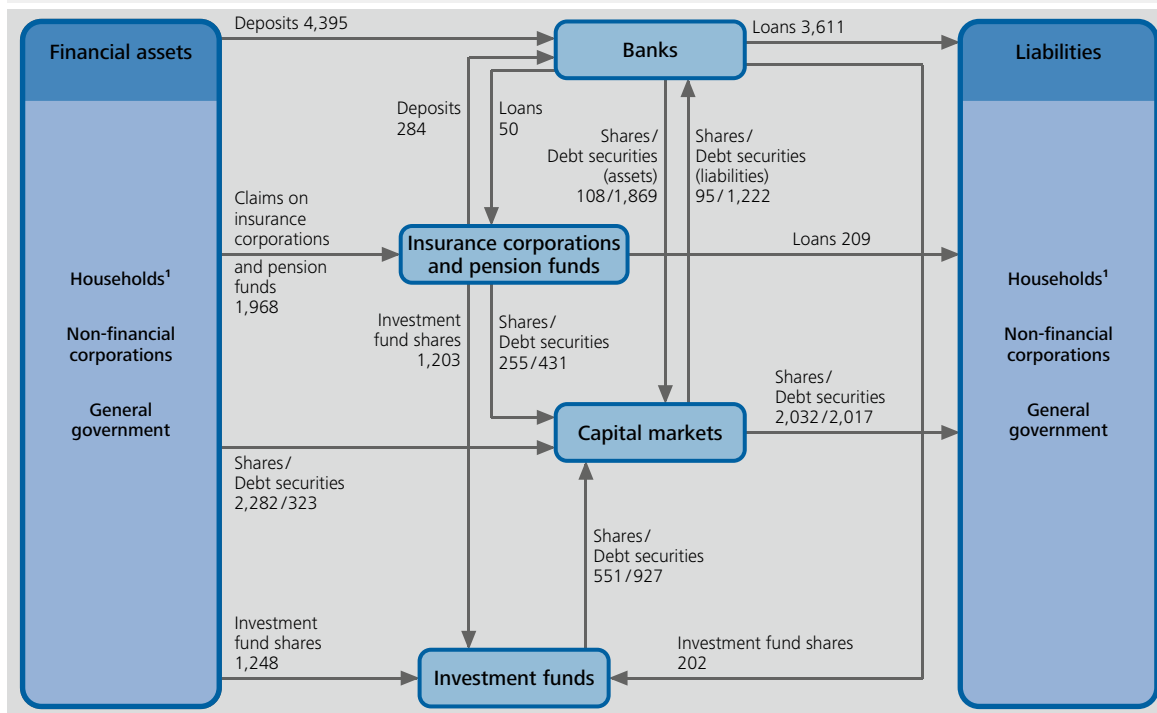
The financial accounts describe aggregate financial transactions during the period under review. Additionally, they record the amount of financial assets and liabilities as of a given date (in the financial balance sheets), thereby contributing significantly to the compilation of sectoral and aggregate balance sheets. This information is necessary for, amongst other things, analytical purposes in that the level and structure of financial (and non-financial) assets and liabilities can influence economic behaviours.

*Financial balance sheets*

<sup>1</sup> In this publication, all time series are linked to the macroeconomic time series database on the Bundesbank's website. Clicking on any one of the time series in this publication will take you to the corresponding time series in the database. For reasons of clarity, certain time series in this publication are only shown in aggregate form, whereas all the components are shown separately in the database. This applies in particular to the data on creditor-debtor relationships. For example, whereas this publication shows the extent to which financial corporations as a whole have issued shares, the above-mentioned database only contains separate data on the respective financial corporations (insurance corporations, monetary financial institutions, etc.).

### Simplified structure of the German financial system\* (including according relationships with the rest of the world)

End-of-year level 2022, € billion



\* Direction of arrow indicates a claim. 1 Including non-profit institutions serving households.  
 Deutsche Bundesbank

#### Uses

The Bundesbank itself uses the results of the financial accounts in a variety of ways, including to study the portfolio structure of non-banks within the context of monetary analysis. Moreover, knowledge of the financing structure and dynamics of non-banks as well as of the respective determinants are helpful with regard to monetary transmission. The Bundesbank's interest is mainly focused on the relationship between the credit operations of domestic banks, on the one hand, and on other sources of funding (such as securities markets, other financial intermediaries, insurance corporations and foreign lenders), on the other. Its aim is, inter alia, to uncover the links between the credit and securities markets. In this context, it also examines questions concerning the development and sustainability of (sectoral) debt. The Bundesbank – in addition to its business cycle analysis – looks at the pattern of asset acquisition and financing of enterprises and households in connection with real economic variables of the national accounts (especially capital formation and saving).

The European System of Accounts (ESA)<sup>3</sup> satisfies this requirement and provides a standardised methodological framework that is prescribed to all EU Member States<sup>4</sup> in the form of a regulation. It essentially contains the integrated components of domestic output, distributive and capital transactions and input-output accounts, and includes the definitions and characteristics of transactions, economic entities, etc. that are needed to prepare the standardised EU national accounts (and therefore also financial accounts). ESA allows financial and real economic flows to be reported in their entirety on a consistent basis and used for analytical purposes.

The Bundesbank began to develop national financial accounts data very early on. The first publication appeared in 1955.<sup>5</sup> Since then, financial accounts data have been dis-

*Development of the financial accounts in Germany*

Statistical systems: SNA and ESA

The United Nations created the System of National Accounts (SNA)<sup>2</sup> in order to establish international consistency and standardisation. Within the European Union (EU), a more detailed version with specific definitions is required to manage and monitor economic and monetary union.

2 See United Nations (2009), System of National Accounts 2008, New York, available at <http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf>

3 For the differences between ESA 2010, in force since 1 September 2014, and the 2008 SNA, see ESA 2010, Section 1.51.

4 See Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union.

5 See Stöß, E. (2009), Gesamtwirtschaftliche Finanzierungsrechnung der Deutschen Bundesbank, in Kategorien der Volkswirtschaftlichen Gesamtrechnungen, Vol. 4, Marburg, p. 375 ff.

cussed and commented on in various Bundesbank publications. In the course of revising and updating the original statistics, stock data on financial assets and liabilities of the individual sectors were published for the first time in 1971. Since then, financial balance sheets have been part of the standard publication programme.<sup>6</sup> The complete annual financial accounts appear at regular intervals as a separate special series (under the name “Special Statistical Publication 4” up until 2019). Since the beginning of 2007, the current quarterly data for the households and non-financial corporations sectors have been published in the statistical section of the Monthly Report. Additionally, the corresponding data for these and other sectors can be found in the time series database on the Bundesbank’s website.<sup>7</sup>

*Results based on ESA 2010*

This publication shows the annual results of the financial accounts for the 2017 to 2022 period. The data on financial flows and stocks contained in this publication have been compiled according to ESA 2010, which replaced the previous ESA 1995 on 1 September 2014. Owing to the associated methodological changes, the results of this edition of this special series can only be compared to a very limited extent with those of previous editions, which are based on ESA 1995 data.<sup>8</sup> The annual results in this publication are based on quarterly data.

## ■ Methodological structure

### Basic principles

*Financial assets and liabilities*

The financial accounts form a closed-loop system. Consequently, total assets equal total liabilities. Transactions are divided into acquisition of financial assets and external financing, and stocks into financial assets and liabilities. The terms “financial assets” and “liabilities” are defined broadly. Financial assets are classified as any asset that pertains to a creditor-debtor relationship, whereby the creditor has a legally enforceable claim on the debtor. Besides direct creditor-debtor relationships, they include financial operations in the form of shares, investment fund shares and other equity, claims on insurance corporations and central bank holdings of “financial gold” (this item in the financial accounts results from currencies formerly being backed by gold through fixed pegging against the US dollar until the end of the Bretton Woods system; gold holdings of other sectors are classified as non-financial assets).

### Sectoral breakdown

*Residence concept and classification by sector (S)*

The financial accounts show the financial relationships between all economic entities permanently domiciled in Germany (residence concept). Foreign employees and the

production sites of foreigners in Germany are thus treated as domestic economic entities (sector S.1), whereas German facilities domiciled abroad are regarded as non-residents and are thus assigned to the sector Rest of the world (sector S.2). Domestic entities are grouped in institutional sectors according to their economic and financial nature (see overview of sectors on p. 8). Here, a unique classification into the main and sub-sectors of the national accounts is not always possible, as economic entities may engage in multiple activities. Classification is consequently based on their primary function or their primary behaviour. Because of the creditor-debtor relationship of financial assets and liabilities, each creditor sector has a counterpart debtor sector.

The primary function of economic entities in the sector Non-financial corporations (sector S.11) is to produce (real) goods and services for the market. Consequently, their task is to identify and invest in economically advantageous projects. The sector Non-financial corporations includes genuine corporations (public limited companies, private limited companies, etc.) and quasi-corporations (chiefly partnerships, i.e. general partnerships and limited partnerships).

*Non-financial corporations (S.11)*

By contrast, the main task of the economic entities in the sector Financial corporations (sector S.12) is to provide financial services. This sector is disaggregated into monetary financial institutions (MFIs, sectors S.121–S.123), investment funds (except money market funds, sector S.124), other financial intermediaries (OFIs) including financial auxiliaries, captive financial institutions and money lenders (sectors S.125–S.127), insurance corporations and pension funds (sectors S.128–S.129). The Bundesbank is included in the MFIs sub-sector as a central bank, along with commercial banks, building and loan associations and money market funds, which are included as other MFIs. In this sub-sector, money is created through lending and the collection of deposits from money-holding economic entities (households, non-financial corporations, etc.). Invest-

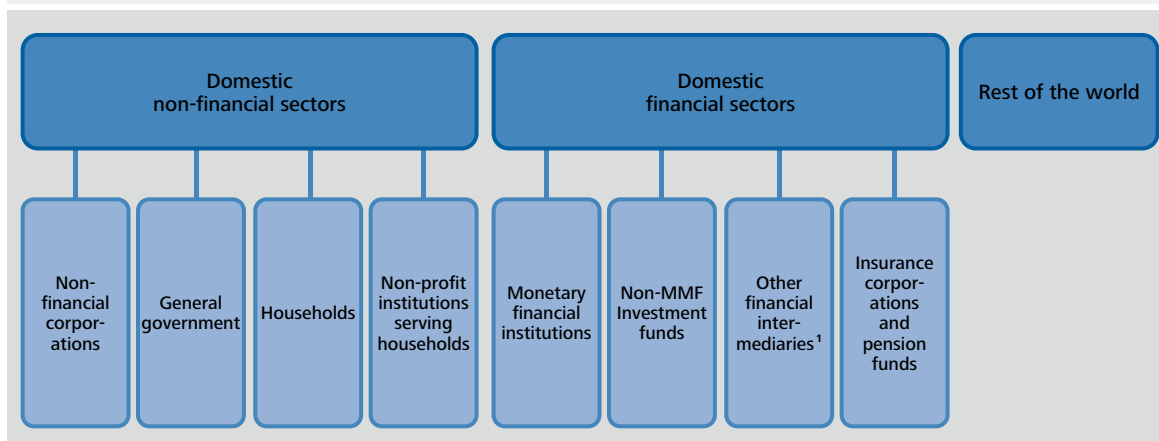
*Financial corporations (S.12)*

<sup>6</sup> For detailed information concerning the reparation of integrated balance sheets for financial and non-financial assets for Germany, see Deutsche Bundesbank (2008), Integrated sectoral and overall balance sheets for Germany, Monthly Report, January 2008, pp. 31–45. For results from 1999 to 2020, see Deutsche Bundesbank and Federal Statistical Office (2021), Balance sheets for institutional sectors and the total economy, 1999–2020.

<sup>7</sup> Available at [https://www.bundesbank.de/dynamic/action/en/statistics/time-series-databases/time-series-databases/743796/743796?treeAnchor=GESAMT&statisticType=BBK\\_ITS](https://www.bundesbank.de/dynamic/action/en/statistics/time-series-databases/time-series-databases/743796/743796?treeAnchor=GESAMT&statisticType=BBK_ITS)

<sup>8</sup> For a more detailed description of the changes in the financial accounts following the adoption of ESA 2010, see Deutsche Bundesbank (2014), Methodological changes in the financial accounts – background, approach and selected results, Monthly Report, October 2014, pp. 13–26.

## Sectors of the financial accounts



<sup>1</sup> Including financial auxiliaries as well as captive financial institutions and money lenders.  
 Deutsche Bundesbank

ment funds (except money market funds) comprise all entities that collect funds by issuing investment fund shares and primarily invest these funds in financial assets and tangible fixed assets (generally real estate). The OFIs sub-sector encompasses financial institutions engaging in financial intermediation that can neither create money nor provide insurance services, and are also not investment funds (e.g. securities dealers, financial leasing corporations, captive money lenders, financial vehicle corporations, issuing houses). Insurance corporations whose main focus is the assumption of risk relating to premium payments and the formation of insurance technical reserves, together with pension funds (supplementary pension funds for government employees, occupational pension schemes, etc.), form a sub-sector of their own.

*General government (S.13)*

The primary focus of the sector General government (S.13) is the fulfilment of sovereign tasks. In line with the federal structure, it comprises the central, state and local government and social security funds sub-sectors. General government's main source of financing is compulsory payments (taxes, fees and contributions) and borrowing on the financial markets. The supplementary pension funds for public-sector employees fall within the scope of the (private) insurance sector.

*Households (S.14)*

The sector Households (sector S.14) includes all persons or groups of persons who are characterised primarily by the consumption of real and financial goods and services. It also includes persons or groups of persons who produce market goods and/or services, insofar as no quasi-corporations were formed for this purpose.<sup>9</sup> Consequently, sole proprietors, independent professionals, self-employed farmers, etc. also belong to this sector.

Non-profit institutions serving households (sector S.15) are institutions which constitute independent legal entities that serve households as private other non-market producers. These include, for instance, political parties, trade unions, private foundations and churches.<sup>10</sup>

*Non-profit institutions serving households (S.15)*

Residents' assets and liabilities vis-à-vis non-residents are offset in the sector Rest of the world (S.2). Only the basic financial relationships and connections with non-residents are shown; non-residents are not divided into individual sectors. Consequently, only those asset items arising from links between residents and non-residents are shown in this sector. The total asset and liability position of non-residents can only be determined based on the results of all foreign financial accounts.

*Rest of the world (S.2)*

### Recording of financial instruments

Within the sectors, economic entities are structured according to their primary economic operations. These (financial) operations are, in turn, broken down into various instruments. By analysing activities, conclusions can be drawn regarding the objectives of entities within the sectors. The instruments are therefore structured accord-

*Instruments used for financial transactions and stocks*

<sup>9</sup> This group of persons was reclassified to the sector Households upon the entry into force of ESA 1995 mainly because it was felt that the relevant entrepreneurial activities were not being recorded adequately for statistical purposes and that they would be better reflected under other private lifestyles. For more detailed information, see Deutsche Bundesbank (2020). Overall financial flows in 1999, Monthly Report, June 2000. ESA 2010 has not altered this classification.

<sup>10</sup> Non-profit institutions serving households, which were always recorded together with households under ESA 1995, have been shown separately since the introduction of ESA 2010.

ing to their liquidity (tradability), maturity and legal characteristics (see the adjacent classification of instruments).<sup>11</sup> Owing to the creditor-debtor relationship, creditor and debtor positions exist for each instrument. In the financial accounts tables, the definitions of financial instruments are independent of the creditor or debtor sectors involved. Therefore, the different categories of deposits also include the balances of domestic sectors with foreign banks. Similarly, the item Loans comprises not only loans granted by banks and building and loan associations, but also unsecured lending by other sectors (e.g. mortgages and other loans granted by insurance corporations or general government).

*Monetary gold and special drawing rights (F.1)*

Monetary gold (financial gold, F.1) is gold held by central banks. It is part of a country's international reserves. Special drawing rights (SDRs) are currency units defined and maintained by the International Monetary Fund (IMF), which are covered by the most commonly used international currencies. They are used as a means of settlement between central banks and international institutions.

*Currency and deposits (F.2)*

Currency comprises the banknotes issued by the central bank and coins in circulation. Generally speaking, currency is a liability of the institutional sector that issues it. As a modern form of debt money, banknotes are a liability of the central bank. By contrast, coins are a central government liability in many countries, including Germany, due to the "coinage prerogative". Deposits are deposits at MFIs, which are either directly available (transferable deposits) or available after a fixed term or period of notice (other deposits). Currency and transferable deposits are used mainly as payment instruments for real economic or financial transactions, i.e. as direct payment methods. Savings and time deposits, by contrast, are chiefly used for savings, with short-term ones considered potential means of payment given their "near-money" status.

*Debt securities (F.3)*

Debt securities (F.3) comprise borrowed capital that has been converted into negotiable securities through securitisation. They can be traded on the market and are subdivided into short-term and long-term debt securities. Financing with an original maturity of up to one year is deemed short-term, whereas financing with an original maturity of more than one year is deemed long-term.

## Financial instruments in the financial accounts

### Monetary gold and special drawing rights

- Monetary gold
- Special drawing rights (SDR)

### Currency and deposits

- Currency
- Transferable deposits
- Time deposits
- Savings deposits
- Savings certificates

### Debt securities

- short-term debt securities
- long-term debt securities
- Additionally: Debt securities by issuer

### Loans

- short-term loans
- long-term loans
- Additionally: Loans by lender

### Equity and investment fund shares

- Listed shares (by issuer)
- Unlisted shares
- Other equity
- Investment fund shares
  - Money market fund shares
  - Non-MMF investment fund shares

### Insurance, pension and standardised guarantee schemes

- Non-life insurance technical reserves and provisions for calls under standardised guarantees
- Life insurance and annuity entitlements
- Pension entitlements<sup>1</sup>

### Financial derivatives and employee stock options

### Other accounts receivable/payable

- Trade credits and advances
- Other accounts receivable/payable

<sup>11</sup> The breakdown by maturity is based on the lifetime or the period of notice originally agreed. Claims or liabilities repayable on demand or in one year or less are normally classified as short-term, while those with longer maturities are deemed to be long-term.

<sup>1</sup> Pension entitlements, entitlements to non-pension benefits and claims of pension funds on pension managers.

*Loans (F.4)* Loans (F.4) are unsecuritised assets which, unlike securities, are not directly tradable. Based on their original maturity, they are broken down into short-term (maturity of up to one year) and long-term loans.

*Shares (F.5)* Shares (F.5) comprise ownership rights in corporations. This equity generally enables the owner to influence corporate decisions. Shares first and foremost include direct holdings of shares, irrespective of whether or not they are listed. They also include shares in Other corporations (private limited companies and cooperative societies) and in partnerships. Substantial capital is tied up in such companies in line with the corporate structure in Germany. Finally, investment fund shares are also included in this category.

*Claims on insurance, pension and standardised guarantee schemes (F.6)* Claims on insurance, pension and standardised guarantee schemes (F.6, also referred to as insurance technical reserves) mainly encompass claims arising in connection with possible future events. These usually relate to insurance corporations and pension funds as debtors. However, in the case of employers' pension commitments in connection with company pension schemes, the liability remains in the relevant debtor sector, e.g. Non-financial corporations. Claims on social security funds (state pensions) are not covered in the financial accounts.

*Financial derivatives and employee stock options (F.7)* Financial derivatives (F.7) are financial instruments based on another instrument which allow special risks to be traded separately from the underlying instrument. Their value is derived from an underlying instrument, which can either be another financial asset (e.g. options on securities), an index (e.g. DAX futures), a commodity (e.g. commodity futures) or an event (e.g. credit default swaps). Employee stock options entitle employees to acquire a certain number of their employer's stocks at a pre-determined price, either at a fixed point in time or within a certain timeframe.

*Other accounts receivable/payable (F.8)* Other accounts receivable/payable (F.8) comprise financial operations that tend to be the counterparts of other business activities, e.g. early or late payments for goods and services. These items include enterprises' trade credits and prepayments/accrued income as well as government tax claims and payment arrears. With respect to the sector Households, other accounts receivable also include accumulated interest-bearing surplus shares with insurance corporations.

### Capturing the dynamics

*Stocks and flows* The financial instruments which are held and issued by the sectors are measured both over time periods and at specific points in time. Flows (including transactions and other

changes in volume) encompass the issue, exchange, transfer or utilisation of financial assets or liabilities over a period of time, whereas stocks reflect these values at a particular point in time. As a rule, financial transactions and their counterpart entries are recorded at the same time.

The financial accounts document the financial stocks and flows of the various sectors on a quarterly basis. The data are published regularly at quarterly intervals and once a year as annual data in this special series. The time lag between the reporting date/period and publication is at present about three-and-a-half months and is mainly used for the collection, compilation and verification of the data.

### Conceptual aspects

Economic entities may interact, and thus carry out financial transactions, with entities within the same sector or with those from other sectors. The unconsolidated approach takes into account transactions which take place within one sector. This reflects the overall activity of the sector. Under the consolidated approach, the financial relationships within a particular sector are netted out to produce consolidated data. This approach illustrates the external relationships of a particular sector with other sectors. The difference between the unconsolidated and consolidated accounts is attributable to the internal relationships and activity. This provides a deeper insight into the functions and links between financing and the acquisition of assets, particularly within the heavily disaggregated financial sector. Unconsolidated data are published in this special series for the individual sectors. However, the data in the matrices from p. 60 onwards are consolidated and therefore illustrate the external relationships of the individual sectors.

The financial accounts aim to reflect transaction values at market prices, as these contain implicit information on the subjective valuation of stakeholders. Financial flows are therefore valued at actual transaction prices. In practice, this valuation concept is sometimes difficult to apply in cases in which stocks are to be shown at market prices rather than at their nominal value. The transaction value principle can be applied without any problems wherever turnover statistics are available, for instance in the case of issuance of securities at issue prices. If, however, the figures on the transactions are derived from stock data which include revaluations, the valuation concept can only be applied using separate calculations that eliminate valuation changes that have occurred over time. This, in turn, requires the availability of additional suitable statistics, from which the necessary information can be taken. If

*Reporting periods and frequency*

*Consolidation*

*Valuation of transactions ...*

such data are not available, or only available to a limited extent, estimates have to be used.

*... and of stocks*

The predominant criterion for valuing stocks is also market prices (or at least estimated near-market prices). In the case of financial operations in the form of securitised creditor or debtor relationships (or equity) and in foreign currency, daily market prices quoted in the securities and foreign exchange markets are used. In the case of unsecured claims and liabilities in domestic currency, however, these largely correspond to nominal values.

*Other changes in volume*

The use of market prices for valuing financial flows and stocks leads to flow-stock discrepancies (other changes in volume). These may be attributable to valuation adjustments, for example, which may be significant in the case of securities and external positions. In such cases, a seamless match between the recorded financial transactions and the changes in the stocks can only be achieved via an additional reconciliation account showing the audit trail between the initial position, transactions, valuation changes and the final position. Other changes in volume can arise as a result of reclassifications within a sector at the instrument level or a change in the allocation of individual units to an institutional sector. However, such reclassifications occur only irregularly.

*Net recording*

Financial flows are shown net in the German financial accounts, i.e. the increases in claims (or liabilities) of a specific type are offset against the relevant decreases in the period concerned. This representational concept is in line with ESA 2010, but also arises inevitably from the fact that stock statistics frequently have to be used in order to derive the financial flows.

*Consistency*

The system of double-entry bookkeeping in the financial accounts results from creditor-debtor relationships. All assets are therefore matched by counterpart liabilities, broken down by instrument and sector and subdivided according to transactions and stocks. One party's monetary assets are another's monetary liabilities. This requires consistency of data. The totals of the relevant balance sheet items for instruments and sectors must match. This need for consistency applies to both the result of the financial accounts and the sources and procedures used, and it is a particular challenge to ensure this requirement is met.

### Statistical sources

*Financial accounts as secondary statistics*

Worldwide, there are hardly any separate collections of statistics for the specific purposes of the financial accounts. As a consequence, existing statistical information which primarily serves other purposes usually has to be used in compiling them. A case in point is the banking statistics,

which are collected by central banks primarily in connection with performing their monetary policy and supervisory functions. The same applies to securities statistics for analysing the capital market and to various statistics for compiling the balance of payments. The financial accounts therefore assume the character of secondary statistics which are based on statistical components from diverse financial areas which are linked consistently with one another.

The information for compiling the financial accounts can be obtained either directly or indirectly. In the first case, the data stem directly from the institution for which they are needed, in other words, from households or enterprises themselves. The second option is to obtain the desired data indirectly – i.e. from other sources, for example credit institutions or other financial intermediaries. Both methods have advantages and drawbacks. The direct method is often impeded in practice by considerable psychological resistance, legal hurdles and high costs. On the other hand, the indirect method used in Germany has the advantage that one can draw on existing statistics which, on account of legal regulations, are usually sufficiently detailed, comparatively dependable and available without too great a time lag. The disadvantage of this method is that these statistics do not necessarily meet the specific requirements of the ESA. In such cases, statistical procedures and adequate additional information are used in an attempt to fill the gaps. Because the resulting statistics are estimates, the results should be interpreted with caution, however, as is the case with the item Other equity in Germany, for example. If there are no well-founded points of reference, as with employee stock options, no explicit information is shown.

*Indirect information*

The most important sources for the financial accounts are the statistics of financial intermediaries, particularly the monthly balance sheet statistics of banks (MFIs), the securities holdings statistics and the quarterly data on the financial position of insurance corporations. The bulk of the stock data come from these sources, which often also indicate the sectors in which the claims shown are concurrently incurred as liabilities and, conversely, the liabilities accrue as claims. Further data are provided, for example, by the capital market statistics, the balance of payments statistics, the international investment position, corporate financial statement statistics and various government financial statistics.

*Main sources*

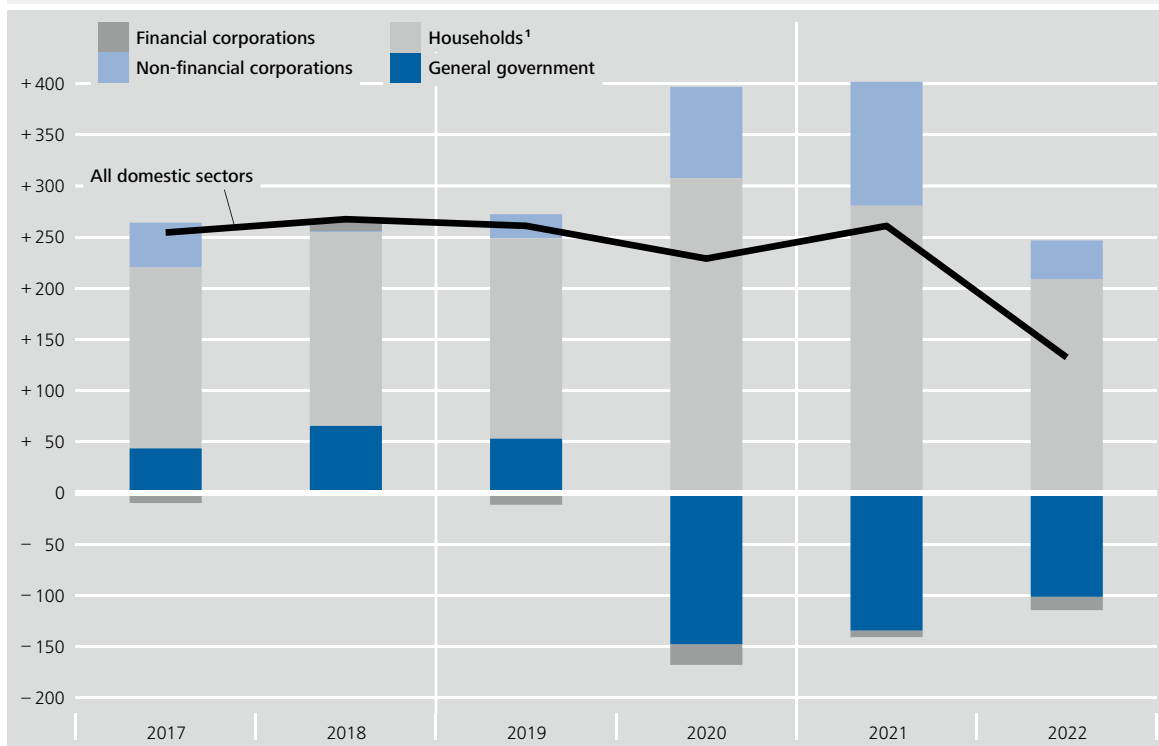
### Compilation

The financial accounts statistics are generally compiled according to the bottom-up principle, i.e. data for the top sector are calculated summing up available data for the

*Financial accounts process*

### Net lending/net borrowing by institutional sectors

€ billion



<sup>1</sup> Including non-profit institutions serving households.  
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sub-sectors and sub-categories of financial instruments. Where this is not possible owing to incomplete sub-account data, data from higher accounts are disaggregated for the lower accounts according to the top-down principle. Owing to the varying degrees of reliability and temporal availability of primary statistics, data are compiled according to a hierarchy of sources for the selection of data sources to calculate the various instruments and sectors. This is based on the objective of capturing, above all, the domestic sectors accurately. Discrepancies that exist between individual data sources owing to the use of different methods in collecting data are compensated in part via the external account. At the same time, the consistency of instruments (horizontal consistency) and sectors (vertical consistency) is checked and ensured. In the case of vertical consistency, consistency between the real-economic national accounts and financial accounts (sectoral balances) is verified.

#### Revisions

The results of the financial accounts are revised from time to time. Such adjustments, which are also implemented retroactively, are essentially made for any of three reasons. First, changes in the data of the primary statistics used are taken into consideration in this way. Revisions of this kind can become necessary due to changes in the source classification, definitions or the classification of economic enti-

ties. Second, as the availability of suitable primary statistics changes over time, the additional inclusion of new or the replacement of previous data leads to revisions of the financial accounts. It is necessary to take such changes in the primary statistics into consideration in the financial accounts to ensure the consistency, timeless and high quality of the data and of the information contained therein. Third, methodological changes in the financial accounts themselves – such as the conversion to ESA 2010, which was completed in the autumn of 2014 – necessitate revisions.

### Selected developments over the years 2017 to 2022

The above chart shows net lending/net borrowing by institutional sectors for the period from 2017 to 2022 according to the national accounts data.<sup>12</sup> Institutional sectors' net lending/net borrowing experienced significant change in 2022. Households' net lending was down sig-

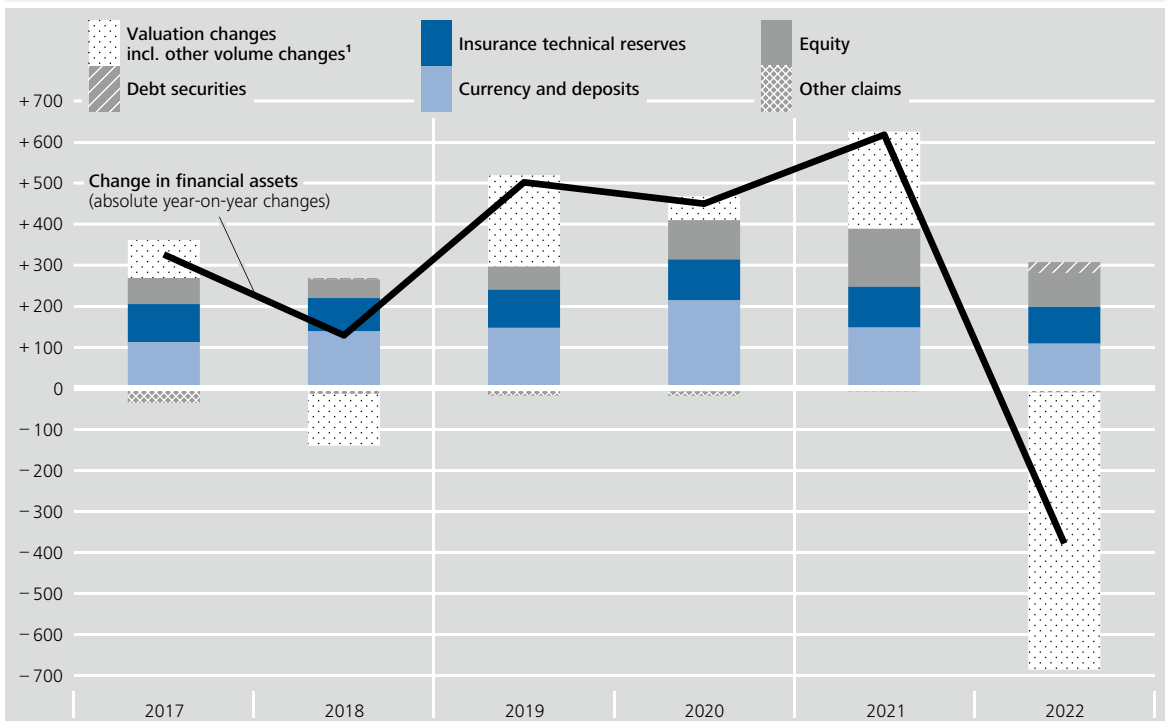
*Net lending by households down significantly*

<sup>12</sup> Consistent with the results of the financial accounts, the national accounts data discussed below will also be considered in absolute terms.



## Development of financial assets of households\*

Transactions and valuation changes incl. other volume changes in € billion

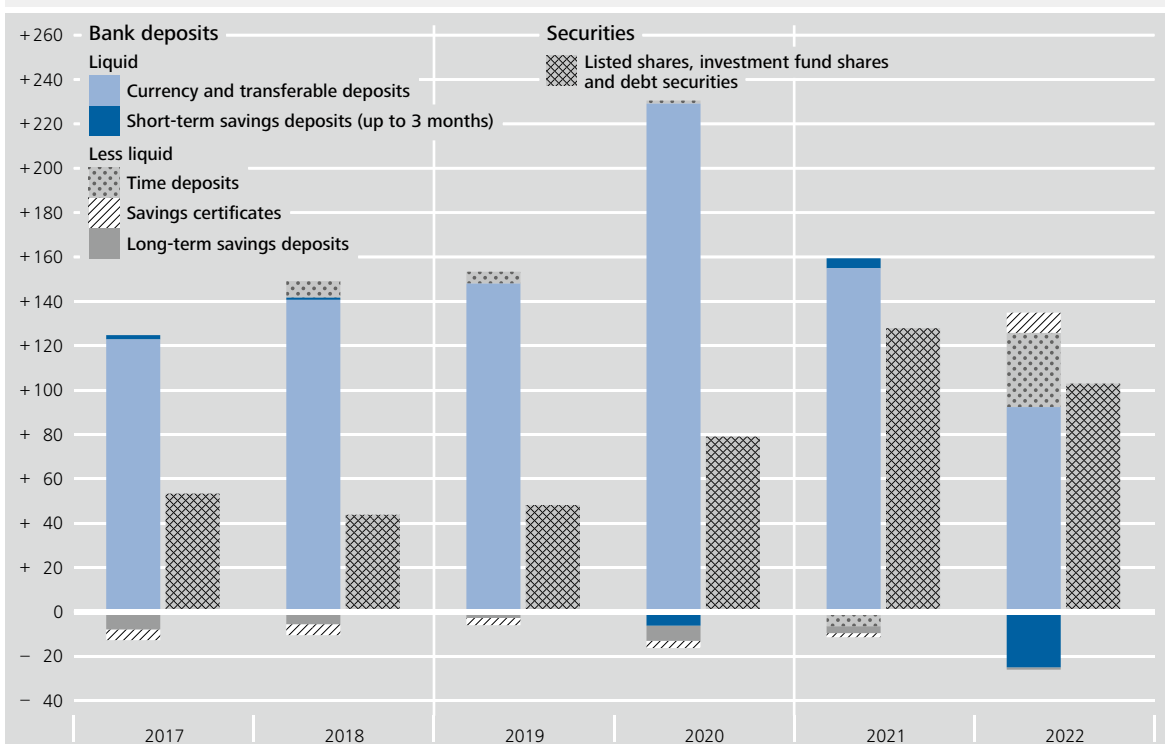


\* Including non-profit institutions serving households. 1 The reduction in the total assets of private households is partly due to a methodological change implemented for 2022. See footnote 15 for further information.

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## Net acquisition of assets in the form of deposits and securities by households\*

Transactions in € billion

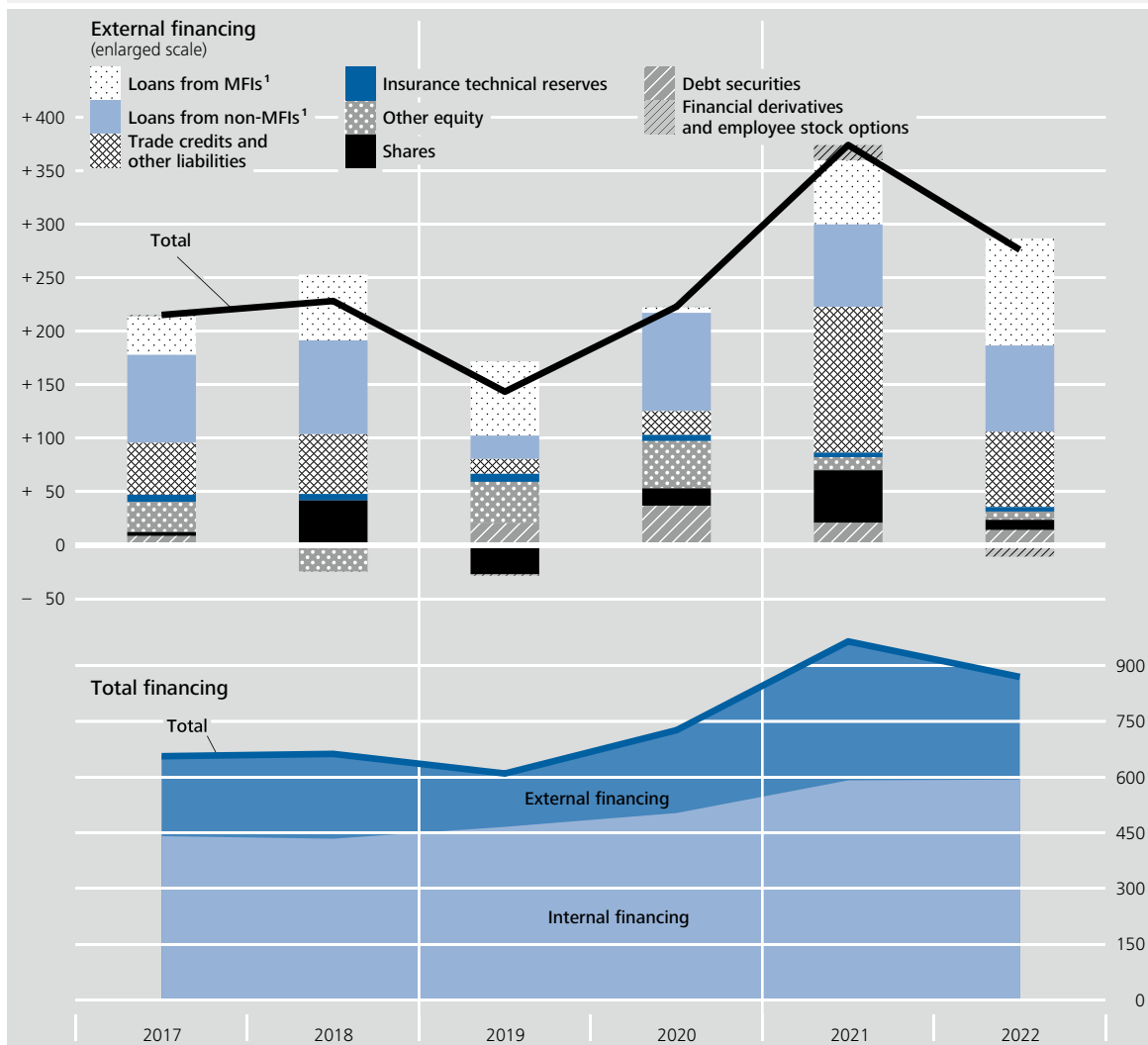


\* Including non-profit institutions serving households.

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### Financing structure of non-financial corporations

€ billion



<sup>1</sup> Domestic and foreign.  
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nificantly compared with 2021. This can be attributed firstly to the fact that nominal consumption expenditure rose more strongly than disposable income in the past year, against the backdrop of a sharp rise in the cost of living, and secondly to the fact that households saved more in 2021 and 2020 due to the Corona restrictions, hence leading to exceptionally high levels of net lending/net borrowing.

*Sharp fall in non-financial corporations' net lending, too*

Non-financial corporations likewise saw net lending decline significantly in 2022 compared with 2021. While output increased sharply, more of the income was distributed to shareholders and more was invested, as well. Nonetheless, the debt ratio was down at year-end 2022.

General government recorded net borrowing in 2022 for the third year in succession. Compared with the previous year, however, it fell significantly to 2.6% of gross domestic product. While expenditure due to the energy crisis weighed heavily on the budget, pandemic-related assistance declined considerably and the nominal reference variables of tax revenue and social contributions rose dynamically.

*General government records net borrowing for third year in succession*

Financial corporations' net lending/net borrowing was also negative in 2022. Overall, the sum of net lending/net borrowing of the four domestic sectors fell. In absolute figures, the domestic sectors' net lending in 2022 amounted to roughly €132 billion, which is only half as much as the previous year. Accordingly, an exceptional decline was also observed in the current account surplus. The current ac-

*Net lending to the rest of the world down considerably*

count surplus as a percentage of nominal gross domestic product last fell this sharply when Germany was reunified.

*Households suffer valuation losses on listed securities*

Households' financial assets stood at €7,462 billion at the end of 2022, down on the end-2021 figure. Net financial assets fell more sharply still, dropping to €5,307 billion partly because liabilities rose by €92 billion. Households added €111 billion to their stocks of currency and deposits, besides acquiring additional debt securities worth around €13 billion. At the same time, however, they suffered valuation losses (including other volume changes) of €99 billion on their holdings of listed shares and of €142 billion on their holdings of investment fund shares (the bulk of which are equity funds and mixed securities funds). Both the cycle of monetary policy tightening in response to the high inflation rates and the uncertainty surrounding the war in Ukraine impacted significantly on valuation effects.

*Changing investment behaviour as interest rates rise*

The lower chart on page 13 shows how households' financial assets evolved between 2017 and 2022. As before, households' investment behaviour continues to be characterised by a distinct preference for liquidity. Flows into currency and transferable deposits, however, were less strong in 2022 than they had been in 2021, and short-term savings deposits even declined on the year. Better-remunerated time deposits and savings bonds registered clear growth, by contrast. Debt securities, too, regained popu-

larity among households in 2022 compared with 2021 and 2020. That is another development that should be seen against the backdrop of the higher interest rates.

Safer and more liquid financial assets generate lower yields most of the time and this was particularly noticeable in the low interest rate setting of previous years. Yield considerations played an increasingly important role at that time. With interest rates rising and uncertainty levels high in 2022, riskier and higher-yielding forms of investment like listed shares and investment fund shares have, on the whole, lost some of their appeal among investors.

*Yield considerations play a growing role*

Non-financial corporations' external financing, which is shown in the chart on page 14, was noticeably lower in 2022 than in 2021. Equity financing through the issuance of shares and other equity (including GmbH shares) played a much smaller role in 2022 than it had in 2021. Another significant factor was the decline in trade credits and other liabilities.

*Non-financial corporations see significant decline in external financing*

Total financing comprises internal financing – i.e. financing via retained profits and the present value of depreciations – and external financing. Unlike external financing, the absolute amount of internal financing remained largely stable in 2022 compared with 2021. Its share of total financing thus increased, coming to 68% for the year as a whole.

*More of total financing accounted for by internal financing*

