

## **Documentation of statistics for Personal assets and Liabilities 2024**

## 1 Introduction

The purpose of the Wealth and Debt statistics is to provide insights into the wealth and debt of individuals, families, and various population groups. The statistics were first created in the aftermath of the financial crisis in collaboration with Danmarks Nationalbank (the Danish Central Bank) and were intended, among other things, to analyze families' resilience to economic shocks. Additionally, the statistics are used in analyses of the pension system and to measure economic inequality. The statistics have been produced since 2014.

## 2 Statistical presentation

The statistics produces annual data on the value of real estate, cars, financial assets, pension wealth and debts. There are also separate and more detailed publications on pension wealth. The statistics are register based and are based on data at the individual level. It is linked to other registers in order to do subdivisions on age, gender, municipality etc.

### 2.1 Data description

The main indicator of the wealth statistics is the Net wealth. This is calculated as the sum of the value of real estate, cars, bank deposits, shares (including unquoted shares) and pension wealth. From this is deducted debt to both public and non-public sectors. Unquoted shares and some debts to the public sector have only been part of the statistics from 2020. Thus there are two series for new wealth - with and without these two components. One is available from 2014 and the other from 2020.

Due to the obvious correlation between age and wealth, it is recommendable to use age as a background variable in most cases. Thus age are also a background variable in most publications by Statistics Denmark. Furthermore note that averages may be skewed by individuals with extreme wealth. Thus the median may in many cases be better to represent the wealth of 'ordinary' people in the selected sub-population.

In 2023 Statistics Denmark and the Danish Nationalbank has estimated payouts from aldersopsparingen, which were otherwise tax-free and thus without data on payouts. This is described in detail in Danish in the paper [Estimering af aldersopsparing](#). In 2023 Statistics Denmark and the Danish Nationalbank has collected data on pension stocks, contributions and payouts etc. to provide an overview of growth rates and flows within the pensions system. This is described in detail in the paper [New data on individual pension wealth growth](#)

### 2.2 Classification system

The basic structure of the wealth components are inspired by the [OECD](#)

The data are among other disseminated by type of family, ownership of dwelling, income in intervals, socioeconomic status, educational level, municipality, age and gender.

The statbank table LABY11, 12, 14 and 15 is distributed on [municipality groups](#).

### 2.3 Sector coverage

The household sector.

## **2.4 Statistical concepts and definitions**

**Median wealth:** The median represents the point at which exactly half of the population has a higher wealth, while the other half has a lower wealth. In particular, for wealth, the average can be significantly skewed by individuals with large fortunes, making it less representative of the general population. The median is a good alternative when aiming for a clearer picture of typical wealth levels in the Danish population.

**Net wealth:** The total value of a person's or household's assets minus their liabilities. In wealth statistics, net wealth is the sum of the value of real estate, cars, bank deposits, stocks, investment funds, pension funds etc., minus debt. The 2020 definition of net wealth, the value of unquoted shares (shares not traded on the stock exchange) and all public debt arrears. The 2014 definition of net wealth excludes unquoted shares and the majority of public debt arrears.

**Unlisted share (Wealth and liabilities):** An unlisted share is a share in a limited company that is not traded on a regulated market or stock exchange. In the Wealth and liabilities statistics, the term refers to the value of company assets in public limited companies, entrepreneurial companies and private limited companies that can be allocated to individuals.

## **2.5 Statistical unit**

The primary unit is persons supplemented with a few tables at the family level

## **2.6 Statistical population**

The Danish population on the 31st of December in the given year.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

The statistics on wealth and debt covers 2014 and onward – the data for every year was collected on the 31st of December in the given year. A few components, mainly financial assets, public property assessments and debt are available in the income registers further back in time. See under “Comparability over time”.

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

DKK and number of persons

## **2.11 Reference period**

The statistics contains information on wealth and debt on the 31st of December in the given year. Census data on age, gender and family units has the same date of reference.

## **2.12 Frequency of dissemination**

Annual

## **2.13 Legal acts and other agreements**

Much of the data is collected via the tax authorities based on §6 in the law on Statistics Denmark. The pension data is collected based on the law of The Danish National Bank, §14 a. The statistics also provides data for EU-SILC, that is regulated by [EU regulation 2019/1700](#) and the OECD database.

## **2.14 Cost and burden**

The statistics are register-based, meaning there is no direct reporting burden. Most data is collected from KMD, LD, the Danish Tax Agency, the Development and Simplification Agency, and the Debt Agency. In addition, pension data is gathered from around 100 pension companies and financial institutions. These companies submit pension data to the Danish Tax Agency, which then forwards the data to Statistics Denmark. After an error-checking process, the data is shared with Denmark's central bank. A significant amount of work is involved in ensuring that the data meets the agreed data exchange agreements, as well as the practical tasks related to organizing and transferring the data. If the data does not meet quality requirements, resubmission may be necessary. The reporting burden has not been quantified.

## **2.15 Comment**

Additional information can be found on the [website on wealth and debt](#) or the [website on pensionwealth](#) or by contacting Statistics Denmark.

Let me know if you need any further refinements or translations!

## **3 Statistical processing**

Data is collected from multiple sources and undergoes statistical processing, including debt classification and market value assumptions for assets such as homes, cars, and unlisted shares. Registers are compiled using anonymized identifiers. In pension statistics, bonuses and reserves are allocated proportionally to pension funds, and anonymized contract numbers enable time-series analysis, except in cases of mergers and acquisitions.

### **3.1 Source data**

Data is collected from a variety of sources. Housing evaluation stems from the Danish property Assessment Authority but are adjusted to market values using sales statistics and the register on buildings and dwellings (BBR). Most data on financial assets and debt comes from the tax authorities. The value of cars is assessed by using used car sales prices from AutoBranchen Danmark and ownership of the cars are based on the car register. The pension data are collected from each of the 100 pension funds in close cooperation with the Danish National Bank and the tax authorities. The municipalities (mainly KMD) delivers data on postponed payments of real estate taxes. The Danish Debt Collection Agency (Gældsstyrelsen) delivers data on public debt. The assessment of the value of unquoted shares are done by Statistics Denmark in cooperation with the National Bank. It's mainly based on accounting statistics. The unquoted shares are distributed via the registers on ownership of businesses. LD delivers data on vacation funds.

### **3.2 Frequency of data collection**

Annual.

### **3.3 Data collection**

Most data collected from public registers and they are delivered to Statistics Denmark via the CEMOS-system. All data contains personal identification numbers etc. that are used to link the various inputs and to the central personal register. The personal identification numbers are replaced by random identifiers and only information relevant to the production of the statistics enters the data processing phase.

### **3.4 Data validation**

The data on pensions is validated by Statistics Denmark and The Danish National Bank. Data is validated on both the micro level and the macro level where the data from each pension provider is compared to aggregated accounting data from The Danish Financial Supervisory Authority. Most other data coming from the tax system are validated by the tax authorities. Data is systematically checked for new codes. Prior to publication, the annual changes to the wealth components are evaluated and compared to secondary sources, where these are available.

### **3.5 Data compilation**

The tax authorities real estate estimations are adjusted to better reflect actual sales prices. This is done within strata on region, size of the dwelling and they type of dwelling. The value of cars are estimated using used car sales prices. Prices are in the model assumed to decrease exponentially. The price does not include the surplus of the car dealership. The Scrap Premium are assumed to be the minimum price. Pension holders may have several types of pensions within the same contract. However pension bonuses are only reported at the contract level. Statistics Denmark distributes the bonuses proportionally to the value of the individual pension schemes within the same contract. In pension wealth statistics the company is split by type based on an annual report from the Danish Financial Supervisory Board. The value of civil servant pensions are estimated based on assumptions on current wage, seniority, expected retirement age, interests and expected remaining lifetime. The value of unquoted stocks is estimated based on the equity and adjusted to market value using the relationship between stock prices and equity in noted companies - following recommendation from the OECD and Eurostat. The owners of the stocks are found using administrative registers on the real owners of the businesses. Owners with less than 25 pct. dos not have to be registered - Some shares can thus not be distributed on persons. In total 87 per cent of the values has been distributed on persons in 2021.

Data from the various sources are merged with an anonymized personal identifier. For publications secondary sources on geography, age, income levels, socio economic status etc. are used.

### **3.6 Adjustment**

Not relevant for these statistics.

## **4 Relevance**

These statistics are relevant for researchers, ministries, Economic think tanks, pension funds and the media. It is used for forecasts on the pension system and, analyses on the level of wealth in different strata, the level of prosperity and the level of economic inequality. The statistical data and results are also used in other statistical areas within Statistics Denmark, e.g. in national accounting and as a supplement to the income statistics. Data on pension wealth are also used for the macro economic Model ADAM.

### **4.1 User Needs**

Statistics about wealth and debt focused on the individual level can give important input to analyses of e.g. how wealth is distributed among various household types and what economic situations they are in. Especially data about the distribution of pension assets is interesting for the evaluation of the Danish pension systems and its effect on both the future living conditions of households and its effect on state finances. Researchers, ministries and pension providers are therefore especially interested in these data.

### **4.2 User Satisfaction**

There are no surveys on consumer satisfaction, but through inquiries about data, we receive ongoing feedback and requests for improvements. feedback is also collected via an annual meeting with a group of national experts on Income and wealth statistics.

### 4.3 Data completeness rate

The statistics in in compliance with the law.

## 5 Accuracy and reliability

The quality of the financial data is high since most of the data is validated by the tax authorities. There is much larger uncertainty on the imputed market value of owned property, cars, unquoted stocks and the value of lifetime pensions. Data on assets that can not be linked to persons is not included. Data Wealth held abroad by Danes is likely lacking as well. For discretionary reasons the register is top-coded with a maximum wealth of DKK 1.93 bio.

### 5.1 Overall accuracy

There are many wealth components and the expected accuracy varies between them. The value of Real estate, cars, pensions and unlisted stocks are all estimated based on various assumptions. The exact value is not known at the individual level. The quality of Financial data and debts are much better as the data is collected and checked by the tax authorities. The same goes for pensions wealth which is checked thoroughly by statistics Denmark and the Danish National Bank. The statistics only includes assets and debt that can be assigned to specific persons. Thus the statistics does not include the value of Cash, Crypto currencies, paintings, furniture and some wealth components abroad. The wealth has been top-coded at the individual level. The threshold is DKK 1.9 billion and leads to an overall underestimation of wealth of DKK 210 billion in 2023 out of the total net wealth of DKK 9,507 billions.

The estimation of payouts from aldersopsparing is not very precise as it is very difficult to distinguish losses from payouts. Read more in Danish in the paper [Estimering af aldersopsparing](#)

### 5.2 Sampling error

Not relevant for these statistics.

### 5.3 Non-sampling error

The value in owned property is based on the public evaluations that have been shown to occasionally be severely inaccurate at the individual level. The model that re-calculate evaluations to market prices cannot compensate for this. The valuation of cars and unlisted cars are also uncertain. The value of life-time pensions depends heavily on assumptions about the average lifespans and age of retirement. Assets not registered by the authorities are not in the statistics. This includes "hidden" wealth abroad, stocks of cash. In 2023, property values are based on temporary data derived from the Danish Tax Agency's new property data system. This leads to poorer address matching between residences and the civil registration system, resulting in property values amounting to approximately DKK 20 billion being shifted from A.1 (primary residences) to A.4 (other residences). Additionally, there has been an observed increase in properties without valuations, meaning their value is not included in the statistics. Since 2020, the number of such properties owned by individuals has grown by approximately 10,000. Efforts are underway to address this gap.

## 5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

## 5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

## 5.6 Quality assessment

The quality of data varies dependent on the type of component. Financial components are assumed to collectively be of high quality as data that are relevant to tax payments are verified by the tax administration albeit the distinction between the individual components may not be perfect, if the distinction does not serve an administrative purpose. But incorrect codes have been utilized – especially in areas that do not have direct administrative importance. This could have as consequences that sums move between individual components if the person registering the data uses an invalid code. The ladder should not affect the total assets or debt. While ownership is based on solid register data, the values of houses and cars are imputed based on sales prices and used car prices. These evaluations might be uncertain. Finally note, that not all types of wealth and debt are covered.

## 5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

## 5.8 Data revision practice

The wealth statistics are published in November following the end of the year. As part of this publication, the previous year's data is revised, so that it is based on the most recent available data foundation.

Statistics on pension wealth is published in June and revised in August/September if there are better data available.

The statistics remains under development. Revisions can occur to the degree that we post-publication receive significantly better data or that we make improvements of the statistics. Latest a major revision was done in December of 2022. Read about it in this [paper on the revision, Danish only](#) In August 2022 the distribution of pension bonuses was revised in the statistics on pension wealth. In 2020 the value of civil servant pensions and shared housing communities (andelsboliger) was revised. In all cases the revisions have been carried out until 2014, where possible.



## **6 Timeliness and punctuality**

These statistics are published approximately 12 months after the end of the reference year. Publications are released on time without delays, as stated in the release calendar.

### **6.1 Timeliness and time lag - final results**

The final data are published about 12 months after the end of the reference period. Uniquely for the pensions assets applies the procedure that they are published in July/August. These data are however preliminary in the sense that they do not include civil servant's pensions and vacation funds.

### **6.2 Punctuality**

Pension wealth are published within 6 months following the end of the reference time on the 31st of December. They may be revised a couple of months later.

The complete statistics on assets and debt are published about 11 months after the reference time, the 31st of December.

## **7 Comparability**

These statistics have been compiled since 2014. Albeit unlisted stocks and defaulted public debt is only available from 2020. These statistics are compiled according to common European guidelines, but are unique as the only complete register based statistics with almost full coverage on wealth and liabilities. Use caution if doing international comparisons.

### **7.1 Comparability - geographical**

As far as we know, similar register based statistics are not produced elsewhere that have as extensive coverage as the Danish ones – international comparisons may produce skewed results due to different methods of data collection and coverage. Use caution if doing international comparisons and take note of which component are covered by the statistics..

### **7.2 Comparability over time**

The statistics have been compiled since 2014 and are comparable over time. However, data on unlisted shares and debt under public collection is only available from 2020, while student loan debt under collection has been included in all years. To ensure continuity in time series, two separate series have been created for net wealth and other sum variables, avoiding data breaks.

In 2023, the statistics transitioned to a temporary data foundation based on the Danish Tax Agency's new valuation system. As a result, some values were reallocated from "A.1 Primary Residences" to "A.4 Other Residences".

In the income register, wealth data exists dating back to 1980. However, these data sets are incomplete, as they lack information on the value of cars, unlisted shares, and pension assets. Additionally, there was a significant data break in property valuations in 2014 when the methodology shifted from public assessments to market value calculations.

### **7.3 Coherence - cross domain**

Data on wealth at the macro level is published in the national accounts. In 2014, a memo was made about the differences between the individual-based statistics and the national accounts. The National accounts include macro data on wealth components that are not available at the level of individuals I.E. non-traded stocks. This includes e.g. unlisted shares and cash. The statistics on personal assets and liabilities are a subset of these statistics. The financial wealth components that are also included in the income statistics are also very internally consistent. The few difference that occur are caused by the often changing points of time during the day that the tax authorities' systems register their data.

### **7.4 Coherence - internal**

Not relevant for these statistics.

## **8 Accessibility and clarity**

These statistics are published yearly in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under [Wealth and liabilities](#) and [Pension assets](#). For further information, go to the [subject page](#).

### **8.1 Release calendar**

The publication date appears in the release calendar. The date is confirmed in the weeks before.

### **8.3 User access**

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

### **8.2 Release calendar access**

The Release Calendar can be accessed on our English website: [Release Calendar](#).

### **8.4 News release**

These statistics are published yearly in a Danish press release.

### **8.5 Publications**

Publications are only available in Danish.

## 8.6 On-line database

The statistics are published in the StatBank under the subject [Wealth and liabilities](#) in the following tables:

- [FORMUE11](#): Wealth by type of wealth, unit, age, sex, population and time
- [FORMUE12](#): Wealth by type of wealth, unit, region, age, population and time
- [FORMUE13](#): Wealth by type of wealth, unit, socioeconomic status, population and time
- [FORMUE14](#): Wealth by type of wealth, unit, age, ancestry, population and time
- [FORMUE15](#): Wealth by wealth, definition, price unit, age and time
- [FORMUE16](#): Wealth by percentile, price unit, age and time
- [FORMUE17](#): Wealth by type of wealth, unit, age, family type, population and time
- [LABY11](#): Median Net wealth (18 years old and above) by municipality groups, age standardisation and time
- [LABY12](#): Net-wealth (median) by municipality groups, age and time
- [LABY14](#): Negative net wealth (share of the population) by municipality groups, age and time
- [LIGEII7](#): Gender equality indicator of median net assets by indicator, age, family type and time
- [LIGEII8](#): Gender equality indicator of value of median pension assets for persons by indicator, age and time

Wealth statistics are available under the topic [Pension assets](#) in the following tables:

- [TJEN01](#): Accrued civil servant pension for active civil servants by sector, unit, sex, profession ages groups and time
- [TJEN02](#): Accrued civil servant pension for retired civil servant by sector, unit, sex and time
- [PENSOC](#): Supplementary table for accrued-to-date pension entitlements in social insurance by pension schemes, account and time
- [PENFOR11](#): Value of pension schemes by kind of pension, taxation, age, sex, unit and time
- [PENFOR12](#): Value of pension schemes by family type, age, sex, price unit, value of pension schemes and time
- [PENFOR20](#): Value of pension schemes by kind of pension, life insurance companies, age, population, taxation, unit and time
- [LABY15](#): Pension wealth for people within 5 years of old-age retirement age (median) by municipality groups and time

## 8.7 Micro-data access

Researchers and other analysts from authorized Danish research institutions, can be granted access to the underlying micro-data by contacting [Research Services](#). The micro-data is anonymized.

## 8.8 Other

It's possible to order custom made tables by paying for the working hours needed to create them. Read about the [terms and conditions](#) on the website. The statistics have also been used for analyses (Danish only). - [Household real-estate wealth](#) - [Parents purchasing homes for their children](#) - [Inequality in real estate ownership](#) - [Debt levels in Danish households?](#)

It is possible to order custom-made tables based on the anonymized data by paying for the working hours needed to create them. Read more about it in the terms and conditions on the [website](#), or contact DST Consulting.

## 8.9 Confidentiality - policy

[Data Confidentiality Policy](#) for Statistics Denmark is applied.

## 8.10 Confidentiality - data treatment

Top- and bottom coding has been implemented. Wealth above the threshold of 1.000 the interquartile distance has been capped at that level. 2014: DKK 1.275 mio. 2015: DKK 1,338 mio. 2016: DKK 1,401 mio. 2017: DKK 1,472 mio. 2018: DKK 1,500 mio. 2019: DKK 1,612 mio. 2020: DKK 1,738 mio. 2021: DKK 1,909 mio. 2022: DKK 1,819 mio. 2023: DKK 1,930 mio. For persons with wealth exceeding the cap the wealth components have been lowered proportionally, so that the net wealth overall remains at the cap. The isolated effect is that estimates for average wealth and inequality are lower than they would otherwise be. For instance the share of wealth in the top 1 pct. is reduced from 29.8 pct. to 28,2 pct. as a result of the discretionary measures in 2023.

Christiansø is counted together with Bornholm.

## 8.11 Documentation on methodology

Read about the wealth components in [the variable documentation](#) (Danish only)

## 8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## 9 Contact

The administrative placement of these statistics is in the division of Labour Market, Social Statistics. The contact person is Jarl Christian Quitzau, tel.: + 45 2342 3503, and e-mail: JAQ@dst.dk.