

**Documentation of statistics for  
Sales of real property 2023**

## 1 Introduction

The statistics for Sales of real estate property measure the number of sales and prices of transactions of Danish real estate properties. The statistics are used for monitoring developments in the real estate market, as well as economic developments. The current price indices link back to 1992. There are price indices for previous years, but there are methodological differences.

## 2 Statistical presentation

This statistics are published monthly including price and volume trends in real estate transactions, such as one-family houses, owner-occupied flats, agricultural properties and business properties. These statistics contain key figures broken down by category of real estate property, region, type of transfer, price index and period. The statistics include all registered real estate transactions, which include land, both newly built and existing properties.

### 2.1 Data description

These statistics shed light on the turnover of real estate and the associated prices as well as the price development described with a price index. Real estate includes both owner-occupied dwellings as one-family houses, owner-occupied flats and weekend cottages, as well as business properties such as agriculture properties, mixed residential properties and commercial properties and industrial properties and warehouses.

There are two different statements of the number of sales. Firstly, there is the number of sales in the price calculation, which is used for calculating average prices, spar-value and price indices. Here the atypical sales are excluded such as partial sales or sales where the seller is a public authority. Second, there is the estimated number of sales, which is used for the preliminary figures, where all sales have not yet been registered. For the final figures, the estimated number of sales is equal to the actual number of sales. All types of both typical and atypical sales are included in the estimated number of sales.

For the transactions that are included in the price calculation, the statistics show an average price where different quality of the real estates have not been taken into account. For agricultural and building sites, the statistics show an average price per hectare or square meter. However, since the quality of different real estate transactions varies from property to property the statistics also show the Purchase sum in percent of taxable value, which is calculated as a weighted average of the ratio between the transaction price and the appraisal value. This is also called the value-weighted spar-value (Sales Price and Appraisal Ratio). The difference between the transaction price and the appraisal value covers both the development of the transaction price since the time of the valuation and a possible systematic difference between the transaction price and the appraisal value. The spar-value is used to calculate the price index, as the change in the spar-value between two consecutive periods is used to represent the price change. This applies on the assumption that any systematic differences between the transaction price and the appraisal value are the same at different periods, and therefore are eliminated in the calculation. Both the price index and the other key figures are broken down by geography and property category, such as one-family houses, owner-occupied flats, weekend cottages, agricultural properties and business properties. Price indices are only calculated for properties that have been traded in ordinary free trade, while the key figures are also distributed by type of transfer.

The House Price Index (HPI), which is calculated under the auspices of the EU-Harmonized Index of Consumer Price (HICP), on the other hand, is calculated as a single price index for one-family houses, owner-occupied flats and weekend cottages including all types of transfers (ordinary free trade, family transfer and other transfers). The House Price Index is calculated for existing

dwellings and newly built dwellings separately, which is then aggregated by using fixed weights (Laspeyres Price Index), while the other price indices do not distinguish between existing and newly built properties. The sales of cooperative housing should be included in the House Price Index, which is likely to happen during 2022. However, cooperative housing should not be included in the traditional statistic of sales of real estate properties, since you do own land which you buy a share of in a Housing Cooperative. The sales of cooperative housing is not included in the statistic of sales of real estate properties since they are not registered in the land registration system. However, cooperative housing should be included in the House Price Index which is likely to happen during 2022.

The statistics also contain an inventory of first-time buyers divided into different municipal groups. First-time buyers are defined as buyers of owner-occupied dwellings who have not owned an dwelling in the past three years.

Since 26 March 2024, a new price index has been introduced for one-family houses, owner-occupied flats and weekend cottages based on population weights in tables EJ56 (quarterly figures) and EJ67 (annual figures). The change meets a user request and means that the price index for regions and the national level combines the price indices for the 11 provinces of the country with population weights, where trade weights were previously used that reflected the property valuation for the properties traded in the period (quarter or year).

## 2.2 Classification system

The statistics are grouped geographically by [regions and provinces](#) and by [category of real property](#) (even though some of the detailed categories are only available after payment) and by type of transfer:

- Ordinary free trade
- Intra-family sales
- Other sales

Finally the inventory of first-time buyers in the table LABY22 is divided by different [types of municipalities](#)

## 2.3 Sector coverage

Not relevant for these statistics.

## 2.4 Statistical concepts and definitions

Ordinary free trade: Sales between parties who are not related to each other and where there is no partial gift. Price index is calculated only for ordinary free trade.

Residential and business property: Property where, in addition to residential premises, there are premises that are used for business purposes, provided that the business use amounts to at least 25 per cent. of the value of the property.

Residential property with 2 flats or more: Property that contains at least 2 apartments and has an area of ??less than 5501 sqm. The property may also include individual premises that are used for commercial purposes, if the commercial use amounts to less than 25 per cent. of the value of the property.

Owner-Occupied flat: Apartment used for residential purposes and which is located in either multi-storey properties or single-family houses, semi-detached houses and two- and three-family houses and which has the character of open-low buildings and terraced houses which have the character of dense-low buildings. For example, terraced houses that are located on a plot that is not subdivided, but where the individual units in the buildings have been subdivided into owner-occupied flats. Owner-Occupied flats can be free or not free from the obligations of the tenancy law, which i.a. aims at protecting previous tenants against termination. The market value is significantly lower for owner-occupied flats that are still rented out compared to owner-occupied flats that can be freely sold.

One-family house: Property with one apartment that is used for living and has an area of ??less than 5501 sqm. The properties may include individual premises that are used for commercial purposes, if the commercial use amounts to less than 25 per cent. of the value of the property. Townhouses where the land is matriculated for each house are single-family houses.

Industrial property and warehouse: Property that only contains premises that are used for industrial companies, larger workshops, gas, electricity, water and heating plants, independent storage facilities and which are typically located in an industrial district.

Intra-family sales: Sales between spouses or between persons, who are related by marriage, even if the sale does not include a gift.

Agricultural property: Built-up property used for agriculture and which has an area of ??at least 0,55 acres.

Business property: Property that only contains premises that are used for business.

Weekend cottages: Property which is intended for summer residence and which is typically located in a holiday home area.

Building site: Land that contains all undeveloped areas except undeveloped agricultural plots.

## 2.5 Statistical unit

The statistical unit is real estate.

## 2.6 Statistical population

The population includes all registered real state transactions.

## 2.7 Reference area

Denmark.

## 2.8 Time coverage

The statistics cover the period 1992- to the present.

## 2.9 Base period

For figures that are published as an index, the index reference period is 2006 = 100, except for the House Price Index (HPI) which use index reference period 2015=100.

## 2.10 Unit of measure

Number, DKK 1.000 and index.

## 2.11 Reference period

The month of the contract date (sales agreement date, deed date or registration date in the land registration system).

## 2.12 Frequency of dissemination

Monthly, quarterly and yearly.

## 2.13 Legal acts and other agreements

Legal authority for data collection is provided by the Act on Statistics Denmark, section 6, cf. [Statutory Order no. 610 of 30/05/2018](#). The European Commission has adopted a [Regulation\(no. 93/2013\)](#) on Harmonized index of Consumer Price (HICP), as far as the introduction of owner-occupied house price index in concerned. The Regulation shall apply from 1. September 2012 and shall be binding in all EU-Member States in accordance with the Treaties. This Regulation has been updated in 2016: [no. 792/2016](#). This Regulation introduced e.g. a House Price Index (HPI) in order to improve the relevance and comparability of the harmonized index of consumer price. The Regulation obliges Member States, in accordance with common guidelines, to produce and transmit price indices for households' purchases of owner-occupied housing (and cooperative housing) under the harmonized index of consumer price. The house price index (HPI) is not intended to be aggregate with items in the international harmonized index of consumer price (HICP), but should instead act as an independent supplement to it.

## 2.14 Cost and burden

The statistics are based on administrative records. Therefore there is no direct burden to the compilation of these statistics. Data comes from the electronic land registration system for registration of ownership of real properties.

## 2.15 Comment

Additional information can be requested by contacting Statistics Denmark or on the website of [Sales of Real Estate Property](#).

## 3 Statistical processing

Data concerning the registration of ownership of real estate properties is collected on a monthly basis from the electronic land registration system via Datafordeleren. The data is checked for errors by Statistics Denmark. The individual real estate transactions are divided according to category of real property, region, type of transfer and period. Aggregated figures are then calculated for number of sales, average prices and the ratio between purchase price and appraisal value (spar-value). Finally, the price index is calculated.

### 3.1 Source data

Administrative registers from the data distributor (Datafordeleren), which, among other things, collect information from the electronic deed in the electronic land registration system.

### 3.2 Frequency of data collection

Monthly.

### 3.3 Data collection

Data for these statistics are collected electronically from administrative registers on the Data distributor (Datafordeleren), where a large number of public basic data is available.

### 3.4 Data validation

Data from the Data Distributor is initially checked for errors by Geodatastyrelsen (responsible for the owner register) and the Tax Authorities (responsible for the appraisals). When Statistics Denmark receives data, further checks are conducted, for example, the validity of dates and geographical information.

### 3.5 Data compilation

In the statistics for sales of real estate property, the individual real estate property transactions are divided according to category of real estate property, region, type of transfer and period. Then aggregated figures are calculated for number of sales, average prices and the ratio between purchase price and appraisal value (spar-value). Finally, the price index is calculated.

The number of sales in the price calculation is calculated as all sales except extreme observations and outliers. The sales that are sorted out are, for example, partial sales, sales of several properties, services in addition to cash purchase price (inheritance/gift), sales where the seller is a public authority, sales where sales information is missing or sales with extreme price. An extreme price is defined as the spar-value (ratio of price and appraisal value) is less than 0,4 or higher than 3. Price index, average prices and spar-value is calculated on the transactions that are included in the price calculation.

The average price per property is calculated as a simple arithmetic mean of the properties included in the price calculation. Purchase sum per hectage/square meter is only available for resp. agriculture (hectares) and land (square meters). One hectare corresponds to 100 x 100 square meters, equal to 10.000 square meters.

The purchase sum in percent of taxable value, the so-called the spar-value, is used to calculate the price index. The average spar-value is calculated as the average price per property divided by the average appraisal value. In this way, the appraisal value is used as the weight basis. This also means that a property with a high appraisal value has a higher weight than a property with a lower value (value-weighted spar-value).

The price index is calculated on the basis of the development in the spar-value (using the so-called value-weighted SPAR method), which seeks to take into account differences in the quality of the sold properties. The calculation is described in more detail in this note [Beregning af prisindeks for ejendomssalg](#). This note is only available in Danish.

The estimated number of sales is used to calculate the number of registered sales for the preliminary figures. The number of sales is estimated in the preliminary figures because the statistics is calculated before all sales have been registered. The variable includes all sales, inclusive extreme observations and outliers. There is no estimation (enumeration) of the final figures.

Statistics Denmark have made analyzes that shows that a real property transaction is typically registered close to the takeover data, and than more expensive properties on average have a longer takeover period than cheaper properties. This means that more expensive properties are included later in the database than cheaper properties, as the transactions comes from the electronic registration system of sold properties. The analyzes also shows that the purchase sum in percent of taxable value (spar-value) is higher on the more expensive properties than on the cheap properties. In addition, the expensive properties weight most in the calculation of the spar-value. In order to take into account the potential bias in the preliminary price indices, the observed skewness in the registration pattern is corrected. The method is described in more detail in the note [Revisioner af ejendomssalgstatistikken](#), only available in Danish.

A first-time buyer is defined as a person who has not been a dwelling owner for at least the previous three years. The purpose of the three-year limit is to ensure that the group of first-time buyers has not been on the housing market recently. You could also define a first-time buyer quite literally as someone who has never owned a home. However, it is difficult to calculate how many middle-aged and older dwelling buyers have never owned a dwelling. In the calculation of first-time buyers, the person is counted several times in the statistics if the same person has acquired several owner-occupied dwelling the same year. Cooperative housing does not count here as owner-occupied housing. If you have owned a cooperative dwelling and bought an owner-occupied dwelling during the period, you are counted as a first-time buyer. Only trades in ordinary free trade are included. If there is at least one non-first-time buyer in the transaction, the transaction is categorized as "non-first-time buyers" and none of the buyers count as first-time buyers, even if one of the buyers has not been a dwelling owner in the three previous years. Only people who enter into housing transactions, where the entire group of buyers are first-time buyers, count as first-time buyers.

### **3.6 Adjustment**

Seasonal adjustments are made to both price index and the number of sales in the [StatBank table EJ12](#). Seasonal adjustment has the challenge that the latest figures are the most difficult to seasonally correct, but at the same time it is these figures that are of greatest interest. A general assumption for seasonally correcting is that the seasonal pattern is stable over time. Regarding housing prices this concerns stability in multiplicative seasonal factors. In this connection, one must be aware of that the seasonal correction of the latest observations is partly based on projection of the observed series, and sudden changes in the course of the series increase the uncertainty and the risk of misrepresentation. Especially when the latest observations deviate from the expected course. Major revisions of published figures may occur when the forecast values of the seasonal adjustment are replaced by observed values. Statistics Denmark has assessed that it is too uncertain to seasonally adjust the monthly house prices, therefore only the quarterly house prices are seasonally adjusted. Read more about this subject in the analysis of [Season in the housing market](#), only available in Danish.

## **4 Relevance**

There is a great interest for the published numbers among users, which follows the currently economic business cycle. The statistics of sales of real properties are relevant for the banking- and financial sector, real estate agents, politicians, researchers and the news media. The users consider the statistics for sales of real estate properties as an important economic indicator. The statistics have a high profile in the press and among other professional users.

### **4.1 User Needs**

Estate agents and other interested parties use the statistics to follow developments in the number of sales and prices for different types of real property within selected geographical areas. The statistics are also used for monitoring short-term economic trends.

Since 26 March 2024, a new price index has been introduced for one-family houses, owner-occupied flats and weekend cottages based on population weights in tables EJ56 (quarterly figures) and EJ67 (annual figures). The change meets a user request and means that the price index for regions and the national level combines the price indices for the 11 provinces of the country with population weights, where trade weights were previously used that reflected the property valuation for the properties traded in the period (quarter or year).

### **4.2 User Satisfaction**

There is not gathered knowledge of user satisfaction for this statistic. However, in 2013, a contact group consisting of internal and external experts in this area was established. The primary task of the contact group is to discuss and evaluate the published results as well as planned developments in the area. The contact group also debates the current trends and issues around price index for real properties.

### **4.3 Data completeness rate**

The statistics meet the requirements of guidelines and / or regulations as presented by the EU, except that work that is underway to develop a price index for cooperative housing, which must be included in the house price index.



## 5 Accuracy and reliability

The precision of the price development is the result of the quality of the appraisals and of the assumptions in the SPAR-method, which seeks to correct the quality of the sold properties in order to measure the pure price development. There is no significant bias in the preliminary figures for the price development, while the preliminary figures for the average prices are underestimated, as they are not corrected for the bias in the registration pattern.

### 5.1 Overall accuracy

The estimated number of sales is slightly underestimated, as some transactions are only registered more than a year after the transaction and are therefore not included in the statistics. In addition, pile sales are not included. It is estimated at a maximum of 200 per year.

There is no reason to believe that the average price is neither overvalued or undervalued in the final figures, as the registered prices are judged to be fair. However, preliminary figures for the average prices are underestimated because no correction is made for the more expensive properties to be included in the database later than the cheap properties.

As the appraisal values have been maintained since 2011, the purchase sum in percent of taxable value (spar-value) is higher than it would otherwise be if the appraisals had been continuously updated every year.

There is no knowledge of systematic over- or underestimation of the final figures for the price index. For the preliminary figures for price development, bias and deviation have been calculated in: [analysis: The reliability of the preliminary figures for house price development](#) for the first figures for the price development in relation to the final figures in 2019. The analysis shows, for example, that the first estimate for the price development for one-family houses in a given month in 2019 compared to the same month the year before differs by an average of 0.7 percentage points from the final estimate. The corresponding figure for owner-occupied flats is 0.8 percentage points. The analysis also shows that there is no significant systematic bias in the estimates. Overall, there is a slight negative bias of 0.1 percentage points for both owner-occupied flats and one-family houses. In the StatBank (tables [VERSEJ14](#), [VERSEJ55](#), [[VERSEJ12](#)](<https://www.Statbank.dk/VERSEJ12>) and [VERSEJ66](#)) there are versiontables for the price index, which show the preliminary and final figures, so it is possible to assess how close the preliminary figures are on the final figures.

### 5.2 Sampling error

This statistic is a total statement of all registered real estate transactions based on administrative register information.

### 5.3 Non-sampling error

Two identical properties with the same quality and location can be traded at different prices at a given time, as there is no perfect and transparent market. For example, a property may obtain a higher price if the seller has been waiting for the "right buyer" and there is always an element of randomness in the pricing. The public appraisal value is also subject to uncertainty, so that two identical properties do not necessarily have the same appraisal value. The spread or uncertainty of the appraisal values together with the uncertainty of the traded property prices for the period, contributes to the uncertainty of the spar-value and thus to the uncertainty of Statistics Denmark's property price index.

The uncertainty in the property price is higher when the geographical area or the observation period

is reduced. For example, the uncertainty in the property price is higher for monthly figures in the Region Nord Jylland than for annually figures nationwide. It is also estimated that the uncertainty in the price index for commercial properties is higher than for dwellings, as relatively few commercial properties are sold compared to dwellings and at the same time commercial properties are often more heterogeneous than dwellings, which makes it difficult to quality adjust the price. The measurement uncertainty of quality correction is described in the analyze [Usikkerhed ved opgørelse af udviklingen i boligpriser](#), only available in Danish.

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Data is received from an administrative register, where error registrations may occur. However, it is not considered that incorrect registration of the selling price and incorrect appraisal values have a significant effect on the published figures, as the ratio of sales price and appraisal value for each individual transaction (spar-value) is checked on an ongoing basis. Incorrect appraisal values are considered to be of a greater extent for commercial properties than for dwellings, as relatively few commercial properties are sold and they are at the same time more heterogeneous than dwellings.

The electronic registration has made it more difficult to identify so-called multiple sales of owner-occupied flats. The phenomenon is particularly pronounced for parent properties, which consist of several rental properties, but also exist for building sites. Multiple sales include approximately 100 transactions per year and have not been included in the statistics since 2011.

There are problems with correct registration of partial sales (sale of a subset of a property), which particularly affects agricultural properties. The sale of agricultural land from a larger agricultural property is an example of a partial sale. The problem arises because the partial sale does not have a corresponding appraisal value. Thus, the sales price relates to a partial sale, while the appraisal value relates to the entire property. This is a problem because the ratio between the sales price and appraisal value (spar-value) is used to calculate the price index. The partial sales that are incorrectly registered as full sales in the land registry system are not considered to be a source of great uncertainty in the price development, as the ratio between the sales price and appraisal value (spar-value) is calculated for each individual property and it is checked whether it is in the range of 0,4 - 3. Following the transition to electronic registration on 8. September 2009, fewer transactions has been registered as partial sales. The reason for this is unknown. The variable for partial sale is described in more detail on Statistics Denmark's website for high-quality documentation under property sales.

The codes for type of transfer are defined by the Danish Tax Authorities and are included in the data that the land registration system send to the Danish Tax Authorities for use in calculate the public appraisal values. It does not appear directly from the guidelines from the Danish Tax Authorities how parental purchase that are sold to their child must be registered, but it is the experience of the land registry court that most people choose "intra-family sale", when it comes to sales from parents to children.

It is not considered that failure to report to the electronic land registry system is a significant source of uncertainty, as it is mandatory to report sales information in connection with the sale of real property in Denmark. It may happen that a real property transaction is registered very late after it has been sold and that it therefore does not have time to be included in the final figures, which is published approximately thirteen months after the transaction date. These are approximately 100 transactions per year, which is less than 1 per mille of all sales.

Analyzes shows that around 70 per cent of all transactions are included in the first publication of the monthly figures. For the second publication it is around 85 per cent.

The freedom code for owner-occupied flats is often missing, and in those cases it is assumed that the dwelling can be freely traded. The freedom code indicates whether the owner-occupied flat is free

from the obligations of the tenancy legislation, which i.a. protects previous tenants against termination.

The calculation of the price index for properties is complicated by the fact that different properties with different characteristics are sold from quarter to quarter (period to period), so it is not possible to easily compare prices in two quarters (periods). To make a comparison anyway, one has to quality correct the property prices. This can be done in several ways which are mentioned in the analysis [Sammenligning af boligprisstatistikker i Danmark](#), only available in Danish. No matter what method is chosen, a quality correction of property prices will never be completely perfect. This applies to all methods, including Statistics Denmark's SPAR-method and the housing organizations calculation of the price per square meter. The SPAR-method (Sales Price Appraisal Ratio method) has been chosen as it can correct for more than location and dwelling size. The quality correction of the method is made by measuring the ratio of sales price and appraisal value (spar-value). The development in property prices is determined as the development in the average spar-value. The SPAR-method is also used by the statistical offices in Sweden and the Netherlands. Statistics Denmark does not continuously make statistics with other methods than the officially chosen one, but occasionally other methods are tested as a check. Statistics Denmark's official method is described in more detail in the note: [Beregning af prisindeks for ejendomssalg](#), only available in Danish. The described quality correction, where the ratio of sales price and appraisal value is calculated assumes that the appraisal value is a sufficiently fair bid on the sales price at the time of valuation, sufficient to be able to use the SPAR-method.

It is well known that the public appraisal value is subject to uncertainty, so it can not be assumed that two identical properties with a uniform location are always valued at the same price. The premise is instead that the appraisal value is, on average, sufficiently accurate. For the purposes of the property price index, the country is divided into geographical areas, and it is assumed that any difference between the sales price and the appraisal values is systematic. In that case the systematic is eliminated or at least significantly reduced when calculating the relative development in the ratio of sales price and appraisal value.

When calculating the price index, "extreme observations" are removed. The significance of the limits for the individual spar-value is at the moment examined in more detail.

Statistics Denmark periodically examines whether the price index is affected by whether transactions weights or stock weights are used, see [Model group paper about house prices](#), only available in Danish.

## 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 data on which the calculation of the statistics for sales of real properties is based are generally of a high quality, as they come from the mandatory electronic real property registration system, which is the most comprehensive register of real property transactions in Denmark. To ensure high quality of the statistics, all calculations are performed mechanically in a dedicated production system and various forms of validity checks of both input data and results are performed on an ongoing basis.

The calculation of the price index for properties is complicated by the fact that different properties with different characteristics are sold from quarter to quarter (period to period), so it is not possible to easily compare prices in two quarters (periods). To make a comparison anyway, one has to quality correct the property prices. This can be done in several ways which are mentioned in the analysis [Sammenligning af boligprisstatistikker i Danmark](#), only available in Danish. No matter what method is chosen, a quality correction of property prices will never be completely perfect. This applies to all methods, including Statistics Denmark's SPAR-method and the housing organizations calculation of the price per square meter. The SPAR-method (Sales Price Appraisal Ratio method) has been chosen as it can correct for more than location and dwelling size. The quality correction of the method is made by measuring the ratio of sales price and appraisal value (spar-value). The development in property prices is determined as the development in the average spar-value. The SPAR-method is also used by the statistical offices in Sweden and the Netherlands. Statistics Denmark does not continuously make statistics with other methods than the officially chosen one, but occasionally other methods are tested as a check. Statistics Denmark's official method is described in more detail in the note: [Beregning af prisindeks for ejendomssalg](#), only available in Danish. The described quality correction, where the ratio of sales price and appraisal value is calculated assumes that the appraisal value is a sufficiently fair bid on the sales price at the time of valuation, sufficient to be able to use the SPAR-method.

Furthermore, a bias adjustment is made in the preliminary price indices to correct for the observed skewness in the registration and thus the reporting pattern. Due to the desire for statistics shortly after the end of the reference period, a number of preliminary versions of the statistics are compiled before all observations for a given period are available and thus it is possible to compile more accurate statistics.

## 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

All figures are revised 11 times, both monthly, quarterly and yearly figures. The calculation is made on the basis of the transactions which have been registered in the electronic land registration system at the time of calculation. The preliminary figures are calculated based on an incomplete set of data since not all transactions have been registered at the time of calculation.

The preliminary figures for the price development are continuously revised for two reasons: (1) The figures are calculated on the basis of an incomplete set of data, since not all transactions have been registered at the time of calculation. (2) Changes in the appraisal values as the Tax Authorities makes a new appraisal value every second year. The appraisal values is usually included in the calculation from and including the December publication. This means that for the period January - November, the first publications are based on the old valuation (appraisal) year, but are subsequently revised to the new valuation. The current appraisal value will be the most accurate to use, as it takes into account recent changes in the general price level and in the building stock.

Analysis made by Statistics Denmark shows that the transactions of properties is typically registered into the electronic land registration system close to the acquisition date, which is the time when the new owners gets the key to their new property. The acquisition date may be relatively long time after the transaction date. The analysis also shows that the period between the transaction-date and the acquisition date is longer for more expensive properties than for cheaper properties. At the same time analysis also shows that expensive properties is more likely to have a relatively lower appraisal than cheaper properties. That is, the appraisals for expensive properties is typically less than the sales price while it is opposite for the cheaper properties where the appraisals typically is higher than the sales price. The preliminary price indices are calculated in a way that adjust for these circumstances in order to keep the bias and deviation as low as possible. The method is described in detail: [here](#).

The preliminary figures for average prices are underestimated because no correction is made for that the more expensive properties are included later in the database than the cheap properties (timing issues).

For the preliminary figures for the price development, the analyze [Pålideligheden af de foreløbige tal for boligprisudviklingen](#), only available in Danish, calculate bias and deviation for the first figures for the price development in relation to the final figures in 2019. The analysis shows, for example, that the first estimate for the price development for one-family houses in a given month in 2019 compared to the same month the previous year deviates on average by 0.7 percentage points from the final estimate. The corresponding figure for owner-occupied flats is 0.8 percentage points. The analysis also shows that there is no significant systematic bias in the estimates. Overall, there is a slight negative bias of 0.1 percentage points for both one-family houses and owner-occupied flats.

In the Statbank (tables [VERSEJ14](#), [VERSEJ55](#), [[VERSEJ12](#)](<https://www.Statbank.dk/VERSEJ12>) and [VERSEJ66](#)), there are versiontables for the price index for dwellings, which show the preliminary and final figures, so that it is possible to assess how close the preliminary figures are to the final figures.

## 6 Timeliness and punctuality

The statistics for sales of real property publish preliminary quarterly and annual figures 3 months after the end of the reference period. Monthly figures are published only as final figures. Final figures are available 13 months after the end of the reference period. The statistics are published without delays in the planned releases.

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

The statistics for sales of real property publish preliminary quarterly and annual figures 3 months after the end of the reference period. Monthly figures are published only as final figures. Final figures are available 13 months after the end of the reference period. The statistics are published without delays in the planned releases.

## **6.2 Punctuality**

The statistics are published without delay in the pre-announced release date.

## **7 Comparability**

Comparable house sales statistics for all EU member states can be found on the [Eurostats website](#) where figures are published around 100 days after the end of a quarter (reference period).

### **7.1 Comparability - geographical**

Comparable house sales statistics for all EU member states can be found on the [Eurostats website](#) where figures are published around 100 days after the end of a quarter (reference period).

## 7.2 Comparability over time

The sales of real estate property statistics have methodically developed over time. However since 1992 - when some methodological improvements were implemented - the statistics have been processed in accordance with the same principles. In calculating price indices, the ratio between the sales price and appraisal (spar-value) is used to quality adjust the properties in order to calculate the pure price change (SPAR-method). In 2014 Statistics Denmark carried out retrospective calculations of the tables ejen55, ejen66, ejen77 and ejen88. Originally the series started in 2006 due to the municipal reform by 1.1.2007. The series is now brought back to 1992 based on historical data. For ejen77 and ejen88 the data is comparable to the originally data, but now based on the new geographical subdivisions. However, it was not possible to calculate hectares prices for agricultural property for the period 1992-1999. For ejen55 and ejen66 the price indices might in some cases differ from the historical tables, among others for Counties. This applies especially for the overlap periods where the base year of the appraisals have been changed. It was not possible to calculate the price index for the Province Bornholm due to the municipal government reform in 2003. The yearly price indices are calculated as an unweighted average of the quarterly figures, which may also contribute to minor differences.

When data from the electronic registration system was implemented in 2009, multiple sales were registered in a different way than previous. Therefore, we have excluded multiple sales for building sites and owner-occupied flats from 2011 and onwards. The big jump for building sites in the fourth quarter of 2010 in EJEN77 is due to multiple sales.

Before 13. January 2010, the sales price was not fully [public](#). It could be stated in the deed that the sales price should not be published. Many attorneys used the option by default to protect the buyer from disclosure of sales prices to third-party sites (e.g., weekly newsletters). It has been found that some of the not fully public sales are missing in the statistics. It is not known by sure how big share of all real property transactions they constitute, but it is not assessed as a significant loss of transactions. After the 13. January 2010, all sales are fully public (see for example [ois.dk](#)) and are included in the statistics.

Land transfers were included in the previous data files from the Tax Authorities before second quarter of 2022, but is not included in the current data files from the Data Distributor. This particularly concerns agricultural properties, where fewer sales will be included in the statistics.

## 7.3 Coherence - cross domain

Read an analysis of a comparison of different house price statistics in Denmark [here](#). However, this analysis is only available in Danish. This analysis describes the statistics from [Boligmarkedsstatistikken](#), [Boligøkonomisk Videncenter](#) and [Boligsiden](#).

## 7.4 Coherence - internal

Data comes from a single data source.

Regarding the variable 'Number of registered sales' in the tables EJS10, EJS20, EJS30 and EJS40 for the years 2012 to 2017: For owner-occupied flats and building sites, figures for postcodes and municipalities include bulk sales (several properties are sold at the same time), while the totals are exclusive of bulk sales.

## **8 Accessibility and clarity**

The statistics for sales of real properties is published in [News from Statistics Denmark](#). Detailed figures can be found in [StatBank](#) and in the [Online payment data bank] (<https://www.dst.dk/betalingsdatabank>). The figures are also included in the Statistical Ten-Year Review and Statistical Yearbook (has been discontinued). Historical figures can be found here: [Historical sales of real property](#). Analyzes (only available in Danish) can be found [here](#) and [here](#).

### **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**

The statistics for sales of real properties are published monthly in News from Statistics Denmark.

### **8.5 Publications**

Information on sales of real properties are included in the Ten-Year review and Statistical Yearbook (has been discontinued). The statistics had its own annual [Publications](#) from 1923 to 1983, except for the period 1937-1950.

A number of Statistics Denmark analyzes and Behind the Figures (only available in Danish) have been published with data from the statistics of sales of real properties, eg [Statistics Denmark analysis \(2018\): Holiday homes in Denmark](#) and Analysis (2020): Who buys single-family houses? [<https://www.dst.dk/da/Statistik/Analyser/visanalyse?cid=42797>].



## 8.6 On-line database

These statistics are published in the StatBank under [Sales of real property](#).

Monthly figures are available in the tables:

- [EJ131](#): Sales of real property by region, category of real property and key figures

Quarterly figures are available in the tables:

- [EJ5](#): Price index for sales of property by category of real property and unit - no longer updated for residential properties since 2023
- [EJ56](#): Price index for sales of property by region, category of real property and unit
- [EJ121](#): Seasonally adjusted sales of property by region, property category and unit
- [EJEN77](#): Sales of real property by region, category of real property, key figures and type of transfer
- [EJENEU](#): House Price Index (HPI) by urbanisation and type of expenses

Annual figures are available in the tables:

- [EJ6](#): Price index for sales property by category of real property and unit - no longer updated for residential properties since 2023
- [EJ67](#): Price index for sales property by region, category of real property and unit
- [EJEN88](#): Sales of real property by region, category of real property, key figures and type of transfer
- [LABY22](#): Sales of real property by municipality groups, category of real property and key figures

The following tables are only available in the [Online Payment Database](#):

- [EJS10](#): Quarterly sales of real property by municipalities, category of real property, key figures and type of transfer
- [EJS20](#): Yearly sales of real property by municipalities, category of real property, key figures and type of transfer
- [EJS30](#): Quarterly sales of real property by postal code, category of real property, key figures and type of transfer
- [EJS40](#): Yearly sales of real property by postal code, category of real property, key figures and type of transfer
- [EJS50](#): Quarterly price index for sales of property (2006=100) by category of real property

## 8.7 Micro-data access

Access is provided to Statistics Denmark's registers for property sales through the [Research Service](#). The database dates back to 1992. Read documentation of high-quality variables here: [high-quality variables](#).

Detailed information about individual transactions can be found at the public information server on the website <http://www.OIS.DK>.

The sale prices for real properties were made [public](#) on 13 January 2010.

## 8.8 Other

In our [payment StatBank](#) you can buy access to data for more detailed geographical level than the data we disseminate for free in our [StatBank](#).

· EJS10: Quarterly sales of real property by municipalities, category of real property, key figures and type of transfer · EJS20: Yearly sales of real property by municipalities, category of real property, key figures and type of transfer · EJS30: Quarterly sales of real property by postal code, category of real property, key figures and type of transfer · EJS40: Yearly sales of real property by postal code, category of real property, key figures and type of transfer · EJS50: Quarterly price index for sales of property (2006 = 100) by category of real property

If you need data that is not available in this payment databank or among the free data, please contact our DST Consulting on [consulting@dst.dk](mailto:consulting@dst.dk) or the [library](#).

## 8.9 Confidentiality - policy

[Data Privacy Policy](#) in Statistics Denmark is followed.

## 8.10 Confidentiality - data treatment

The statistics are not published on such a detailed level that individual properties can be identified.

## 8.11 Documentation on methodology

Documentation on methodology for this statistics are not available in English. For more information see the Danish site.

## 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 Prices and Consumption, Economic Statistics. The contact person is Jakob Holmgaard, tel.: + 45 2487 6456, and e-mail: [JHO@dst.dk](mailto:JHO@dst.dk).