

## Housing market developments – 4nd quarter 2022

### House prices decreased in the municipality of Utrecht

Average house prices increased the most in the province of Zeeland with 7.8% year on year. The municipality of Utrecht is currently registering the lowest price development of all the municipalities in the Netherlands with -2.1%. The largest cities, Amsterdam and Rotterdam, show average house price increases of respectively 0.5% and 5.7%. The Hague shows an average house price increase of 2.0%.

### Transactions decreased and number of homes for sale increased

The annual number of sales decreased to 237.000 houses. The number of homes for sale increased. The ratio between the number of sales and supply has reached a factor 0.3 (sales > supply).

### Housing affordability declined

On average, 22.9% of net household income was required to service housing costs, in 2008 the housing affordability peaked with 27.0%. The relatively good affordability in the last years was mainly the result of the low mortgage interest.

### CALCASA INDEXES 2022 Q4

Calcasa House Price Index (WOX) (1995Q1=100)	457
Calcasa WOX Top 15 Cities Index (1995Q1=100)	526

### Residential price change

WOX price change (year-on-year)	4.0%
WOX price change (quarter-on-quarter)	-3.4%
WOX price change corrected for inflation (year-on-year)	-9.6%

### House price forecast

Yearly price change 2023 Q1	-3.2%
Quarterly price change 2023 Q1	-3.2%

### Housing affordability

Affordability index	22.9%
Yearly change in housing affordability	-52.8%
Quarterly change in housing affordability	-10.2%

### Transactions

Number of transactions on a yearly basis (x 1,000)	237
Yearly change in the number of transactions	-13.2%
Quarterly change in the number of transactions	-0.5%

\*Housing stock January 1<sup>st</sup>, 2022, municipal reclassification 2021

## Content WOX:

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### Table 1

Calcasa key numbers Q4 2022  
Source: WOX Monitor Calcasa

## Average house prices

- The WOX (1995 = 100) currently stands at 457 points.
- Average house price: € 447.000.
  - » Q-O-Q price development: -3.4%.
  - » Y-O-Y price development: +4.0%.
- The current Dutch inflation rate is 13.6% (which is the average rate for Q4 2022 according to Statistics Netherlands). In the fourth quarter of 2022, inflation-adjusted house prices decreased by -9,6% y-o-y.

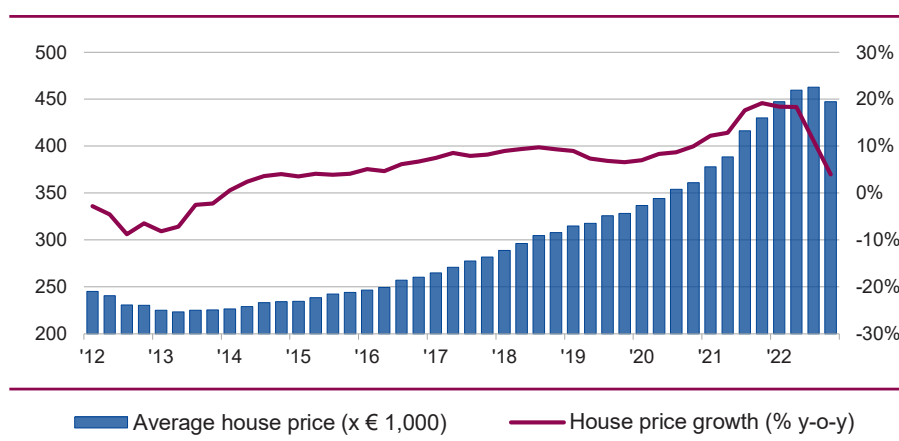


Figure 1

Average house price (x EUR1,000) and yearly price change per quarter in the Netherlands. Source: WOX Monitor Calcasa

- Average price of a single-family house: € 474.000.
  - » Q-O-Q price development of single-family houses: -3.1%.
  - » Y-O-Y price development of single-family houses: +4.7%.
- Average price for apartments: € 378.000.
  - » Q-O-Q price development of apartments: -4.3%.
  - » Y-O-Y price development of apartments: +1.9%.

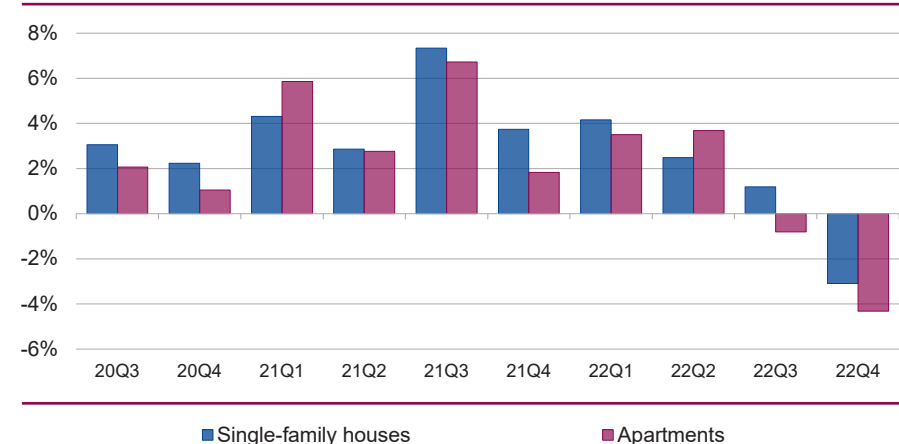


Figure 2

Q-O-Q price change per housing type in the Netherlands. Source: WOX Monitor Calcasa

## Highest price increase price class less than € 150,000

- Based on house price levels, Calcasa has divided the market into five price classes. Homes in the price class less than € 150,000 performed best with an annual average house price rise of 5.6%.
- The price class € 250,000 to € 350,000 increased the least in value; over the past year these homes increased in value by 3.6%.

Price class (euro)	Price development y-o-y
Less than 150,000	5.6%
150,000 to 250,000	4.9%
250,000 to 350,000	3.6%
350,000 to 500,000	4.1%
More than 500,000	3.8%
<b>All residential properties</b>	<b>4.0%</b>

Table 2a

Netherlands - price development per price class and transaction distribution over the last year.  
Source: Calcasa

## (Semi-) detached houses show biggest price increase

- (Semi-) detached houses built after 2000 are registering the fastest growth. Their value increased by 7.5% in the past year.
- Apartments built before 1944 are registering the slowest growth. Their value increased by 0.3% in the past year.

Development (y-o-y)	Construction year				Total
	<1944	1945-1979	>1980	>2000	
(semi) detached	4.0%	4.0%	5.9%	7.5%	5.0%
Terraced/corner house	2.1%	4.3%	5.2%	6.8%	4.5%
Apartment	0.3%	2.0%	2.4%	3.7%	1.9%
<b>Total</b>	<b>1.7%</b>	<b>3.4%</b>	<b>4.5%</b>	<b>5.6%</b>	<b>4.0%</b>

Table 2b

Netherlands - annual price development per construction year and housing type.  
Source: Calcasa

## Forecast house price development in Q1 2023

- Q-O-Q price change: -3.2% (Q1 2023 - Q4 2022).
- Y-O-Y price change: -3.2% (Q1 2023 - Q1 2022).
  - » Y-O-Y price change single-family homes: -2.6%.
  - » Y-O-Y price change apartments: -4.9%.

Calcasa publishes region-specific house price forecasts for four specific areas of the Netherlands, reflecting the diversity and variety displayed across the region.

- Western part: -3.9%
- Eastern part: -2.0%
- Northern part: -5.6%
- Southern part: -1.3%

## Strong house price growth in Zeeland

- Average house prices increased the most in the province of Zeeland, with an annual increase of 7.8% in value.
- Single-family houses are in demand in Zeeland, with values going up by 8.1%. Apartments prices increased with 4.9%.
- The lowest price increase was measured for houses in the provinces of North Holland (1.8%) and Utrecht (0.8%).

Q4 2022	Average price	Average price	Price change (year-on-year)
	single-family houses	apartments	
Groningen	342,000	286,000	4.1%
Friesland	332,000	263,000	3.2%
Drenthe	370,000	313,000	4.4%
Overijssel	387,000	282,000	7.7%
Flevoland	405,000	377,000	5.5%
Gelderland	474,000	325,000	5.4%
Utrecht	647,000	407,000	0.8%
North-Holland	606,000	515,000	1.8%
South-Holland	520,000	355,000	4.2%
Zeeland	336,000	316,000	7.8%
North-Brabant	473,000	338,000	5.8%
Limburg	345,000	265,000	5.5%
<b>The Netherlands</b>	<b>474,000</b>	<b>378,000</b>	<b>4.0%</b>

Table 3

Average price and y-o-y price development on province level  
Source: WOX Monitor Calcasa

## Zeeuwsch-Vlaanderen fastest growing region

- The largest annual price increase of 8.3% is measured for houses in the NUTS III region of Zeeuwsch-Vlaanderen. The average house price in this region is € 300,000.
- Second-largest annual price increase is seen in the NUTS III region Midden-Limburg with an annual growth rate of 8.2%, here the value of single-family homes rose by 8.5% and the value of apartments by 5.5%.
- The NUTS III regions with the smallest price increases are Haarlem (0.8%) and Utrecht (0.8%).
- In 19 of the 40 NUTS III regions the annual increase for houses prices is less than 5%.

## Housing affordability

On average, 22.9% of net household income was required to service housing costs in the fourth quarter of 2022, compared to mid-2008 when housing costs represented 27.0% of net income.

- Q-O-Q change in net housing costs: 10.2%.
- Y-O-Y change in net housing costs: 52.8%.

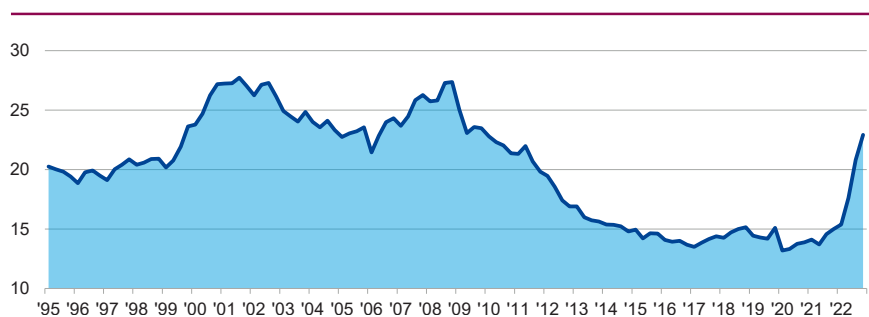


Figure 3

Housing affordability index\* (in % of household income) in the Netherlands.  
Source: WOX Monitor Calcasa

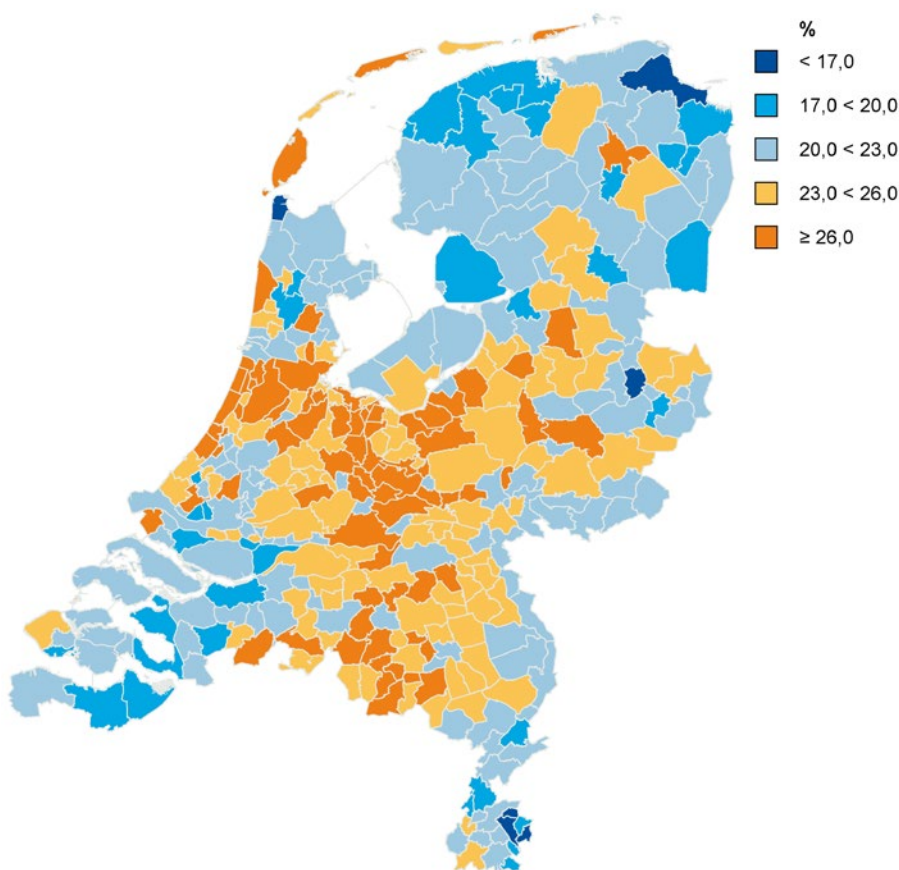


Figure 4

Affordability index per municipality (in %).  
Source: WOX Monitor Calcasa

\*The index measures the affordability of Dutch owner-occupied houses. It is calculated taking into account net housing costs, current average mortgage costs (current interest rate, maintenance costs, local taxes and fiscal treatment).

## Number of sales

The annual number of transactions has decreased. 237.000 residential properties were sold during the past year.

- Y-O-Y development, number of annual sales: -13.2%.
- Q-O-Q development, number of annual sales: -0.5%.

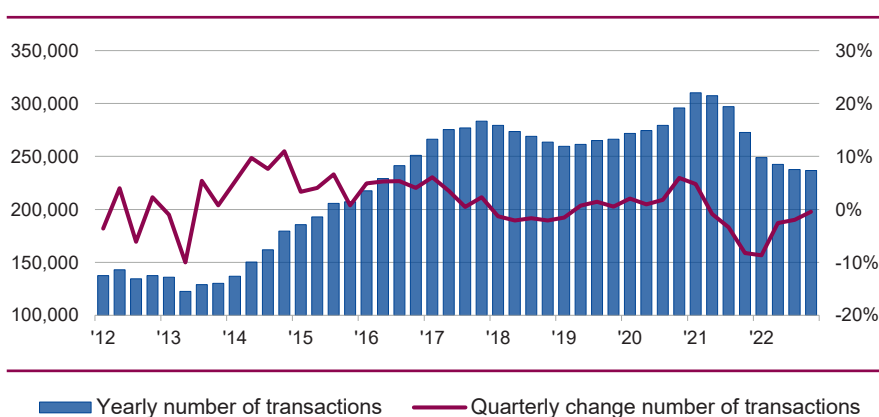


Figure 5

Number of annual sales\* and y-o-y change in number of sales in the Netherlands.  
Source: Statistics Netherlands, Land Registry, adaptation by Calcasa

\* Calcasa shows the number of housing sales on an annual basis for a reliable picture of the long term trend (corrected for seasonal effects).

## Number of sales by housing type

- Transactions of detached houses decreased the most with 16.2% in the fourth quarter of 2022.
- Apartment sales decreased this quarter with 9.6% year-on-year.

### Transaction development y-o-y

Housing type	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4
Detached	-9.4%	-21.7%	-22.9%	-24.1%	-16.2%
Semi-detached	-7.4%	-23.1%	-23.8%	-20.8%	-15.2%
Corner house	-5.0%	-20.2%	-21.4%	-19.3%	-14.2%
Terraced house	-7.4%	-21.6%	-22.3%	-18.7%	-13.1%
Apartment	-9.1%	-14.3%	-17.1%	-18.3%	-9.6%
<b>Total</b>	<b>-7.9%</b>	<b>-19.7%</b>	<b>-21.1%</b>	<b>-20.0%</b>	<b>-13.2%</b>

Table 4

Y-o-y transaction development by period and property type  
Source: WOX Monitor Calcasa

## Sales in expensive price class increased

- The sale of homes in the price range € 350,000 to € 500,000 increased by 13.3% in the past year, whilst homes above € 500,000 increased by 31.7%.
- Especially in the east (38.5%) and in the north (47.1%) of the Netherlands more expensive homes (> € 500,000) were sold.
- In the south the highest increase in sales was measured for houses in the price range above € 500,000 (34.2%).
- The lowest price segment (€ 75,000 to € 150,000) decreased in the western part of the Netherlands by 37.5%.

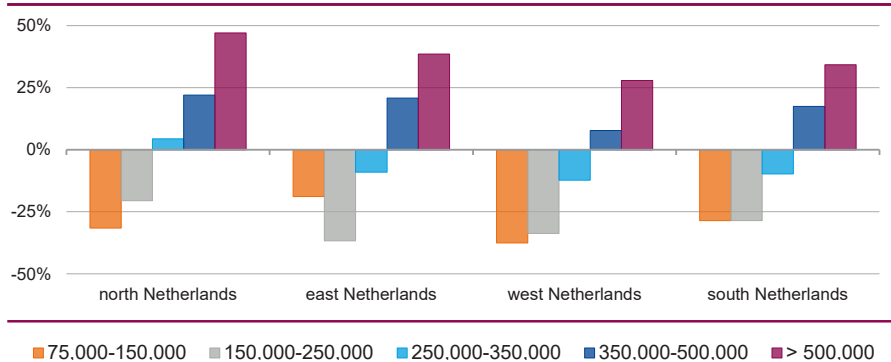


Figure 6

Growth (%) of share of housing sales per price class in North, East, West and South Netherlands in Q4 2022 compared to Q4 2021.

Source: WOX Monitor Calcasa

## 29% of housing sales within € 350,000 to € 500,000

- In the past year 14% of housing sales were within the price class of € 150,000 to € 250,000.
- The percentage of transactions in the price class € 75,000 to 150,000 decreased in four years time from 12% to 3%.
- The price segment € 350,000 to € 500,000 increased in four years time from 15% to 29%.
- 28% of housing sales were within the price class of € 500,000 or more. Four years ago this was 10%.

Share of housing sales per price class

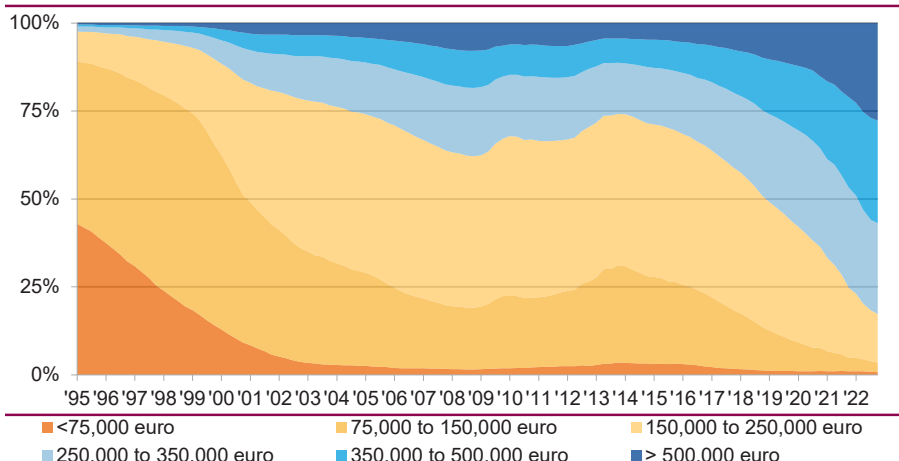


Figure 7

Share of housing sales per price class

Source: WOX Monitor Calcasa

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## Groot-Amsterdam highest market liquidity

- In the NUTS III region Groot-Amsterdam 6.4% of the housing supply was sold during the past year. The regions Zeeuwsch-Vlaanderen and Zuidoost-Drenthe follow with 5.9% and 5.8% respectively.
- The NUTS III region IJmond has the lowest market liquidity: 4.5%.

NUTS III region	Percentage of housing supply sold last year	NUTS III region	Percentage of housing supply sold last year
Groot-Amsterdam	6.4%	IJmond	4.5%
Zeeuwsch-Vlaanderen	5.9%	Delft en Westland	4.5%
Zuidoost-Drenthe	5.8%	Noord-Limburg	4.5%
's-Gravenhage	5.8%	Delfzijl en omgeving	4.6%
Flevoland	5.7%	Achterhoek	4.6%
Overig Groningen	5.6%	Zuidwest-Overijssel	4.7%
Agglomeratie Haarlem	5.6%	Twente	4.7%
Groot-Rijnmond	5.6%	Noord-Drenthe	4.8%
Oost-Groningen	5.5%	Alkmaar en omgeving	4.8%
Veluwe	5.5%	Leiden en Bollenstreek	4.8%

Table 5

Top 10 NUTS III regions with highest and lowest percentage of housing supply sold last year

Source: WOX Monitor Calcasa

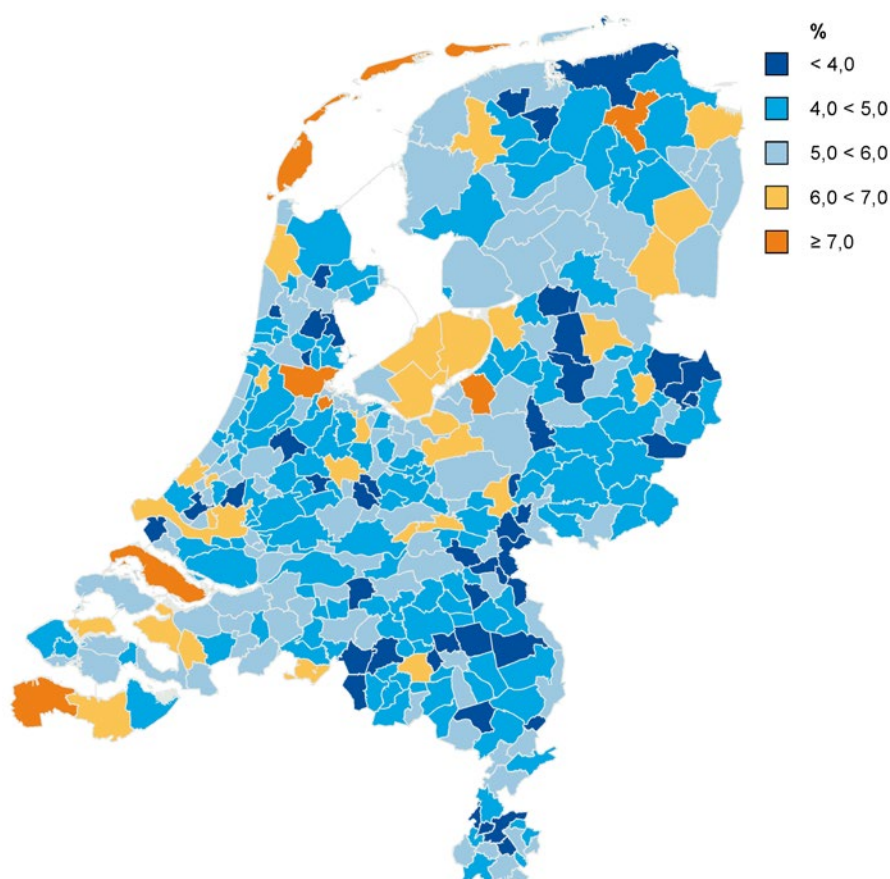


Figure 8

Market liquidity: sold homes as percentage of total number of owner occupied housing stock for previous year per municipality

Source: WOX Monitor Calcasa



## Market liquidity: number of sales surpassed supply

- The annual ratio of houses for sale vs. sold has increased to 0.3. A year ago this ratio was 0.3.
- The annual number of houses sold: 237,000.
  - » Y-O-Y development: -13.2%
- Homes for sale in Q4 2022: 70,000
  - » Q-O-Q development: +2.0%
- The market liquidity is best in the municipality of Urk with a factor of 0.11.
- In the municipality of Wassenaar the market liquidity is highest (worst) with a factor of 0.53.

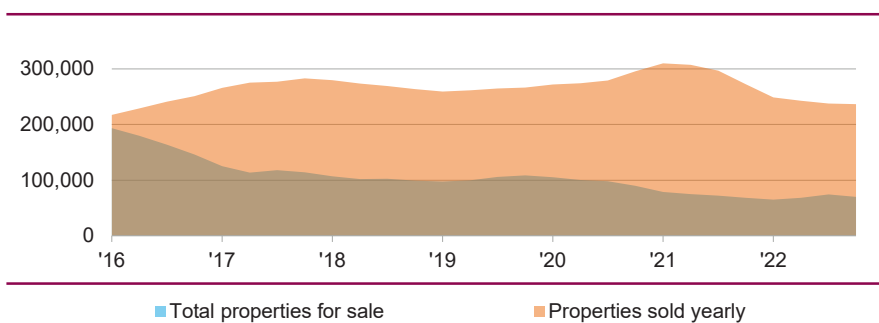


Figure 9a

Annual number of properties for sale versus number of properties sold in the Netherlands. Source: Multiple real estate agents, adaptation Calcasa

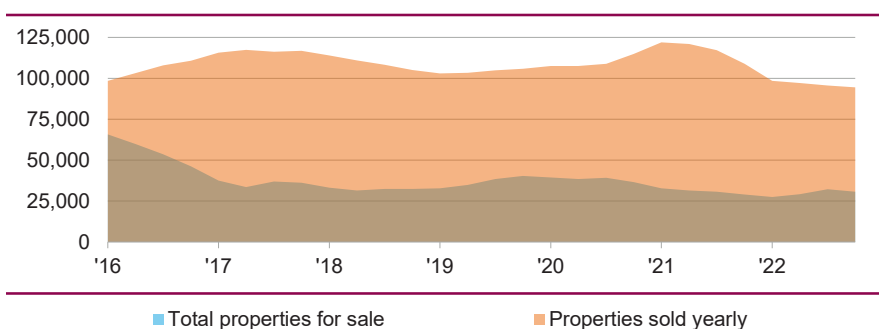


Figure 9b

Annual number of properties for sale versus number of properties sold in the Randstad. Source: Multiple real estate agents, adaptation Calcasa

- The relationship between the supply of owner-occupied housing and total owner-occupied housing stock is also a component of market liquidity. The percentage of the total owner-occupied housing stock that sold last year is 5.3% for the Netherlands.
  - o The percentage of family homes sold previous year: 5.5%.
  - o The percentage of apartments sold previous year: 4.8%.
- The share of owner occupied housing stock which was sold last year is highest in the city of Amsterdam with 8.5%.
- In the municipality of Dinkelland only 3.2% of the existing stock of owner-occupied homes has changed owners.

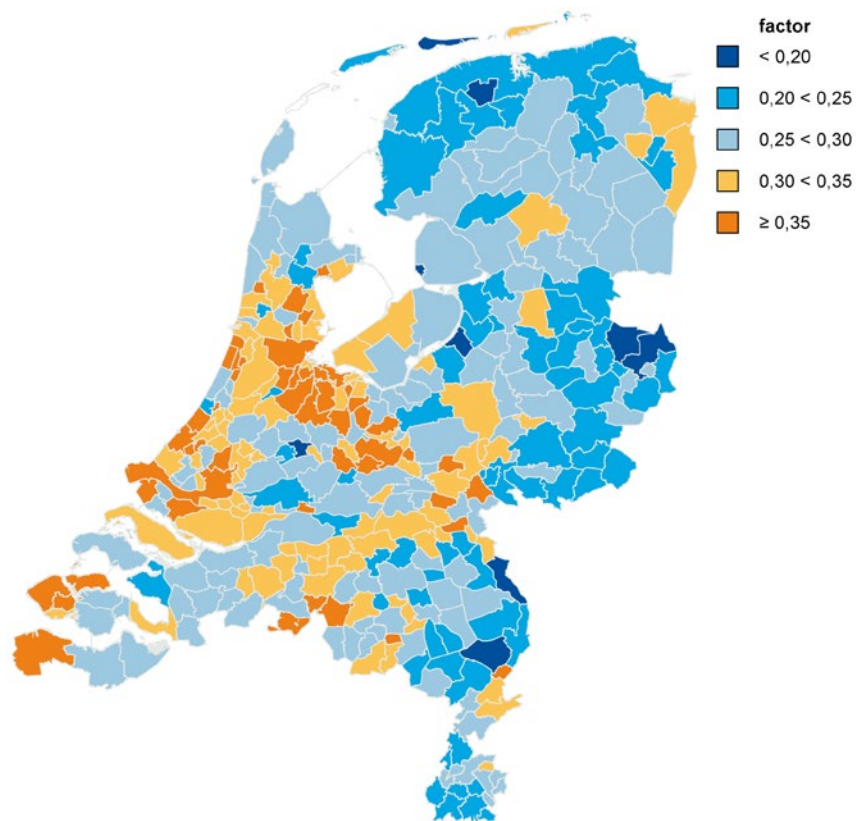


Figure 10

Supply/Sales ratio all properties per municipality

Source: WOX Monitor Calcasa

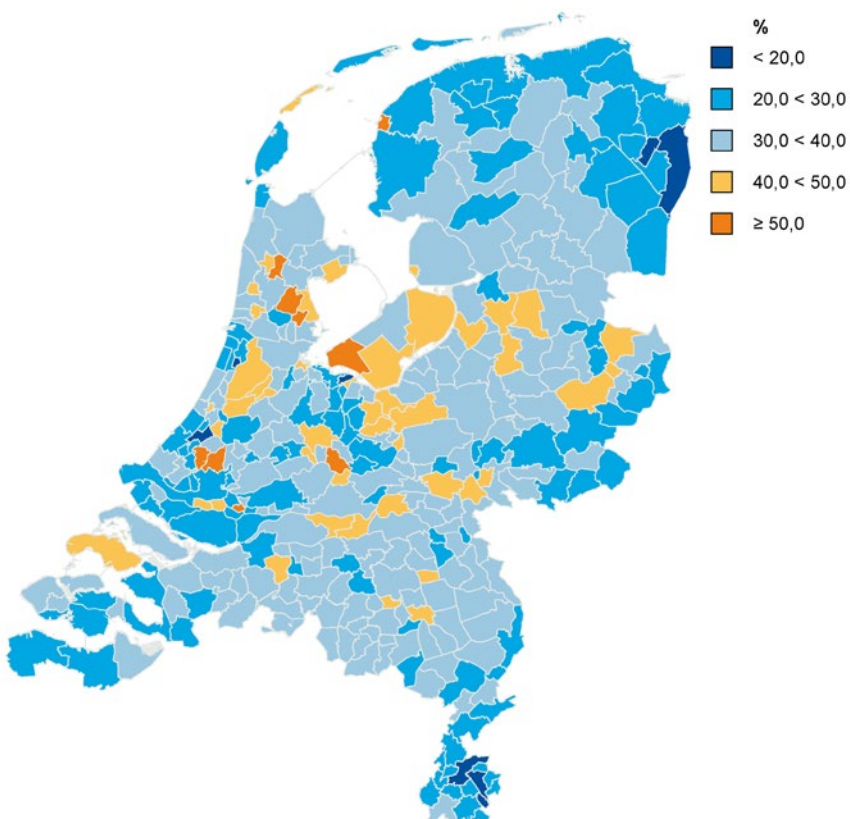


Figure 11

Percentage of properties with energy label A per municipality

Source: WOX Monitor Calcasa

## Mortgage approvals

Approximately 462,000 mortgages were approved last year.

- Y-O-Y development, number of annual mortgages: -10.3%.
- Q-O-Q development, number of annual mortgages: -8.0%.

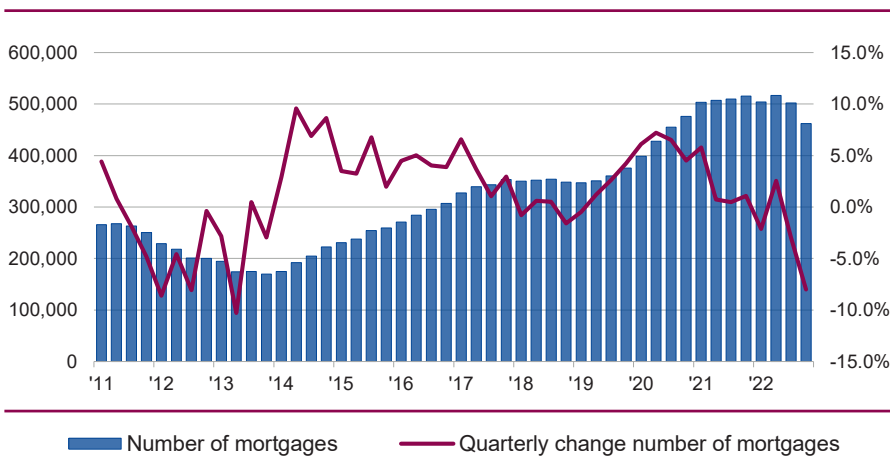


Figure 12

Number of mortgages  
Source: Statistics Netherlands, Land Registry and adaptation Calcasa

## Number of foreclosures

Over the last four quarters, 220 foreclosures have been registered by the land registry.

- o Y-O-Y development amount of annual foreclosures: -14.1%.
- o Q-O-Q development amount of annual foreclosures: -2.7%.
- The share of foreclosure sales versus total sales is 0.1%.
- The highest share of foreclosure sales to total sales is 1.0% in the municipality of Nederweert.
- 237 municipalities had no foreclosure sales in the past year. The largest municipality without foreclosure sales is Amersfoort.

Note that many foreclosed properties will be sold via the public market and not via auction. The reason is that proceeds of a sale of a home through a forced auction can be less compared to a sale via the public market.

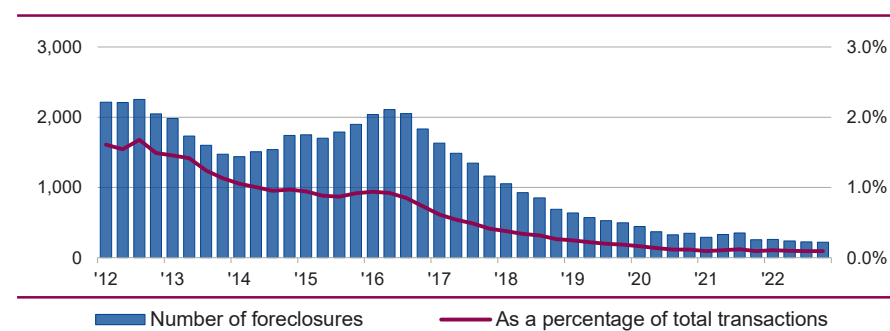


Figure 13

Number of yearly foreclosures and amount of foreclosures as a % of the total number of transactions in the Netherlands.  
Source: Statistics Netherlands, Land Registry and adaptation Calcasa

## Average price newly built homes increased

- In the third quarter of 2022 the total amount of sales for newly built homes was 5.300. This is a decrease of 34.1% year-on-year.
- During the third quarter of 2022 the average price for newly built houses was € 474.000. This is an increase of 0.4% compared to a year ago.

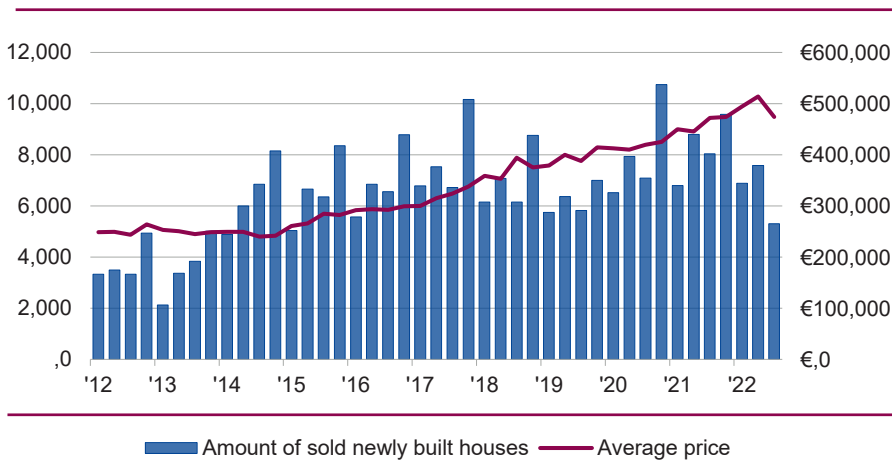


Figure 14

Average sales price for newly built houses per quarter in the Netherlands compared to the quarterly amount of newly built houses sold.

Source: CBS

## Amount of households in arrears decreased

- Since 2015 the number of homeowners with payment problems decreased with 69%.
- At the beginning of 2022 there were 35.000 homeowners who had difficulty paying their mortgage: this is a decrease of 6.8% compared to a year earlier.

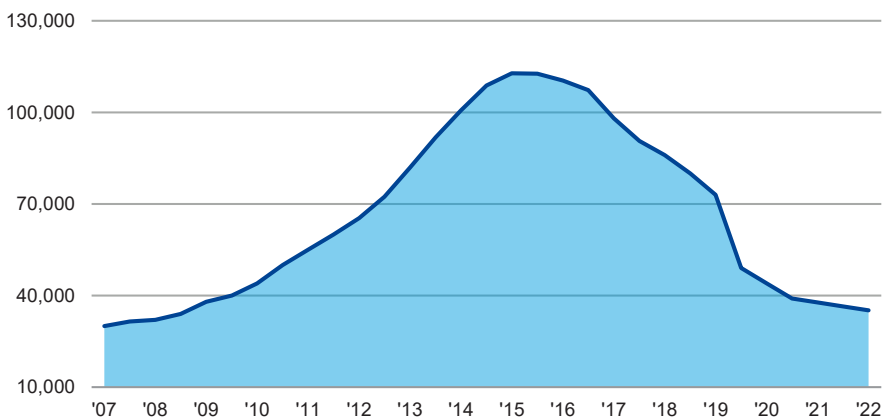


Figure 15

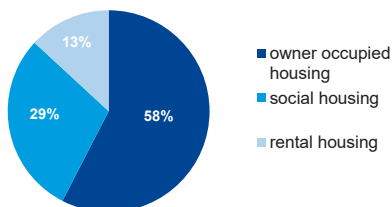
Number of borrowers with mortgage payment arrears

Source: BKR

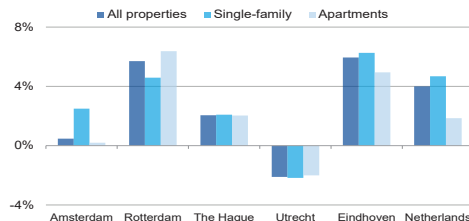
## Dutch Housing Market Summary

	Largest cities	All properties	Single-family	Apartments	Owner occupied	Rental	Total population	Total households	Annual sales	Current supply
Amsterdam	447,000	60,000	387,000	29%	70%	873,340	474,880	10,980		
Rotterdam	316,000	86,000	229,000	35%	64%	651,630	328,570	7,237		
The Hague	262,000	59,000	204,000	42%	57%	548,320	269,600	6,993		
Utrecht	157,000	68,000	89,000	45%	54%	359,370	181,780	4,886		
Groningen	116,000	47,000	69,000	41%	58%	233,270	136,510	3,500		
Eindhoven	113,000	67,000	46,000	44%	55%	235,690	121,630	3,364		
<b>Provinces</b>										
Groningen	282,000	185,000	97,000	55%	45%	586,940	296,370	8,474	2,157	
Friesland	303,000	245,000	58,000	62%	38%	651,440	295,870	9,659	2,333	
Drenthe	223,000	184,000	39,000	66%	34%	494,770	220,380	7,661	2,023	
Overijssel	510,000	389,000	121,000	61%	39%	1,166,530	512,030	15,085	3,675	
Flevoland	172,000	135,000	37,000	65%	35%	428,230	178,960	6,439	1,960	
Gelderland	912,000	684,000	228,000	61%	39%	2,096,600	938,340	28,291	7,885	
Utrecht	586,000	368,000	218,000	58%	41%	1,361,150	613,800	17,972	5,522	
North-Holland	1,349,000	675,000	673,000	50%	49%	2,888,490	1,381,760	38,477	12,758	
South-Holland	1,693,000	830,000	863,000	52%	47%	3,726,050	1,729,250	46,980	15,394	
Zeeland	188,000	152,000	36,000	66%	32%	385,400	177,240	6,782	2,055	
North-Brabant	1,141,000	854,000	286,000	61%	38%	2,573,950	1,165,900	35,225	10,042	
Limburg	533,000	390,000	143,000	60%	39%	1,115,870	533,540	15,607	4,008	
<b>Netherlands</b>	<b>7,892,000</b>	<b>5,093,000</b>	<b>2,799,000</b>	<b>57%</b>	<b>42%</b>	<b>17,475,420</b>	<b>8,043,440</b>	<b>236,652</b>	<b>69,811</b>	

### Housing stock



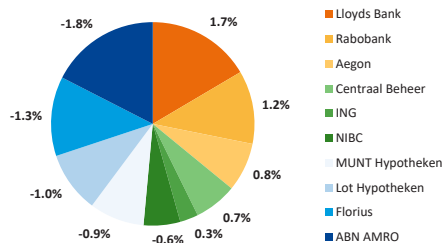
### Y-O-Y price development largest cities



### Mortgage developments

	Amount	Change
Sales with NHG	16,200	13.3%
Execution sales with losses	2	-33.3%
Households in arrears	35,000	-6.8%
Sold mortgages	462,000	-10.3%
Total mortgage debt	812B	4.4%

### Top mortgage lenders: increase/decrease market share



### Macro-economic figures

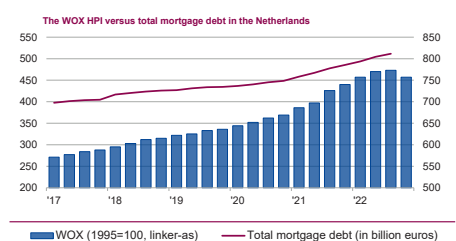
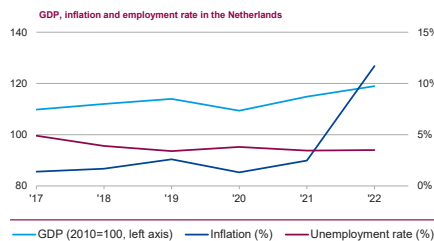


Table 6

Key figures for the Dutch housing market  
Source: Statistics Netherlands, Land Registry

Figures 16 & 17

Source figure left: Statistics Netherlands  
Source figure right: Calcasa

Table 7 & Figure 18

Source table left: Statistics Netherlands, NHG, BKR, Land Registry  
Source figure right: Calcasa, IG&H

Figures 19 & 20

Source figure left: DNB, Statistics Netherlands  
Source figure right: Calcasa, Statistics Netherlands

Municipalities	Highest	Municipalities	Lowest
	property values (x 1,000)		property values (x 1,000)
Bloemendaal	1,214	Heerlen	260
Wassenaar	958	Kerkrade	262
Heemstede	905	Brunssum	264
Gooise Meren	771	Eemsdelta	268
De Bilt	741	Oldambt	271
Wijdmeren	710	Terneuzen	281
Zeist	692	Veendam	282
Bergen (NH.)	684	Leeuwarden	290
Utrechtse Heuvelrug	679	Landgraaf	294
Huizen	663	Noardeast-Fryslân	297

Municipalities	Highest	Municipalities	Lowest
	annual price development		annual price development
Borne	8.6%	Utrecht	-2.1%
Oldenzaal	8.6%	Amsterdam	0.5%
Roermond	8.6%	Haarlem	0.5%
Olst-Wijhe	8.5%	Groningen	1.2%
Haaksbergen	8.5%	Bloemendaal	1.3%
Raalte	8.4%	Heemstede	1.5%
Twenterand	8.4%	Nieuwegein	1.6%
Dinkelland	8.4%	Alkmaar	1.6%
Weert	8.4%	Amstelveen	1.7%
Wierden	8.4%	Wassenaar	1.7%

Table 8

Top 10 highest and lowest property values, per municipality containing over 5,000 owner-occupied dwellings.  
Source: Calcasa

Table 9

Top 10 highest and lowest price developments, per municipality with over 5,000 owner-occupied dwellings.  
Source: Calcasa

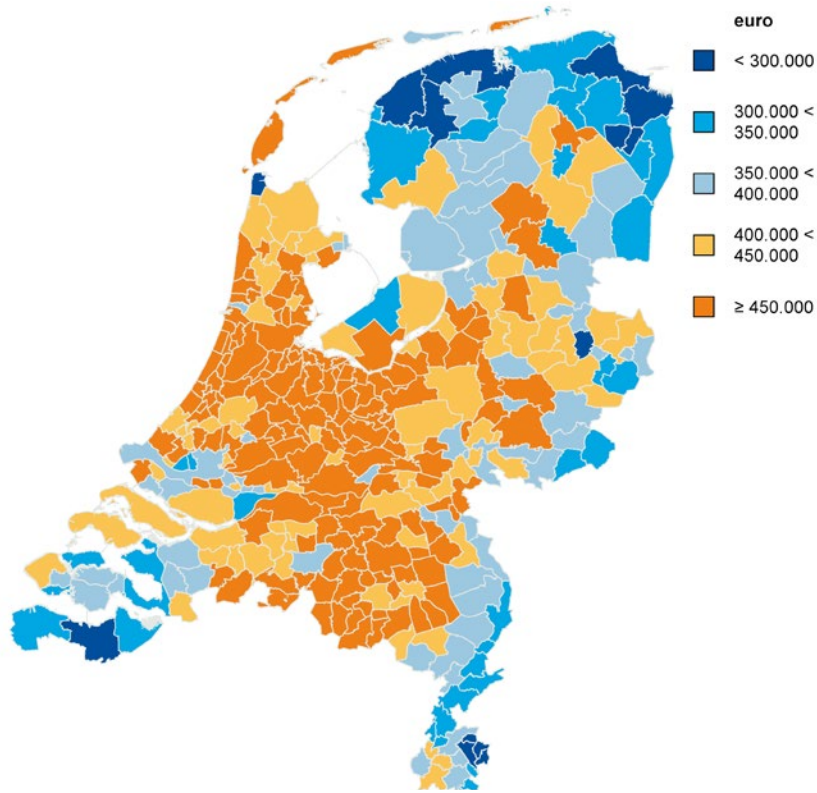


Figure 21

Average house price per municipality (EUR).  
Source: Calcasa

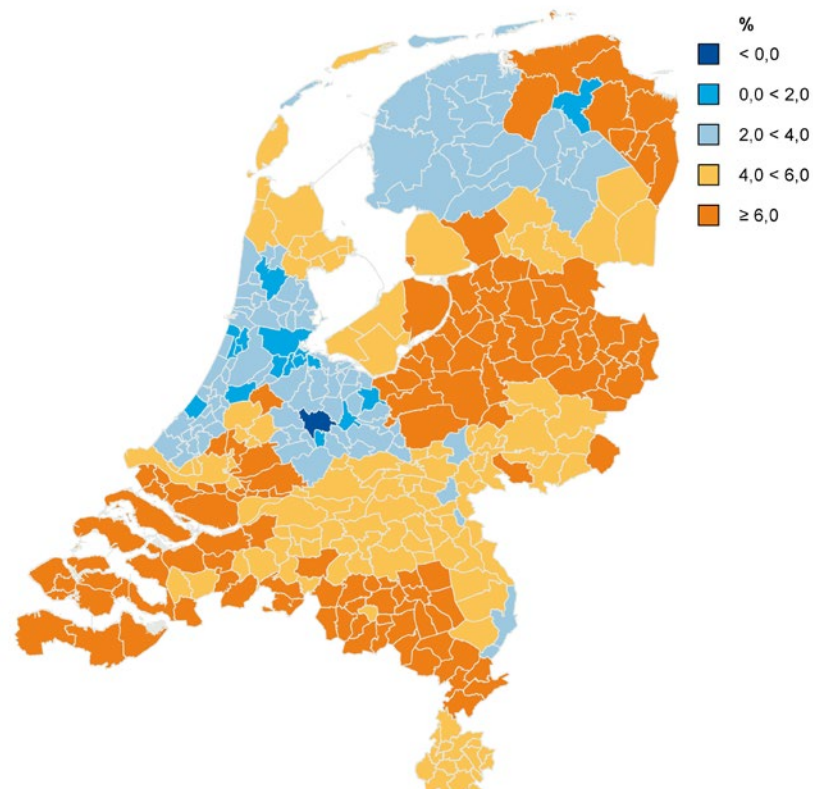
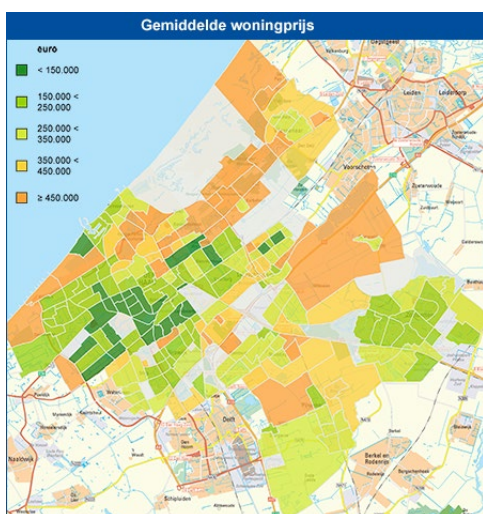


Figure 22

Year-on-year price change per municipality (%).  
Source: Calcasa

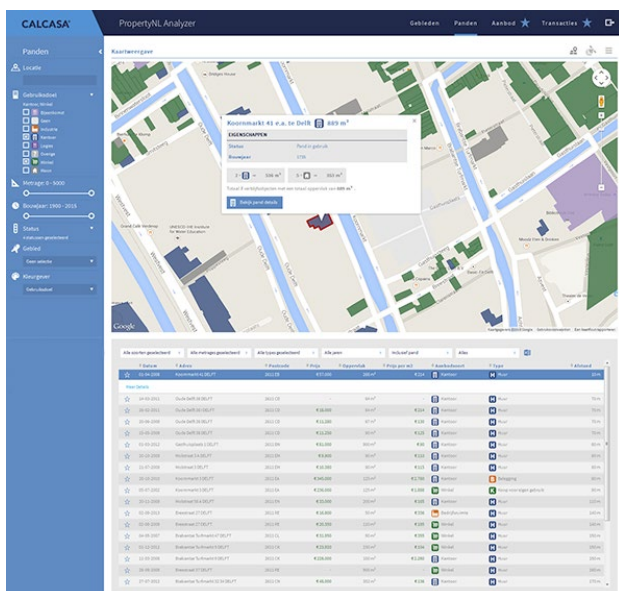
## The WOX Monitor: All housing market data for every neighborhood

More information on price developments in various regional levels (neighborhood, municipality, province) is available via the WOX monitor.



## Calcasa PropertyNL Analyzer

Analyzing the commercial real estate market is possible through the Calcasa PropertyNL Analyzer (“CPA”). CPA is an online application with information that is easily accessible for the office, retail and industrial markets. This tool increases the transparency in the property market.





## About Calcasa

Calcasa is an independent technology company specializing in the statistical analysis and valuation of real estate. The Calcasa Automated Valuation Model (AVM) for valuation of individual homes is unique due to its high coverage and accuracy. It is internationally recognized by the three major rating agencies and regulators. Mortgage lenders, investors, intermediaries, validation institutes, housing corporations, consumer organizations, real estate companies, broker organizations, government agencies and regulators rely daily on the solutions Calcasa. [www.calcasa.co.uk](http://www.calcasa.co.uk)

## Calcasa WOX: A reliable house price index

Calcasa WOX is demonstrably the most reliable house price index in the Netherlands. Every quarter, Calcasa calculates a reliable house price index for each province, municipality, borough and neighborhood in the Netherlands. The house price index is calculated using the national data on transactions starting from 1993 and additional house and location characteristics from the database. The source data is screened for integrity, such that non-representative data is omitted for the index calculation. The developed methodology takes into account any over or under representation of sold properties, compared to the existing housing stock in that area. Unlike most house price indices, the Calcasa WOX does not simply calculate the coincidental development of sales for a specific area; rather it calculates the development of prices of the total housing stock.

## European AVM Alliance (EAA)

Calcasa is a founding member of the EEA which was launched as a pan-European initiative at the end of 2012. The mission is to promote and standardize the usage of AVM's resulting in a consistent approach to automated valuations in Europe. Other members include Hometrack (UK), Eiendomsverdi (Norway), Värderingsdata (Sweden), CRIF (Italy), Tinsa (Spain), On-Geo (Germany) and On-Geo (Austria).

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