

Housing market developments – 1st quarter 2018

Strong house price growth in the Randstad: Average house prices increased the most in the provinces of North and South Holland (10.6%). The two largest cities, Amsterdam and Rotterdam, show average house price increases of respectively 10.1% and 12.9%.

Transactions keep rising whilst number of homes for sale drops: The annual number of sales increased in five years from 123 thousand to a record of 280 thousand houses. The number of homes for sale continues to decline. The ratio between the number of sales and supply has reached a factor of 0.4 (sales > supply) and in the urban agglomeration 'Randstad' this factor dropped to 0.3.

Housing affordability remains stable: On average, 15.1% of net household income was required to service housing costs, in 2008 this number was 27.0%.

City dwellers push up house prices in neighbouring municipalities

In the past five years, house prices in the 15 largest Dutch cities increased by 40%. This increase was only 25% in the rest of the Netherlands. It is striking that the sharp price rises in the big cities have now also reached the surrounding municipalities.

This 'ripple effect' is strongest around the four major cities, where house prices have risen fastest and supply has fallen sharply. As a consequence home buyers have been forced outwards into surrounding municipalities, causing house prices in these areas to also increase.

CALCASA INDEXES 2018 Q1

Calcasa House Price Index (WOX) (1995Q1=100)	302
Calcasa WOX Top 15 Cities Index (1995Q1=100)	351

Residential price change

WOX price change (year-on-year)	9.0%
WOX price change (quarter-on-quarter)	2.5%
WOX price change corrected for inflation (year-on-year)	7.8%

House price forecast

Yearly price change 2018 Q2	8.5%
Quarterly price change 2018 Q2	1.7%

Housing affordability

Affordability index	15.1%
Yearly change in housing affordability	-5.7%
Quarterly change in housing affordability	0.9%

Transactions

Number of transactions on a yearly basis (x 1,000)	280
Yearly change in the number of transactions	5.0%
Quarterly change in the number of transactions	-1.3%

*Housing stock January 1st, 2018, municipal reclassification 2017

Content WOX:

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Table 1

Calcasa key numbers Q1 2018
Source: WOX Monitor Calcasa

Average house price keeps rising

- The WOX (1995 = 100) currently stands at 302 points.
- Average house price: 289 thousand euro.
 - » Q-O-Q price development: +2.5%.
 - » Y-O-Y price development: +9.0%.
- The current Dutch inflation rate is 1.2% (which is the average rate for Q1 2018 according to Statistics Netherlands). In the first quarter of 2018, inflation-adjusted house prices rose by 7.8% y-o-y.

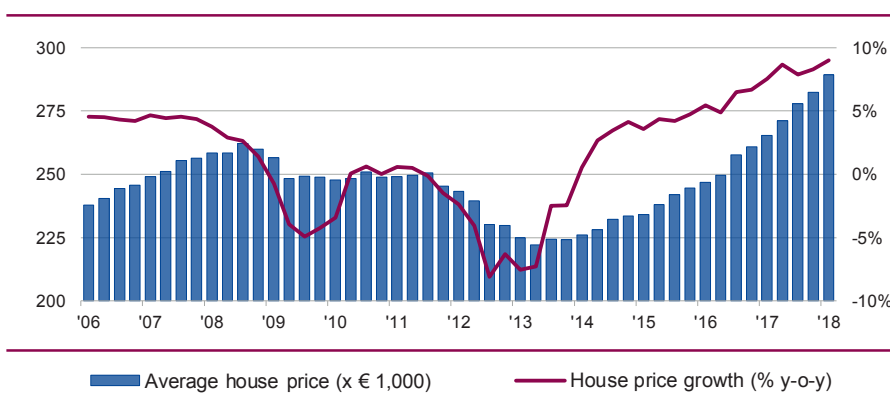


Figure 1

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: 306 thousand euro.
 - » Q-O-Q price development of single-family houses: +2.0%.
 - » Y-O-Y price development of single-family houses: +7.9%.
- Average price for apartments: 247 thousand euro.
 - » Q-O-Q price development of apartments: +3.9%.
 - » Y-O-Y price development of apartments: +12.8%.

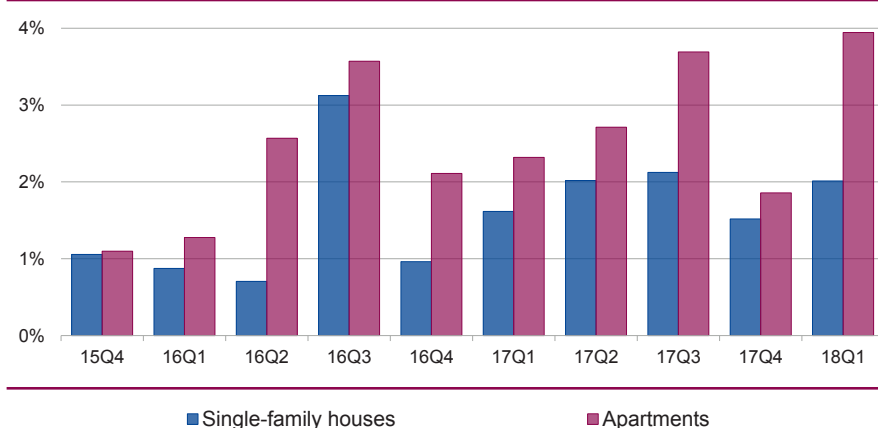


Figure 2

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

Highest price increase for less than 150,000 euro class

- Based on house price levels, Calcasa has divided the market into five price classes. Homes in the price class less than 150 thousand euros performed best with an annual average house price rise of 10.2%.
- The most expensive houses - worth 500k or more - increased the least in value; over the past year these homes increased in value by 7.2%.

Price class (euro)	Price development y-o-y
Less than 150,000	10.2%
150,000 to 250,000	9.0%
250,000 to 350,000	9.2%
350,000 to 500,000	9.1%
More than 500,000	7.2%
All residential properties	9.0%

Older apartments show biggest price increase

- Again, the value of apartments saw the biggest price growth in the past year; their average price rose by 12.8%.
- Apartments built between 1945 and 1979 are most desirable. Their value increased by 14.1% in the past year.

Development (y-o-y)	Construction year				
Housing type	<1944	1945-1979	>1980	>2000	Total
(semi) detached	7.8%	7.6%	6.7%	7.8%	7.5%
Terraced/corner house	7.6%	8.2%	8.1%	8.5%	8.1%
Apartment	11.8%	14.1%	13.5%	11.9%	12.8%
Total	9.6%	10.0%	9.4%	10.0%	9.0%

Forecast house price development in Q2 2018

- Q-O-Q price change: +1.7%.
- Y-O-Y price change: +8.5% (Q2 2017 - Q2 2018).
 - » Y-O-Y price change single-family homes: 7.6%.
 - » Y-O-Y price change apartments: 11.2%.

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: 9.9%
- Eastern part: 6.7%
- Northern part: 7.0%
- Southern part: 6.6%

Table 2a

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

Table 2b

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

City dwellers push up house prices in neighbouring municipalities

In the past five years, house prices in the 15 largest Dutch cities increased by 40%. This increase was only 25% in the rest of the Netherlands. It is striking that the sharp price rises in the big cities have now also reached the surrounding municipalities.

This 'ripple effect' is strongest around the four major cities, where house prices have risen fastest and supply has fallen sharply. As a consequence home buyers have been forced outwards into surrounding municipalities, causing house prices in these areas to also increase.

The figures below clearly show that house prices in the four major Dutch cities are rising faster than the surrounding municipalities, whereas house prices in the surrounding municipalities are rising faster than the rest of the country.

In **Amsterdam**, for example, house prices rose by 65% over the last five years, followed by the surrounding municipalities at an average of 45%. This is a big difference compared to the price increase of 25% in the rest of the Netherlands (excluding the Top 15 Cities). Interestingly, the ripple continues to spread outwards: in the past year house prices in the town of Almere increased at a faster rate than in Amsterdam.

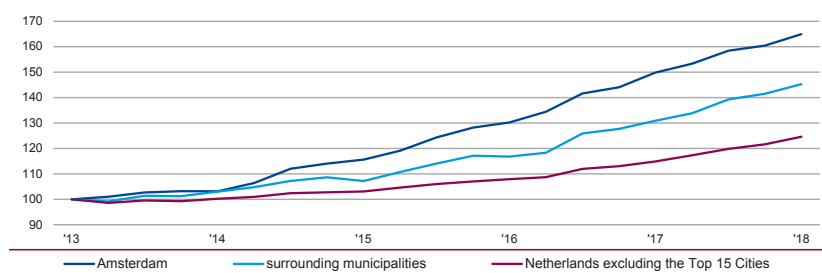


Figure 3

Calcasa WOX index (2013Q1=100) for Amsterdam, surrounding municipalities and the Netherlands (excluding the Top 15 Cities)
Source: Calcasa

A similar trend was seen in the **city of Utrecht** where house prices have grown by 42% in the past five years, followed by the surrounding municipalities at an average of 30%.

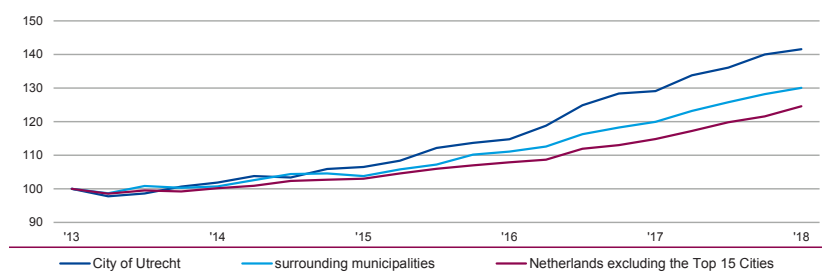


Figure 4

Calcasa WOX index (2013Q1=100) for Utrecht, surrounding municipalities and the Netherlands (excluding the Top 15 Cities)
Source: Calcasa

The WOX® Quarterly Q1 2018

In **Rotterdam** the recovery in residential prices stalled until the second quarter of 2016. However, house prices in the port city are now booming: over the last 2 years prices rose by an average of 27% against growth of just 17% over the preceding three years. The neighbouring municipalities of Rotterdam are doing better than the rest of the country, however, the ripple effect remains limited.

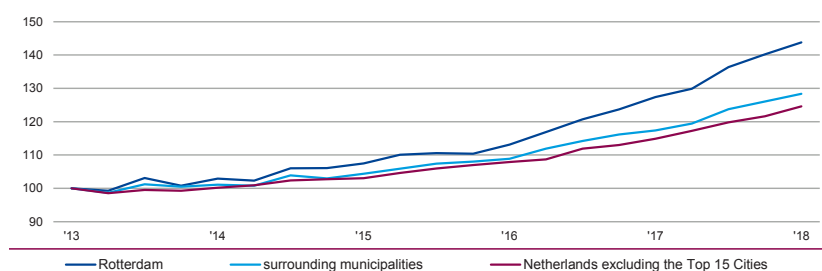


Figure 5

Calcasa WOX index (2013Q1=100) for Rotterdam, surrounding municipalities and the Netherlands (excluding the Top 15 Cities)
Source: Calcasa

Average house prices in **The Hague** increased by 43% over the past 5 years, whereas its surrounding municipalities registered a 33% gain. Prices in Rijswijk even grew at a slightly higher rate than in The Hague over the past year.

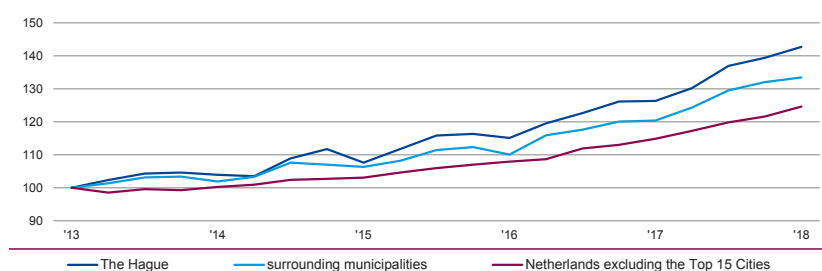


Figure 6

Calcasa WOX index (2013Q1=100) for The Hague, surrounding municipalities and the Netherlands (excluding the Top 15 Cities)
Source: Calcasa

The table below shows the average house price developments for the Top 15 Cities and the Netherlands for different time periods.

	quarterly	1 year	3 years	5 years	10 years
The Netherlands	2.5%	9.0%	23.6%	28.7%	12.0%
Top 15 Cities Index	2.5%	10.5%	30.7%	40.0%	22.3%
The Netherlands without the Top 15	2.4%	8.5%	20.9%	24.6%	8.1%
Amsterdam	2.8%	10.1%	42.6%	64.9%	43.5%
's-Gravenhage	2.3%	12.9%	32.6%	42.7%	21.0%
Rotterdam	2.6%	12.9%	33.8%	43.8%	28.2%
Utrecht	1.1%	9.7%	33.0%	41.6%	25.5%
Tilburg	2.1%	10.4%	23.4%	22.9%	11.9%
Almere	3.3%	11.2%	24.7%	29.0%	15.2%
Eindhoven	2.9%	8.2%	22.5%	25.5%	5.3%
Breda	2.9%	8.6%	18.2%	23.7%	5.4%
Groningen	5.2%	9.7%	22.6%	25.7%	16.3%
Apeldoorn	2.5%	8.5%	19.9%	22.5%	3.6%
Haarlem	3.4%	12.3%	32.0%	48.1%	27.6%
Haarlemmermeer	1.4%	9.9%	36.4%	44.5%	28.0%
Amersfoort	1.5%	8.7%	25.9%	30.4%	15.7%
Enschede	1.0%	6.4%	16.1%	16.4%	6.5%
's-Hertogenbosch	2.7%	8.7%	17.8%	21.2%	5.0%

Table 3

Average house price developments for the Top 15 Cities and the Netherlands
Source: Calcasa

Analysis other parts of the Netherlands

The growth in house prices originating from the big cities is clearly visible around the four major cities in the western Netherlands. Each part of the country is examined to see whether this effect is also present in other regions.

Northern Netherlands

In the northern part of the country house prices have increased the most in the cities of Groningen and Leeuwarden over the past five years. The municipalities to the south of the city of Groningen, including Assen, have benefited from the price increases. For example, house prices in the municipality of Tynaarlo rose even faster in the past year than in the city of Groningen.

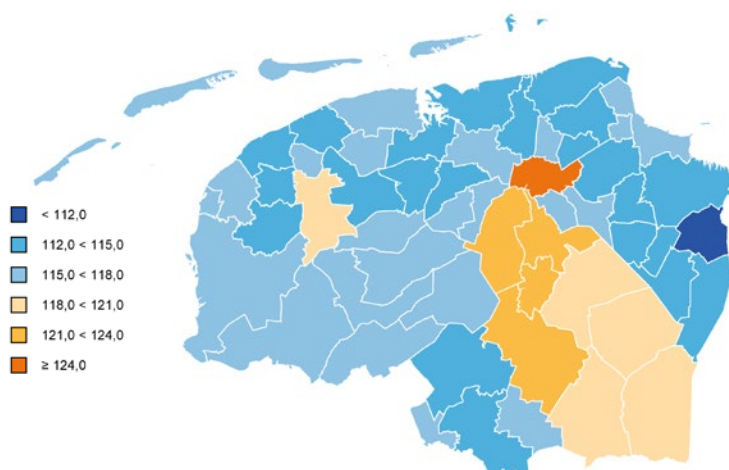


Figure 7

Calcasa WOX index (2013K1=100) for Northern Netherlands
Source: Calcasa

East Netherlands

In terms of house price development, the eastern part of the Netherlands can be divided in a north-eastern and a south-western part. In the south-western part - with larger municipalities such as Arnhem, Nijmegen, Apeldoorn and Ede - house prices rose approximately 20% over the past five years. The north-eastern part, including municipalities such as Enschede, Zwolle, Deventer and Hengelo, lagged behind with a price increase of approximately 15%. The surrounding municipalities show a similar picture. However, the ripple effect is limited.

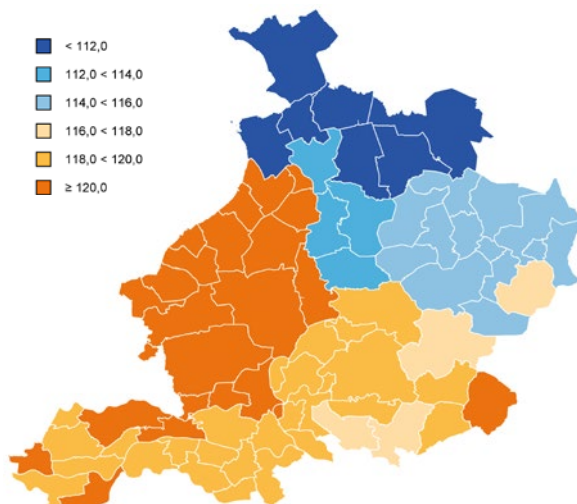


Figure 8

Calcasa WOX index (2013K1=100) for Eastern Netherlands
Source: Calcasa

South Netherlands

In the province of Noord-Brabant, house prices in Eindhoven and the neighbouring municipalities rose by 22-25% over the past 5 years. Prices also rose by more than 20% in Breda, Tilburg and Den Bosch.

In the provinces of Limburg and Zeeland, house prices increased at a lower rate than in the rest of the country. Within these provinces, what stands out is that in the municipalities of Maastricht, Venlo, Roermond (Limburg) as well as Vlissingen, Middelburg and Goes (Zeeland) house prices have increased relatively faster than in the rest of their respective provinces.

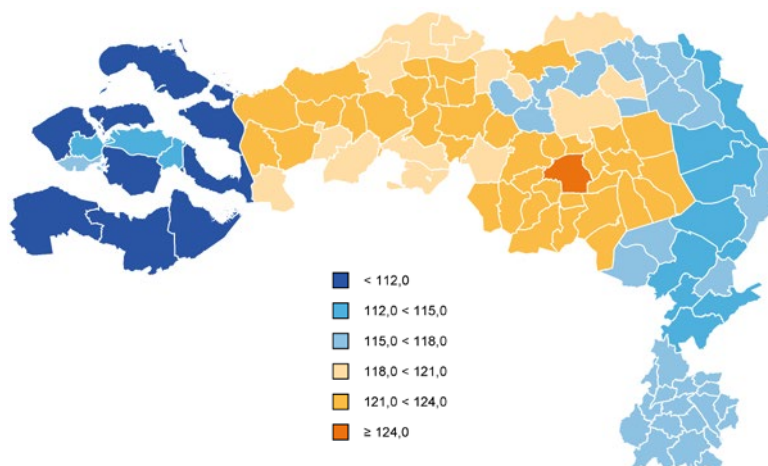


Figure 9

Calcasa WOX index (2013K1=100) for South Netherlands
Source: Calcasa

West Netherlands

House prices in the western part of the Netherlands are rising at a faster rate than the growth being registered across the rest of the country (hence the different scale on the map of West Netherlands). The ripple effect around the four major cities is clearly visible on the map. Prices in the cities of Rotterdam, The Hague and Haarlem have increased faster in the past 12 months than in Amsterdam and Utrecht. The northern and south-eastern part of the Western Netherlands are still clearly lagging behind in regional price developments.

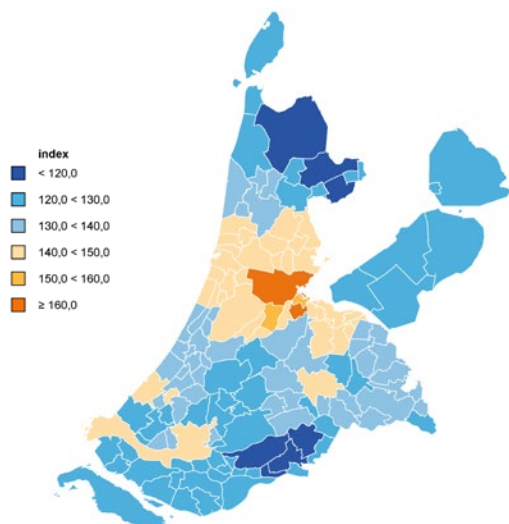


Figure 10

Calcasa WOX index (2013K1=100) for West Netherlands
Source: Calcasa

Strong house price growth in the Randstad

- Average house prices increased the most in the provinces of North- and South-Holland, with an annual increase of 10.6% in value.
- Especially apartments in South-Holland and Flevoland are in demand, with values going up by 14.8% and 14.5% respectively.
- The lowest price increase was measured for houses in the provinces of Zeeland (3.2%) and Overijssel (6.2%).

Q1 2018	Average price single-family houses	Average price apartments	Price change (year-on-year)
Groningen	216,000	198,000	8.4%
Friesland	212,000	172,000	7.6%
Drenthe	235,000	183,000	8.2%
Overijssel	241,000	166,000	6.2%
Flevoland	247,000	236,000	10.5%
Gelderland	299,000	197,000	8.0%
Utrecht	413,000	266,000	8.8%
North-Holland	396,000	366,000	10.6%
South-Holland	336,000	218,000	10.6%
Zeeland	215,000	190,000	3.2%
North-Brabant	309,000	219,000	8.1%
Limburg	236,000	164,000	7.3%
The Netherlands	306,000	247,000	9.0%

Table 4

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

14% house price growth in Gooi and Vechtstreek region

- The largest annual price increase of 13.7% is measured for houses in the NUTS III Gooi and Vechtstreek region. The value of single-family homes rose by 13.0% and the value of apartments by 17.9%.
- Second-largest annual price increase is seen in the NUTS III region Zaanstreek with an annual growth rate of 12.6%, the value of single-family homes rose by 12.1% and the value of apartments by 14.5%.
- The NUTS III regions with the smallest price increases are Zeeuwsch-Vlaanderen (3.2%) and Overig Zeeland (3.2%).
- In 10 of the 40 NUTS III regions the annual increase for houses prices is more than 10%.

Housing affordability increases slightly

On average, 15.1% of net household income was required to service housing costs in the first quarter of 2018, compared to mid-2008 when housing costs represented 27.0% of net income.

- Q-O-Q change in net housing costs: -0.9%.
- Y-O-Y change in net housing costs: +5.7%.

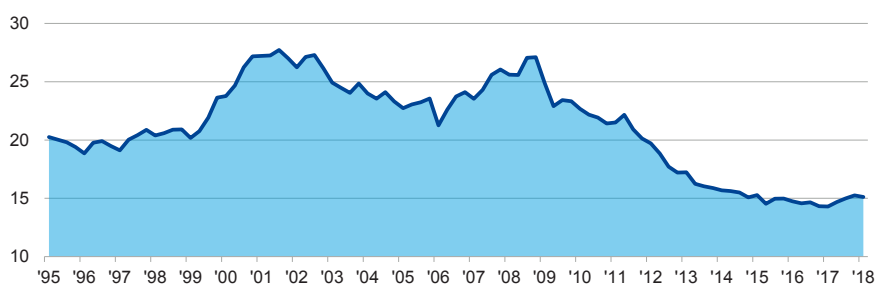


Figure 11

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

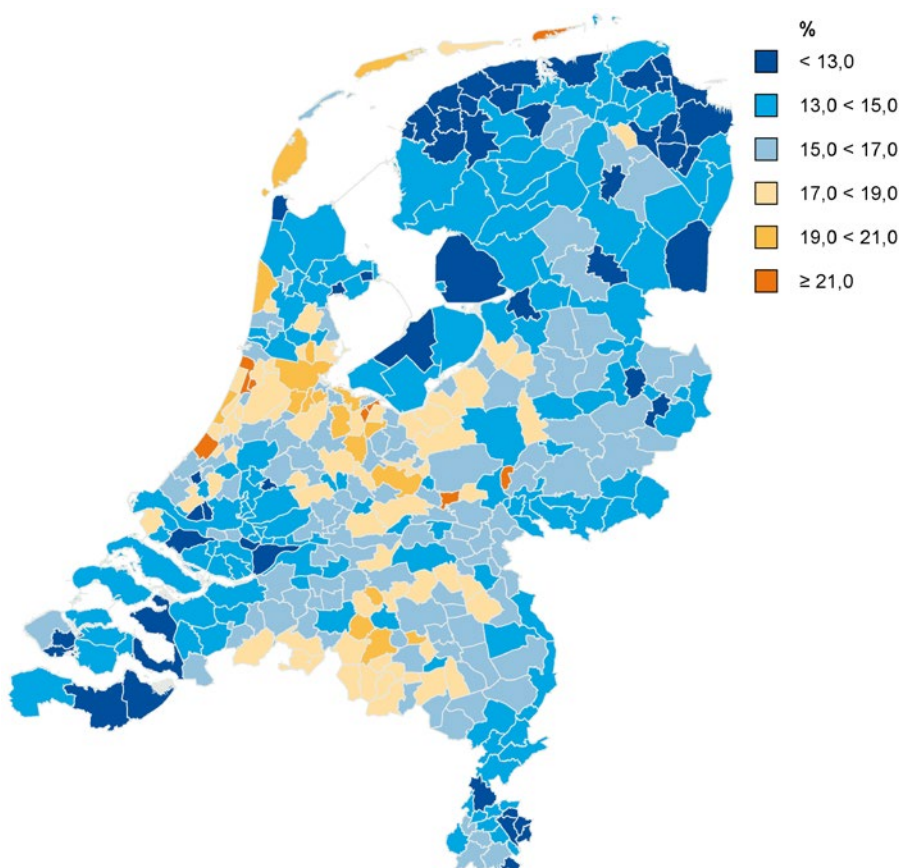


Figure 12

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 stay strong

The annual number of transactions has increased, with a total of 280 thousand residential properties sold during the past year.

- Y-O-Y development, number of annual sales: +5.0%.
- Q-O-Q development, number of annual sales: -1.3%.

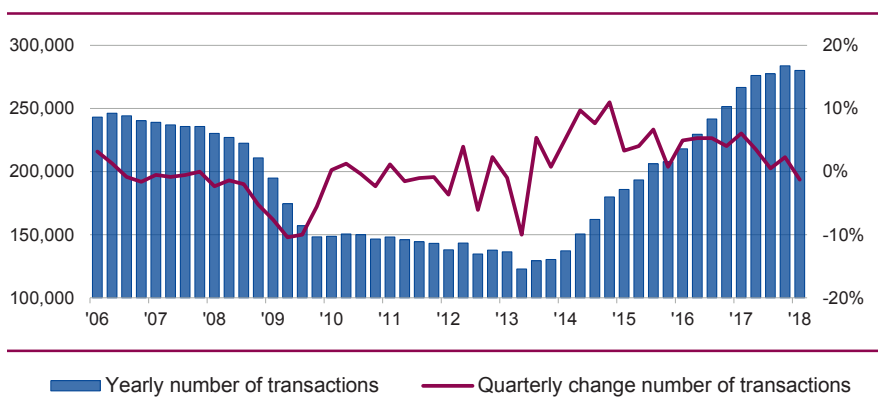


Figure 13

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).

Strongest rise in detached house sales

- Sales increased for all types of housing in the past year, as shown in the table below. Detached houses were most popular with an increase in sales last year of 12.2%.
- The decrease of the amount of transactions for apartments is the lowest this quarter with -0.1% (Y-O-Y).

Transaction development y-o-y

Housing type	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1
Detached	27.4%	28.4%	22.0%	22.7%	12.2%
Semi-detached	25.1%	24.2%	19.6%	16.8%	6.0%
Corner house	20.1%	19.4%	15.3%	15.6%	7.5%
Terraced house	21.3%	19.2%	14.2%	12.6%	5.6%
Apartment	21.0%	16.9%	10.4%	6.4%	-0.1%
Total	22.3%	20.3%	14.8%	12.8%	5.0%

Table 5

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

Sales in expensive price class increased by 29%

- The sale of homes in the price range 350 to 500 thousand euros increased by 27.3% in the past year, whilst homes above 500 thousand euros increased by 29.0%.
- Especially in the east (45.6%) and in the south (37.7%) of the Netherlands more expensive homes (>500 thousand euros) were sold.
- In the western part of the Netherlands the highest increase in sales was measured for houses above 500 thousand euros (24.0%).
- The lowest price segment (75 to 150 thousand euros) decreased the most in the western part of the Netherlands by 24.2%.

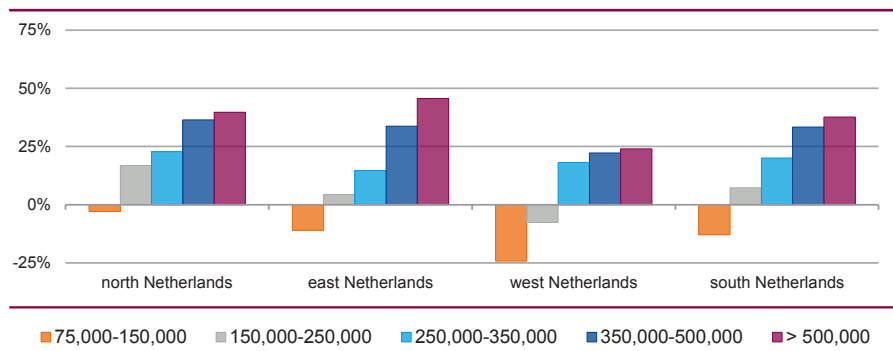


Figure 14

Growth (%) of share of housing sales per price class in North, East, West and South Netherlands in Q1 2018 compared to Q1 2017.

Source: WOX Monitor Calcasa

40% of housing sales within 150 to 250 thousand euros

- In the past year 40% of housing sales were within the price class of 150 to 250 thousand euros.
- The percentage of transactions in the price class 75 to 150 thousand euros decreased in four years time from 28% to 16%.
- The price segment 350 to 500 thousand euros increased in four years time from 7% to 13%.

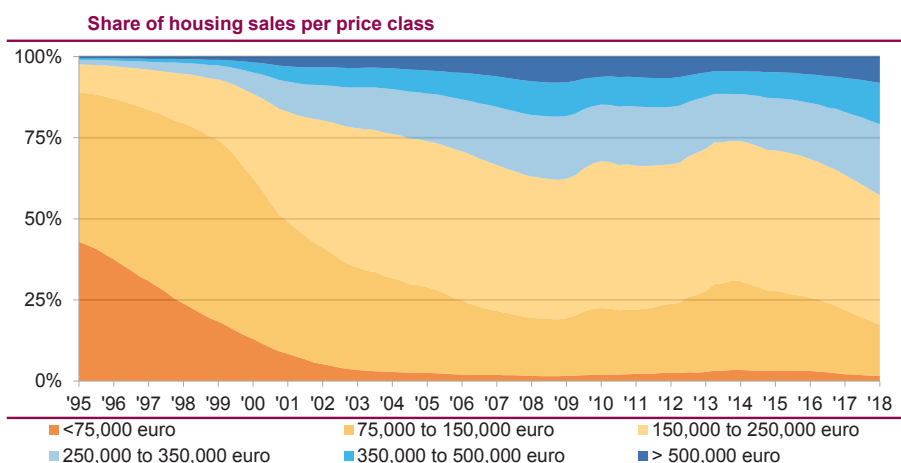


Figure 15

Share of housing sales per price class
Source: WOX Monitor Calcasa

Visit calcasa.co.uk for more information

Groot-Amsterdam highest market liquidity

- In the NUTS III region Groot-Amsterdam 7.9% of the housing supply was sold during the past year. The regions of The Hague and Groot-Rijnmond follow with 7.8% and 7.4% respectively.
- The NUTS III region Delfzijl en omgeving had the lowest market liquidity: 5.2%.

NUTS III region	Percentage of housing supply sold last year	NUTS III region	Percentage of housing supply sold last year
Groot-Amsterdam	7.9%	Delfzijl en omgeving	5.2%
's-Gravenhage	7.8%	Midden-Limburg	5.3%
Groot-Rijnmond	7.4%	Oost-Groningen	5.5%
Overig Groningen	7.2%	Twente	5.6%
Arnhem/Nijmegen	6.8%	Achterhoek	5.6%
Het Gooi en Vechtstreek	6.8%	IJmond	5.6%
Agglomeratie Haarlem	6.7%	Noord-Limburg	5.6%
Noord-Friesland	6.6%	Zuid-Limburg	5.6%
Zuidoost-Drenthe	6.6%	Zuidoost-Friesland	6.0%
Zuidwest-Drenthe	6.6%	Alkmaar en omgeving	6.0%

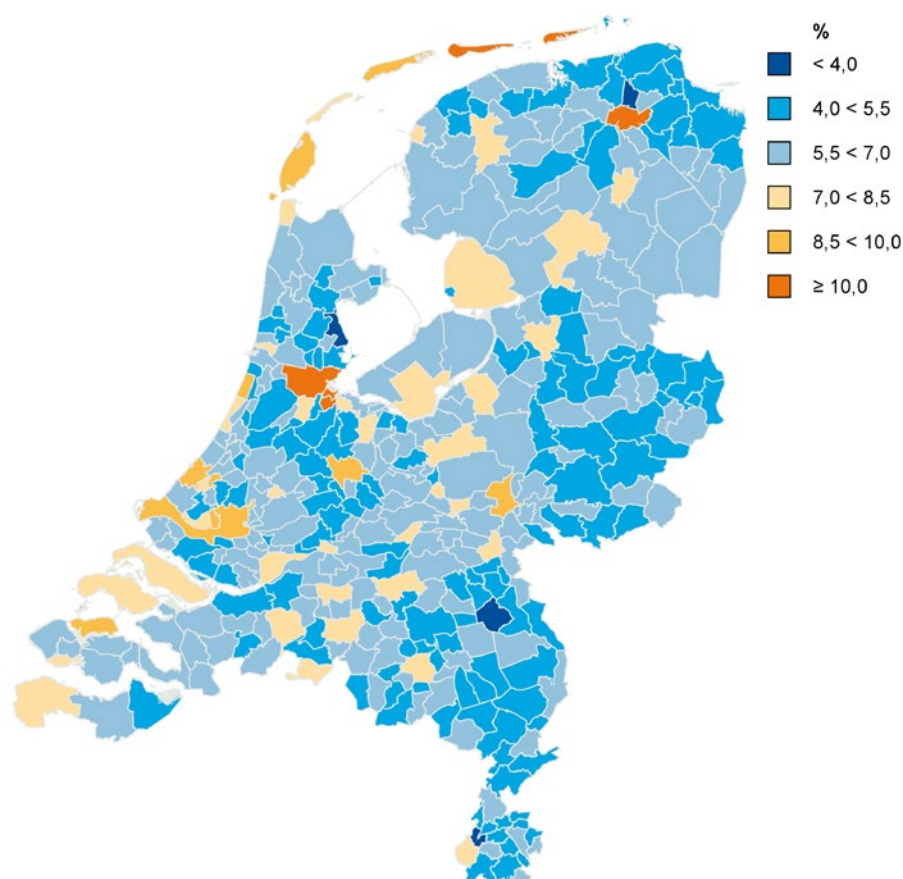


Table 6

Top 10 NUTS III regions with highest and lowest percentage of housing supply sold last year
Source: WOX Monitor Calcasa

Figure 16

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 decreased to 0.4. This is an improvement compared to last year when this ratio was still 0.6.
- The annual number of houses sold: 280 thousand.
 - » Y-O-Y development: 5.0%
- Homes for sale in Q1 2018: 112 thousand
 - » Y-O-Y development: -32.9%
- The market liquidity is best in the municipality of Groningen with a factor of 0.14.
- In the municipality of Oldambt the market liquidity is highest (worst) with a factor of 1.15, followed by the municipality of Veendam with a factor of 1.13.

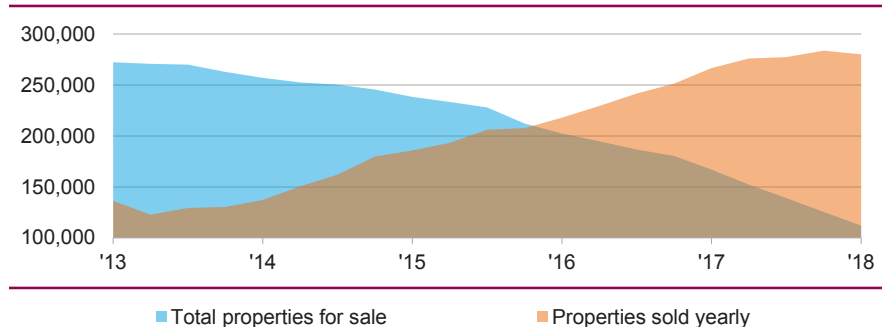


Figure 17a

Annual number of properties for sale versus number of properties sold over the period 2013-2018 in the Netherlands. Source: Multiple real estate agents, adaptation Calcasa

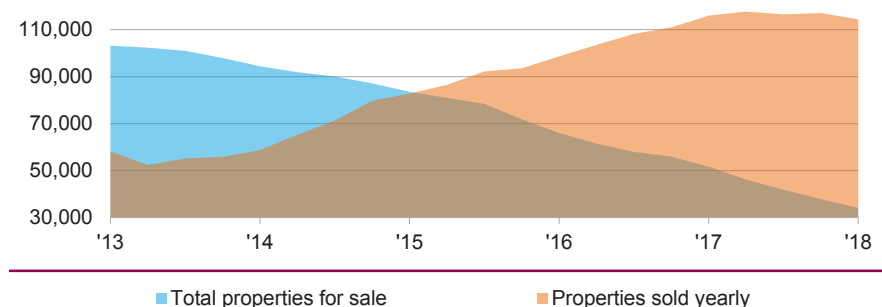


Figure 17b

Annual number of properties for sale versus number of properties sold over the period 2013-2018 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 6.5% for the Netherlands.
 - o The percentage of family homes sold previous year: 6.1%.
 - o The percentage of apartments sold previous year: 7.9%.
- The share of owner occupied housing stock which was sold last year is highest in the city of Amsterdam with 10.4%.
- In the municipality of Edam-Volendam only 3.3% of the existing stock of owner-occupied homes has changed owners.

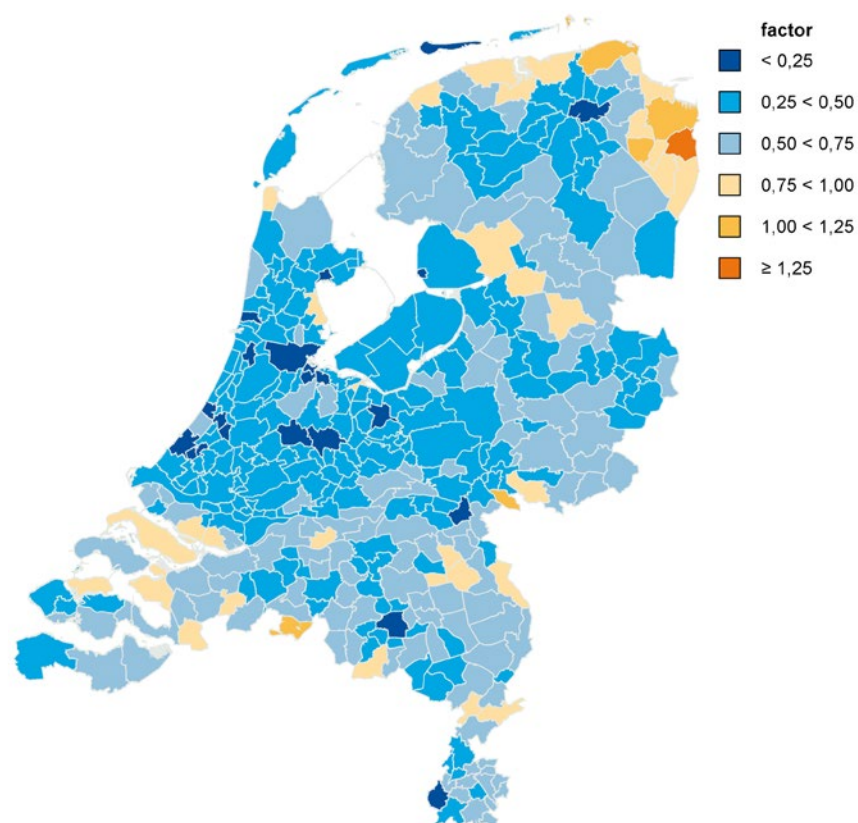


Figure 18

Supply/Sales ratio all properties per municipality

Source: WOX Monitor Calcasa

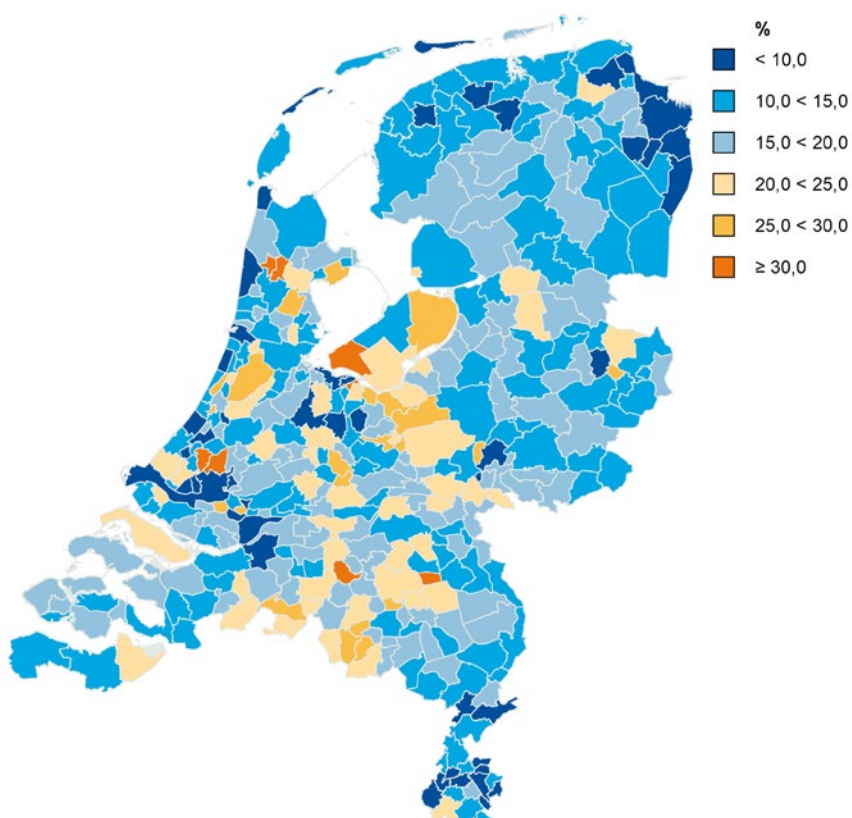


Figure 19

Percentage of properties with energy label A per municipality

Source: WOX Monitor Calcasa

Mortgage approvals keep rising

Approximately 350 thousand mortgages were approved last year.

- Y-O-Y development, number of annual mortgages: +7.0%.
- Q-O-Q development, number of annual mortgages: -0.8%.

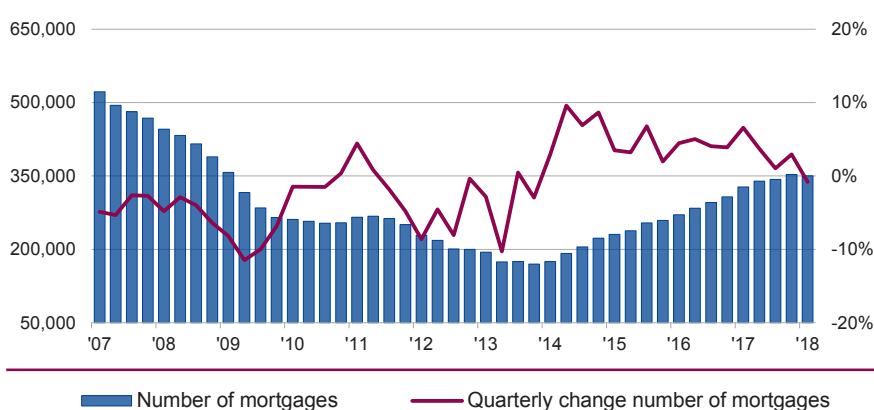


Figure 20

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

Number of foreclosures through auction decreases

Over the last four quarters, 1,057 foreclosures have been registered by the land registry.

- o Y-O-Y development amount of annual foreclosures: -35.6%.
- o Q-O-Q development amount of annual foreclosures: -9.8%.
- The share of foreclosure sales versus total sales is 0.4%.
- The highest share of foreclosure sales to total sales is 1.6% in the municipality of Hoogez.
- The lowest share of foreclosure sales (0.0%) is registered in the municipality of Katwijk.

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 up to 40 percent less compared to a sale via the public market.

Due to the increase in the number of foreclosures after the crisis, the NHG has come up with stricter regulations allowing banks to only sell homes via auction if the selling price is less than 5% below market value. This is to avoid big losses.

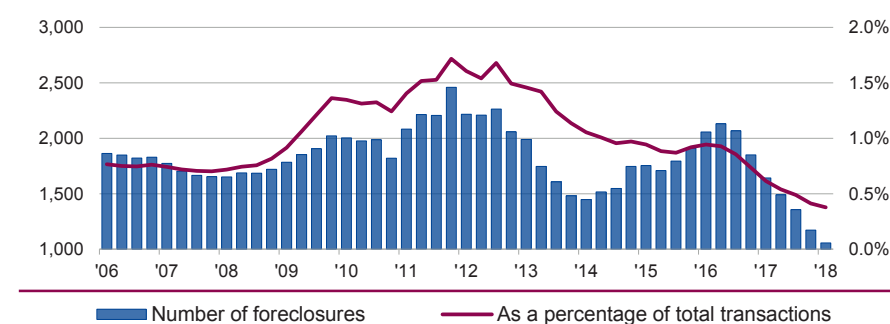


Figure 21

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

More newly built homes sold in 2017

- In 2017 the total amount of sales for newly built homes was 37 thousand. This is an increase of 7.8% compared to 2016.
- During the third quarter of 2017 seven thousand newly built homes came on the market. 76% of them were sold in the same quarter.

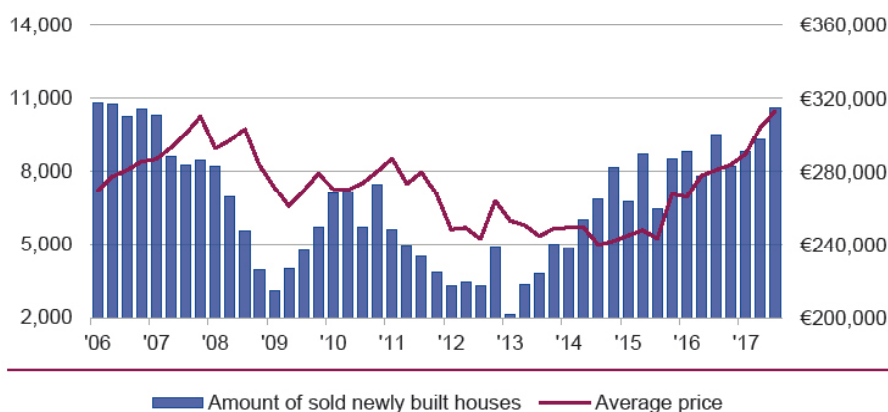


Figure 22

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

Source: NEPROM, adaptation Calcasa

Amount of households in arrears decreased

- Since 2015 the number of homeowners with payment problems decreased with 29%.
- Currently there are 80 thousand homeowners who have difficulty paying their mortgage: this is a decrease of 18.4% compared to a year ago.

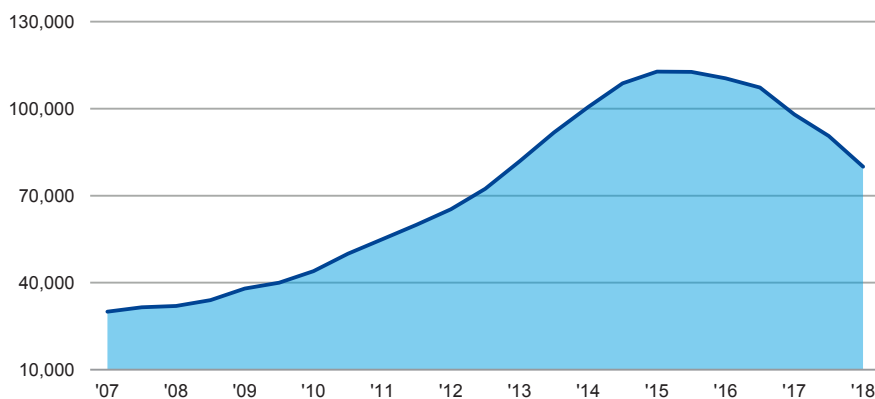


Figure 23

Number of borrowers with mortgage payment arrears

Source: BKR, adaptation Calcasa

Industrial rental prices increase by 11% in 3 years time

The average office rental price increased by 6.4% y-o-y in 1Q2018

The Calcasa PropertyNL OPI (Office Price Index) showed a value of 94 (4Q2001=100) for the first quarter of 2018. The average office rental value is now EUR125 per square meter.

The average retail rental price increased by 0.3% y-o-y in 1Q2018

The Calcasa PropertyNL RPI (Retail Price Index) showed a value of 107 (4Q2001=100) for the first quarter of 2018. Compared to the first quarter of 2017, this is a increase of 0.3%. The average retail rental value is now EUR162 per square meter.

The average industrial rental price increased by 6.4% y-o-y in 1Q2018

The Calcasa PropertyNL IPI (Industrial Price Index) showed a value of 101 (4Q2001=100) for the first quarter of 2018, an increase of 6.4% compared to the first quarter of 2017. The average industrial rental value is now EUR61 per square meter.

The three real estate indices are based entirely on actual transactions and not on appraisals from professionals. The actual situation for the rental income may even be grimmer: in the actual rents any incentives given by the owner are not included.

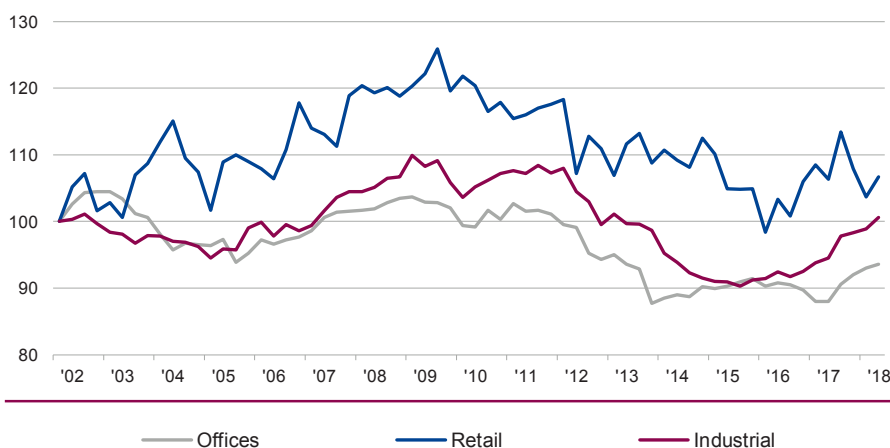


Figure 24

Development of Calcasa commercial real estate indexes (Q4 2001 = 100)
Source: Calcasa

Netherlands	Index (Q4 2001=100)	Average rent per m2	Y-O-Y price change	Three year price change
Offices (OPI)	94	€ 125	6.4%	3.7%
Retail (RPI)	107	€ 162	0.3%	1.7%
Industrial (IPI)	101	€ 61	6.4%	10.6%

Table 7

Development of rental values of commercial real estate in the Netherlands
Source: Calcasa, PropertyNL

Visit calcasa.co.uk for more information

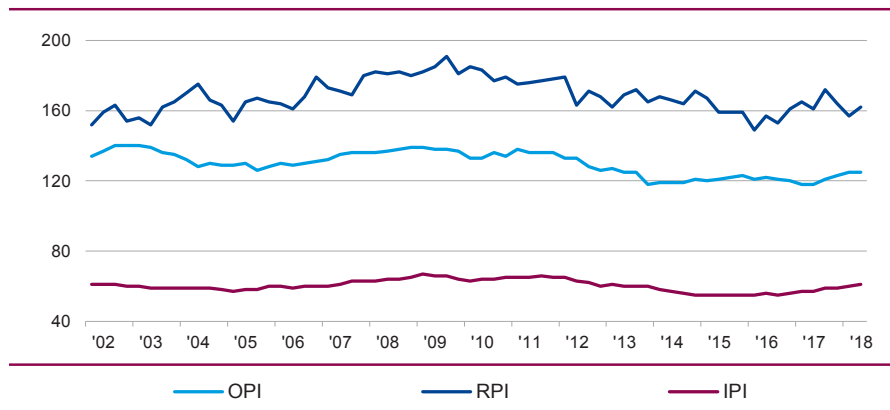


Figure 25

Development of Calcasa commercial real estate indexes (2001Q4 = 100)
Source: Calcasa, PropertyNL

Commercial real estate index: A scientifically justified methodology

Calcasa calculates price developments for commercial real estate by using realized rental transactions which have been gathered and checked by the research department of PropertyNL. Calcasa translates the rental transactions to determine a value for the entire stock of commercial real estate, using a hedonic modeling technique. A revaluation of the entire stock takes place each quarter and hence a more accurate and robust index is formed, capturing the developments in the commercial real estate market.

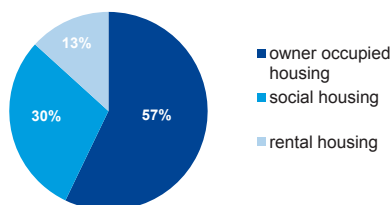
With the application of the hedonic method, it is essential that objects and their location are documented precisely, using the characteristics that influence the price. Hence, when using a hedonic index model, a range of object characteristics are taken into account, e.g. living area and year of construction.

It is equally important that multiple variables are included in the model, which describe the location of the object; an example of such variables would be distance to important amenities like city centers, airports, train stations and motorways. Using this methodology, Calcasa produces a quarterly index for the office market (with minimal space of 200 square meters), which is published in PropertyNL and the Calcasa WOX quarterly bulletin.

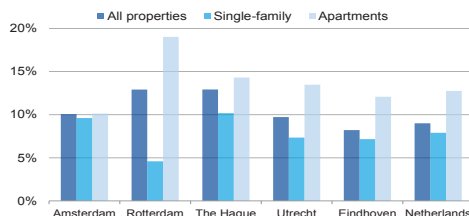
Dutch Housing Market Summary

Largest cities	All properties	Single-family	Apartments	Owner occupied	Rental	Total population	Total households	Annual sales	Current supply
Amsterdam	428,000	101,000	327,000	30%	70%	844,950	462,330	13,042	
Rotterdam	310,000	111,000	199,000	35%	64%	634,660	319,780	9,942	
The Hague	255,000	75,000	180,000	42%	56%	524,880	257,190	9,491	
Utrecht	151,000	77,000	74,000	45%	53%	343,040	176,590	5,912	
Groningen	101,000	40,000	61,000	38%	61%	202,640	122,280	3,869	
Eindhoven	108,000	74,000	34,000	45%	53%	226,870	116,320	3,887	
Provinces									
Groningen	277,000	197,000	80,000	54%	45%	583,580	291,320	9,783	4,935
Friesland	296,000	257,000	39,000	61%	37%	646,870	289,340	11,485	5,583
Drenthe	219,000	193,000	26,000	65%	34%	491,790	215,130	9,204	4,491
Overijssel	497,000	413,000	84,000	59%	39%	1,147,690	495,380	17,644	7,623
Flevoland	164,000	137,000	27,000	64%	35%	407,820	168,680	6,973	2,296
Gelderland	888,000	720,000	168,000	59%	39%	2,047,900	906,480	33,216	14,767
Utrecht	554,000	379,000	175,000	57%	41%	1,284,500	579,180	20,573	6,458
North-Holland	1,307,000	745,000	562,000	50%	49%	2,809,480	1,341,500	45,041	13,690
South-Holland	1,667,000	917,000	750,000	51%	48%	3,650,220	1,685,400	59,621	19,799
Zeeland	184,000	157,000	27,000	65%	34%	381,570	172,920	7,770	4,192
North-Brabant	1,104,000	893,000	211,000	61%	38%	2,512,530	1,122,800	41,644	19,614
Limburg	527,000	423,000	104,000	59%	40%	1,117,550	525,940	17,172	8,648
Netherlands	7,686,000	5,428,000	2,258,000	56%	43%	17,081,510	7,794,080	280,126	112,096

Housing stock



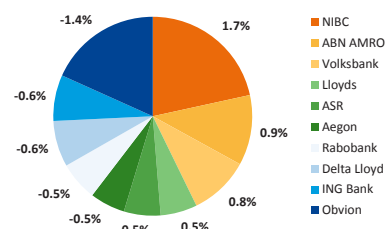
Y-O-Y price development largest cities



Mortgage developments

Annual numbers 1Q18	Amount	Change
Sales with NHG	27,000	-4.6%
Execution sales with losses	362	-44.3%
Households in arrears	80,000	-18.4%
Sold mortgages	350,283	7.0%
Total mortgage amount (x 1,000,000,000)	672.2	1.2%

Top mortgage lenders: increase/decrease market share



Macro-economic figures

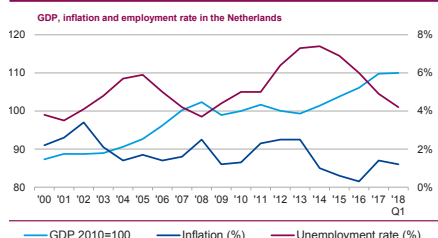


Table 8

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

Figures 26 & 27

Source figure left: Statistics Netherlands
Source figure right: Calcasa

Table 9 & Figure 28

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

Figures 29 & 30

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

Appendices

Provinces	Detached houses	Semi-detached	Corner houses	Terraced houses	All single-family dwellings
Groningen	246,000	206,000	184,000	186,000	216,000
Friesland	273,000	201,000	169,000	156,000	212,000
Drenthe	307,000	218,000	181,000	167,000	235,000
Overijssel	356,000	234,000	212,000	200,000	241,000
Flevoland	402,000	291,000	222,000	210,000	247,000
Gelderland	420,000	292,000	245,000	224,000	299,000
Utrecht	706,000	486,000	353,000	329,000	413,000
North-Holland	552,000	458,000	347,000	318,000	396,000
South-Holland	533,000	407,000	311,000	289,000	336,000
Zeeland	293,000	204,000	178,000	171,000	215,000
North-Brabant	448,000	309,000	264,000	245,000	309,000
Limburg	337,000	221,000	204,000	197,000	236,000
Netherlands	403,000	303,000	270,000	257,000	306,000

Table 10

Average house price for single-family dwellings, per property type and per province in the Netherlands (in euros).
Source: Calcasa

Provinces	Porch flat	Gallery flat	Maison-nette	Up/downstairs apartment	All apartments
Groningen	178,000	170,000	175,000	189,000	198,000
Friesland	166,000	149,000	166,000	161,000	172,000
Drenthe	168,000	157,000	155,000	191,000	183,000
Overijssel	155,000	160,000	172,000	171,000	166,000
Flevoland	215,000	185,000	187,000	194,000	236,000
Gelderland	189,000	175,000	189,000	211,000	197,000
Utrecht	245,000	221,000	261,000	270,000	266,000
North-Holland	271,000	260,000	326,000	380,000	366,000
South-Holland	191,000	191,000	225,000	224,000	218,000
Zeeland	201,000	217,000	169,000	179,000	190,000
North-Brabant	214,000	196,000	213,000	225,000	219,000
Limburg	163,000	149,000	166,000	174,000	164,000
Netherlands	206,000	201,000	238,000	272,000	247,000

Table 11

Average house price for apartments, per property type and per province in the Netherlands (in euros).
Source: Calcasa

Municipalities	Highest	Municipalities	Lowest
	property values (x 1,000)		property values (x 1,000)
Bloemendaal	809	Delfzijl	155
Wassenaar	629	Oldambt	163
Heemstede	598	Veendam	171
Gooise Meren	497	Heerlen	172
De Bilt	473	Terneuzen	172
Wijdmeren	463	Leeuwarden	173
Zeist	445	Kerkrade	175
Amsterdam	440	Brunssum	175
Bergen (NH.)	440	Franekeadeel	178
Utrechtse Heuvelrug	437	Dongeradeel	182

Table 12

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

Municipalities	Highest	Municipalities	Lowest
	annual price development		annual price development
Hilversum	14.0%	Borsele	2.0%
Gooise Meren	13.7%	Schouwen-Duiveland	2.1%
Wijdmeren	13.4%	Veere	2.3%
Huizen	13.1%	Hulst	2.4%
Rijswijk	13.0%	Reimerswaal	2.4%
's-Gravenhage	12.9%	Tholen	2.8%
Rotterdam	12.9%	Sluis	3.3%
Zaanstad	12.6%	Goes	3.5%
Haarlem	12.3%	Terneuzen	3.6%
Alkmaar	12.1%	Middelburg	3.9%

Table 13

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

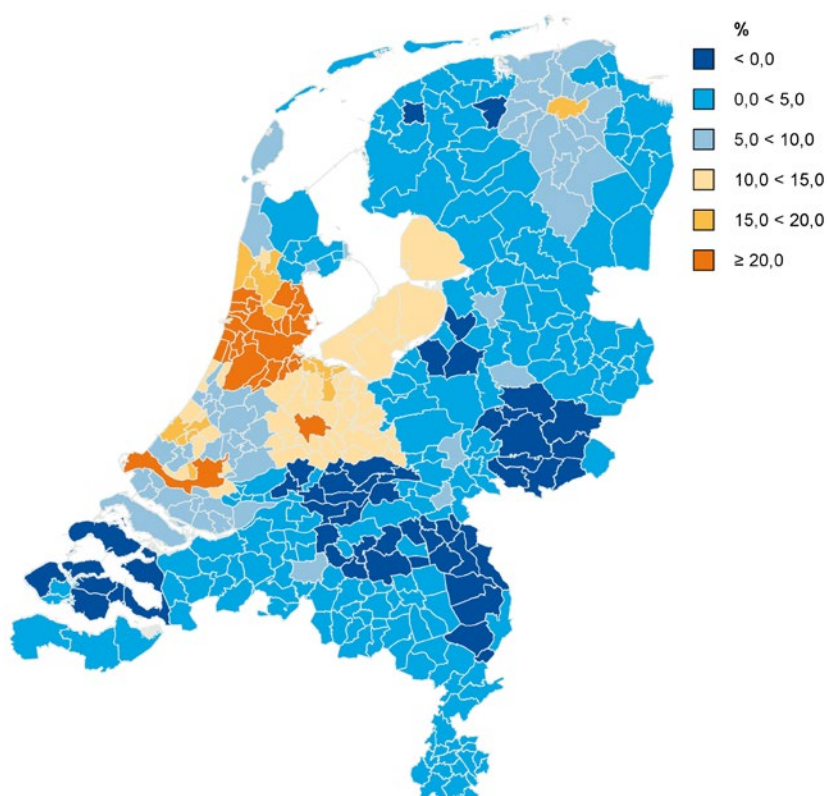


Figure 31

The price development of all houses per municipality in 2018Q1 compared to 2008Q3
Source: Calcasa

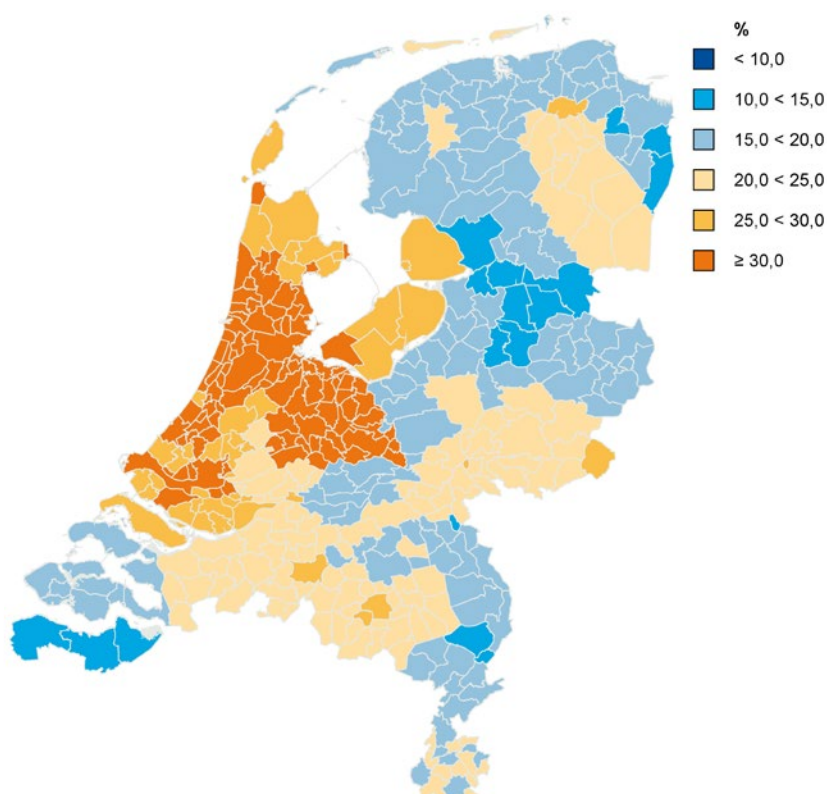
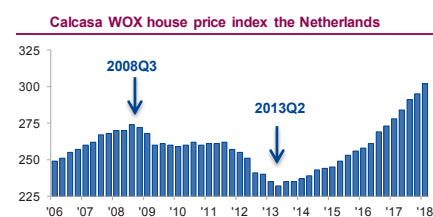


Figure 32

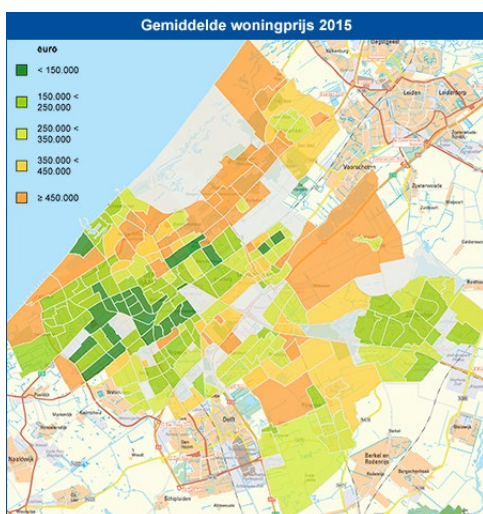
The price development of all houses per municipality in 2018Q1 compared to 2013Q2
Source: Calcasa



Visit calcasa.co.uk for more information

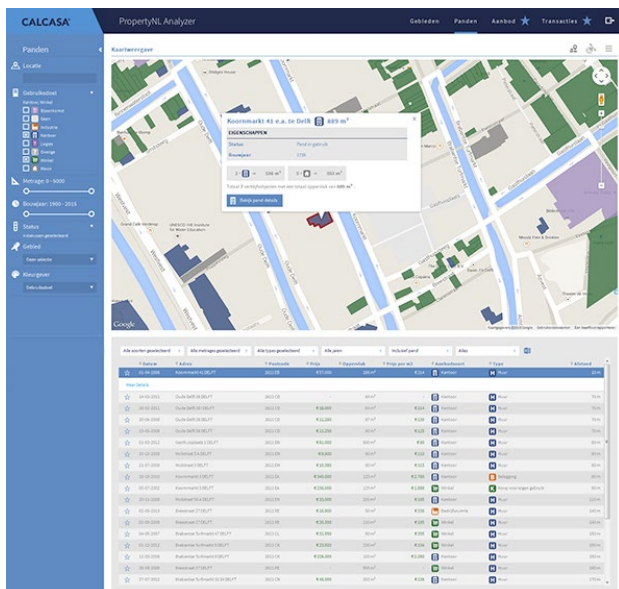
The WOX Monitor: All housing market data for every neighborhood

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. For more information contact Mr. Rogier van der Hijden: Rogier@Calcasa.nl



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

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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