

# Housing market developments – 3rd quarter 2017

**Strong house price growth in the Randstad:** Average house prices increased the most in the provinces of North Holland (10.5%) and South Holland (9.8%). The largest cities in these provinces, Amsterdam and Rotterdam, show average house price increases of respectively 11.9% and 12.1%.

**Transactions keep rising whilst number of homes for sale drops:** The annual number of sales increased in four years from 123 thousand to a record of 277 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 0.5 (sales > supply) and in the urban agglomeration 'Randstad' this ratio remained unchanged at 0.4.

**Housing affordability remains stable:** On average, 14.6% of net household income was required to service housing costs, in 2008 this number was 27.0%.

#### Dutch house sellers enjoy an average profit of 32 thousand euros

In 2017 three quarters of the houses were sold with a profit. On average the sales price exceeded the original purchase price by 32 thousand euros. In Amsterdam sellers enjoyed an even higher profit of 131 thousand euros.

This quarter Calcasa also researched the number of houses that increased in value since their purchase. Around half of owner-occupied properties increased in value by at least 20%, which amounts to an average virtual profit of 43 thousand euros for homeowners.

#### CALCASA INDEXES 2017 Q3

Calcasa House Price Index (WOX) (1995Q1=100)	291
Calcasa WOX Top 15 Cities Index (1995Q1=100)	337
Residential price change	
WOX price change (year-on-year)	7.8%
WOX price change (quarter-on-quarter)	2.4%
WOX price change corrected for inflation (year-on-year)	6.3%
House price forecast	
Yearly price change 2017 Q4	8.5%
Quarterly price change 2017 Q4	1.9%
Housing affordability	
Affordability index	14.6%
Yearly change in housing affordability	-2.0%
Quarterly change in housing affordability	-1.9%
Transactions	
Number of transactions on a yearly basis (x 1,000)	277
Yearly change in the number of transactions	14.6%
Quarterly change in the number of transactions	0.3%

# **Content WOX:**

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#### Table 1

Calcasa key numbers Q3 2017 Source: WOX Monitor Calcasa

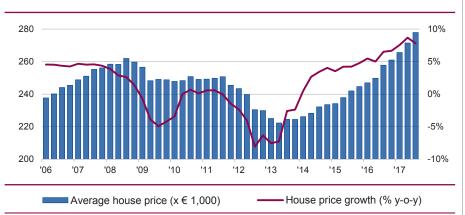
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\*Housing stock January 1st, 2017, municipal reclassification 2016



# Average house price keeps rising

- The WOX (1995 = 100) currently stands at 291 points.
  - Average house price: 278 thousand euro.
  - » Q-O-Q price development: +2.4%.
    - Y-O-Y price development: +7.8%.
- The current Dutch inflation rate is 1.4% (which is the average rate for Q3 2017 according to Statistics Netherlands). In the third quarter of 2017, inflation-adjusted house prices rose by 6.4% 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: 295 thousand euro.
  - » Q-O-Q price development of single-family houses: +2.0%.
  - » Y-O-Y price development of single-family houses: +6.9%.
- Average price for apartments: 233 thousand euro.
  - » Q-O-Q price development of apartments: +3.6%.
  - » Y-O-Y price development of apartments: +11.0%.



#### Figure 2

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



# Highest price increase for 250-350 thousand euro class

- Based on house price levels, Calcasa has divided the market into five price classes. Homes in the price class 250 to 350 thousand euros performed best with an annual average house price rise of 8.6%.
- The most expensive houses worth 500k or more increased the least in value; over the past year these homes increased in value by 5.9%.

Price development y-o-y
7.3%
8.2%
8.6%
7.1%
5.9%
7.8%

# 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 11.0%.
- Older apartments built before 1944 are most desirable. Their value increased by 11.5% in the past year.

#### Development (y-o-y) Construction year

Housing type	<1944	1945-1979	>1980	>2000	Total
(semi) detached	7.6%	5.3%	4.9%	6.6%	6.1%
Terraced/corner house	8.4%	7.3%	6.5%	7.1%	7.3%
Apartment	11.5%	10.5%	11.4%	10.4%	11.0%
Total	9.6%	7.9%	7.6%	8.6%	7.8%

# Forecast house price development in Q4 2017

- Q-O-Q price change: +1.9%.
- Y-O-Y price change: +8.5% (Q4 2016 Q4 2017).
  - » Y-O-Y price change single-family homes: 7.6%.
    - » Y-O-Y price change apartments: 11.5%.

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: 10.7%
- Eastern part : 6.1%

Northern part: 5.5% Southern part: 5.7%

#### Table 2a

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

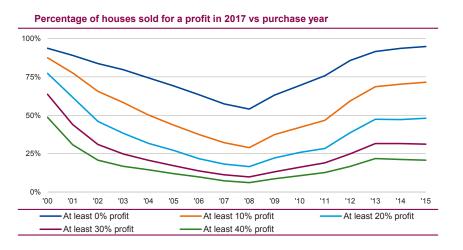
#### Table 2b

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



#### Dutch home sellers enjoy average profit of 32 thousand euros

In 2017 three quarters of the houses were sold with a profit: their sales price exceeded their original purchase price. A quarter of these sold homes even enjoyed a profit margin of at least 40%. This year home sellers made an average profit of 32 thousand euros. However, still 25 thousand homes were sold at a loss in 2017. Adjustments for inflation and transfer tax have not been taken into consideration in this investigation.



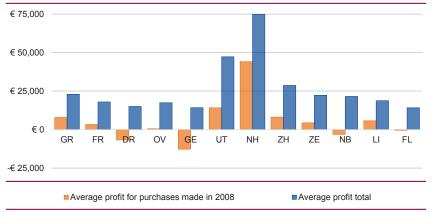
Sellers in the province of North Holland enjoyed the best reward; on average they made an average profit of 75 thousand euros. Conversely Flevoland saw the lowest profits of just 14 thousand euros on average.

#### 2008 worst purchase year

Profit margins differ according to the year the property was purchased. The worst purchase year is 2008. Only half of the homes purchased in 2008 and sold in 2017 generated a profit for the seller.

Those who bought a house in Gelderland in 2008 were the most disadvantaged, experiencing a loss of 13 thousand euros on average for houses sold during 2017.

#### Average profit per province for purchases made in 2008 and in total



#### Figure 3

Percentage of houses sold in 2017 where the sale price exceeded the original purchase price, categorised by profit margin. Source: Calcasa

#### Figure 4

Average profit per province for houses purchased in 2008 and in total Source: Calcasa

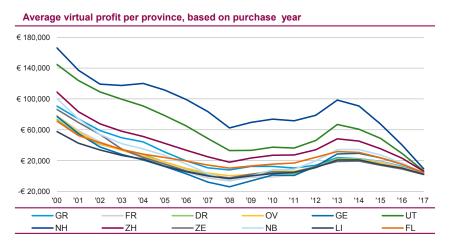


#### Half of properties sold in 2017 increased in value by at least 20%

Almost all homes (96%) in the Netherlands increased in value since their original purchase and now demonstrate a virtual profit. Half of homes are currently worth at least 20% more than their purchase price. On average this increase in value is 43 thousand euros. A quarter of homes have a virtual profit of over 100 thousand euros.

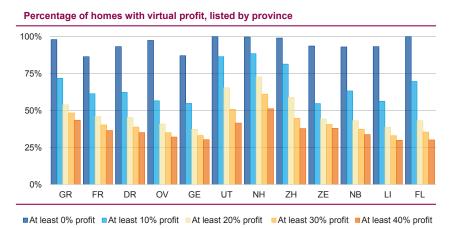
The average virtual profit is highest in the province of North Holland with 89 thousand euros and the lowest in Limburg with just 17 thousand euros.

In 2017 the number of sellers suffering a loss on the sale of their house decreased from 340,000 in Q1 to 213,000 in Q3.



3.5 million homes increased in value by at least 10%. These homes are mainly located in the provinces of North Holland (89%), Utrecht (86%) and South Holland (81%) (see Figure 6).

Almost 2 million homes increased in value by 40% or more, including almost half of the homes in North Holland. House prices in Limburg and Flevoland experienced less favourable growth; in both provinces only a quarter of homes increased in value by 40% or more.



#### Figure 5

Average virtual profit per province, based on purchase year Source: Calcasa

#### Figure 6

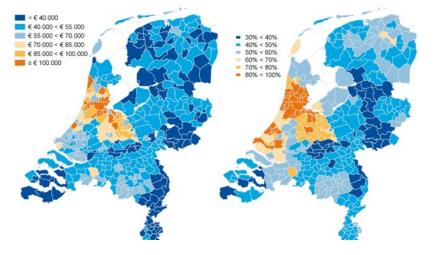
Percentage of homes with virtual profit, listed by province Source: Calcasa



#### Large differences in virtual profit between municipalities

The map on the left of Figure 7 shows that 20 Dutch municipalities saw properties increasing in value by over 100 thousand euros on average. These houses are all located in or around Amsterdam or in the area immediately surrounding Utrecht. However, the city of Utrecht itself narrowly fails to enter this category with an average virtual profit of 85 thousand euros.

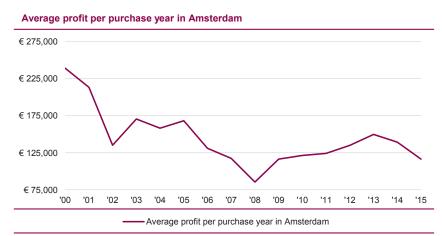
The map on the right in Figure 7 displays the number of homes in each municipality with a virtual profit that increased by at least 10%. 80% of homes in 40 municipalities have virtual profits that increased by at least 10%. Almost 40 municipalities are located within the Randstad (the area containing Amsterdam, Utrecht, The Hague and Rotterdam).



#### Average profit of 131 thousand euros for sellers in Amsterdam

Sellers in Amsterdam enjoyed average profits of 131 thousand euros (above original purchase price) on houses sold during 2017. Even on houses bought at the peak of the market in 2008 sellers enjoyed an average profit of 85 thousand euros (see Figure 8).

After the worst purchase year 2008, houses bought during the depths of the crisis in 2013 are currently the most profitable, with an average profit of 150 thousand euros. Even more recent purchases from 2015 still deliver an average profit of 116 thousand euros.



#### Figure 7

Average virtual profit per municipality (left) Percentage of homes with at least 10% virtual profit per municipality (right) Source: Calcasa

#### Figure 8

Average profit by purchase year in Amsterdam Source: Calcasa



# Strong house price growth in the Randstad

- Like last quarter, average house prices increased the most in the province of North-Holland, with an annual increase of 10.5% in value. Runner-up is the province of South-Holland, where house prices increased by 9.8%.
- Especially apartments in North-Holland are in demand, with values going up by 11.8% whereas single-family houses rose by 9.6%.
- The lowest price increase was measured for houses in the provinces of Limburg (3.8%) and Zeeland (4.0%).

	Average price	Average price	Price change
Q3 2017	single-family	apartments	(year-on-year)
	houses		
Groningen	211,000	182,000	6.2%
Friesland	207,000	160,000	6.3%
Drenthe	224,000	170,000	4.3%
Overijssel	236,000	159,000	5.0%
Flevoland	234,000	220,000	8.1%
Gelderland	286,000	189,000	5.5%
Utrecht	402,000	248,000	8.4%
North-Holland	380,000	347,000	10.5%
South-Holland	326,000	205,000	9.8%
Zeeland	213,000	179,000	4.0%
North-Brabant	296,000	204,000	6.3%
Limburg	228,000	156,000	3.8%
The Netherlands	295,000	233,000	7.8%

#### Table 3

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

# 12% house price growth in the Amsterdam region

- The largest annual price increase of 11.8% is measured for houses in the NUTS III Amsterdam region. The value of single-family homes rose by 11.4% and the value of apartments by 12.1%.
- Second-largest annual price increase is seen in the NUTS III region The Hague with an annual growth rate of 11.3%, the value of single-family homes rose by 10.3% and the value of apartments by 12.3%.
- The NUTS III regions with the smallest price increases are South-Limburg (2.5%) and North-Overijssel (2.9%).
- In 30 of the 40 NUTS III regions the annual increase for houses prices is more than 5%.



# The WOX® Quarterly Q3 2017

# Housing affordability increases slightly

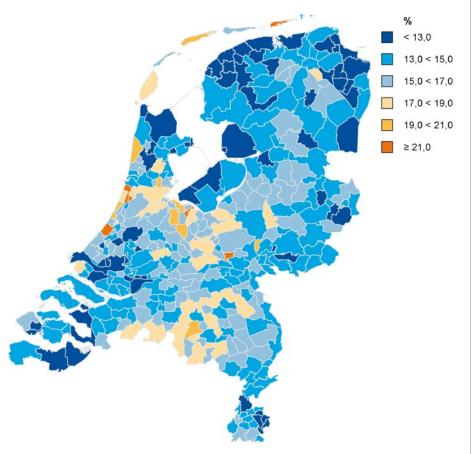
On average, 14.6% of net household income was required to service housing costs in the third quarter of 2017, compared to mid-2008 when housing costs represented 27.0% of net income.

- Q-O-Q change in net housing costs: +1.9%.
- Y-O-Y change in net housing costs: +2.0%.



#### Figure 9

Housing affordability index\* (in % of household income) in the Netherlands for the period 1995-2017. Source: WOX Monitor Calcasa



#### Figure 10

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

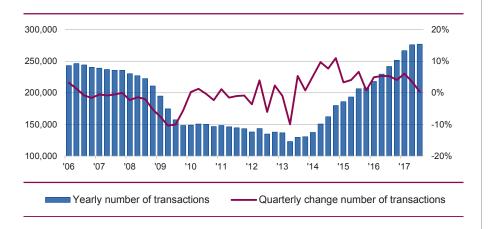
\*The index measures the affordability of Dutch owner-occupied houses. It is calculated taking into account net housing costs, current average mortgage costs (current interest rate, maintenance costs, local taxes and fiscal treatment.



# Number of sales stay strong

The annual number of transactions has increased, with a total of 277 thousand residential properties sold during the past year.

- Y-O-Y development, number of annual sales: +14.6%.
- Q-O-Q development, number of annual sales: +0.3%.



#### Figure 11

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 21.8%.
- The increase of the amount of transactions for apartments is the lowest this quarter with 10.1% (Y-O-Y).

Transaction development y-o-y					
Housing type	2016Q3	2016Q4	2017Q1	2017Q2	2017Q3
Detached	18.6%	24.0%	27.4%	28.4%	21.8%
Semi-detached	11.9%	20.4%	25.0%	24.1%	19.5%
Corner house	12.1%	15.8%	20.0%	19.2%	15.3%
Terraced house	16.0%	20.0%	21.4%	19.1%	14.0%
Apartment	21.6%	23.1%	21.1%	16.9%	10.1%
Total	17.2%	21.1%	22.4%	20.3%	14.6%

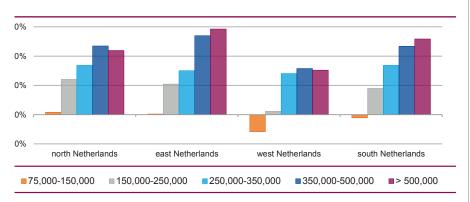
#### Table 4

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



# Sales in expensive price class increased by 45%

- The sale of homes in the price range 350 to 500 thousand euros increased by 39.1% in the past year, whilst homes above 500 thousand euros increased by 36.9%.
- Especially in the east (58.5%) and in the south (51.7%) 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 worth between 350 to 500 thousand euros (31,5%).
- The lowest price segment (75 to 150 thousand euros) decreased the most in the western part of the Netherlands by 11.7%.



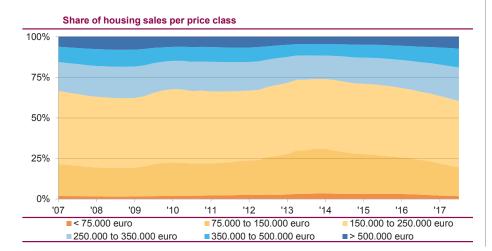
#### Figure 12

Growth (%) of share of housing sales per price class in North, East, West and South Netherlands in Q3 2017 compared to Q3 2016.

Source: WOX Monitor Calcasa

# 41% of housing sales within 150 to 250 thousand euros

- In the past year 41% of housing sales where within the price class of 150 to 250 thousand euro.
- The percentage of transactions in the price class 75 to 150 thousand euro decreased in four years time from 28% to 18%.
- The price segment 350 to 500 thousand euro increased in four years time from 7% to 12%.



#### Figure 13

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

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# The WOX® Quarterly Q3 2017

# Groot-Amsterdam highest market liquidity

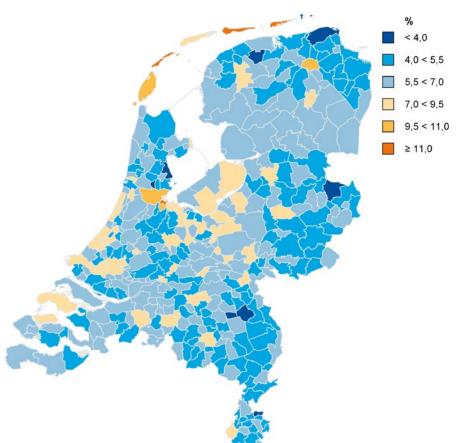
- In the NUTS III region Groot-Amsterdam 8.3% of the housing supply was sold during the past year. The regions of The Hague and Groot-Rijnmond follow with 8.1% and 7.2% respectively.
- Oost-Groningen along with Delfzijl and Midden-Limburg had the lowest market liquidity: 5.0%.

	Percentage		Percentage
	of housing supply		of housing supply
NUTS III region	sold last year	NUTS III region	sold last year
Groot-Amsterdam	8.3%	Oost-Groningen	5.0%
's-Gravenhage	8.1%	Delfzijl en omgeving	5.0%
Groot-Rijnmond	7.2%	Midden-Limburg	5.0%
Overig Groningen	7.1%	Noord-Limburg	5.3%
Haarlem	7.0%	Achterhoek	5.4%
Het Gooi en Vechtstreek	7.0%	Zuid-Limburg	5.4%
Arnhem/Nijmegen	6.7%	Twente	5.5%
Utrecht	6.7%	IJmond	5.7%
Veluwe	6.5%	Zuidwest-Friesland	5.8%
Flevoland	6.5%	Zuidoost-Friesland	5.8%

# Table 5

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

Source: WOX Monitor Calcasa



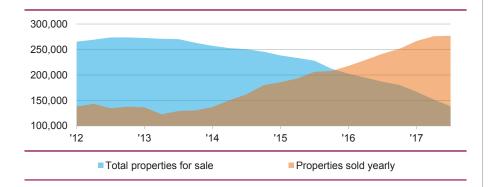
#### Figure 14

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 0.5. This is an improvement compared to last year when this ratio was still 0.8.
- The annual number of houses sold: 277 thousand. » Y-O-Y development: 14.6%
- Homes for sale in Q3 2017: 139 thousand
  - » Y-O-Y development: -25.8%
- The market liquidity is best in the municipality of Diemen with a factor of 0.17.
- In the municipality of Veendam the market liquidity is highest (worst) with a factor of 1.43, followed by the municipality of Oldambt with a factor of 1.41.





- 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: 6.0%.
  - o The percentage of apartments sold previous year: 8.0%.
- The share of owner occupied housing stock which was sold last year is highest in the city of Diemen with 11.8%.
- In the municipality of Edam-Volendam only 3.3% of the existing stock of owner-occupied homes has changed owners.

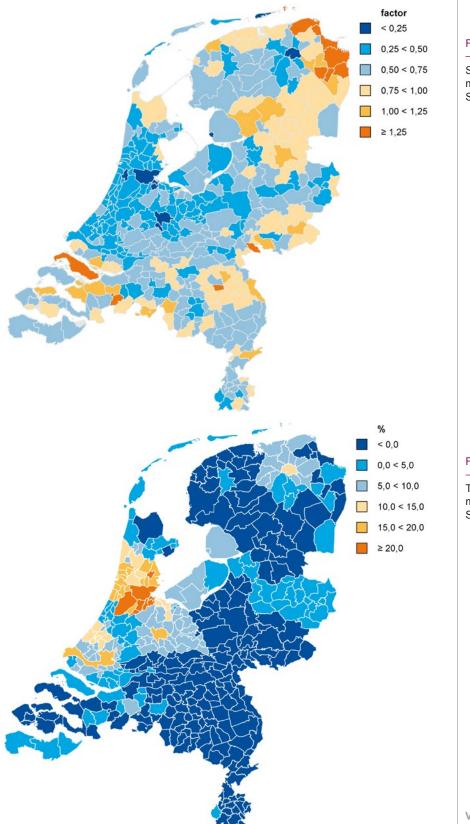
#### Figure 15a

Annual number of properties for sale versus number of properties sold over the period 2012-2017 in the Netherlands. Source: Multiple real estate agents, adaptation Calcasa

#### Figure 15b

Annual number of properties for sale versus number of properties sold over the period 2012-2017 in the Randstad. Source: Multiple real estate agents, adaptation Calcasa





#### Figure 16

Supply/Sales ratio all properties per municipality Source: WOX Monitor Calcasa

#### Figure 17

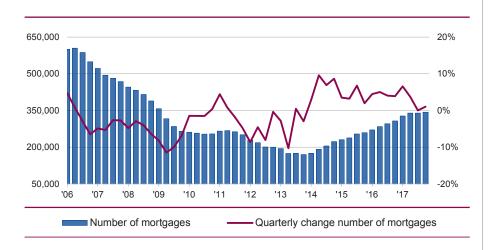
The price development of all houses per municipality in 2017Q1compared to 2008Q3 Source: WOX Monitor Calcasa



# Mortgage approvals keep rising

Approximately 343 thousand mortgages were approved last year.

- Y-O-Y development, number of annual mortgages: +11.6%.
- Q-O-Q development, number of annual mortgages: +1.0%.



#### Figure 18

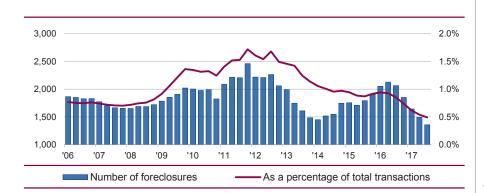
Number of mortgages Source: Statistics Netherlands, Land Registry and adaptation Calcasa

# Number of foreclosures through auction decreases

Over the last four quarters, 1,357 foreclosures have been registered by the land registry.

- o Y-O-Y development amount of annual foreclosures: -34.2%.
- o Q-O-Q development amount of annual foreclosures: -9.0%.
- The share of foreclosure sales versus total sales is 0.5%.
- The highest share of foreclosure sales to total sales is 2.1% in the municipality of Heerlen.
- 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 19

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 2016

- In 2016 the total amount of sales for newly built homes was 34 thousand. This is an increase of 9.7% compared to 2015.
- Looking at the fourth quarter of 2016, we can see an increase of 5.9% compared to the previous year. For this quarter 9 thousand newly built homes were sold.

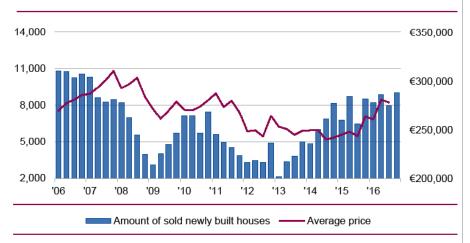


Figure 20

Average sales price for newly built houses per quarter in the Netherlands compared to the quarterly amount of newly built houses sold – 2005-2016.

Source: MNW, adaptation Calcasa

# Amount of households in arrears decreased

- Since 2007 the number of homeowners with payment problems has increased with 202%.
- Currently there are 91 thousand homeowners who have difficulty paying their mortgage: this is a decrease of 15.6% as compared to Q3 2016.

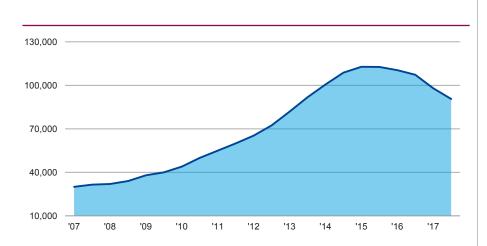


Figure 21

Number of borrowers with mortgage payment arrears for the period 2007-2017 Source: BKR, adaptation Calcasa



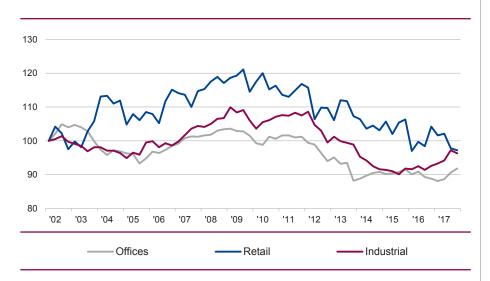
# Industrial rental values increase by 4.0%

**The average office rental price increased by 3.4% y-o-y in 3Q2017** The Calcasa PropertyNL OPI (Office Price Index) showed a value of 92 (4Q2001=100) for the third quarter of 2017. The average office rental value is now EUR123 per square meter.

**The average retail rental price decreased by 6.7% y-o-y in 3Q2017** The Calcasa PropertyNL RPI (Retail Price Index) showed a value of 97 (4Q2001=100) for the third quarter of 2017. Compared to the third quarter of 2016, this is a decrease of 6.7%. The average retail rental value is now EUR149 per square meter.

**The average industrial rental price increased by 4.0% y-o-y in 3Q2017** The Calcasa PropertyNL IPI (Industrial Price Index) showed a value of 96 (4Q2001=100) for the third quarter of 2017, an increase of 4.0% compared to the third quarter of 2016. The average industrial rental value is now EUR58 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 22

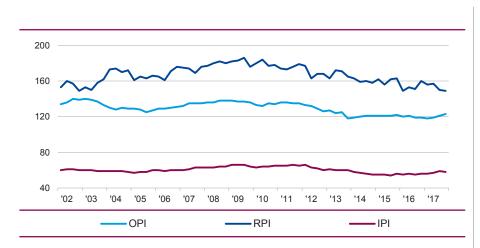
Development of Calcasa commercial real estate indexes (Q4 2001 = 100) Source: Calcasa

Netherlands	Index (Q4 2001=100)	Average rent per m2	Y-O-Y price change	Three year price change
Offices (OPI)	92	€ 123	3.4%	1.1%
Retail (RPI)	97	€ 149	-6.7%	-5.7%
Industrial (IPI)	96	€ 58	4.0%	5.2%

#### Table 6

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





#### Figure 23

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.



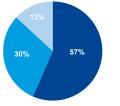
# **Dutch Housing Market Summary**

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Largest cities	All Droperties	Single family	Abartments	Owner Occupied	Rental	<sup>Total</sup> population	lotal households	Annual sales	Current supply
Amsterdam	424,000	84,000	340,000	29%	70%	833,620	456,460	13,422	
Rotterdam	311,000	104,000	207,000	35%	63%	629,610	318,220	9,866	
The Hague	253,000	68,000	185,000	42%	55%	519,990	255,780	9,539	
Utrecht	149,000	73,000	76,000	45%	53%	338,970	174,760	6,035	
Groningen	99,000	39,000	61,000	38%	61%	200,950	121,160	3,837	
Eindhoven	107,000	74,000	33,000	46%	53%	224,760	114,610	3,851	
Provinces									
Groningen	275,000	194,000	81,000	55%	44%	583,720	290,290	9,479	6,139
Friesland	296,000	254,000	42,000	61%	38%	646,040	287,250	10,856	6,942
Drenthe	219,000	190,000	29,000	65%	34%	488,630	213,000	8,638	5,966
Overijssel	494,000	402,000	91,000	60%	39%	1,144,280	490,680	17,301	9,610
Flevoland	163,000	135,000	28,000	64%	35%	404,070	166,700	6,799	3,114
Gelderland	886,000	713,000	173,000	59%	39%	2,035,350	895,700	32,868	18,488
Utrecht	548,000	370,000	178,000	57%	41%	1,273,610	572,960	21,126	7,524
North-Holland	1,300,000	717,000	583,000	50%	49%	2,784,850	1,327,940	45,861	16,183
South-Holland	1,657,000	891,000	766,000	51%	48%	3,622,300	1,671,420	59,416	25,010
Zeeland	184,000	155,000	28,000	65%	34%	381,250	171,900	7,426	5,110
North-Brabant	1,096,000	877,000	219,000	61%	38%	2,498,750	1,111,510	40,740	23,865
Limburg	525,000	417,000	108,000	59%	39%	1,116,260	521,440	16,506	10,568
Netherlands	7,641,000	5,309,000	2,333,000	56%	43%	16,979,120	7,720,790	277,016	138,520

Table 7

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

#### Housing stock



Mortgage developments

Annual numbers 3Q17

Execution sales with losses

Households in arrears

Total mortgage amount

Macro-economic figures

Sales with NHG

Sold mortgages

(x 1,000,000,000)



Change

-4.8%

-40.9%

-15.6%

11.6%

1.1%

Amount

29,600

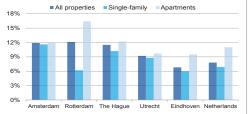
90,600

343,038

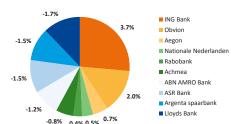
669.1

495

# Y-O-Y price development largest cities



Top mortgage lenders: increase/decrease market share



# -0.8% 0.4% 0.5% 0.7%



#### Figures 24 & 25

Source figure left: Statistics Netherlands Source figure right: Calcasa

#### Table 8 & Figure 26

Source table left: NHG, BKR, DNB Source figure right: Calcasa, IG&H

#### Figures 27 & 28

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



# **Appendices**

					All
Provinces	Detached	Semi-	Corner	Terraced	single-family
	houses	detached	houses	houses	dwellings
Groningen	241,000	201,000	180,000	182,000	211,000
Friesland	265,000	195,000	164,000	152,000	207,000
Drenthe	298,000	210,000	175,000	162,000	224,000
Overijssel	347,000	228,000	206,000	195,000	236,000
Flevoland	382,000	277,000	211,000	199,000	234,000
Gelderland	403,000	280,000	235,000	215,000	286,000
Utrecht	681,000	469,000	341,000	318,000	402,000
North-Holland	531,000	437,000	331,000	304,000	380,000
South-Holland	512,000	391,000	299,000	278,000	326,000
Zeeland	289,000	201,000	176,000	168,000	213,000
North-Brabant	436,000	300,000	256,000	238,000	296,000
Limburg	327,000	215,000	198,000	191,000	228,000
Netherlands	390,000	292,000	260,000	248,000	295,000

# Table 9

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

# Up/

Provinces	Porch	Gallery	Maison-	downstairs	All
	flat	flat	nette	apartment	apartments
Groningen	166,000	159,000	163,000	176,000	182,000
Friesland	155,000	142,000	150,000	153,000	160,000
Drenthe	158,000	148,000	147,000	180,000	170,000
Overijssel	148,000	153,000	165,000	164,000	159,000
Flevoland	202,000	174,000	176,000	181,000	220,000
Gelderland	180,000	168,000	181,000	202,000	189,000
Utrecht	231,000	208,000	246,000	254,000	248,000
North-Holland	262,000	247,000	309,000	368,000	347,000
South-Holland	178,000	180,000	211,000	209,000	205,000
Zeeland	191,000	204,000	164,000	167,000	179,000
North-Brabant	202,000	186,000	201,000	212,000	204,000
Limburg	156,000	142,000	159,000	165,000	156,000
Netherlands	196,000	190,000	225,000	259,000	233,000

Table 10

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



	Highest		Lowest
	property values		property values
Municipalities	(x 1,000)	Municipalities	(x 1,000)
Bloemendaal	780	Delfzijl	152
Wassenaar	603	Oldambt	159
Heemstede	575	Heerlen	166
Gooise Meren	474	Veendam	167
De Bilt	456	Leeuwarden	168
Wijdemeren	442	Terneuzen	169
Zeist	429	Kerkrade	170
Utrechtse Heuvelrug	422	Brunssum	170
Amsterdam	420	Franekeradeel	173
Bergen (NH.)	417	Dongeradeel	178

#### Table 11

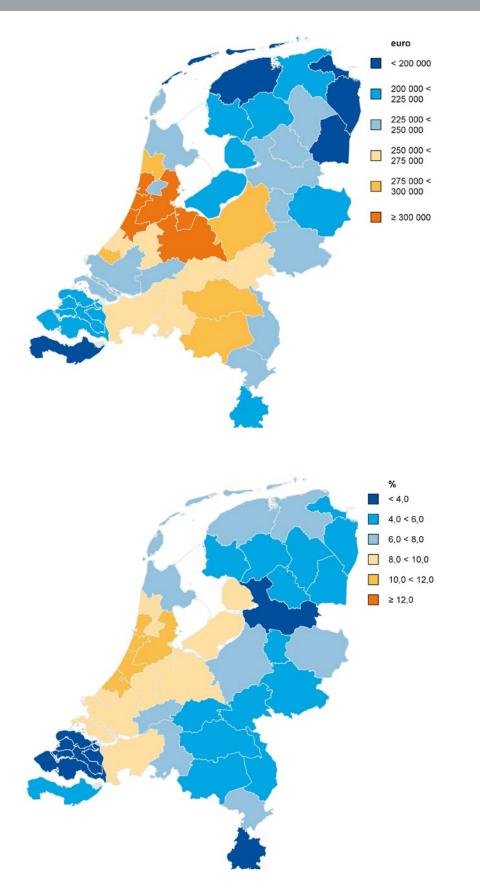
Top 10 highest and lowest property values, per municipality containing over 5,000 owner-occupied dwellings. Source: Calcasa

	Highest		Lowest
	annual price		annual price
Municipalities	development	Municipalities	development
Amstelveen	12.2%	Stein	1.9%
Diemen	12.2%	Eijsden-Margraten	2.1%
Rotterdam	12.1%	Kerkrade	2.2%
Amsterdam	11.9%	Landgraaf	2.2%
Purmerend	11.8%	Meerssen	2.3%
Rijswijk	11.7%	Zwartewaterland	2.5%
Haarlemmermeer	11.6%	Sittard-Geleen	2.5%
Edam-Volendam	11.6%	Heerlen	2.6%
Uithoorn	11.6%	Beek	2.6%
's-Gravenhage	11.5%	Brunssum	2.7%

#### Table 12

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





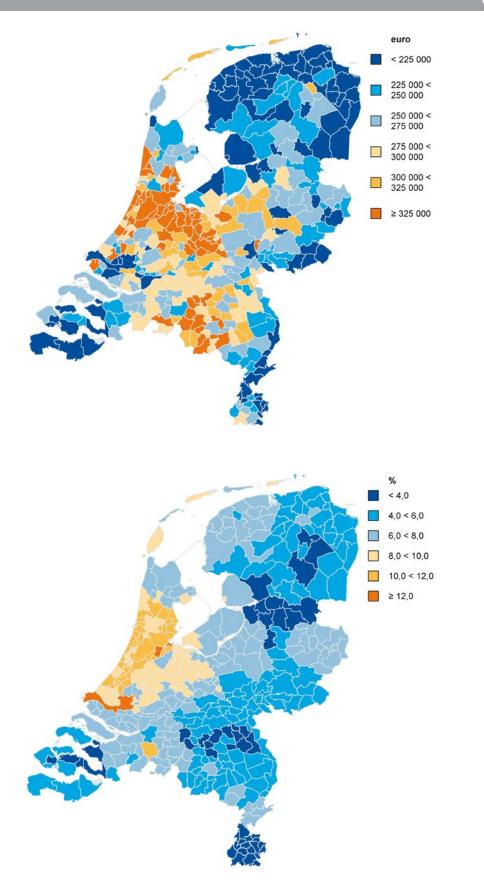
#### Figure 29

Average house price per NUTS III region (EUR). Source: Calcasa

#### Figure 30

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





#### Figure 31

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

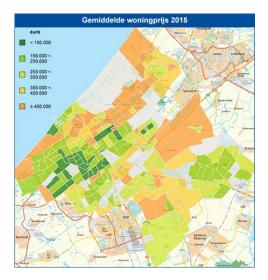
#### Figure 32

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



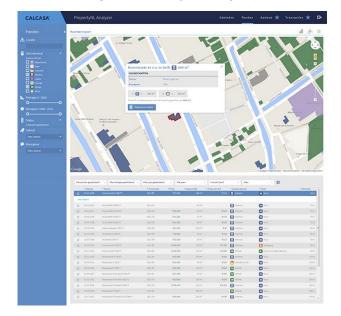
# The WOX Monitor: All housing market data for every neighborhood

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. 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).

#### Calcasa

Koornmarkt 41 2611 EB Delft The Netherlands T 0031 15 214 88 34 Visit calcasa.co.uk for more information