DYNAMIC CREDIT

January 2020

Dutch Housing Market Update 2019 Q4

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Dynamic Credit originates and manages tailored portfolios of Dutch residential and consumer BTL mortgage loans for institutional investors in an easy, cost-efficient and transparent way. As always, we welcome the opportunity to discuss the housing market or investing in Dutch owner-occupied mortgages.

In this quarterly report we discuss developments in the Dutch housing market and the broader economy.

"Non-eligibility of NHG as credit protection under CRR / Solvency II has been a hot topic recently. Progress towards eligibility has been made for banks as the required adjustments to the NHG guarantee are expected to be implemented in 2020-Q1. For insurance companies using the standard model a bit more work is needed but the required changes are taken into account in the consultation of the 2020 Solvency II revisions"

Jasper Koops,
Head of Portfolio Management

DYNAMIC

1. Executive Summary

Interest rates: Across all major risk classes and all major fixed rate periods, the top six most competitive rates decreased on average by 11 basis points QoQ. Especially NHG rates have been steeply decreasing as a result of new entrants in that segment.

Spreads: Over the last quarter swap rates have increased which, in combination with the decreasing mortgage rates, has resulted in a decrease of mortgage spreads. The average spread decrease over all major fixed rate periods and all major risk classes was 46 basis points, the biggest spread fall since we started reporting. It should be noted that the spread decrease follows a period of steep spread increases.

NHG guarantee: NHG is expected to be recognized as guarantee in 2020-Q1 under the standard model of Capital Requirements Regulation (for banks) but under the standardized approach of Solvency II (for insurers) it does not qualify yet. In case of a recognized guarantee, the capital requirements under the standardized approach are significantly lower. DNB is making an effort to meet the requirements under Solvency II (revisions) and to close the regulatory gap between the two regimes.

Tightness: In relation to the demand, the housing supply in the Dutch market remains very tight. QoQ availability of houses for sale (a measure for supply) decreased whereas QoQ sales (a measure for demand) remained roughly unchanged.

House price increases: Dutch house prices increased 1.4% over the fourth quarter and 6.2% over the year 2019. Over the quarter, prices in the province Groningen grew most with 2.8%. Furthermore, out of the four large cities The Hague showed the steepest increase of 2.8% QoQ.

Increase in the number of property transfers: Almost 60,000 properties were sold in the last quarter, which is 1.3% more than the previous quarter and 5.6% more than in 2018-Q4. Regional differences persisted.

Real disposable income: In December, DNB published its semi-annual outlook. Real disposable income is expected to grow by 3.7% in 2020, which is mostly driven by lower inflation and higher wages combined with lower wage taxes.

Nitrogen Crisis: Significant steps have been taken by the government to address the Nitrogen Crisis. Although construction of newly built properties is expected to decrease more than 20% in 2020, production is expected to pick up in the following years. Additionally, the Supreme Court obliged the government to reduce greenhouse gas emissions significantly in 2020. Hence, more measures are expected to be announced during the year.

2. Market Update

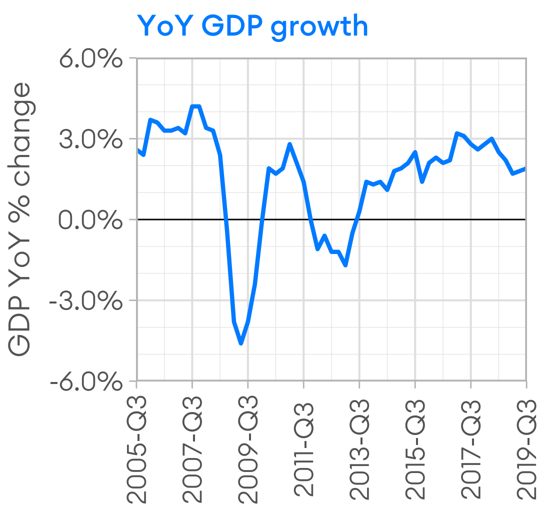
The following sections provide an update on the macroeconomic outlook and housing market developments.

Macroeconomic update

The most recent economic updates from the Central Bureau of Statistics ("CBS") on key economic indicators showed an increase in GDP growth from 1.8% YoY in 2019-Q2 to 1.9% YoY in 2019-Q3 (published with one quarter delay, Figure 1).

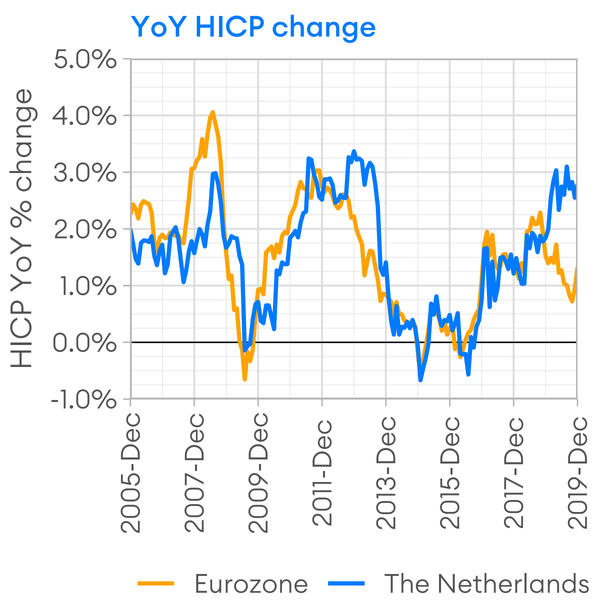
GDP and inflation numbers remained largely unchanged

In December 2019, Dutch HICP ("Harmonised Index Consumer Prices") YoY increases remained at roughly the same level as the previous quarter as the index increased 2.8%YoY (compared to 1.8% the year before). This contrasts the Euro zone HICP growth of 1.3% YoY and 0.1% QoQ. Germany, being heavily reliant on manufacturing, showed a 1.6% YoY HICP increase and reported -0.2% QoQ. All in all, the last quarter showed a slowdown in Euro zone inflation even though the index increased over the year.



Source: Dynamic Credit, CBS

Figure 1: Dutch GDP growth. As of 2019-Q3.



Source: Dynamic Credit, CBS

Figure 2: HICP change. As of December 2019.

Dutch **consumer confidence** declined further to -3 in January 2020 from -1 in October 2019 (Figure 3). At this level, the index is above the long term average of -4. The decline is the combination of a more negative view on the economic situation (from -4 in October to -7 in January) and the willingness to buy declining slightly (from +1 in October to 0 in January).

Over the fourth quarter, unemployment declined to 3.2% (from 3.5% in September). That level is similar to what was observed in March to May 2019 (3.3%). December was the first month where The Netherlands counted a working population of 9 million. The growing population combined with the number of unemployed being back at its first quarter level has caused the unemployment rate to decline.

The Dutch working population increased to 9M for the first time while the number of unemployed decreased back to the 2019-Q1 level

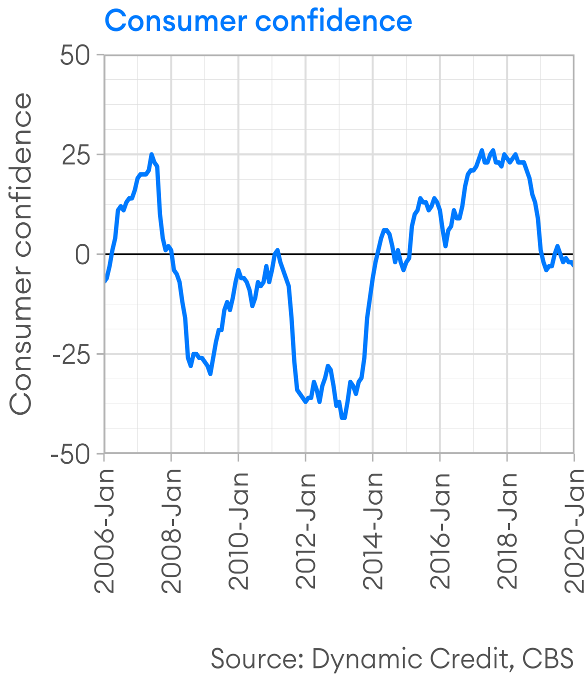


Figure 3: As of January 2020.

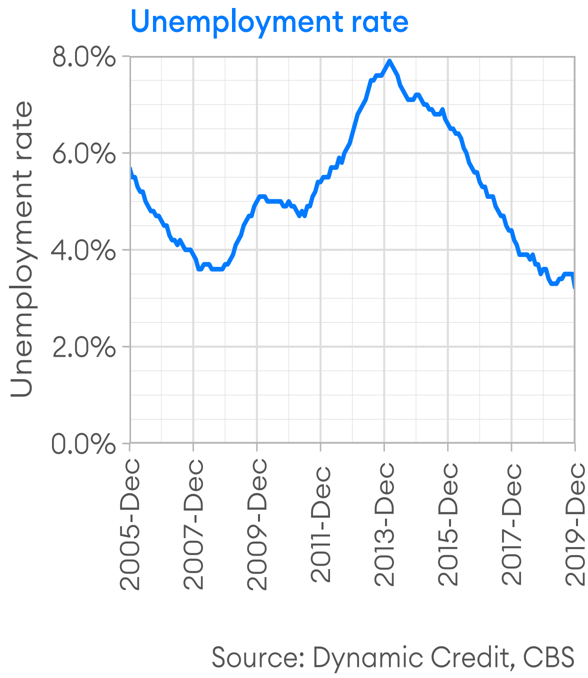


Figure 4: As of December 2019.

Dutch housing market update

Vereniging Eigen Huis[1] ("VEH") measures consumer confidence in the housing market every month. They do that based on questions about interest rates, prices, and the general housing market. In the last quarter of 2019, the indicator increased slightly from 103 in September to 105 in December (Figure 5). The index was at 101 at the end of 2018. The indicator can take values ranging from 0 to 200, 100 indicating a neutral value. A higher value indicates more positive sentiment.

Income increases are not keeping up with increasing house prices, making homes even more expensive, if not unaffordable

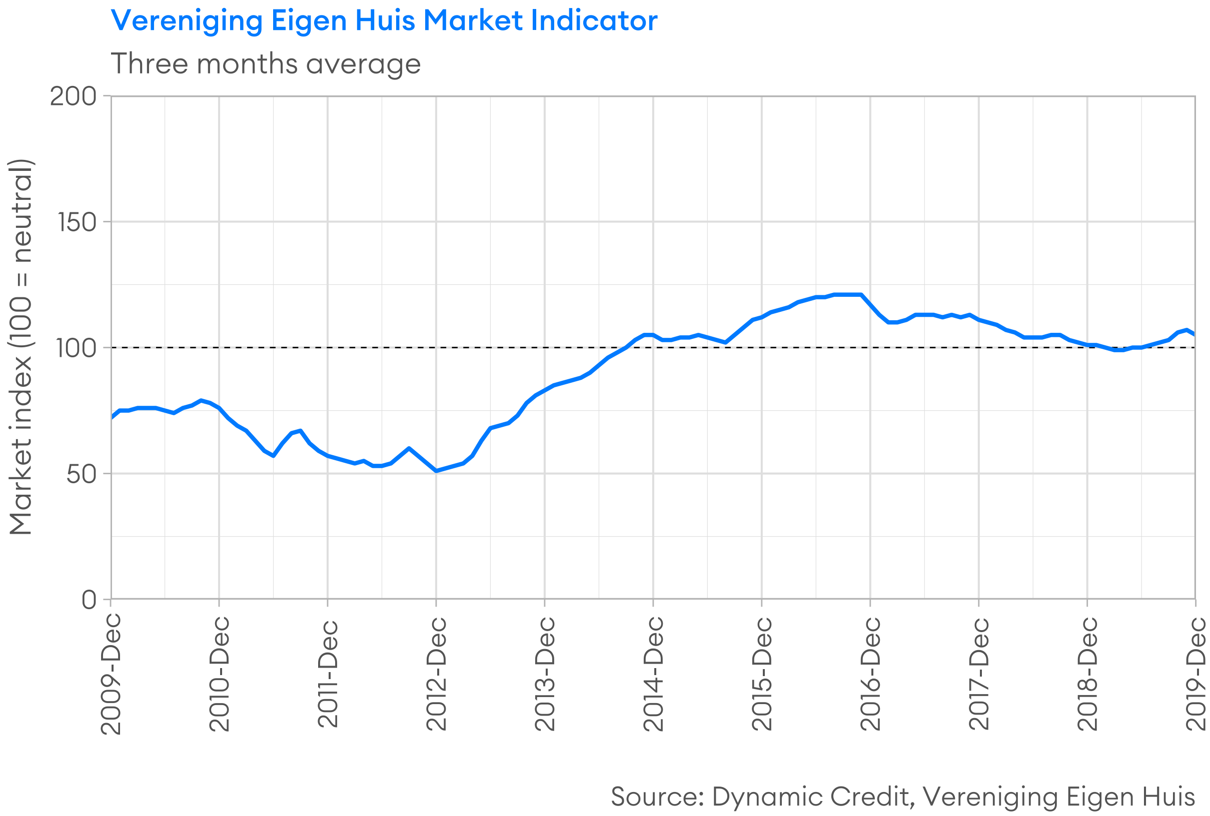


Figure 5: Vereniging Eigen Huis Market Indicator. As of December 2019.

Despite the increase in the indicator, still almost half (44%) of the Dutch do not think it is a good time to buy a home. This is due to the increasing gap between the willingness and ability to buy a home. Income increases have not been able to compensate for the increasing house prices, making the gap even bigger. According to VEH a solution could lie in building affordable homes. Contributors to the increase in consumer confidence are the decrease in interest rates and the expectation that they will not increase in the near future. Furthermore, the prolonged period of house price increases gives consumers confidence that buying a home is a smart decision.

VEH believes that building affordable homes is crucial to closing the gap between the willingness and ability to buy a home

1 Eigen Huis Market Indicator

House prices and property sales

The Dutch House Price Index ("HPI") increased 1.4% over 2019-Q4 and 6.2% YoY. This compares to house price increases of 1.8% QoQ and 6.3% YoY in 2019-Q3. Close to 60,000 properties were sold during 2019-Q4, a 1.3% QoQ increase and a 5.6% YoY increase (see Table 1, Figure 7, and Figure 8 on the following pages more details regarding regional differences).

House prices are still increasing but the pace is slowing down

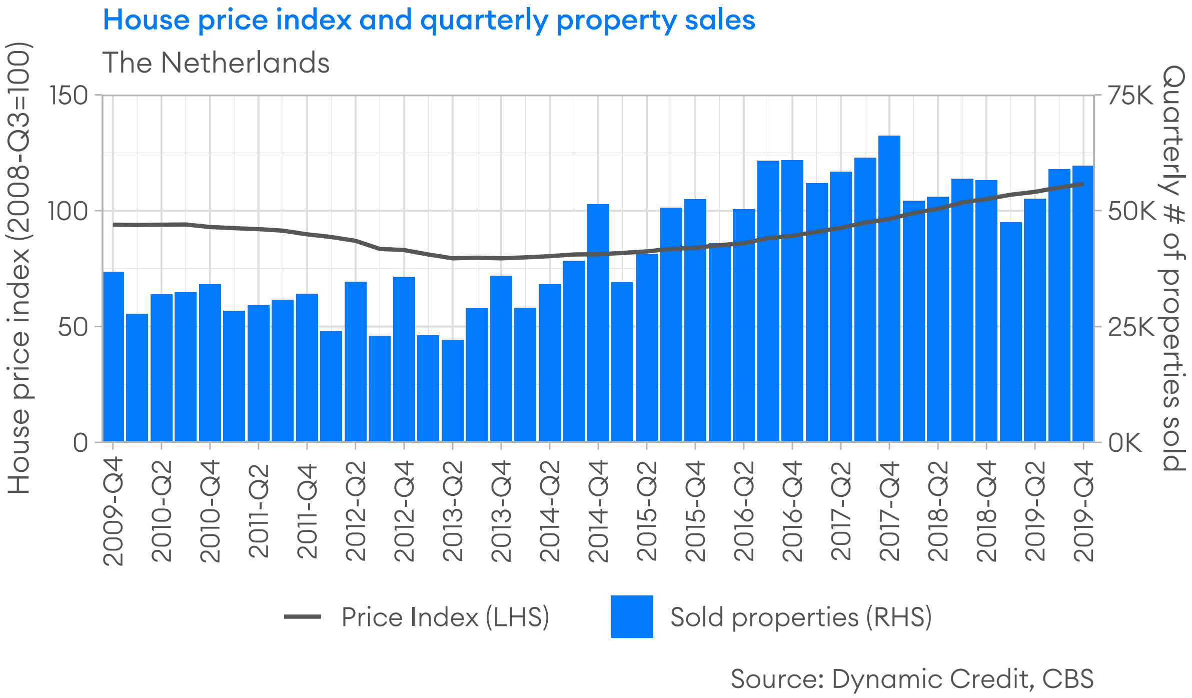


Figure 6: House Price Index of the Netherlands (2008-Q3=100) and monthly property sales.

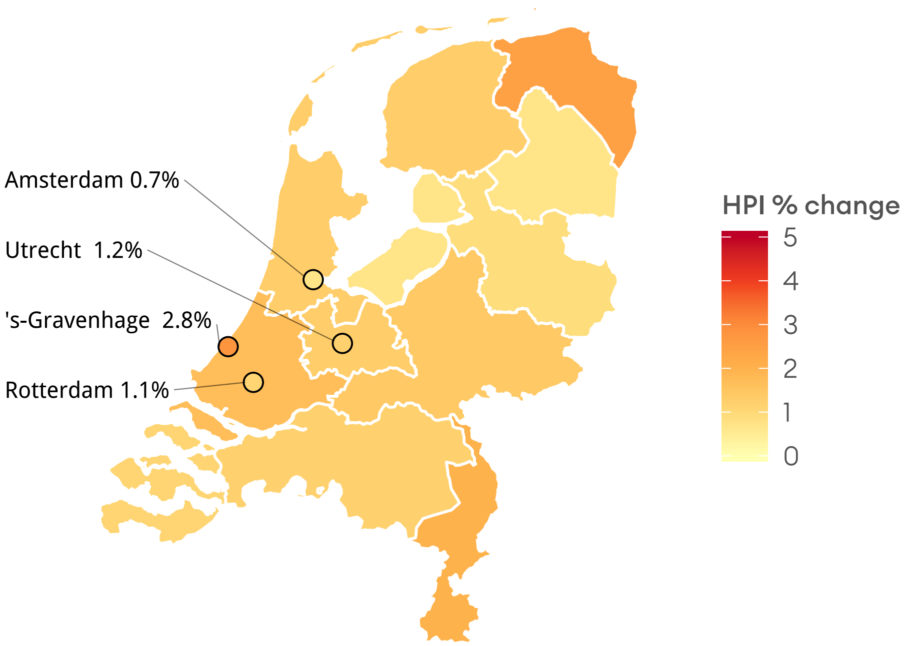
Regional differences

Groningen was the province with the steepest price increases (+2.5% QoQ). Prices in Flevoland and Drenthe (both +0.7% QoQ) increased the slowest. When looking at the 4 main municipalities in the Randstad, prices in The Hague (+2.8% QoQ) increased the fastest while growth in Amsterdam remained low (+0.7%) (Table 1).

Flevoland had the biggest increase in terms of the number of property sales (+17.2% YoY) followed by Noord-Holland (+9.2%) and Zuid-Holland (+7.2%). QoQ growth in the number of sold properties ranges between +7.8% for Zeeland and -2.4% for Groningen while The Netherlands averaged +1.3%. It should be noted that YoY, Zeeland showed +1.7% and Groningen +7.4%. The QoQ numbers are therefore not entirely representative since this metric shows seasonality with regard to the number of properties sold (Table 1).

Number of quarterly property sales largely unchanged from 2018-Q4

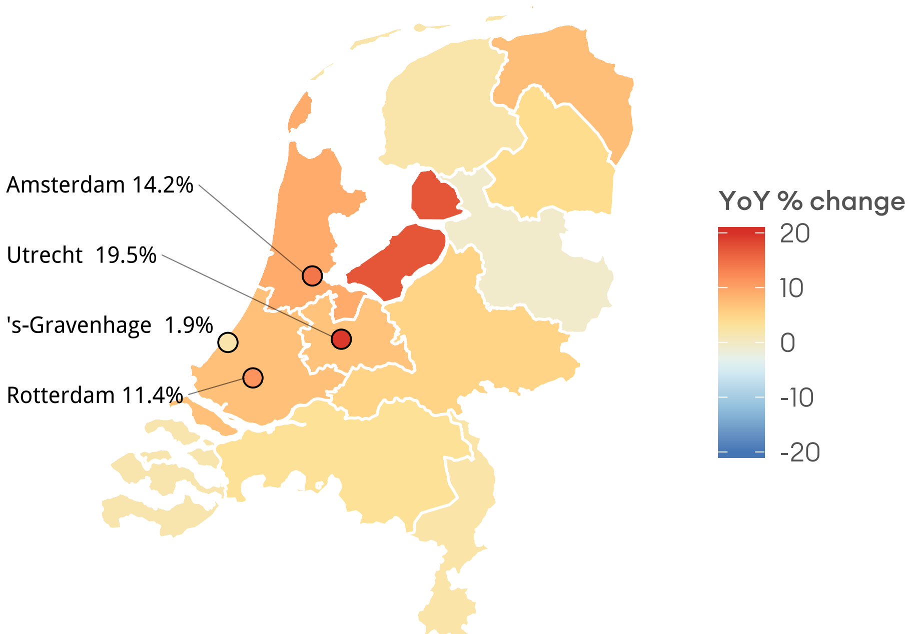
House Price Index QoQ change



Source: Dynamic Credit, CBS

Figure 7: Dutch House Price Index QoQ % change. 2019-Q4.

Number of sold properties YoY change



Source: Dynamic Credit, CBS

Figure 8: Sold properties YoY % change. 2019-Q4 .

Area	Type	HPI (2008-Q3=100)	CPI adjusted HPI (2008-Q3=100)	QoQ Price %	YoY Price %	# Sold in quarter	QoQ Sold %	YoY Sold %
The Netherlands	Country	111.6	94.3	1.4	6.2	59,723	1.3	5.6
Groningen	Province	108.3	91.6	2.5	8.4	1,982	-2.4	7.4
Limburg	Province	106.8	90.3	2.0	6.7	3,690	3.9	2.2
Zuid-Holland	Province	117.1	99.0	1.7	6.6	12,332	1.0	7.2
Gelderland	Province	104.0	87.9	1.4	5.9	7,059	0.9	5.2
Utrecht	Province	115.5	97.6	1.3	6.5	4,630	-1.8	6.9
Noord-Holland	Province	124.2	105.0	1.3	5.4	9,570	-2.3	9.2
Friesland	Province	103.7	87.7	1.3	6.5	2,283	-3.0	2.0
Noord-Brabant	Province	103.1	87.2	1.2	5.8	9,044	6.4	3.5
Zeeland	Province	106.1	89.7	1.1	6.8	1,617	7.8	1.7
Overijssel	Province	106.5	90.1	0.9	6.3	3,876	4.0	-0.5
Flevoland	Province	117.9	99.7	0.7	6.9	1,727	-1.3	17.2
Drenthe	Province	103.6	87.6	0.7	7.4	1,913	6.3	4.3
's-Gravenhage	Municipality	130.0	109.9	2.8	6.6	1,786	-5.8	1.9
Utrecht	Municipality	139.2	117.6	1.2	7.7	1,291	0.8	19.5
Rotterdam	Municipality	139.1	117.6	1.1	6.5	1,837	0.1	11.4
Amsterdam	Municipality	148.9	125.8	0.7	3.4	2,654	-1.0	14.2

Table 1: House prices and number of property sales changes in Dutch provinces and major municipalities 2019-Q4. Source: CBS.

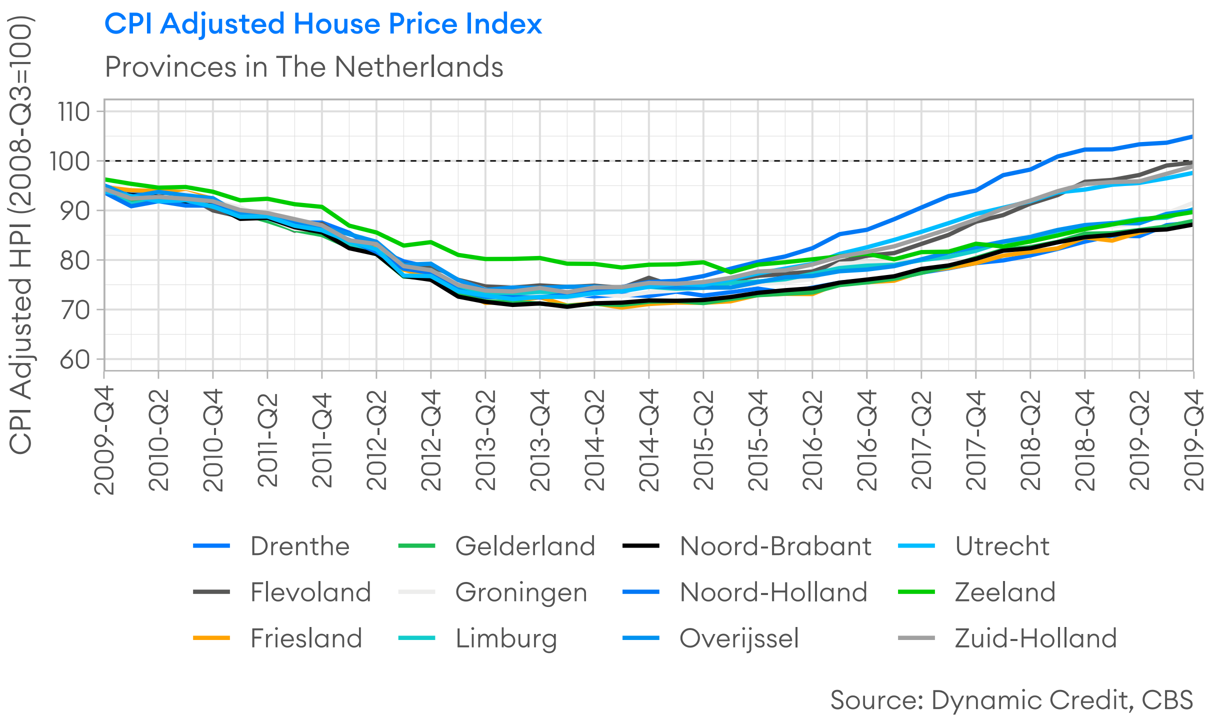


Figure 9: CPI Adjusted House price index of provinces in the Netherlands (2008-Q3=100). The data is indexed as of 2008-Q3 because this marks the pre-crisis high for the unadjusted House Price Index.

Supply and demand developments

The Dutch Association of Real Estate Agents ("NVM") uses a tightness indicator they refer to as the "Krapte Indicator". This indicator divides the supply of houses by the number of sales to indicate the "tightness" or "krapte" of the housing market. As the outcome of this indicator is not always intuitive, we analyze the supply and sales volume separately (Figure 10).

- The average supply, indicated by the average percentage of owner-occupied properties for sale during a certain year, continued to decrease. As a result of a strong recovery of the housing market during the past years, potential homebuyers in 2019 could only choose from around 1.1% of the housing stock in Noord-Holland, compared to around 5.5% in 2012. The 1.1% for Noord-Holland was unchanged YoY and remained below the national average of 1.3% (was 1.6% in 2018).
- Annual sales, indicated by the percentage of owner-occupied properties sold in a certain year, decreased in 2018 but has remained relatively stable in 2019. A record-high 5.6% of the housing stock nationally was sold in 2017, but only 5.0% and 4.9% was sold in 2018 and 2019 respectively. At these sales volumes, an owner-occupied property is sold on average every 20-21 years compared to every 35-36 years in 2012.

Houses are sold faster as sales volume remained stable even though supply continued to decrease

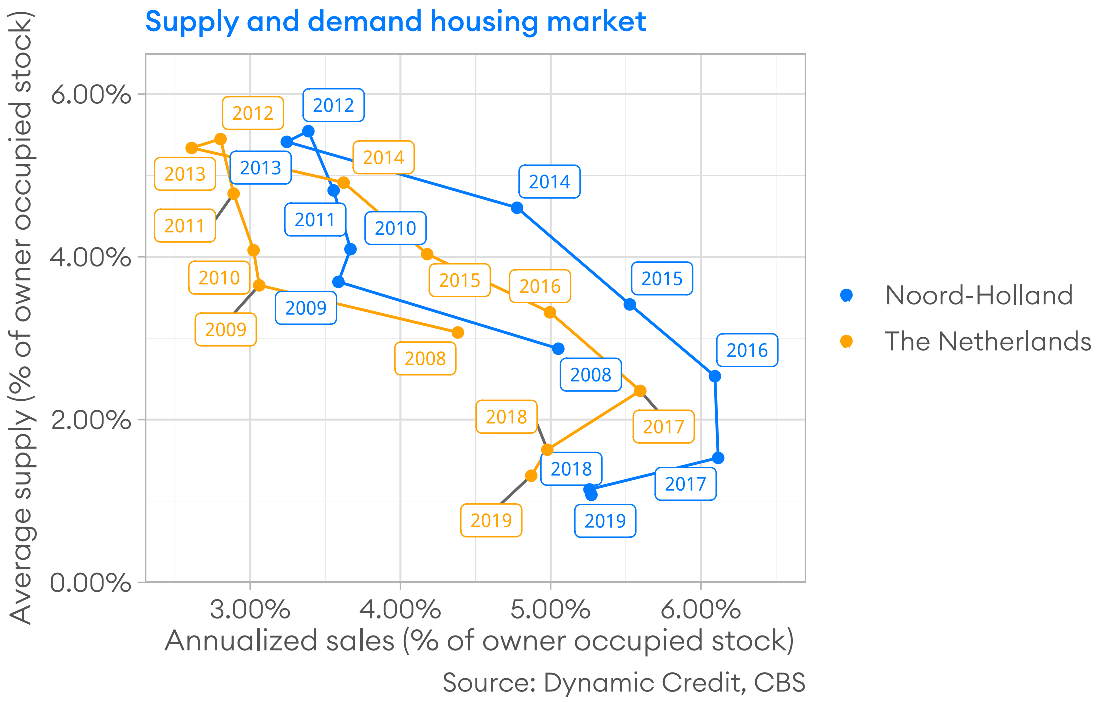


Figure 10: Housing market supply and demand in the Netherlands and Noord-Holland over time.

3. Owner-Occupied Mortgages

Interest rate developments

Across all major risk classes and all major fixed rate periods, the top six most competitive rates decreased on average by 11 basis points from the end of 2019-Q3 to the end of 2019-Q4. Whereas we observed the high LTV segment rates decreasing more in 2019-Q3 compared to the other LTV segments, this quarter we see the opposite happening as the highest LTV segment for all fixed rate periods decreased less over the quarter compared to other risk classes. Of all risk classes, the NHG segment rates decreased the most with 15 basis points QoQ over all major fixed rate period segments.

Rates for the 10-year fixed rate period decreased the most during the quarter with 14 basis points on average over all risk classes. This was partly explained by new entrants. For more details, please see our section on new entrants. The 5-, 20- and 30-year fixed rate periods decreased by 9, 11 and 11 basis points respectively.

For an overview of the evolution of mortgage rates, see Table 2 below.

Mortgage rate development for average of top 6 mortgage rates

Fixed rate period	Risk class	2019-06-30	2019-09-30	2019-12-31	QoQ	YoY
5-year	NHG	1.23%	1.03%	0.95%	-0.08%	-0.33%
	60% LTV (non-NHG)	1.31%	1.15%	1.05%	-0.10%	-0.30%
	80% LTV (non-NHG)	1.42%	1.25%	1.14%	-0.11%	-0.32%
	100% LTV (non-NHG)	1.74%	1.50%	1.43%	-0.07%	-0.35%
10-year	NHG	1.55%	1.22%	1.06%	-0.16%	-0.67%
	60% LTV (non-NHG)	1.60%	1.29%	1.15%	-0.14%	-0.64%
	80% LTV (non-NHG)	1.71%	1.42%	1.27%	-0.15%	-0.62%
	100% LTV (non-NHG)	2.00%	1.67%	1.55%	-0.12%	-0.67%
20-year	NHG	2.16%	1.69%	1.49%	-0.20%	-0.77%
	60% LTV (non-NHG)	2.27%	1.74%	1.61%	-0.13%	-0.80%
	80% LTV (non-NHG)	2.39%	1.82%	1.73%	-0.09%	-0.81%
	100% LTV (non-NHG)	2.60%	1.98%	1.96%	-0.02%	-0.80%
30-year	NHG	2.43%	2.05%	1.90%	-0.15%	-0.59%
	60% LTV (non-NHG)	2.52%	2.11%	2.01%	-0.10%	-0.61%
	80% LTV (non-NHG)	2.65%	2.19%	2.06%	-0.13%	-0.69%
	100% LTV (non-NHG)	2.85%	2.36%	2.28%	-0.09%	-0.68%

Table 2: Average top-6 mortgage rates (excluding action rates) for mortgage loans with different fixed rate periods for four risk classes.

For a breakdown of the rates (compared to swap rates), see Figure A5 to Figure A8 in the Appendix.

Spread developments[1]

Over 2019-Q4 the swap rates (used for determining the mortgage spreads) have increased. This in combination with the decreasing mortgage rates has resulted in a decrease of mortgage spreads. The average spread decrease over all major fixed rate periods and all major risk classes was 46 basis points, the steepest spread decrease since we started reporting. It should be noted that the spread decrease follows a period of steep spread increases. At the end of 2019 spreads were roughly at the same level as they were in the second half of 2018.

For an overview of the evolution of mortgage spread, see Table 3 below. A graphical representation of spreads developments is provided in Figure A1 to A8 in the Appendix.

The information in the table below and the graphs in the Appendix can be interpreted as a representative gross spread for newly originated Dutch residential mortgage loans over time.

Spread development for average of top 6 mortgage rates

Fixed rate period	Risk class	2018-12-31	2019-09-30	2019-12-31	QoQ	YoY
5-year	NHG	1.21%	1.52%	1.17%	-0.35%	-0.03%
	60% LTV (non-NHG)	1.28%	1.64%	1.28%	-0.37%	-0.01%
	80% LTV (non-NHG)	1.40%	1.75%	1.37%	-0.38%	-0.02%
	100% LTV (non-NHG)	1.72%	1.99%	1.66%	-0.33%	-0.06%
10-year	NHG	1.18%	1.56%	1.06%	-0.50%	-0.12%
	60% LTV (non-NHG)	1.24%	1.63%	1.15%	-0.48%	-0.09%
	80% LTV (non-NHG)	1.34%	1.76%	1.27%	-0.49%	-0.07%
	100% LTV (non-NHG)	1.68%	2.01%	1.56%	-0.46%	-0.12%
20-year	NHG	1.28%	1.79%	1.21%	-0.58%	-0.07%
	60% LTV (non-NHG)	1.43%	1.84%	1.33%	-0.51%	-0.10%
	80% LTV (non-NHG)	1.57%	1.92%	1.45%	-0.47%	-0.12%
	100% LTV (non-NHG)	1.80%	2.08%	1.69%	-0.40%	-0.12%
30-year	NHG	1.43%	2.09%	1.55%	-0.54%	0.12%
	60% LTV (non-NHG)	1.56%	2.15%	1.66%	-0.49%	0.10%
	80% LTV (non-NHG)	1.69%	2.23%	1.71%	-0.52%	0.02%
	100% LTV (non-NHG)	1.91%	2.41%	1.94%	-0.47%	0.03%

Table 3: Spread of the average top-6 mortgage rates (excluding action rates) over duration matched swap rates for four risk classes. Source: Dynamic Credit, Hypotheekbond.

1 The EUSWxV3 swap is used, which uses quarterly resets and the floating leg is 3-month EURIBOR.

New NHG guarantees

Data from the Mortgage Data Network ("HDN") shows that over 2019-Q4, 39,694 NHG loans with a total balance of EUR 7.8 bn were offered through its network (6.9 bn in 2019-Q3). This corresponds to an NHG market share of 24.4% in terms of mortgage loans balance (27.3% in 2019-Q3). As can be seen in Figure 11 below, it is generally the case that the NHG share increases in January. This is because the NHG limit is typically increased in January. As per January 2020, the NHG limit has been increased from EUR 290k to EUR 310k. Overall, there has been a decreasing NHG market share over the past 2 years.

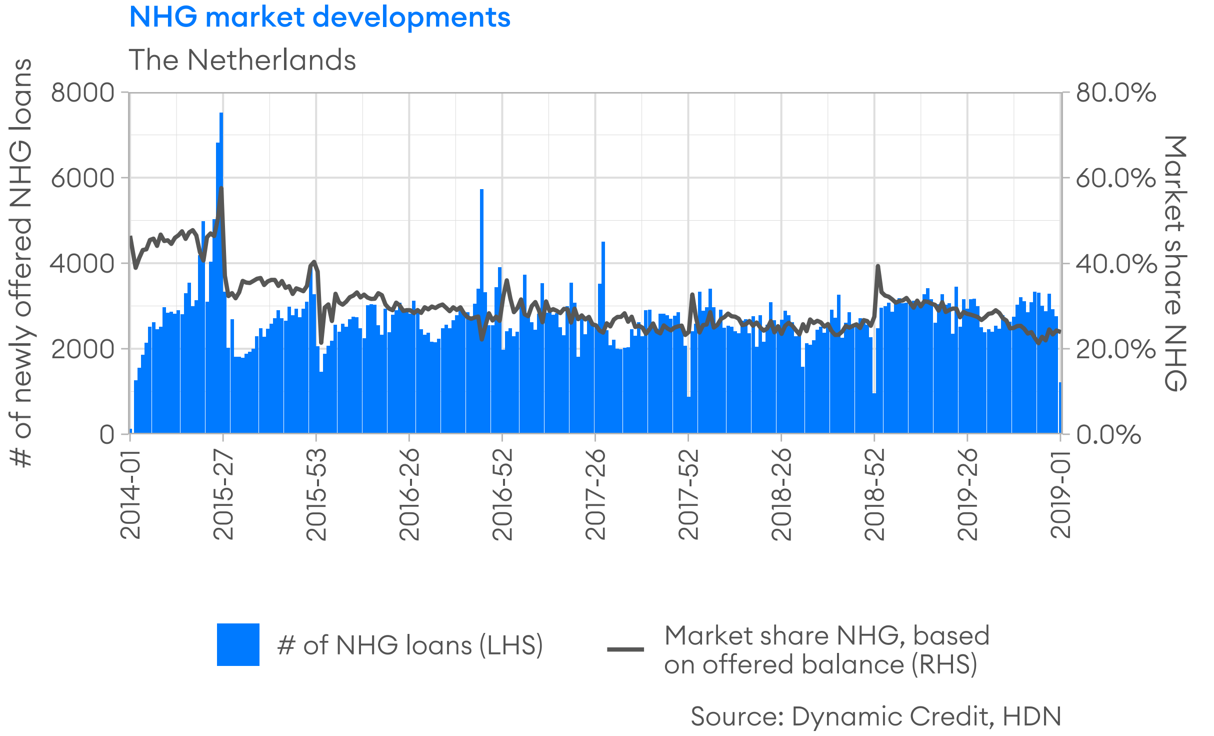


Figure 11: Number of new NHG guarantees and market share of NHG loans as a percentage of total originated balance through time. The x-axis refers to year and week number.

Fewer NHG claims submitted in 2019

Loss declarations

The number of loss declarations submitted to Waarborgfonds Eigen Woning ("WEW") decreased from 174 in 2018-Q3 to 92 in 2019-Q3. The NHG payout ratio of processed declarations decreased slightly from 88.7% in 2018-Q3 to 87.5% in 2019-Q3[1]. In 2019, WEW changed the payout ratio calculation methodology by using the payout amount over the submitted declaration as opposed to the suretyship as calculated by the WEW. However, the 2019-Q2 number is not final as delayed claims can still possibly have an impact. With this lower amount, delayed claims can have a bigger impact on the smaller total amount of claims. Furthermore, claims can be partly processed, meaning that the payout ratio might increase if more evidence is provided.

1 NHG - Quarterly report Q3-2019, published with one quarter delay

New entrants

Owner-Occupied
In September 2019 Bawag P.S.K., an Austrian Bank, entered the Dutch mortgage market through the newly launched Hypotrust Vrij Leven label. Servicing and specials servicing are outsourced to Quion (Blauwtrust Group). The initial focus was on 10 year NHG and non-NHG low LTVs, but recently they expanded their focus to also include fixed rate periods of up to 30 years.

Also in September 2019, the Holland Woont label was launched. The label is funded by MeDirect, a Maltese bank, also active in Belgium. The Holland Woont label focusses on NHG: non-NHG mortgage loans are only available to existing customers. MeDirect uses the services offered by the Blauwtrust Group.

4. Buy-to-let Mortgages

Dynamic Credit launched its consumer buy-to-let platform in the Netherlands[1,2] in 2019. Besides the unique feature of offering borrowers an LTV of 90%, the product also sets itself apart by offering a 30-year fixed rate period. Besides that, it allows for equity take-out in case this is used for acquiring real estate.

As can be seen in Table 4 below, the average rates decreased. It should be noted that Dynamic Credit is the only active lender in the high LTV (>80%) segments.

Market rate and spread development for consumer buy-to-let rates							
		BTL rates			Spreads		
Fixed rate period	**LTV**	**2019-09-30**	**2019-12-31**	**QoQ**	**2019-09-30**	**2019-12-31**	**QoQ**
1-year	50%	2.60%	2.53%	-0.07%	3.10%	2.90%	-0.20%
	60%	2.71%	2.58%	-0.13%	3.21%	2.96%	-0.25%
	70%	2.72%	2.66%	-0.06%	3.22%	3.04%	-0.18%
	80%	2.95%	2.89%	-0.06%	3.45%	3.27%	-0.18%
	90%	3.30%	3.30%	0.00%	3.80%	3.68%	-0.12%
5-year	50%	2.65%	2.56%	-0.09%	3.15%	2.79%	-0.36%
	60%	2.74%	2.63%	-0.11%	3.24%	2.87%	-0.37%
	70%	2.77%	2.69%	-0.08%	3.27%	2.92%	-0.34%
	80%	3.03%	3.03%	0.00%	3.53%	3.26%	-0.27%
	90%	3.35%	3.35%	0.00%	3.85%	3.59%	-0.27%
10-year	50%	2.82%	2.68%	-0.14%	3.17%	2.70%	-0.47%
	60%	2.93%	2.74%	-0.19%	3.28%	2.76%	-0.52%
	70%	2.94%	2.81%	-0.13%	3.29%	2.83%	-0.46%
	80%	3.08%	3.05%	-0.03%	3.43%	3.07%	-0.36%
	90%	3.50%	3.50%	0.00%	3.86%	3.54%	-0.33%
20-year	50%	2.90%	2.96%	0.06%	3.03%	2.71%	-0.32%
	60%	2.98%	3.00%	0.03%	3.11%	2.75%	-0.36%
	70%	3.00%	3.11%	0.11%	3.14%	2.87%	-0.27%
	80%	3.20%	3.33%	0.13%	3.35%	3.10%	-0.24%
	90%	3.60%	3.60%	0.00%	3.76%	3.39%	-0.37%

Table 4: Interest rate and spread development for consumer buy-to-let rates in the Netherlands.
Source: Dynamic Credit, Hypotheekbond.

1 www.dynamiccredit.com/dutch-consumer-buy-to-let
2 www.dynamiccredit.nl/verhuurhypotheek

New entrants

BTL

Several new buy-to-let lenders for professional landlords (BTL-P) have entered the market: Casarion, De Nederlandse (launched by Tulp Groep, who also offers residential mortgages trough Tulp Hypotheken) and Nestr. All of these lenders are funded by Citi and have outsourced servicing to Link Asset Services. Citi is not new to this market as they also cooperate with Domivest. The products of these new lenders are relatively similar: they all go up to 80% LTV, allow interest-only if the loan has an LTV of up to 60%, fixed rate periods up to 10 years and maturities of up to 35 years. Depending on the LTV and fixed rate period, the interest rates range between 2.9% - 4.4%. With these interest rates, these lenders are significantly (in some cases more than 100 bps) more expensive than some of the BTL-consumer (BTL-C) lenders.

In the Netherlands, the distinction between a consumer and a professional borrower is not explicitly incorporated into legislation and hence lenders will need to do their own assessment. This will be one of their main challenges and currently, the criteria that market participants use are not fully aligned. We observe that there is overlap between what several lenders classify as consumer and professional: BTL-C lenders generally have capped the number of properties to 3 or 4 whereas BTL-P lenders require at least 2 or 3 properties or substantiation of how/when the borrower will grow his/her portfolio.

5. Funding Update

ABS comments 2019-Q4

RMBS: Activity in the Dutch RMBS market was slightly subdued compared to 2019-Q4, as only 2 new deals were issued versus 4 deals in 2019-Q3. Total Dutch RMBS issuance for 2019 was EUR 5.9bn, 36% lower compared to 2018, mainly due to no issuance in 2019-Q1.

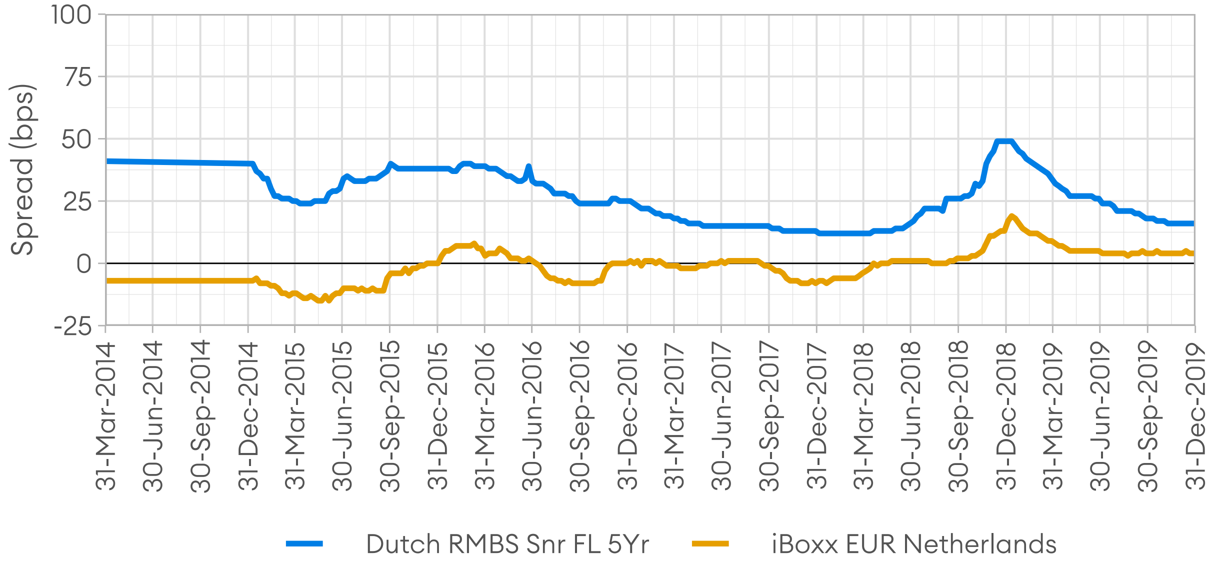
The first Dutch deal in 2019-Q4 was **Tulip Mortgage Funding 2019-1**, originated by Tulp Hypotheken and sized at EUR 398.6mm. This is an STS-compliant Dutch RMBS and the debut deal of Tulp Hypotheken. Tulp Hypotheken is a new Dutch lender that launched its mortgage loan offering in May 2018 offering mortgage loans within the prime predominately non-NHG Dutch space. Three out of the seven tranches were offered to investors, with tranches A to C pricing at 55 to 140 bps, respectively. The deal was 1.3x oversubscribed on the class A and 1.0x on the Class B and C. The weighted average current loan to indexed market value is 92.5% and 7.3% of the pool is Interest-only.

The second deal was Elan Woninghypotheken, **EDML 2019-1**. Five out of the six tranches of the EUR 350mm deal were offered to investors, with tranches A to E pricing at 48 to 313 bps, respectively. The deal priced outside the IPT's and was only one time covered. The weighted average current indexed LTV of the mortgage pool is 88.5%. The weighted average debt service to income of the portfolio is 17.0% with 88.3% of borrowers employed, 7.5% self-employed and 4.2% in other categories (e.g. pensioners).

Covered bonds: Covered bonds issuance by Dutch banks in the fourth quarter of 2019 amounted to only EUR 0.5bn, bringing the total 2019 YTD issuance to EUR 10.9bn. One sizeable deal was issued by NIBC Bank. Dutch covered bond benchmark spreads ended the quarter at +4 bps, unchanged compared to the end of Q3 2019 levels.

Summary: The renewed appetite of the ECB set Dutch RMBS spreads again tighter. Benchmark Dutch AAA RMBS spreads ended the quarter at +15 bps, down 3 bps from the end of September.

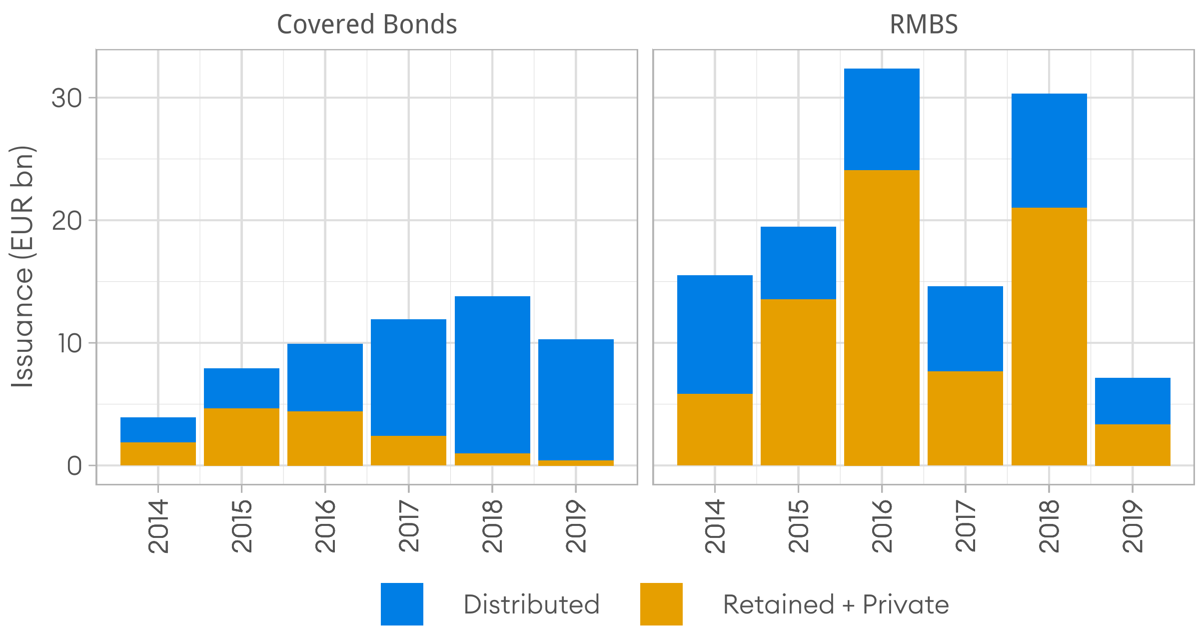
Mortgage funding spreads



Source: Dynamic Credit, JP Morgan

Figure 12: RMBS spread refers to indicative mid spread (DM) for representative generic RMBS bonds. iBoxx EUR Netherlands spread refers to spread versus mid swap rates. The data is as of 2019-Q4.

Mortgage funding issuance



Source: Dynamic Credit, JP Morgan

Figure 13: Issuance of Dutch RMBS and covered bonds. The data is as of 2019-Q4.

Dutch RMBS market: Priced Dutch prime RMBS deals

Two new Dutch prime RMBS deals were closed during 2019-Q4

Date	Issuer	Series	Seller	Class	Euro Amount	Life	FXFL	Coupon	DM	Benchmark	M	SP	F	DBR	Retained	Comments
2019-11-07	Tulip Mortgage Funding BV	2019-1	Tulpenhuis 1 BV	A	360	4.27	FL		55	3 mo. Euribor			AAA	AAA	N	EUR 398mm; WA CLTV 92.5%; WA Seasoning 6m; Obligors 1,131; IO Loans 7.3%; Self-employed 9.6%
				B	9	4.91	FL		100	3 Mo. Euribor			AA+	AA	N	
				C	10	4.91	FL		140	3 Mo. Euribor			A	A L	N	
				Z1	13										Y	
				Z2	7										Y	
2019-12-02	EDML BV	2019-1	Elan Woninghypotheken	A	315	4.5	FL		48	3 mo. Euribor	Aaa		AAA		N	EUR 350mm; Obligors 897; WA Seasoning 5m; WA CLTV 89.9%; IO Loans 36.4%; Self-employed 7.5%
				B	9	5	FL		100	3 Mo. Euribor	Aa2		AAA		N	
				C	7	5	FL		140	3 Mo. Euribor	A1		A+		N	
				D	7	5	FL		163	3 Mo. Euribor	Baa1		A		N	
				E	4	5.0	FL		313	3 Mo. Euribor	Ba1		BBB-		N	
				F	8	5.0									N	

Table 5: Priced Dutch RMBS Deals in 2019-Q4. Source: Dynamic Credit, JP Morgan

6. News

ECB

On 23 January 2020, the Governing Council of the European Central Bank met. The main takeaways from the announcements were:

- The Governing Council decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 0.00%, 0.25% and -0.50% respectively;
- The Governing Council will continue to make net purchases under its asset purchase programme (APP) at a monthly pace of €20 billion. The Governing Council expects them to run for as long as necessary to reinforce the accommodative impact of its policy rates, and to end shortly before it starts raising the key ECB interest rates.
- The Governing Council intends to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when it starts raising the key ECB interest rates, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.
- The Governing Council also decided to launch a review of the ECB's monetary policy strategy. The review will be concluded by the end of 2020, and will encompass "quantitative formulation of price stability, monetary policy toolkit, economic and monetary analyses and communication practices."

During the press conference, Ms. Lagarde said the recent trade deal between the U.S. and China had slightly reduced uncertainties facing eurozone exporters, but that its overall impact for the eurozone still needed to be assessed.

Furthermore, she noted positive signals from encounters in Davos between EU leaders and U.S. President Trump, despite Trump's threat to impose tariffs on European automobiles. However, she also said that the eurozone economy still faced "downside risks" from rising protectionism.

Macroeconomic projections

Twice a year, both ECB staff (March and September) and Eurosystem staff (June and December) publish macroeconomic projections for the euro area. The numbers below refer to published numbers in December 2019 with the previous numbers being from September 2019.

The inflation (HICP) forecasts came in at 1.2% in 2019, 1.1% in 2020, 1.4% in 2021, and 1.6% in 2022. The 2019 number was in line with September's projection while the 2020 number was an upward revision of 0.1% compared to the previous forecast.

Annual real GDP growth was forecasted at 1.2% in 2019, 1.1% in 2020 and 1.4% in 2021 and 2022, an upward revision of 0.1% for 2019 and a downward shift of 0.1% for 2020 compared with September's projections.

DNB: banks' resilience against house price correction crucial to financial stability

Due to low historic losses, the risk weights assigned to Dutch mortgages by the internal models of Dutch banks is one of the lowest in the EU, compared to risk weights assigned to domestic mortgages by banks in other EU countries. Because of the growing systematic risk in the housing market – mainly caused by steeply increasing house prices over the last three years – the Dutch banking regulator DNB believes the required capital currently imposed on banks is too low. To improve the banks' ability to withstand a sharp fall in house prices, the DNB wants to increase the required capital for Dutch mortgages.

DNB wants to mitigate the risk of banks having difficulty to attract funding during adverse economic scenarios. When house prices decline, LTVs will go up and as a result risk weights for Dutch mortgages can increase by 8 to 11 percentage points. This means banks – during periods of economic downturn – need to attract more funding to adhere to capital requirement regulation. In order to mitigate this risk, the DNB intends to introduce a floor for risk weights of these portfolios in autumn 2020. This floor applies to Dutch banks that use internal models for their domestic mortgage loan portfolios, which almost all Dutch banks do. The proposed floor – which is currently under public consultation – assigns a risk weight of 12% to the portion of the loan not exceeding 55% of the market value of the property and 45% risk weight to the remainder of the loan[1]. Risk weights assigned to mortgage loans that are partly or fully covered by NHG are exempted from this measure[2]. The estimated impact on the risk weights differs per bank but are expected to increase on average from 11% to 14-15%. The DNB expects that mortgage rates will not increase with more than 2 basis points as a result of this measure.

Due to the proposed changes in Basel III reforms, Dutch banks are already increasing their CET1 capital to prevent a large impact. Starting from 2022, the Basel III reforms impose a floor for the capital requirements under the internal model as a percentage of the outcome of the standardized approach. Depending on the LTV, the risk weights under the Basel III reforms range from 10 to 23% in 2022 and will gradually increase to 15 to 35% for non-NHG loans in 2027.

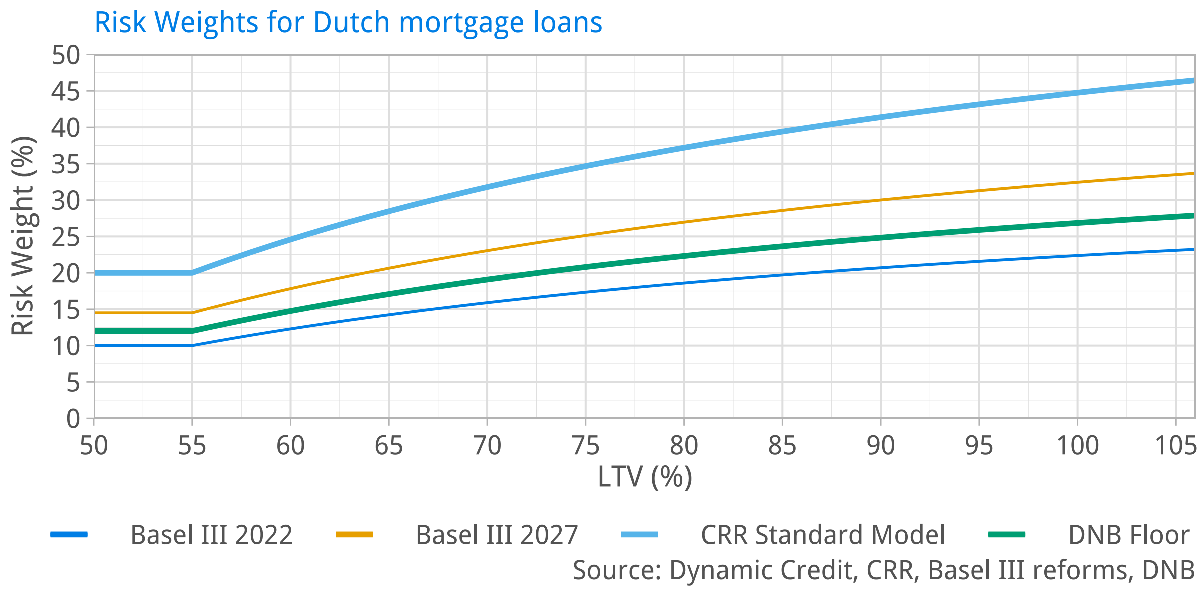


Figure 14: Risk weights under CRR, DNB proposal and Basel III reforms.

1 https://www.toezicht.dnb.nl/51-237891.jsp
2 https://www.dnb.nl/en/binaries/OFS-najaar2019_ENG_tcm47-385944.pdf

NHG guarantee expected to be recognized under CRR, DNB is working on a solution for insurers

The Dutch national mortgage guarantee (NHG) did not qualify as a guarantee under European regulation for insurers (Solvency II) and banks (Capital Requirements Regulation or CRR). Qualification is important because banks and insurers face significantly lower capital requirements for the part of the loan that is covered by the guarantee. The DNB has investigated the requirements for qualification under Solvency II and CRR, and while a solution for CRR has been found, it seems to be near for Solvency II.

For banks, the change in the guarantee is important since Basel III reforms will introduce risk weight floors which will step-by-step limit the advantage of the internal model. Foreign and smaller Dutch insurers have the most benefit in the acknowledgment of NHG since the majority of large Dutch insurers apply a (partial) internal model under which the guarantee may be modeled.

A provisional payment has been added to NHG in order to qualify as a guarantee for which lower risk weights apply under the standard model in CRR

DNB, the ministries of the Interior & Kingdom Relations and Finance, and WeW (Waarborgfonds Eigen Woning – the guarantor of NHG), have come to a solution to qualify NHG as a valid guarantee under CRR. The regulation (Article 215) requires that on default of the counterparty, when pursuing the guarantor, the guarantor will (i) make the payment within 24 months, (ii) without having to pursue the borrower. This article allows for a provisional payment that can be settled after foreclosure. After publication of these changes, WeW can pay out the NHG guarantee in case the collateral is not sold within 21 months[1]. Until the change of the NHG guarantee was implemented, DNB was using its discretionary authority to allow NHG as valid credit protection.

Under Solvency II, provisional payments do not qualify for fulfilling the guarantee. Hence, NHG is not recognized under the standardized approach

Unfortunately, in this case, regulation for insurers and banks differ. Similar to CRR, under Solvency II it is also required that the insurer can pursue the guarantor without having to pursue the borrower. However, the payment cannot be provisional. As such, the change to NHG does not have the desired effect on the SCR. Also, implicit state guarantees such as NHG would not qualify. The DNB has addressed these points during the consultation of Solvency II revisions.

The changes to NHG will be implemented in the Terms and Norms 2020-2 and published 2020-Q1. There is a discussion with market participants planned on February 13th regarding the exact details. Dynamic Credit will participate and represent its institutional clients.

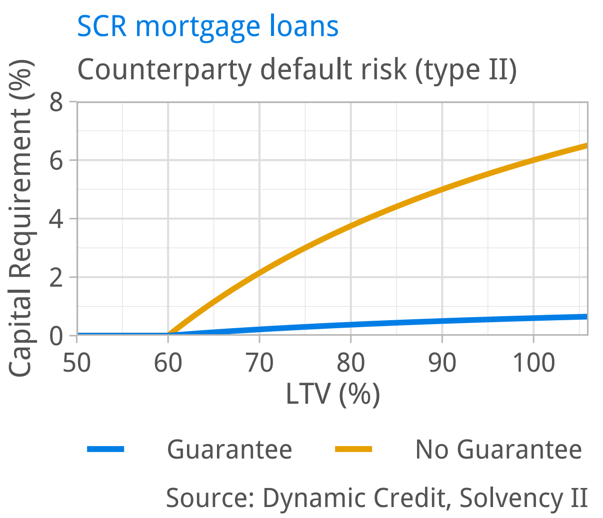


Figure 15: Risk weights under CRR, DNB proposal and Basel III reforms.

1 [Kamerbrief Ministerie BZK: Aanpassing NHG inzake kredietprotectie en missie]

DNB Economic Outlook

In December 2019, the Dutch National Bank published its semi-annual Economic Developments and Outlook report. They discuss a number of interesting trends, including:

Real disposable income is expected to increase steeply in 2020.

Real disposable income is affected by a number of elements, including wage tax, compensation per employee, and inflation, amongst others. Dutch households experienced an increase in real disposable income of 1.8% annually between 2014-2018. As can be seen in Figure 16, the forecasted increase in 2019 would have been higher if it wasn't for an increase in inflation. The Dutch Financial Times also reported earlier this year that the YoY increase in CAO (collective labor agreement) negotiated salaries had increased the most in more than 10 years.

In 2020, DNB projects real income growth of 3.7%. However, the inflation forecast is much lower for 2020 as the energy tax and VAT impact will fade. Furthermore, the income tax is reduced in 2020. In 2021 growth in real disposable income will fall back to 1.8%, as inflation is slightly higher, and the effect of tax reductions fades away.

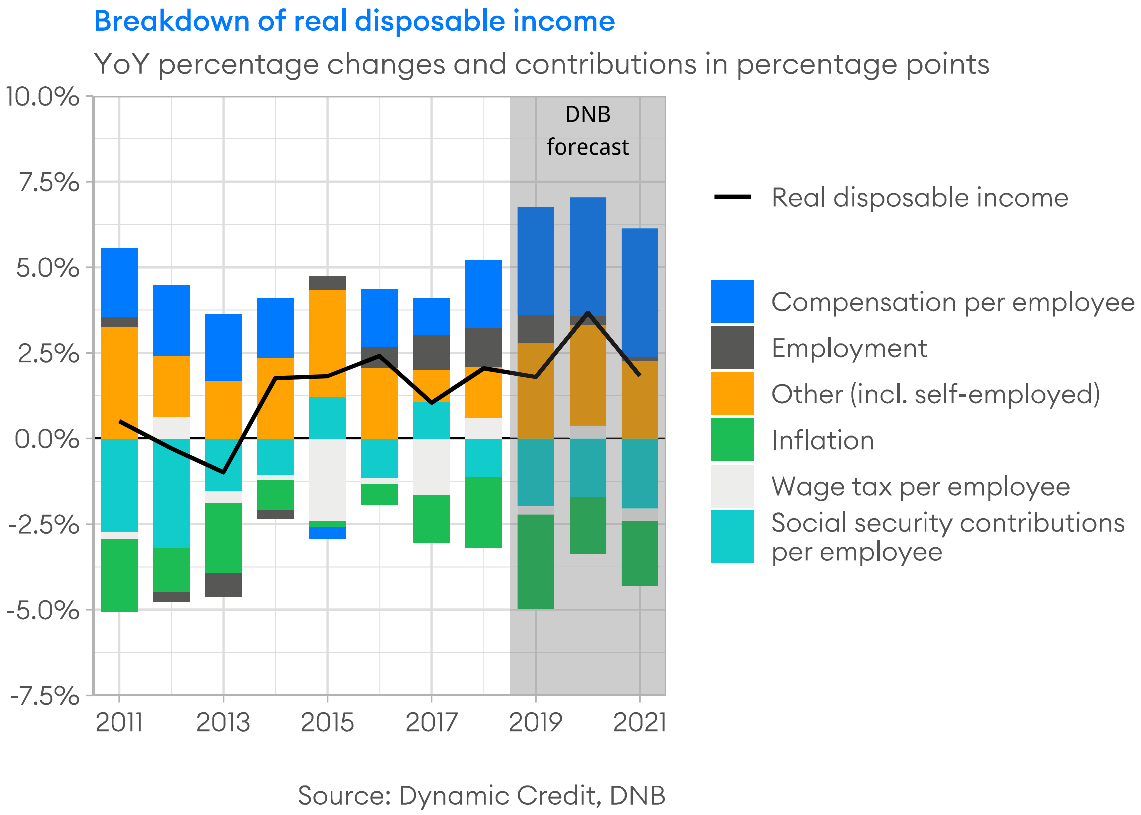


Figure 16: Real disposable household income in the Netherlands. YoY changes and contributions in percentage points. Employment (persons) refers to the impact of people finding/losing jobs.

Fewer employees on flexible contracts

The number of people on flexible contracts increased significantly in the years following the financial crisis in 2008. However, the recovery and increased tension in the Dutch labor market over the past several years has been accompanied by an increase in the number of permanent jobs. Furthermore, since 2019-Q1, the number of employees on flexible contracts has been decreasing, most notably so in 2019-Q3 where the number of employees on flexible contracts declined by 60,000 YoY. In the same period, the number of employees on permanent contracts went up by 213,000.

DNB expects this trend (fewer flexible contracts, more permanent) to continue in the short term due to the persistently low unemployment rate and ongoing tightness in the labour market. They also point out that the increased tension not only leads to more security, it also leads to higher potential for wage growth.

Finally, the number of self-employed persons continues to increase. In 2018, the number of working persons whose main activity was in self-employment made up almost 12% of the work force in the Netherlands. The topic has recently received increased political attention as the Dutch Labor Party (PvdA) wants companies to pay pension and state pension premiums for self-employed people without employees (zzp'ers). They want an incentive for companies to offer permanent contracts.

The number of people on flexible contracts is decreasing

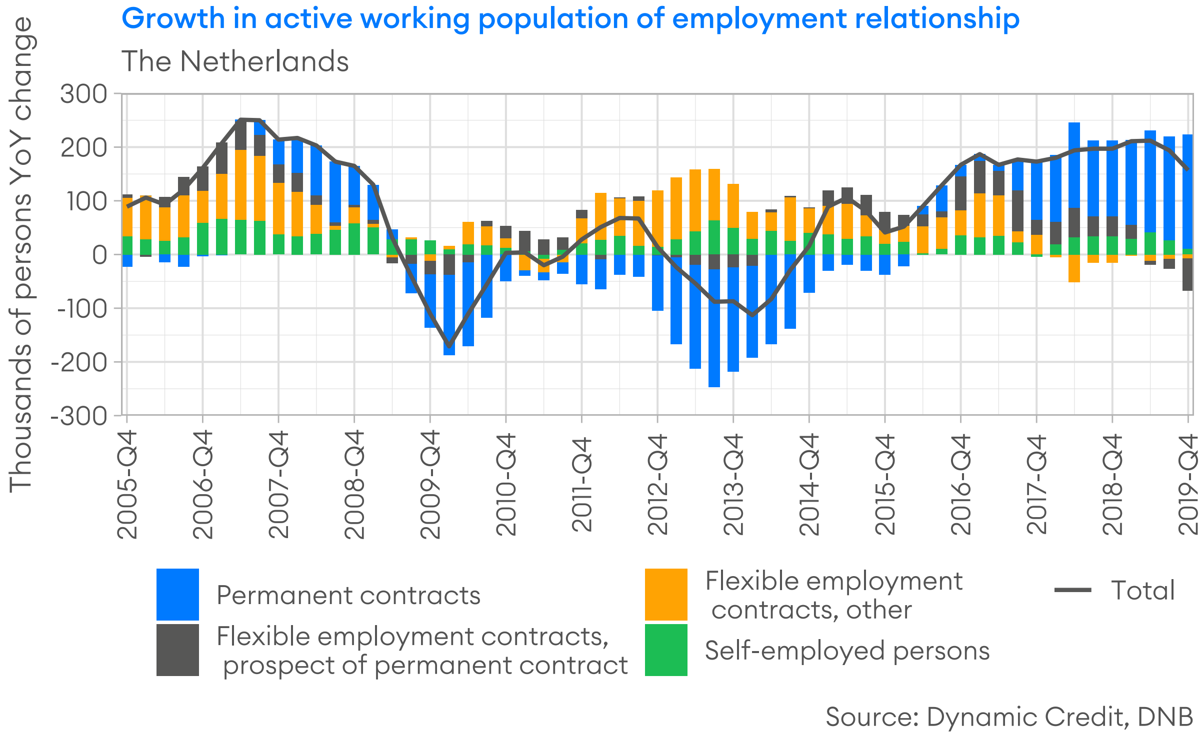


Figure 17:Change in active working population by type of employment relationship

AML: recent developments and planning

European legislation on anti-money laundering has been released rapidly over the last years and implementation dates of these Directives are coming close. This will lead to changes in anti-money laundering legislation by the national governments and as a result also in the Netherlands. Previously implemented improvements have resulted in more awareness with financial institutions, as data from the Financial Intelligence Unit Netherlands ("FIU") shows that between 2014 and 2018, the number of reported suspicious transactions doubled. Furthermore, more large transactions are being reported suspicious, evidenced by the increase in the average amount per suspicious transaction as can be seen in the chart below. Researchers from the University of Utrecht estimate that on average 13 billion euros is laundered annually in the Netherlands.

Increased AML awareness has led to a large increase in the number of transactions that are reported as being suspicious

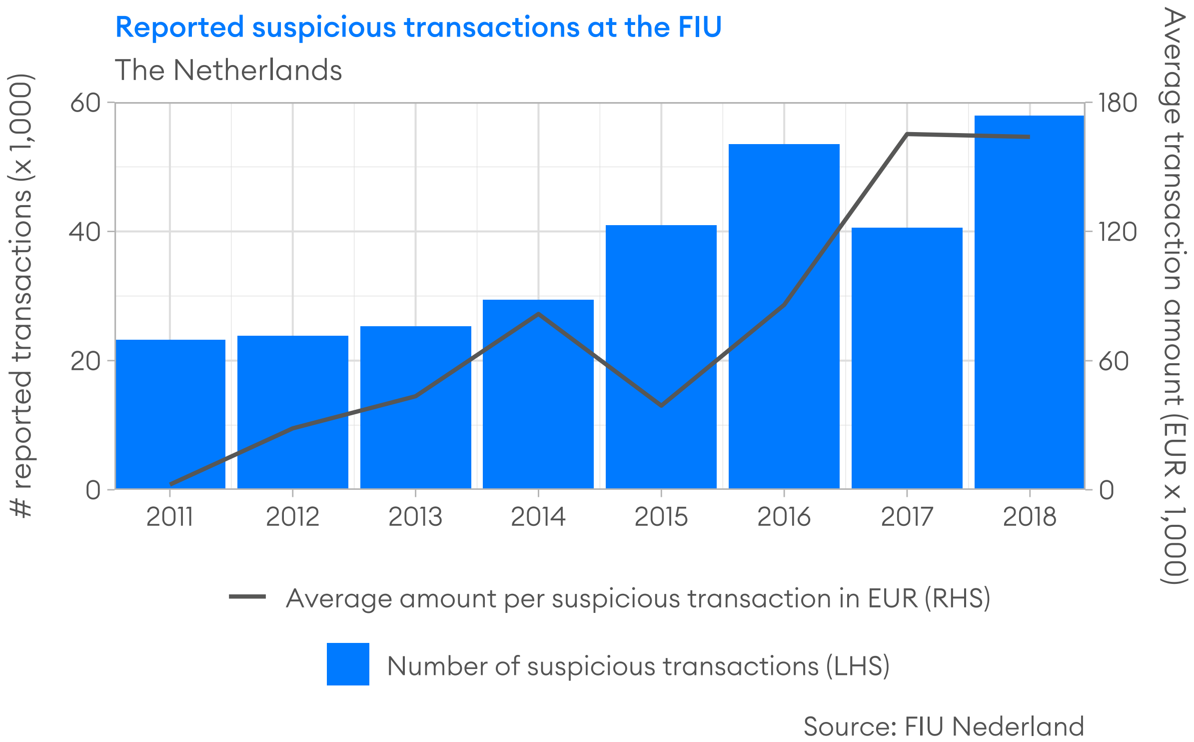


Figure 18: Reported suspicious transactions in the Netherlands

Changes due to implementation of AML5

The fifth Anti-Money Laundering Directive ("AML5") is the successor of the fourth Anti-Money Laundering Directive. An update is required due to the rising complexity of criminal organizations, the increased use of technology in the financial system and the desire to facilitate cross-border cooperation. AML5 should have been implemented in the Netherlands on 10 January 2020, however is still pending approval by the Senate. The main changes that require implementation in national legislation ("Wet ter voorkoming van witwassen en financieren van terrorisme", hereinafter "Wwft") are:

- The scope of the Wwft is expanded by including providers of exchange services between virtual currencies and fiat currencies, and custodian wallet providers. Consequently, these providers must perform a client assessment and report unusual transactions to the FIU.

- Additional measures are formulated that have to be taken for transactions in/from 'high-risk' countries. The measures include, amongst others, gathering sufficient information regarding the customer, the purpose of the transaction and the origin of the funds. These measures were already applicable, but only when such an obligation was specifically mentioned in a ministerial decree.
- The exchange of information between several national and international authorities is expanded. Exemptions to the confidentiality are formulated, creating the possibility to share information amongst various types of supervisory authorities.

In parallel, a new database is being developed for the Dutch Chamber of Commerce ('Kamer van Koophandel'), which includes information regarding the Ultimate Beneficial Owner ("UBO") of a company (hereinafter "UBO-register"). This is not sufficiently reflected in the current register, which only mentions the owner of the company (which can be another company). With the introduction of the UBO-register a large part of the companies will be obliged to submit certain credentials of the UBO. This should facilitate that financial institutions can check who they are effectively doing business with.

Future developments on AML

In June 2019, the Dutch government introduced a plan to prevent money laundering in a better way. This plan is based on three pillars: i) increasing barriers to make it harder for criminals to use the financial system for money laundering, ii) increasing the efficiency of so-called gatekeepers and intensifying their supervision, and iii) improve detection and prosecution of money launderers. The plan is accompanied with draft legislation, which on a high level consists of three actions:

- A prohibition on cash payments above EUR 3,000 for professional and commercial traders.
- The obligation, in case when an intensified customer due diligence is required, to investigate whether the borrower is or has been a customer at another financial institution or has been rejected by such an institution. And whenever that is the case, request information from those financial institutions regarding possible integrity risks that have occurred in the past.
- A legal base for outsourcing transaction monitoring and sharing transaction details.

The consultation of this legislative proposal ended 14 January 2020.

Furthermore, on 3 December 2020 the sixth Anti-Money Laundering Directive ("AML6") has to be implemented into Dutch national legislation. With AML6, criminal charges in the field of money laundering and specific sanctions will be introduced.

Update on the Nitrogen Crisis

In our last quarterly update, we have given an overview of how the court ruling against the current approach to reduce has grown into a 'Nitrogen Crisis' and how a similar – but unrelated – PFAS pollution regulation could negatively impact the number of to be issued building permits for residential properties in the upcoming years. The large impact forced the government to act quickly and come up with proposals to reduce nitrogen depositions in and around Natura 2000 sites, restore and improve the nature, and to increase the granting of permits for the construction of new properties again.

In November the government presented a package of measures that can be implemented on short notice and is expected to reduce nitrogen depositions. The achieved savings in nitrogen depositions will be allocated mainly to the construction of residential properties and infrastructure. The measures presented include the reduction of the maximum speed on highways to 100 km/h during the day to be implemented in March 2020, the adjustment of the composition of cattle feed to reduce ammonia emissions and a subsidy to pig farmers to stop their farms.

The CBS recently published the preliminary statistics on newly built residential properties[1]. As expected, the number of properties constructed rose to 71,000, the largest number during the past ten years. However, the number of building permits issued in 2019 dropped significantly to approximately 56,000 from 70,000 in 2018. This will inevitably negatively impact the production of newly built properties in 2020.

The Economic Institute for Construction ('EIB') recently presented their expectation of the impact of the measures on the construction of newly built residential properties[2]. The government set a target of 75,000 newly constructed residential properties per annum, but the EIB – not to be confused with the European Investment Bank – expects that by 2024 the production can grow to a maximum of 70,000 residential properties, following the expected drop in production to 60,000 in 2020. They also highlight the problem that the growth in number of households during this period as expected by the CBS is larger than the growth of number of newly built residential properties, thereby implying that the shortage will only grow.

Supreme Court: Dutch State obliged to reduce greenhouse gas emissions by at least 25% compared to emissions in 1990 before the end of 2020

1 https://www.cbs.nl/nl-nl/nieuws/2020/05/bijna-71-duizend-nieuwbouwwoningen-in-2019
2 https://www.eib.nl/nieuws/structureel-groeiperspectief-voor-de-bouw-blijft-sterk/

Update on the Nitrogen Crisis - continued

This is not the end of the story. At the end of the year, the Supreme Court judged that the Dutch State is obliged to reduce greenhouse gas emissions by at least 25% compared to emissions in 1990 before the end of 2020[1]. The dispute was about whether the Dutch State is obliged to adhere to a minimum reduction of 25% by 2020. The ruling is based on the legal duty of the Dutch State to respect human rights – including the right to life as laid down in the European Convention on Human Rights. Emission of greenhouse gases can lead to life-threatening situations for the residents of the Netherlands.

The minimum of 25% reduction of greenhouse gases is widely accepted on the basis of scientific insights. The Dutch State was not able to justify why a lower reduction in 2020 could still lead to achieving the final target of a 40% reduction by 2030, as accepted by the Dutch State.

The government and parliament must now decide what measures to take to get to these levels, it is not up to the courts to decide which measures to take. In November 2019 minister Wiebes of Economic Affairs and Climate Policy already announced that the roofs of schools and other public buildings should be better utilised for solar power and more funds will be made available for the purchase of heat pumps[2]. It is also expected that there could be some synergies in the measures taken to reduce greenhouse gas and nitrogen emissions. As there is still uncertainty whether or not the measures previously announced are enough, this could potentially have an impact on the number of permits issued for newly built residential properties. From a different perspective, it could also potentially lead to an acceleration of the energy transition, by providing either more subsidies or amending acts to allow for new initiatives to finance the transition.

1 https://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Hoge-Raad-der-Nederlanden/Nieuws/Paginas/Staat--moet-uitstoot-broeikasgassen-met-25-verminderen-eind-2020.aspx
2 https://www.nrc.nl/nieuws/2019/11/01/kabinet-neemt-extra-maatregelen-om-klimaatdoelen-toch-te-halen-a3978835

Energy efficiency within the Dutch Housing Market

Reporting on energy labels (running from G for the least energy-efficient to A for the most energy-efficient) were mandatory for home sellers in the Netherlands in 2008, but only after a notice of default from the European Commission for insufficient implementation of the Energy Performance Building Directive[1], this obligation was enforced via sanctions in 2015. This measure resulted in a significant increase in a price premium for sustainable homes (properties with energy labels A, B or C) over non-sustainable homes (properties with energy labels below C) as of 2015. We refer to this as the sustainability premium. The average sustainability premium was EUR 3,000 in 2014 and increased to EUR 10,000 in 2015. This increase can be explained by the insight the energy label gives to a potential buyer or tenant on the expected energy consumption of the property.

Mandatory energy labels have a positive effect on the sustainability of the Dutch housing market

Currently, the sustainability premium paid by homebuyers for a sustainable home, compared to properties with a D label, approximately equals both the investment in sustainable measures as the energy savings of the property. This was concluded by the DNB based on estimates by the Economic Institute for Construction on the investment costs and energy savings required to obtain a specific energy label. Sustainable homes are now on average sold with a sustainability premium of EUR 4,000 to EUR 6,000 compared to a non-sustainable home with a D label. Only for sustainable homes with an energy label A does this not reflect the investment costs for sustainable measures which are twice as high. The sustainability premium is more close to revenue from energy savings of the property. For non-sustainable homes, a discount generally applies, running up to EUR 13,500 for properties with a G label.

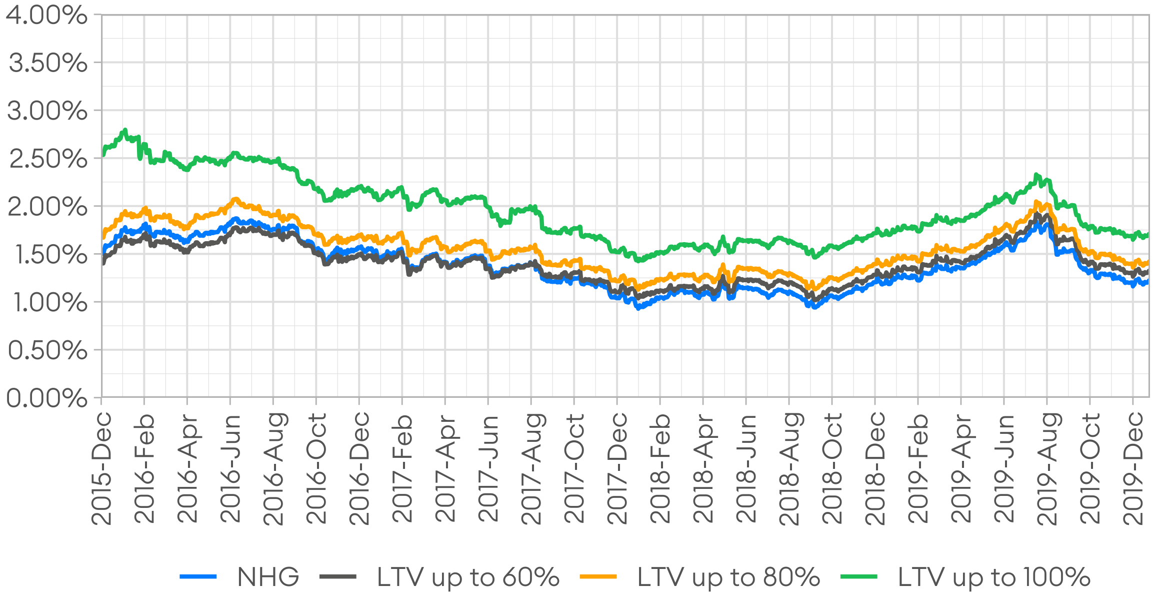
Research conducted by the DNB shows that the price difference between sustainable homes and non-sustainable homes can be explained by the costs involved in making homes sustainable

1 Directive 2002/91/EC

Appendix

Spread average top 6 per risk class

5-year fixed rate period

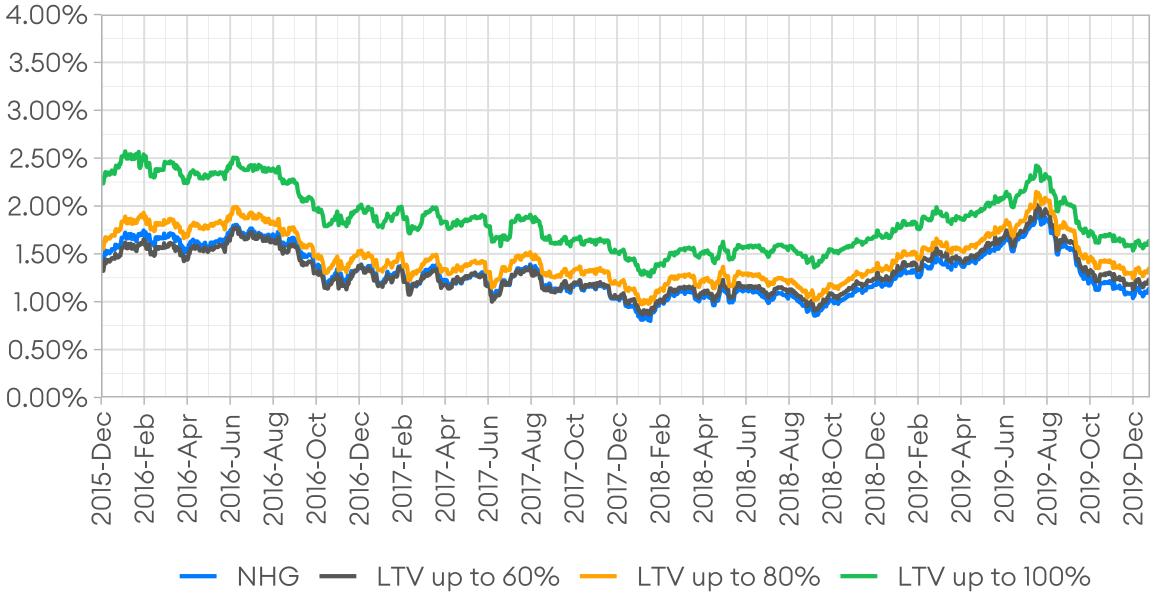


Source: Dynamic Credit, Hypotheekbond

Figure A1: Spread of the average top-6 price leader mortgage rates (excluding action rates) for mortgage loans with a 5-year fixed rate period for four risk classes. Up to and including 28/1/2020.

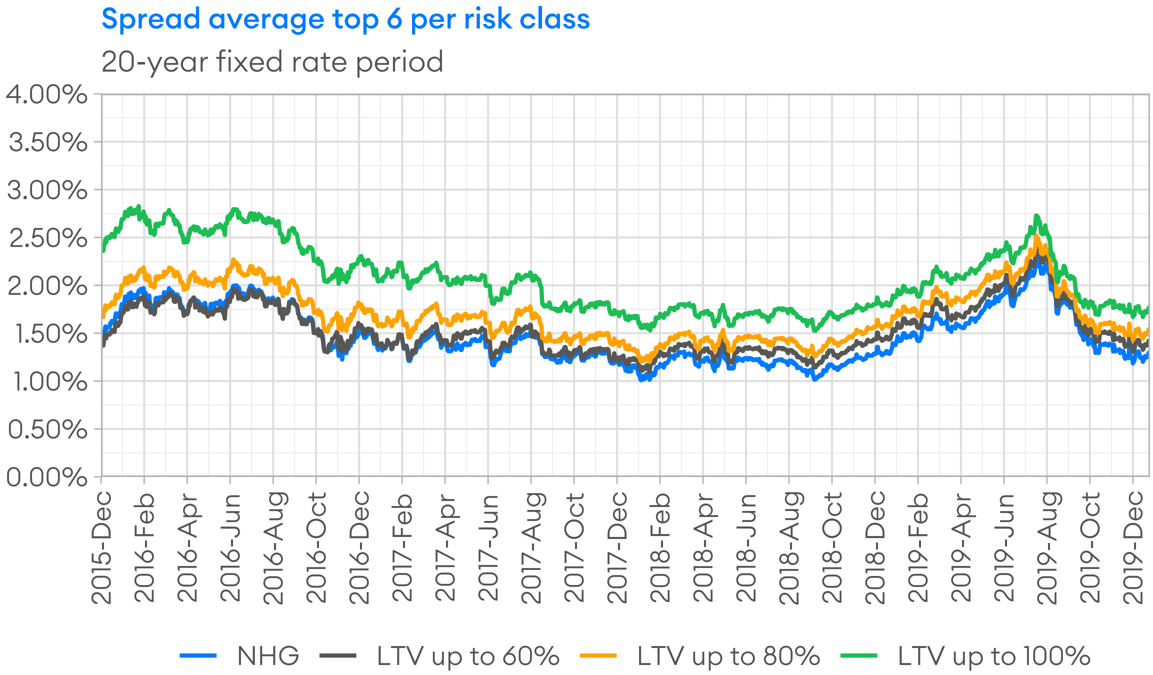
Spread average top 6 per risk class

10-year fixed rate period



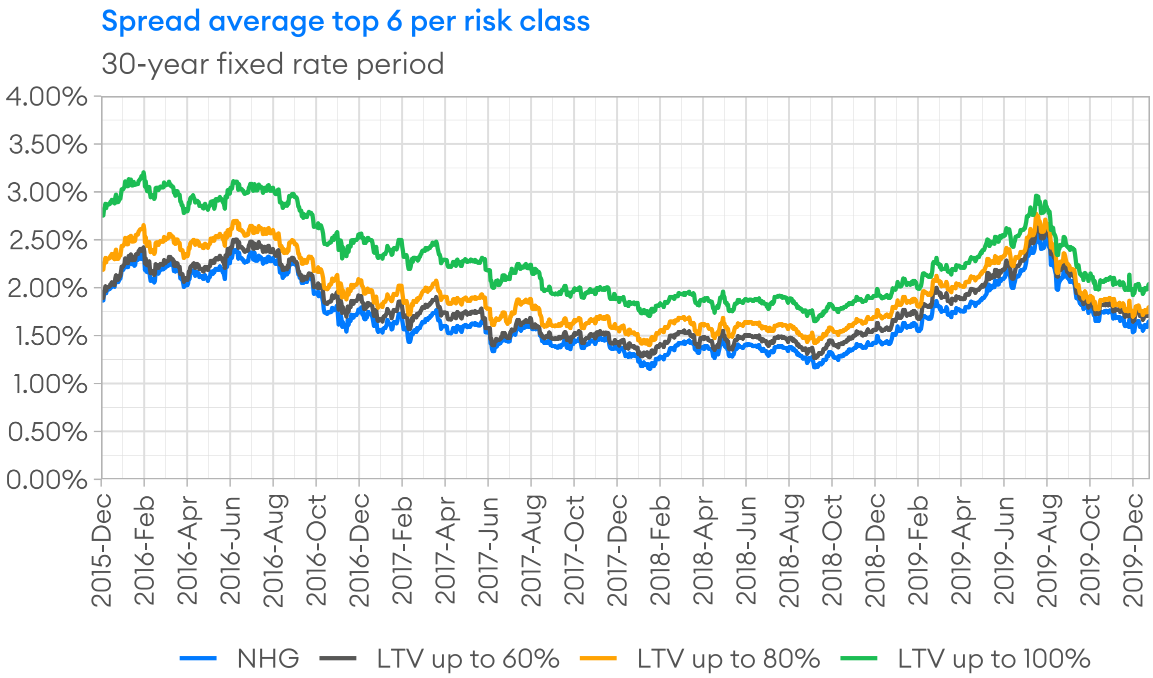
Source: Dynamic Credit, Hypotheekbond

Figure A2: Spread of the average top-6 price leader mortgage rates (excluding action rates) for mortgage loans with a 10-year fixed rate period for four risk classes. Up to and including 28/1/2020.



Source: Dynamic Credit, Hypotheekbond

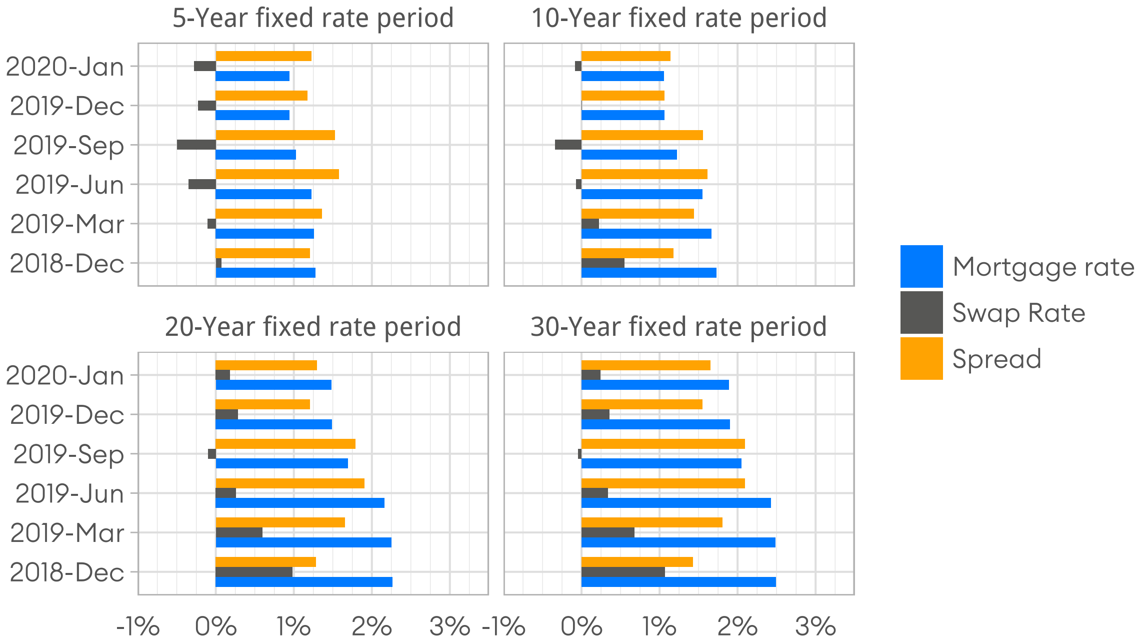
Figure A3: Spread of the average top-6 price leader mortgage rates (excluding action rates) for mortgage loans with a 20-year fixed rate period for four risk classes. Up to and including 28/1/2020.



Source: Dynamic Credit, Hypotheekbond

Figure A4: Spread of the average top-6 price leader mortgage rates (excluding action rates) for mortgage loans with a 30-year fixed rate period for four risk classes. Up to and including 28/1/2020.

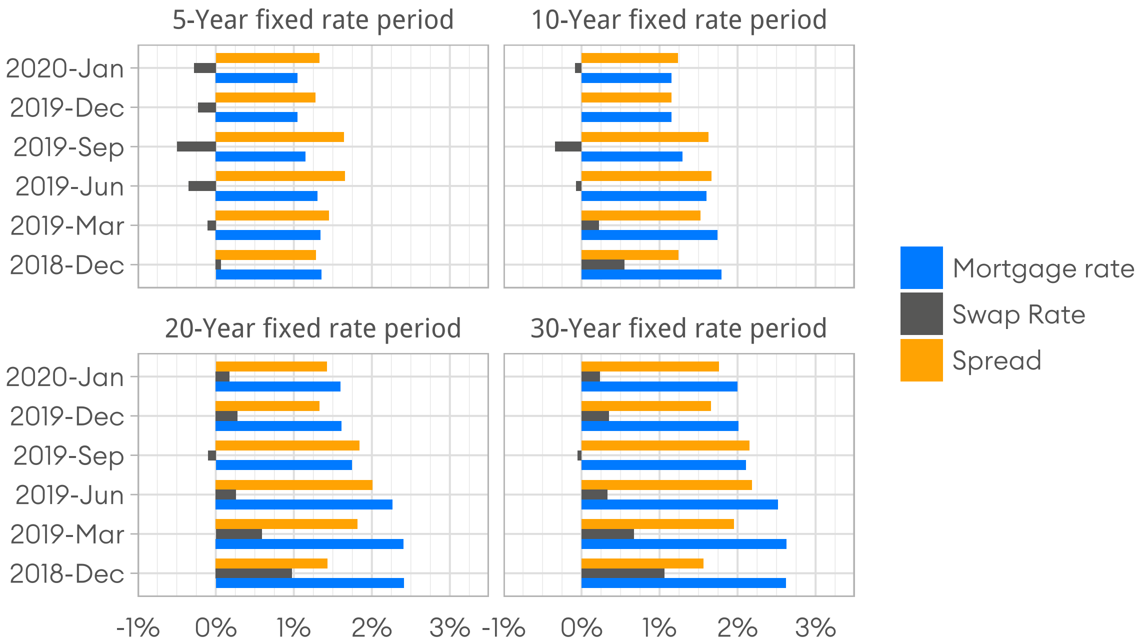
Mortgage rate decomposition for NHG mortgage loans



Source: Dynamic Credit, Hypotheekbond

Figure A5: Mortgage rate decomposition of the average top-6 price leaders (excluding action rates) for NHG mortgage loans with different fixed rate periods. End of month data has been used. Up to and including 28/1/2020.

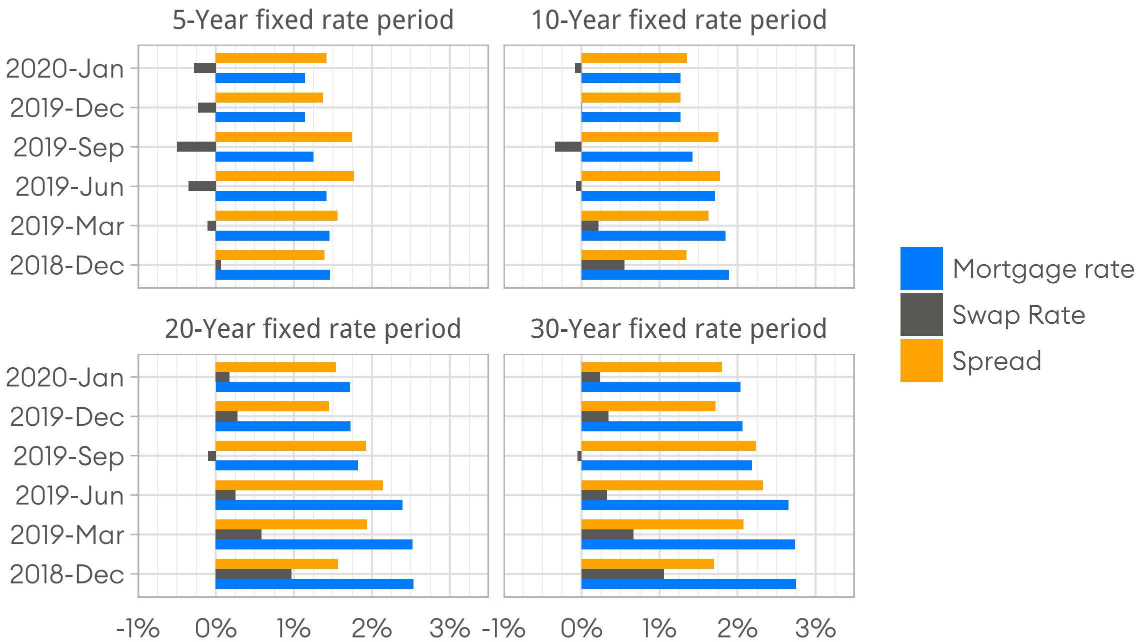
Mortgage rate decomposition for 60% LTV mortgage loans



Source: Dynamic Credit, Hypotheekbond

Figure A6: Mortgage rate decomposition of the average top-6 price leaders (excluding action rates) for 60% LTV mortgage loans with different fixed rate periods. End of month data has been used. Up to and including 28/1/2020.

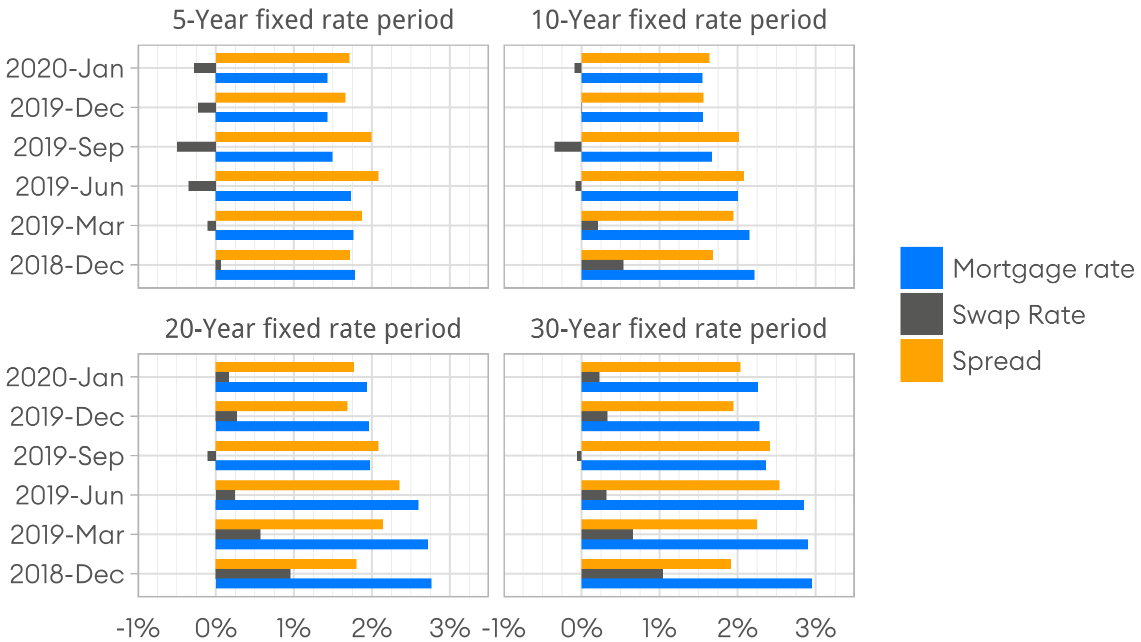
Mortgage rate decomposition for 80% LTV mortgage loans



Source: Dynamic Credit, Hypotheekbond

Figure A7: Mortgage rate decomposition of the average top-6 price leaders (excluding action rates) for 80% LTV mortgage loans with different fixed rate periods. End of month data has been used. Up to and including 28/1/2020.

Mortgage rate decomposition for 100% LTV mortgage loans



Source: Dynamic Credit, Hypotheekbond

Figure A8: Mortgage rate decomposition of the average top-6 price leaders (excluding action rates) for 100% LTV mortgage loans with different fixed rate periods. End of month data has been used. Up to and including 28/1/2020.

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