DMFCO Asset Management

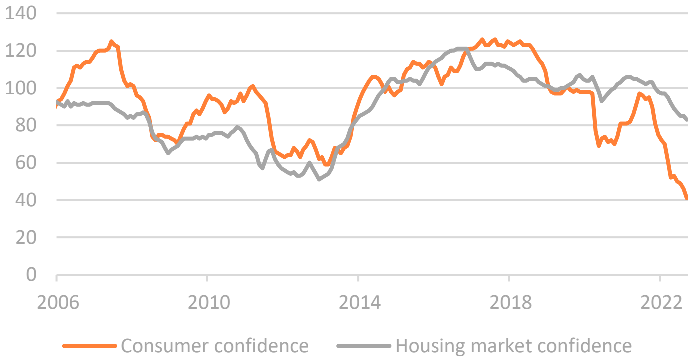
Dutch housing and mortgage market
Update Q3 2022

DASHBOARD DUTCH HOUSING AND MORTGAGE MARKET Q3 2022

Economic indicators

Confidence indicators

Source: CBS & VEH



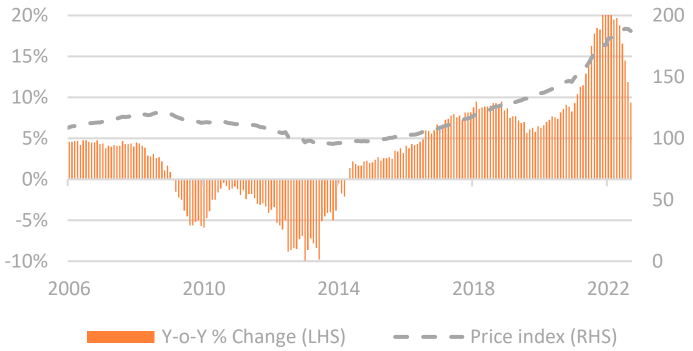
Annual inflation rate

Source: CBS

Dutch Housing market

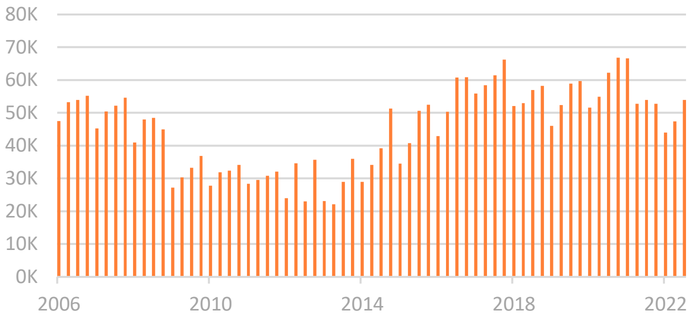
Price development

Source: Land Registry / CBS



Transactions

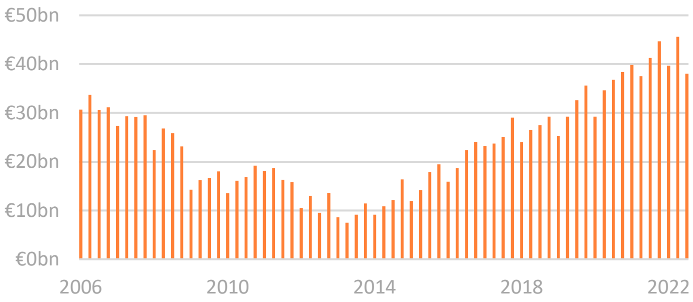
Source: Land Registry / CBS



Dutch Mortgage market

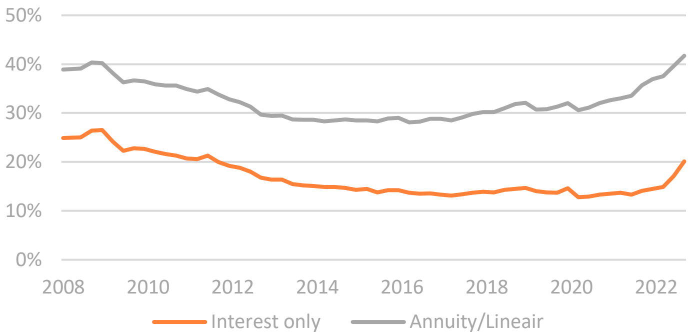
Market volume

Source: Land Registry / DMFCO



Affordability index

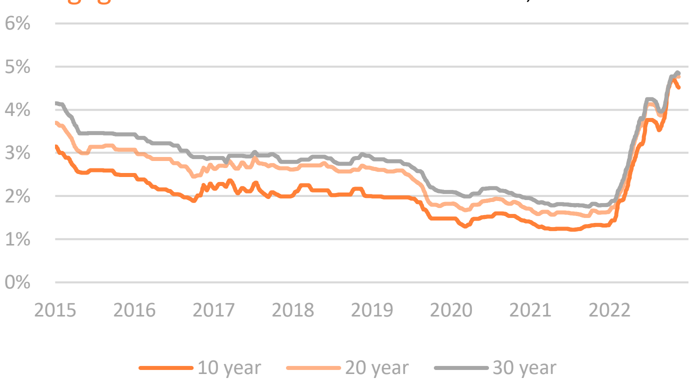
Source: Calcasa



Average net household income spent on net housing costs

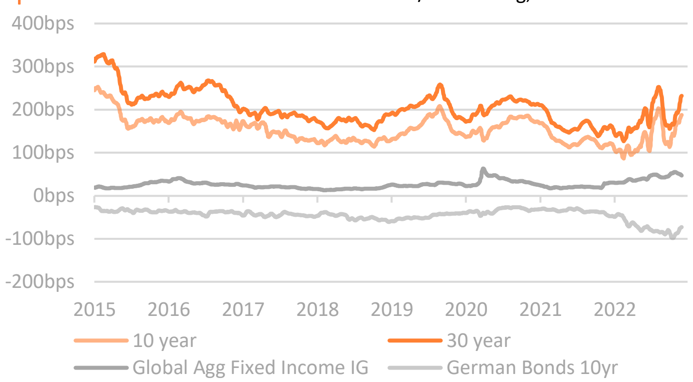
Mortgage rates

Source: DMFCO, end of November



Spreads

Source: DMFCO / Bloomberg, end of November



Please see annex I for an overview of all key indicators

Driven by high inflation, rising interest rates and increased economic uncertainty, the Dutch housing and mortgage markets are cooling down, marking the end of a period of consecutive records. Most noticeable is that after 8 years of steep house price growth, house prices are slightly declining.

Mortgage market volumes continue to decline due to the lower refinancing activity and the fall in housing transactions. The dominant fixed rate period has shifted from longer (≥20 years) to shorter (≤10 years) ones. Nonetheless, the market for longer fixed interest rate periods is, due to a flat yield curve, still substantial with a market share of 34% last quarter. Mortgage spreads remain volatile as a result of fluctuating interest rates.

Main developments

Persistent inflation continues to negatively affect consumer confidence, as inflation is slowly converting into a lower purchasing power. The impact of inflation continues now that the majority of Dutch households have to sign new energy contracts with significantly higher tariffs and the higher energy costs are seeping into production costs resulting in higher prices for consumer products.

The European Central Bank (ECB) continued its restrictive monetary policy in order to slow down the economy and hence control inflation. In parallel, the Dutch government implemented support measures to limit the impact of rising energy costs on households and small and medium-sized enterprises (SMEs).

Pressed by higher interest rates, households' maximum borrowing capacity has been reduced. As a result, borrowers' preference for fixed-interest periods continue to shift from longer to shorter fixed-interest periods. The corresponding market share of mortgage applications with 10- and 20-year fixed-interest periods increased to 56% and 27% respectively. A year ago it was the opposite at 21% and 57% respectively.

Refinancing became less attractive as mortgage rates continued to be high. As a result, the group of refinancers (primarily lower LTV buckets) withdrew from the market. The withdrawal of refinancers combined with the reduced borrowing capacity of households led to a substantial decline in mortgage applications to 102,000 (-13.8% YoY) and a subsequent decline in mortgage volume to €38 billion (-7.8% YoY).

Another important development in the mortgage market, is that borrowers gradually start taking their existing mortgage conditions to a new property, the so-called ‘movers’ feature (meeneemregeling). This is particularly attractive for borrowers now that the mortgage rates are higher.

The housing market is increasingly showing signs of a further cooldown as the economic situation persists. While buyers become more cautious, the number of transactions in the Dutch housing market fell to roughly 50,000 (-6.4% YoY). However, the most remarkable development is the decline in house prices measured by the NVM (-5.3% QoQ).

The fall in house prices is driven by a couple of developments. First, the borrowing capacity of households is reduced as a result of increased mortgage interest rates. Second, the yearly seasonal effect of the summer period caused less demand. Third, consumers’ willingness to overbid declined. And lastly, demand in more expensive regions and higher price segments decreased.

Similarly to previous quarters, uncertainty in the financial markets was reflected in volatile mortgage rates and subsequently affected mortgage spreads. After a widening of spreads at the beginning of the quarter, spreads tightened substantially before widening again at the end of Q3 2022.

Economic indicators

Ongoing inflation is working its way through to the overall economic situation in the Netherlands. Whereas previous inflation was assumed to be a temporary shock, the temporary nature is increasingly turning into a long-term phenomenon with associated side effects.

Economics

According to the International Monetary Fund (IMF), inflation is currently the most urgent threat to the global economy and is expected to remain high in the near future. High inflation and the resulting deterioration of household purchasing power are likely to coincide with a slowdown in economic growth. According to the Dutch Central Bureau of Statistics (CBS), the slowdown of the economy is also apparent in the Netherlands (-0.2% QoQ). This was mainly attributed to lower investments because of higher interest rates.

As the economic outlook is deteriorating, policymakers are taking an even more aggressive approach to monetary tightening. In recent months, this aggressive approach has led to an increase in ECB policy rates by 1.5%[1]. The ECB expects to continue raising interest rates in the coming months to return to its inflation target of 2%.

While the ECB attempts to slow down the economy by raising its policy rates, the government is spending billions on a support package instead. Although it makes sense for the government to provide this support for households and to a lesser extent to small and medium-sized enterprises (SMEs), it does have the opposite effect on the monetary tightening of the central bank.

Inflation

Inflation was initially caused by disruptions in the supply chain and created a mismatch between supply and demand. Currently, inflation is primarily fuelled by the war in Ukraine, which caused a major energy crisis in Europe, given Europe's dependence on Russian gas. Especially the Netherlands is strongly reliant on gas compared to other European countries since the vast majority of Dutch houses use gas heating. As a result, energy prices rose significantly in a brief period of time.

As the war continues and electricity and gas prices remain high, energy costs are driving up production costs and thus the prices of goods and services. The spillover of inflation makes current inflation even more persistent.

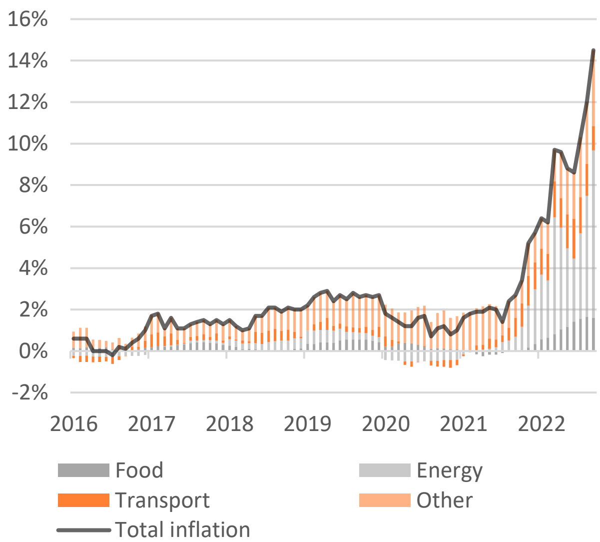


Figure 1: Inflation in the Netherlands, end of September 2022 (Source: CBS)

To limit the impact on households, the Dutch government introduced several measures. First, it lowered the energy tax on gas and electricity and increased the tax refund, resulting in a rebate for all households.

[1] Both in September and November, the ECB raised their policy rates by 0.75 percentage points.

Second, the government will introduce a price ceiling for both gas and electricity as of 1-1-2023. In November and December, households will receive an extra 190 euros per month regardless of their energy consumption. Finally, households with an income around the social minimum will receive additional support to compensate for high energy prices through an energy surcharge. There is also an emergency fund for vulnerable households to support them in case of arrears on their energy bills.

Sentiment indicators

At the end of Q3 2022, consumer confidence[2] in the Netherlands reached its lowest point ever (41). The lack of confidence is still motivated by pessimism about the economic outlook and the financial situation of households for the next 12 months. As a result, the willingness to buy non-essential and more expensive goods declined.

While confidence in the housing market[2] often lags falling confidence in the general economy, housing confidence is declining too. The negativism about the housing market is mainly caused by higher mortgage rates (reducing the borrowing capacity), house price development and the general economic climate.

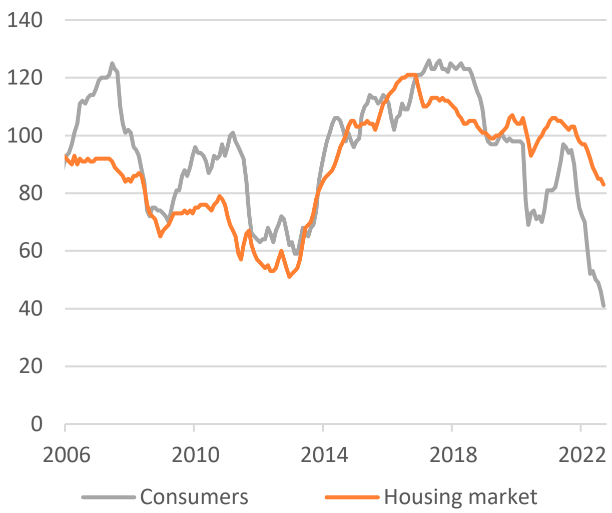


Figure 2: Confidence indicators, end of September 2022 (CBS & VEH)

Labour market

The high level of inflation has a significant effect on the purchasing power of Dutch households. With a general unemployment rate of only 3.7% in Q3 2022, the labour market provides some protection against the loss of purchasing power of households. Although the number of unemployed has increased slightly in the past months, the overall unemployment rate is still extremely low.

The importance of a strong labour market is mainly based on wage retention, although wage increases are also important given the current problems with inflation. In Q3, the upward trend in the level of wage settlements[3] (+4.2% Q3 2022 YoY) continued, as companies seek to retain employees and are willing to compensate for the loss in purchasing power.

From 2023, the minimum wage and state pension (AOW) will be increased (+10.15%). In addition, pension funds are able to index their pensions since their funding ratio improved, as a result of the increasing interest rates.

[2] The indicators have a range between 0 (negative) and 200 (positive). A value of 100 is neutral.
[3] According to the CBS, collective wages (per hour including special pay) increased by 3.5%, while contractual wage (collective wages and employer contributions) rose by 4.2% in Q3 2022.

Housing market

The increased uncertainty in the housing market due to persistently high inflation and economic uncertainty is slowly reflected in a slight decrease of house prices and a lower number of transactions. Therefore, the Dutch housing market seems to be returning to more normal conditions.

Transaction volume and housing supply

During Q3 2022, the number of transactions (50,000) was 6.5% higher than in the previous quarter. Compared with the same period last year, the number of transactions fell by 6.4%.

When considering the number of transactions on a 12-month rolling basis, the market has declined sharply over the past year. Whereas the 12-month average almost reached 240,000 transactions at the end of Q3 2021, the 12-month average at the end of Q3 2022 was down to 195,000. Even though this is a sharp decline, the number of 195,000 transactions is still high from a historical perspective.

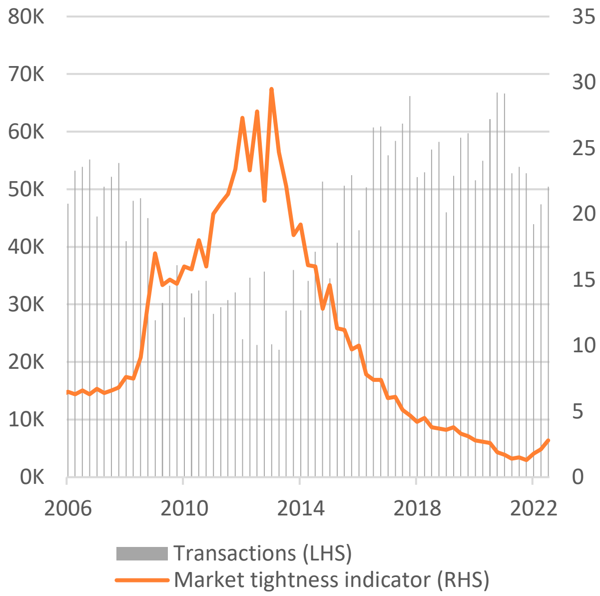


Figure 3: Number of transactions & tightness indicator, end of September 2022 (Source: CBS, Land Registry) & (Source: NVM)

The declining number of transactions is mainly due to increased interest rates and economic uncertainty. These changing market dynamics are causing sellers to bring forward their sales and making buyers more cautious. According to the Dutch brokers' association (NVM), brokers are expecting the slowdown in transactions with fewer viewers, offers and overbids, to continue.

In order to track the market dynamics, the market tightness indicator is an important indicator. This indicator measures the ratio of transactions (demand) to the current number of houses for sale (supply). While the ratio reached its lowest point of 1.3 in the fourth quarter of 2021, market tightness continued to improve to 2.8 in the third quarter of 2022. This indicates that prospective buyers have an average of 2.8 homes on offer to choose from.

Driven by climate awareness and increased energy prices, buyers appear to be more critical of energy consumption and thus increasingly interested in the energy efficiency of homes. The energy label is therefore becoming increasingly decisive when buying a house.

New construction and housing shortage

The minister of housing and spatial planning presented his final National Housing and Construction Agenda past quarter. Despite a promising agenda[4], the Council of State ruled that the exemption to be

[4] The agenda includes agreements that serve as a foundation for at least 15 large-scale housing locations containing agreements on building locations, types of houses, target groups and intended price categories.

allowed to emit nitrogen during construction projects (Programma Aanpak Stikstof, PAS[5]) violates European nature conservation rules.

As a result, developers are required to make an accurate pre-assessment, including nitrogen calculations, to demonstrate that the construction project will not harm the environment. The ruling will delay new construction and is therefore another setback for the government. Particularly, because the housing market is already characterised by a large shortage of houses.

Prior to the ruling of the Dutch Council of State, the government was already struggling with a huge backlog of building permits, as the number of permits granted is still not sufficient (69,000 on a 12-month average) to fulfil the governments' building ambitions of 100,000 homes per year. So far, only 48,000 permits have been granted in 2022 (-12% year-on-year). Consequently, the number of newly built homes has not shown any significant increase for several years. At the end of Q3 2022, the number of new homes built over the past 12 months was only 72,000.

In addition to the environmental concerns and the subsequent lack of permits, rising costs of construction projects and an ongoing shortage of workers in the construction sector contribute to the problem as well.

House prices

In Q3 2022 house prices rose 10.5% year-on-year to a nominal value of 443,000 euros. While the nominal value is a new record, year-on-year house price growth is gradually flattening.

Although the annual house price growth is gradually flattening, the current short-term price trend shows an even more important trend. According to the Land Registry, quarterly and monthly house price trends are +3.3% and -1.9%, respectively. Contrary to the Land Registry's figures, the NVM has already measured a sharp fall in house prices of 5.3% QoQ in Q3 2022. On a year-on-year basis, however, house prices still rose slightly by 2%.

The difference in house prices between NVM and Land Registry stems from the transaction's time of registration. As a result, NVM registers a transaction on average 2 to 3 months earlier and is therefore a useful but limited predictor of house price trends.

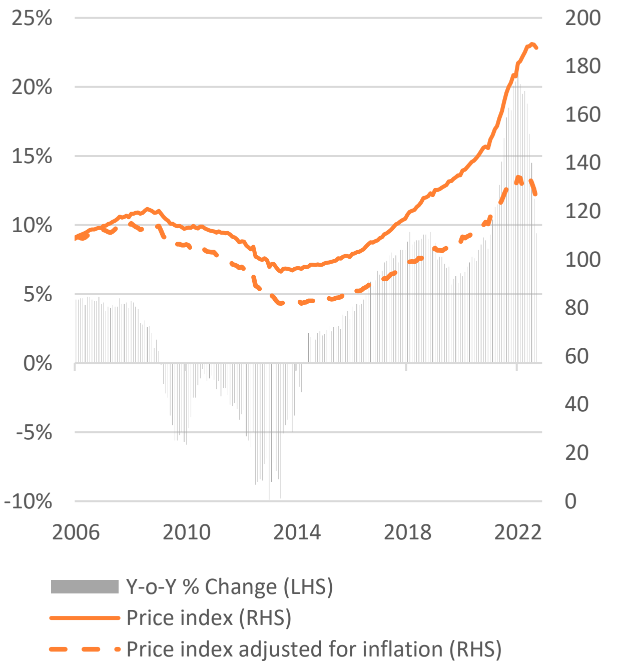


Figure 4: House price development 2015=100, end of September 2022 (Source: CBS, Land Registry)

[5] The PAS was a system in which advance permission for nitrogen-emitting activities was granted via a nature permit. The permission was conditional on future measures being taken to ensure that nitrogen emissions should not lead to deterioration of nature areas. Because the future positive effects of the measures were not fixed, the Council of State ruled that this violated European law.

According to the NVM, the sharp fall in house prices can be explained by a number of different developments:

- Rising mortgage interest rates, inflation and higher energy costs affect the maximum borrowing capacity of households and thus market sentiment;
- The yearly seasonal effect of the summer period causes less demand;
- Less overbidding. The average ask-sell price differential fell from 8% to 3% (from 30,000 to 14,000 euros) compared to last quarter, causing the average transaction price to fall sharply; and
- The composition of sales in terms of regions and price segments, as there are fewer transactions in the more expensive regions and the higher price segments.

Mortgage market

The mortgage market is stabilising at a point where shorter fixed-interest periods are more attractive to households given the high-interest rates and a deteriorated borrowing capacity. In addition, the number of mortgage applications is decreasing sharply, mainly driven by the withdrawal of refinancers. As refinancing is no longer attractive households prefer to transfer their mortgage conditions to the next property (movers).

Mortgage applications

While the number of mortgage applications reached record levels during the first quarters of 2022 (191,000 and 142,000 respectively), Q3 2022 experienced a substantial drop to a total number of applications of 102,000 (-13.8% YoY and -27.5% QoQ). Despite this drop, the number of applications is still historically high.

The sudden shift to shorter fixed-interest periods, predominantly driven by increased mortgage rates, seems to be stabilising. During Q3 2022, the market share of 10-year fixed-term period applications was 56%, while the market share of 20-year fixed-term period applications was only around 27%. One year ago, during Q3 2021, the market shares were 21% and 57% respectively.

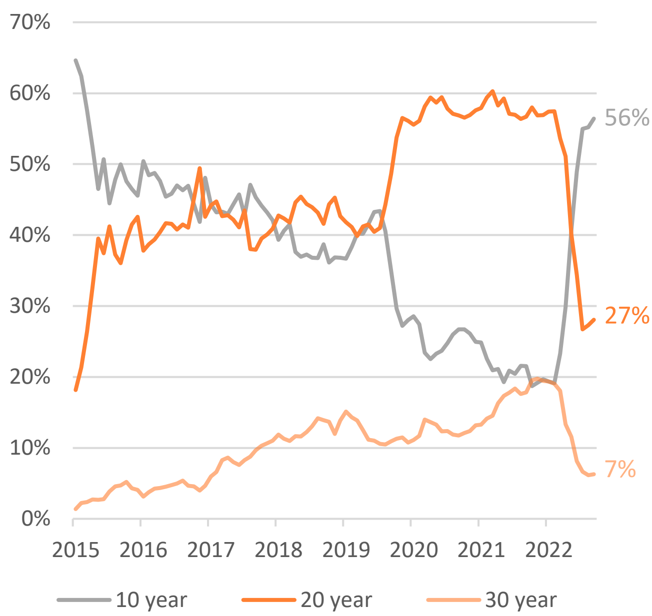


Figure 5: Market share distribution per fixed-rate period, end of September 2022 (Source: HDN)

Since the attractiveness of refinancing has declined sharply due to the higher interest rates, taking the existing mortgage conditions to a new property (the so-called 'movers' feature) has become an attractive option for mortgage borrowers. During Q3 2022, HDN saw a significant increase in interest in mover mortgages.

Number of originated mortgages and market volume

In Q3 2022, mortgage volume fell to €38 billion (-16.5% QoQ and -7.8% YoY). In the same period, the number of originated mortgages fell, in line with the mortgage volume, to 114,000 (-16.4% QoQ and -11.7% YoY).

The drop in mortgage volume is the result of the lower transaction volume and drying-up of the refinancing market. Therefore, it seems plausible that the mortgage market, considering the current lower number of mortgage applications, will shrink in the coming quarters. However, important to note is the fact that the mortgage market was very large in the past years.

Affordability

The National Institute for Family Finance Information (NIBUD) finalised its annual advice on mortgage lending standards for 2023. In the advice, NIBUD states that the impact of inflation is evident and should be taken into account.

Therefore, overall lending standards for 2023 will be slightly tighter than in previous years. As a result of the tightening, households will be able to borrow between 3% and 3.8% less on average[6]. For lower- and middle-income homebuyers, this implies a reduction in borrowing capacity between 5,000 and 9,000 euros. Higher-income homebuyers will be able to borrow between 14,000 and 22,000 euros less on average. When considering an expected wage growth of 3.7% as assumed by the CBS, the tightening will be offset, and households are able to borrow the same or slightly more through 2023.

In practice, however, the tightening of lending standards only has a marginal effect compared to the effect of rising mortgage rates, which have more than tripled YTD. Higher interest rates have reduced the maximum mortgage amount for borrowers by tens of thousands of euros.

Contrary to the tightening, NIBUD advised loosening the rules for second incomes: a second income in a two-person household will count for 100% instead of the current 90%. Besides income, the NHG limit will rise from 355,000 euros to 405,000 euros (with energy-saving measures, the cost limit will be 429,300 euros).

Mortgage interest rates and spreads

While mortgage rates continued to rise in the first half of the year, they developed differently at the start of the third quarter. Driven by a substantial drop in swap rates, mortgage rates fell subsequently.

However, the drop in swap rates was short-lived, as they started rising again in August as central banks increased their policy rates. Eventually, this resulted in even higher mortgage rates. Considering the lowest mortgage rate (early 2022) and the highest (October 2022), mortgage rates have increased by around 3% YTD.

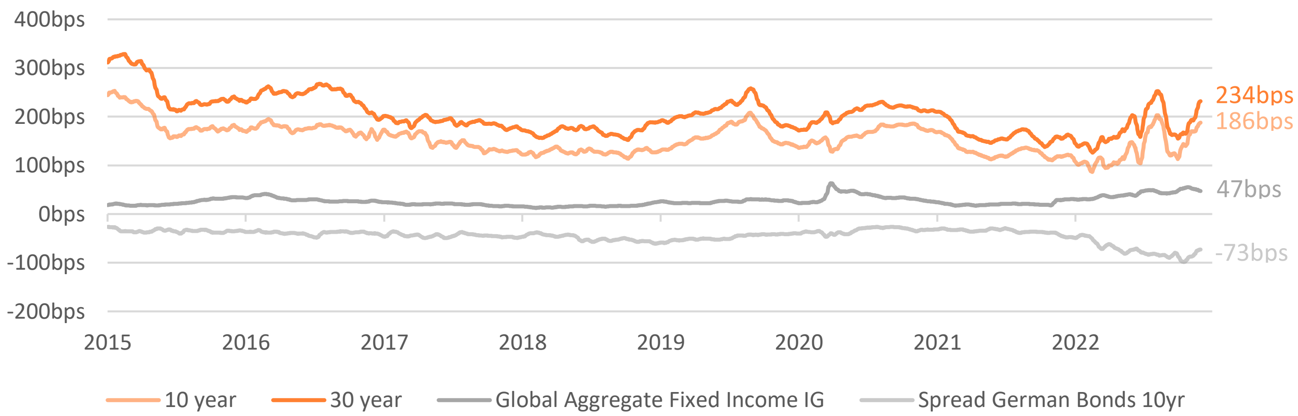


Figure 6: Dutch residential mortgage spreads w.r.t. EUR swap and the spread of other LDI assets, end of November 2022 (Source: DMFCO & Bloomberg)

[6] In the case that income and mortgage rates will remain constant.

In line with previous quarters, mortgage spread levels remained very volatile. These fluctuations were a direct reflection of the volatility in the financial markets and the development of risk-free rates. Whereas spreads reached one of the highest levels in recent years, they fell significantly halfway through the quarter before widening again.

Despite the volatility, Dutch mortgages remained to be an attractive asset class given the high relative value: attractive spreads, a strong credit performance (i.e. low arrears and losses), the increase in risk free interest rates and tight credit spreads in virtually all asset classes (search for yield). Especially, compared to alternative LDI assets such as German government bonds (10 year swap spread) and credits (Spread over swap Bloomberg Barclays Global Aggregate EUR hedged) Dutch mortgages remain attractive from a relative value perspective.

Mortgage performance

The Dutch mortgage market continued to perform very well with low levels of losses and arrears. Moreover, there are still no signs of a substantial increase in the number of losses or arrears.

To allow for a projection of losses for the coming year in the Dutch mortgage market we use public mortgage loans data (European DataWarehouse) and stress this data in the Moody's Portfolio Analyser. The stress tests are based on 4 macro scenarios as described below.

In all scenarios losses are expected to remain low:

1. The Baseline scenario assumes that the growth outlook for the remainder of the year has darkened. A recession is nonetheless avoided. Global oil prices remain elevated for several months before they start coming down, while European natural gas and electricity prices remain high for the next 12 months.
2. The Stronger Near Term Growth scenario assumes global energy prices to decline faster than the base case scenario. Supply bottlenecks improve somewhat more quickly than expected, while slack in the economy proves slightly larger than initially thought.
3. The Moderate Recession scenario assumes geopolitical tensions persist, weakening consumer and business sentiment. Global energy prices remain higher for longer, as do nonenergy commodity prices, exacerbating HICP inflation. Supply bottlenecks persist throughout 2022.
4. The Protracted Slump scenario assumes significant limits to the supply of oil and natural gas, causing energy prices to jump. The double hit of the Russian invasion and the pandemic leads to the re-emergence of political tensions that cause a selloff in financial markets.

Number	Scenario	Expected loss[7]
1	Baseline	1.2bps
2	Stronger Near Term Growth	1.2bps
3	Moderate Recession	1.3bps
4	Protracted Slump	1.4bps

[7] The expected loss is the sum of the values of all possible losses, each multiplied by the probability of that loss occurring over a horizon of 1 year.

Annex I: Key indicators

Indicator	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q-o-Q	Y-o-Y
Consumer confidence	95	75	61	50	41	-9 points ↓	-54 points ↓
Housing market confidence	103	98	95	87	83	-4 points ↓	-20 points ↓
General unemployment	4.1%	3.8%	3.5%	3.3%	3.7%	+0.4% ↑	-0.4% ↓
Inflation	2.7%	5.7%	9.7%	8.6%	14.5%	+5.9% ↑	+11.8% ↑
Mortgage applications	119,393	157,042	191,293	142,019	102,918	-27.5% ↓	-13.8% ↓
Mortgage volume (bn)	€41.25	€44.65	€39.66	€45.60	€38.05	-16.5% ↓	-7.8% ↓
# of originated mortgages	128,726	134,609	117,692	135,997	113,680	-16.4% ↓	-11.7% ↓
House price index	168.6	175.1	182.4	187.5	188.6	+0.6% ↑	+11.9% ↑
Average purchase price	€400,935	€402,726	€426,787	€429,010	€443,042	+3.3% ↑	+10.5% ↑
Transactions	53,875	52,798	43,923	47,382	50,453	+6.5% ↑	-6.4% ↓
ECB refinancing rate[8]	0.00%	0.00%	0.00%	0.50%	1.25%	+0.75% ↑	+1.25% ↑
10-year German Government bond rate	-0.19%	-0.18%	0.55%	1.37%	2.11%	+2.3% ↑	+0.74% ↑
10 years mortgage interest rate	1.30%	1.33%	2.21%	3.76%	4.49%	+0.73% ↑	+3.19% ↑
20 years mortgage interest rate	1.54%	1.63%	2.57%	4.12%	4.54%	+0.42% ↑	+3.00% ↑
30 years mortgage interest rate	1.76%	1.80%	2.66%	4.25%	4.53%	+0.28% ↑	+2.77% ↑
10 years mortgage spread	121.85	105.33	104.35	167.55	147.28	-20.27 bps ↓	+25.43 bps ↑
20 years mortgage spread	121.28	121.40	139.98	198.45	161.28	-37.17 bps ↓	+40.01 bps ↑
30 years mortgage spread	142.43	142.45	156.63	218.63	171.38	-47.25 bps ↓	+28.96 bps ↑

[8] As of November 2nd, the ECB increased their refinancing rate with 0.75% to 2.00%.

Explanation of the indicators

Indicator	Source	Definition
Affordability	**Calcasa**	The percentage of the net monthly income spent on net housing costs.
Building plots	**Kadaster**	The number of pieces of land on which the zoning plan, as documented in the housing act, is housing or commercial property
Consumer confidence	**CBS**	The consumer confidence indicator measures consumer sentiment measured as percentage points of the total answers to the questions on the economic situation of the last and upcoming 12 months, the financial situation of the last and upcoming 12 months and whether now is the right time to make large purchases.
GDP	**CBS**	GDP is a quantity that expresses the size of an economy by taking the sum of final uses of goods and services (final consumption/gross capital formation) plus exports and minus imports
House prices	**CBS /Kadaster**	The house price index for existing owner-occupier homes is based on all sales transactions recorded by Kadaster as well as the municipal valuation of all homes in the Netherlands.
Housing shortage	**ABF research**	The housing shortage is the difference between the housing requirement that is not met (demand side) and the available supply.
Market share	**Kadaster / DMFCO**	Based on mortgage registrations provided by Kadaster, the market shares of different lenders are determined.
Market tightness indicator	**NVM**	The NVM Shortage indicator gives an approximation of the number of options that a potential buyer has in the housing market. The indicator is normally calculated as the offer at the beginning of the month divided by the number of transactions in that month. The NVM covers approximately 75% of the market.
Mortgage spreads	**DMFCO**	The difference between the mortgage interest rate and the interest rate on a 10-year swap.
Mortgage volume	**Kadaster**	The total annual mortgage turnover together with the total number of mortgages provided annually.

Newly built properties / granted permits	**CBS**	The number of granted *building permits* (building environment permits with activity) is documented in the Housing Act. The number of *new constructions* added to the existing stock. The data comes from the Key Register of Addresses and Buildings (BAG).
Transactions	**Kadaster**	Number of home sales registered by the Kadaster and conducted by a notary
Unemployment	**CBS**	The number of people who are between 15 and 75 years old who are not in work but are both actively searching for paid work and are directly available to work.
VEH indicator	**VEH**	Indicator for confidence in the Dutch owner-occupied housing market/willingness to buy a house.
Spread credit benchmark	**Bloomberg**	This is the option-adjusted spread between the Bloomberg Barclays investment grade global credit benchmark and the risk-free rate of return. The OAS considers how the embedded option in the benchmark are likely to change the expected future cash flows and the present value of the security.
Spread German 10yr Bonds	**Bloomberg**	Spread between the yield on a 10 year German government bond and the risk-free rate of return.

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