



Rabobank

Dutch Housing Market Quarterly

August 2011

Economic Research Department

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Summary and conclusions

The market for existing owner-occupied homes experienced a weak second quarter, with both price levels and the number of transactions reaching a new low. The declining transaction volumes and the further increase in the number of homes for sale demonstrate that buyers and sellers are unable to reach agreement. From the buyers' perspective, this is due to the lower borrowing capacity caused by the reduced Nibud rates (*Nibud is the National Institute for Family Finance Information*), the austerity measures implemented by the Dutch government, and the higher interest rates. The European debt crisis has also reduced confidence in the housing market, resulting in a lower demand for owner-occupied homes. Many sellers have so far been unwilling to adjust their prices to current market conditions.

Prompted by the sluggish housing market, the government decided to reduce the transfer tax. This will ensure that buyers and sellers will reach agreement more often. On balance, a total of 125,000 homes are expected to change ownership in 2011; for 2012, this number will be 133,000. The increase in transaction volumes is good news for both buyers and sellers, as they will be able to move more quickly into a home that matches their requirements more closely. The development will also be positive for estate agents, removal companies and civil-law notaries.

However, the reduction in the transfer tax will not bring about any significant changes in price trends. The measure will cause supply to accelerate faster than demand, thereby increasing competition between sellers. Furthermore, buyers' borrowing capacity will remain low as a result of the austerity measures and a further lowering of the financing burden scale, which will negatively affect affordability. Prices at the national level are expected to decline by 2% in 2011 and by another 2.5% in 2012. At the regional level, price trends may vary significantly from the national average.

Over the long term, the new housing sector will be negatively affected by the reduction in the transfer tax, since new homes will become relatively more expensive than existing homes. However, one trend that will be positive for the construction industry is that the number of renovations will potentially increase due to the higher transaction volumes.

It should be noted that reducing the transfer tax is not sufficient to restore the market in the long term; the structural problems in the housing market – including the unnecessarily high risks – require an integrated vision. Rabobank has now taken the first steps towards achieving this objective.

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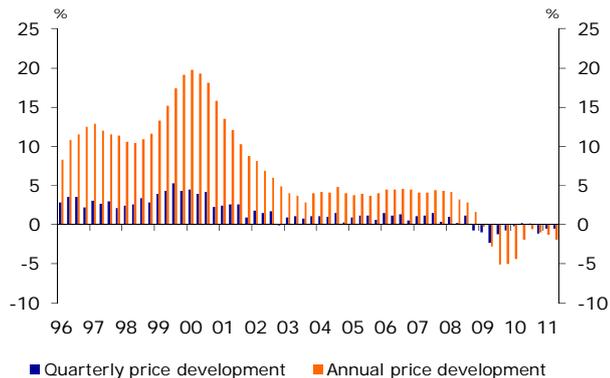
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Market for existing residential properties

Prices decline further in Q2

Second-quarter figures show a further worsening of the market for existing owner-occupied homes. Based on the Price index of Existing Houses (Prijsindex Bestaande Koopwoningen - PBK-index) of Statistics Netherlands/Land Registry, prices in the second quarter were down 0.5% from the previous quarter, following previous drops of 1.1% and 0.5% in the fourth quarter of 2010 and first quarter of 2011, respectively. Prices are currently 1.9% lower than a year ago (see Figure 1).

Figure 1: Price trends for existing residential properties



Source: Statistics Netherlands

Prices are currently 1.9% lower than a year ago (see Figure 1).

Besides the prices, transaction volumes also declined further (see the next paragraph). While this decline did not come as a surprise, it is sharper than expected, suggesting that the disparity between the maximum price buyers are willing to pay and the minimum price sellers are willing to receive is too great

to complete a transaction. The accelerated increase in the number of homes for sale also indicates that the gap between what buyers are willing to pay and what sellers are willing to receive for their homes has further increased. From a buyer's perspective, there are several explanations for this trend, namely the lower borrowing capacity and economic uncertainty. Since 1 January, households can borrow less based on the same income and interest rate than they could a year ago, an effect that has been enhanced by the slightly higher interest rates. The economic uncertainty is mainly the result of the debt crisis currently affecting Europe. Sellers, for their part, have been unwilling or unable to reduce their prices.

The decline in transaction volumes and the increased supply prompted the government to reduce the transfer tax from 6% to 2% for a period of one year. The section entitled 'Transfer tax and forecast' describes the impact of this development on the market. Another measure that was implemented on 1 August is the new code of conduct for mortgage financing. The main aspect of this measure is that households are only permitted to take out mortgages of which a maximum of 50% is interest only. In addition, households are no longer permitted to borrow more than 104% of the home's market value plus transfer tax. In the former situation, households could borrow 110% of the home's market value. With the transfer tax having been reduced to 2%, this rate now stands at 106%.

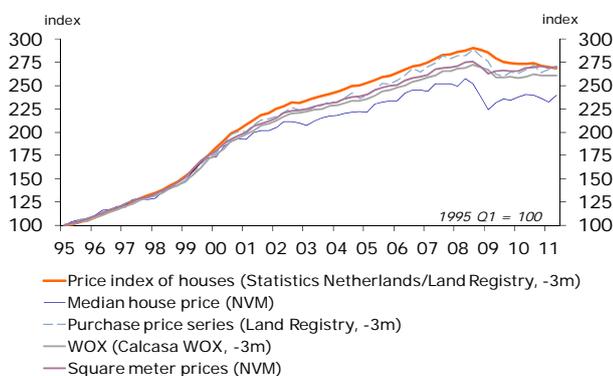
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Since the implementation on 1 August, there has been a discussion of whether mortgage providers should allow households the opportunity to take out mortgages under the National Mortgage Guarantee Scheme up to 108% of the home's market value. Although, on average, households will not be able to borrow much less due to the measure, monthly expenses will increase for households that previously opted to either not redeem or redeem less than 50%. The effects of this measure, along with the adjustment of the Nibud financing burden scale, are described in detail in the two previous quarterly reports. The new measures, combined with the increasing supply and the economic uncertainty, will, on balance, result in a price decline of 2% in 2011 and 2.5% in 2012.

In addition to the PBK-index, there are several other indicators that measure the price levels of existing owner-occupied homes (see Figure 2). Median house prices and square-metre prices recorded by the NVM (Netherlands Association of Real Estate Agents), and the Land Registry's Purchase price series show a price increase in the second quarter of 2011, contrary to the PBK-index. Although the figures produced by the Association are an indication for the Statistics Netherlands (CBS) index for the next three months, it is still too soon to speak of a revival. This is because the series are simply too volatile, as they are not adjusted for the types of homes being sold. A relatively large number of expensive homes were sold during the second quarter – this increase in sales of high-priced homes has caused average transaction prices to rise. The Statistics Netherlands (CBS) index adjusts for this effect.

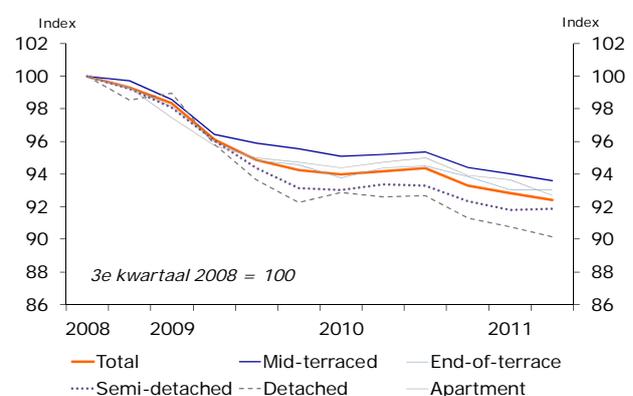
If we break down price trends into the various housing types, our first observation is that price trends per housing type are more volatile. In the second quarter prices of apartments, mid-terrace houses and detached houses were down 1.0%, 0.5% and 0.7% from the previous quarter, respectively. Prices of end-of-terrace houses remained stable, while prices of semi-detached houses increased slightly by 0.1%.

Figure 2: Different indicators



Source: Statistics Netherlands, the Netherlands Association of Real Estate Agents, Calcasa Wox, Land Registry

Figure 3: Price trends based on housing type



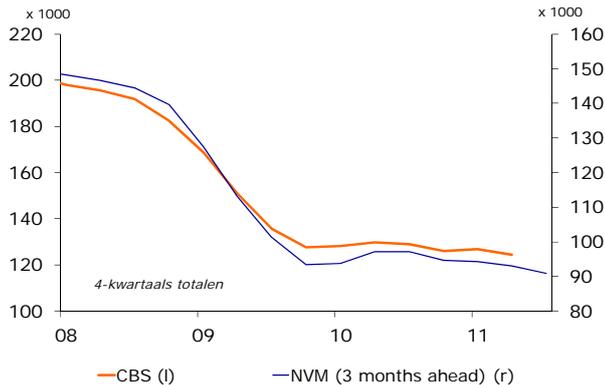
Source: Statistics Netherlands

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Compared to when the index reached its peak in the third quarter of 2008, prices have declined within a range from 6.4% and 9.8%, where it should be noted that the size of the decline is strongly correlated with the type of home:

the more high-end the segment, the sharper the price decline. The only exception to this trend is apartments, whose prices have declined more sharply than the price segment would indicate (see Figure 3). This is because many apartments built during the economic boom did not meet the needs of consumers. While the economy was strong, these homes still attracted buyers, but the current slump in the market has brought to light this incongruity.

Figure 4: Further decline in the number of transactions



Source: Statistics Netherlands and the Netherlands Association of Real Estate Agents

Further decline in transaction volumes

A total of 29,532 transactions were completed in the second quarter of 2011 – down 7.4% from the same period last year. This brought the total number of transactions for the period

from July 2010 to June 2011 to 124,381 (see Figure 4). For a long time, the number of transactions ranged between 126,000 and 130,000 annually. In falling below this range, the market has reached a new low. This also means that the revival that occurred during the first two months of this year was merely temporary. It was due to the fact that the financing burden scale set by Nibud was reduced effective 1 January, as a result of which people were able to borrow less based on the same income and the same interest rate. Up to 1 January, buyers and sellers therefore had an additional incentive to complete transactions prior to that date. This temporary revival is also visible in the months of January and February, as transactions are only registered once the actual transfer is completed. The lower transfer tax will result in slightly higher transaction volumes over the next several months.

The Netherlands Association of Real Estate Agents, which has a market share of 70 to 75%, also reported a decline in the number of transactions in the second quarter. According to the Association, a total of 22,726 homes changed owners – down 8.6% from the second quarter of 2010. The number of transactions for the year was 90,934. As with Statistics Netherlands/Land Registry, this indicates a new low. It is important to note that the reduction in the transfer tax had also not yet been incorporated into the figures of the Association. Since the Association registers transfers two to three months before the Land Registry, the Statistics Netherlands/Land Registry figures will not yet show a revival in the third quarter; this will most likely be in the fourth quarter. For more information, please see the section entitled 'Transfer tax and forecast'.

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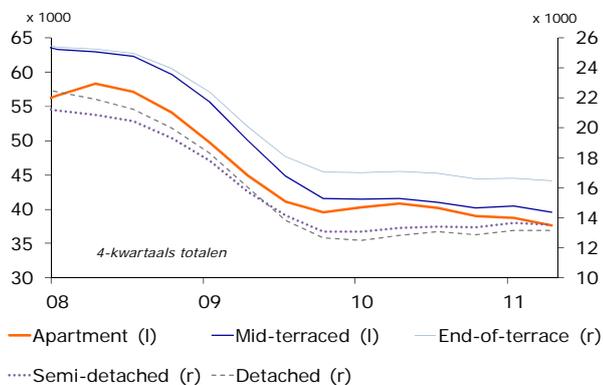
Movements in transaction numbers between the various segments vary significantly. Sales of homes in the low-end segment – i.e. apartments, mid-terrace houses and end-of-terrace houses – are down significantly from a year ago, with transactions declining by 10.9%, 8.4% and 4.1%, respectively. The number of semi-detached homes sold dropped by 4.0%. Positive exceptions include detached homes, the sales of which increased by 0.4% from a year ago (see Figure 5). Accordingly, homes whose prices have declined most sharply since the third quarter of 2008 currently show the smallest decline when we look at movements in transaction volumes for the past year. In that sense, the market still appears to follow economic principles, which would lead us to conclude that an increase in transaction volumes can only be achieved through a further price decline.

Increased supply, but lower average sale periods for homes

The number of days a home is on the market declined to 258 during the second quarter, down from 269 in the first quarter.

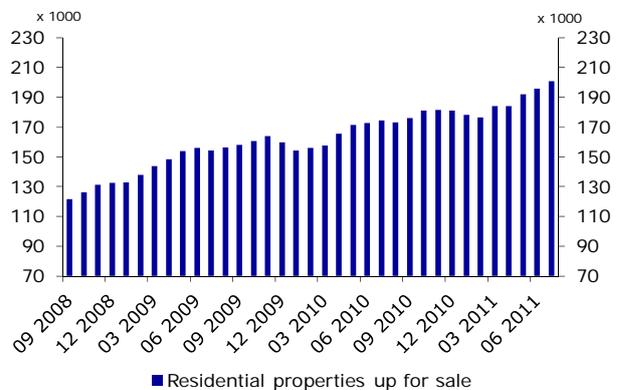
According to the Netherlands Association of Real Estate Agents, this is because a relatively large number of homes are traditionally put on the market during the second quarter, causing the length of the period to drop. Figure 6 shows how the supply has increased. In July, a record number of 200,739 homes were for sale – up 16,648 from April. The sharp increase in the number of homes for sale is also reflected in the higher percentage of homes that were for sale for less than three months. Figure 7 shows that the percentage of homes that were on sale for less than three months increased from 21.2% to 26.4% compared to the previous quarter.

Figure 5: Transactions based on housing type



Source: Statistics Netherlands

Figure 6: Number of homes for sale



Source: Huizenzoeker.nl

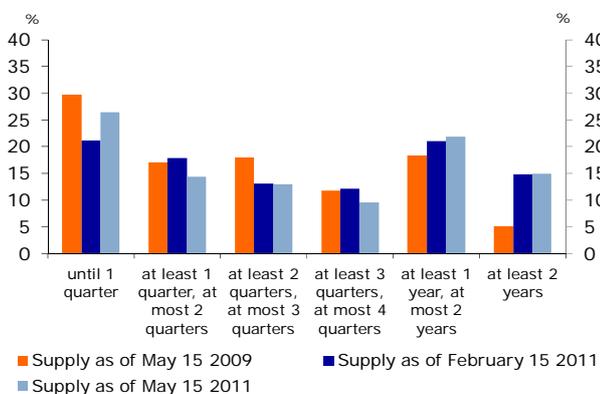
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The percentage of homes that were for sale for more than two years further increased by 0.1 percentage point in the second quarter. The percentage of homes that were for sale for more than two years increased by 9.8 percentage points from two years ago. As described in the previous quarterly report, pressure on a portion of the sellers to sell their home will increase, due to the elimination of the double mortgage interest rate deduction.

Foreclosures

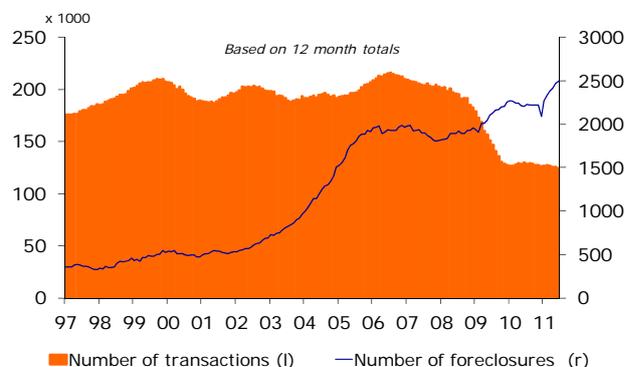
The number of foreclosures increased further during the second quarter of 2011. In this period, a total of 669 home sales were foreclosures – 20.8% more than a year ago. The number of foreclosures on an annual basis amounts to 2,497 (see Figure 8). If we put this number in perspective by comparing it to the number of owner-occupied homes in the Netherlands, we see that the percentage is very low, i.e. 0.06%.

Graph 7: Time on the market for homes



Source: Netherlands Association of Real Estate Agents

Figure 8: Foreclosures up slightly



Source: Statistics Netherlands; Land Registry

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Transfer tax and forecast

Introduction

As part of its housing policy¹, the Dutch government decided to temporarily reduce the transfer tax from 6% to 2%. This measure is effective from 15 June 2011 to 1 July 2012. The purpose of the reduction is to increase confidence in the housing market and boost the number of sales.² Below we discuss the impact of the measure on the market for existing owner-occupied housing. Additionally, based on these insights and the market conditions, we will provide a forecast for 2011 and 2012.

Background

In recent years, there has been a mismatch between supply and demand in the housing market. The growing number of homes for sale and the lower transaction volumes demonstrate that demand has failed to meet supply, indicating that asking prices do not match the prices that buyers are willing and able to pay. The only solution for this mismatch is a price reduction.

More purchasing power for buyers

Due to the reduction in the transfer tax, however, buyers will have more to spend, thereby causing the number of transactions to increase. By way of example: buyers who were previously willing to spend €200,000 on the purchase of a home were actually prepared to pay €220,000 (i.e. including additional costs). The €20,000 difference is due to the 6% transfer tax and approximately 4% other transaction costs. The reduction in the transfer tax has resulted in lower costs – €7,849 in this example. The fact that the transfer tax does not decline by €8,000 is due to the higher purchase amount. Households that are still willing to spend €220,000 on a home, currently have on average €7,547 more to spend when purchasing a home. Sellers who were previously unwilling to drop the price below €205,000 were therefore unable to sell their home, whereas in the current situation one of the parties can sell their home without suffering financially. In that case, the transaction price will hover between €205,000 and €207,547. The number of transactions will increase as a result. CPB (Netherlands Bureau for Economic Policy Analysis)³ has calculated that a 1 percentage point reduction in transaction costs causes the number of transactions to increase by 8%. This would mean that the transaction volume should increase by approximately 32%, which we consider unlikely in the current economic situation.

¹ Ministry of the Interior and Kingdom Relations (2011) *Woonvisie*, The Hague, 1 July 2011.

² We assume that the transfer tax will remain at the current level of 2% after 1 July 2012. However, the Dutch government has not made any formal decision yet.

³ Jos van Ommeren, Michiel van Leuvensteijn (2003) *New evidence of the effect of transaction costs on residential mobility*, The Hague.

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On balance, we expect that the percentage of removals will be approximately 10% higher than it would be if the transfer tax had not been reduced. In addition, due to this measure prices need not be reduced as much as would have been the case otherwise. However, this does not mean that prices will increase, as the price that would balance the market is still lower than the current level.

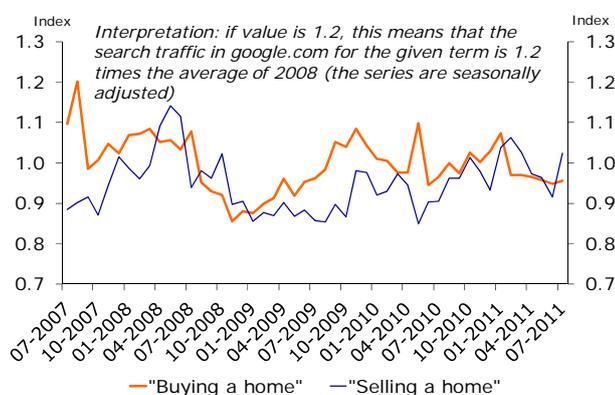
Tightening credit

In the meantime, borrowing capacity has been down as well. Government cuts have had a negative impact on households' disposable income, and in addition households have less money to spend on housing due to the higher health insurance premiums and pension contributions. Nibud, which makes an annual calculation of households' maximum borrowing capacity, is likely to reduce the financing burden scale again effective 1 January 2012. The increasing interest rates in recent months are another reason people are not able to borrow as much as before. Interest rates are expected to remain at the current level over the next several months (see the section entitled 'Mortgage interest').

More potential buyers?

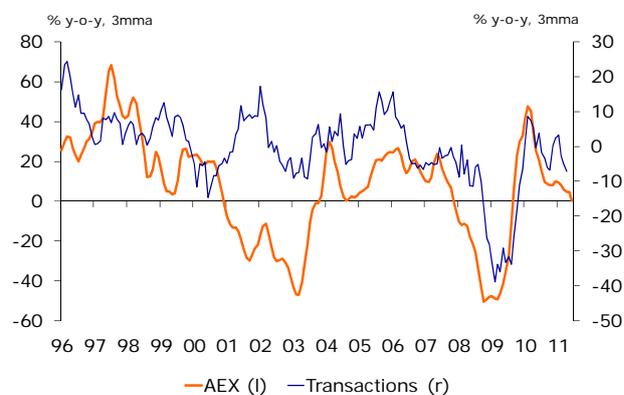
If potential buyers come to judge the market more favourably, demand for housing will increase. A higher demand would result in a larger transaction volume with higher price levels, although initial signs do not indicate a higher demand.

Figure 9: Active sellers, passive buyers



Source: Google, edited by Rabobank

Figure 10: Relationship between AEX and transactions



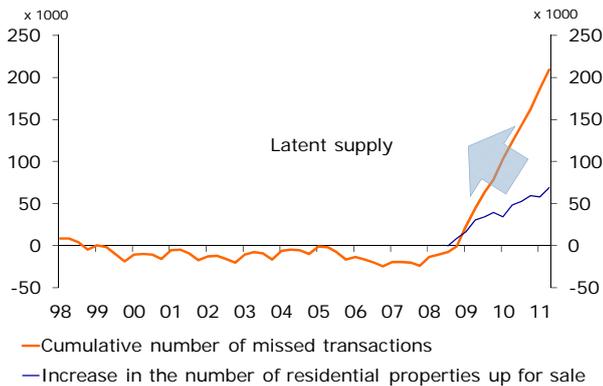
Source: Statistics Netherlands and Reuters EcoWin

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Due to the lack of hard data, such as transaction figures, we checked which of the search phrases produced the largest increase in the number of hits on Google, 'buying a home' or 'selling a home'. As Figure 9 shows, the former

phrase garnered no additional hits, which may be due to the turmoil in the financial markets relating to the European debt crisis. In recent years, there has been a clear correlation between stock market trends and transaction volumes in the Netherlands (see Figure 10). Although this does not reveal any information about causality, it does indicate that it is not likely that the number of transactions will pick up in the immediate future.

Figure 11: Size of latent supply



Source: CBS and huizenzoeker.nl

Increased supply

An additional effect of this temporary measure is that people who were previously willing to sell their home but did not put it on the market due to unfavourable conditions are now

seizing the opportunity to do business. Figure 11 shows an estimate of the size of the latent supply. This is calculated by deducting the increase in the number of owner-occupied homes for sale from the number of missed transactions. The number of missed transactions is the result of the average number of home sales in a 3-month period preceding the crisis less the current number of transactions. This currently involves a total of 140,000 homes. One consequence of this trend is that the supply of homes will further increase in the coming months. Despite the fact that we must be careful in interpreting Figure 11, this confirms our impression that more homes will be offered for sale, i.e. in addition to the current generous supply. As a result, competition between sellers will be even stronger than is already the case, resulting in lower prices for all transactions. This cancels out the price-increasing effect of the lower transfer tax.

Conclusion and forecast for 2011 and 2012

In the period preceding the implementation of the measure, there was a serious mismatch between supply and demand, with buyers refusing to pay the asking price and sellers unwilling to sufficiently reduce the price. This has caused the number of transactions to further decline and the number of homes for sale to increase. In the immediate future, a reduction in the transfer tax will result in a larger number of transactions and an increase in the pace of the adjustment process. The main effect of this trend is that it will reduce the gap between the original asking price and the potential offer to be made by buyers. This could potentially cause the number of transactions to increase by approximately 10%. An estimated 125,000 homes will change owners in 2011; in 2012, this number will be 133,000.

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The increase in transaction volumes is a positive trend for both buyers and sellers, as the costs of adjusting the housing situation to the possible changed preferences of homeowners are lower. It will also have a favourable impact on the labour market, because it will become less expensive for people to live in those areas where they can find the most suitable jobs. Estate agents, removal companies and civil-law notaries are also set to benefit from the increased transaction volume, as they partly depend on these volumes for their income.

However, in order for the market to recover prices must be reduced further. The lower transfer tax will mainly cause supply to increase significantly, while there will be little or no additional demand, and sellers are having difficulty selling their homes in the current market. This problem is compounded by a further reduction in buyers' borrowing capacity. Consequently, prices will decline by an average of 2% this year and by 2.5% in 2012.

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New housing completions

The temporary reduction in the transfer tax from 6% to 2% is a mixed blessing at best for the homebuilding industry. With no transfer tax payable upon the purchase of a new home, purchasing costs payable by the purchaser are significantly lower. However, the reduction of the transfer tax has significantly reduced the difference with the purchase of an existing home, which means buyers are more likely than before to opt for an existing home. The measure will, however, likely result in an increase in the number of removals, which often involve a renovation. If, through this measure, the government succeeds in increasing confidence in the housing market on a permanent basis, demand for new homes could potentially increase as well. However, we expect that this trend will result in a decline in the number of new housing projects in the immediate future. In the medium term, the 'temporary' measure will therefore presumably cause a temporary decline in the number of new homes.

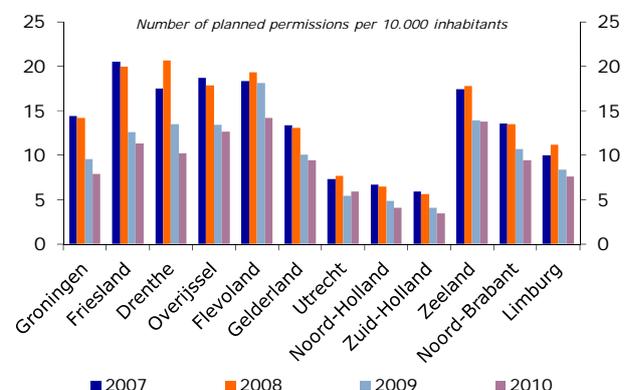
A total of 56,000 new homes were completed in 2010 (see Figure 12). At an estimated 55,000, the number of new homes constructed will barely change in 2011, and it will likely be even lower in 2012 – around 52,000 – based on the number of planning permissions granted in 2010. The effect of the reduction in the transfer tax, which in the short term will likely result in a temporary decline in the number of new construction projects, will presumably only be visible after this period. Accordingly, it is not unlikely that the number of completed homes will decline further in 2013. A housing shortage is likely to arise in the long term, although there are significant differences between the various provinces in terms of the number of planning permissions granted. More than half of all planning permissions are granted in North Brabant (19%), Gelderland (15%), Overijssel (12%) and South Holland (10%), which also happen to be the country's most densely populated provinces. Based on population numbers, the majority of planning permissions are granted in the other provinces (see Figure 13). The number of permissions granted declined substantially in all provinces in 2009 and 2010.

Figure 12: Number of new homes remains low



Source: Statistics Netherlands

Figure 13: Slump in the number of planning permissions



Source: Statistics Netherlands

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Mortgage interest

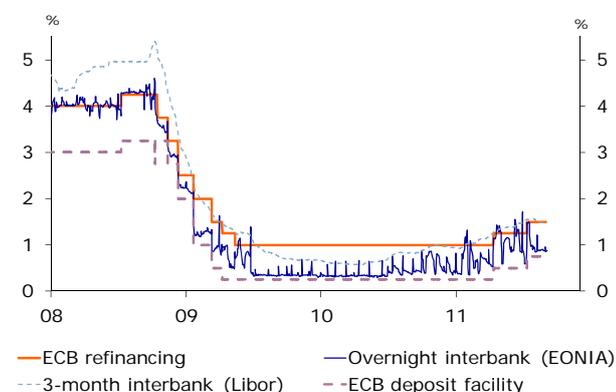
The ECB calls a time-out

After increasing the benchmark interest rate by 25 basis points to 1.50% in April and July of this year, the European Central Bank did not change the rate in August (see Figure 14). In light of the renewed turmoil in the financial markets, banks once again have the opportunity to take advantage of the ECB's unlimited borrowing facility for a period of six months. The ECB believes that economic growth in the eurozone is fraught with uncertainty, while price stability is still subject to upside risk. We assume that the ECB will not raise interest rates again in the immediate future. First, there are various signs pointing to a slowdown in economic growth in the eurozone. Second, the EU agreement of 21 July has not been able to ease concerns regarding the debt problems of the peripheral euro countries. If European policymakers do not succeed in implementing long-term measures to control the crisis in the near future, interest rates will not be raised next year either.

Panic in the capital market

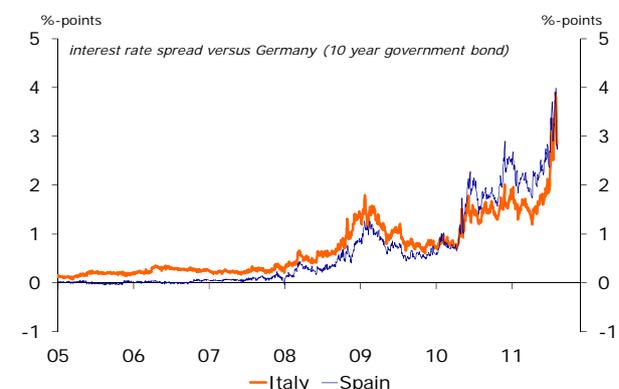
Failure to take a decision regarding a new aid package for Greece and Moody's credit downgrade of Portugal are resulting in significantly higher interest rates in all Southern European countries. In Spain and Italy, in particular, interest rates on 10-year government loans increased substantially (see Figure 15). However, the relief in the markets after the EU agreement was reached on 21 July was short-lived. First of all, there is a risk that, now that the Greek debt has been declared untenable, the debts of other peripheral Member States will also be grouped into this category. In addition, the plan to provide the EFSF with more scope is being challenged. For example, the fund does not have the cash available to quickly intervene when market conditions call for it. There is also the fact that the European emergency fund is not large enough to support countries such as Spain and Italy if necessary. This is because it remains to be seen whether

Figure 14: No more interest rate hikes in the immediate future



Source: Reuters EcoWin

Figure 15: Spain and Italy under fire



Source: Reuters EcoWin, Rabobank

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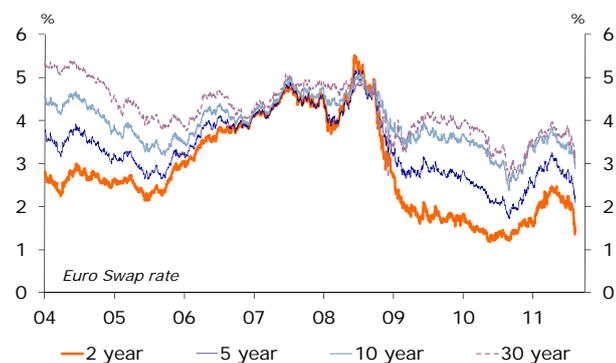
preventive measures on the part of the emergency fund will not meet with resistance among the triple-A nations. The ECB's announcement that it would be buying Spanish and Italian government bonds was necessary in order to restore

calm in the financial markets in the short term. However, the European Central Bank has assumed the credit risk, which, in the event of loss on the government bonds purchased, will ultimately be borne by the Member States. The debt problems involving the European periphery were compounded by the political conflict in the United States regarding the debt ceiling increase, and the austerity measures that also drove down long-term interest rates. For the first time in its history, credit rating agency S&P decided to cut the credit rating for long-term US government-backed bonds from triple A to AA+. The preliminary solutions reached by European and

US politicians do not provide an answer to fundamental economic and budget problems in their countries. We expect that long-term interest rates will remain low in the immediate future, also in view of the economic growth slowdown in the second half of the year (see Figure 16).

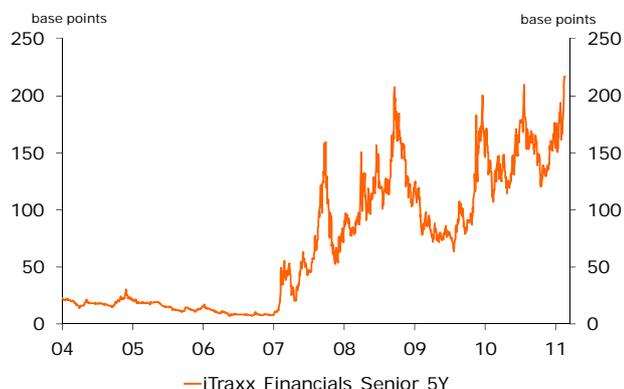
While the negative sentiment in the financial markets has resulted in lower money market and swap rates, risk premiums are increasing again (see Figure 17). As a result, banks' financing costs are higher than the usual comparison with these interest rates would suggest. We expect that the upward trend in mortgage interest rates, which first emerged in early 2011, will be followed by a flat pattern in the second half of this year (see Figure 18).

Figure 16: Rising tension in the capital market



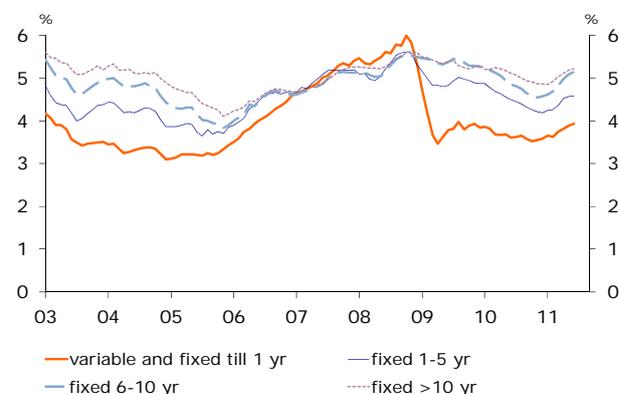
Source: Reuters EcoWin

Figure 17: New rise in risk premiums



Source: Reuters EcoWin

Figure 18: Mortgage interest rates on the increase



Source: The Dutch Central Bank

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Affordability

The Rabobank Affordability index measures the affordability of an average owner-occupied home for a family with an average household income in the Netherlands. The index is a snapshot, which means it does not take into account any changes in, for example, a family's income situation as a result of unemployment. If the index has a value of 100, gross monthly expenses account for 30% of gross income. This is based on the purchase of an average-price home and average-income household. If the index value exceeds 100, then gross monthly expenses account for less than 30% of gross income, and vice versa.

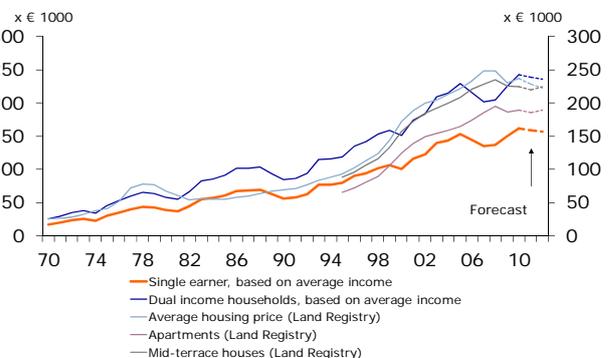
The Affordability index for double-income households is expected to reach 104.4 this year and 105.8 in 2012 (see Figure 19). The living expenses of double-income households would therefore comprise less than 30% of their income. In addition, housing expenses as a percentage of income are lower than in previous years. The increase in affordability can be attributed almost entirely to the expected decline in average house prices, given that the mortgage interest rate is expected to remain stable in the coming months. Single-income households, in particular, are having difficulty entering the homebuyer market. The Affordability index for this group of potential buyers is expected to reach 69.6 this year. The maximum mortgage is not nearly sufficient for them to be able to afford the average price of a home or apartment (see Figure 20). This is especially true for first-time homebuyers. Without any savings to their name, it is virtually impossible for this group to finance their own home. Added to this is the fact that the Affordability index does not take into account any increase in expenses other than housing expenses. Since other fixed expenses (such as pension contributions and health insurance premiums) are on the rise, the spending limit for housing expenses is declining more sharply than the index would indicate. However, this is offset by the fact that potential buyers can temporarily benefit from the lower transfer tax.

Figure 19: More affordable housing



Source: CPB Netherlands Bureau for Economic Policy Analysis, Statistics Netherlands/Land Registry, Reuters EcoWin, Rabobank

Figure 20: Maximum mortgage not high enough



Source: CPB Netherlands Bureau for Economic Policy Analysis, Statistics Netherlands/Land Registry, Reuters EcoWin, Rabobank

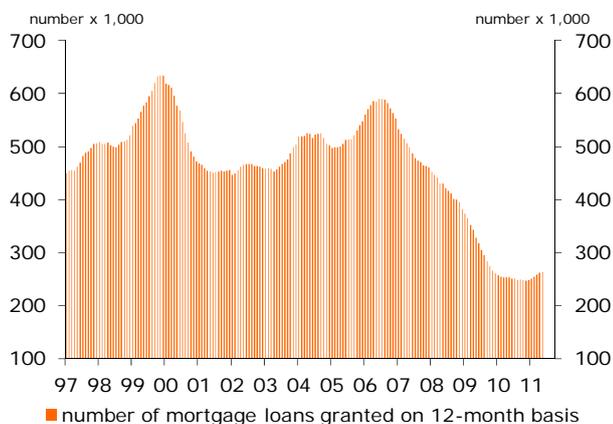
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Mortgage market

Data provided by the Land Registry show that more than 108,000 mortgages were provided during the first five months of 2011. The number of mortgages provided increased by more than 15,000 from the same period last year. The largest increase occurred in the first quarter of this year and can be attributed mainly to the number of re-mortgages, which increased substantially. Premature re-mortgaging was financially appealing due to the lower mortgage interest rates in the autumn of 2010. Additionally, the adjusted Nibud finance charge rates for 2011 and the implementation of the more stringent code of conduct for mortgage financing effective August 2011 may prompt homeowners to bring forward the re-mortgage of their home. A total of 270,000 mortgages are currently provided in the Netherlands on an annual basis; this represents a slight increase from the trough in autumn 2010 (see Figure 21). Since mortgages are recorded in the Land Registry's system with a delay of several months, the effect of a lower transfer tax rate, and therefore growing transaction volumes, are likely to be reflected in the data only during the fourth quarter.

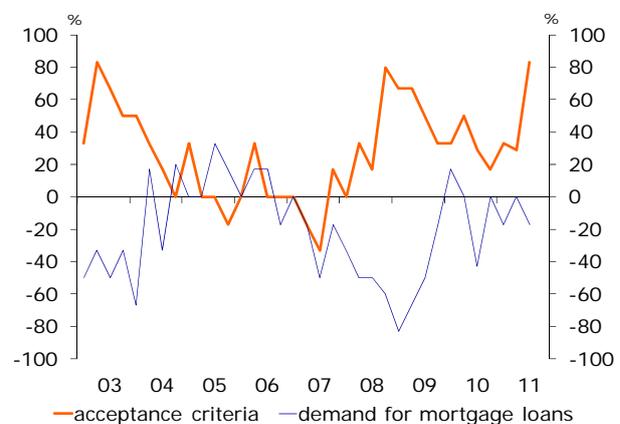
Based on the assumption that the lower transfer tax rate represents a temporary measure and given the stricter standards for mortgage lending, we do not expect any significant growth in the number of mortgages provided this year or next year. The number of banks that have announced they will tighten their credit terms in the third quarter of this year has increased substantially, bringing it to the highest level since autumn 2008 (see Figure 22). Banks are also anticipating a decline in the demand for mortgage loans in the third quarter of this year, which is chiefly due to the deteriorating economy and lower confidence. However, this does not take into account the lower transfer tax rate, as the survey is completed on the first calendar day of the quarter.

Figure 21: More mortgages provided in first half of 2011



Source: Land Registry, Rabobank

Figure 22: Banks tighten acceptance criteria for mortgage loans



Source: The Dutch Central Bank

The housing market of the future

In mid-June, Rabobank presented a proposal in the media aimed at finding a solution to both current – i.e. temporary – problems and long-term problems in the housing market. The main component of the proposal, which contains a combination of measures for both the owner-occupied and rental markets, is to only provide mortgages based on an annuity repayment schedule to new applicants in the future. The measures, which are set out in a national agreement to which all the parties involved commit for the long term, create tranquillity and confidence, and in the long term they will result in a more stable and better-performing housing market.

Long-term problems in the housing market...

The current problems in the housing market are largely the result of a lack of confidence caused by the financial crisis and the subsequent recession. The political discussion on housing market reform has caused confidence to decline further. In addition to this temporary confidence problem, the housing market has also been beset by a number of long-term problems.

First, we may question the effectiveness and efficiency of the government's intervention in the housing market. On the one hand, the tax incentives for homeowners have resulted in a greater demand for owner-occupied homes and in increasing house prices, while the housing supply shows little flexibility. One disadvantage of this is that potential buyers are spending more on owner-occupied homes than is desirable from a social perspective, and that, due to the tax regulations, they finance their purchase with debt as much as possible. On the other hand, the rent regulation combined with the lack of regular means testing in the social rental sector increases the problem of the skewed rent-to-income ratio, as well as resulting in long waiting lists. Higher-income households unfairly occupy social rented sector accommodation, thereby reducing the availability of affordable rented housing for low-income groups.⁴ The idea of moving to a more expensive rented home tends to be unappealing to the first category of tenants, as any increase in quality cannot match the financial benefits of social rented sector accommodation that is priced too low. Transfer to owner-occupied homes is also limited, due to the major difference in price between social rental sector and owner-occupied housing. First-time homebuyers, in particular, are experiencing the disadvantages of this and tend to have difficulty entering the owner-occupied market. In the social rental sector, this group faces long waiting lists, while at the same time not being able to lend a sufficient amount of money to purchase a home. The lack of a well-developed private rental sector with free rent setting is another cause of problems: only 5% of tenants in the Netherlands rent homes in this segment of the market.

⁴ Depending on the definition, this involves between 800,000 and 1,000,000 households. In addition, there is another group of households that is eligible for social rental housing but is currently on a waiting list. See: T. van Hoek (2009), *Hervorming van de woningmarkt*, Economic Institute for the Construction Industry.

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In addition to intervening in the housing market by means of tax instruments and rent regulation, the government also exercises control through its strict land-use and zoning regulation. These policies determine the availability of land for housing construction, which means they have a considerable impact on house prices. As newly built homes must also comply with a series of detailed requirements, it takes some time before the housing supply can adapt to demand. Despite the government's ambitious goal of completing 80,000 new homes a year, the production of new homes has been in decline since the 1970s. Due to the credit crisis, the number of planning permissions and completions has fallen to around 50,000. Although the quantitative and qualitative housing shortage at the national level will increase over the next several years, regional differences will remain substantial as well. In peripheral areas in the Netherlands, plans are underway to demolish the partially vacant housing stock, whereas areas in the Randstad conurbation are faced with a long-term housing shortage. In addition to a quantitative mismatch, the qualitative incongruity between supply and demand in the housing market is at least as significant. For one, the housing stock includes few expensive rental homes and affordable owner-occupied homes. The significant focus on building homes in VINEX residential developments (i.e. designated by the government for future urban development) has been the subject of growing criticism, while construction in urban areas is a slow-going process.

Finally, the Netherlands has an excessively high gross mortgage debt. With a gross mortgage debt of approximately 105% of GDP, it ranks first in this category internationally.⁵ Since the late 1980s, an increasing number of financial products have emerged that take maximum advantage of the tax scope offered by the mortgage interest rate deduction. Coupled with the more liberal financing options available since the early 1990s and the higher house prices, this has resulted in a sharp increase in the gross mortgage debt. This high debt position could potentially seriously undermine the stability of the Dutch economy and the financial system, particularly during times of economic stress.⁶ While this high gross mortgage debt is offset by substantial capital, this cannot prevent households from becoming more vulnerable to fluctuations in the price of their own homes.⁷

⁵ European Mortgage Foundation, 2009.

⁶ There have been repeated warnings about this since the turn of the century, including by the IMF and the OECD. See also: IMF (2011). Kingdom of the Netherlands - The Netherlands 2011 Article IV Consultation: Preliminary Conclusions, March 2011.

⁷ The Dutch pension system is superior to those of most other countries, with home ownership tending to be a key pension provision. In addition, consumer credit plays a relatively less important role in the Netherlands, due in part because a portion of the demand for this type of credit is absorbed by mortgage loans. From a macroeconomic perspective, it is important that the Netherlands has a national savings surplus.

...call for long-term solutions

To start with the latter problem, the mandatory provision of mortgages based on an annuity repayment schedule can potentially result in a gradual decline of the high gross mortgage debt in the long term. Annuity mortgages are characterised by the fact that in the first few years the share of interest in relation to repayment is relatively large, resulting in a comparatively generous tax advantage. The major benefit of annuity repayment is that homeowners have repaid their loan at the end of the mortgage term. In order to limit the negative effects on-home transfers, the transfer tax in its current form must be amended.⁸ One alternative might be a transfer tax payable on the result upon the sale of the home. In order for the proposed measures to have the desired effect, it is vital that the current tax treatment of owner-occupied homes remains unchanged, as the provision of annuity mortgages will be a smaller burden on public finance over the long term.

The disadvantage of making annuity repayment compulsory is that it significantly limits households' freedom of choice. A hybrid form where households can choose between various types of mortgages but where the taxation on the home is based on annuity repayment would solve this problem. This is because such a policy would encourage households to repay their mortgages while at the same time having the option to choose from different types of mortgages. However, this option requires political support, which is clearly lacking in the present climate. The proposal presented must therefore be regarded as second best, yet more feasible for the time being.

Mortgage providers must also be given sufficient scope again for custom solutions and professional judgment; in many cases, this will involve more generous credit options for households. Contrary to popular belief, the amount of the mortgage is not more likely to lead to problems for first-time homebuyers than it is for current homeowners. This is true both for the past and the current situation. By providing high-potential first-time homebuyers, in particular, with more options, the price-decreasing effects of implementing an annuity mortgage can be partially reduced.

In addition to the changes in the owner-occupied housing market described above, it is also important that restrictions to market-driven prices are eliminated in the rental market. The introduction of free rent setting would help resolve problems relating to waiting lists, the skewed rent-to-income ratio, and the limited opportunities to transfer from the owner-occupied housing market to

⁸ Empirical research shows that a reduction in transaction costs by 1%-point increases transaction volumes by 8%. Elsewhere in this quarterly report, we stated that the recent reduction in the transfer tax from 6% to 2% also results in an increase in the number of transactions.

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the rental market. The problem of a skewed rent-to-income ratio can also be countered by replacing once-only means testing upon entry into social rental homes with means testing on a regular basis.

The proposed combination of measures will ensure a better-performing and more stable housing market in the long term. The provision of mortgages based on annuity repayment schedules is not only less of a burden on public finance in the long term; it also reduces households' financial vulnerability.⁹ Furthermore, reforms in the owner-occupied and rental markets result in greater overall prosperity, as the choice of homes is more in line with households' income and preferences, and because a more dynamic housing market also creates more labour mobility.

⁹ Households that make no payments at all are particularly vulnerable, as the entitlement to mortgage interest rate deduction expires after 30 years.

Predictability of the regional housing market

In each edition of the Dutch Housing Market Quarterly Report, we provide a forecast of house prices and transaction volumes for the next two years. There are significant regional differences in house prices, both in terms of amounts and in terms of trends. We have not provided any regional outlooks to date, and to make up for this we conducted an econometric study over the past few months into the possibility of forecasting both house prices and transaction volumes at the COROP level (Note: COROPs are regional areas in the Netherlands used for the purpose of analysis). Although we can provide estimates of house prices, it is not possible to predict regional transaction volumes, particularly in times of economic crisis.

Data and methodology

In providing a forecast for house prices, we take into account past results. It will be interesting to see how these levels will develop in the future. The purpose of this study is therefore not to explain house prices at the regional level, but rather to be able to predict whether house prices in a particular region are likely to increase or decrease in the future. In order to determine house prices, we use data from the first quarter of 1995 provided by Statistics Netherlands. This represents an index of house prices, adjusted for the composition effects of homes sold.

In order to be able to predict house prices, it is important to know what factors determine these prices. The first step in the study was to find potential explanatory factors based on past economic research and logical reasoning. The explanatory factors that turned out to be decisive from an econometric perspective were then used to provide a forecast per individual region.

Explanatory variables

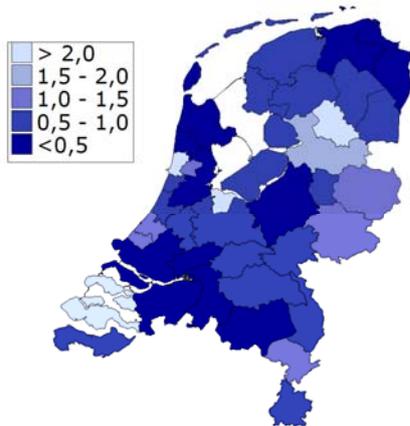
Factors that have a decisive impact on house prices were identified through analyses of the Netherlands and three different COROP areas, i.e. *the Greater The Hague Area, South-West Friesland, and Het Gooi en Vechtstreek*. These three COROP regions were selected due to their great diversity in aspects such as population density and employment. The factors that have an impact in these COROP regions have been incorporated into the model that was designed to provide forecasts for all COROP regions.

It is striking that trends in house prices in the previous period, in particular, explain the change in future house prices. If, during the previous two quarters, house prices increase by 1 percentage point, this will result in an increase of 0.51 percentage points in current house prices.

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The fact that trends in house prices during the previous quarter are so significant indicates that the housing market responds very slowly to changing market conditions. In any event, house prices are slower to adapt to market conditions

Figure 23: Difference between house prices forecast and actual house prices 2008 (expressed in percentage points)



Source: Statistics Netherlands & Rabobank

than are transaction volumes, as demonstrated after the third quarter of 2008. This can be explained by the fact that, when faced with deteriorated market conditions, it is easier for home sellers to take the house off the market than to substantially lower the price of the house. This will only happen when there is an urgency to sell, for example when someone has already purchased another house and wants to avoid paying a double mortgage. Buyers, for their part, will wait to buy until prices have declined further.

In addition to the significant impact of delayed house prices, disposable income at the regional level affects these prices as well. The difference with the difficult-to-predict transaction volumes is that movements in transaction

volumes are determined solely by national indicators such as the AEX index and mortgage interest rates. Accordingly, trends in the regional housing market are only impacted by regional factors in the case of house prices.

Transaction volumes, on the other hand, can be determined by specific regional factors. In a community that is home to many farms that are passed on from father to son throughout the generations, transaction volumes will likely be lower than in communities with many young first-time homebuyers making careers for themselves.

Forecasts

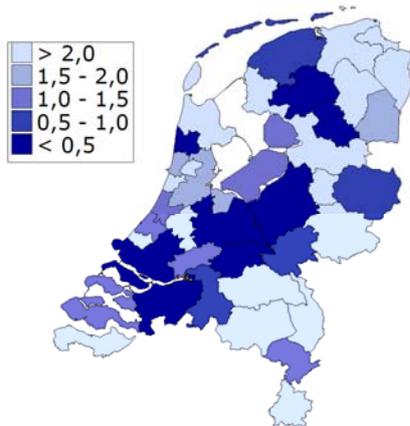
The second step of the study was to predict house prices and transaction volumes per individual COROP region, based on the explanatory variables that impacted house prices during the first step. These forecasts were then compared with actual developments in these regions in terms of house prices.

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During the economic crisis, a new trend emerged in house price development. After steadily increasing since 1995, house prices have been in decline since the fourth quarter of 2008. In our study, we distinguished between pre-crisis models

and post-crisis models in order to assess the impact of the change in trend on the predictability of house prices.

Figure 24: Difference between house prices forecast and actual house prices 2010 (expressed in percentage points)



Source: Statistics Netherlands & Rabobank

Results before and during the crisis

The growth of the house price index is determined by comparing the average for each year with the average for the previous year. The average absolute difference between the values forecast and the actual values for the first three quarters of 2008 for each COROP region is 0.82 percentage points, which means that the estimate varies by an average of 0.82 percentage points from the actual value. For the Netherlands as a whole, this difference averages 0.07. The average housing index for 2007 was 108.95. The econometric model predicted an average housing index of 112.20

for the first three months of 2008, while the actual housing index for the first three quarters of 2008 was 112.13. In the most densely populated – and therefore more significant – regions, including the Greater Amsterdam Area and the Greater Rijnmond Area, the rates are 0.03 and 0.00, respectively. Figure 23 shows all differences per COROP region. The darker the colour of the region, the more reliable the model is in predicting price trends. The figure shows that the regions located in South and North Holland, North Brabant and Groningen perform well, while more peripheral areas such as Zeeland and the east of the Netherlands lag behind. The average difference on an annual basis between actual house prices and house prices forecast for the model during the crisis is 1.86 percentage points.

This difference is obviously substantial, as house price trends in normal economic times also tend to hover around 2%. The differences for the individual COROPs between the trends forecast and actual trends in house prices in 2010 are shown in Figure 24. Explaining price levels for 2010 has turned out to be significantly more difficult. The figure shows that peripheral areas, in particular, have difficulty keeping the discrepancy between actual values and values forecast to a minimum. This is mainly due to a sharper actual decline in house prices in these regions than was anticipated based on the forecast, which would indicate that factors other than fundamentals, such as uncertainty, have played a key role in the housing market, especially in the recent past.

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This means that the accuracy of our forecasts decreased during the crisis, as evidenced by, among other things, the number of regions where the difference is less than 1%. This number is 31 (including the Netherlands as a whole) based on the pre-crisis model and only 12 based on the version of the model used during the crisis.

The major difference in the 2010 model: Q4 is explained by the fact that a trend break cannot be accommodated. Starting in the first quarter of 1995, the econometric programme forecasted a positive trend, with a minor rupture of five quarters at the end of the period. Whereas in 2008 the programme still observed trends and could make accurate predictions, this became more uncertain once this trend was reversed. Due to this larger difference between actual and forecasted values, it does not make sense to provide a forecast for the last two quarters of 2011, due to the risk of making too great an error on account of the crisis. However, once the market has stabilised a new, specified model will be able to make accurate predictions. It has been demonstrated that this is possible during times when trends in house prices are stable.

In addition to research into house prices, a study was conducted into the predictability of transaction volumes at the regional level. However, this study showed that the most effective models indicated a discrepancy of 7.66% before the crisis and of 12% during the crisis. These figures are too unreliable for use, which means that it is easier to predict house prices than transaction volumes. This is most likely due to the more volatile nature of the latter.

Conclusion

At the regional level, it is easier to forecast price trends in the housing market than to predict transaction volumes. There is also the fact that the predictability of the models has decreased due to the economic crisis. Any shocks that cause a departure from normal market conditions are difficult to incorporate into the model. While at the COROP level regional house prices can be forecast in normal market conditions, a policy measure such as the elimination of the transfer tax could potentially have a major impact on the accuracy of these predictions. It is therefore important to continue making economic analyses of the housing market, a process that can be supported by the econometric model developed. This is essential, as the sole use of a previously specified econometric model to forecast house prices does not produce accurate results.

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Key data

House prices

Year-on-year change (%)	2009	2010	2011 ^a	2012 ^a
NVM (median house price)	-7.1	3.1	-1	-1.5
Land Registry (purchase prices)	-6.4	0.3	0.5	-2
Statistics Netherlands/Land Registry	-3.3	-2.0	-2	-2.5
CALCASA WOX	-3.3	-0.3	0	-2.5

Numbers

X 1,000	2009	2010	2011 ^a	2012 ^a
Sales transactions	128	126	125	133
New housing completions (rental and sale)	83	56	55	52

Numbers

	2009	2010	2011	2012
Involuntary sales	2,256	2,086		

Key economic data (June 2011)

	2009	2010	2011 ^a	2012 ^a
GDP (volume growth in %)	-3.5	1.7	2	1.75
Inflation (%)	1.2	1.3	2	1.75
Unemployment (%)	4.8	5.4	5	5

Rabobank Affordability index

	2009	2010	2011 ^a	2012 ^a
Affordability index ^b	98	106	104	106

Interest rate^c

Level (%)	11 August 2011	+3m ^d	+12m ^d
3-month eurozone	1.55	1.55	2.05
10-year euro swap	2.80	3.10	3.50
Mortgage interest rate. 5-10 years fixed ^e	5.14		

^a Rabobank forecasts

^b The Rabobank Affordability index is calculated based on average house prices (data provided by the Land Registry) and average household income (data provided by Statistics Netherlands). This is based on an annuity mortgage with a term of 30 years for a foreclosure value of 80% of the market value and a monthly expense quote of 30%. If the value exceeds 100, an average home is easily affordable. If the value is lower than 100, the price of such a home is less accessible for buyers not using their own assets.

^c Forecast by Financial Markets Research, Rabobank International

^d 3-month outlook and 12-month outlook, respectively

^e Monthly average for June 2011 – Dutch Central Bank

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Colophon

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