

DNB Occasional Studies
Vol.11/No.1 (2013)

Funding problems in the mortgage market

DNB
Occasional Studies

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Central bank and prudential supervisor of financial institutions

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Occasional Studies

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Table of contents

	Summary	7
1	Introduction	9
1.1	More expensive and less stable capital market funding	11
1.2	Strained capital market conditions also drive up mortgage rates via other channels	12
1.3	Estimated impact of funding charges on mortgage rates	13
2	Less competition between banks since the banking crisis	19
3	More stringent capital requirements	21
	Appendix 1 Empirical analysis of funding gap and deposit rates	23
	Appendix 2 Detailed results	27

Summary

Dutch households have the second-highest mortgage debt in the world (108% of GDP), but they also save a lot, mainly in the form of compulsory pension savings schemes. However, as Dutch pension funds predominantly invest abroad, banks rely largely on the international capital markets to fund their mortgage business. Until the outbreak of the financial crisis, this was hardly a problem; now it is. As Dutch households borrow heavily to buy their homes and because house prices are currently falling, international investors see Dutch mortgages as increasingly risky. They are therefore less willing to make mortgage funding available to Dutch banks or charge a higher price for this. Dutch banks also have less access to foreign deposits. For this reason, Dutch banks are turning to domestic deposits as a more attractive source of funding. This explains why interest rates on savings accounts are higher in the Netherlands than in other countries. The more limited availability of stable market funding has also highlighted the refinancing risks for banks, which is prompting them to curtail their mortgage lending, usually by charging higher interest rates. This development is reinforced by rating agencies that are increasingly looking at the loan-to-deposit ratio when assessing the creditworthiness of banks. This also gives banks an extra incentive to attract a larger share of the scarce savings deposit base by offering relatively high interest rates. In addition, the introduction of the net stable funding ratio will encourage banks to limit the duration mismatch between assets and liabilities.

Due to the more limited availability of stable market funding and the higher interest rates on savings accounts, mortgage lending rates are higher in the Netherlands than in most other countries of the euro area. As a result, Dutch homeowners have so far barely profited from the ECB's extremely loose monetary policy. An additional explanation for the relatively high mortgage rates is the diminished competition in the Dutch mortgage market, which has translated into wider gross margins. However, there are indications that this latter factor is of a temporary nature. Whilst the aforementioned poor funding conditions currently impede entry, it seems reasonable to presume that, notably, foreign financial institutions will return to the Netherlands when funding conditions normalise. Lured by high margins, Dutch insurers have lately stepped up their activities in the mortgage market. In addition, price competition will heat up again as soon as the European Commission lifts the temporary price leadership ban on banks that have received

state aid. The ban for ING was already lifted at the end of 2012. As yet, the gradual adjustment to the new capital requirements under Basel III is not a convincing explanation for the relatively high mortgage rates, as the capital tied up by mortgage loans is relatively low.

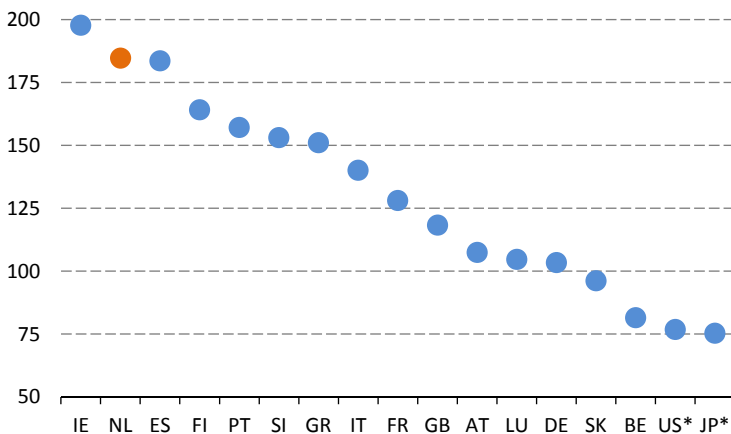
I Introduction

Since the mid-1990s a widening gap has arisen between domestic loans extended by banks, which to a large extent consist of mortgage loans, and deposits held at banks (Figure 1). This is related to the long balance sheets of Dutch households. They save a lot, particularly through pension funds, but they also borrow a lot, particularly in the form of mortgage loans. Mortgage lending through Dutch banks amounts to some 90% of GDP, twice the euro area average. Banks rely heavily on the (international) capital market for their mortgage funding for the simple reason that the deposit base in the Netherlands is not sufficient to meet their funding needs. This is much less the case in other countries.

Since peaking in 2008, mortgage interest rates in the Netherlands have dropped to the level of early 2005. However, Figure 2 shows that Dutch mortgage interest rates are still higher than in Belgium, Germany and France. Monetary expansion has pushed the risk-free interest rate down to a historically low level, but the Dutch

Figure 1 Loan-to-deposit ratio

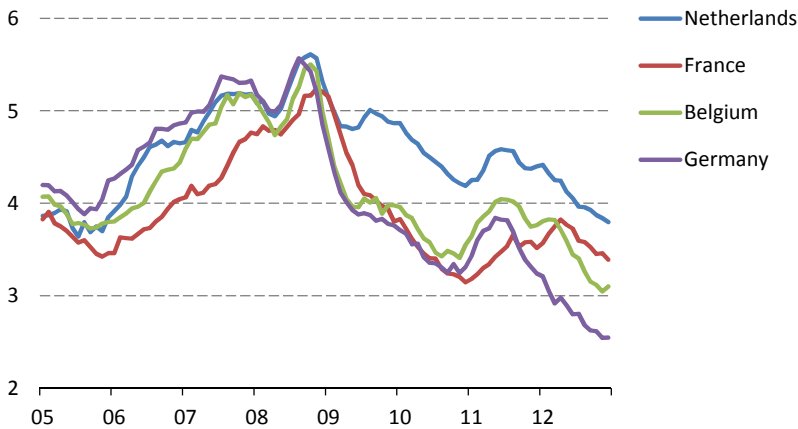
Percentages of deposits; 2012 Q3



Note: Figures for the US and Japan concern year-end 2011
 Source: DNB, BIS and ECB.

Figure 2 Mortgage interest rates

Percentages



Note: 1-5 year fixed-rate, new contracts.

Source: ECB.

mortgage market has drawn little or no benefit from this. At least three explanations (which are not mutually exclusive) can be given for this phenomenon:

1. The difficulty in financing Dutch mortgage debts leads to higher funding costs that are passed on to customers. In addition, the limited availability of stable market funding is causing banks to curtail their lending operations. As a consequence, they charge high interest rates to discourage demand for credit. This effect, which is related to the increased refinancing risk, can occur even though there is no demonstrable increase in funding costs.
2. The competition among banks in the Netherlands has decreased (possibly temporarily), so that profit margins have widened.
3. More stringent capital requirements for the banking sector may lead to more selective lending and higher interest rates on loans. This reduces the amount of tied-up capital and increases the gross margin on lending. Retention of profits is an important strategy for improving the capital base.

1.1 More expensive and less stable capital market funding

Due to their dependence on capital market funding, Dutch banks are relatively sensitive to unfavourable developments in the international money and capital markets. The capital market makes a distinction between secured and unsecured funding instruments. Secured funding comprises securitisations and covered bonds. After the crisis, the funding conditions have deteriorated dramatically in all market

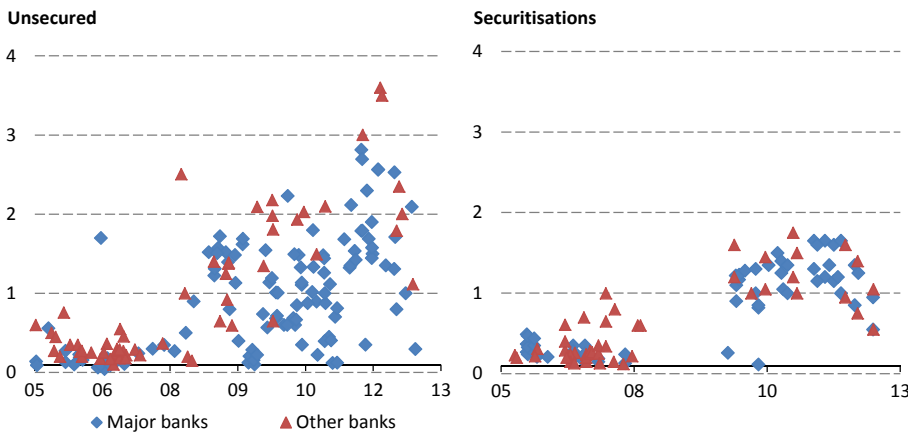
segments. Figure 3 shows that the risk premia on securitisations and unsecured bonds have risen strongly and have become much more volatile.

Securitised mortgages have a tarnished reputation, which can be traced back to the US subprime crisis. In 2008 and the first half of 2009, the market for new securitisations was effectively closed. Dutch banks are more sensitive to this development than foreign institutions: before the crisis they made relatively extensive use of securitisations, which are usually refinanced every five years. Mortgage funding by means of this particular type of securitisation thus entails considerable refinancing risks. International investors in Dutch residential mortgage-backed securities (RMBS) have become more aware of the combination of high loan-to-value ratios (LTVs), the large proportion of interest-only mortgages, the fact that over 30% of the mortgages are now under water and the continuing slide in house prices. They are therefore demanding higher risk premia and more collateral than before the financial crisis. Due to the fact that Dutch securitisations are periodically refinanced, the collateral required for this funding source is gradually increasing. At the end of 2010, outstanding Dutch mortgage-backed securities had a total value of EUR 125 billion against a total mortgage debt of EUR 632 billion.¹

¹ Dutch Association of Insurers (2011), *Financiering Nederlandse woningmarkt onder druk*, position paper.

Figure 3 Risk premia for unsecured bonds and securitisations, 2005-2012

Spread in percentages above swap rate, per issuance



Note: The major banks are ING, Rabobank and ABN AMRO. Selected issuances: 3 to 14 year term to maturity; (tranche) amount of at least EUR 50 million; securitisation with a rating of at least AA-. Risk-free reference rate is the swap rate on the same day with the same term in years.

Source: Dealogic and Bloomberg.

Partly owing to the problems in the RMBS market, the banks have greatly increased their funding by means of covered bonds in the past years. Between 2007 and 2012 the outstanding amount quadrupled to EUR 50 billion. However, the availability of this – relatively cheap – source of funding is limited by the need for overcollateralisation. Banks are compelled to provide significant additional collateral because of the duration mismatch between assets and liabilities and the large proportion of interest-only mortgages. In addition, secured funding ties up more assets, which makes unsecured funding riskier and therefore more expensive.

The costs of unsecured funding include a risk premium, which has risen sharply since 2008 and is also displaying strong volatility. This risk premium, proxied by the spread on credit default swaps (CDS spread), varies according to the (perceived) health of the bank in question, the market sentiment and the government's creditworthiness. The rise in the risk premium has largely offset the fall in the risk-free interest rate. In so far as banks have made use of unsecured funding, the funding costs of their mortgage business have remained relatively high. In addition, the heightened volatility of the CDS spread implies that the future costs or availability of unsecured funding have become more uncertain. As unsecured funding often has a significantly shorter duration than mortgage loans, the refinancing risk of banks has increased.²

1.2 Strained capital market conditions also drive up mortgage rates via other channels

The developments sketched above have made retail deposits more attractive as a source of mortgage funding. This has translated into upward pressure on deposit rates compared to other countries. DNB research suggests that countries with a relatively large funding gap tend to have relatively high interest rates on savings deposits and short term deposits (see Appendix 1 for more details). The impact of the funding gap is stronger in times of financial stress and has also increased after the financial crisis. In countries such as the Netherlands and France, savings rates are now far above the risk-free rates, even though most savings deposits are covered by the deposit guarantee system and thus constitute a risk-free investment. In Germany and Belgium, where there is no funding gap problem, savings rates have fallen more strongly.

Some banks currently either have no access to market funding or only at prohibitively high rates. These institutions rely entirely on savings deposits. Other banks are concerned about the increased refinancing risk and are seeking to reduce this. In either case banks can respond by increasing mortgage rates more than their

² Most mortgages have an initial term to maturity of 30 years, but in practice are repaid within 7 to 10 years on average.

funding costs in order to discourage demand for mortgage credit. This distorts or even severs the link between mortgage lending rates and marginal funding costs.

Since the onset of the financial crisis, market participants, including rating agencies, pay more attention to the loan-to-deposit ratio (LTD) of a bank. A bank that allows its LTD to grow too high, runs the risk of incurring a downgrade and, as a result, higher market funding costs. This implicit liquidity restriction imposed by financial markets encourages banks to manage their LTD carefully. On the one hand, banks are offering higher interest rates to attract more savings deposits, on the other hand they try to limit credit demand by charging high lending rates and/or imposing more stringent lending conditions. Dutch banks currently have an outstanding unsecured long-term debt of about EUR 400 billion on their balance sheet and are therefore extra vulnerable to downgrades.

Banking supervisors increasingly require banks to invest the deposits they have attracted in a certain country in assets of the same country. This restriction impedes a funding strategy where banks attract funding through a central treasury, to be redistributed across countries and markets. It reduces the extent to which deposits attracted from abroad can be used to finance Dutch mortgage loans, thus further increasing the banks' dependence on capital market funding. All this reinforces the discussed transmission channels and also, indirectly, influences the level of competition in the Dutch mortgage market (see Section 2).

1.3 Estimated impact of funding charges on mortgage rates

The funding gap may affect mortgage interest rates through various channels. The impact of higher funding costs depends on, among other things, how banks make use of the various sources of funding. This 'funding mix' differs from bank to bank and cannot be observed or derived directly from balance sheet data, because – except for secured funding – the funds raised cannot be directly linked to specific assets. An analysis of funding cost developments is therefore by necessity based on assumptions about the applied funding mix. The following analysis explores two extreme funding mix strategies.³

1. In the **matching strategy** only long-term funding sources are used to finance the total amount of loans to households (mortgage loans and consumer credit). These sources are employed in the following order: (i) covered bonds and securitisations (because both are closely connected to the mortgage portfolio); (ii) retail deposits (iii) long-term unsecured market funding (if necessary). This

³ The funding mix concerns the average mix. Ideally, the applied funding mix should represent the *marginal* funding method for new mortgages. However, the data required for this are not available.

funding mix seeks to minimise refinancing risks: (relatively) long-term liabilities are held against the long-term mortgages

2. In the **balance sheet mirroring strategy** mortgage funding relies on the above-mentioned long-term sources, short-term market funding and corporate deposits. It is assumed that mortgages have exactly the same funding mix as the entire balance sheet. Banks allocate the funding costs of the entire bank to each asset class and do not carry out any matching at asset level.

On this basis, two possible scenarios are set up to assess the development of the funding costs and the gross margin on new mortgages. The outcomes give an indication of the plausibility of each scenario.

- The **central scenario** assumes that the funding mix has changed over time: banks used the balance sheet mirroring strategy in the 2005-2007 period and the matching strategy in 2010-2012.⁴ This scenario rests on the following considerations. The strong increase in the funding gap during the pre-crisis years supports the assumption that at that time banks used funding strategies with substantial (latent) refinancing risks. Mortgage loans were seen as relatively liquid assets, which – if necessary – could be packaged and sold. In general, less attention was devoted in the pre-crisis period to the volatile nature of (short-term) market funding, the uncertain access to foreign deposits and the risks of a high loan-to-deposit ratio.

Since the crisis both banks and supervisors attach more importance to a stable funding profile. The matching strategy reflects this more cautious sentiment. The planned introduction of the net stable funding ratio as part of Basel III will give banks an incentive to finance long-term assets with long-term liabilities. The matching strategy also makes abundant use of deposits for mortgage funding, which is in keeping with the increased pressure on (Dutch) banks to reduce the loan-to-deposit ratio.

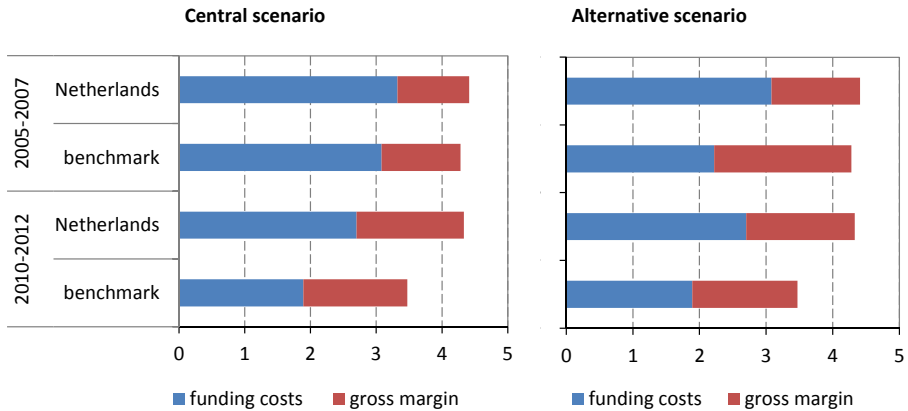
- In the **alternative scenario** banks apply the matching strategy both before and after the crisis. This assumption can be motivated as follows. Firstly, the matching strategy was relatively cheap before the crisis because risk premia in financial markets were low. Secondly, even before the crisis a correlation existed between the funding gap and deposit rates, though it was weaker than after the crisis. This scenario fits in with the assumption that even before the crisis banks were already striving for a funding mix with a substantial weight for deposits.

Figure 4 shows for each scenario how the (estimated) funding costs and gross margin for both the Netherlands and an international benchmark have changed

⁴ The intervening years 2008 and 2009 are not included in the analysis because of the frequent occurrence of acute financial stress in these years. The calculations concern new mortgages with a fixed-rate period of 1-5 years. See Appendix 2 for details.

Figure 4 Funding costs and gross margin in two scenarios

Percentages



Note: 1-5 year fixed-rate, new contracts.

Source: ECB and DNB calculations.

between the pre-crisis and post-crisis period. The two components add up to the observed mortgage rate. The benchmark is the (unweighted) average of Belgium, Germany and France. The bank must cover its operating and other costs from the gross margin. The Netherlands Competition Authority (NMa) assumes in its *Mortgage Market Sector Study* from 2011 that 0.8 percentage points are required for this purpose. In addition, banks must form reserves to cover default and other risks.

Three important findings are:

- In the 2010-2012 period, the mortgage rate was 4.3% in the Netherlands and 3.5% abroad. In the 2005-2007 period, the respective percentages were 4.4% and 4.3%. Thus there is an 0.8 percentage point difference in mortgage rates with other countries, which largely arose after the crisis.
- Dutch banks face higher funding costs than foreign banks in the post-crisis period. The difference is 0.8 percentage point (estimated in both scenarios on the basis of the matching strategy).⁵

⁵ According to the mirroring strategy, the difference would be 0.5 percentage point. The Netherlands Bureau for Economic Policy Analysis (CPB) concludes that the funding costs for Dutch banks are not higher than for their foreign counterparts. See *De Nederlandse woningmarkt - hypotheekrente, huizenprijzen en consumptie: op verzoek van minister Blok van Wonen en Rijksdienst*, CPB Paper 14 February 2013. The CPB assumes here that banks' funding costs are equal to a weighted average of the costs of demand deposits and unsecured market funding (the weights used are 'all deposits as a fraction of total assets' and its complement). This version of the mirroring strategy overestimates the actual funding costs, as banks also finance a substantial part of their balance sheet with short-term market funding and corporate deposits, which are relatively cheap. The calculation method implies an unrealistically low gross margin for foreign banks (0.2 percentage point). See Appendix 2 for details.

- After the crisis Dutch banks increased their gross margin by passing on only 15% to 20% of the reduction in their funding costs to the consumer.⁶

The **central scenario** sketches the following picture. The funding costs for Dutch banks after the crisis are 0.6 percentage point lower than before the crisis; the decrease for foreign banks is 1.2 percentage points. Dutch banks have passed 15% of the cost decrease on to the consumer, while foreign banks have passed on 80%. Consequently, both Dutch and foreign banks have raised their gross margins. The gross margins in the Netherlands and abroad are now at roughly the same level. Of the widened interest rate differential with other countries (increase of 0.7 percentage point), 80% is attributable to the fact that the funding costs have decreased much less in the Netherlands than abroad. The remaining 20% is due to the fact that Dutch banks have raised their gross margins by an extra 0.1 to 0.2 percentage point.

The **alternative scenario** sketches the following picture. The funding costs after the crisis are 0.4 percentage point lower for Dutch banks and 0.3 percentage point lower for foreign banks. Dutch banks have passed on 20% of the cost decrease to the consumer, whereas foreign banks have passed on 250%. As a consequence, Dutch banks have increased their gross margins by 0.3 percentage point, while foreign banks have significantly lowered their gross margin, by 0.5 percentage point. In this scenario, therefore, the 0.7 percentage point increase in the interest rate differential is fully attributable to changes in gross margins. This extreme result raises doubts about the relevance of this scenario. It is virtually impossible to think of a plausible reason why banks in Belgium, Germany and France would have slashed their gross margins so sharply, particularly now that all European banks face the challenge of reinforcing their profitability and capital base.

The above analysis can be summed up as follows. The need to make assumptions about the applied funding mix in order to calculate the size and development of the funding costs implies that such calculations include considerable margins of uncertainty. However, in view of the difference in plausibility between the two scenarios, it is justifiable to assume that since the crisis, Dutch banks have been confronted with relatively high funding costs and that this partly explains the relatively high current mortgage rates.

⁶ The risk of default and the required interest rate spread is – internationally – low in the Netherlands. However, compared with other countries, the default risk has increased because house prices have fallen in the Netherlands, while they have increased in other countries. On the other hand, in the past years, a large part of the default risk relating to new mortgages did not impact on banks but on the government, as about 80% of new mortgage loans currently fall under the NHG guarantee scheme. Changes in interest rate spreads for default risk are therefore not a significant factor behind the increased difference in mortgage interest rates between the Netherlands and other countries.

2 Less competition between banks since the banking crisis

A second possible explanation for the relatively high mortgage rates in the Netherlands is the weaker competition in the Dutch mortgage market since the financial crisis. Several foreign parties have withdrawn from the Netherlands, thus reducing the number of mortgage lenders. However, several factors suggest that this reduction in competition is not a structural phenomenon and partly stems from the funding problems sketched above.

Before the crisis it was relatively easy for new entrants to capture substantial market shares in the Netherlands. This suggests that entry barriers to the Dutch mortgage market are low in principle (Argenta approx. 5% in 2006; BNP approx. 8% in 2010; Aegon approx. 5-10% during 2009-2012). The presence of intermediaries (responsible for 60% of mortgage sales) plays an important role in this respect, as it means that new entrants can establish a presence without heavy initial investments. Mortgage lenders can enter the Dutch market provided they are able to attract enough stable funding to finance their mortgage business.

The difficult funding conditions of recent years have therefore made it harder for potential competitors to enter the market. The required collateral for secured funding, for instance, creates an extra obstacle for new entrants, as they do not possess an existing mortgage portfolio with low LTVs. The uncertainty of access to unsecured funding and its volatile price also work to their disadvantage. Moreover, due to the financial crisis, banks now tend to focus more on protecting their domestic market share. Banks are retreating to their home markets and are less inclined to embark on foreign adventures. When funding conditions normalise, the relatively high Dutch mortgage rates will probably lure foreign lenders back to the Netherlands.

In addition, price competition has been under pressure in the past few years due to the temporary price leadership ban that the European Commission imposed on banks that received state aid. These institutions were temporarily forbidden to compete on mortgage rates. However, price competition may increase again now that this ban was lifted for ING at the end of 2012. Only ABN AMRO is still subject to a price leadership ban.

Another obstacle to foreign banks entering the Dutch market is that supervisors in many countries require that savings deposits remain in their own country. This makes it more difficult for foreign banks to enter the Dutch market, aided by a cheap foreign deposit base. Initiatives aimed at reintegrating European financial markets – such as the banking union – may reverse this trend.

Lower competitive pressures give the remaining mortgage lenders scope for temporarily achieving higher profit margins. The strategy of banks focusing on profit retention and rationing in order to strengthen their balance sheets fits in with this. The higher interest rates attract entrants, which supports the impression that the reduced competition in the mortgage market is a temporary phenomenon. Tellingly, Dutch insurers have lately expanded their activities in the mortgage market. Furthermore, price competition (also from new entrants) may get a boost from the standardisation of funding instruments and the promotion of transparent pricing.

3 More stringent capital requirements

The gradual adjustment to the new capital requirements (Basel III) based on risk-weighted assets is less of an impediment for mortgage lending than the funding gap, as the risk weights of mortgages are fairly low. For most Dutch banks, the required capital for mortgages is currently less than 1%. As a result, the relatively large mortgage portfolio of Dutch banks ties up only a limited amount of the available capital. In the short term banks will not be able to greatly reduce their capital requirements by curbing or even refusing new mortgage business. The new capital requirements do imply that in future banks will need to hold more capital against all their risky assets, including their mortgage loans. This could put mortgage lending under pressure.

The Dutch banking sector has a high leverage ratio by international standards. Bank capital as a percentage of total unweighted assets is relatively low. This is partly attributable to the large mortgage portfolio in combination with the low risk weights of mortgages. In the framework of Basel III, it is likely that banks will be confronted with an additional capital requirement in the form of an unweighted capital ratio of probably 3%. Banks will probably have to disclose their unweighted capital ratio from 2015. In addition, financial markets also look at the unweighted capital ratio as an indicator of a bank's solidity. This may translate into higher premia on market funding for highly-leveraged banks. These developments may prompt banks to take a more prudent approach to mortgage lending. If the unweighted capital ratio is close to the required minimum, the capital that needs to be maintained as a result of this additional capital requirement may become a relevant consideration.

Appendix I Empirical analysis of funding gap and deposit rates

The literature suggests that the funding gap can be relevant for deposit rates, as there may exist a pecking order in external sources of funding, with savings deposits dominating other types of external funding. The standard point of departure for analysing the pricing behaviour of banks is the Klein-Monti model for banking competition. In this model, pricing on the lending side is independent of pricing on the borrowing side (Klein, 1971; Monti, 1972). The model assumes that banks can always turn to the capital market to make up shortfalls or deposit surpluses at a given yield curve, which represents a bank's marginal borrowing costs. This outcome of portfolio separation as assumed in the Klein-Monti model is based on a simplified set-up with a perfect capital market, without any role for risk or information asymmetries. In this framework capital market financing and deposits are perfect substitutes as a source of funding. In reality, the existence of information asymmetry entails that capital markets are only accessible when banks provide sufficient collateral or pay a sufficiently high risk premium, particularly in times of stress. This gives rise to a pecking order regarding the manner in which banks wish to fund themselves, analogous with the theory that Myers and Majluf (1984) formulated for firms in general. In this framework, deposits dominate other sources of external funding. Banks that have a lower or no funding gap are less exposed to the trade-off between deposits and other sources of external funding. This limits the competition for savings deposits and will reduce upward pressure on deposit rates.

The financial crisis may have increased banks' preference for savings deposits as funding source even further. Alternative funding sources (securitisations and other wholesale funding) have proved to be unstable. In addition, policy initiatives that favour a specific funding mix can strengthen the pecking order, thus increasing the relevance of the funding gap to the level of savings rates. The introduction of the net stable funding ratio (NSFR), for instance, may cause banks to show a greater preference for savings deposits as a source of funding for (longer-term) lending.⁷

⁷ The (provisional) calibration of the NSFR not only assigns 'stable funding' value to term deposits, but also to demand deposits. In the NSFR stable deposits – from customers with whom the bank maintains a customer relationship and which are covered by the deposit guarantee system – have an annual run-off rate of 10%. Constructing the same run-off rate based on market funding would demand an evenly expiring and rolled-over portfolio of 10-year bonds. The run-off rate for non-stable deposits is 20%, which translates into a portfolio of 5-year bonds. This means that both types of deposits are regarded as relatively stable funding sources in the liquidity framework of Basel III.

The increased attention for the loan-to-deposit ratio among market participants and rating agencies can have the same effect.

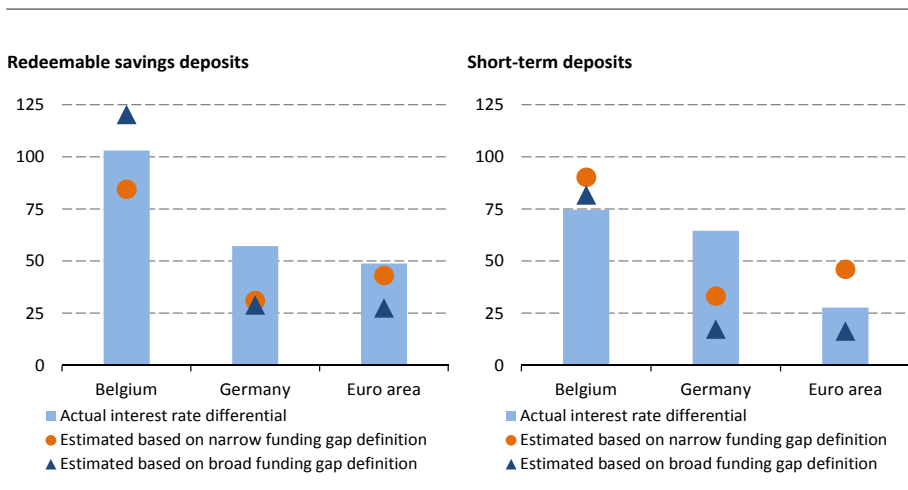
An empirical model based on a broad panel of countries supports the hypothesis that a positive relationship exists between the size of the funding gap and the level of savings interest rates. Figure 5 (left) presents the actual average interest rate differentials between the Netherlands and (i) Belgium, (ii) Germany and (iii) the entire euro area for savings deposits redeemable at notice of up to three months over the period from January 2003 to February 2012. In addition, the columns include the interest rate differential that can be explained by the model. The model is estimated for two definitions of the funding gap. First, a narrow definition, where the funding gap is defined as the difference between deposits from and loans to households. Second, a broader definition, where the funding gap is defined as the difference between deposits from and loans to the non-financial private sector (households and businesses). Figure 5 (right) gives the same information, for short-term deposits. Though the results are by no means perfect, the analysis reveals that the interest rate differentials indeed increase when the funding gap is larger.

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Figure 5 Actual and estimated interest rate differential

Basis points



Note: Interest rate differential averaged over the sample period January 2003 - February 2012. Short-term deposits refer to term deposits with an agreed maturity of up to one year.

Source: ECB and calculations DNB.

Monti, M. (1972), 'Deposit, credit and interest rate determinations under alternative bank objectives', in: G.P. Szegö en K. Shell (eds.), *Mathematical Methods in Investment and Finance*: Amsterdam: Noord-Holland.

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Appendix 2 Detailed results

The table below shows the results underlying the scenario analysis in the main text and the figures mentioned in Footnote 5:

- The **central scenario** compares the left-hand panel of part (b) with the right-hand panel of part (a).
- The **alternative scenario** compares the left-hand and right-hand panel of part (a).
- The cost difference of 0.5 percentage points according to the balance sheet mirroring method is derived from the right-hand panel of part (b).
- The gross margin of foreign banks of 0.2 percentage points is shown in the right-hand panel of part (c).

Table. Estimated margins, lending rates and funding costs of new mortgages

(a) Matching strategy

	2005 - 2007			2010 - 2012		
	Margin	Rate	Funding costs	Margin	Rate	Funding costs
Netherlands	1.6	3.3	3.1	1.6	4.3	2.7
Benchmark	2.1	4.3	2.2	1.6	3.5	1.9
Difference	-0.7	0.1	0.9	0.0	0.9	0.8
<i>Germany</i>	2.2	4.6	2.4	1.6	3.3	1.7
<i>France</i>	1.4	3.9	2.6	1.2	3.5	2.3
<i>Belgium</i>	2.6	4.3	1.7	2.0	3.6	1.7

(b) Balance sheet mirroring strategy

	2005 - 2007			2010 - 2012		
	Margin	Rate	Funding costs	Margin	Rate	Funding costs
Netherlands	1.1	4.4	3.3	1.8	4.3	2.5
Benchmark	1.2	4.3	3.1	1.5	3.5	2.0
Difference	-0.1	0.1	0.2	0.4	0.9	0.5
<i>Germany</i>	1.4	4.6	3.2	1.3	3.3	2.0
<i>France</i>	0.7	3.9	3.2	1.3	3.5	2.2
<i>Belgium</i>	1.5	4.3	2.8	1.8	3.6	1.9

(c) Alternative strategy in the CPB Paper *De Nederlandse woningmarkt*

	2005 - 2007			2010 - 2012		
	Margin	Rate	Funding costs	Margin	Rate	Funding costs
Netherlands	0.8	4.4	3.6	1.3	4.3	3.1
Benchmark	0.8	4.3	3.5	0.2	3.5	3.3
Difference	0.1	0.1	0.1	1.1	0.9	-0.3
<i>Germany</i>	1.1	4.6	3.6	0.4	3.3	2.9
<i>France</i>	0.3	3.9	3.6	0.1	3.5	3.4
<i>Belgium</i>	0.9	4.3	3.4	0.0	3.6	3.7

Publications in this series since Januari 2003

- Vol.1/No.1 (2003) Requirements for successful currency regimes:
The Dutch and Thai experiences
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