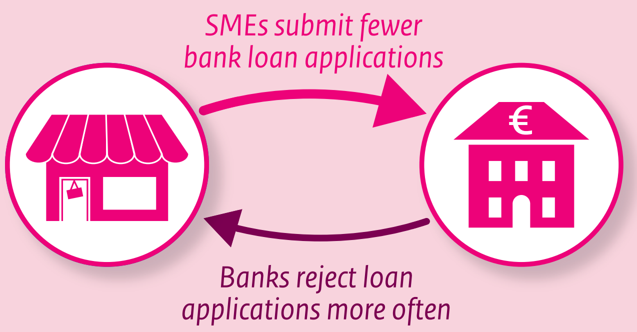
Centraal Planbureau

Dutch SME bank financing, from a European perspective

Dutch SMEs are obtaining bank loans less often than SMEs elsewhere in the eurozone.

Plausible explanations:

- There is less need among businesses
- They expect their application to be rejected
- The market power of banks
- Mortgage competition
- No credit registry



CPB Policy Brief

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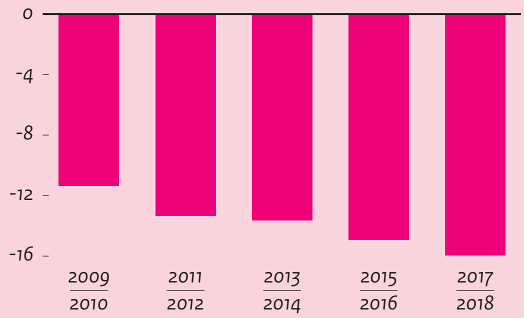
July 2019

Bank loans to Dutch SMEs

For SMEs, bank loans are the main source of external financing. Dutch SMEs, however, obtain loans less often than SMEs elsewhere in the eurozone.

Relative chance of credit provision, compared to the eurozone (%)



This may have an adverse effect on economic growth

Analyses based on ECB SAFE surveys
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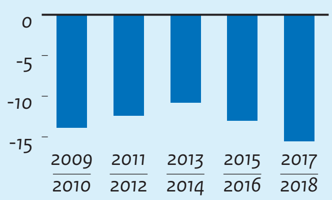
Possible explanations

Fewer loan applications

Dutch SMEs less often apply for bank loans.

Applications,compared to the eurozone (%)



Not very plausible
Use other forms of funding

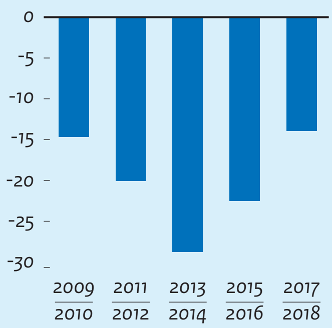
Unknown
Cultural differences

Plausible explanations
Companies have sufficient capital; they expect their application to be rejected; SMEs are investing less.

Banks reject loan applications more often

In the Netherlands, banks approve fewer loans than elsewhere in the eurozone. Perhaps this is justified, but the difference is remarkably large.

Fully granted, compared to the eurozone (%)



Not very plausible
This is unlikely due to the financial health of SMEs, as this is comparable to that of SMEs elsewhere in the eurozone.

Plausible explanations
Market power of banks: perhaps there is little competion in the Netherlands, due to high market concentration levels, as is indicated by the relatively high interest rates.

For the banks, mortgages are more interesting than business loans, as is indicated by the strong focus on mortgage debts.

There is no registry available to credit providers to assess the credit rating of individual businesses.

Top 3 market interest rates for business loans, 2018, >1 million euros, 1–5 years (%)

Netherlands	Germany	Italy
2.3	1.6	1.4

Top 3 mortgage debts on bank balances in the eurozone (% of GDP)

Netherlands	France	Spain
61	43	43

Summary

Bank loans continue to be the main source of external financing for small and medium-sized enterprises (SMEs), in both the Netherlands and other European countries. Businesses are using those loans for expansion, innovation or as working capital.

This policy brief confirms that Dutch SMEs are applying for relatively few bank loans, and that those applications are relatively often rejected by the banks. This applies to all businesses but more so to SMEs. The 2009–2018 period shows a steady trend, although in recent years the difference with the eurozone average number of applications has grown, while for the number of rejections the difference has decreased.

In looking for an explanation for this phenomenon, we need to tread carefully. All we can do is cross off certain explanations and focus on plausible mechanisms, but without being able to provide any definite answers. It should be noted, here, that not all rejections by banks are problematic; new business loans are sometimes justifiably rejected, based on economic prospects. Furthermore, what would be the optimal level of credit provision also remains an open question.

Most businesses that do not apply for a loan do so because they have sufficient financial means at their disposal. In addition, in the Netherlands as opposed to elsewhere in Europe, the expectation of a loan application being rejected appears to be a more important reason for not even applying for one. Dutch businesses also appear to make fewer physical investments. A number of possible other explanations, such as a greater reliance on alternative sources of financing, do not seem to play a role.

The financial health of Dutch enterprises is probably not a reason for the relatively large number of rejections. Businesses in the Netherlands were found to be more rather than less profitable than those in other countries. They, furthermore, have an average level of own capital at their disposal.

In the Netherlands, a relatively low level of competition between banks and a relatively interesting mortgage market are likely to play a role in the comparatively low loan approval rate. The concentration on the Dutch labour market is high, although this would not automatically lead to a limited level of competition. The relatively high interest rates at Dutch banks may be an indication of market power, and the banks are also providing comparatively large numbers of loans for the housing market. It is a rather attractive market, because of the fiscal subsidies on homeownership in combination with the strong level of protection for banks in cases of defaults on loans. In situations where the banks revert to balance sheet reductions in order to comply with capital requirements, this may put pressure on the provision of business loans. Such market and government failures are difficult to solve.

Addressing information asymmetry through, for example, a credit registry, could be an effective policy intervention, according to the international literature. Many other European countries already have such a registry, although other instruments are also a possibility. Although we expect new entrants on the lending market to be able to profit from such public credit rating data, we do not expect any spectacular effects for existing players, seeing the level of data availability in the current digital age and the strong level of protection enjoyed by creditors in the Netherlands.

1 Introduction

A number of stories are circulating about the degree of bank loan access of Dutch small and medium-sized enterprises. This started after the financial and euro crisis, and was the reason why the SER, for example, wrote an elaborate report about expanding and strengthening SME financing ('Verbreding en versterking financiering mkb'). Also, early this year, the IMF, in its article IV research on the Netherlands, argued for improving SME access to financing. In addition, credit insurance company Allianz/Euler Hermes recently published a short study that also addressed the derogation of the Netherlands in terms of credit provision in Europe.[1]

Should Dutch companies indeed face unnecessary barriers to bank financing, this may have a negative impact on economic growth.[2] For the Dutch SMEs, as for those in other European countries, banks are still the main source of external financing.[3] In cases where investment opportunities are underutilised because of insufficient credit availability, this has certain consequences for the country's growth potential.

How much the Dutch economy would be hurt by a limited availability of credit is difficult to determine with some degree of certainty. This would require knowing which bank loans were justifiably turned down, which entrepreneurs had been wrong not to apply for financing and which applications failed because the entrepreneurs were not prepared to pay an economically justifiable interest rate. For this policy brief, therefore, we did not attempt to calculate the size of this *finance gap*.[4] Moreover, any negative consequences of higher debt within society would otherwise also need to be included in the assessment. In response to the study by Allianz/ Euler Hermes, the Rabobank, for example, emphasised that more credit for small and medium-sized enterprises would not necessarily be better.[5]

This policy brief, therefore, focuses on the question of how SME bank financing in the Netherlands relates to that in European countries. Subsequently, it discusses the various explanations for any differences, although definite answers cannot be provided. We mainly considered correlations and did not uncover any causal relationships. In closing, the policy brief addresses potentially promising policy options in relation to the possible explanations.

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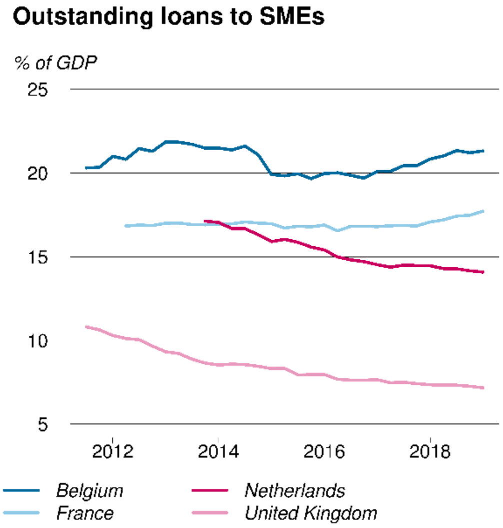
[1] For example, see SER (2014), 'Expanding and Increasing SME Financing' (link), IMF (February 2019), 'The kingdom of The Netherlands - 2019 Article IV Consultation' (link), Allianz/ Euler Hermes (9 April 2019), 'European SMEs: Filling the Bank finance gap' (link).
[2] The ECB-SAFE survey shows that Dutch entrepreneurs consider 'access to finance' a relatively small problem. They do not state that they face large issues in this respect. However, a relatively large number of Dutch entrepreneurs do indicate that 'access to finance' is the largest problem for their enterprise, compared to other potential problems. This policy brief, therefore, uses as few subjective questions as possible, because the replies contain a cultural component, among other things. For similar reasons, this policy brief also does not refer to the ECB Bank Lending Survey that was held among banks.
[3] Forty per cent of all successfully obtained types of external financing consists of bank loans. The second-largest category is that of leasing (21%). Source: Statistics Netherlands (CBS), *CBS Financieringsmonitor*, January 2019 (link; in Dutch).
[4] Other organisations, such as Allianz/Euler Hermes, do provide information on this subject, including the strong assumption that all rejected loans have a negative impact.
[5] See the article in the FD daily newspaper, Het Financieele Dagblad (22 April 2019), which states that strengthening SMEs would require more that merely improved access to credit ('Om het mkb te versterken is meer nodig dan soepele kredietverlening': link (in Dutch).

2 Dutch SMEs are obtaining fewer bank loans than SMEs elsewhere

SME bank financing in the Netherlands, as a percentage of GDP, is decreasing over time (Figure 2.1). A similar trend can be seen in the United Kingdom. Belgium and France, however, are showing an increase. Unfortunately, we were unable to make serious comparisons with other European countries (see the text box on measurement errors).

Many of the differences between European countries are related to the structure of the business community. The Netherlands, for example, has relatively many micro-enterprises, and Dutch SMEs are particularly focused on the services sector rather than on industry. This is why Dutch SMEs are less in need of capital. These differences in structure between countries are relatively stable, over time.

Figure 2.1 Bank loans to SMEs, for the eurozone countries reporting on this subject, in % of GDP



Source: National central banks and Eurostat. For NL: DNB, based on data from major banks only.

Small and medium-sized enterprises?

The business community can be categorised from small to large, along various dimensions. Small and medium-sized enterprises can be defined, for example, on the basis of turnover, staff numbers or added value. The various definitions are correlated, but do not yield the exact same results. A company such as Adyen, for example, has relatively few employees, yet a very high turnover and large added value. The staff and turnover classifications can also be combined. For example, Eurostat ranks all enterprises with fewer than 250 staff members and a turnover of less than 50 million euros among the SMEs. This policy brief uses the staff classification whenever it refers to the SAFE results.

The Dutch business community (without the self-employed), categorised according to various definitions

	Turnover		Staff (including the owner)	
Micro-enterprises	<10 million euros	96.2%	2 ≤ staff < 10	81.8%
Small enterprises			10 ≤ staff <50	14.2%
Medium-sized enterprises	>10 million euros <50	2.9%	50 ≤ staff< 250	3.1%
Large enterprises	> 50 million euros	0,9%	250 ≥ staff	0.8%

Source: CBS Statline (staff) and adapted by CPB (turnover) for 2016

Measurement errors regarding SME bank financing

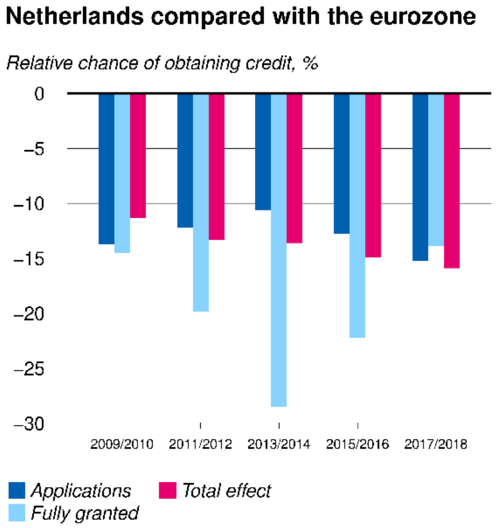
Data on the amount of money provided to SMEs in the form of bank loans is unfortunately only available from a small number of eurozone countries. The ECB does not oblige European banks to publish this type of information. This is partly due to the lack of a clear separation between SMEs and larger companies. A number of national central banks, among which DNB, request that banks nevertheless try to divide their loans portfolio according to business sizes. DNB, incidentally, only gathers such information from large Dutch banks.

Other data sources are currently unsuitable. The ECB uses loan size as a proxy for SME loans; those below EUR 250,000 are assumed to concern SMEs. All of the larger loans are considered to have been granted to larger companies. This proxy is demonstrably false, as DNB data show that SMEs very regularly take out loans for more than one million. An alternative data source would be the EBA transparency exercise, which focuses only on systemic banks. As yet, there are certain questions about this; for instance, because reporting unit on SME loans is unclear.

In 2017–2018, Dutch small and medium-sized enterprises less often received a bank loan (by 16 percentage points) than did comparable enterprises elsewhere in the eurozone (Figure 2.2; for more information, also see the background document 'Bank credit: Dutch versus European firms')**.** This is shown in the econometric analyses of the micro data from the ECB SAFE surveys[6], which we conducted to further investigate the differences between countries.[7] The total chance of obtaining bank financing depends on the percentage of entrepreneurs who apply for a loan and the chances of such a loan being granted, also counting the partially successful applications. Over the past half year, an average of 25% of all SMEs in the eurozone obtained a bank loan.[8] The difference between the Netherlands and other countries, therefore, is not merely statistically significant, but also economically relevant. In addition, over the 2009–2016 period, the Netherlands scored reliably low, from a European perspective, on the total chance of obtaining bank financing.

This difference is driven both by relatively few applications and relatively many rejections. In 2017–2018, Dutch SMEs appeared to have applied less often for a bank loan (by 15 percentage points) than the European average, compared to enterprises elsewhere in Europe. This is also a substantial effect; in the entire eurozone, around 30% of enterprises applied for a loan, over this period. Figure 2.2 shows that international differences in applications were slightly smaller in the years before 2017.

Figure 2.2 Dutch SMEs and bank loans, over time, compared with the same types of loans and enterprises elsewhere in the eurozone (source: regression analyses of ECB SAFE micro data)[9]



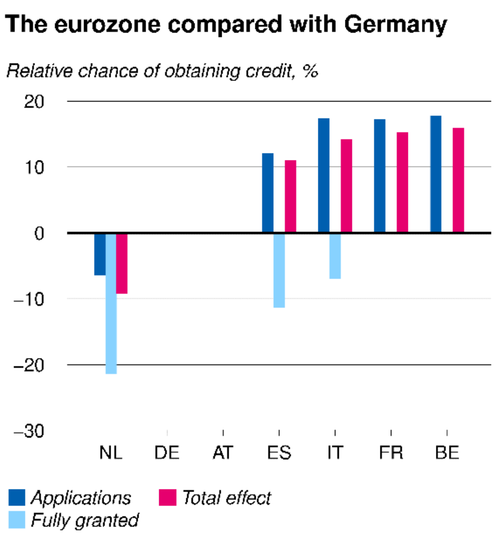
[6] Since 2009, a random sample of European entrepreneurs have been interviewed, biannually, about their experiences with financing. Our background document, titled 'Bank credit: Dutch versus European firms', analyses the entire 2009–2018 period, with a special focus on the most recent period (2017–2018). Because of the limited number of observations per wave, we combined multiple surveys. The most recent wave that was included in our analysis was compiled in the autumn of 2018. Just prior to publication of this policy brief, the latest wave (compiled in spring 2019) was published. The results were similar to those from the previous period.
[7] Our econometric analyses also take into account the underlying characteristics of the participating enterprises, to ensure that we compare apples to apples, as much as possible (specifically checking for type of sector, business age, size, and staff numbers). In this way, we ensured as much as possible that the differences between the Netherlands and other countries would not be related to those factors. Nevertheless, a number of differences between countries remain; for example, in our survey, we lacked information about balance sheets and income statements of companies.
[8] The averages in this section are unweighted averages over all observations within the eurozone in SAFE, for this period. The effects for the Netherlands, mentioned in this section, are point estimates rather than marginal effects.
[9] The bars represent the coefficient of the Netherlands' dummy in an OLS regression with control variables (see the background document 'Bank credit: Dutch versus European firms'). All coefficients are significant at a p-level of 1%. The total effect also takes account of applications that were granted only partially.

In 2017–2018, 14 percentage points fewer loan applications were fully approved in the Netherlands, compared to other countries. Banks in the eurozone, on average, approved 74% of all SME loan applications. The difference between the Netherlands and other countries was larger at the time of the crisis than during the current period. This finding still holds when partial approvals are also taken into account.

The low probability of obtaining bank financing applies to Dutch companies of all sizes. The difference with other countries is the largest for loan applications by medium-sized enterprises; in 2017–2018, Dutch enterprises in this category applied for bank loans 21 percentage points less often than those in other eurozone countries. Approval rates in the eurozone show the largest differences for micro and small enterprises. In 2017–2018, there were 12 percentage points fewer loans fully approved for micro enterprises, and for small enterprises this was 25 percentage points. Also interesting is the fact that large enterprises in the Netherlands obtained fewer bank loans than those elsewhere in the eurozone. This last point is particularly driven by the fact that these types of enterprises had submitted fewer loan applications. The probability of loan approval though, in the 2017–2018 period, was the same for large enterprises as elsewhere in the eurozone.

Looking at all eurozone countries individually, the Netherlands still has the lowest total chance of obtaining bank financing (Figure 2.3). This analysis uses Germany as a benchmark. In 2017–2018, Dutch SMEs applied for 6 percentage points fewer bank loans than German SMEs; and those that did had 21 percentage points fewer bank loans fully approved. It is notable that, of all eurozone countries, only in the Netherlands, SMEs applied for significantly fewer bank loans over the last period, whereas the Dutch approval rates are more like those in southern European Member States than those in neighbouring countries. This image still holds, whether the comparison is to the eurozone, the entire European Union, or only to relatively similar countries in Europe.[10]

Figure 2.3 SME bank loans in the eurozone, in 2017–2018, significant differences between Germany and core countries (source: regression analyses of ECB SAFE microdata)



[10] This concerns Belgium, Denmark, Finland, France and the United Kingdom. These are the countries that, in Kalara and Zhang (2018, link), were classified as *EU-market-based financial systems*.

3 Multiple reasons for fewer applications

In the SAFE survey, most Dutch entrepreneurs who had not applied for a loan indicated that they did so because they had sufficient own means at their disposal. Also when compared to other countries, Dutch SMEs state this fact relatively often as the reason for not applying for a bank loan. In 2017–2018, more Dutch entrepreneurs (by 10 percentage points) ticked the box ‘sufficient own means’ than did those in other countries. In the entire eurozone, the average is 61%. This difference may be due to the various fiscal measures that make it attractive to not pay out any dividends.[11]

The expectation of being rejected also plays a role, in the Netherlands. Dutch SMEs, in 2017–2018, did not apply for a bank loan because they expected to be rejected by 1 percentage point more often than the eurozone average. This difference is not significant, although it was in earlier years. Economically the magnitude of the difference is considerable however, as the European average stands at 8%.

Dutch enterprises are also investing slightly less in physical capital (buildings, installations or machines), even when taking international differences in sectoral structures into account. The difference with the rest of the eurozone, over the 2017–2018 period, was 3 percentage points. On average, 28% of the SMEs in all countries had invested in a certain type of physical capital in the six months before the survey.

The attractiveness of other types of financing, however, does not appear to feature in the deviating application behaviour of Dutch SMEs. In addition to bank loans, in SAFE in 2017/2018, Dutch entrepreneurs appear to also make less use of credit lines, trade credits and other sources of financing, such as corporate bonds, leasing and factoring, compared to those in other countries. In recent years, however, we did see a sizeable increase in the use of alternative sources of financing (particularly factoring and leasing) in the Netherlands, but this increase can also be seen elsewhere in the eurozone.[12]

Cultural differences may also play a role in the application behaviour of entrepreneurs. Perhaps Dutch entrepreneurs are more loan-averse than other Europeans, but we have not found any data on this subject.

4 Some rejections are justified

Certain loan rejections are good news for general welfare. Banks, naturally, do reject loans for legitimate reasons, for instance if a certain project or company is not expected to make a profit, or if the bank’s profit from providing the loan is not expected to cover the related costs. Banks would risk their own existence and general financial stability if they would just grant loans unconditionally, also to parties with a credit rating that is too low.

[11] For additional figures, see DNB (April 2019), ‘Smaller companies contribute increasingly to savings surplus’ (link) and, for a policy analysis, for example: SEO (2014), ‘Evaluatie fiscale regelingen gericht op bedrijfsoverdracht’ (link).
[12] See Kalara and Zhang (2018), ‘The changing landscape of firm financing in Europe, the United States and Japan’ (link) for country details.

These valid reasons for rejecting loans, often, feature more for SMEs than for larger enterprises, but not always. For example, fixed costs for banks are mostly to the disadvantage of smaller firms. The differences between countries with respect to these costs, however, are unknown.[13] For the Netherlands, we know that smaller enterprises show a larger range in business results and, therefore, represent higher risks for the bank. This is partly compensated by the fact that the relatively small loan applications submitted by SMEs are easier to diversify in a broader portfolio, compared to large loans.

On average, Dutch SMEs are relatively healthy, financially, and we therefore assume that Dutch banks do not reject relatively many loan applications because of the applicant's financial status. The profitability of enterprises, also those that are small and medium-sized, is relatively good in the Netherlands, compared to other eurozone countries (Table 4.1). Furthermore, the median shareholder equity ratio of small Dutch enterprises is larger than that of those in other countries and certainly larger than that of larger enterprises.[14]

Dutch banks reject loan applications relatively often, but this has not resulted in the healthiest lending portfolios of the eurozone. In late 2018, Dutch banks had 2.2% of problem loans on their balance sheets, which certainly is substantially lower than in Greece, Portugal and Italy. However, Germany, Finland, Estonia and Luxemburg showed even fewer NPLs, while the chances of bank loan approval are higher in those countries than in the Netherlands.[15]

Table 4.1 Median return on assets and equity ratio per size of enterprise, in various European countries

	Netherlands	Belgium	Germany	Austria	France	Spain	Italy
Return on assets (net operating profit, as percentage of assets)							
Small enterprises, turnover < EUR 10 m	8%*	5%	6%	6%	6%	2%	5%
Medium-sized enterprises, EUR 10 m < turnover < EUR 50 m	10%*	6%	6%	6%	5%	5%	5%
Large enterprises, turnover > EUR 50 m	7%*	4%	6%	5%	4%	5%	4%
Shareholder equity ratio (equity, as percentage of assets)							
Small enterprises, turnover < EUR 10 m	44%	46%	36%	33%	41%	47%	23%
Medium-sized enterprises, 10M < turnover < EUR 50 m	35%	35%	38%	31%	33%	42%	27%
Large enterprises, turnover > EUR 50 m	36%	32%	36%	33%	32%	40%	30%

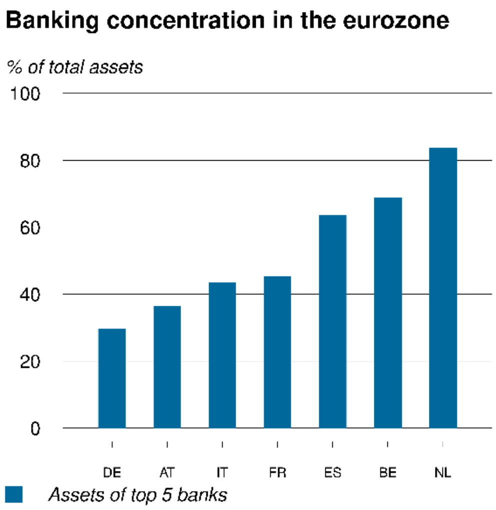
Source: BACH data and CPB adaptation of CBS micro data (NL) on 2016.
*CBS data based on a definition that differs slightly from the BACH data.

[13] We can however compare cost-to-income ratios, which results in Dutch banks ranking as average.
[14] Unfortunately, we had no data on the differences between enterprises in the various countries, which is why we cannot rule out the financial position of Dutch SMEs being the distinctive element in the 'tails'. Neither can we rule out the possibility of, in the Netherlands, for some reason, bank loans being applied for by a 'worse' type of entrepreneur than in other countries. However, as yet, we have not found any evidence of this being the case.
[15] Source: EBA Q4 2018 Risk Dashboard (link).

5 More rejections due to market power, mortgages and asymmetrical information?

The market power of banks may play a role in the small chances of loan approval, in the Netherlands.[16] Banks that, together, form an oligopoly are able to achieve higher profits by setting higher interest rate margins. This causes low-revenue projects to be priced out of the market. The market concentration level of banks is high, in the Netherlands, but this does not automatically means there is little competition (Figure 5.1). From the answers to an additional question in SAFE, we know that Dutch SMEs, in 2017, had a business relationship with only 1.5 banks. This is the lowest figure in the eurozone, which thus does not point to very strong competition. It is however close to impossible to robustly measure the competition between banks.[17]

Figure 5.1 Dutch banking sector is relatively concentrated (source: ECB for 2017)[18]



The high market interest rates for business loans from Dutch banks represent an additional indication of market power playing a role, although it is not definitive proof.[19] In the Netherlands, the interest rates for both small and large long-term loans are higher than in the surrounding countries (Figure 5.2). This despite the fact that all these eurozone countries are able to borrow money from the ECB on the same conditions and there being no indications of Dutch companies posing higher risks (Table 4.1).[20] Neither are Dutch banks

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[16] Terence Tai-Leung Chong, Liping Lu and Steven Ongena, 'Does Banking Competition Alleviate or Worsen Credit Constraints Faced by Small-and Medium-Sized Enterprises? Evidence from China', Journal of Banking & Finance 37, no. 9 (2013): 3412–3424; Zuzana Fungáčová, Anastasiya Shamshur and Laurent Weill, 'Does Bank Competition Reduce Cost of Credit? Cross-Country Evidence from Europe', Journal of Banking & Finance 83 (2017): 104–120; Robert M. Ryan, Conor M. O'Toole and Fergal McCann, 'Does Bank Market Power Affect SME Financing Constraints?', Journal of Banking & Finance 49 (2014): 495–505.

[17] For example, see Dubovik and Kalara (2018), 'Can we measure banking sector competition robustly?' (link)

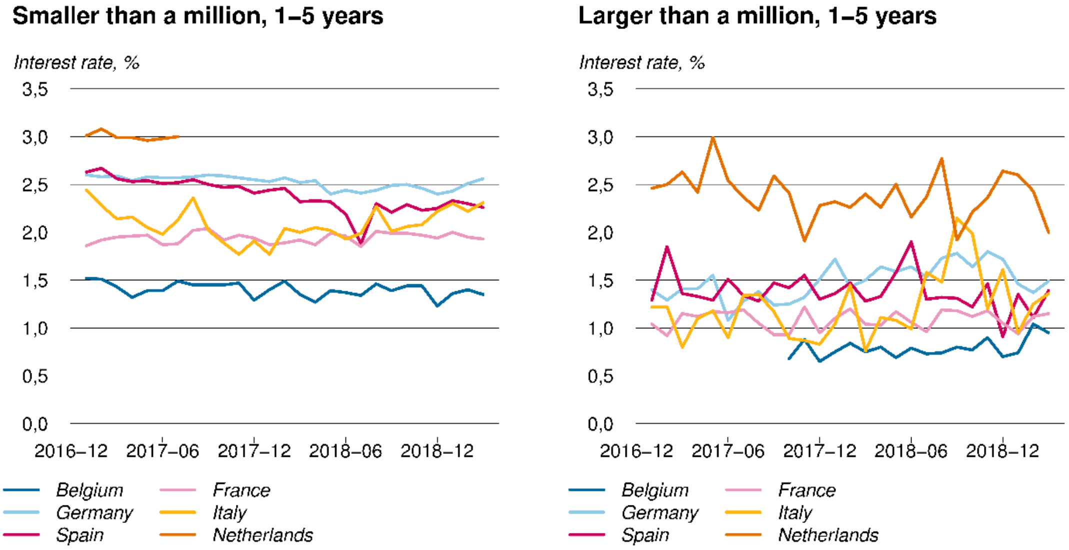
[18] The data on bank concentrations, unfortunately, cannot be divided into business loans and mortgages.

[19] ACM, in 2015, reached a comparable conclusion in: 'Concurrentie op de markt voor mkb financiering' [competition on the SME financing market] (link).

[20] The ECB, unfortunately, only separates the tariffs for eurozone loans according to source country, thus not showing the country in which the loan was obtained. If Dutch banks are entering into relatively risky loans abroad, this may be one of the reasons for the differences in interest rates.

attracting fewer consumer deposits that could lead to relatively high financing costs. In the Netherlands, savings accounts make up 51% of the banks' liabilities; in Germany and France this is 36% and 42%, respectively.[21]

Figure 5.2 Relatively high market interest rates for business loans from Dutch banks (source: ECB)[22]



Business loans, in general, and SME loans, in particular, may also be squeezed out of the market by activities that are more profitable for banks. In a perfectly competitive market with a never-ending range of financing possibilities, banks would finance each project that would be expected to turn a profit. In reality, however, the market is probably far from perfectly competitive and banks are also faced with short-term capital restrictions, such as having to comply with regulations on mandatory capital buffers under the EU Capital Requirements Directive ('Basel 3'). Recent scientific evidence shows that, to comply with capital requirements, banks are inclined to reduce their balance sheet rather than issue new shares.[23] This explains why they give preference to the more profitable loans for their assets portfolio.[24]

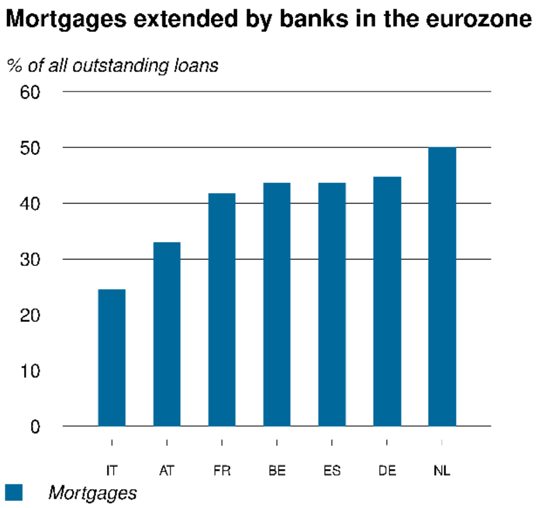
Policy choices, among other things, have made mortgages more attractive than business loans, in the Dutch market. This policy brief focuses on mortgages, because, on this subject, there are clear differences between European countries, but there could also be other banking activities that are more attractive than that of providing credit to SMEs. For a number of reasons, Dutch banks enjoy relatively strong protection against the problem of non-repayment by homeowners.[25] Because of the tax deductibility of mortgage interest payments, the tax department carries part of the financial burden. Also, many homeowners are using a National Mortgage Guarantee (NHG) (which obviously carries a lower interest rate) and the owners remain

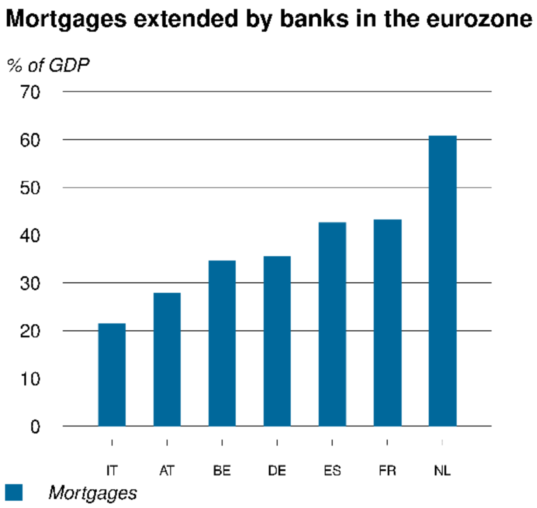
[21] Source: ECB, for 2017.
[22] The ECB, regrettably, does not provide interest rate data on loans that are divided into source country and country of destination. These data, therefore, also include those on loans distributed abroad. Loans given out by ING in Germany, thus, are categorised as 'Dutch' loans. And there are no more data available from the ECB, from the autumn of 2017 onwards, about interest rates on small Dutch business loans.
[23] For example, Gropp et al. (2018), Banks Response to Higher Capital Requirements: Evidence from a Quasi-Natural Experiment, Review of financial studies, Volume 32, Issue 1, January 2019, Pages 266–299.
[24] A number of recent scientific papers discuss the relationship between business loans and mortgages on the balance sheet, for example, those by Chakraborty, Goldstein, MacKinlay (2018), Housing Price Booms and Crowding-Out Effects in Bank Lending, The Review of Financial Studies, Volume 31, Issue 7, July 2018, Pages 2806–2853, and Bezemer, Samarina and Zhang (2019), The effect of mortgage lending on business credit: evidence from a disaggregated bank credit dataset, Working Paper, Groningen University.
[25] For example, see OECD (2018), 'Design of insolvency regimes across countries' (link), CPB (2017), 'In vier stappen naar efficiëntere faillissementswetgeving' [four steps to a more efficient bankruptcy legislation (in Dutch)] (link) and the valedictory lecture by Professor Kortmann in Nijmegen (link).

severally liable for any negative equity. The run time of mortgages, moreover, is relatively long and the costs of collecting payments are low.

Dutch business loans seem to face competition from mortgage loans for the housing market. From a European perspective, the Dutch financing market is particularly characterised by a strong focus on mortgages (Figure 5.3).[26] This would be a plausible explanation for the relatively low approval rate of loan applications of SMEs by Dutch banks. The figure only shows mortgage debt at the banks ('monetary financial institutions') that hold only 62% of all Dutch mortgages on their balance sheets.[27] Since the financial crisis, the other 38% is at insurance companies, pension funds and other financial intermediaries. This, therefore, seems an attractive market for 'new' entrants.

Figure 5.3 Mortgage debt in the Netherlands is relatively high (source: ECB for Sept. 2018)[28]





In addition to market power and the mortgage market, the difference in the availability of information to entrepreneurs and financiers may also be a reason for the low approval rate in the Netherlands. This difference is playing a major role in the theory of credit rationing (see text box). The theory describes a situation in which loans are not being approved because, under relatively high risks, there are no interest rates imaginable that would keep the entrepreneurs engaged and for which the banks are also willing to run the loan-related risks.

In contrast to the situation in, for example, Belgium, Ireland, Italy and Spain, there is no credit registry in the Netherlands from which potential lenders could obtain information about a company's credit rating. In the past, several institutions (e.g. the IMF, SER and CPB itself) have called for such a registry being created for the Netherlands, in order to remove the information asymmetry and allow more competition on the financing market.[29]

[26] Also in the non-eurozone country of Denmark, bank balance sheets contain large numbers of mortgages. The market concentration of the 5 largest banks there, however, is lower than in The Netherlands (64.5%).
[27] Source: CBS, for the third quarter of 2018 ((in Dutch; link).
[28] This concerns domestic mortgages, i.e. issued to domestic customers.
[29] For example, CPB (2015), Financial Stability Report (in Dutch).

Credit rationing

Entrepreneurs are able to obtain both equity and debt from external financiers. These can provide equity; in which case they fully share in the future profits or losses of the enterprise. The financiers can also lend out money, with or without collateral. The entrepreneur only pays a certain percentage in interest rate on this debt. In those cases, all profits are for the entrepreneurs, but in bad times, the lenders would be the first to get their money back.

The market failure 'credit rationing' occurs when profitable yet risky projects are unable to attract capital and, therefore, cannot take place. Credit rationing occurs when financiers have insufficient knowledge of or influence on the daily practice of an enterprise, or when they have insufficient control over the remaining value of a project in case of bankruptcy (or not enough collateral). In case of debt, the higher risks need to be compensated by higher interest rates, but such higher rates also increase the risks of non-repayment by the entrepreneurs. This is why, when the risks are too great, there is no interest rate level (no matter how high) that could ensure profitable credit provision for the creditor. Providing equity would then be an option, but also involves similar drawbacks. Higher risks, in such cases, would need to be compensated by larger shares in the company. The entrepreneur, thus, will be earning less and be inclined to work less hard, which in turn will have its impact on business results and profits. When the risks become too great, then there is no share large enough to ensure profitability for the external shareholder.

'Measuring Credit Rationing of Dutch Firms', the background document to this policy brief, investigates credit rationing in the Netherlands, using a microsimulation model. This simulation uses data from the balance sheets and profit and loss statements for all Dutch enterprises, over the 2007–2016 period (securely obtained through CBS microdata). The microsimulation requires several crucial assumptions on the functioning of the Dutch credit market, which deserve further investigation. On the basis of these assumptions however, we conclude that only in recent years, SMEs were relatively more affected by credit rationing than were the large enterprises. It would be interesting to compare these findings on an international level, but similar simulations on other countries are not available.

Reliable international research shows that credit registries likely improve the functioning of the credit market, although this does not automatically mean that total lending volumes will go up. For the United States, Bosnia & Herzegovina, Guatemala and Albania, natural experiments with credit registries have shown that such availability of public information improves loan repayment.[30] Many experimental studies also indicate that a credit registry makes it more difficult for badly performing enterprises to obtain financing. In Argentina, for example, the amount of credit for companies with multiple financiers decreased.[31] And those that performed badly were less able to obtain large loans and those loans also carried higher interest rates.[32] The effects of the implementation of a credit registry on the total credit volume are mixed, which may be related to the way in which the registry is implemented. The literature, furthermore, shows that the positive effects of implementation or expansion of credit registries are strongest in developing countries[33] and in countries where the rights of creditors are limited.[34]

There may, of course, be other factors involved in the low approval rates for SME loans in the Netherlands. 'Relationship banking' (personal contact and a certain degree of discretion between a bank officer and firms) is also mentioned as an explanatory factor for the level of bank lending in a country. This is motivated by the assumption that relationship banking reduces the monitoring costs for the bank. Relationship banking does not seem big in The Netherlands, with its low number of local bank branches. The question, however, is whether the higher costs related to relationship banking would outweigh the benefits. It is also possible that there are international differences in the degree to which local government authorities, supervisors and the public at large are obliging banks to care for their customers. In the Netherlands, this subject is receiving a large amount of attention, since the problems with interest rate derivatives (IRDs).

6 Policy options

This chapter describes policy options that may reduce the differences between the Netherlands and other eurozone countries in the field of bank financing. Here, the focus is only on those options that would address the possible explanations named in the previous chapter. It must be noted that these explanations cannot be fully proven and, thus, should be treated with caution. Sensible policy considerations, in addition, should include weighing the effectiveness, costs and side-effects of measures. The effectiveness of a measure should preferably be determined via randomised controlled trials (RCTs) or quasi-experiments; something that is not yet available for all the policy options in this domain.

Addressing information asymmetry, for instance via a credit registry, is a feasible and relatively well-researched policy intervention. A credit registry may take on various forms, but essentially concerns the collection of data on a broad credit history for enterprises, including their current creditworthiness. Each

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[30] Jaap WB Bos, Ralph De Haas, and Matteo Millone, 'Show Me Yours and I'll Show You Mine: Sharing Borrower Information in a Competitive Credit Market', *Baffi Carefin Centre Research Paper*, no. 2015–8 (2016); Antonio Doblas-Madrid and Raoul Minetti, 'Sharing Information in the Credit Market: Contract-Level Evidence from US Firms', *Journal of Financial Economics* 109, no. 1 (2013): 198–223; Patrick Behr and Simon Sonnekalb, 'The Effect of Information Sharing between Lenders on Access to Credit, Cost of Credit, and Loan Performance–Evidence from a Credit Registry Introduction', *Journal of Banking & Finance* 36, no. 11 (2012): 3017–3032; Alain De Janvry, Craig McIntosh, and Elisabeth Sadoulet, 'The Supply-and Demand-Side Impacts of Credit Market Information', *Journal of Development Economics* 93, no. 2 (2010): 173–188; Jill Luoto, Craig McIntosh, and Bruce Wydick, 'Credit Information Systems in Less Developed Countries: A Test with Microfinance in Guatemala', *Economic Development and Cultural Change* 55, no. 2 (2007): 313–334.
[31] Andrew Hertzberg, Jose Maria Liberti, and Daniel Paravisini, 'Public Information and Coordination: Evidence from a Credit Registry Expansion', *The Journal of Finance* 66, no. 2 (2011): 379–412.
[32] Jose Maria Liberti, Amit Seru, and Vikrant Vig, 'Information, Credit, and Organization' (IMFS Working Paper Series, 2015).
[33] Simeon Djankov, Caralee McLiesh, and Andrei Shleifer, 'Private Credit in 129 Countries', *Journal of Financial Economics* 84, no. 2 (2007): 299–329.
[34] Maria Soledad Martinez Peria and Sandeep Singh, *The Impact of Credit Information Sharing Reforms on Firm Financing* (The World Bank, 2014).

potential credit provider will have access to these data, which is useful for individual loan applications and provides general loan market information to new entrants. The government may carry all or some of the costs of this provision of information. This would be expected to improve the functioning of the financing market as a whole, and thus reduce the risk of credit rationing.

In the current Digital Age, a credit registry is likely to have added value particularly for new lenders, as they are currently lacking market information about defaults, and it therefore might also impact the market power of existing banks. On the other hand, it takes lending institutions these days relatively little effort to obtain large amounts of information about businesses—for instance, if the applying party shares payment data—which is why a credit registry will have only limited added value, from this perspective. Standardised business reporting, of course, also plays a role here.

In the Netherlands, competition between banks on the business loan market could be promoted further, although it is not easy for the government to directly affect the market structure. Within the current framework of competition law, the government has only few instruments to do so. Increased concentration of the market may, of course, be countered by controlling mergers. However, in all other cases, the Netherlands Authority for Consumers and Markets (ACM) is only allowed to intervene in cases of abuse of market power or illegal (secret) collaboration that is to the disadvantage of consumers. Examples of such collaborations would be cartel formation, tacit or agreed collusion with the aim of jointly keeping interest rates up. Proving such practices can be very difficult. Therefore, the government cannot intervene when low levels of competition simply lead to less innovation that is keeping price levels high. Public ownership of banks, in theory, could be used to impact market structure, for example by having the Volksbank offer lower interest rates on business loans. However, this is likely to lead to problems with European legislation, because of unfair competition.

Indirect influence on the competition between banks, however, would be an option. Completing the European banking union, for example, would make it more attractive for banks to compete on an international level. In all cases, the barriers to entry would need to be kept as low as possible, although they are already relatively low for lending institutions. After all, the lending activity by itself does not require a banking license. Another example is that of implementing number portability which makes it easier for SMEs to change banks and, thus, also move to another credit provider.

In further reforming the mortgage market, it would be sensible to also look at the relationship with credit provision to businesses. There are various activities taking place in this respect, already. In particular, the mortgage interest rate deductions have been restricted, over the past years, and will decrease even further this year. The degree to which the relatively attractive lending market needs to be adjusted further is a political consideration. Current policy, such as fiscal stimulation, obviously serves other policy goals than that of stimulating SME financing, but has rather unintended side-effects in this area.

The various policy options in this chapter are certainly not an exhaustive list. Policymakers could for example also take generic measures to increase the provision of credit to small and medium-sized enterprises. The primary focus of this policy brief is not on those types of measures, which is why further investigation on this subject would be called for. Important, in this respect, would be to prevent, as much as possible, the phenomenon of 'crowding out' (substituting private funding by public financing).