

Financial Stability Report

Autumn 2019

DeNederlandscheBank

EUROSYSTEEM





Contents

De Nederlandsche Bank (DNB) is responsible for overseeing financial stability in the Netherlands, a task embedded in the Bank Act. Early detection of systemic risks comprises an important part of our financial stability task. Every six months we publish our Financial Stability Report (FSR). In it, we raise awareness of these systemic risks among stakeholders – financial institutions, policymakers and the general public. The FSR does not provide forecasts, but instead analyses scenarios. Where possible, we use macroprudential instruments and issue policy recommendations to prevent or mitigate the systemic risks identified in the FSR.



Current developments

Risks to financial stability accumulate the longer the expansive monetary policy continues. Persistently low interest rates hinder debt reduction and lead to distorted pricing in financial markets, which could cause asset price bubbles. Likewise, ever lower interest rates weigh heavily on the financial position of pension funds and life insurers. Monetary policymakers must therefore devote attention to the side-effects of protracted expansive monetary policy. At the same time, the trade war, Brexit, geopolitical tensions, and political and policy uncertainties are important downside risks to the global economy. Similarly, new developments seen in financial markets, such as leveraged finance, and in the payments landscape, such as PSD2 and Libra, have the potential to create financial instability in the long run. In the Netherlands, systemic risk inherent in the housing market has increased. Accordingly, we intend to impose higher capital buffers for banks to hold against their mortgage loan portfolios to make them more resilient.

International developments

Monetary policies in both the United States and the euro area have been more accommodative. Concerns over the global economy and limited inflationary pressures prompted the Federal Reserve Board (Fed) to lower the US policy rate in two incremental steps to a range between 1.75% and 2.0%. Moreover, it stopped unwinding its balance sheet in August, two months ahead of the expected date. In Europe, too, low inflationary pressures and downside risks to economic growth have prompted the European Central Bank (ECB) to further loosen its monetary policy.

In September, it lowered the deposit facility rate by 0.1 percentage point to -0.5%, with part of the reserves deposited with the ECB exempted from the negative deposit facility rate. The ECB also amended its forward guidance – interest rates will remain at their present or lower levels until the inflation outlook robustly converges to a level sufficiently close to, but below, 2%. Net purchases under the asset purchase programme (APP) will be resumed. From 1 November onwards the ECB will purchase bonds in monthly amounts of EUR 20 billion net until shortly before the first interest rate increase. Also, the ECB will continue to reinvest expiring bonds purchased under the APP in full. Lastly,

a new round of targeted longer-term refinancing operations (TLTROs) are made available to banks from September onwards, with a three-year term.

Risks to financial stability accumulate the longer the expansive monetary policy continues. Public and corporate debts have gone up in the euro area, sharply in some cases, since the crisis, while household indebtedness fell only moderately. As low interest rates persist, incentives for bringing down debts decrease. If debts remain high, governments, firms and households remain vulnerable to unexpected sudden interest rate increases, negative income shocks, or both. Furthermore, if interest rates remain low for a prolonged period of time, risk pricing becomes distorted, which could result in misallocation of capital, thereby eroding the economy's growth potential. For example, low-cost financing will allow weak firms to survive. In addition, persistently low interest rates put pressure on the profitability of financial institutions and provoke a search for yield. This may entice financial institutions to reallocate their investment funds to higher-yielding but riskier and less liquid assets. Such a search for yield could cause overvaluation of specific asset classes, which may result in considerable price corrections in the longer run. A point of concern is that





macroprudential policy is capable to a limited extent only to counterbalance such side-effects of persistently low interest rates and accommodative financial conditions. For this and other reasons, it is important that monetary policymakers devote attention to the side-effects that protracted expansive monetary policy has for financial stability (see [Macroprudential policy](#)).

The trade dispute between the United States and China escalated further over the past few months.

The United States and China have been involved in a trade dispute for over a year now, and it regularly flares up strongly. Meanwhile, both have imposed significant import tariffs. June and July saw negotiations take place with the aim of ending the conflict, but these failed. In response, both nations announced fresh measures. The escalating trade tensions are harming economic growth worldwide and heightening financial uncertainties. In addition, there is a risk that they broaden into a currency war.

A no-deal Brexit remains a risk. Before 31 October, the United Kingdom (UK) and the European Union (EU) must have ratified the terms for withdrawal. For the moment, a further extension, an orderly exit and a disorderly exit are conceivable scenarios. A disorderly Brexit will see the UK leave the EU without

a withdrawal agreement and without the previously agreed transition period until end-2020. This could trigger sharp corrections in financial markets and inflict substantial losses on institutions with sizeable investments in the UK or on institutions with exposure to firms directly hit by Brexit's impact. The Dutch financial sector's direct exposure to the UK is roughly 4% of its total international exposure. Pension funds have the largest investment exposure to the UK, at 5.1% of their total exposures. UK-based central counterparties (CCPs) provide clearing services that are critical to the EU. They warrant heightened attention, particularly because the European Commission's public measures are temporary and expire on 30 March 2020, as currently foreseen.

Political and policy uncertainty are harming economic growth worldwide. Apart from trade tensions and the political crisis in the UK, the past few months also witnessed unrest in other parts of the world. Social tensions in Hong Kong ran high, the nuclear deal with Iran almost became a dead letter, Italy experienced a government crisis that lasted for weeks, and political tensions between Japan and South Korea heightened. These and other factors have pushed global geopolitical and policy indices further up in recent months, and they are now at a high level

(see [Figure 1](#)). Together with increased trade tensions, high uncertainty is harming global economic growth. According to ECB and IMF estimates, global GDP growth should come to around 3% this year, more than half a percentage point below their year-earlier estimates.

In Europe, the risk of a resurgence of the sovereign debt crisis remains.

Although the capital position of the European banking sector overall has improved over the past few years, part of the sector continues to grapple with structural weaknesses, such as low profitability. Similarly, sovereign debt positions in Europe differ widely. In an unsettling development, governments that face relatively high debts are the ones that reduce them at a slower pace. Moreover, some are still leaning heavily on their own banking sectors for funding of their sovereign debts. A combination of weak banks, vulnerable governments and strong interdependencies could cause the harmful interplay between banks and governments that featured before in the European sovereign debt crisis to resurface (see [Interaction between governments and banks](#)).



Current developments in financial markets and payments

Leveraged loans

The recent boom in the leveraged loan market and the deterioration in underwriting standards illustrate an increasing risk appetite among investors. Leveraged loans are often loans with a high risk profile, extended to businesses that are less creditworthy or already relatively heavily dependent on debt financing. The leveraged loan market has shown rapid growth in recent years. Recent estimates from the [Bank of England](#) show a global market of USD 3.2 trillion, equivalent to 11% of total advanced-economy credit to non-financial corporations. The outstanding stock of leveraged loans has reached record levels both in the United States and in Europe (see [Figure 2](#)). Rapid market growth has been accompanied by a rapid deterioration in underwriting standards. Before the crisis, covenant-lite loans, which offer weaker investor protection, made up approximately 30% of the market but are now above 80% in both the United States and Europe. The average leverage of issuers is also growing steadily.

Financial institutions are exposed to the leveraged loan market in a variety of ways. Although banks and non-banks may directly issue leveraged loans, the majority are structured and issued by banking

syndicates. Arranging banks may retain a portion of the syndication themselves, which exposes them to potential loan losses and bankruptcies. The loan portion not retained by the banks is distributed among institutional investors, such as Collateralised Loan Obligations (CLOs) and Loan Mutual Funds. CLOs bundle loans and tranche them into securities with varying risk and return profiles. These investments expose investors to market risk and migration risk, which is the risk of value loss due to a rating downgrade. While banks typically invest in the segments rated as more creditworthy, insurance firms tend to invest in the middle segments. Investment funds are more likely to opt for the segments rated as riskier. In addition, financial institutions can be indirectly exposed to the risk inherent in the leveraged loan market, as they finance or invest in other financial institutions that have major direct exposures.


Globally, banks have significant exposure to the leveraged loan market. The [Bank of England](#) estimates that the banks' own loan book exposures account for nearly half of the total leveraged loan market volume, mainly through revolving credit facilities and, to a lesser extent, holdings of term loans. In addition, banks invest in the CLO segments rated as more creditworthy: roughly a third of the CLOs are held by banks, accounting for 9% of the total leveraged loan market. In terms of regional distribution, US and other globally

operating banks are among the largest investors, at 33% of market volume, while euro area banks account for 11%. The combined share of Dutch banks stands at roughly 1.5%.

In spite of the similarities between the leveraged loan market and the pre-crisis subprime lending market, there are also important differences. The sizeable and booming leveraged loan market and the deterioration in underwriting standards are reminiscent of developments in the US pre-crisis subprime lending market, when banks assumed major risks by granting mortgage loans to less creditworthy (subprime) customers. Issues that emerged in this market at the time eventually culminated in the global financial crisis. Further similarities between both markets are strong investor demand for securitised products and the close interdependency between banks and non-banks. There are also pertinent differences, however. First, the leveraged loan market is less dependent on short-term funding than the subprime lending market was at the time, and securitisations are less complex. In addition, supervision has been made much stricter since then, and credit ratings have undergone reforms.

This does not obviate the need, however, for analysing the risks to financial stability that arise from the leverage loan market and CLOs in further detail. Major investors in the global primary CLO





market are banks, as well as asset managers and investment funds. As the latter often buy on behalf of third parties, the identities of ultimate investors can be unclear, as well as the extent to which they are capable of dealing with shocks. This creates uncertainty about the way potential losses are transmitted through the financial system. The Financial Stability Board (FSB) is currently identifying the developments and risks in the markets for leveraged loans and CLOs.

PSD2

The European payments landscape is undergoing significant changes, and PSD2 is one of their drivers.

Under the revised European Payment Services Directive (PSD2) banks must allow licensed payment service providers access to payment accounts, subject to the account holders' consent. Implementation of the directive has opened up the European payments market to new categories of financial service providers. It also offers attractive and simple market access to BigTech firms such as Amazon, Facebook and Google, allowing them to offer payment and similar services in the European market. PSD2 was implemented in the Netherlands in February, and we have meanwhile issued licences to several payment service providers. Firms were also licensed in other EU Member States, allowing them to provide services in the Netherlands.

PSD2 requirements must be carefully implemented in supervision. Welcoming new entrants to the payments market can boost innovation and efficiency in the financial sector, thereby increasing its diversity and productivity, while consumers benefit from higher service levels and a wider range of options. But the flip side is that new entrants can also bring fresh risks, including operating, integrity and concentration risks. Similarly, there are concerns among some consumers about privacy safeguards. As part of our supervision, we devote a great deal of attention to new operating and security requirements, to ensure that banks can disclose their customers' payments data to other parties in a reliable manner. We also work closely alongside the Dutch Data Protection Authority, which oversees the protection of people's privacy ([DNB, 2019](#)).

Cryptos and stablecoins

After the turbulent rise of cryptos, "stablecoins" have recently emerged. Crypto markets went through their most tempestuous period in the second half of 2017. In early 2018, their combined market value stood at nearly USD 800 billion, but sharp price corrections have slashed it to roughly a third (see [Coinmarketcap](#)). Due to their volatility, cryptos are not a stable medium of exchange, a unit of account or a reliable store of value. For this and other reasons, alternatives referred to as stablecoins have recently gained prominence.

Stablecoins such as Tether are digital value units that are usually privately issued, pegged to a low-risk asset or basket of assets. The philosophy behind them is that they should be less volatile than cryptos, making them more suitable as a medium of exchange and unit of account. Nevertheless, there are significant concerns in relation to stablecoins, if only because transactions are effected anonymously and across borders, which means the risks of money laundering are significant. Moreover, if a stablecoin quickly reaches critical mass, risks to financial stability, the smooth functioning of the payment system and monetary transmission could emerge.

Facebook and its partners in the Libra Association have announced plans to launch a global payments platform.

They issued a white paper on 18 June 2019, detailing their plans for such a platform. The initiative will also feature a stablecoin named Libra. This will allow payments to be made over a private blockchain outside the conventional payments infrastructure. Facebook's huge customer base and its partnerships with major retail corporations provides Libra with massive potential for growth. This holds true in particular in countries with an inefficient payments infrastructure or in countries where access to basic banking services among households is low. Libra may be attractive for consumers because of persistently





high remittance fees and inefficiencies for some cross-border payments. The Libra Association argues that Libra offers a stable alternative for traditional fiat money, as the stablecoin will be backed by a basket of bank deposits and short-term government securities known as the Libra Reserve. The announcement by Facebook and the Libra Association has elicited critical comments from international supervisors and policymakers.

If Libra were to evolve into a full-fledged means of payment in due course, financial stability could be at risk in several ways. While much is still unclear in terms of the Libra Association's aspirations, financial stability could be impacted along several dimensions. Firstly, once this stablecoin has become a widely accepted means of payment, operational disruptions could pose a threat to the smooth functioning of retail payments. Secondly, its backing by the Libra Reserve could also cause risks to financial stability. This is because a run on the Libra could prompt the sudden withdrawal of the bank deposits that underlie it, causing banks to face liquidity or funding problems. Lastly, incumbents could experience pressure on their business models and engage in riskier behaviour as a consequence.

Concerns over Libra have been voiced in other areas too. First, stablecoins such as Libra are susceptible to

financial crime, because transactions are anonymous and international. Moreover, large-scale data collection and processing raises privacy questions. Similarly, Libra could have far-reaching consequences where the effectiveness and independence of monetary policy is concerned. These are more likely to materialise if Libra were to gain a substantial market share, becoming a substitute for the euro or another key currency. After all, this would involve a private party playing a major role in money creation without necessarily taking account of the impact on inflation and economic growth. The widely shared concerns over private stablecoins and their international nature have prompted global organisations such as the G7 and the FSB to develop a coordinated policy response.

We expect firms offering two types of crypto services to become subject to DNB's integrity supervision as of 10 January 2020. A major concern related to cryptos is that they are vulnerable to financial crime. To deal with this risk, a legislative proposal is currently before the Dutch House of Representatives. It proposes to bring firms offering services for the exchange between cryptos and regular money and crypto wallet providers under our integrity supervision ([House of Representatives](#), 2019). This implies that these firms must register with us and we will assess their board members and specific shareholders ("qualifying holdings") ([DNB](#), 2019). Following registration and



assessment, we will monitor that they comply with the rules on money laundering and terrorist financing. Our supervision of these providers will be limited to integrity supervision, as we will have no mandate for prudential supervision or supervision of consumer protection under the applicable laws and regulations.

Financial stability in the Netherlands

In the past three decades, interest rates have followed a downward trend, both in nominal and in real terms (see [Figure 3](#)). Lower inflation is a significant factor behind the trend-based decline in nominal capital market rates since the mid-eighties. In addition, real-economy trends have been key drivers of falling interest rates, including a global increase in savings appetite, a lower propensity to invest and lower potential growth. Monetary policy also plays a role, as the policy rate moves above and below the interest rate that is determined by structural factors ([DNB](#), 2019).

Ever lower interest rates weigh heavily on the financial position of pension funds and life insurers. The trend-based decline in interest rates has worked out adversely for pension funds and life insurers, which have seen their long-term liabilities grow at a faster pace than their investments. On top of this, prolonged low interest rates depress their future returns, making





it more difficult for these institutional investors to meet their commitments (DNB, 2017). This may incite life insurers and pension funds to venture into a new, riskier investment universe (see [Box 2](#)).

The Dutch pensions sector in particular is under pressure. On average, pension funds enter into longer-term commitments than insurance firms, and they invest a smaller proportion of their assets in fixed-income securities. This gives them a larger interest rate mismatch, causing their funding ratio to be highly sensitive to declining interest rates. Over the past year, interest rate declines have pushed the average funding ratio down by 7.3 percentage points, while eating 4.2 percentage points into the policy funding ratio, which is calculated as the average funding ratio based on daily market information of the preceding twelve months. In the second quarter of 2019, 51 pension funds had a policy funding ratio below the minimum threshold. Together, these funds administer 60% of all pension rights in the Netherlands. If the situation is not remedied, they will need to curtail benefits in the years ahead.

Dutch life insurers are also suffering the negative effects of low interest rates. Over the past years, Dutch insurance firms have made progress in future-proofing their sector, including by cutting

costs and lowering the guarantees they offer as part of their product range. Also, many insurance firms have capitalised on new opportunities, for example by offering insurance against cyber risks. Even so, the sector's life insurance arm remains at risk from further interest rate declines, due among other factors to return guarantees provided in the past. The average solvency ratio of Dutch life insurers has eroded by more than 30 percentage points on the back of lower interest rates in the past six months. In the current low-interest rate climate, it is difficult to introduce new, profitable life insurance products, and insurance firms are facing fierce competition in a saturated market.


Financial resilience has been bolstered across the Dutch banking sector over the past few years. For one thing, Dutch banks have formed additional buffers. In recent years, the risk-weighted core capital buffer has increased from 13.9% in the first quarter of 2014 to 16.9% in the second quarter of 2019. Likewise, Dutch banks have built holdings of capital instruments (AT1) and subordinated instruments (MREL) that provide supplementary cushions for recapitalisation purposes. It should be noted, however, that the Dutch banks' unweighted capital ratio (leverage ratio) is relatively low by international standards (see [Figure 4](#)), due to the relatively high amount in mortgage loans on their balance sheets, which carry relatively low risk weights.

The banks have, moreover, substantially lowered those risk weights over the past three years (see [Housing market](#)).

In the years ahead banks will need to further increase their buffers to comply with stricter requirements for capital and resolution. In early June, the new Banking Package of European regulations was adopted to make further strides in reducing risks in the banking sector and make the rules more proportionate. Among other elements, the new package includes an unweighted capital requirement and an add-on on top of this for global systemically important banks. The international Basel 3.5 accord agreed in December 2017 has not yet been incorporated into the Banking Package. We are pressing for the consistent, full and timely implementation of the Basel 3.5 capital accord in European regulations. In order to comply with the requirements of Basel 3.5 by 2027, the three largest Dutch banks face an expected additional capital requirement of EUR 7.0 billion in CET1 core capital and EUR 4.6 billion in AT1 capital instruments. In view of their profitability levels, we expect them to be able to meet the new requirements by retaining earnings.

Systemic risk inherent in the Dutch housing market has increased. House prices in the Netherlands are currently at an all-time high, with nominal prices





having gone up by over 39% on average from the low in June 2013. Annual price rises averaged as much as nearly 8% in the past three years. While sluggish supply and declining interest rates go a long way towards explaining price rises, there are also indications of overvaluation. House price increases have significantly outpaced income growth in recent years. In addition, house buyers have engaged in riskier behaviour, taking out larger loans in relation to their income and increasingly purchasing their home at levels above the asking price (see [Housing market](#)).

Macroprudential policy in the Netherlands

We decided in the third quarter to maintain the countercyclical capital buffer (CCyB) at 0%. The credit gap, which is the difference between actual total lending to businesses and households and its long-term trend, is an important indicator for determining the CCyB. The credit gap has been in negative territory for some time, suggesting subdued net credit growth. We also consider other indicators, such as credit growth in specific subsectors and real estate prices.

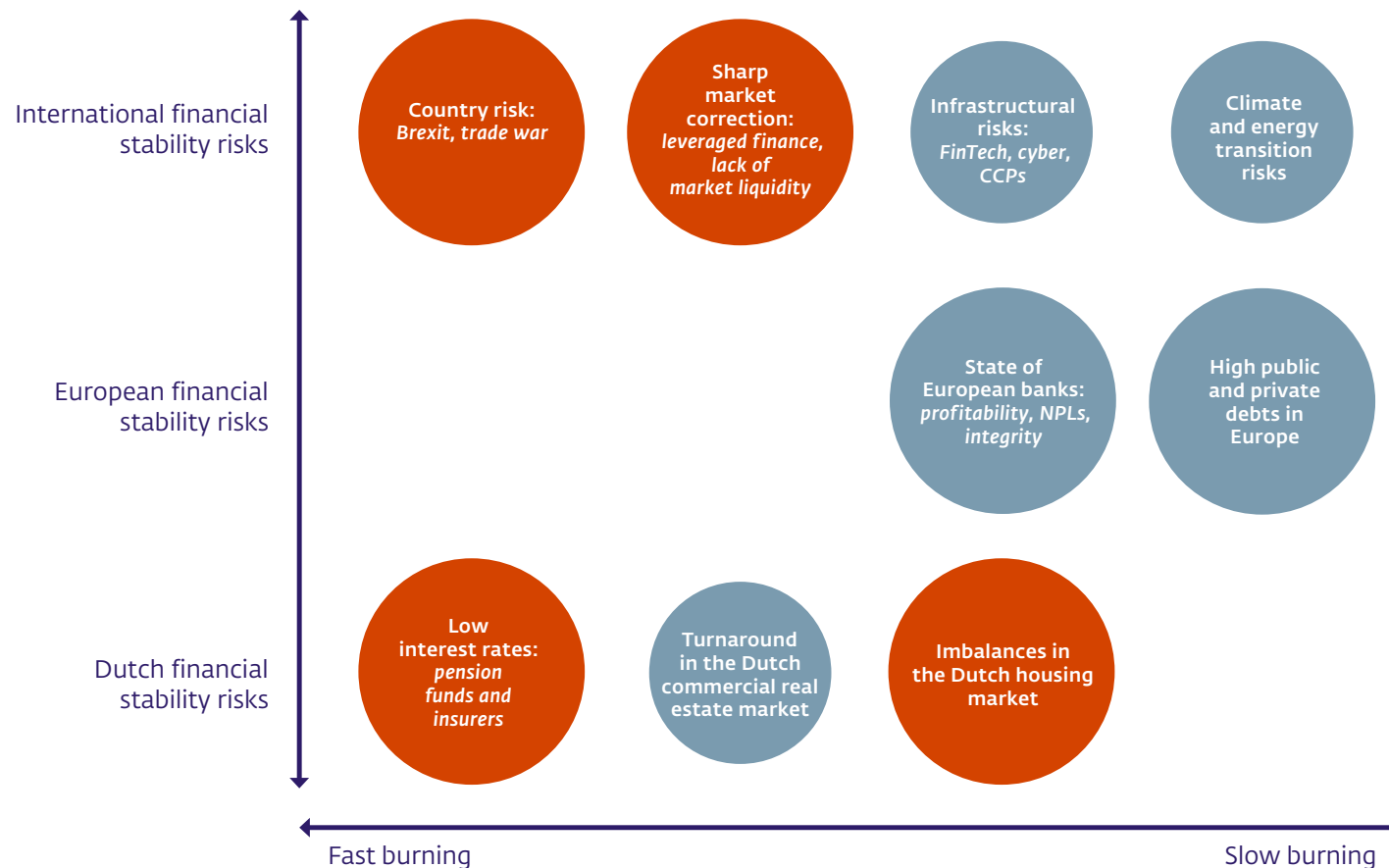
We intend to introduce a floor for risk weights of mortgage loan portfolios. The risk weights which banks currently assign to their mortgage loans do not reflect the increased systemic risk inherent in the housing market. We intend to impose a floor for mortgage loan portfolio risk weighting in the autumn of 2020 to improve the banks' ability to withstand a sharp fall in house prices. This means banks will need to maintain larger amounts in capital against their mortgage loan portfolios (see [Housing market](#)).

We advocate stricter and more stable borrowing criteria. By international standards, the Dutch loan to value (LTV) and loan to income (LTI) limits are still generous. In addition, the method used for computing the LTI limit contributes to house price fluctuations. This is why we urge for further reductions in the LTV limit. In unison with the Dutch Authority for the Financial Markets (AFM), we advocate exploring options aimed at strengthening the stabilising effect of the system of lending limits at the macro level. Ongoing reduction of mortgage interest tax relief would also be beneficial from a financial stability perspective, given that it eases the incentive for debt financing.

Extra capital buffers for systemically important banks remain in force. From an international perspective, the Netherlands has a relatively large and concentrated banking sector. We have instructed the five major Dutch banks to gradually build a systemic buffer, which must be completed this year. As in previous years, we will assess the buffer amounts in the autumn.



Risk map



Note

The risk map presents a schematic overview of the main risks to financial stability. The size of the circles reflects the magnitude of risk. The colour of the circles reflects whether, viewed over the medium term, a risk increases (red), decreases (green) or remains unchanged (grey). The interactive risk map included in the [Spring 2019 Financial Stability Report](#) provides detailed information for each risk. Compared with that risk map, we made the circles for "Country risk" and "Low interest rates" larger and moved them to the left, towards "Fast burning". The intensification of the trade war and increased uncertainty surrounding Brexit have been important considerations for enlarging the "Country risk" circle and moving it to the left of the "Sharp market correction" circle. As for the "Low interest rates" circle, we enlarged it to reflect ever lower market interest rates in advanced economies and the more accommodative monetary policy. We moved it further to the left because the risk has become more burning.

Figures

Policy and geopolitical
uncertainties increase
[View Figure 1 →](#)

Interest rates in the Netherlands
are at historically low levels
[View Figure 3 →](#)

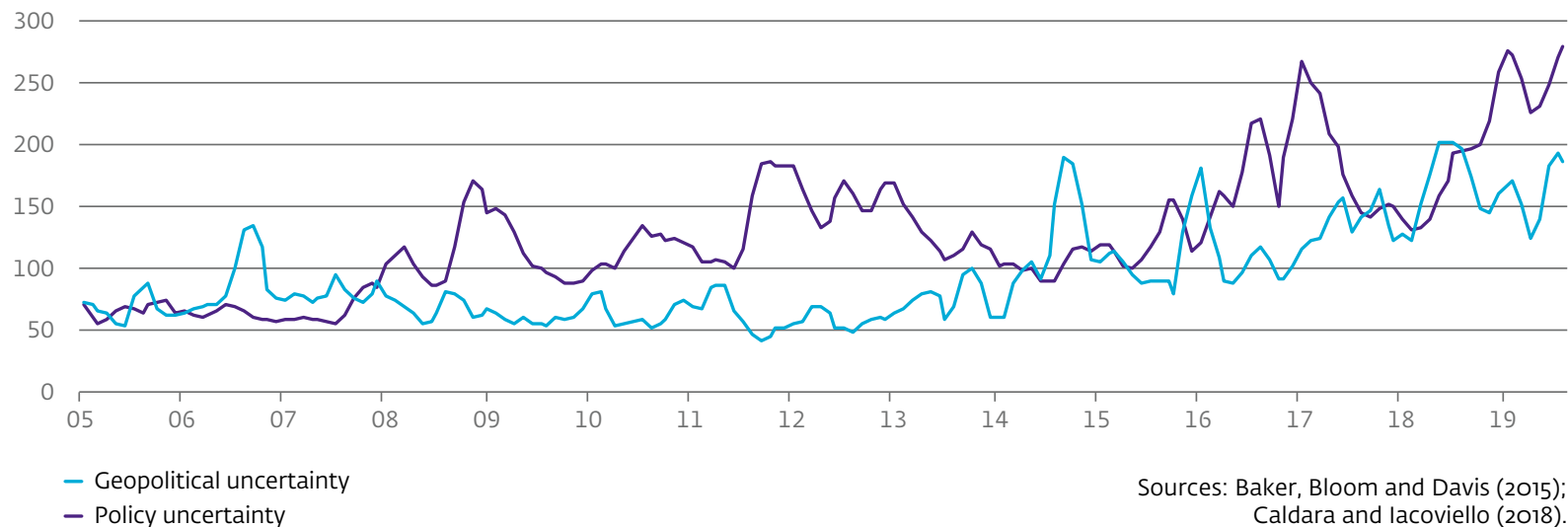
Total stock of outstanding
leveraged loans has reached
record levels
[View Figure 2 →](#)

From a euro area perspective,
Dutch banks have relatively high
weighted and relatively low
unweighted capital ratios
[View Figure 4 →](#)



Figure 1 Policy and geopolitical uncertainties increase

Indices, three-month moving averages



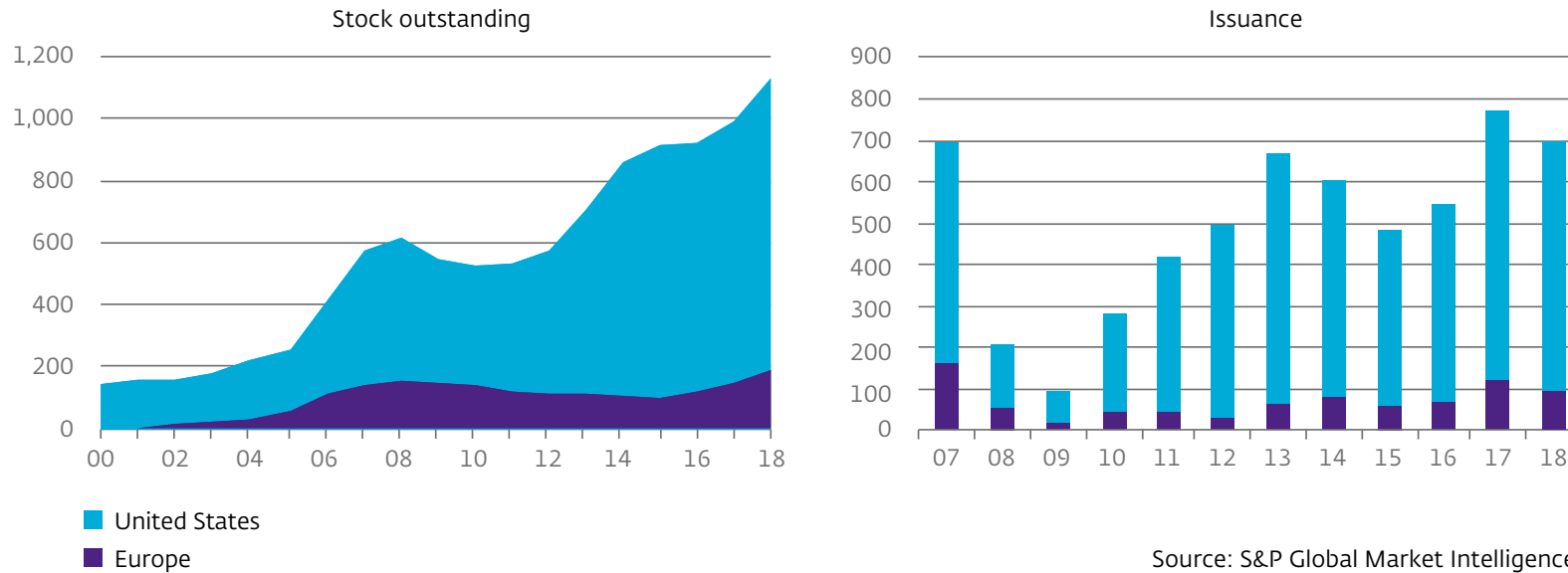
Sources: Baker, Bloom and Davis (2015);
Caldara and Iacoviello (2018).

Note: Policy uncertainty is gauged by the Economic Policy Uncertainty Index, compiled by Baker, Bloom and Davis (2015). It measures the level of policy uncertainty by the frequency with which specific word combinations appear in major newspapers. Geopolitical uncertainty is measured by the Geopolitical Risk Index, compiled by Caldara and Iacoviello (2018). The frequency with which newspapers refer to geopolitical tensions determines the level of the index.



Figure 2 Total stock of outstanding leveraged loans has reached record levels

In USD billion



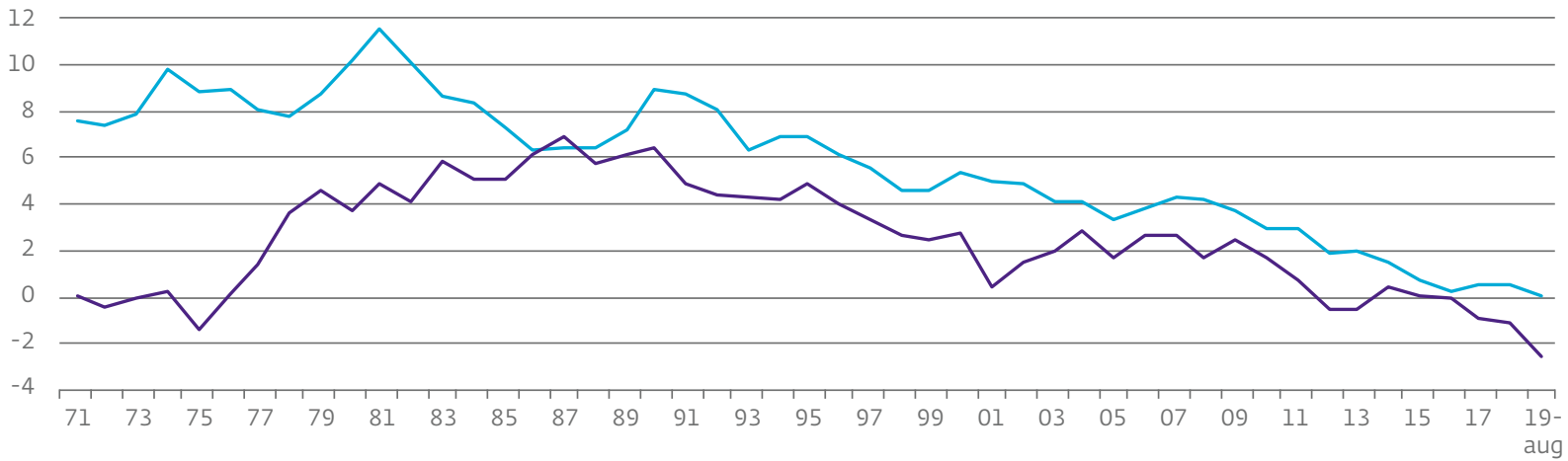
Source: S&P Global Market Intelligence.

Note: Given the lack of a consistent definition of leveraged lending, these charts use the widely used S&P leveraged loan index. Estimates by the Bank of England are higher, because its definition also covers institutional loans not included in the S&P index, amortising term loans and revolving credit facilities.



Figure 3 Interest rates in the Netherlands are at historically low levels

Annual percentages



— Nominal long-term interest rates
— Real long-term interest rates

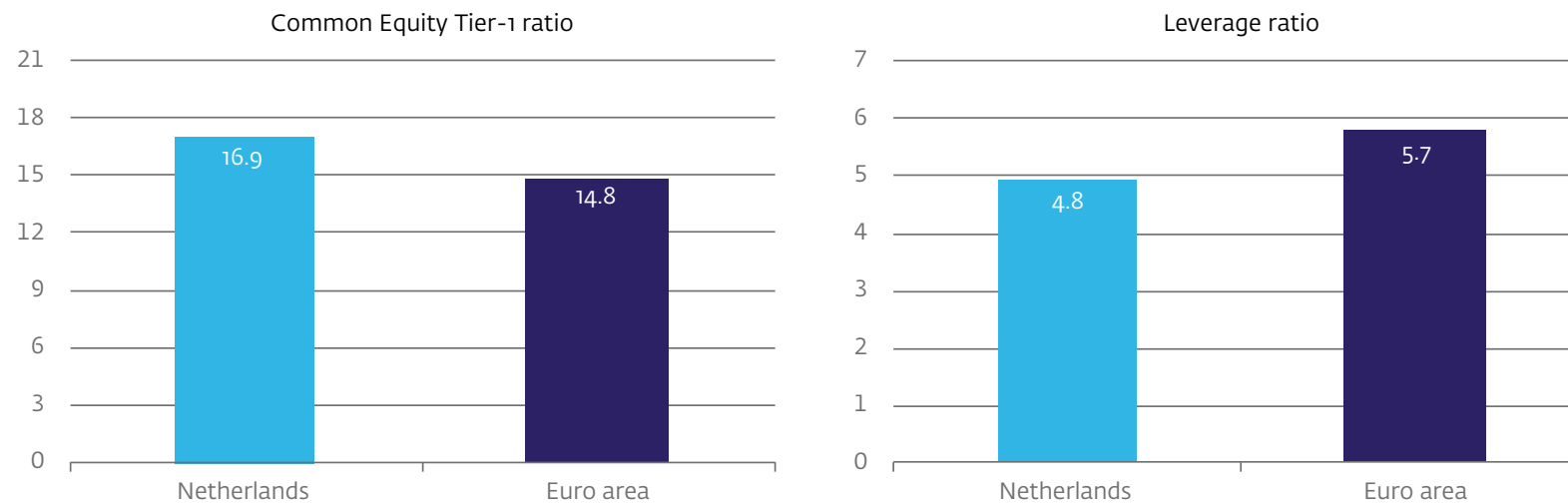
Sources: Statistics Netherlands and Refinitiv.

Note: The nominal long-term interest rate refers to the average 10-year rate on Dutch sovereign bonds. The real long-term interest rate refers to the nominal long-term interest rate adjusted for inflation, based on average consumer prices for each year.



Figure 4 From a euro area perspective, Dutch banks have relatively high weighted and relatively low unweighted capital ratios









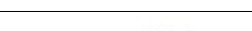
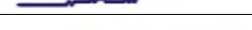






Risk-weighted assets as percentages; total exposures in percentages; Q1 2019



Source: ECB.

Macroprudential indicators

Figures are expressed as percentages, except where otherwise indicated.

	Most recent observation	Trend after 1998				
		Min	Max	Average	Period under review	
Credit conditions						
Trend deviation credit/GDP ratio ¹⁾	-28.1	-28.1	10.1	-3.0		1998Q1-2019Q2
Growth in household lending (y-o-y)	1.2	-1.3	16.2	5.5		1998Q1-2019Q2
Growth in non-financial corporations lending (y-o-y)	2.0	-1.8	10.6	4.4		1998Q1-2019Q2
Credit conditions for non-financial corporations ²⁾	0	-47	98	5		2003Q1-2019Q3
Credit conditions for residential mortgages ²⁾	-34	-53	100	10		2003Q1-2019Q3
Leverage						
Leverage ratio CRD IV, fully loaded ³⁾	5.0	3.4	5.0	4.2		2014Q1-2019Q2
Tier 1-capital/balance sheet total of the banking sector (up to 2013Q4)	5.0	3.0	5.0	3.9		1998Q1-2013Q4
CET1 ratio of banks under CRD IV, based on transition rules	16.9	13.6	17.0	15.5		2014Q1-2019Q2
Tier 1 ratio of banks under CRD III (up to 2013Q4) ⁴⁾	12.5	8.2	12.8	10.0		1998Q1-2013Q4
Household debt (% of GDP)	100.5	73.6	118.4	103.5		1998Q1-2019Q2
Non-financial corporations debt (% of GDP)	131.7	115.0	148.5	128.8		1998Q1-2019Q2
Real estate market						
Growth in house prices (y-o-y)	5.7	-9.9	20.1	4.4		1998Jan-2019Aug
Growth in commercial real estate prices (y-o-y)	8.0	-7.5	9.8	2.7		1998Q1-2019Q2
Loan-to-Value-ratio of first-time buyers ⁵⁾	89.8	89.8	95.7	93.2		2013Q2-2018Q4
Loan-to-Income-ratio of first-time buyers ⁶⁾	400	385	404	394		2013Q1-2018Q4
Interest rates on new mortgage loans 5-10 years (bp)	215	215	553	410		2003Jan-2019Jul

Macroprudential indicators

Figures are expressed as percentages, except where otherwise indicated.

	Most recent observation	Trend after 1998				
		Min	Max	Average	Period under review	
Bank liquidity						
Loan-to-deposit-ratio ⁷⁾	136.8	136.8	191.2	170.6		1998Q4-2019Q2
Proportion of market funding with maturities < 1 year	24.5	15.3	32.0	25.1		2003Q1-2019Q2
Systemic importance						
Size of bank balance sheets (% of GDP)	321.3	306.5	562.5	408.3		1998Q1-2019Q2
Share of the five largest banks in balance sheet total of the banking sector ⁸⁾	85.1	79.9	90.3	86.6		1998Q1-2019Q2
Rating uplift of systemically important banks (in steps) ⁹⁾	1.0	1.0	2.3	2.0		2012-2018
International risks						
Long-term interest rates (bp) ¹⁰⁾	-49.9	-49.9	566.6	302.5		1998Jan-2019Aug
BAA-AA risk premium (bp) ¹¹⁾	93.0	74.0	463.0	161.4		2001Jan-2019Aug
Risk premium in money market (bp) ¹²⁾	7.4	1.0	186.0	19.4		1999Jan-2019Aug
Risk premium on senior unsecured bank bonds (bp) ¹³⁾	64.9	12.6	321.5	82.4		1999Jan-2019Aug
Financial stress index ¹⁴⁾	-0.10	-0.56	3.32	0.20		1999Dec-2019Aug
Growth in global lending to non-financial corporations (y-o-y) ¹⁵⁾	-0.1	-5.8	20.3	6.1		2000Q1-2019Q1
Global growth in house prices (y-o-y)	1.5	-7.9	10.5	2.8		2001Q1-2018Q3



Macroprudential indicators

Figures are expressed as percentages, except where otherwise indicated.

Concentration of exposures of Dutch banks ¹⁶⁾			
	Netherlands	Abroad	2019Q2
Total of debt securities and loans	49.9	50.1	
Central bank	5.9	2.6	
Governments	5.7	5.1	
Credit institutions	1.0	9.7	
Other financial institutions	2.0	6.4	
Non-financial corporations	11.0	17.0	
Of which: Small and medium-sized enterprises	3.0	3.5	
Of which: Commercial real estate	4.3	2.7	
Households	24.3	9.3	
Of which: Mortgage loans	23.1	7.9	
Of which: Consumer credit	0.7	1.0	

Sources: Bloomberg, BIS, Statistics Netherlands, DNB, IMF, IPD, Moody's, Thomson Reuters Datastream.

Bp = basis points



Notes

- 1) The difference between a) the ratio of lending to the non-financial private sector and Dutch GDP and b) the long-term trend for that ratio as calculated in ESRB (2014), Occasional Paper No. 5: Operationalising the countercyclical capital buffer: indicator selection, threshold identification and calibration options.
- 2) The proportion of banks tightening credit conditions and easing credit conditions, with a positive number reflecting a net tightening and a negative number reflecting net easing.
- 3) Calculated based on the most recent definition of the leverage ratio as agreed by the Basel Committee in January 2014.
- 4) The Tier 1 ratio reported here includes the Basel I floor.
- 5) The ratio of the amount of the mortgage loan to the value of the home at the time the mortgage loan is taken out. First-time buyers are defined as individuals younger than 35 at the time the mortgage loan is taken out. DNB estimate based on a sample of Dutch mortgage loans.
- 6) The ratio of the amount of the mortgage loan to the income of the borrower at the time the mortgage loan is taken out. First-time buyers are defined as individuals younger than 35 at the time the mortgage loan is taken out. DNB estimate based on a sample of Dutch mortgage loans.
- 7) The ratio of loans (including sensitised loans) to deposits made by the domestic non-financial private sector.
- 8) Assets of the five largest Dutch banks (ABN AMRO, ING, Rabobank, Volksbank and BNG) as a percentage of the Dutch banking sector's total assets.
- 9) The difference between credit ratings including and excluding government support, based on Moody's methodology. This is an average of ABN AMRO, ING, Rabobank and Volksbank, weighted by balance sheet total.
- 10) Yields on Dutch ten-year government bonds.
- 11) The yield differential between international BBB-rated corporate bonds and international AA-rated corporate bonds.
- 12) The difference between three-month EURIBOR interest rates and the three-month EONIA swap index.
- 13) The yield differential between European senior unsecured bank bonds and the five-year swap rate.
- 14) Index based on indicators of Dutch equity, bond and forex markets.
- 15) Trend in lending to the non-financial private sector in all countries reporting to the BIS.
- 16) The share of Dutch and foreign counter sectors in the exposures of all Dutch banks, based on reported consolidated figures for supervisory purposes.



Macprudential policy for the Dutch housing market

Systemic risk inherent in the Dutch housing market has increased over the past few years. House price increases have significantly outpaced income growth while borrowers engage in riskier borrowing behaviour. At the same time, mortgage indebtedness remains very high. A potential house price correction could hit households and banks in particular. Resilience among households would be well served if the government restricted their borrowing capacity. Banks should maintain more capital against their mortgage loan portfolios to bolster their resilience.

Systemic risk inherent in the Dutch housing market has increased over the past few years.

House prices have gone up sharply for several years in a row – by almost 8% annually on average in the past three years. While sluggish supply and declining interest rates partly account for the price increases, there are also signs of overvaluation. In the Netherlands' major cities, real prices are now more than 17% above the previous peak level. In the provinces of Noord-Holland, Zuid-Holland, Utrecht and Flevoland - which together account for 44% of all Dutch owner-occupied residential properties - they hover around the previous peak. Price increases have significantly outpaced income growth in recent years. As a result, price/income ratios in the major cities are now higher than at the peak of the previous housing market boom (see [Figure 5](#)). Notwithstanding low interest rates, financing charges (principal repayments and interest payments net of tax relief) have gone up. Charges for a fully annuity-based

mortgage loan have returned to near-pre-crisis levels. Likewise, riskier behaviour on the part of buyers, such as overbidding, would appear to be a relevant factor in price increases. The share of transactions in which the purchase price exceeds the asking price increased further to upwards of 60% in the four major cities, and nearly 40% in the Netherlands overall. Price increases seem to flatten out now (see [Figure 6](#)). Following last year's 9% increase, a 5.9% hike is expected in 2019, followed by 2.8% and 2.3% in subsequent years. While the outlook for price increases is subdued, a price correction cannot be excluded. Following rapid price rises in the late 1990s and early 2000s, increases also slowed initially before prices started to slump in 2009.

House buyers borrow ever larger amounts, and total mortgage loan indebtedness remains elevated.

While they put up more of their own money, they also tend to borrow more in relation to their income.

This applies to both first-time buyers and homemovers. The share of buyers borrowing close to their LTV limit has risen steadily over the past few years (see [Figure 7](#)). In the second quarter of 2019, almost 50% of all first-time buyers and nearly 40% of all homemovers borrowed at or above 90% of their maximum capacity, against 44% and nearly 30%, respectively, in 2013. The average loan to value for new mortgage loans has fallen in recent years, partly due to a reduction in the LTV limit. Nevertheless, LTVs of first-time buyers in particular remain exceptionally high from an international perspective. In the Netherlands, roughly two-thirds of first-time buyers take out mortgage loans at LTV ratios at or above 90%, while around 38% borrow an amount equalling at least the full value of their home. This is impossible in many other countries. In Sweden and Norway, LTVs are capped at 85%. Ireland applies an 80% upper limit, while allowing first-time buyers a 90% LTV. In Germany and Austria, LTVs rarely exceed 80%. A further notable feature in the Netherlands is the persistently high mortgage loan indebtedness, notwithstanding the slide from over 105% to 91% of GDP since 2013. To put this into perspective, the euro area average mortgage loan indebtedness is 55% of GDP.



High indebtedness makes Dutch households vulnerable to a downward correction in the housing market. As prices drop, high mortgage loans will sooner end up underwater. Underwater homeowners consume less, as could be seen during the last crisis. A recent analysis from [CPB Netherlands Bureau for Economic Policy Analysis](#) shows that households whose mortgage loan was underwater or ended up underwater in the crisis, consumed 17% of their average disposable income less in 2014 than in 2007. Had they not moderated their consumption, nation-wide consumption would have been four percentage points higher in 2014. This testifies to the high sensitivity of Dutch consumption to trends in house prices (see also [DNB](#), 2018).

Banks, too, can be hit by a house price correction. Under Dutch law, a mortgage loan provider has a claim against both the mortgaged property and the borrower's income and wealth if the latter should default. On top of this, the National Mortgage Guarantee (NHG) offers banks additional security should a property's foreclosure sale yield less than the value of the loan outstanding. These and other factors have helped keep banks' mortgage loan losses muted during the last crisis, even when house prices plummeted. Nevertheless, stress tests show that banks' expected mortgage loan losses could surge in an adverse scenario. This could be the case if the

probability of default were to increase, for instance due to a sharp rise in unemployment, while collateral values simultaneously decrease due to the house price correction. A housing market correction will also hit Dutch banks indirectly, due to the high sensitivity of the Dutch economy to house price developments as described above. Lastly, Dutch banks still rely relatively heavily on market funding ([IMF](#), 2019), which dried up completely during the crisis. This also contributes to their vulnerability to a house price correction.

The European Systemic Risk Board (ESRB) in its recent recommendation also points out the risks inherent in the Dutch housing market. The ESRB is responsible for macroprudential oversight of the EU's financial system. Assessing systemic risks, it issues warnings or recommendations where necessary. On 23 September, the ESRB published a recommendation to the Dutch authorities to take measures aimed at mitigating risks in the housing market. Two years ago, the ESRB issued a [warning](#) to the Netherlands, which mainly concerned high mortgage loan indebtedness, very high LTV ratios and the many underwater mortgages. While acknowledging that measures have been taken to address the risks since, the ESRB believes further action is warranted. In addition, it points out that risks have increased due to sharp house price rises in recent years. For this reason, it has issued several recommendations to the Dutch government and DNB,

which are governed by the comply-or-explain principle. This means the Dutch government and DNB will need to either comply or explain why they choose not to do so. Recommendations to the Dutch government are as follows: 1) lower the LTV limit further; 2) amend the methodology for calculating the LTI limit; 3) introduce an act-or-explain mechanism for recommendations made by the Financial Stability Committee that relate to the LTV and LTI limits; and 4) take wider structural action ensuring that households are no longer incited to take out excessive mortgage debts. The ESRB recommends that DNB takes capital-related measures to improve the banking sector's resilience against the risks inherent in the Dutch housing market which the ESRB has identified.



Ability of households to withstand shocks

While debt financing incentives have been reduced, borrowing criteria remain generous. In recent years, the Dutch government has taken various measures that slowed down the increase in mortgage indebtedness. Newly issued mortgage loans no longer benefit from mortgage interest relief unless they are repaid within 30 years, at least on a straight-line basis. The maximum tax rate at which mortgage interest payments can be deducted will be brought down to 37% at a faster pace. In addition, the LTV limit has been capped at 100% of a home's appraisal value. These measures reduce incentives for debt financing, thereby contributing to more stable house price developments. Resilience among households would be well served if the government introduced further measures. By international standards, the LTV and LTI limits remain very generous, as does the tax relief facility for mortgage interest payments, even after the planned reduction (see for example [OECD, 2017](#)).

On the demand side, further LTV limit reductions, a stable LTI limit and a further reduction of the mortgage interest tax relief facility can help reduce volatility in house prices. Further LTV limit reductions mean that mortgage loans would end up underwater less quickly in the event of a house price correction. This would mitigate the adverse economic impact.

As further LTV limit reductions will boost demand for rented housing, ancillary policies must be pursued to increase supply. The current method used for computing the LTI limit makes the maximum LTI ratio move with disposable household income. A household's borrowing capacity also depends on current mortgage interest rates if a loan's fixed-interest period equals or exceeds ten years. Many households have opted for such long fixed-interest periods, which means that falling interest rates have given them more borrowing capacity. In a tight housing market, additional borrowing capacity contributes to higher house prices. This is why, in unison with the AFM, we advocate exploring options aimed at strengthening the stabilising effect of the system of lending limits at the macro level. In addition, the tax relief facility for mortgage interest payments remains generous, even after the planned reduction. Further reduction of this facility is desirable to reduce the incentive for debt financing. With the current low level of interest rates reducing the value of the relief, now is a good time to implement this measure.

The supply of homes should be increased, especially in the mid-price segment of the rental market. The Netherlands' major cities in particular face a shortage in non-subsidised rented housing, leaving middle-income earners stranded. Similarly, new entrants to the housing market effectively have no other choice

than to purchase a home ([DNB, 2017](#)). Housing supply should provide a better match with demand ([Nijsskens et al., 2019](#)). The ESRB in its recommendation also highlights the housing supply shortfall. Central and local government policies aim to boost the supply of homes. Over 66,000 new homes were built in 2018, while over 7,000 non-residential properties were transformed, only nearly missing the residential development target of 75,000. However, the number of building permits issued in the first six months of 2019 was almost 20% down on the year-earlier period. Completion times are long, due to such factors as staff shortages in the construction sector and conflicting interests among local governments. Municipalities are confronted with an insider-outsider dilemma: while new residents benefit from newbuilds, existing residents are not very keen on having them "in their backyards". Objection procedures can significantly delay the building permission process. On Budget Day, the cabinet announced a new set of measures aimed at tackling the housing market issues. Among other elements, it comprises a EUR 1 billion budgetary residential construction stimulus and a EUR 100 million per annum structural reduction of the landlord levy. In addition, it will pursue policies aimed at preserving affordable homes within the current rented housing stock, while improving allocation.

Resilience of the Dutch banks

The Dutch banks' resilience against a potential house price correction is crucial to financial stability.

Generally speaking, banks are the most systemically important financial institutions. Moreover, of all financial institutions it is the banks that are most exposed to risks in the housing market. A large proportion of their assets are Dutch-originated mortgage loans. At 23%, their share significantly exceeds those of insurance firms (14%) and pension funds (3%).

The risk weights which banks currently assign to their mortgage loans do not reflect the increased systemic risk inherent in the housing market.

Almost all banks use internal models to assess the riskiness of their outstanding mortgage loans. On that basis, they assign risk weights to 96% of the combined stock of loans on their balance sheets. Risk weights determine how much capital banks must maintain to absorb potential losses. Risk weights assigned to Dutch mortgage loans are among the lowest in the EU (see [Figure 8](#)). From a macroprudential perspective, we consider them to be insufficiently prudent, given the increased systemic risk. Our analyses show that

they could increase by as much as 8 to 11 percentage points in an adverse scenario¹. This would depress the banks' CET1 capital ratios by 1 to 1.3 percentage points on average, thereby eroding confidence among market participants, particularly in times of crisis. As in the most recent crisis, market participants could be less keen on funding Dutch banks, also given the latter's relatively low leverage ratios, which average 5.0%. Dependence on market funding can be measured by the loan-to-deposit ratio, which Dutch banks reduced in the wake of the crisis, from over 191% in 2008 to 137% in 2019. Viewed from an international perspective, however, Dutch banks still depend relatively heavily on market funding ([IMF, 2019](#)). The ESRB in its recommendation also notes that risk weights currently do not reflect risks to financial stability.

Moreover, average risk weights of banks' mortgage loans have gone down by some 20% since 2015, from 14% to 11%, unlike those of insurance firms and pension funds. Not only structural characteristics, such as the gradual reduction of LTVs of new loans, but cyclical factors also play an important role in the lower risk weights that banks assign. Among the principal factors depressing risk weights are value increases of collateral properties and lower default

rates. While lower risk weights make sense based on individual loans' risk characteristics, they are at odds with the increased systemic risks inherent in the Dutch housing market. Insurance firms and pension funds have not experienced a reduction in capital requirements for mortgage loans in recent years. Furthermore, under Solvency II and the Financial Assessment Framework we are not at liberty to impose macroprudential measures with respect to capital requirements for mortgage loan portfolios.

We intend to impose a floor for mortgage loan portfolio risk weights to improve the banks' resilience. All banks that use internal risk models must apply it. The floor increases with the LTV ratio of the underlying mortgage loans, meaning that more capital must be maintained for riskier mortgage loan portfolios. Loans wholly or partly covered by the Dutch National Mortgage Guarantee scheme will be exempt from the measure. By prescribing minimum risk weights we prevent systemic risks from being insufficiently taken into account in banks' capitalisation in good times. In principle, our measure applies for two years. It is therefore not an add-on on top of the new capital requirements under the Basel 3.5 accord, which will most likely be phased in from 2022 onwards.

¹ This adverse scenario was also used in the EU-wide stress test conducted by the European Banking Authority (EBA) in 2018. In this scenario Dutch house prices were around 25% lower after three years compared with the baseline scenario.

We expect risk weights for mortgage loans to start moving in a similar direction under the accord².

Various other countries have taken similar measures. Sweden, Finland and Belgium also increased risk weights for mortgage loans in recent years (see [Figure 8](#)) in response to substantial housing market risks and very low risk weights. Some countries have activated the countercyclical capital buffer (CCyB). Denmark, for example, currently applies a 1% CCyB, citing the rapid surge in house prices as one of the reasons for activating it.

The floor we impose will support the banks' ability to absorb the impact of a housing market correction. Our estimates show that the total amount in capital which Dutch banks, taken together, must hold will increase by almost EUR 3 billion, of which more than EUR 2 billion is core capital. The effect of the measure will differ between banks due to differences between their mortgage loan portfolios and risk weights assigned on the basis of their risk models, but their risk weights for mortgage loans should on average go up to 14-15%. The limit contributes to more stable bank

capitalisation, thereby reducing the risk of bank finance drying up in times of crisis.

We expect the measure to have only a limited impact on the Dutch housing market. It aims to strengthen banks' resilience and is not meant to influence house price developments, but will have some macroeconomic impact. We expect it to push up banks' funding costs slightly, part of which they can pass on to their lending rates. Extrapolations performed with our Delfi macroeconomic model show that mortgage interest rates are expected to go up by no more than 2 basis points as a result. The measure is therefore expected to affect home buyers only marginally. After several years, lending growth and house prices should be a mere 2% below the baseline scenario, respectively.

The measure will become effective in the autumn of 2020, following public consultation and consultation with European institutions. We will be imposing the measure as part of a procedure set out in Article 458 of the Capital Requirements Regulation (CRR). This article allows Member States to raise risk weights in

the residential property and commercial immovable property sectors if they identify changes in the intensity of macroprudential or systemic risk with the potential to have serious negative consequences to the financial system and the real economy. As the ECB, the EBA, the ESRB and the European Commission are relevant institutions in this procedure, we will first consult them before the measure becomes effective.



² The Basel 3.5 accord introduces an output floor, which imposes a lower limit on total risk-weighted assets of banks that use internal models, based on the outcome of the standardised approach. Their risk-weighted assets must be at least 72.5% of risk-weighted assets under the standardised approach. This floor impacts Dutch banks because risk weights under their internal models, including those for mortgage loans, tend to be lower than those under the standardised approach.

Figures

Price/income ratios in the major cities are now much higher than during the previous housing market boom
[View Figure 5 →](#)

House prices in the Netherlands keep rising, if at lower rates than a year ago
[View Figure 6 →](#)

The share of households borrowing close to or at their LTI limit has gradually increased in recent years, while LTV levels are declining slowly
[View Figure 7 →](#)

Risk weights assigned to domestic mortgage loans by Dutch banks are among the lowest in the EU
[View Figure 8 →](#)



Figure 5 Price/income ratios in the major cities are now much higher than during the previous housing market boom

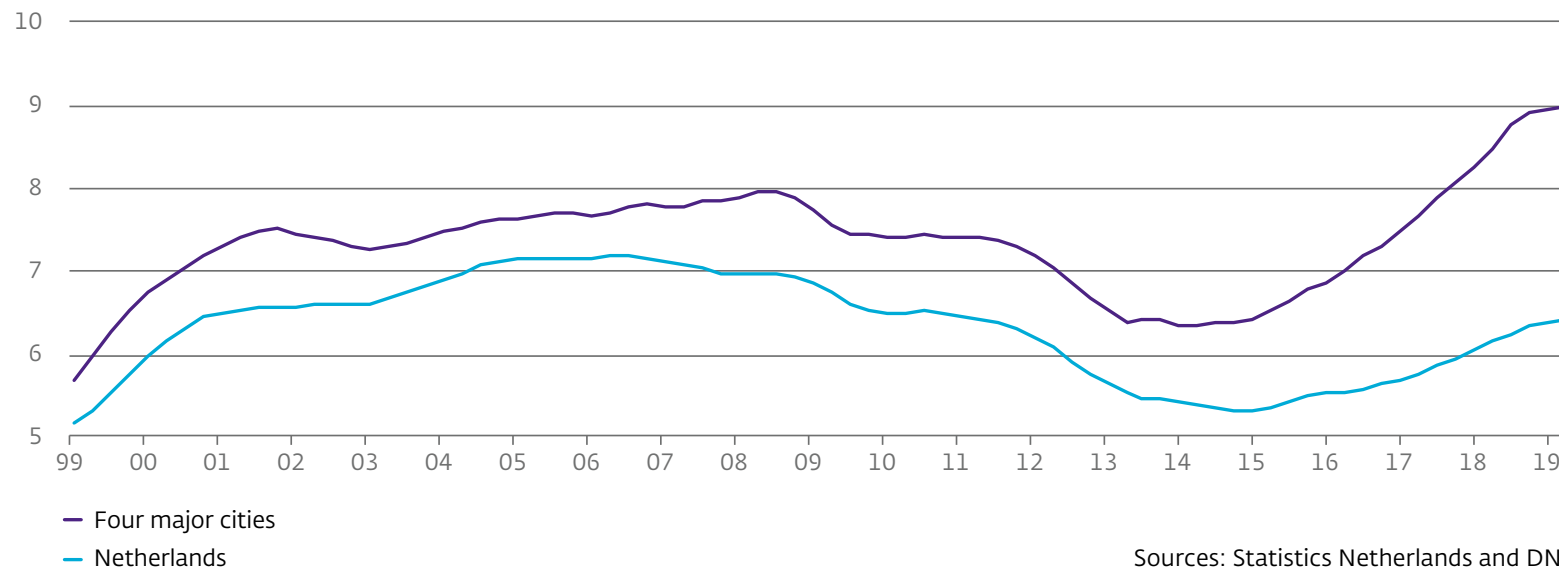
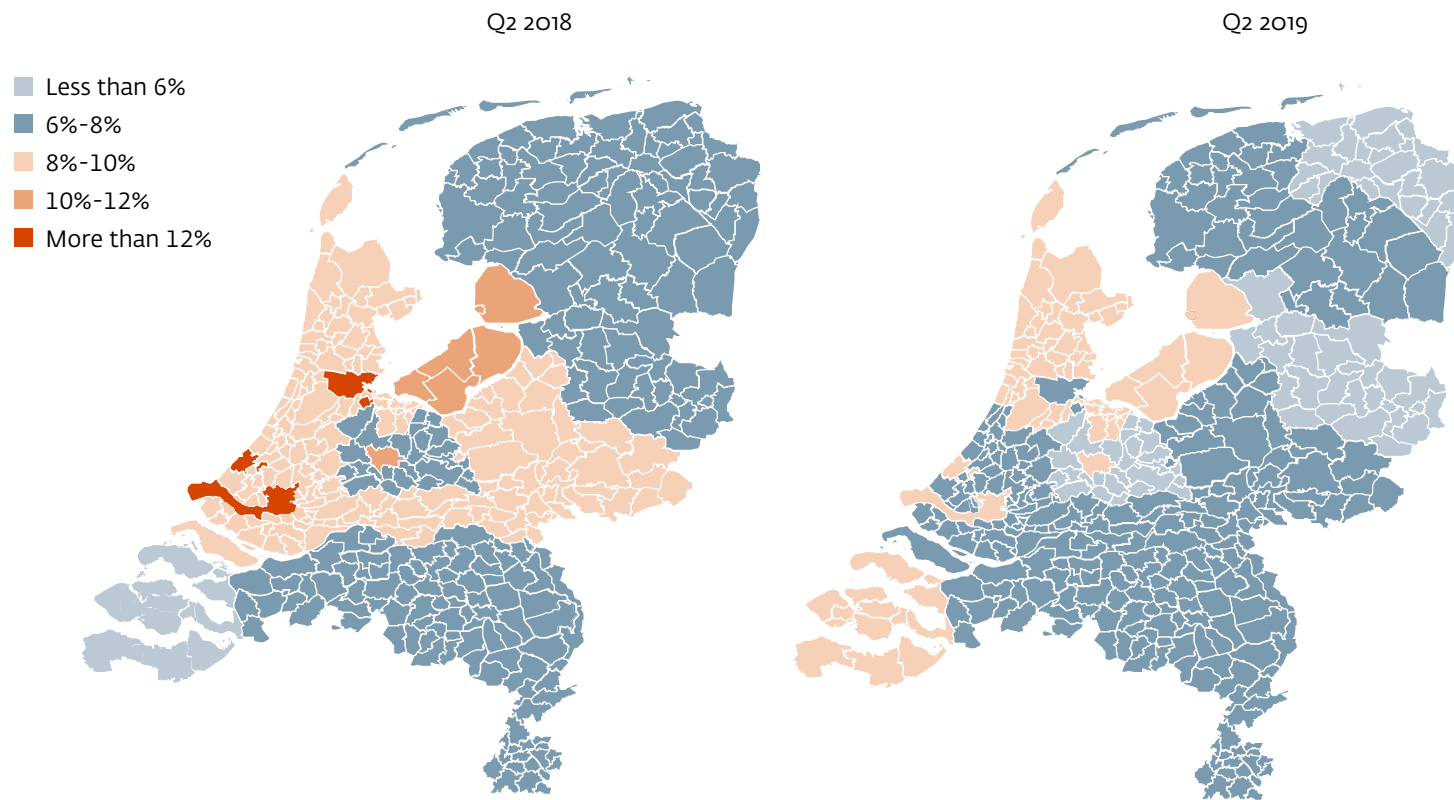


Figure 6 House prices in the Netherlands keep rising, if at lower rates than a year ago

Year-on-year percentage change



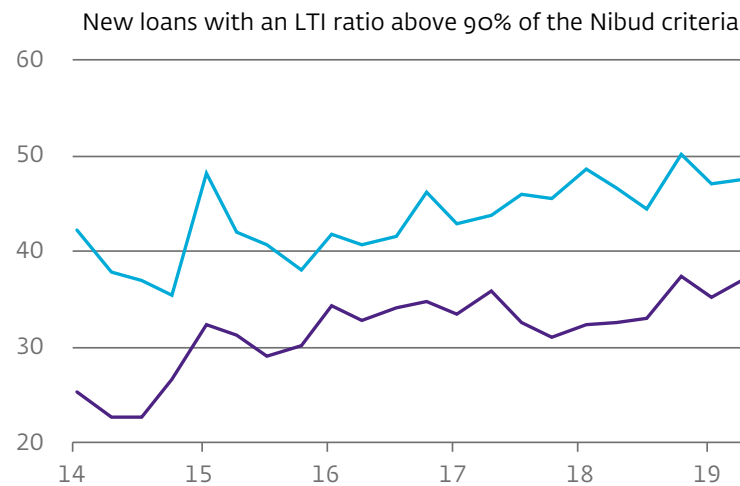
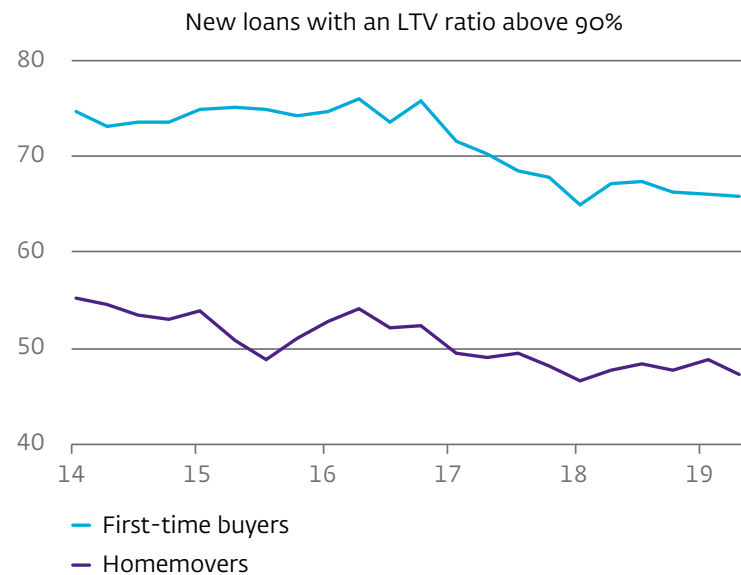
Sources: Statistics Netherlands and DNB.





Figure 7 The share of households borrowing close to or at their LTI limit has gradually increased in recent years, while LTV levels are declining slowly

As a percentage of all newly issued mortgage loans

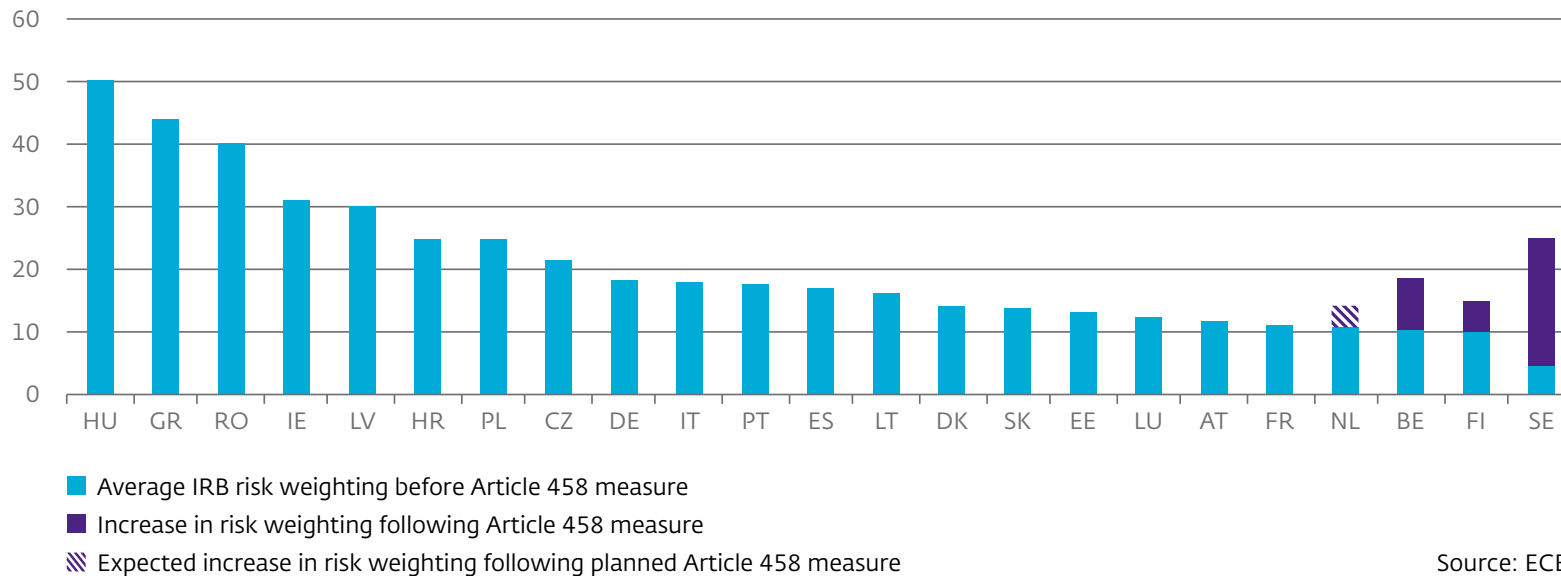


Source: DNB Loan Level Data.



Figure 8 Risk weights assigned to domestic mortgage loans by Dutch banks are among the lowest in the EU

Percentages; Q1 2019



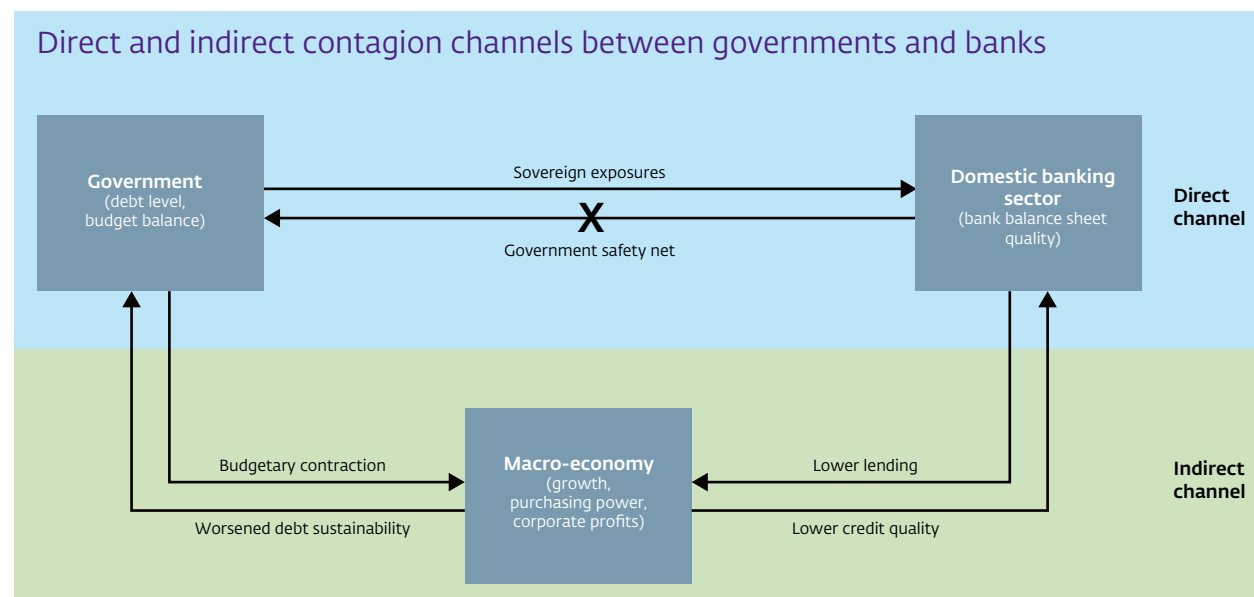
Source: ECB.

Note: The chart shows the average risk weight percentage that Dutch banks assign to the portion of their domestic mortgage loan portfolio for which they calculate risk weights using internal models. Sweden, Belgium and Finland previously decided to set floors for risk weights assigned to mortgage loans, under Article 458 of the CRR. As a result, their banks must use average risk weights that exceed outcomes of internal models (see dark blue bars). In the Netherlands, the average risk weight will also be higher following the introduction of the floor (see shaded bar).

Interaction between governments and banks

In some European countries, governments and domestic banks are still closely interconnected. As a result, the risk of a resurgence of the European sovereign debt crisis remains. Completion of the banking union and a renewed impetus to the capital market union should contribute to more private risk sharing and diversification. A strengthened common financial market will reduce the harmful interaction that occurred in various countries during the European sovereign debt crisis. Also, sustainable government finances and a healthy banking sector will reduce contagion between governments and banks, thereby mitigating the external impact of shocks.

The close interconnectedness of banks and governments was one of the decisive factors in the European sovereign debt crisis. This interconnectedness is also referred to as the sovereign-bank nexus. It means that problems faced by governments and banks can be mutually reinforcing. Their interaction involves a range of direct and indirect channels (IMF, 2018).



A primary cause of harmful interaction is direct mutual exposure. If problems arise in the banking sector, authorities that have insufficient options for resolving large non-viable banks in a controlled and careful manner may face the need to bail out the banks using public funds. The cost of such interventions may cause governments to run into financial trouble themselves. Conversely, doubts about the sustainability of public debts directly feed through to the domestic banking sector if banks hold large amounts in sovereign debt, whose value falls when risk premiums rise.

Indirect channels can also be a major source of contagion. Countries with unsustainable debt levels will ultimately need to put their government finances in order. In the short run, however, budgetary consolidation depresses economic growth. This

Note: Based on N. Veron (2017), "Sovereign concentration charges: a new regime for banks' sovereign exposures".





could contribute to a worsening of the quality of banks' loans granted to firms and households. At the same time vulnerable banks will want to repair their balance sheets by taking measures that include lending restrictions, which will reinforce an economic downturn. It is this interaction between the real economy and the financial sector that causes a self-reinforcing negative feedback loop.

Although single European banking supervision is now in place, the European banking union has not yet been completed. Agreements were made in 2012 to break the sovereign-bank nexus. The European banking union is comprised of three pillars, which must be considered in conjunction. Progress has been greatest so far with the first pillar, which is single European banking supervision. Stricter supervision and a more uniform approach contribute to a more solid banking sector in Europe.

The second pillar, which is a European resolution regime for failing banks, shows room for further progress. Important steps have already been taken in creating a regime to deal with banks that find themselves in trouble. Banks are currently building additional buffers to absorb losses and generate fresh capital in the event of resolution (bail-in). Also, resolution plans have now been prepared for all major banks in the banking union. They describe the

specific measures to be taken when a bank gets into difficulties. We can still push ahead further with the resolution framework by implementing additional regulations (BRRD 2). It is of the utmost importance that a bank's liabilities are sufficiently subordinated for any bail-in to be effective and credible. Also, resolution authorities and banks must still elaborate the operational requirements governing resolvability. Lastly, bolstering international collaboration will enable the European resolution authority to fulfil its coordination role more effectively.

Hardly any progress has been made when it comes to the third pillar, a European deposit insurance scheme (EDIS). National deposit guarantee schemes protect deposit holders. They are funded by the banks and at a national level, with the government acting as a backstop. EDIS should combine the funding of national deposit guarantee schemes at a European level. This will ensure that the failure of one bank in a specific country is less likely to destabilise that country's domestic banking sector and national government, as its impact is spread across Europe. Likewise, EDIS can prevent capital flight when the domestic banking sector is in distress, while confidence in the government's ability to save the banking sector is low. At the same time, banks must be prevented from using this system to shift risks to other countries by attracting savings under EDIS

to make risky investments or expose themselves to excessive levels of domestic public debts. This will result in an imbalanced distribution of risks across the European financial system. This is why, in Europe, the Netherlands emphatically advocates further steps aimed at reducing risks before any further progress can be made with EDIS ([Dutch Ministry of Finance, 2019](#)). In order for progress to be made, we see some scope for exploring variants of European liquidity support that could promote financial stability in the banking union, while any losses are borne nationally. In the first half of this year, a high-level working group prepared recommendations to the Eurogroup for detailing a new roadmap for the banking union, based on agreements reached in 2016.



Risks to financial stability

Government bonds play an important role in the financial sector. They are an important source of liquidity for banks' day-to-day operations. In addition, banks use sovereign debt instruments as investments, collateral in funding transactions and reference values for a variety of market operations. This special position of sovereign debt is also reflected in international regulations, given that banks are allowed to assign 0% risk weights to sovereign debt in domestic currency, with no concentration limits.

The current preferential treatment of sovereign debt leads to the imbalanced build-up of risks. In several countries, European banks have a relatively large share of their portfolios consisting of bonds issued by their own governments. In Italy, Portugal and Spain, their exposure to domestic sovereign debt is between more than 7% and 11% of their total assets (see [Figure 9](#)), against the euro area average of less than 4%. In times of financial turmoil in particular, exposure to domestic government bonds tends to increase as foreign investors withdraw and domestic banks are the principal source of funding for governments. These banks' home bias can play a stabilising role in the short run, as it depresses risk premiums and resolves urgent government financing issues. In the longer term, however, vulnerabilities increase. On the one hand, governments face fewer

restrictions that prompt them to put their budgets in order as long as domestic banks are prepared to fund sovereign debts. On the other, the relevant banks do not need to maintain any additional capital to cover their increasing exposure and risks. This deteriorates bank's balance sheets and might potentially lead to reduced lending to firms and households.

European countries with high public debts are hardly managing to bring their debt-to-GDP ratios down. In the aftermath of the financial crisis, the euro area public debt ratio peaked at 93% of GDP in the second quarter of 2014. While it has dropped to 86% for the euro area as a whole since then, disparity between the euro area countries has increased. Many countries, including the Netherlands and Germany, sharply reduced their debt levels in recent years. By contrast, other countries such as Italy, Spain and France have allowed public debt to go up further in nominal terms, with public debt ratios remaining just below the peak (see [Figure 10](#)). Among the causes are insufficient budgetary reform and low economic growth. After all, slow economic growth makes it harder to bring down debts (see [Figure 11](#)).

Governments with high debts are vulnerable, particularly in the euro area. Capital flight from one country to another is more likely to occur if countries share a common currency. In such a situation risk

premiums on sovereign debt could suddenly go up sharply, making it exceedingly difficult to get a grip on debt development.

Higher risk premiums make themselves felt immediately in the domestic banking sector in several ways. Firstly, banks face immediate losses or write-downs, given that roughly two-thirds of their sovereign debts portfolio is based on market values ([ECB, 2019](#)). Secondly, higher risk premiums drive up banks' funding costs. This is because government bond yields often serve as benchmarks for other fixed-income securities. Thirdly, markets will notice that a government's worsened debt position reduces the scope for government support of the financial sector. Several factors, including the sovereign-bank nexus, cause risk premiums for banks in countries with vulnerable public debts to be closely correlated with those of their governments. This correlation increased markedly in almost all euro area countries during the crisis. The market has witnessed greater disparity since then. While correlation is high in some countries due to a combination of high public debts and large bank exposures to their governments, it has gone down in other countries (see [Figure 12](#)).

As the new European Commission takes office, opportunities present themselves for strengthening integration. With the financial sector operating





across borders, we need a European approach in order to effectively safeguard financial stability in the Netherlands and Europe. Fresh initiatives relating to the banking union and the capital market union could improve diversification and stability, while enhancing incentives for refraining from excessive debt accumulation. These could include ending the current preferential treatment of sovereign debt, bolstering and harmonising bankruptcy laws, and strengthening European capital market supervisor ESMA. Increased market financing at a European level and closer integration in the common financial market will make for better risk spreading and reduced domestic interconnectedness.



Policy conclusions

Breaking the sovereign-bank nexus will require a holistic approach. The Basel Committee for Banking Supervision has mapped out various aspects of sovereign debt in a discussion paper, presenting proposals that could form the basis for reforming its current prudential treatment (BCBS, 2017). The ultimate objective is to strike the right balance between the various functions that government bonds fulfil in the financial sector, and to create appropriate incentives that contribute to healthy government finances and a solid banking sector.

Phasing out the preferential treatment of banks' exposure to sovereign debt will be a major step forward. A well-balanced, incremental introduction of risk weights for government bonds matches the risk-based approach of the international capital framework for banks (DNB, 2017). This will ensure that banks need to maintain capital commensurate with the risks that underlie their bond portfolios. It also promotes discipline for governments as banks will monitor their exposures more carefully and demand interest rate mark-ups when governments allow their debts to rise excessively.

Capital add-ons at high risk concentrations could help enhance diversification. Given the vital role which sovereign debt plays, setting a hard and fast limit to a bank's exposure to government bonds is not a preferred option. A well-integrated European capital market will make it easier to use the various diversification options. In the EMU, governments can benefit from an EU-wide investor base, while banks can invest in various national bond markets free from foreign exchange risks. A system in which banks face moderate capital add-ons for large exposure concentrations to a single country's government bonds could encourage banks to spread their portfolios more widely. This will help loosen the national sovereign-bank nexus.

A healthy banking sector is a key precondition for the completion of the European banking union. Further European integration, including increased risk sharing, is desirable only if banks are sound. In recent years, progress has been made in reducing risks in Europe's banking sector (Dutch Ministry of Finance, 2019). Banks are maintaining more capital and have reduced the share of non-performing loans in their balance sheets, but further steps are required. The key challenges in the European financial sector at present relate to improving resolvability, increasing profitability, ensuring a healthy market size with future-proof institutions, as well as further cost savings.

Improved risk weighting of sovereign debt will also create opportunities for market-based European funding initiatives. One much-debated aspect of the need to strengthen the EMU is the creation of a safe European bond (ESRB, 2018). Such a European safe asset would comprise a basket of government bonds issued by euro area countries, with securitisation helping to spread risks. Such an instrument is undesirable and non-viable under the current regulatory regime. As long as the component bonds are nil-weighted, the rules will not present any diversification benefits, while various risks to financial stability could emerge. Moreover, there will be no adequate risk weight for the subordinated junior tranche in particular to ensure that sufficient capital is maintained to absorb potential losses. One of the preconditions for ensuring that a European debt instrument is solid and viable is that its component bonds are given adequate risk weights that do not equal 0%. Market parties will then have a real incentive to split government bonds into various tranches and create the risk combinations of their own preference.

A strengthened capital market union can enhance the shock resistance of Europe's financial system. Capital markets in the euro area are still relatively underdeveloped. Most notably, dependence on bank finance in the EU is large in comparison with the United States. The European Commission's initiative



aimed at creating a European capital market union will make it easier for market participants to provide capital across borders. This will make the EU's funding structure more diversified, allowing shocks to be absorbed more effectively and risks to be spread more internationally. The new European Commission could take further steps towards eliminating obstacles to integration and development of a single European market, including by harmonising national regulations.

Lastly, national governments will need to step up their efforts aimed at safeguarding the sustainability of their public debt. In recent years, budgetary discipline in some Member States has been insufficient. Improved enforcement in the European Union should contribute to risk reduction and diminish the harmful interaction with the financial sector. Equally important will be to sufficiently promote economic growth by means of structural reform and to strengthen competitive positions.





Figures

In some countries banks have held large amounts in government bonds, especially since the crisis
[View Figure 9 →](#)

Lower economic growth complicates debt reduction
[View Figure 11 →](#)

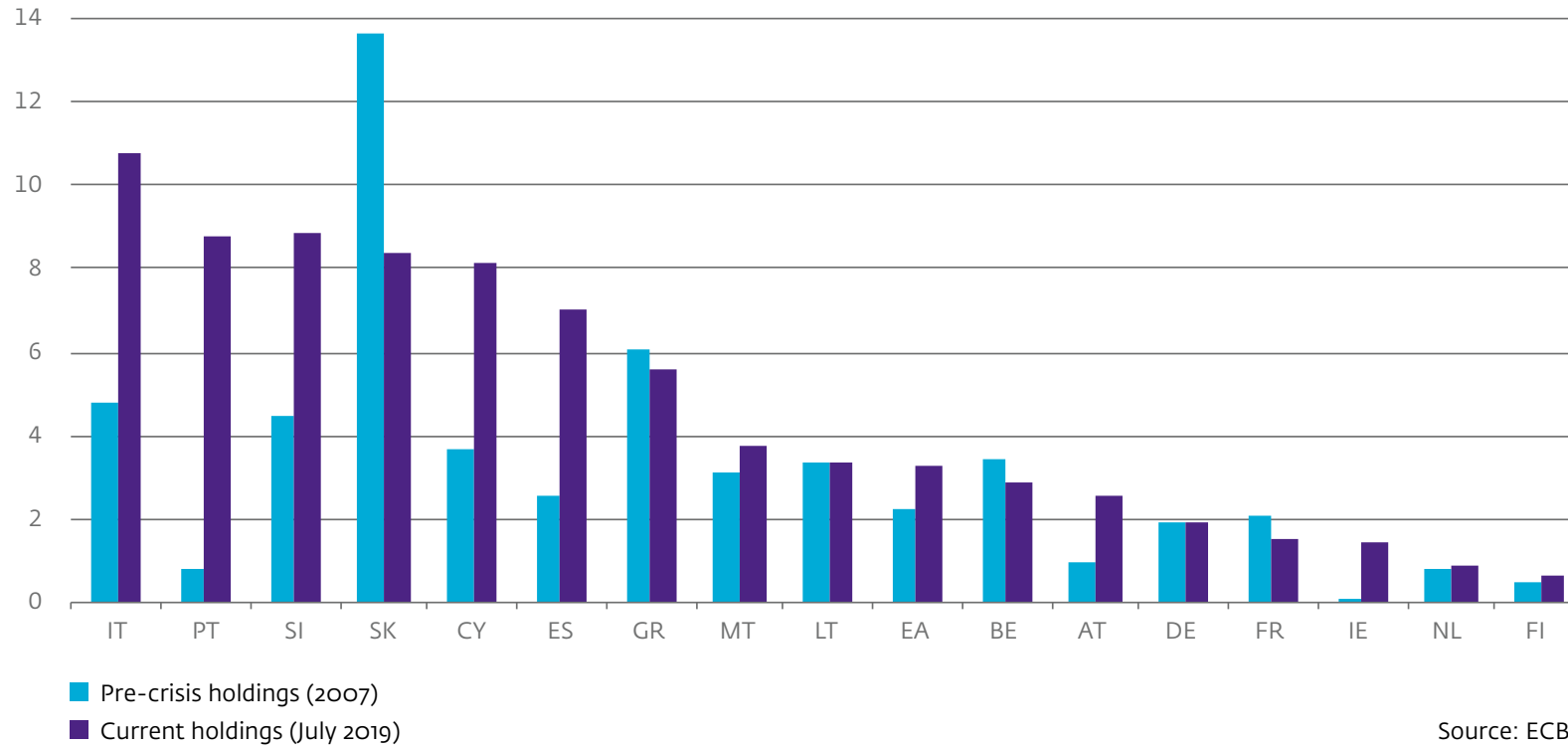
The extent to which governments bring down debt levels is the smallest in countries with high sovereign debts
[View Figure 10 →](#)

Risk premiums of governments and banks are more closely correlated in countries in which banks hold relatively large amounts in government bonds
[View Figure 12 →](#)



Figure 9 In some countries banks have held large amounts in government bonds, especially since the crisis

Percentages of total assets

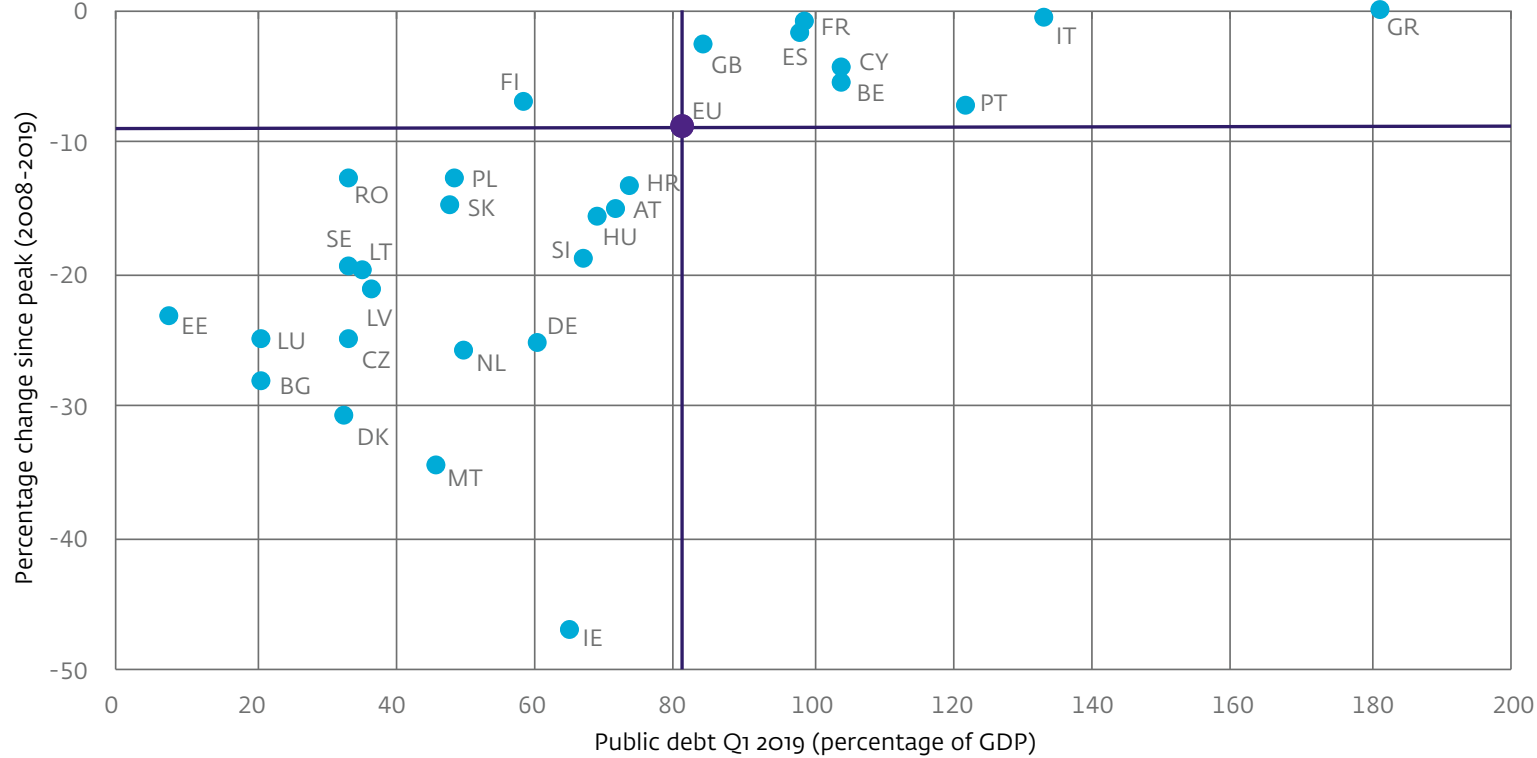


Source: ECB.



Figure 10 The extent to which governments bring down debt levels is the smallest in countries with high sovereign debts

Percentages; percentages of GDP



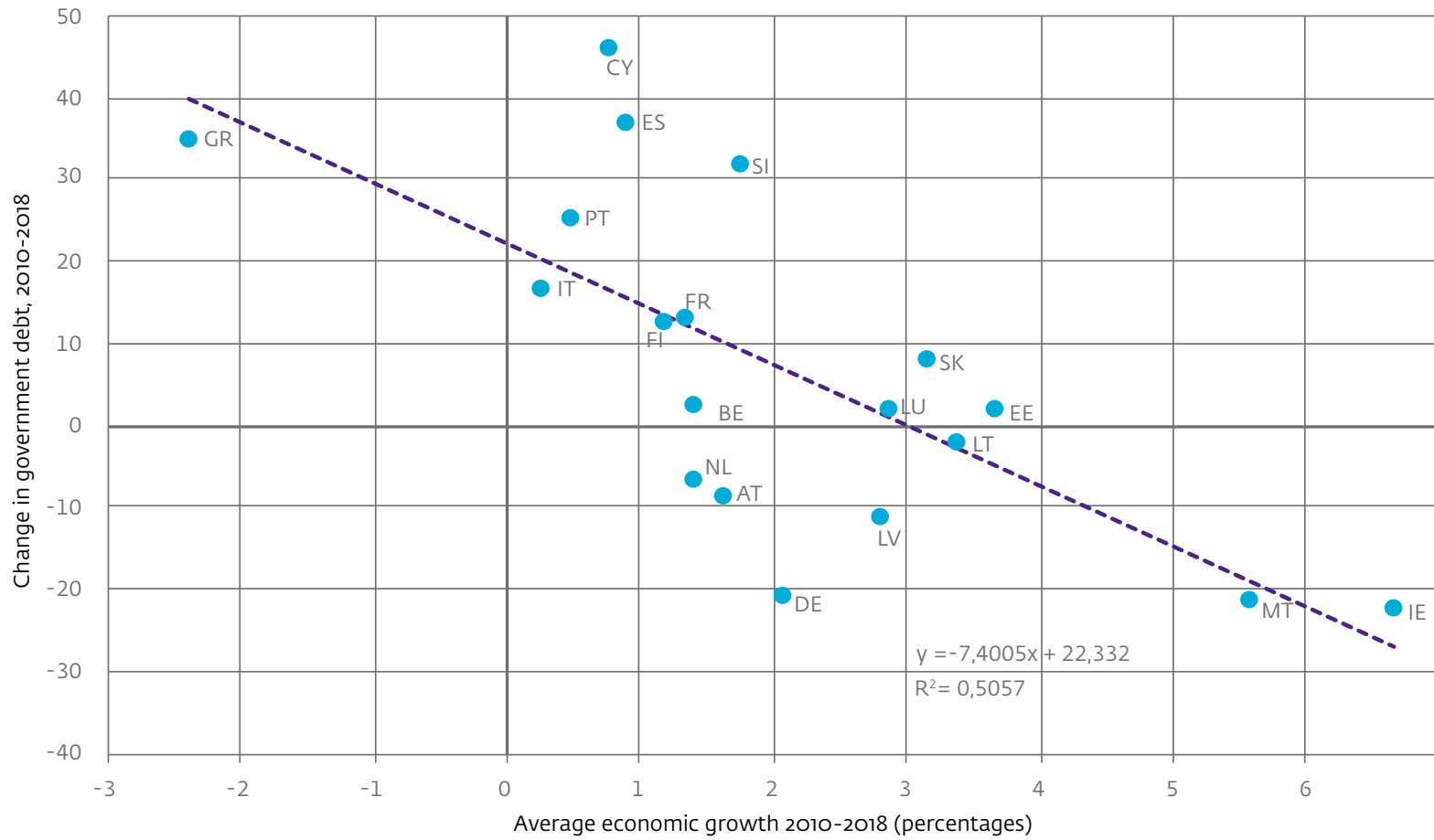
Sources: ECB and Eurostat.

Note: The blue line represents the European average. The graph shows the percentage change for individual countries relative to their peak level over the 2008-2019 period (y axis).



Figure 11 Lower economic growth complicates debt reduction

Percentages; percentage points

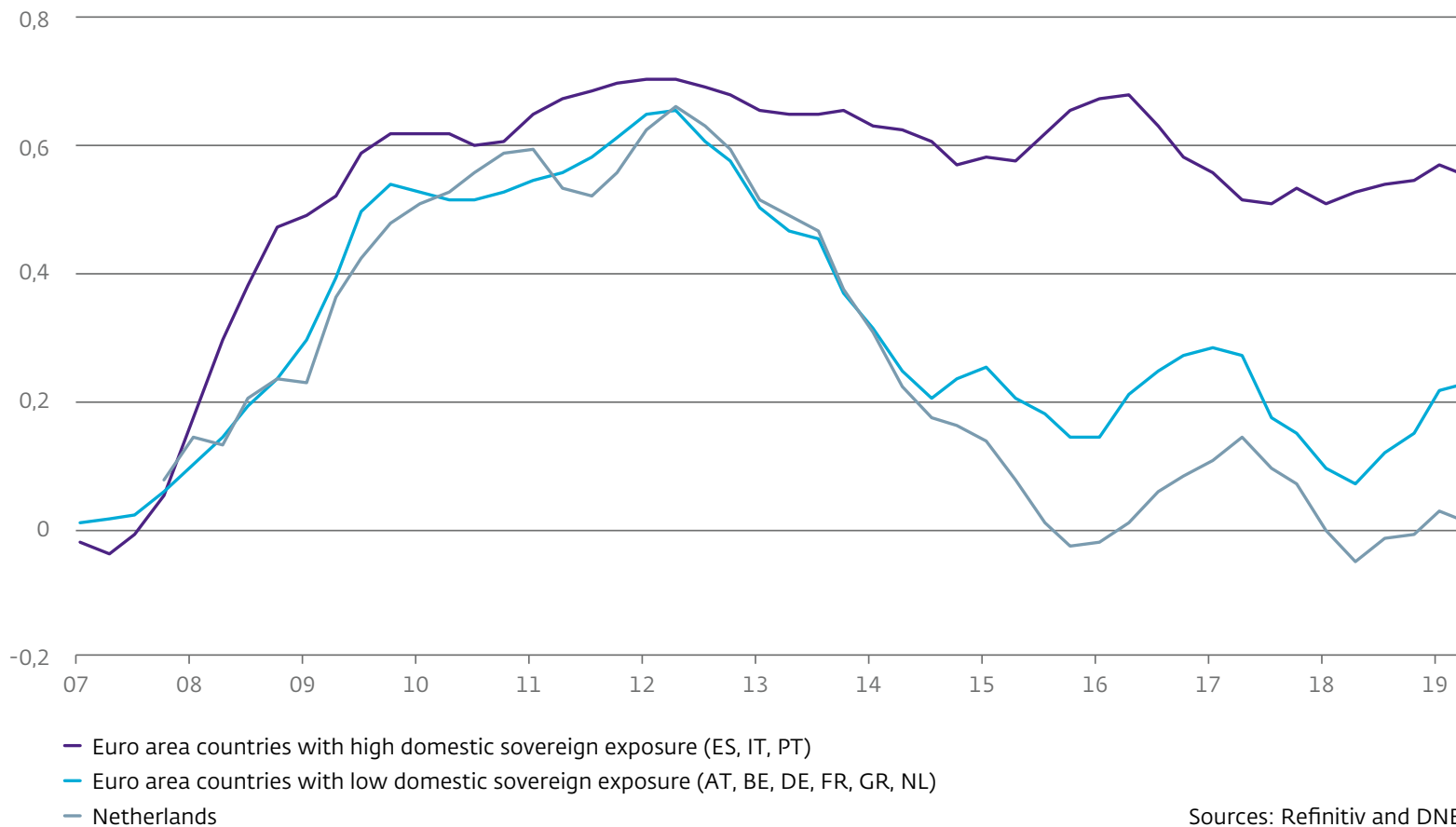


Sources: IMF and ECB.



Figure 12 Risk premiums of governments and banks are more closely correlated in countries in which banks hold relatively large amounts in government bonds

Pearson correlation coefficients, four-quarter average



Macroprudential policy in times of ample liquidity conditions

Due in part to the accommodating monetary policies which central banks have pursued in recent years, liquidity conditions have been ample for a long time. While this has supported economic recovery and kept a lid on deflation risks, risks to financial stability are growing the longer expansive monetary policies are maintained. For example, debt financing remains attractive, and pricing in financial markets is distorted. Similarly, persistently low interest rates incite investors to take higher risks, as a result of which asset bubbles are more likely to emerge. While macroprudential policy can bolster the resilience of banks and households, it can only counterbalance the build-up of these vulnerabilities to a limited extent. For this and other reasons, monetary policymakers should devote attention to the side-effects of protracted expansive monetary policy.

Over the past three decades, interest rates have followed a downward trend, both in nominal and in real terms. Lower inflation and structural factors inherent in the world economy, such as lower potential growth, an increased savings appetite globally and a lower propensity to invest, have pushed rates sharply down over the past decades. The accommodative monetary policy also plays a role, as the policy rate moves above and below the interest rate that is determined by structural factors ([DNB, 2019](#)). Central banks have substantially reduced key policy rates and resorted to unconventional measures, such as purchasing bonds, over the past years. This has supported economic recovery and kept a lid on deflation risks ([Blinder et al, 2017](#)). The accommodative

monetary policy is likely to be with us for some time to come, both in the United States and in the euro area (see [Current developments](#)).

Financial conditions have been accommodative for several years now. To assess financial conditions, interest rate developments, stock prices, underwriting standards and risk premiums can be considered. A composite measure of financial conditions in the Netherlands shows that these have predominantly been accommodative in recent years (see [Box 1](#)). Under accommodative financial conditions, households, firms and governments have relatively little difficulty raising funds to finance their spending.



Box 1 Financial conditions in the Netherlands

We recently developed an indicator that measures financial conditions. Combining data from a wide range of financial series, it assesses financial conditions and hence the ease with which households, firms and governments can finance their activities. Besides market volatility, the individual series we use relate to interest rates, lending volumes, underwriting standards and risk premiums relevant to Dutch households, firms and governments. A dynamic factor model combines the individual series into a single indicator, assigning the optimum weight to each individual series. A below-zero indicator value, as is currently observed, suggests relatively accommodative financial conditions. Moving up, the indicator signifies conditions that are becoming tighter. Moving down, it means they are becoming more accommodative.

As can be seen from [Figure 13](#), financial conditions in the Netherlands have been relatively accommodative since mid-2013. This is primarily accounted for by low risk premiums and limited volatility in financial markets. As is apparent from [Figure 13](#), financial

conditions can tighten abruptly in times of crisis. The indicator shows marked peaks around 2008-2009 and 2011-2012. In 2018, financial conditions tightened as risk premiums rose and volatility in financial markets increased.

Figure 13 Financial conditions in the Netherlands are accommodative

Number of standard deviation moves from the average



Source: DNB.

Risks to financial stability

In the long run accommodative financial conditions can lead to vulnerabilities in the financial system.

In the short and medium term, they help stimulate the economy. Likewise, ever lower interest rates benefit indebted households, firms and governments, which will see their interest expenses go down as they roll over their debts. Prolonged accommodative financial conditions allow vulnerabilities to build up, however. These vulnerabilities can exacerbate negative economic shocks, thereby jeopardising financial stability. Ample financial conditions can allow financial vulnerabilities to build up along three dimensions (Adrian and Liang, 2018).

Firstly, they reduce incentives for bringing down debts. Low interest rates depress financing charges, which increases the attractiveness of taking out new loans, while dissuading debtors from reducing outstanding debts. Also, as asset prices go up, so do collateral values, thereby widening borrowing capacities. Due to these and other factors, debt levels across the non-financial sector globally are significantly above pre-crisis levels, although the crisis was in part caused by excessive credit growth. BIS data put the combined debts of governments, firms and households across the globe at 234% of GDP at year-end 2018,

against roughly 210% at the end of 2007. In the euro area and the Netherlands, too, debts of the non-financial sector exceed pre-crisis levels (see [Figure 14](#)). In the first quarter of 2019, Dutch public, corporate and household debts totalled upwards of 290% of GDP. While debts of Dutch firms and households have come down in recent years, they are very high by international standards, at 138% and 101% of GDP, respectively. By contrast, at 51% of GDP, Dutch public debt is relatively low. The euro area average stands at 85% of GDP.

Secondly, low interest rates could incite financial institutions to take additional risks in a bid to generate the returns they are seeking. While bank returns have been holding up well so far, low long-term interest rates could diminish the banks' ability to generate income from lending (DNB, 2017). The decline of interest rates works out adversely for pension funds and insurance firms, which see their long-term liabilities grow at a faster pace than their fixed-income investments. Moreover, low interest rates make it harder to generate investment results that are sufficient to meet their commitments. This creates incentives for risk-seeking behaviour. This is all the more true of life insurers, many of which have provided return guarantees to their policy holders.

Such incentives may prompt institutions to shift their focus to investment opportunities that offer higher returns and carry heightened risks (Jiménez et al., 2014). Indications have in fact been observed which suggest that Dutch banks and institutional investors engage in search-for-yield behaviour (see [Box 2](#)). At the global level, the recent boom in the leveraged loan market and a significant easing of underwriting standards illustrate the increasing risk appetite among investors.

Ample financial conditions distort pricing in financial markets, thereby increasing the likelihood of asset price bubbles. Low interest rates distort pricing in financial markets. This can cause capital to be misallocated in the real economy. Also, in financial markets low interest rates and reallocation of funds towards riskier asset classes can send prices of assets such as equities and bonds, but also real estate, sharply higher. When this happens, prices no longer reflect the assets' fundamental values based on the actual state of the economy. Bubbles like these can emerge if investors start to believe that price rises will steadily continue going forward (Brunnermeier, 2008). Notably, stock exchanges have shown an upward trend since 2009 amidst limited volatility. As a result, price/earnings ratios in the United States are now far in excess of their long-term average (see [Figure 16](#)).

Box 2 Search for yield among Dutch financial institutions

Persistent low interest rates could incite financial institutions to take additional risks in a bid to generate the returns they are seeking. If investors reallocate investments to higher-risk and less liquid asset classes, they become more vulnerable to market corrections. In addition, such a search for yield can contribute to overvaluation in specific markets, thereby reinforcing the financial cycle.

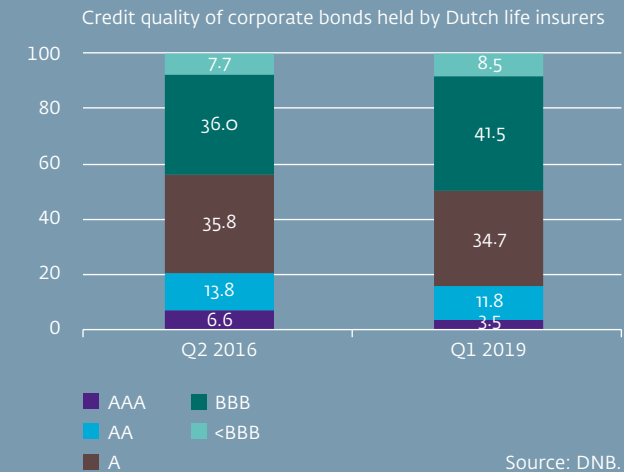
In the Netherlands, specific variants of searches for yield can be observed among institutional investors. The most obvious example is the greater prominence of insurance firms and pension funds in mortgage loan origination (see Figure 15, left-hand chart). Besides greater asset allocation to mortgage loans, a cautious shift towards more alternative and illiquid investments can be observed, and the credit quality of corporate bond portfolios of life insurance firms has gone down (see Figure 15, right-hand chart).

This is consistent with a global trend, which sees non-bank investors venture increasingly into riskier market segments. This is partly offset by the fact that risk-based solvency requirements³ dissuade institutional investors from engaging in excessive risk-seeking behaviour, as higher-risk investment policies result in a higher solvency requirement.

Banks, too, experience incentives for engaging in search-for-yield behaviour in a low interest rate environment. Indications suggest that they have loosened their underwriting standards. Surveyed Dutch banks say they have eased their lending conditions and acceptance criteria for mortgage loans and corporate credit facilities over the past few years (ECB, 2019).

Figure 15 Indications of search for yield in the Netherlands

Percentages



³ Such as the Solvency Capital Requirement (SCR) for insurance firms referred to in the Solvency II Directive and required own funds referred to in the Financial Assessment Framework for pension funds.



In the long run, financial vulnerabilities can lead to financial instability. Strong debt accumulation is a key predictor in the emergence of financial crises ([Schularick en Taylor, 2012](#)). When such a debt accumulation phase is followed by a recession, GDP loss is larger and the recession lasts longer ([Jordà et al., 2013](#)). Financial stability issues can also emerge when an asset price bubble bursts, especially if its emergence was driven by credit growth and leverage is high ([Adrian en Liang, 2018](#)). Again, if the bubble was related to strong credit growth, the recession is deeper and lasts longer ([Jordà et al., 2015](#)).



Macroprudential policy and current vulnerabilities

In response to the financial crisis, central banks and supervisory authorities have been given new, macroprudential instruments. Designed to counter systemic risks, they should promote financial stability. Table 1 shows the current macroprudential toolbox available in the Netherlands and describes

the instruments' objectives and current status. Firstly, with respect to banks, capital buffers can be imposed. Five Dutch systemically important banks are presently required to maintain an additional macroprudential buffer. This is 3% for ING Bank, Rabobank and ABN AMRO Bank, while it is 1% for Volksbank and BNG Bank. It is set at the maximum of the G-SII buffer, the O-SII buffer and the systemic risk buffer. Secondly, national supervisory authorities have a range of measures at



their disposal to address systemic risks at a national level, under what is known as the flexibility package. Our intended introduction of a floor for mortgage loan risk weighting is one of such measures (see [Housing market](#)). Households are subject to two key borrowing limits. In the Netherlands, a mortgage loan can equal no more than 100% of a home's appraisal value: the loan to value (LTV) limit. In addition, criteria apply that cap a mortgage loan at a specific ratio to the borrower's income: the loan to income (LTI) limit.

Table 1 Macroprudential toolbox available in the Netherlands: objectives and current status

Sector	Type	Instrument	Objective	Competent authority	Current status
Banks	Capital buffers	Countercyclical capital buffer	Increasing resilience in response to excessive credit growth	DNB	0%
		G-SII buffer	Increasing resilience of systematically important banks	DNB	ING: 1%
		O-SII buffer		DNB	ING/Rabo/ABN: 2% VoB/BNG: 1%
		Systemic risk buffer	Dealing with long term non-cyclical systemic risk	DNB	ING/Rabo/ABN: 3%
	Flexibility package	Higher risk weights, <i>inter alia</i>	Increasing resilience	DNB	We intend to introduce this in the autumn of 2020 (see Housing market).
Households	Borrowing limits	LTV limit	Curbing credit growth, improving resilience of households	Government	100%
		LTI limit		Government	Criteria depend on income and interest rate

Like macroprudential authorities in many other countries, we use the macroprudential instruments at our disposal to improve resilience. As shown in Table 1, the objective of most of our instruments is to increase the banks' resilience. This applies to the systemic buffers, which we apply permanently to make systemically important banks more resilient, but also to instruments that are of a temporary nature, such as the countercyclical capital buffer (CCyB) and the flexibility package. These instruments can be deployed during the phase in which risks to financial stability increase, but their primary objective is to enhance banks' resilience. For example, the CCyB can be applied when lending is excessive. However, rather than to curb lending (see also [Current developments](#)), the CCyB's objective is to ensure that banks have sufficient buffers in times of economic headwinds and do not feel





forced to strongly reduce lending. The same applies to measures in the flexibility package, such as the floor for mortgage loan risk weights (see [Housing market](#)).

Deploying our macroprudential toolbox cannot fully prevent financial vulnerabilities from building up.

While the policy that targets systemic risks can influence various aspects, the set of instruments currently available is primarily suitable for increasing the financial system's shock resilience (the second line of defence) rather than eliminating threats (the first line of defence). There are no macroprudential instruments, for example, that counter risk-seeking behaviour or incessant asset price rises in financial markets. Excessive lending to households, however, can be countered by means of macroprudential policies, as tighter borrowing standards can restrict the volume of new lending. In the Netherlands, however, these standards are set by the government (see [Table 1](#)), which makes decisions driven by considerations relating not only to financial stability risks, but also to accessibility of the housing market.

In addition, non-bank market participants are gaining prominence in the Dutch financial system, but they are largely outside the scope of today's macroprudential instruments. Viewed from a stability

perspective, the greater role which non-banks, such as insurance firms, pension funds and investment funds, play in the financial system is a good thing, as it provides the real economy with a greater variety of sources of finance. Such greater diversity can reduce the system's vulnerability to shocks. However, macroprudential instruments targeting non-bank institutions are still underdeveloped, with most instruments being aimed at banks and households. One example of the growing role played by non-bank players in the financial system is the strong growth in investment funds' managed assets seen since the crisis. Their larger role could exacerbate price fluctuations in financial markets, for example when open-ended funds are forced to sell less liquid investments to meet their commitments. This is a risk that has grown in recent years, with investment funds having increased their asset allocations to high-yield bonds and other less liquid securities in a search for yield ([ECB, 2019](#)).





Policy conclusions

In today's prevailing ample liquidity conditions, we will continue to deploy our macroprudential instruments to increase the shock resistance of the financial system. It is difficult to counter the build-up of new vulnerabilities that could threaten financial stability using the instruments presently available. This illustrates the importance of a robust second line of defence that should safeguard the system's resilience to shocks. This is why macroprudential instruments that increase the resilience of the financial sector and households must be applied on a structural basis. An obvious case in point is the LTV limit for mortgage loans, given that it reduces households' vulnerability to falling house prices and the likelihood of difficulties involving underwater loans.

The scope of the macroprudential instruments should be extended to include non-banking financial players. Key segments in the financial system, such as investment funds, insurance firms and pension funds are still largely outside the scope of macroprudential policy. Most regulations that target these institutions are of a microprudential nature. This is worrying, as systemic risks would also appear to build up in non-banking sectors. For example, macroprudential instruments that target investment funds are still

underdeveloped, while their close interconnectedness with the banking sector and the real economy could give rise to systemic risks. Leverage limits and crisis measures such as temporary exit bans are conceivable for specific types of investment funds, but some alternative investment funds in particular are excessively leveraged. Tackling these systemic risks more effectively requires further development of macroprudential policies targeted at investment funds, for example to counter excessive leverage or large liquidity mismatches (Van der Veer et al., 2017).

Different policy avenues must be explored to counter the build-up of new vulnerabilities. First and foremost, monetary policymakers must devote attention to the side-effects of expansive monetary policy. After all, risks to financial stability accumulate the longer the expansive monetary policy continues and becomes exceedingly unconventional. Further, tax regimes can play a key role in preventing excessive debt accumulation. Scaling back tax relief that encourages financing using borrowed capital, such as mortgage interest tax relief for households and interest deduction for businesses, could reduce incentives for debt accumulation. Also, microprudential regulations should ensure that risks to which financial institutions are exposed are proportionately reflected in capital and liquidity requirements. This could reduce incentives for

risk-seeking behaviour. Phasing out the preferential treatment of banks' exposure to sovereign debt is a case in point (see [Interaction between governments and banks](#)).



Figures

Financial conditions in the Netherlands are accommodative
[View Figure 13 →](#)

Indications of search for yield in the Netherlands
[View Figure 15 →](#)

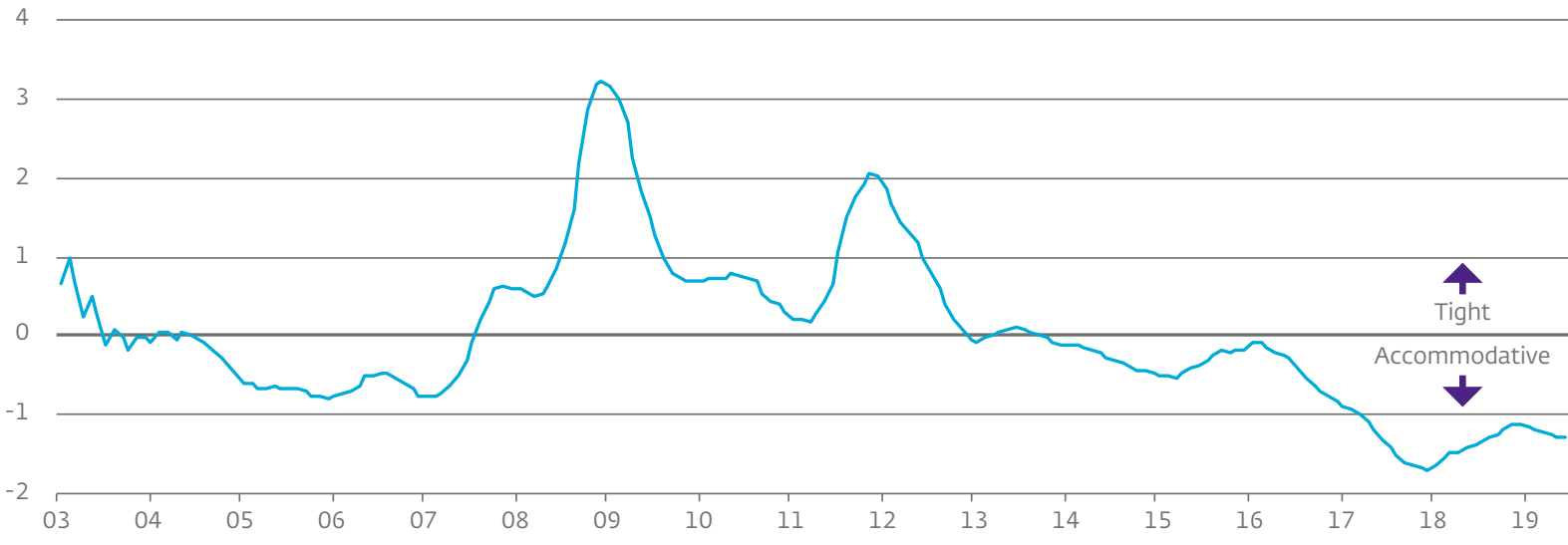
Debt levels of the non-financial sector have risen further since the crisis
[View Figure 14 →](#)

US price/earnings ratio is far in excess of long-term average
[View Figure 16 →](#)



Figure 13 Financial conditions in the Netherlands are accommodative

Number of standard deviation moves from the average

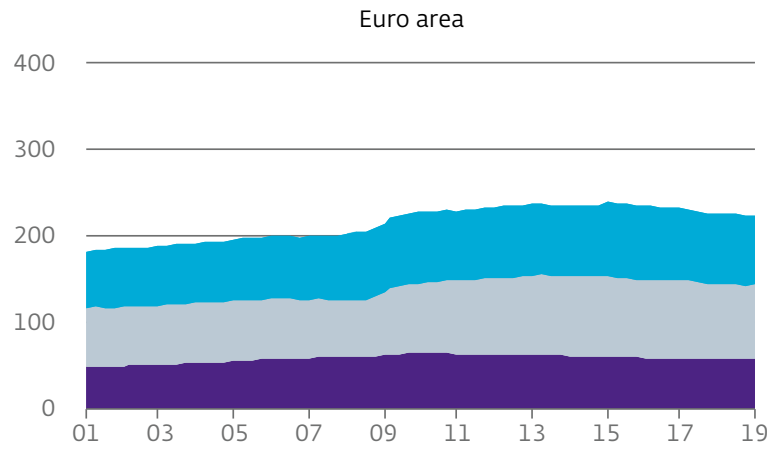
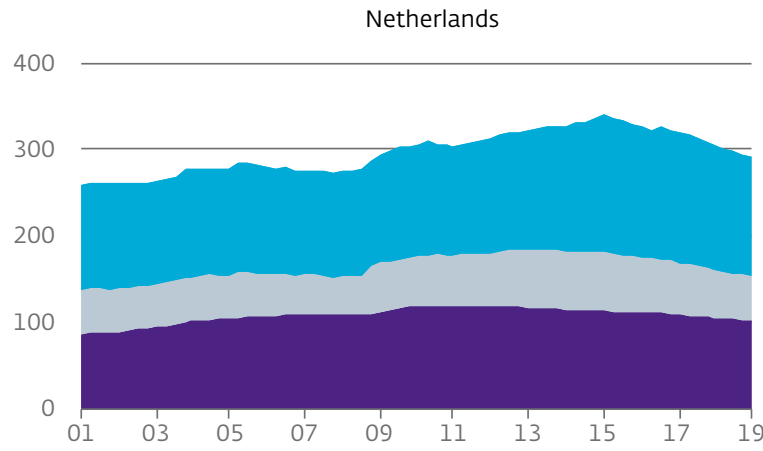


Source: DNB.



Figure 14 Debt levels of the non-financial sector have risen further since the crisis

Percentage of GDP



- Corporate debt
- Government debt
- Household debt

Sources: ECB and Eurostat.



Figure 15 Indications of search for yield in the Netherlands

Percentages

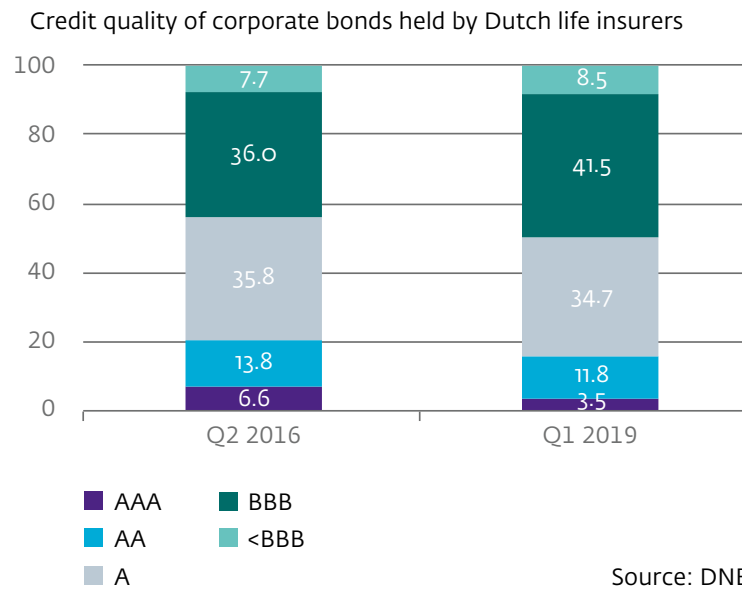
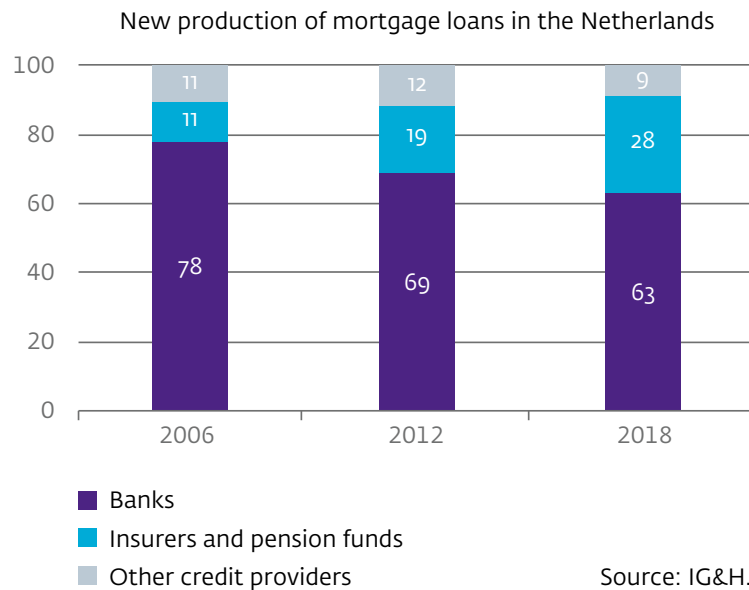
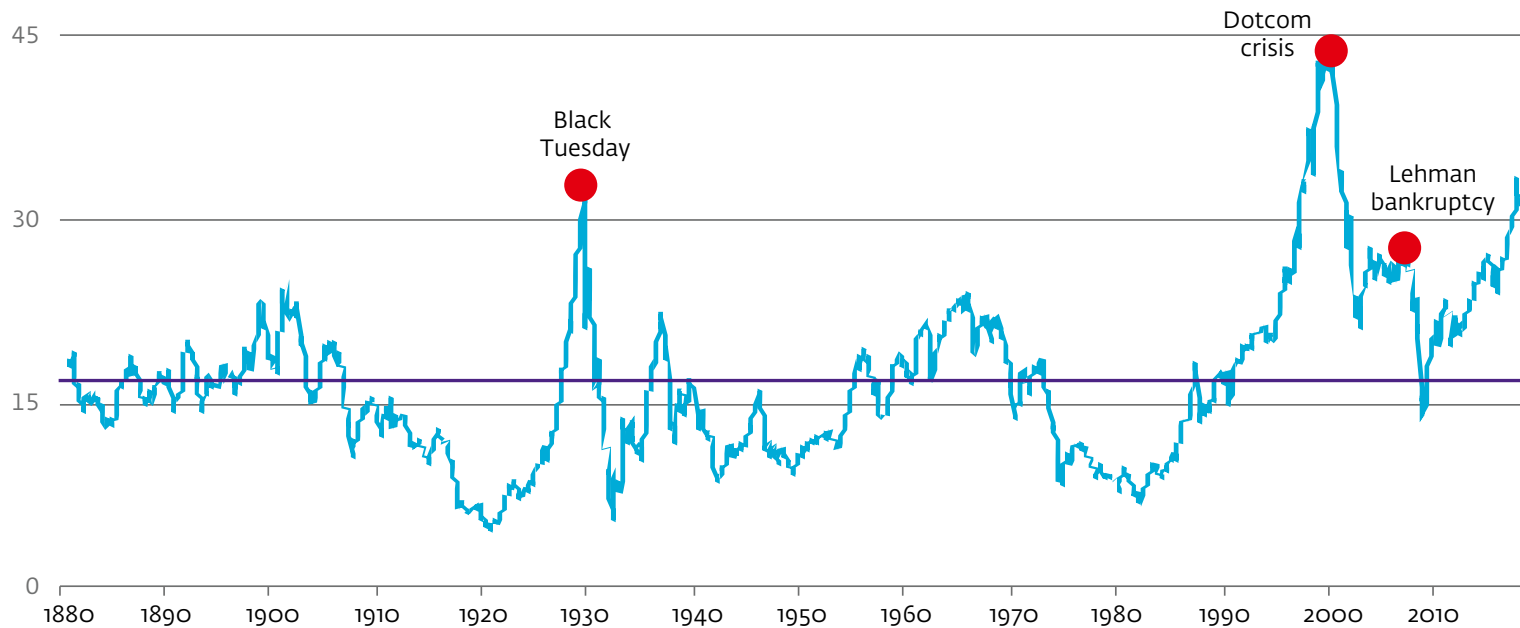


Figure 16 US price/earnings ratio is far in excess of long-term average

Ratio



— Shiller P/E ratio
— Average (1881-2019)

Source: Shiller 2019.

Note: The price/earnings ratio is based on average earnings over the past ten years.