Financial Stability Report

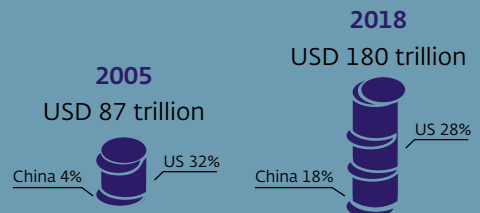
Spring 2019

DeNederlandscheBank

EUROSYSTEEM

Global debt mountain

Debts of the global non-financial sector have more than doubled since 2005.



Netherlands

There is interaction between the housing market and the economy.

Brexit

The likelihood of a no-deal Brexit remains a risk.

Southern Europe

There is interaction between banks and governments.

Risk outline
Risk map

Risk outline

International risks

Monetary policies in the United States and the euro area are set to remain very accommodating for some time to come. Global economic growth has weakened over the past few months. According to IMF estimates, global economic growth should come to 3.3% this year, 0.4 percentage points below its estimates of six months earlier. Financial markets showed steep corrections in the last quarter of 2018. Inspired by these global economic and financial developments and subdued inflationary pressure, the Federal Reserve Board (Fed) took a time-out from its series of interest rate raises. In addition, it slowed down its balance sheet run-off since May, planning to stop the unwinding of its purchased bond holdings altogether in September 2019. The European Central Bank (ECB) will likewise stick to its accommodative policy for the time being. While the Eurosystem stopped expanding its bond holdings at the beginning of 2019, the deposit rate is still negative. In addition, the ECB has indicated that it expects to keep the key policy interest rates at their present levels at least through the end of 2019. In March 2019 it announced a third round of targeted longer-term refinancing operations (TLTROs) to support lending to the non-financial sector.

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Risk outline

Among other factors, accommodating liquidity conditions and low interest rates allow vulnerabilities to develop. The continued accommodating monetary policies pursued by central banks have helped to restore calm to the financial markets following the sharp corrections in the fourth quarter of 2018. The downside of the accommodative liquidity conditions and prolonged low interest rates is that financial vulnerabilities continue to build up. After all, as financial conditions remain accommodative for longer periods of time, governments, businesses and households will lose the incentive to reduce their debts. In addition, accommodative liquidity conditions and persistently low interest rates have distorting effects on the financial markets.

Debt levels are high. Various factors, including prolonged very accommodative financial conditions, have led non-financial sector debt to soar to high levels globally. The Bank of International Settlements (BIS) figures show these debts more than doubled between 2005 and 2018, to reach an all-time high of USD 183 trillion in the first quarter of 2018, before receding only slightly. Masked by the aggregate figures, however, are the underlying dynamics and, hence, specific vulnerabilities that are building up.

Over the past years, markets for riskier corporate debt have grown particularly sharply. For example, the volume of the global leveraged loan market has almost doubled since 2012, whereas global corporate debt as a whole went up by 27%. In an unsettling development, debtor firms are increasingly leveraged and underwriting standards are exceedingly eased. For instance, in Europe the share of covenant lite loans, i.e. loans offering investors fewer guarantees and imposing fewer restrictions on borrowers, increased from less than 20% in 2011-2012 to 70% in 2018. Similarly, the proportion of lower-grade bonds is growing in the corporate bond market.

In Europe, countries with high public debts are reducing these at a slower rate than less debt-laden countries. Public debt levels remain elevated in Europe. In the second quarter of 2014, average public debt in the euro area peaked, having only moderated slightly since. Debt reduction efforts vary widely among countries, however. It is in fact governments with relatively high debts that reduce these at a slower pace than those with lower debts. In both France and Greece, public debt at the end of 2018 was even higher than in the second quarter of 2014. Although on average low interest rates and increased issuance of longer maturity bonds facilitate the funding of public debt, differences in gross borrowing requirements remain large. Italy especially faces large financing requirements in 2019 and suffers with relatively high interest rates. European Commission calculations show that euro area debt dynamics are set to remain vulnerable for Belgium, Spain, France, Italy and Portugal in the medium term.

Financial markets see the search for yield intensify further. Accommodative liquidity conditions and prolonged low interest rates also keep fuelling the search for yield in financial markets, which may cause bubbles to emerge. With interest rates as low as they are, investors are incited to look for alternative asset classes that offer better returns and carry more risk, such as risky corporate debt or commercial real estate.

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Risk outline

Financial instability may emerge amidst high debt levels and exuberant financial markets. The market correction seen in the fourth quarter of 2018 was short-lived. The financial markets have already largely recovered from their price losses. This means concerns about overvaluation and the risk of a market downturn expressed earlier are as relevant as ever. Sharp increases in risk premiums and interest rates may cause debtors to face higher interest charges, possibly resulting in defaults, while financial markets could undergo steep price corrections resulting in investment losses for financial institutions.

Political and policy uncertainties, an unanticipated monetary policy adjustment or a severe crisis in a systemically important country could trigger a market downturn. There is a wide array of factors that could reverse market sentiment. For example, a no-deal Brexit could send a major shockwave across financial markets. Similarly, ongoing trade tensions between the United States and China or geopolitical tensions elsewhere could escalate and erode investor confidence. Furthermore, an unanticipated adjustment to monetary policy could trigger sharp risk premium repricing, especially if market expectations differ strongly from the path envisaged by policymakers. Lastly, market sentiment could also turn if a systemically important country were to face a severe economic, political or financial crisis. In fact, considerable financial imbalances have developed in some of these countries, such as China and the United States.

Further pressure on financial stability could be exerted by a more substantial slowdown in economic growth. If economic growth were to stop in its tracks, existing vulnerabilities could become even more exposed. This will, for example, affect countries where levels of private or public debts, or both, are still high. Lower growth will make it exceedingly difficult to meet interest and redemption obligations. In turn, this could cause credit losses to increase in the financial sector. Added to this is the fact that profitability has been very sluggish in parts of the European banking sector for quite some time, due to excess capacity, high operating costs and – predominantly in Greece, Cyprus, Portugal and Italy – high percentages of non-performing loans in bank balance sheets. Countries in which bank and government sectors are still strongly interwoven may see problems in one sector spill over into the other. The risk of such an adverse "sovereign-bank nexus" increases if economic growth slows down to any significant extent.

Financial stability in the Netherlands

House prices in the Netherlands keep rising, if at a lower rate than before. Prices of existing homes increased by 9% in 2018, in a development not witnessed for 17 years. In the Netherlands' major cities, real prices are now 17% above their previous peak, with financing charges for full annuity-based loans exceeding pre-crisis levels. Expectations are that in 2019, price increases will be more moderate. According to Statistics Netherlands, sales prices in the first quarter of 2019 were 7.9% higher than in the year-earlier period. Annual growth of around 6% is expected for 2019. While this is below the rates seen in previous years, it still exceeds expected income growth. Tightness continues to prevail in the Dutch housing market.

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Risk outline

The number of houses sold fell by 9% in the first quarter of 2019 compared with a year earlier. The proportion of houses sold above the asking price is larger, and houses continue to change hands more quickly than a year ago.

Developments in the housing market amplify the cyclical fluctuations in the Dutch economy. The sharp price increases in the housing market have given economic growth a generous boost. Housing investment boomed after 2013. In addition, there is a strong correlation between house price rises and private consumption growth in the Netherlands. In the near term, a 1% increase in real house prices corresponds to 0.18% growth in real private consumption. Conversely, during the crisis the correction seen in the housing market deepened the economic downturn. The Dutch economy's inherent volatility results in uncertainties and adjustment costs, which does not benefit financial stability.

Among other factors, the price increases seen in recent years are caused by supply lagging behind demand. The most acute housing shortages are currently seen in the middle segment of the rental market. Pressure on the housing market could be eased by expanding the supply of housing and aligning it more closely with demand. The Dutch government and local authorities are pursuing policies that seek to do just that. The 2018 residential development target of 75,000 was, however, not met, as only 66,000 homes were built. Arguably, the tight housing market conditions will not disappear any time soon. One of the key challenges is that residential construction must be made less cyclical. Housing production fell sharply during the crisis, causing huge capacity losses, both in the construction industry and at municipal services. The same capacity constraints are now complicating efforts aimed at stepping up housing production.

The demand side of the housing market must also be tackled more vigorously. Mortgage interest tax relief and relatively generous loan-to-income (LTI) and loan-to-value (LTV) limits have pushed Dutch households' mortgage indebtedness to high levels by international standards. The maximum LTI limit in the Netherlands is determined by the financing costs criteria of the National Institute for Family Finance Information (NIBUD). Half of all first-time buyers currently take out very high loans in relation to their income, at over 90% of NIBUD's criteria. Furthermore, two-thirds of first-time buyers take out loans for amounts that exceed 90% of the purchase price of their home. Various empirical studies, including a recent IMF panel study, show that high mortgage debts make house prices more volatile. Greater borrowing capacities drive up demand for houses, thereby fuelling price rises if housing supply does not increase correspondingly. When prices drop, high mortgage loans will sooner end up under water. Households that find themselves in negative equity are less likely to put their home up for sale, or will only do so for a relatively high price. This reduces the number of transactions, exacerbating price declines.

The way in which the LTI limit is calculated also amplifies price fluctuations. The LTI limit initially determines a household's borrowing capacity. It could help slow down price increases, given that a booming housing market will see

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Risk outline

house prices outpace income trends. As a result, the LTI limit will sooner limit borrowing capacity. However, the way in which the LTI limit is calculated has procyclical elements. For instance, the tax cuts scheduled for 2020 will boost the borrowing capacity of some households by over 10%, thereby contributing to further price rises in an already tight housing market. This is why, together with the Dutch Authority for the Financial Markets (AFM), we are arguing in favour of reviewing the system used to determine the LTI limit.

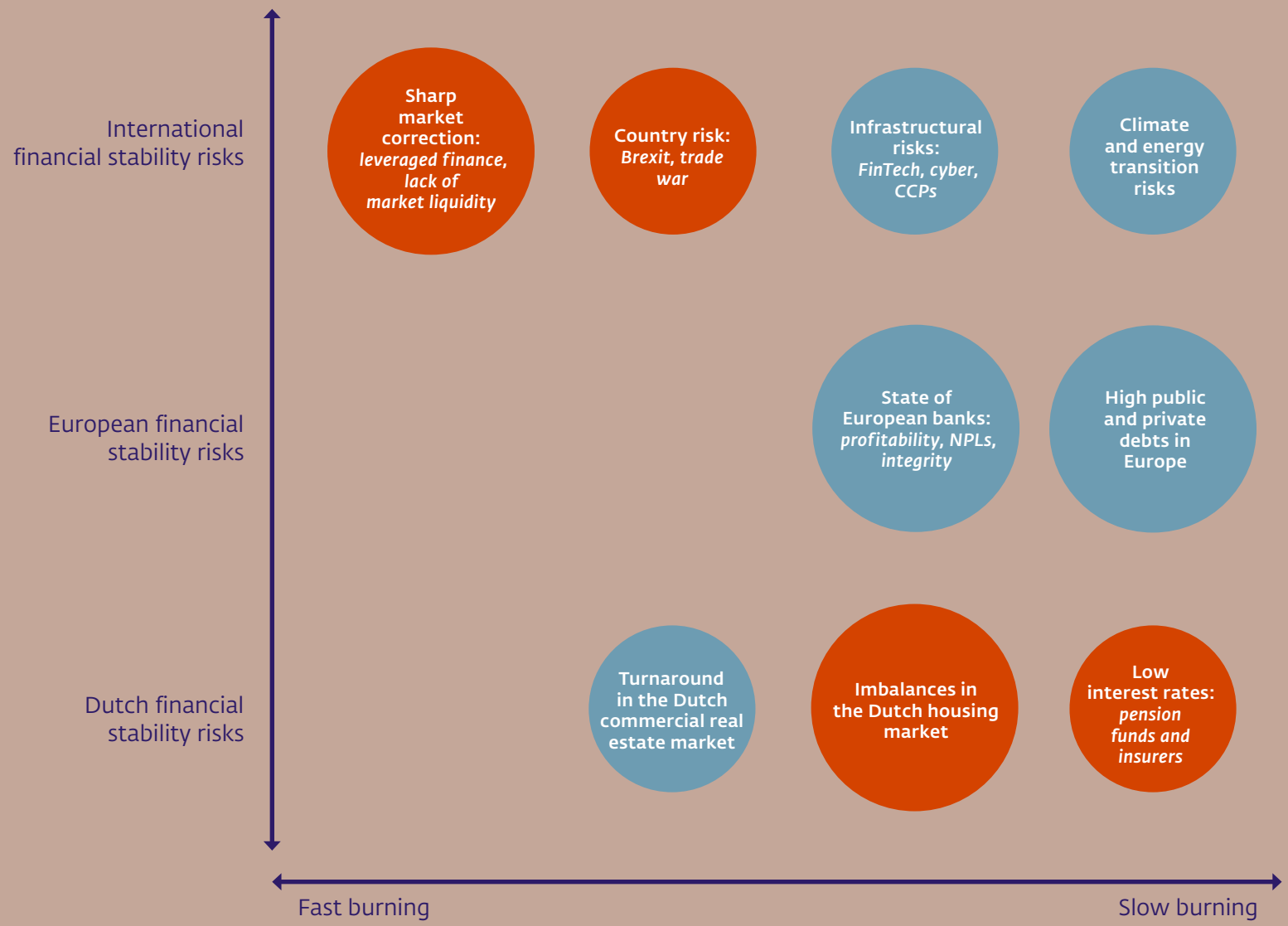
Reducing distortions to the interface between the private rental and owneroccupied housing segments will improve the functioning of the housing market. In the Netherlands, home owners currently benefit from tax relief. A more neutral tax treatment of home ownership could reduce cyclical price fluctuations by eliminating incentives for debt financing. In addition, it would allow the private rental segment in the Netherlands to develop further. This segment is very small at present, due in part to mortgage interest tax relief for home owners and subsidies in social rented housing.

A potential house price correction could have significant ramifications for the Dutch economy and hit banks indirectly as well. In the past two years, banks have eased their credit standards for mortgage loans. In addition, they again apply lower risk weights to mortgage loans, reducing the amount of capital they need to hold for their mortgage loan portfolios. Their reduced risk perception contrasts with the heightened concerns over housing market overheating. The sustained strong price growth and high valuations have increased the risk of a housing market correction. The previous correction severely affected the Dutch economy.

How to read this document
Clicking on a risk will take you to an overview page. From there, click to select a Background, Policy or Figures page.

The figures presented in this Financial Stability Report are also available in a data file on dnb.nl, as is an overview of macroprudential indicators.

Also consult dnb.nl to find out how recommendations in previous editions of the Financial Stability Report have been followed up.



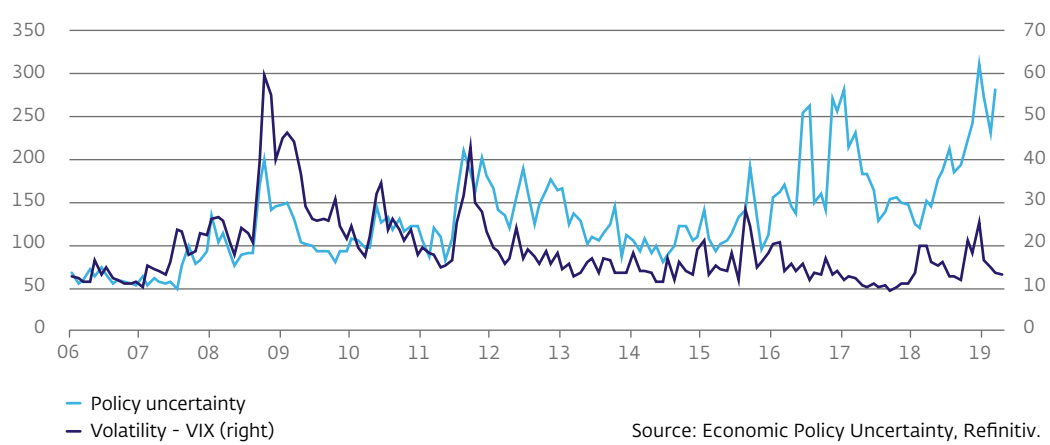
Note
The risk map presents a schematic overview of the main risks to financial stability. The size of the circles reflects the magnitude of risk. The colour of the circles reflects whether viewed over the medium term, a risk increases (red), decreases (green) or remains unchanged (grey).

Sharp market correction

- The final months of 2018 saw financial markets globally dive into the red, but they have meanwhile largely recovered from their price losses.
- Although financial market volatility has settled since early 2019, the risk of sharp price corrections remains acute. Among its causes is the fact that investors have hardly factored in the heightened global policy uncertainties (see Figure 1).
- In times of elevated stress, a variety of factors can aggravate price corrections in financial markets, such as the more prominent role which investment funds play in the financial system, or market liquidity drying up.
- Risk management in financial institutions should therefore take account of the likelihood of potentially sharp market corrections.

Find out more? Click on the tabs.

Figure 1 High degree of policy uncertainty, but volatility on financial markets returned to a low level.



Source: Economic Policy Uncertainty, Refinitiv.

Risk outline
Risk map

Sharp market correction: Background

The correction seen in financial markets has not persisted. During the final quarter of 2018, financial markets globally were in the red (see Figure 2), amid downward revisions of global growth projections and mounting political risks, such as trade tensions between the United States and China. The risk-off sentiment also pushed corporate bond markets lower. For instance, risk premiums on high-yield US corporate bonds went up by more than 100 basis points in December 2018. Meanwhile, global equity markets have largely recouped their price losses since early 2019. Likewise, risk premiums on US and European corporate bonds have returned to levels seen before the market correction (see Figure 3).

The fact that the Fed has put the brakes on monetary tightening has helped restore calm to financial markets. The Fed started phasing out its accommodative monetary policy a long time ago. With US key policy rates now at 2.25-2.5%, the balance sheet of the United States' central banking system has been trimmed by some 15% since October 2017 to around USD 3,900 billion. In early 2019, the Fed took a time-out from its series of interest rate raises. It also announced it would slow down its balance sheet wind-down and halt it altogether in September 2019. The fact that the Fed has put the brakes on the pace of monetary tightening has helped restore calm to financial markets. Emerging countries, which in 2018 saw financial conditions tighten rapidly owing to the Fed's interest rate increases, are experiencing lower capital outflows and less downward pressure on their currencies in the first quarter of 2019 (see country risk). Growing optimism at the time about a trade agreement between the United States and China equally returned financial markets to calmer waters.

The willingness among investors to take risks is still high. This is apparent in the corporate bond market for instance, where the proportion of outstanding BBB or lower-rated bonds is expanding. BBB-rated bonds now represent half of all outstanding investment grade corporate bonds, both in the United States and in Europe. Additionally, the market for higher-risk corporate lending has strongly expanded over the past few years, with growth in the leveraged loan market being a particularly notable feature. Leveraged loans are loans with a heightened risk profile, extended to businesses that are less creditworthy or already depend relatively heavily on debt financing.

The leveraged lending market has grown rapidly. Estimates of the volume of the leveraged lending market range from USD 1.3 trillion to USD 2.2 trillion (Bank of England, 2018). Although many of the leveraged loans originate in the United States, they are equally mushrooming in Europe. They are increasingly securitised as collateralised loan obligations (CLOs), bundling

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Risk outline
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Sharp market correction: Background

and issuing loans as marketable securities with a wide array of risk and return profiles. According to estimates the global CLO market is worth USD 750 billion. In a particularly troubling development, underwriting standards have declined significantly, while the leverage continues to rise. Leveraged loans issued subject to low underwriting standards, known as covenant lite loans, now represent around 70% of all leveraged lending in Europa, and the average size of new leveraged loans has risen to over six times cash flow from operations (EBITDA).

Further market corrections cannot be ruled out. If investors suddenly start shying away from risks, prompted for example by a significant global slowdown, a financial crisis in China or escalating political or policy risks such as a disorderly Brexit or a trade war, steep price corrections could hit financial markets. Similarly, an unanticipated shift in the Fed's stance regarding normalisation of its monetary policy

"Prolonged low interest rates stimulate search for yield behaviour among investors"

could trigger such corrections. Most at risk will be securities whose market valuation exceeds the value indicated by underlying fundamentals, such as US equities or corporate bonds. Rising risk premiums will push up financing costs for banks, households and corporations, which could weigh on growth.

The more prominent role which investment funds play in the financial markets may exacerbate market corrections. Since the crisis, investment funds have recorded a spectacular advance. Globally, the combined assets of investment funds, including money market and hedge funds, more than doubled between 2008 and 2017, to reach well over USD 55 trillion (see Figure 5). While their greater prominence reduces dependency on bank financing and provides investors with a wider range of diversification options at lower costs, it also creates vulnerabilities. With investors in open-ended investment funds having the option of liquidating their unit shares at short notice, funds which face a liquidity mismatch, may be forced to wind up their less liquid positions in a fire sale to meet their obligations. This could deepen a market correction once it has started. Moreover, indications suggest that investment funds increasingly favour less liquid securities, while cash buffers have been declining across the sector (ECB, 2018).

Price corrections in financial markets are more disruptive when market liquidity dries up. Often it is not until a period of elevated stress arrives that the adequacy of market liquidity

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Risk outline
Risk map

Sharp market correction: Background

becomes clear. For example, during the market correction in late 2018 liquidity in the higher-risk segments of the corporate bond market, as measured by bid-ask spreads, worsened rapidly. Concerns over fragile market liquidity have been fuelled by structural changes to the financial system, such as amendments to financial regulation, growth in passive investments and technological change (IMF, 2019). The increasing number of flash crashes witnessed in recent years only serve to increase such concerns. Additionally, the shift within the investment grade corporate bond market towards investments in lower-rated bonds may well raise liquidity and price pressures in this market. In an economic downturn, downgrades of such bonds from investment to speculative grade will force investors to sell them off quickly, for example because they are subject to limits on investments in lower-rated bonds.

Find out more?

- Read about the resilience of financial institutions to market shocks here. This news release discusses the results of the EIOPA stress test for Dutch insurance firms conducted in late 2018. The results of EIOPA's most recent stress test for Dutch pension funds can be found here.

Risk outline
Risk map

Sharp market correction: Policy

Risk management in financial institutions should take account of the likelihood of potentially sharp market corrections. Financial institutions can perform their own stress tests to assess the effect of potential financial market shocks.

Central banks must prevent being held hostage by market expectations. They should keep going their own way. Clear communications on the part of monetary policymakers help keep market expectations in line with central banks' policy intentions. This reduces the risk of financial markets being taken by surprise, resulting in steep corrections.

The risks inherent in the leveraged lending and CLO markets must be studied in further detail. Priority must be given to data collection. In many cases, the identities of ultimate investors are unclear, as well as the extent to which they are capable of dealing with shocks. Added to this is the fact that financial institutions can also be indirectly exposed to this market, for example through the purchase of loans or bonds serving as collateral in a CLO transaction (CLO warehousing) or through purchases in secondary markets. The upshot is uncertainty about how the financial system will transmit potential losses. The Financial Stability Board is currently identifying the developments and risks in the market for leveraged loans and CLOs.

Taking a macroprudential policy for investment funds further will be desirable. The microprudential framework in place for European investment funds contributes towards underpinning the resilience of individual funds. Even so, the sector's rapid growth and interdependencies of investment funds with the banking sector and the real economy can also cause systemic risks. A macroprudential policy governing investment funds must therefore also be developed (see DNB, 2017). Introducing and implementing macroprudential tools designed to counter such phenomena as excessive leverage will help address the systemic risks that originate in this sector.

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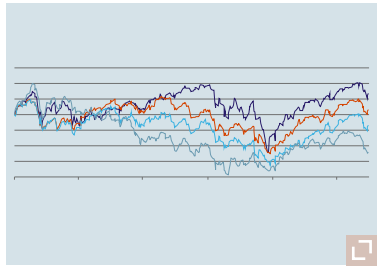
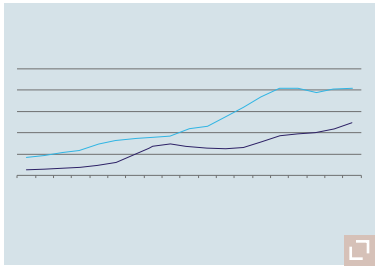
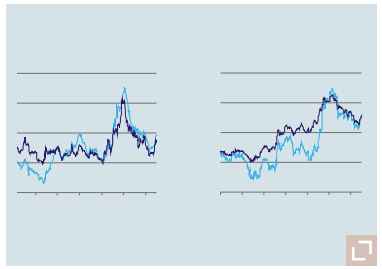
Sharp market correction: Figures



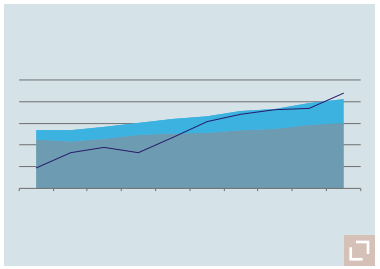
Equity markets have largely recovered from the 2018-Q4 correction.
See Figure 2 →



Sharp increase in amount of risky corporate debt, due particularly to growth in leveraged lending.
See Figure 4 →



Following a sharp increase in 2018-Q4, risk premiums on corporate bonds have decreased again.
See Figure 3 →

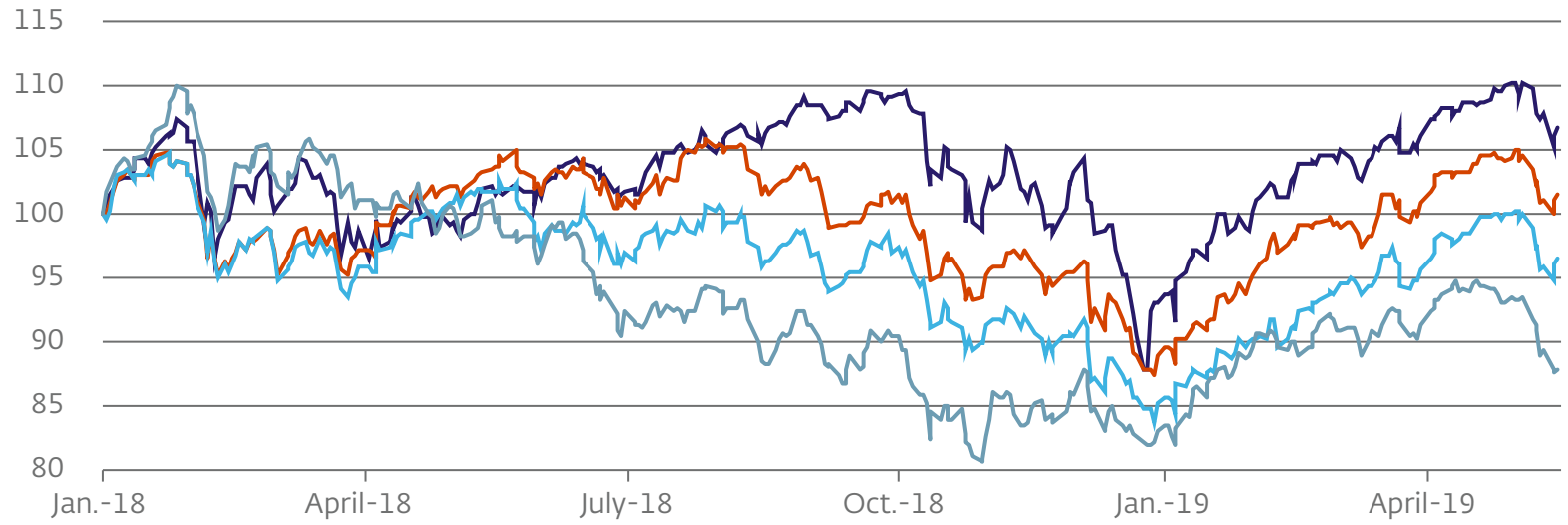


Total assets of investment funds have outstripped those of banks since the crisis.
See Figure 5 →

Risk outline
Risk map

Figure 2 Equity markets have largely recovered from the 2018-Q4 correction.

Index, 1 January 2018 = 100

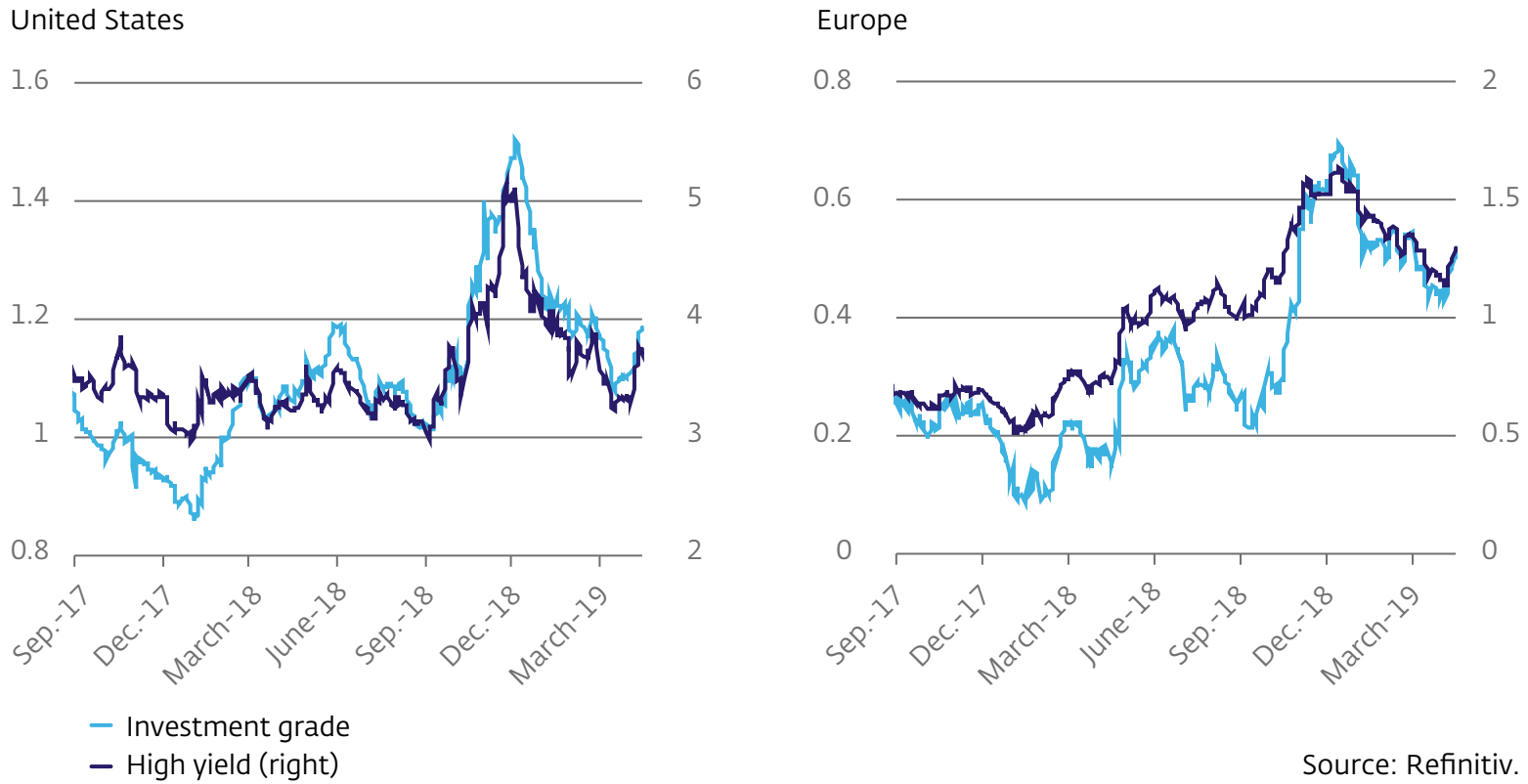


Source: Refinitiv.

Risk outline
Risk map

Figure 3 Following a sharp increase in 2018-Q4, risk premiums on corporate bonds have decreased again.

Yields in percentages per year

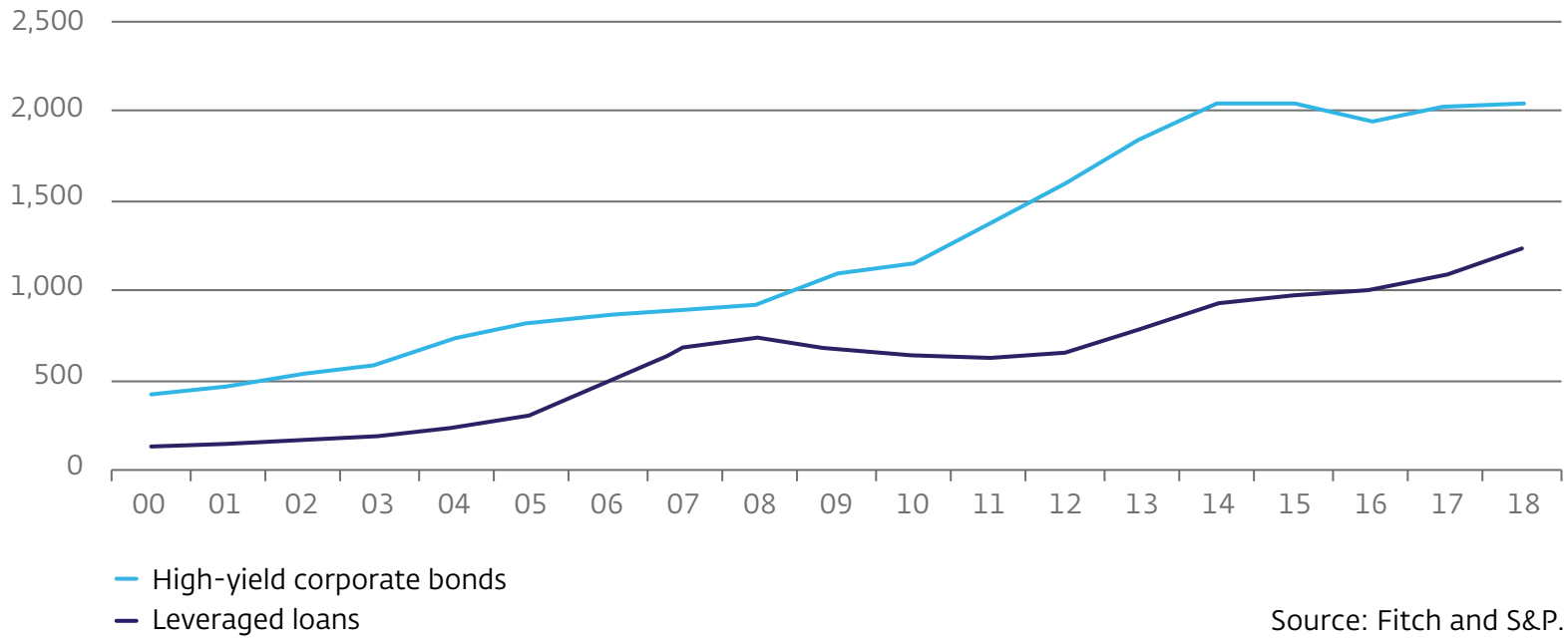


Source: Refinitiv.

Risk outline
Risk map

Figure 4 Sharp increase in amount of risky corporate debt, due particularly to growth in leveraged lending.

In USD billion



Source: Fitch and S&P.

Risk outline
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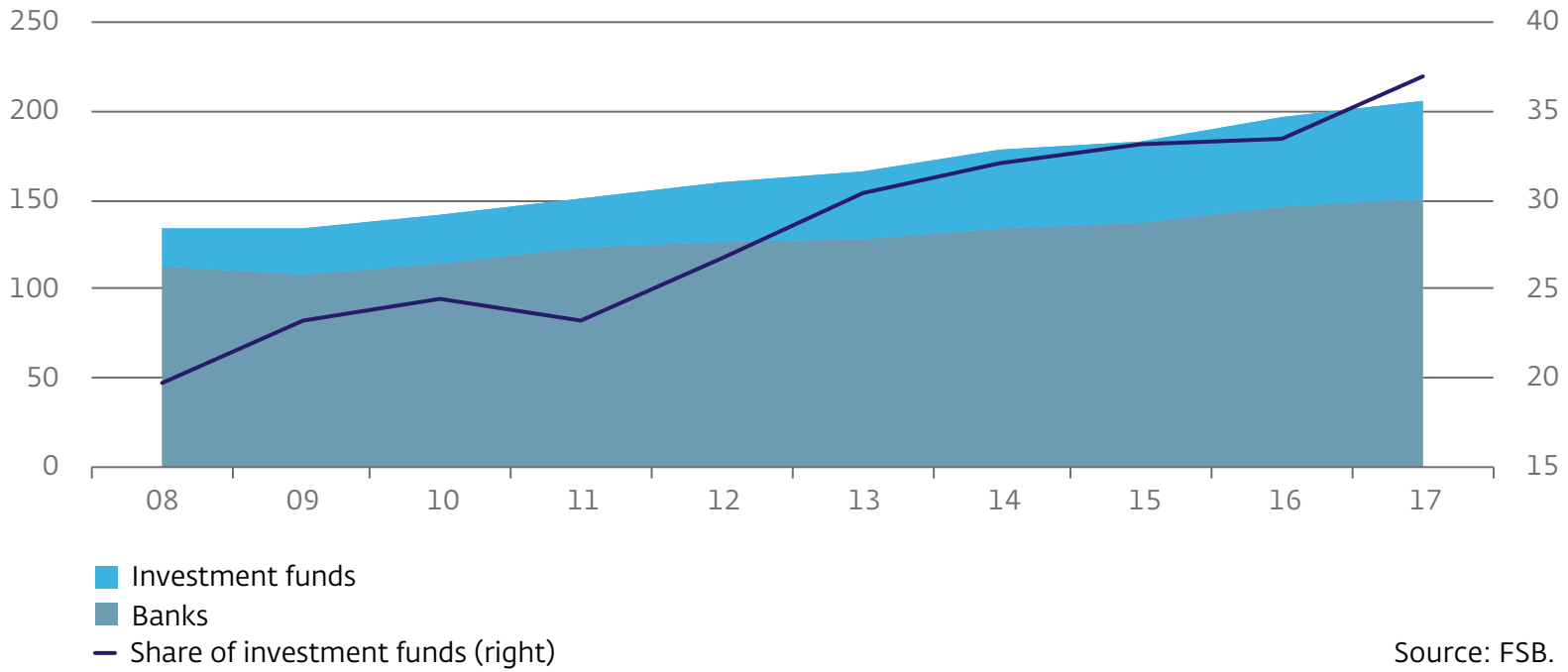
Figure 5 Total assets of investment funds have outstripped those of banks since the crisis.

In USD trillion; ratio of investment funds and banks total assets



Source: FSB.

Risk outline
Risk map

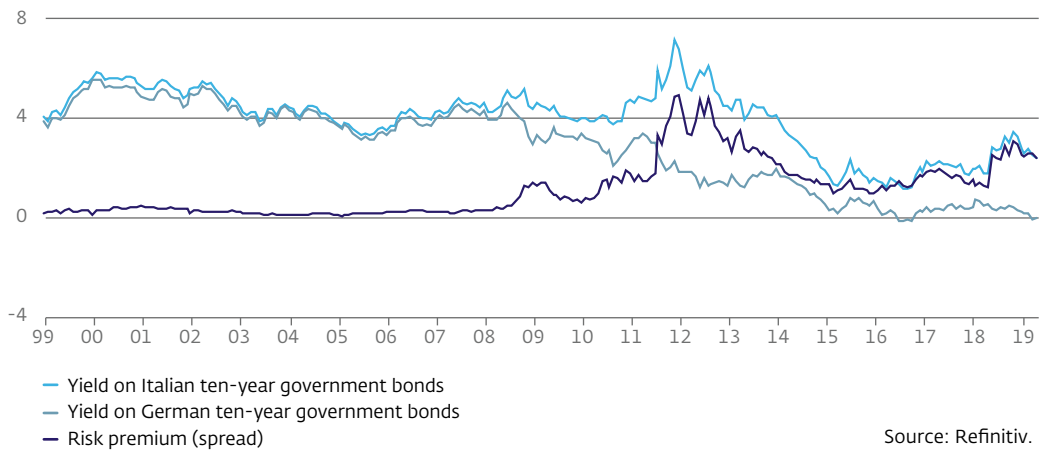
Country risk

- Adverse events such as an economic, political or financial crisis in individual systemically important countries could impact the Dutch financial system. Precisely a number of systemically important countries, such as China and the United States, are currently vulnerable.
- In Europe, uncertainties surrounding Brexit and the budgetary and the economic situation in Italy are the principal risks to financial stability. In Italy, risk premiums have gone up considerably since the spring of 2018 (see Figure 6).
- As to the United States, high corporate and government debt levels are still its principal vulnerabilities. In China, small and medium-sized banks are particularly vulnerable.

Find out more? Click on the tabs.

Figure 6 Spreads on Italian government bonds widened compared to one year ago.

Annual percentages



Source: Refinitiv.

Risk outline
Risk map

Country risk: Background

Adverse events in individual systemically important countries such as the United States could impact the Dutch financial system. Firstly, Dutch financial institutions have direct exposures to individual countries (see Table 1). When a country experiences an adverse event, credit losses may occur and risk premiums could go up sharply. The latter consequence may hit Dutch financial institutions through losses on their investment portfolios. In addition, such adverse events could have indirect effects, as the market sentiment reverses or global growth stalls. For example, trade tariffs can severely impact economic growth in the countries involved (see DNB, 2018). If such countries are systemically important, global economic growth can be affected, which could also impact Dutch financial institutions in due course.

Precisely a number of systemically important countries are currently vulnerable.

Table 1 Exposures of Dutch financial institutions

As a percentage of total exposures to all countries, based on ultimate debtor, 2018-Q4

	Banks	Pension funds	Insurers
The Netherlands	50.8	13.9	51.0
United States	10.3	25.5	4.9
United Kingdom	3.3	5.4	2.7
Italy	1.0	1.5	1.3
China	0.7	0.7	0.1
Brazil	0.6	0.9	0.0
Turkey	0.6	0.4	0.0
Russia	0.2	0.5	0.0
Argentina	0..1	0.2	0.0
Other countries	32.4	51.0	39.9
Total exposures to all countries (in EUR billion)	2,329	1,065	358

United States

Corporate debt in the United States is mounting rapidly. In the United States, growth in corporate debt has outpaced economic growth since 2012, meaning debts as a percentage of GDP have steadily risen (see Figure 7). At year-end 2018, US non-financial corporations owed almost USD 15 trillion in debts. In particular, leveraged loan issuance has boomed in the United States in recent years (see Figure 8), while underwriting standards in this market have declined further. Moreover, a Fed analysis shows that indebtedness is increasing most rapidly among businesses that have weak income positions and higher leverage.

Read more →

Risk outline
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Country risk: Background

The IMF has indicated that the US corporate credit cycle appears to be at its highest point in recent history.

US public debt is at a high level and still increasing. Public debt in the United States has soared since the crisis, fuelled by highly procyclical budgetary policies in recent years. The IMF has estimated that US gross public debt will be close to 107% of GDP in 2019 and exceed 110% by 2024, driven mainly by high deficits. In addition, a substantial portion will need to be rolled over in the next few years, with refinancing requirements totalling some 25% of GDP in both 2019 and 2020. This makes the US public sector vulnerable to higher interest rates. In December 2018, a stalemate over the new federal budget, with USD 5 billion earmarked for the wall on the US-Mexican border, led to the longest shutdown in the nation's history, adversely affecting economic growth.

Europe

With the date of the United Kingdom's withdrawal from the EU deferred to 31 October 2019, the risk of a no-deal Brexit has not subsided. On 10 April 2019, the European Council decided to defer the date of the United Kingdom's withdrawal from the EU to 31 October 2019 at the latest. Before that date, the UK and the EU must have ratified the terms of the withdrawal. The transitional period until the end of 2020 that the EU and the UK agreed on earlier, and that enters into effect following the ratification of the agreement, has remained unchanged. If ratification should prove impossible by the deadline, the UK exits the EU with no deal and without a transition period. Such a disorderly Brexit could trigger steep corrections in financial markets, such as falling asset prices and widening risk premiums. This may lead to financial losses, notably for institutions with substantial investments in the UK.

Within Europe, the economic situation in Italy is a matter of concern. In the EU, confidence in the budgetary and economic outlook in Italy remains weak. In the autumn of 2018, the European Commission rejected a Member State's budget for the first time since the fiscal compact took effect. This drove risk premiums on Italian sovereign debt further up (see Figure 6). Following negotiations between the European Commission and Italy, the Italian parliament adopted a new budget in late December 2018, foreseeing a 2.04% budget deficit rather than the previous 2.4%. Concerns about Italy's budgetary discipline remain, however, both for the short and the medium term (see: High debts in Europe). In addition, the Italian economy has a low growth potential.

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Risk outline
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Country risk: Background

Emerging countries

China has not yet seen the end of its vulnerabilities, and they may increase further. Although growth in Chinese lending has moderated somewhat since 2017 on the back of stricter regulation, the prolonged credit boom has caused vulnerabilities. In absolute terms, Chinese corporate debt has more than doubled since 2012, reaching USD 21 trillion in early 2018, or well over 150% of the country's GDP (see Figure 9). In addition, the many years of buoyant credit growth have fuelled housing market bubbles. High debts of households and businesses make Chinese banks sensitive to credit losses. Small and medium-sized banks in particular lack robust balance sheets, adequate capital ratios and sufficient profitability. The Chinese authorities recently loosened their policy aimed at curbing credit growth, partly in response to worse than expected economic data. They also launched a range of fiscal and monetary incentives to protect the economy from a sudden slowdown. These will allow vulnerabilities to accumulate further.

Emerging countries remain vulnerable to tightening financial conditions. Throughout much of 2018 financial conditions tightened in emerging countries, but ceased to do so in the first quarter of 2019 amid expectations of a slower pace of interest rate rises by the Fed (see Figure 10). Also, political risks receded somewhat in Argentina and Brazil. Nevertheless, the risk of further capital outflows remains large in some countries, due to previously emerged vulnerabilities such as high corporate debt levels, often in foreign currencies, and high current account deficits. Furthermore, economic growth in Turkey is now negative, with inflation remaining at persistently high levels. Borrowing costs have gone up sharply over the past six months, and a concomitant increase in non-performing loans is to be expected.

Risk outline
Risk map

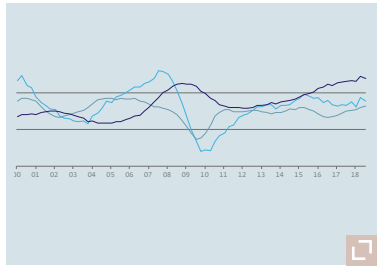
Country risk: Policy

Financial institutions must still make allowance for a no-deal Brexit. The financial sector has prepared for a disorderly Brexit by drafting plans and implementing the measures they contain. The European Commission and the Dutch Ministry of Finance also announced public measures in the past few months, including for the continued functioning of derivatives markets. This has helped mitigate the no-deal Brexit risks to financial stability. It does not mean, however, that all risks have now evaporated. Firstly, the deferral to 31 October does not guarantee that a definitive withdrawal agreement between the United Kingdom and the EU will be in place. Furthermore, the various public measures taken to allow for a disorderly Brexit are of a temporary nature, as is the transition period that will apply if an agreement is reached. This is why financial institutions must continue to implement plans in anticipation of the expiry of these transitional measures where needed.

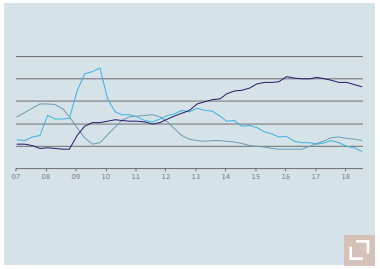
We pursue a policy aimed at mitigating concentration risk related to emerging countries, but the emphasis is on financial institutions' own responsibility to manage concentration risk. It is up to financial institutions to assess the level of country risk they are running, and which supplementary controls, such as limiting concentrations, are needed. We may, however, impose additional requirements on individual banks, for example if they have a heightened risk profile. We also apply various policy rules to curb the risks of exposure to emerging economies. In case of a material concentration of exposures to an emerging country, banks are required to hold additional capital. We also apply a maximum to exposures to countries that are not part of the European Economic Area (EEA) relative to the deposits guaranteed in the Netherlands.

Risk outline
Risk map

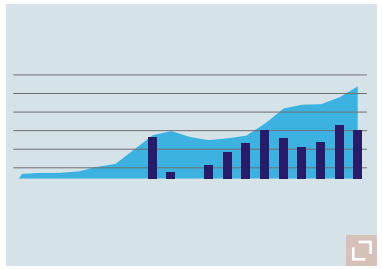
Country risk: Figures



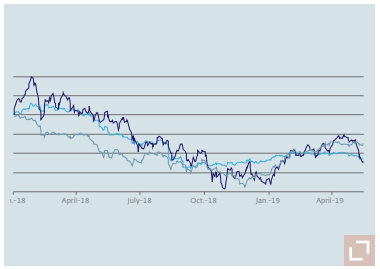
Growth in US corporate debt still outpaces growth in US GDP.
See Figure 7 →



Corporate indebtedness in China is high, but levelling off.
See Figure 9 →



The market for leveraged loans in the US quickly grows in size.
See Figure 8 →

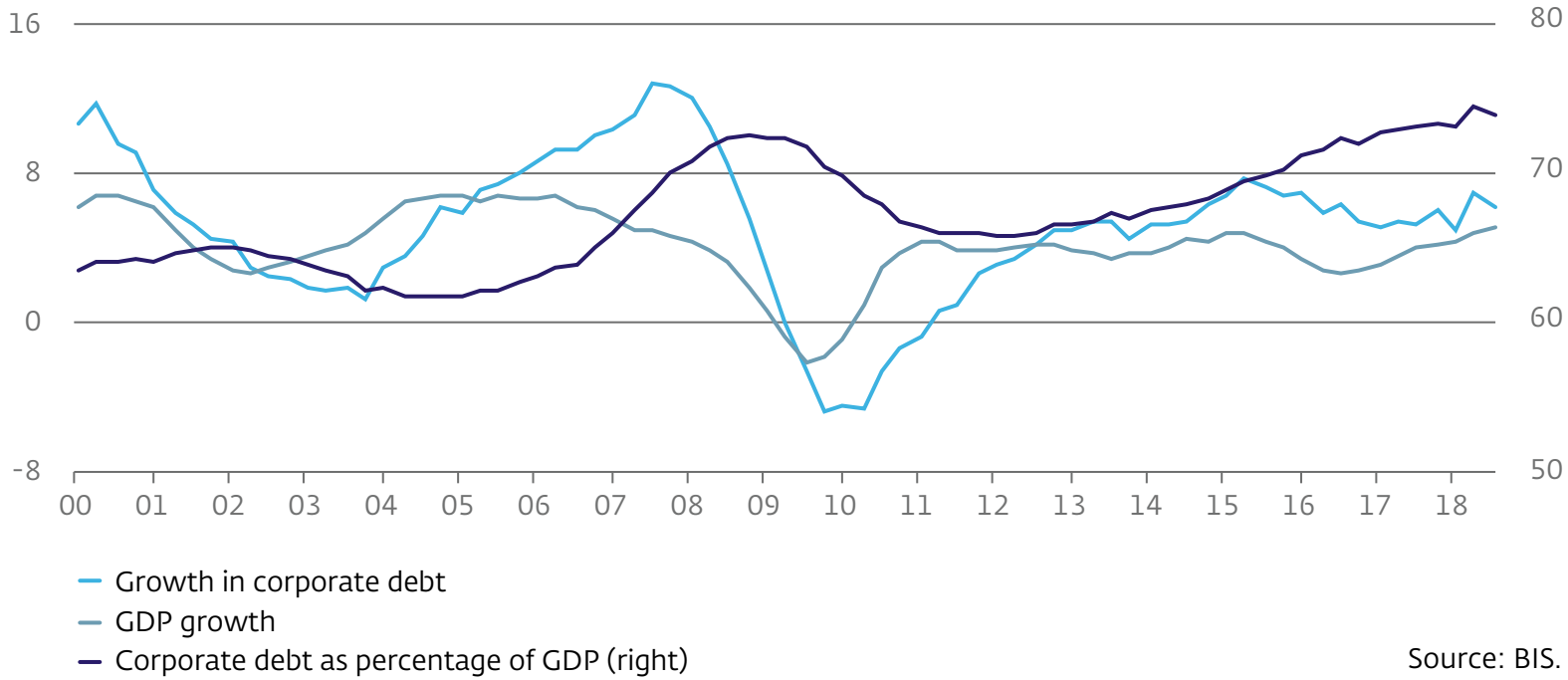


Financial conditions in emerging countries in 2018 considerably tightened.
See Figure 10 →

Risk outline
Risk map

Figure 7 Growth in US corporate debt still outpaces growth in US GDP.

Annual percentages; percentages of GDP

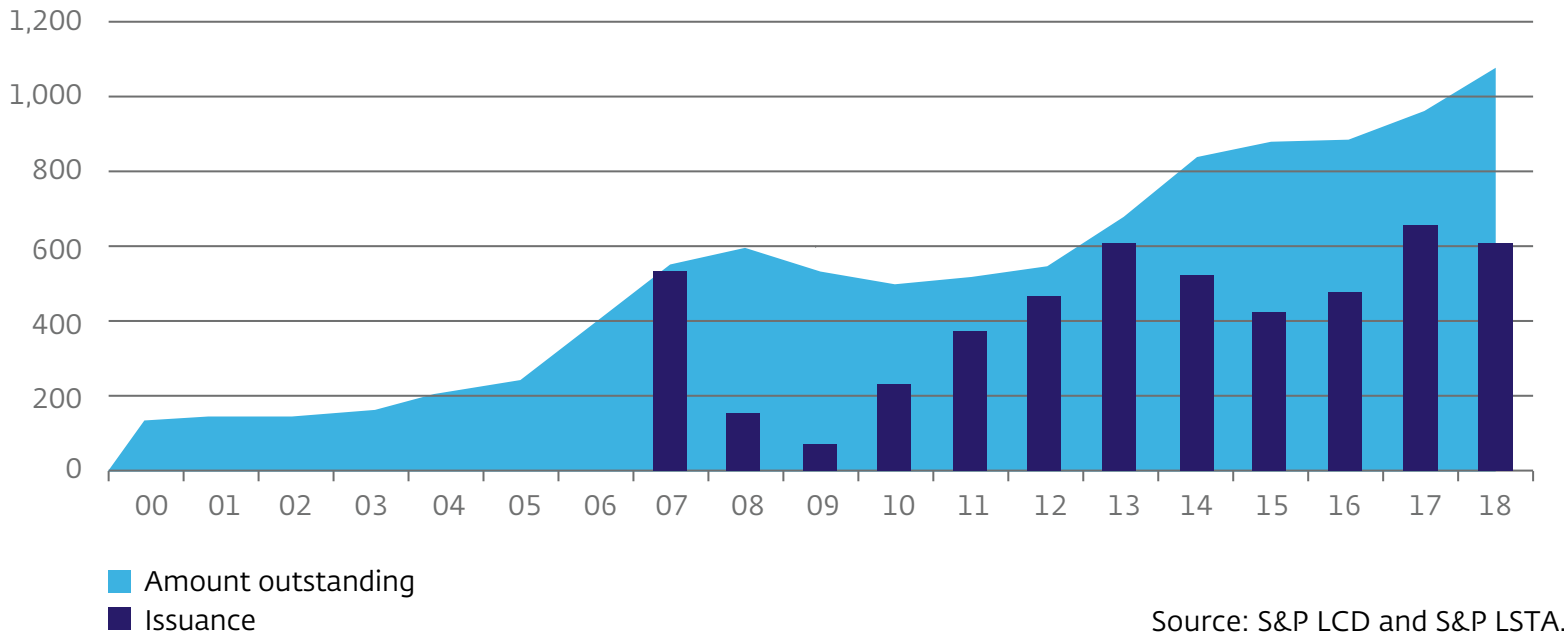


Source: BIS.

Risk outline
Risk map

Figure 8 The market for leveraged loans in the US quickly grows in size.

In USD billion



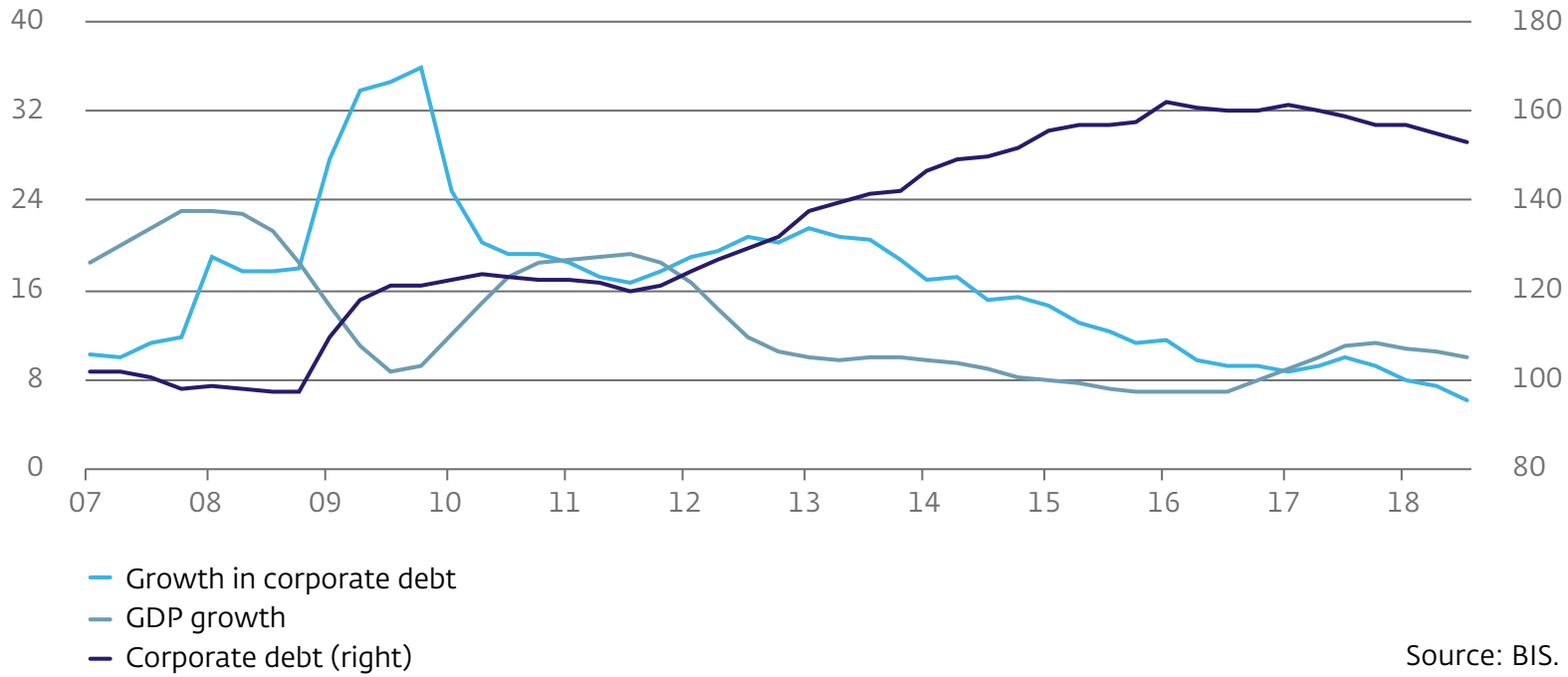
Source: S&P LCD and S&P LSTA.

Note: Issuance figures available since 2007.

Risk outline
Risk map

Figure 9 Corporate indebtedness in China is high, but levelling off.

Annual percentages; percentages of GDP



Source: BIS.

Risk outline
Risk map

Figure 10 Financial conditions in emerging countries in 2018 considerably tightened.

Index, 1 January 2018 = 100; yields in percentages per year (inverted axis)

Source: Bloomberg and Refinitiv.

Note: The currency index is the JP Morgan Emerging Markets Currency Index, the equity index is the MSCI stock index, and effective return is effective return in the JP Morgan Emerging Markets Bond Index (EMBI).

Risk outline
Risk map

Infrastructural risks

- While technological innovation opens up new opportunities for financial institutions, it can also pose fresh risks. This is why it is of fundamental importance that such institutions are given the room to seize opportunities, while adequate laws and regulations and their careful implementation in supervision should mitigate the risks to the largest extent possible.
- The ongoing digitisation increases the financial sector's vulnerability to cyberattacks. Cybercriminals use ever more sophisticated methods and techniques, so financial institutions must never cease to invest in their continued cyber resilience. That said, the sector's collective cyber resilience must also be galvanised, which is why the TIBER programme was launched in the Netherlands. Its scope was recently expanded to include the larger pension funds and insurance firms.
- Central counterparties (CCPs) fulfil a growing role in the financial system as financial market operators increasingly use central clearing of derivatives. With CCPs being systemically important, a comprehensive European resolution regime for CCPs will need to be developed.

Find out more? Click on the tabs.

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Infrastructural risks: Background

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FinTech

Technological innovation in the financial sector is accelerating fast. As data become available in greater quantities and novel technologies such as machine learning and distributed ledger technology emerge, innovative applications show exponential growth. Implementation of the revised European Payment Services Directive (PSD2) has also created room for technological innovation in the financial sector by lowering barriers to the payments market for new entrants. Technological innovation may fuel competition in the financial sector, with positive effects for diversity and productivity in the sector and more options for consumers.

However, technological innovation can also pose risks to financial stability. It could increase procyclicality and spark volatility in financial markets, and put pressure on business models of incumbent financial institutions as their service offering is taken over by new providers. Technological innovation often necessitates changes to operational business processes, meaning that it can also involve major operational risks, such as outsourcing and cyber risks.

Outsourcing

Outsourcing could give rise to new forms of concentration risk, as third parties, often unregulated, take on roles of systemic importance. If financial institutions' critical business processes increasingly depend on support from third parties, and if these are provided by a small circle of global players, as is the case for cloud solutions, such players could acquire systemic importance. Any service disruption of such players could have severe ramifications for financial stability.

Cyberattacks

The ongoing digitisation increases the financial sector's vulnerability to cyberattacks. Advanced hackers are using ever more sophisticated methods and techniques that make them progressively undetectable. Attackers are variously motivated and may seek to steal confidential data and money or disrupt systems. Distributed Denial of Service (DDoS) attacks can for instance render online systems temporarily unavailable. Protracted disruption of payment systems or extensive unavailability of major financial institutions could seriously undermine confidence and financial stability. Furthermore, cyberattacks can inflict collateral damage on financial institutions, for example by hurting their reputation or undermining the integrity of their data.

Central counterparties (CCPs)

CCPs are playing an increasingly prominent role in the financial system. CCPs are hubs that process large volumes of cross-border financial transactions. Ever since the European Market Infrastructure Regulation (EMIR) obliged

Read more →

Infrastructural risks: Background

banks and other financial market participants to clear specific categories of over-the-counter (OTC) derivatives centrally, CCPs have fulfilled an exceedingly important function. A CCP positions itself between buyer and seller, thereby mitigating their counterparty risks. This means derivatives markets have become safer thanks to CCPs, but their rising prominence also brings new risks. The concentration risk of banks has increased due to rising exposures to CCPs. In addition, CCPs take over the obligations of both market participants in exchange for collateral. As collateral is valued at market value, market participants may be required to provide extra collateral (margin calls) in times of market volatility. This may result in liquidity risks and amplify procyclicality in the financial system.

Find out more?

- Chapter 4 of the Overview of Financial Stability, autumn 2016 addresses the implications which technological innovation has for financial stability.
- In our Supervisory Strategy 2018-2022 we explain how we deal with the impact of technological innovation on the financial sector and how we embed it into our supervision.
- Our Payments Strategy 2018-2021 details our efforts in bolstering the financial sector's cyber resilience and discusses the attention we devote to CCPs.

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Infrastructural risks: Policy

FinTech

We wish to offer market parties the room to seize the opportunities that present themselves through technological innovation. Jointly with the AFM we have set up an InnovationHub to deal with questions that market participants may have on our supervision and the rules and regulations pertaining to innovative financial products and services. Likewise, our Regulatory Sandbox is available if existing legislative and regulatory requirements should constitute an unnecessary constraint for new players. The aim is to ensure innovation is not unnecessarily obstructed by laws and regulations, while mitigating emerging risks.

Financial laws and regulations should be adequate in preventing risks. We study the implications of new technologies for the sector, supervision and regulatory framework on an ongoing basis. Among the topics we researched in the year under review were cryptos and artificial intelligence (available in Dutch). In this area we also contribute to the efforts made by international organisations such as the Basel Committee and the European supervisory authorities.

Careful implementation of PSD2 in supervision is a high-priority issue for us. PSD2 must enable banks to disclose their payments data to third parties in a reliable manner, which necessitates the strict operational and security requirements set under the PSD2. Careful implementation of PSD2 in supervision is therefore key. This is why we place great focus on the new requirements for both new market entrants and incumbent players and urge banks to develop secure dedicated interfaces for the disclosure of payments data.

Cyberthreats

Financial institutions are required to invest continuously in their digital resilience. The financial sector is itself responsible for managing ICT risks. We devote permanent attention to and have an ongoing understanding of information security control in the financial sector thanks to specific cyber assessments and other initiatives.

The sector's collective cyber resilience must be bolstered. The Dutch financial institutions are under relentless pressure from groups of advanced and less advanced attackers. To galvanise collective cyber resilience, DNB has developed the threat intelligence-based ethical red teaming (TIBER) programme together with the sector. Based on the most recent threat intelligence, the programme simulates attacks on the institutions that form part of the financial

Read more →

Risk outline
Risk map

Infrastructural risks: Policy

core infrastructure (see In Focus: The financial core infrastructure in the Netherlands). The scope of the TIBER programme was recently expanded to include the larger pension funds and insurance firms, which means that these sectors' cyber resilience can now also be tested in practice. The outcome of the simulations is used for knowledge building and exchange, to make systems across the Dutch financial sector more resilient. The TIBER programme has meanwhile been adopted on a European scale as TIBER-EU.

Central counterparties

The clearing services of British CCPs are critical to the EU. In December 2018, the European Commission issued a decision aimed at safeguarding temporary access by EU market operators to CCPs in the United Kingdom in the event of a no-deal Brexit, given the importance to European financial stability. In addition, the recently agreed EMIR2 framework provides that the European Securities and Markets Authority (ESMA) will, jointly with national supervisory authorities, continue to oversee key CCPs in the United Kingdom after Brexit.

Closer European cooperation in the supervision of CCPs is needed. At present, national authorities are largely responsible for supervising CCPs, which makes for diverging supervisory approaches. EMIR2 does little in the way of harmonising CCP supervision in the EU. Closer European cooperation between supervisory authorities will promote a level playing field and mitigate cross-border risks. To do so, they will need to use the full scope of application of the EMIR2 framework.

With central counterparties being systemically important, a resolution regime for CCPs will need to be developed. A CCP and its participants must absorb their own losses. If, in highly exceptional circumstances, their measures should prove inadequate, however, there must be a possibility for them to enter into resolution. This means there is a need for a resolution regime. Based on international agreements and future European regulations, a national resolution authority for CCPs will be set up in the Netherlands. We are arguing in favour of a fully European CCP resolution regime in due course, given the cross-border operations of CCPs. ESMA will conduct a stress test in 2019 to assess the resilience of the CCPs in Europe.

Read more →

Risk outline
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Infrastructural risks: Policy

In focus: The financial core infrastructure in the Netherlands

Infrastructure risks can also involve specific processes in payment and securities processing systems that are of vital importance in society. If such processes were to fail, society could become severely disrupted or major economic losses could occur, thereby jeopardising financial stability.

It is precisely for this reason that a reassessment of the financial core infrastructure in the Netherlands is currently underway. The financial core infrastructure (FCI) refers to a group of financial institutions and market infrastructures that are of vital importance to Dutch payments and securities processing systems. They include providers and members of exchange and trading platforms, and clearing and settlement systems. After consulting with the AFM and the Ministry of Finance, DNB determines whether an institution or system forms part of the FCI. If it does, its operations must be highly reliable and capable of safeguarding the continuity of payments and securities processing systems. We supervise and oversee the FCI in tandem with the AFM.

Find out more?

- See the fact sheet on the financial core infrastructure at dnb.nl.

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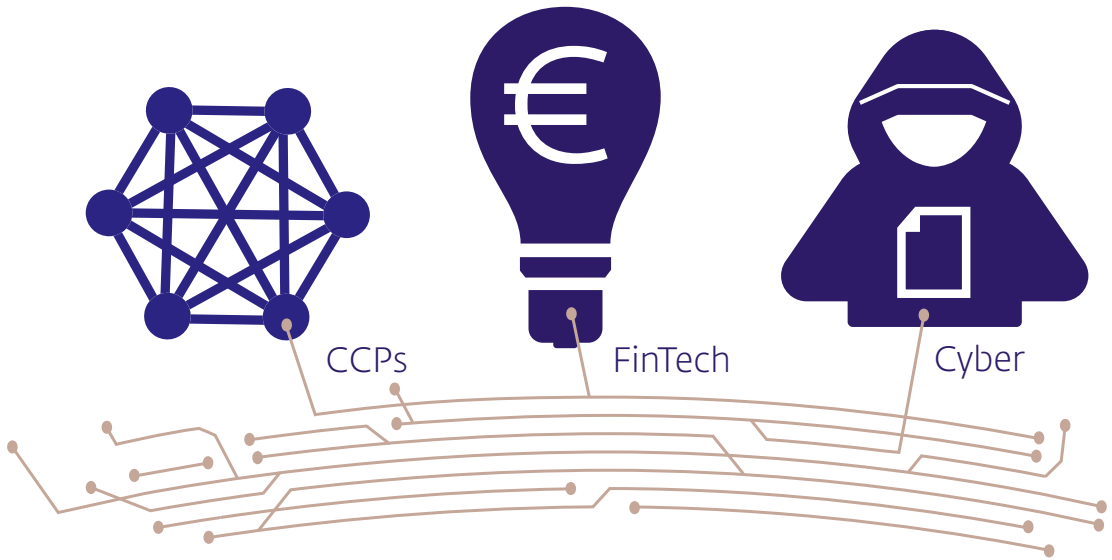
Risk map

Infrastructural risks: Figures



CCPs
Size of OTC derivatives market at end 2018:
- **USD 544 trillion** (in underlying value);
- **USD 9.7 trillion** (in market value)

FinTech
Worldwide investment:
- **USD 112 billion** (in 2018)
- **USD 51 billion** (in 2017)

Cyber
- **EUR 10 billion**: estimated losses to the Dutch economy due to cybercrime
- **USD 124 billion**: expected worldwide cyber security turnover in 2019

Sources: BIS (OTC derivatives market), KPMG (FinTech), Deloitte (loss and damage to the Dutch economy), Gartner (cyber security turnover)

Risk outline
Risk map

Climate and energy transition risks

- During the transition to a climate-neutral economy risks to financial institutions and financial stability may emerge. Climate change itself can also bring physical risks.
- A timely policy response and robust transition path are central to financial stability. These will enable financial institutions to take appropriate measures by incorporating the anticipated impact of sustainability policies in their lending and investment decisions. Achieving this requires international collaboration.
- We have conducted a macroprudential stress test, and we are integrating climate and energy transition risks into our day-to-day supervision activities.

Find out more? Click on the tabs.

Risk outline
Risk map

Climate and energy transition risks: Background

Climate change and the energy transition have a multifarious impact on the financial sector. Firstly, the financial sector may be affected by the transition to a climate-neutral economy. As part of the Paris Climate Agreement, around 200 countries committed themselves to limiting global warming to well below 2°C. These commitments require a transition to an energy supply based on sharply reduced emissions of greenhouse gases. If this energy transition is accompanied by abrupt shocks, this may affect financial stability. At the same time, financial institutions could be affected by the physical impact of climate change. The frequency and scale of natural disasters are expected to increase due to climate change, which will give rise to risks, particularly for non-life insurance firms.

Energy transition

An abrupt energy transition may cause significant losses in the financial sector. In 2018, we developed a stress test to quantify the possible effects of a disruptive energy transition on the Dutch financial sector. Assessment of four stress scenarios has revealed that in some cases losses could be as high as 3% of banks' asset positions and more than 10% of institutional investors' asset positions. The negative impact on solvency ratios and funding ratios in these scenarios is largely compensated for by a decline in the market value of obligations due to rising interest rates. An important insight gained is that losses will not be incurred in carbon-intensive sectors alone, as they feed through to other sectors and the overall economy through the various production chains.

While financial institutions show ambition in the area of sustainability, they expose themselves to reputation risk if they fail to live up to expectations. We surveyed 25 large and medium-sized Dutch financial institutions to find that all of them formulate sustainability policies. However, most of them have yet to fully integrate their sustainability ambitions into their operational management. Nearly two-thirds lack unambiguous indicators and targets to accompany their sustainability policies, and the large majority do not document whether or not they achieved their ambitions.

"An abrupt energy transition may hurt financial stability"

Real estate investors could face new risks, including from new sustainability legislation. By 2023, every office building larger than 100m² must have at least a level C energy label. Buildings that do not meet this requirement by the deadline may no longer be used for office purposes. This will slow down demand for non-sustainable real estate, which will affect

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Climate and energy transition risks: Background

commercial estate investors (see commercial real estate).

Climate change

Non-life insurance firms could face higher than anticipated climate-related insurance claims. Non-life insurers calculate the chance of extreme weather events using sophisticated catastrophe models, which generally do not specifically account for Dutch climate change trends. As a result, they may underestimate their claims burden, which could adversely impact their profits. Dutch insurers still appear to be relatively resilient to catastrophe scenarios. The European Insurance and Occupational Pensions Authority (EIOPA) recently confirmed this after it had analysed the impact of various of such scenarios in its stress test. Insurers in the Netherlands enjoy relatively solid capital positions and reduce their risks by engaging the services of reinsurance firms.

Floods in the Netherlands could severely impact the results of financial institutions. Although the likelihood of flooding is extremely small in the Netherlands, the potential consequences are immense. The resulting damage and losses, which for the most part cannot be insured and can only be partially absorbed by the government, could well run into EUR 60 billion. According to the probability distribution, this scenario could materialise once every 200 to 1,000 years. Part of the losses could end up in the books of financial institutions. For example, collateral assets could be damaged, resulting in losses on mortgage loans, commercial real estate loans and SME loans. Furthermore, financial institutions could be hit by downward revaluations of Dutch sovereign bonds or worsened economic conditions caused by flooding.

Find out more?

- In early 2019, we conducted a study to find out whether Dutch financial institutions had integrated their sustainability ambitions into their operational management.
- Chapter 4 of the Autumn 2018 Financial Stability Report discusses the risks which a disruptive energy transition poses to financial stability.
- In 2017, we identified the climate-related financial risks which financial institutions face.
- In 2017 we also conducted a climate-related stress test (available in Dutch) among non-life insurers.

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Climate and energy transition risks: Policy

A timely policy response and robust transition path are central to financial stability. The Dutch government presented a legislative proposal for a climate act, and a draft national climate agreement was concluded in 2018 to put the Paris Climate Agreement into practice. The definitive climate agreement will be presented in June 2019. Specific follow-up action will reduce the need for abrupt measures in the future, and will enable financial institutions to take appropriate measures by incorporating the anticipated impact of sustainability policies in their lending and investment decisions. Achieving this requires international collaboration.

Mortgage lending aimed at greening homes must be responsible. The financing of sustainability measures must be in line with prevailing mortgage lending standards and incorporate adequate safeguards in terms of the energy efficiency effectively achieved. Lowering borrowing limits for homes that have very low energy efficiency levels could help spur the greening of homes. After all, a home's energy efficiency will then be reflected more clearly in its value.

Financial institutions must identify the possible implications of relevant climate scenarios and include transition risks in their risk management. To do so, they must retrieve relevant and available data to improve their risk assessment, such as energy labels of properties serving as collateral for mortgage loans and commercial real estate loans. Likewise, non-life insurance firms, in tandem with external modelling agencies, should make better allowance for climate change in their risk models.

The Network for Greening the Financial System (NGFS) is urging central banks, supervisory authorities and other stakeholders to make the financial system more sustainable. To facilitate the role of the financial sector in achieving the objectives of the Paris Climate Agreement, it identified six concrete recommendations.

We are embedding climate and energy transition risks in our supervision and expect financial institutions to anticipate future changes in good time. The aim is for them to have an understanding of the impact which climate and energy transition risks have on their short and long-term solidity and take appropriate measures to manage these risks where necessary.

In 2018 we analysed how we can better integrate climate risks into our supervisory methodology; we will implement the recommendations from the study in 2019. There will be a particular emphasis on the self-assessments that financial institutions must conduct as part of their assessment and evaluation processes. We will ask institutions to explicitly identify the effects of climate risks

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Climate and energy transition risks: Policy

on their operations and indicate how they manage these risks. We previously performed a quantitative study of the Dutch financial sector's exposures to carbon-intensive sectors (see Figure 11). In 2019, we plan to perform a subsequent analysis of these exposures, and of exposures to real estate with energy labels that are inadequate for meeting climate agreement targets. In addition, we incorporate sustainability into our on-site inspections of banks, insurers and pension funds. We also continue to develop our methodology for energy transition stress testing, and we advocate the use of such stress tests internationally.

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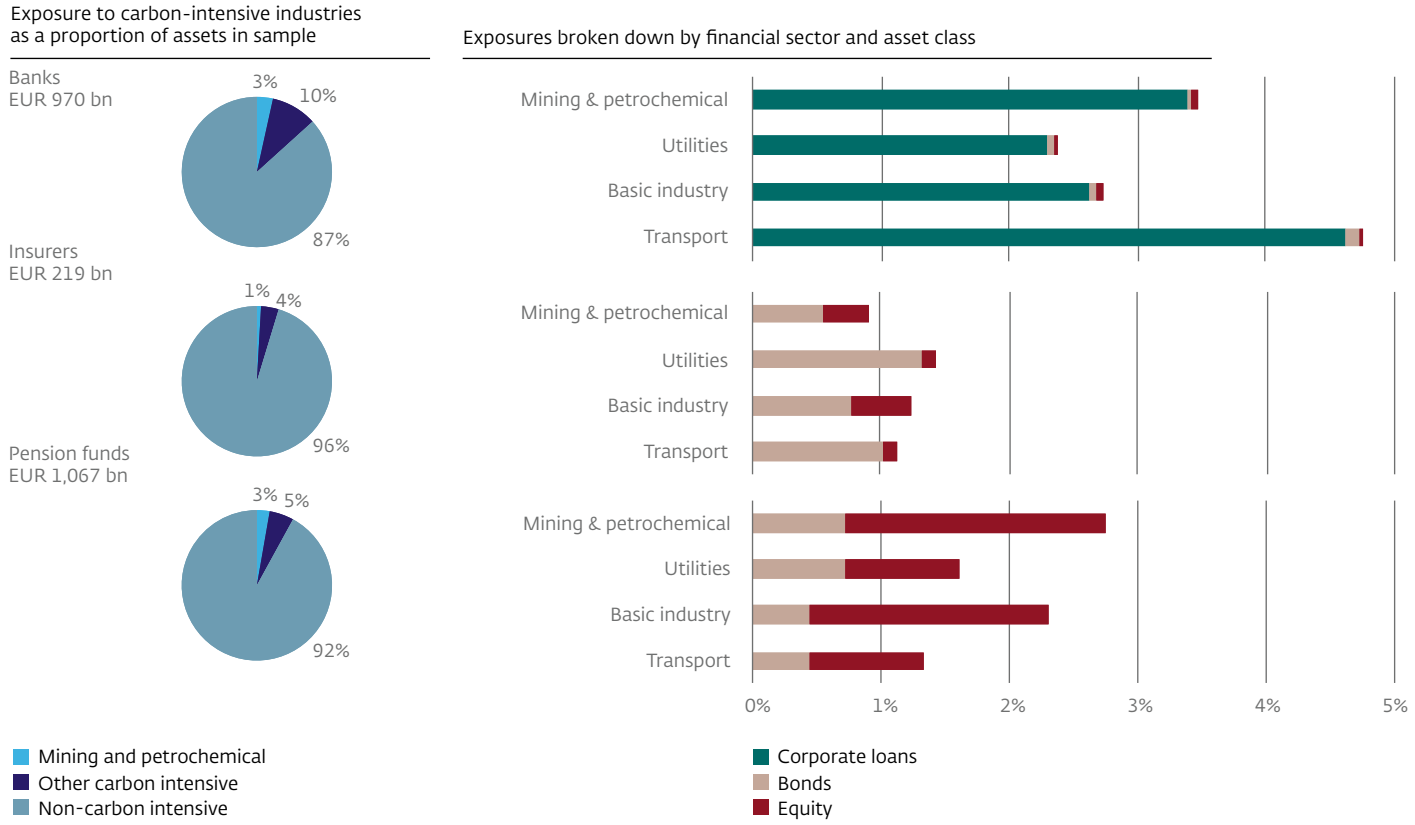
Climate and energy transition risks: Figures

Figure 11 Financial institutions have significant exposures to carbon-intensive sectors.



Note: Exposures in the fourth quarter of 2017.

Source: An energy transition risk stress test for the financial system of the Netherlands, DNB Occasional Study 16-7, 2018.

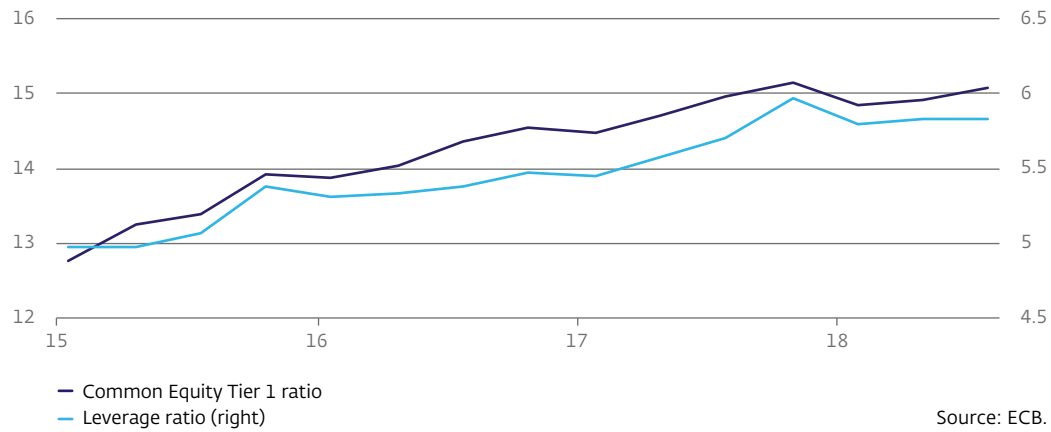
Risk outline
Risk map

State of European banks

- Although capital positions across the European banking sector as a whole have improved over the past few years (see Figure 12), a part of the sector continues to grapple with low profitability. Moreover, the worsened macroeconomic outlook could also put pressure on future profitability.
- The adverse feedback loops between banks and sovereigns may resurface, which is why it is important to sustain efforts aimed at breaking the sovereign-bank nexus.
- To achieve this, it is fundamental that weak banks strengthen their balance sheets and that highly-indebted governments bring down their debts. In addition, phasing out the current preferential treatment of government debt in the capital framework of banks could help reduce banks' vulnerability to debt problems of their own governments. Lastly, it is a necessity to complete the European banking union.

Find out more? Click on the tabs.

Figure 12 Capital position of European banks has improved in the past years.
Risk-weighted assets in percentages; total exposures



Source: ECB.

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State of European banks: Background

Financial soundness

In the past few years the European banking sector has become more resilient. On average, European banks have considerably improved their capital position in recent years (see Figure 12). The average capital ratio (CET1) of European banks increased by more than two percentage points between 2015 and 2018. This is due partly to an increase in equity and partly to the decrease in risk-weighted assets (see Figure 13). In addition, the quality of the loans portfolio of European banks has considerably improved. In the third quarter of 2018 the proportion of non-performing loans to the total number of loans in the euro area was 3.4% on average. In comparison, in 2015 the percentage of non-performing loans was 6%. The legally required liquidity ratios are also at healthier levels than a number of years ago, while the sector as a whole has also made progress in building up own funds that can carry losses. Thanks to the higher capital buffers and the new resolution framework, the loss absorbing capacity increased from 7% to 12% of total assets (ECB, 2019).

> "In part of the European banking sector profitability is under pressure."

Nevertheless, part of the European banking sector is clearly in a less healthy condition. In a number of European countries, profitability of the banking sector is considerably under pressure, partly as a result of overcapacity and high operational costs. For instance, the average return on equity in 2018 in the euro area amounted to 6.7%, but the returns on Greek, Portuguese and German banks were far less (see Figure 14). Besides, in Greece, Cyprus, Italy and Portugal banks still have a large amount of non-performing loans on their balance sheets (see Figure 15).

In particular, Italian and Spanish banks are still very much dependent on central bank funding. The ECB implemented two targeted longer-term refinancing operations (TLTROs) to support lending to the non-financial private sector. These allowed banks to obtain loans from the Eurosystem at a rate of 0% to -0.4%. In particular, Italian and Spanish banks rely heavily on central bank funding. A case in point is that the average share of central bank funding in the banks of these countries amounts to almost 8% of their total liabilities. Consequently, these banks are vulnerable for the moment when this type of funding ends. In March 2019, the ECB announced a third round of TLTROs, although the conditions have been tightened somewhat compared to those of the previous rounds. Although the refinancing risks for banks in the short term have declined as a result of this new round, it

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State of European banks: Background

still means that banks have to work towards a situation in which central bank funding can be replaced by market funding.

The negative interaction between banks and governments may resurface in vulnerable countries. In particular, the Italian, Portuguese, Slovenian, Slovakian, and Spanish governments are still relying heavily on their own banking sectors for funding of their government debt (see Figure 16). When interest rates rise strongly or growth is seriously lagged, this may feed through to the financial sector via losses on investment portfolios of the banking sector. As deteriorated risk profiles of banks may lead to higher risk premiums on public debt, the negative interaction (nexus) between banks and governments may resurface in these countries.

Integrity

In 2018 several shortcomings came to light in the area of preventing financial and economic crime at financial institutions inside and outside Europe. In the case of financial and economic crime, financial institutions, such as banks but also trust offices and money transfer offices, are used or abused for criminal purposes, including money-laundering, corruption, the financing of terrorism and non-compliance with sanctions legislation. In the past few years various European banks faced fines, occasionally high ones at that, settlements and other measures, because they did not take sufficient action in combating this form of crime. Financial-economic crime has an influence on social security and greatly harms trust in the financial sector. Besides, these fines and settlements have a negative impact on the financial results of the perpetrators and consequently hamper the further strengthening of the buffers of these financial institutions.

Find out more?

- The Autumn 2017 Financial Stability Report describes the interaction between banks and governments in more detail.

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State of European banks: Policy

Financial soundness

European banks must take into account the higher capital requirements as laid down in the Basel 3.5 accord. In the wake of the financial crisis, the 2010 Basel III accord laid down agreements about an overall increase of the amount and quality of the capital that banks are required to hold. These agreements were soon found in need of review due to deficiencies in the calculation method for risk-weighted assets. The new Basel Accord, Basel 3.5, more strongly regulates the risk weights banks are allowed to use. This will create more uniformity in the ways in which banks calculate their capital buffers. It enhances confidence in the risk-weighted capital ratios of banks as an indicator of their creditworthiness. The new requirements will be phased in during an extensive transition period (2022–2027).

Weak European banks must further strengthen their balance sheets and restore profitability. Banks can realise this by further reducing their stock of non-performing loans, reducing costs and diversifying in sources of income. Especially in countries with a fragmented banking sector, consolidation would benefit the solidity of the banking sector for small and medium-sized banks.

To end the harmful interaction between banks and governments further, bank balance sheets should be made less sensitive to problems their own national governments may suffer. It is desirable that preferential treatment of sovereign debt is ended, as such debt is not risk-free. Obliging banks to maintain capital for the credit risk associated with sovereign debt will improve incentives for banks and ameliorate the allocation of capital. Concentration limits may also further restrict exposure of banks to governments.

The European banking union must be strengthened. Lifting prudential supervision and the approach to failing banks to the European level, reduces the likelihood of problems in national banking sectors affecting public finances in these countries. Another positive development is that the European resolution framework has been further shored up and that an agreement has been reached about the revised Bank Recovery and Resolution Directive (BRRD2). But as far as a European deposit guarantee scheme is concerned progress is only meagre.

Integrity

Financial institutions primarily have their own responsibility for controlling the risk of becoming involved in financial and economic crime. Financial institutions play a key role in preventing financial and economic crime – a gatekeeper role. They are expected to stop criminals from using the financial

Read more →

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State of European banks: Policy

system. Institutions must therefore create a climate suitable for controlling integrity risks, have adequate procedures and systems in place, and board members must personally commit themselves to preventing involvement in financial and economic crime. Improving operational management in this regard requires substantial investments from banks, for instance to monitor transactions.

It is vital that integrity supervision be harnessed, also at a European level. Financial and economic crime is typically a cross-border phenomenon which requires an internationally coordinated approach. Although European directives are in place, their interpretation and enforcement still vary from country to country, both in the supervisory approach and, for example, with respect to staff resources assigned. In the autumn of 2018, the European Commission proposed ways to harness European cooperation in the prevention of money laundering and terrorist financing by providing the European Banking Authority (EBA) with additional powers. This is a good first step towards a harmonised European supervisory approach. Meanwhile, clamping down hard on such crimes domestically, both by supervisors and other government agencies, remains vitally important (see In Focus: Combating financial and economic crime in the Netherlands).

Read more →

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State of European banks: Policy

In focus: Combating financial and economic crime in the Netherlands

Laws and regulations impose important obligations on financial institutions in terms of combating financial and economic crime. In the Netherlands, the integrity rules and regulations are set out in various laws: the Anti-Money Laundering and Anti-Terrorist Financing Act (*Wet ter voorkoming van witwassen en financieren van terrorisme – Wwft*), the Financial Supervision Act (*Wet op het Financieel toezicht – Wft*), the Pensions Act (*Pensioenwet – Pw*), the Act on the Supervision of Trust Offices (*Wet toezicht trustkantoren – Wtt*) and the Sanctions Act (*Sanctiewet – Sw*). They are being tightened on an ongoing basis. For instance, on 25 July 2018 the provisions of the Fourth Anti-Money Laundering Directive were incorporated into the *Wwft*. They place stricter requirements on institutions' anti-money laundering policies and raise maximum fines. Also, supervisors are now required to disclose administrative sanctions. On 1 January 2019 the revised Act on the Supervision of Trust Offices came into effect, subjecting trust offices to more stringent requirements.

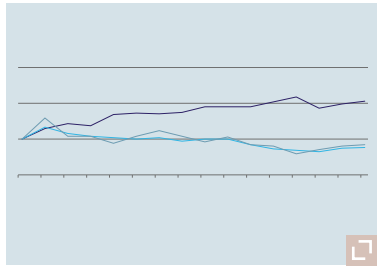
Integrity supervision is an important part of our supervisory work. In our supervisory role, we conduct institution-specific and thematic examinations to determine whether financial institutions comply with relevant standards. We take enforcement action in the event of non-compliance with laws and regulations. Formal measures enable us to force financial institutions to implement structural improvements in their role as gatekeepers. We also work alongside other Dutch organisations in the Financial Expertise Centre (FEC) to improve integrity in the financial sector. To this end, FEC members share information and knowledge and carry out joint projects.

Find out more?

- Our Annual Report 2018 discusses in more detail how financial and economic crime is combated.
- Taking a hard stance against financial and economic crime is one of three goals in our Supervisory Strategy 2018-2022, in which we present our approach to supervision for the years to come.

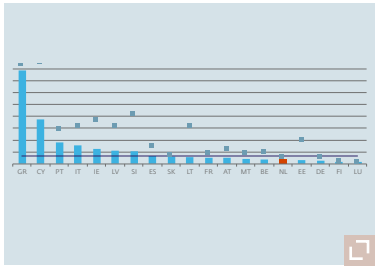
Risk outline
Risk map

State of European banks: Figures



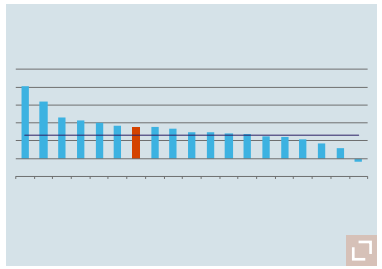
Capital ratio improved on the back of higher equity and lower risk-weighted assets.

See Figure 13 →



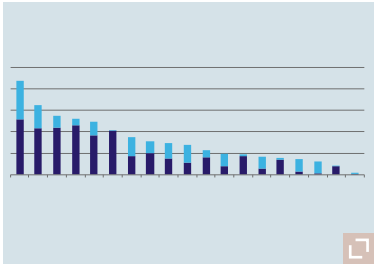
NPL ratios remain high in several vulnerable European countries.

See Figure 15 →



Return on equity varies considerably between countries.

See Figure 14 →



In some European countries, banks have major exposures to their own governments.

See Figure 16 →

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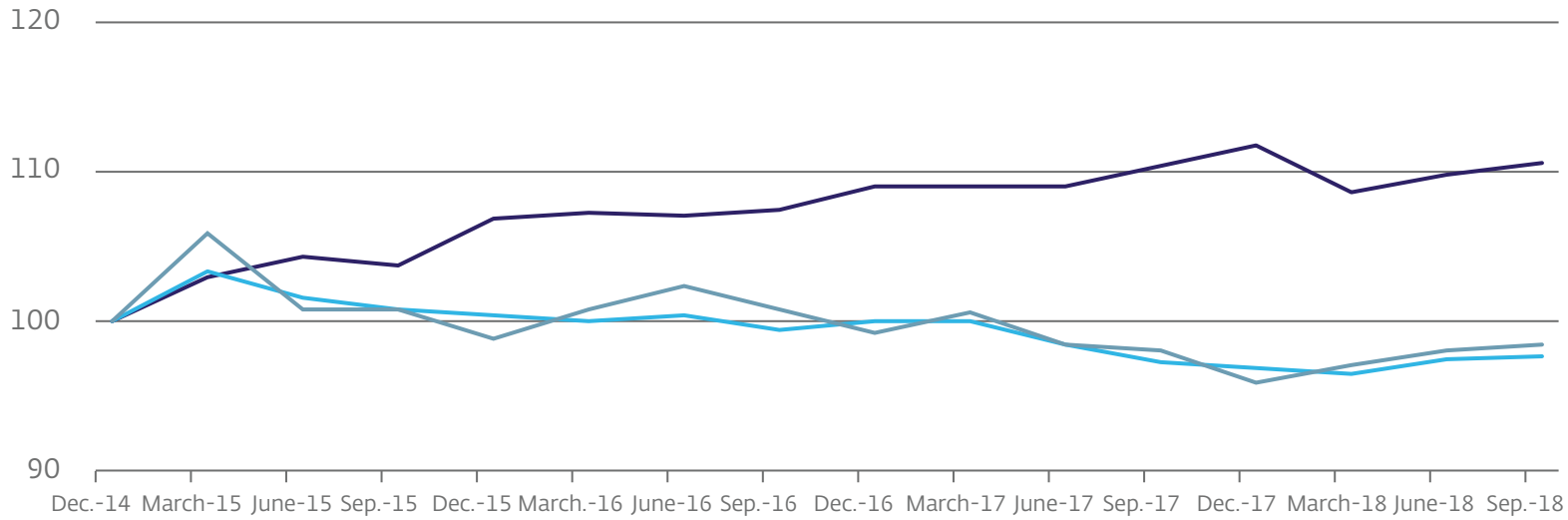
Figure 13 Capital ratio improved on the back of higher equity and lower risk-weighted assets.

Index, year-end 2014=100



Source: ECB.

Risk outline
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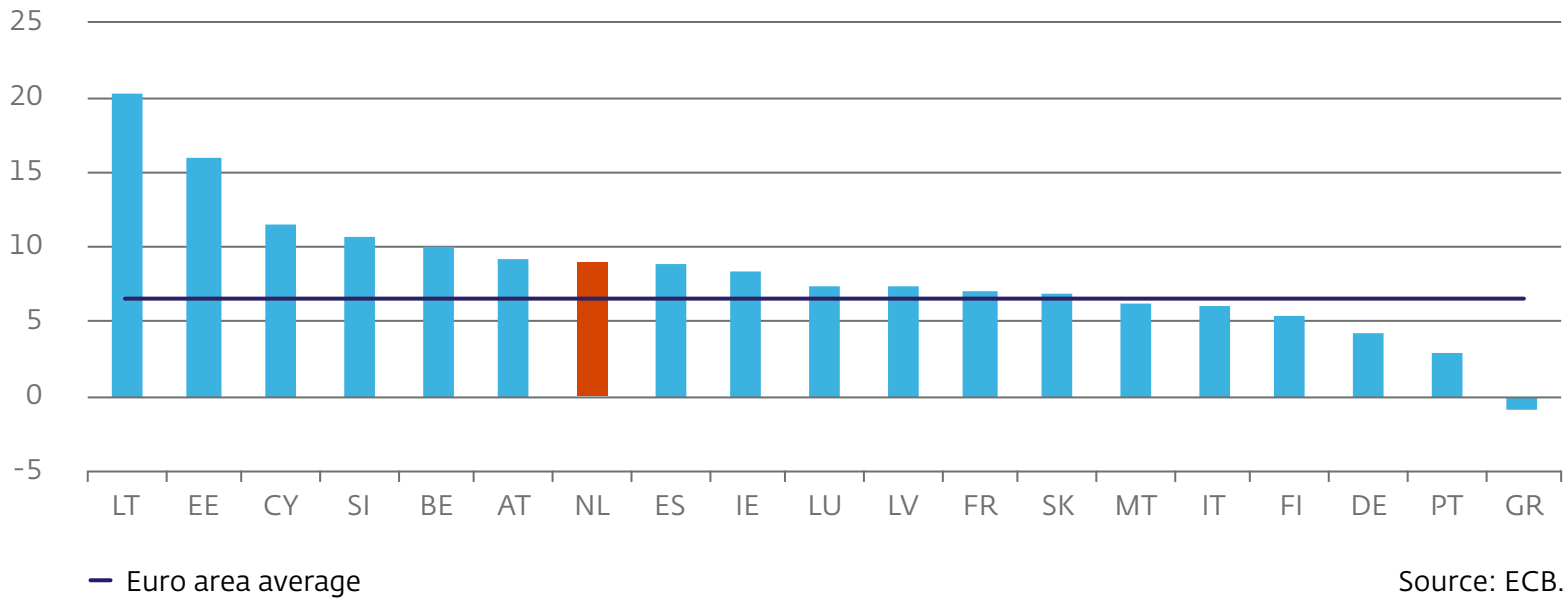
Figure 14 Return on equity varies considerably between countries.

Percentages of equity, 2018-Q1 – 2018-Q3 annualised



Source: ECB.

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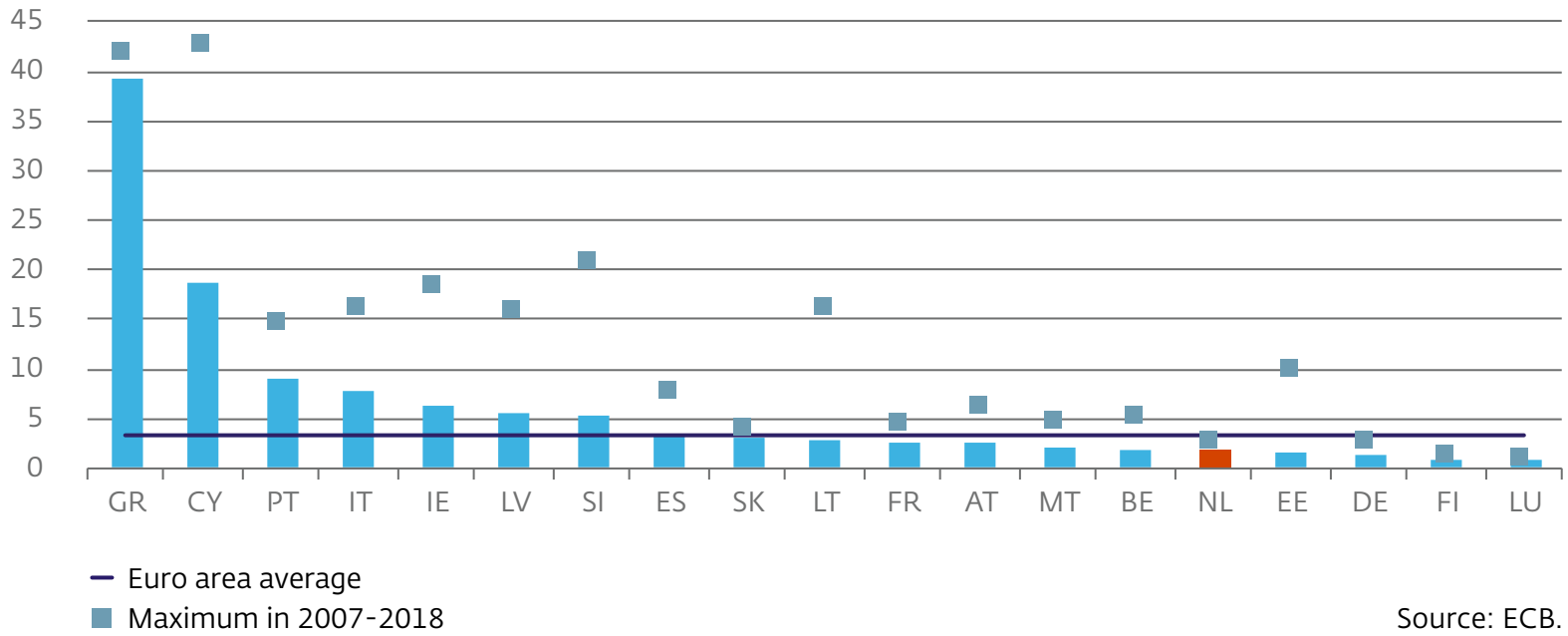
Figure 15 NPL ratios remain high in several vulnerable European countries.

Non-performing debt instruments as percentage of the total debt instruments, 2018-Q3



Source: ECB.

Risk outline
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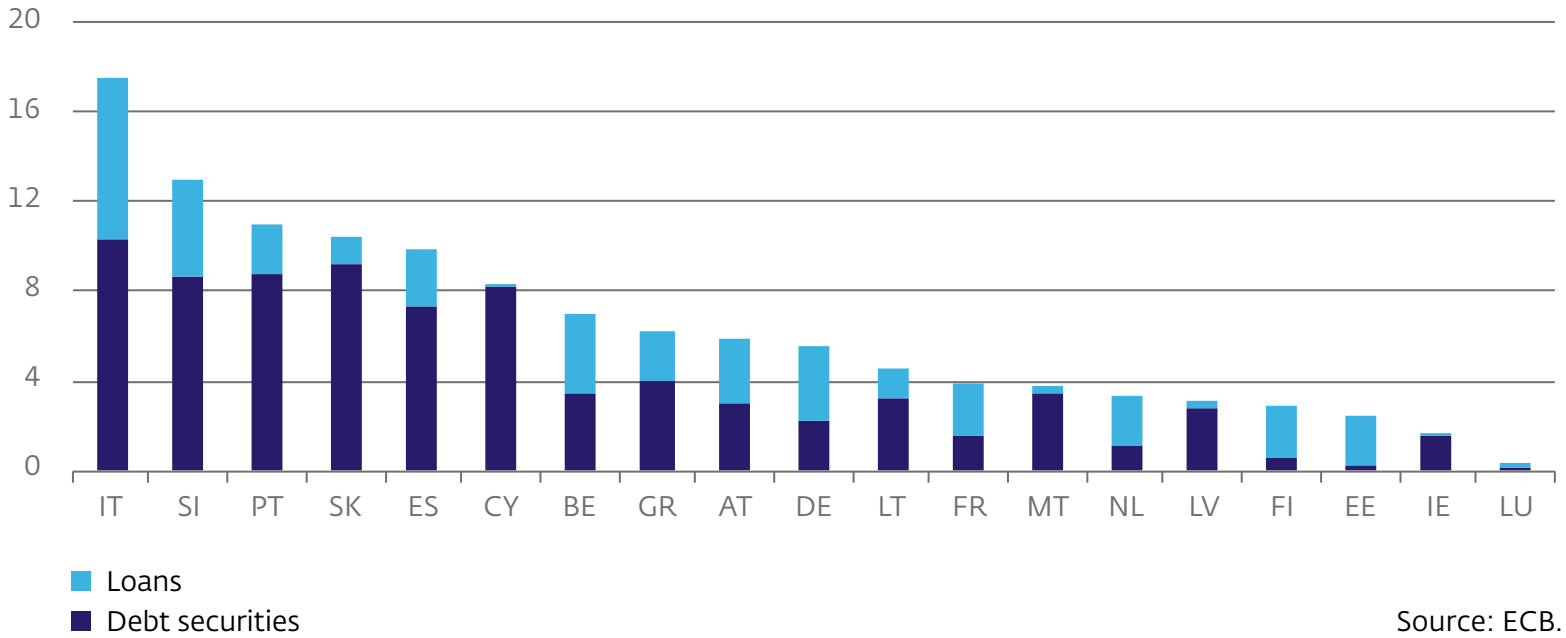
Figure 16 In some European countries, banks have major exposures to their own governments.

Percentages of total assets, 2018-Q4



Source: ECB.

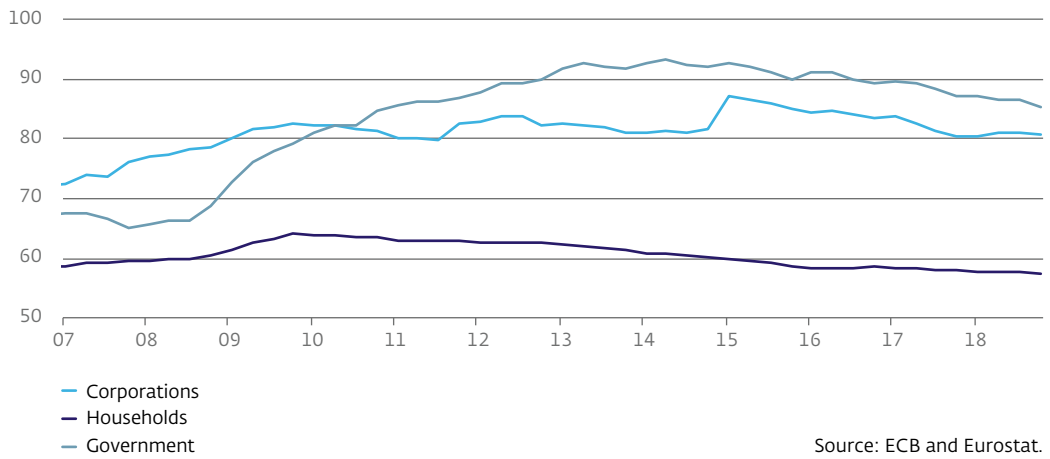
Risk outline
Risk map

High debts in Europe

- Between 2008 and 2012, public debt in the euro area went up quickly. After having peaked in mid-2014, it was brought down to a limited extent only (see Figure 17). Highly indebted governments in fact reduce their debts at a relatively slower pace than those with lower debts. It is vital that they restore their budgetary buffers.
- In a number of countries, including the Netherlands, private sector indebtedness is likewise still elevated. Highly indebted borrowers will be less vulnerable after they have reduced their debts and built up buffers. Moreover, the euro area's adaptability will further improve when debts are reduced.

Find out more? Click on the tabs.

Figure 17 Euro area public and private debt decline only gradually.
As a percentage of GDP



Source: ECB and Eurostat.

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Risk map

High debts in Europe: Background

Public debt

In the euro area, governments have only slightly reduced their debt levels since the crisis. Public debt in the euro area soared most notably between 2008 and 2012, at well over 5 percentage points annually. This was related to sorely needed financial sector intervention and the deep recession that followed in the wake of the financial and sovereign debt crises. Euro area public debt peaked in the second quarter of 2014. Since then, the debt-to-GDP ratio edged down from almost 93% to 85% at year-end 2018 (see Figure 17). Compared to the fast build-up from 2008-2012, running down public debt proceeds at a relatively low pace of less than 2 percentage points a year.

In fact, countries already grappling with relatively high public debt levels reduce their debts only to a limited extent. Seven euro area countries have government debts close to or in excess of 100% of GDP. It is in fact in these countries that debt reduction is relatively limited (see Figure 20). In France and Greece, public debt at the end of 2018 was even higher than in the second quarter of 2014. Sovereign debt reduction varies significantly among countries that enjoy a better debt position, such as the Netherlands.

On average, debt dynamics in the past years have become less vulnerable. Favourable market conditions such as the low interest rates have facilitated the funding of public debt in the euro area. Average capital market rates in the euro area have gone down from more than 4.5% at the height of the sovereign debts crisis to an average of 1% over the past three years. In addition, governments have exceedingly issued bonds with longer maturities, on the back of low interest rates. Remaining maturities of outstanding debt in the euro area have risen to an average of seven years as a result. Longer terms to maturity make governments less vulnerable to abrupt interest rate hikes in the short term.

Differences in gross public financing needs remain large in the euro area. According to European Commission estimates, governments in 2019 spend an average of 14.1% of their GDP on debt servicing and primary deficit funding. Owing in part to varying budgetary performance, gross financing needs vary widely between euro area governments. In 2019, Italy, France, Belgium and Spain have major financing requirements (see Figure 21). Italy, especially, also has to contend with relatively high interest rates.

Debt dynamics remain vulnerable in the medium term for a number of countries. In the medium term, debt dynamics will significantly depend on the level and structure of the debt, interest rates and economic growth. In addition,

Read more →

Risk outline
Risk map

High debts in Europe: Background

over the coming decades, government finances will be burdened by the cost of ageing. European Commission calculations show that euro area public debt dynamics will remain vulnerable in particular in Belgium, Spain, France, Italy and Portugal.

Private sector debt

On average, the euro area private sector faces high debt levels. In the euro area as a whole, the private non-financial sector's indebtedness stood at around 138% of GDP at the end of 2018, compared with the 147% peak of 2015. Overall, households have lower debt levels than non-financial corporations, at 58% and 81% of GDP, respectively. Differences between euro countries are large, however.

Households in Cyprus and the Netherlands have particularly high debts. In Cyprus and the Netherlands, household indebtedness is around 100% of GDP, whereas it stands at roughly 20% in Lithuania and Latvia (see Figure 22). While average euro area household indebtedness has come down since 2009 (see Figure 17), debt reductions and increases differ widely across countries. While households in countries most affected by the crisis, such as Portugal, Ireland and Spain, reduce their debts most, household debts do not recede in some other countries, owing to factors including exuberant housing market developments.

Non-financial corporations in Luxembourg, Cyprus, Ireland, the Netherlands, Belgium, Portugal and France have above-average debt levels. Corporate indebtedness in these countries is around or above 90% of GDP. In addition, their underlying dynamics vary, with some experiencing an increase in corporate debt levels, such as France, while others see their corporate sector scale down debts (see Figure 23). A further marked difference between countries is the extent to which corporations issue bonds to raise finance. French firms, in particular, issue a great deal of bonds, with almost half of all euro area bond issuance being of French origin. Corporate bond issues in GDP terms are likewise high in the Netherlands (see In Focus: Corporate debt in the Netherlands).

Risks

Debtors are vulnerable to interest rate increases. If risk premiums should rise abruptly, heavily indebted borrowers will find it difficult to meet their interest and debt service commitments, especially where debts carry variable interest rates or have short maturities. This could subsequently feed through to the financial sector as credit or investment portfolio losses.

Read more →

Risk outline
Risk map

High debts in Europe: Background

Heavily indebted economies are more procyclical. Borrowers with high debts have less room for manoeuvre to absorb negative income shocks. As a result, such households and corporations are sooner forced to adjust their consumption and investment patterns. Similarly, heavily indebted governments have no room to pursue countercyclical budgetary policies.

Read more →

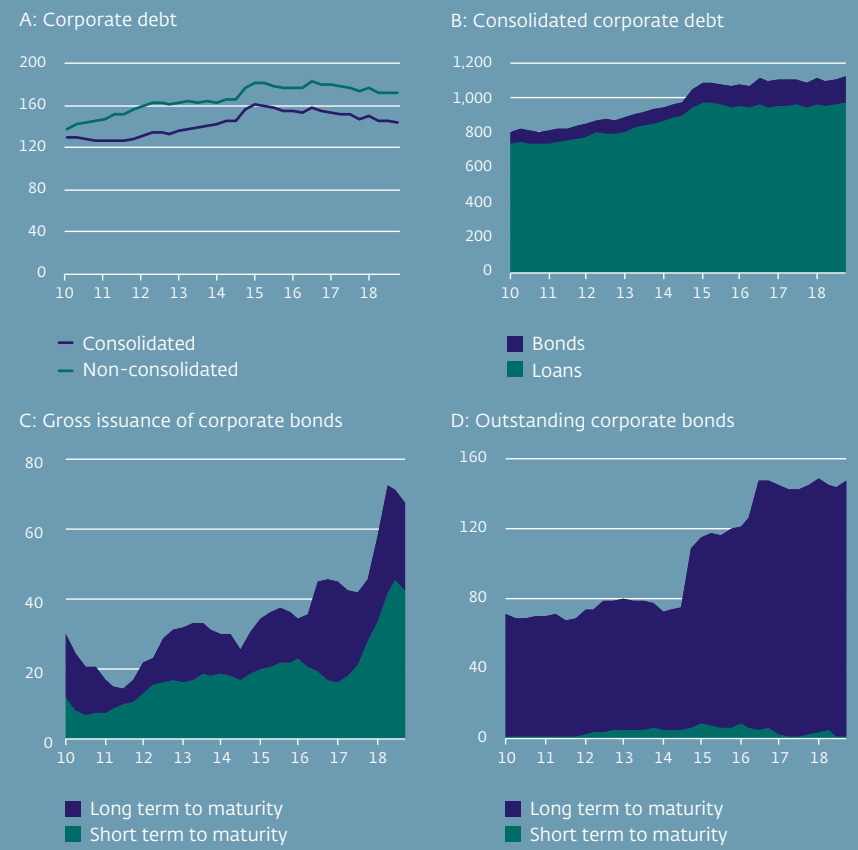
Risk outline
Risk map

High debts in Europe: Background

In focus: Corporate debt in the Netherlands

Dutch non-financial corporations have substantial debts. In the Netherlands, unconsolidated corporate debts, which are loans and bonds, stood at 172% of GDP at year-end, against a euro area average of 110%. Adjusted for intragroup loans, Dutch business debts, at 145% of GDP, still exceed the euro area average of 81% of GDP. Of the Dutch consolidated debts, roughly half are owed abroad, testifying to the international nature of the Dutch corporate sector. Of all corporate debts owed domestically, two-thirds are held by financial institutions. While small and medium-sized businesses in the Netherlands still primarily depend on bank funding, their larger counterparts, which often operate internationally, also have access to other sources of finance, e.g. private loans and debt securities (corporate bonds). Corporate bond issuance varies markedly over time, depending on factors such as market conditions and investor willingness to invest in corporate debt. Gross debt issuance by Dutch corporates has been growing substantially since 2011 but is still a long way from pre-crisis levels. In contrast with the period before the crisis, however, corporates issue more long-term debt securities. By end-2018, the volume of Dutch-issued corporate bonds had more than doubled from 2011, reaching almost EUR 150 billion, or almost 20% of GDP.

Figure 18 Characteristics of Dutch corporate debt.
As a percentage of GDP (A); in EUR billion (B, C, D)



Risk outline
Risk map

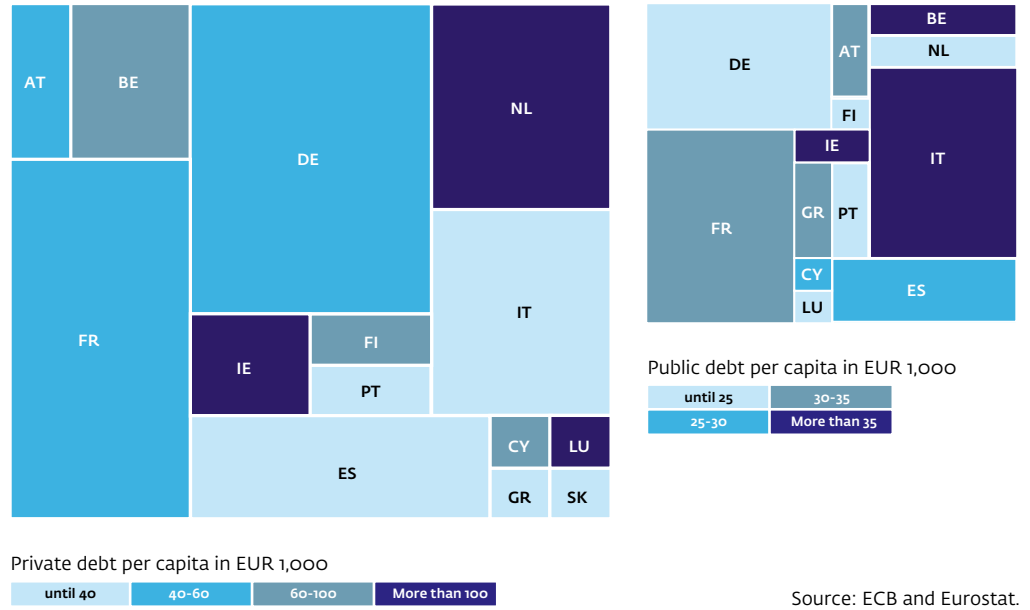
High debts in Europe: Policy

Highly indebted governments must reduce debts and restore budgetary buffers. After all, debt dynamics could worsen rapidly if growth were to stall or risk premiums were to surge abruptly. This could trigger market pressures, most notably in vulnerable countries, especially when investors start questioning the creditworthiness of the government. The developments seen in Italy in the autumn of 2018 illustrate this. After the European Commission had rejected the Italian budget, risk premiums on Italian sovereign debt shot up.

Highly indebted corporates will be well-advised to reduce their debts, which will make the euro area more robust. Lower debt levels make borrowers more resilient to interest rate increases and negative income shocks. Tax measures reducing the appeal of debt financing and encouraging equity financing could contribute to lowering corporate indebtedness.

Figure 19 Public and private debt within the euro area are unevenly spread.

Distribution of debt in the euro area; 2018-Q3



Source: ECB and Eurostat.

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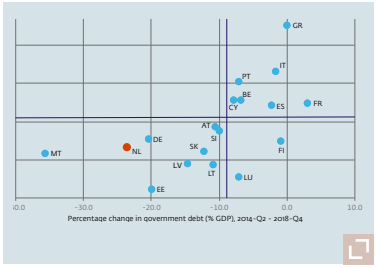
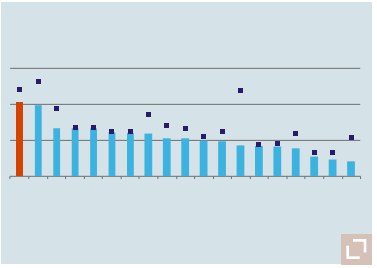
High debts in Europe: Figures

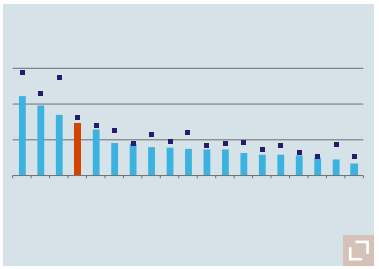


Public debt reduction is relatively slowest in debt-laden countries.
See Figure 20 →



Level and development of household debt in the euro area varies substantially.
See Figure 22 →

Italy in particular has a high gross funding need in 2019.
See Figure 21 →



Level and development of corporate debt in the euro area varies substantially.
See Figure 23 →

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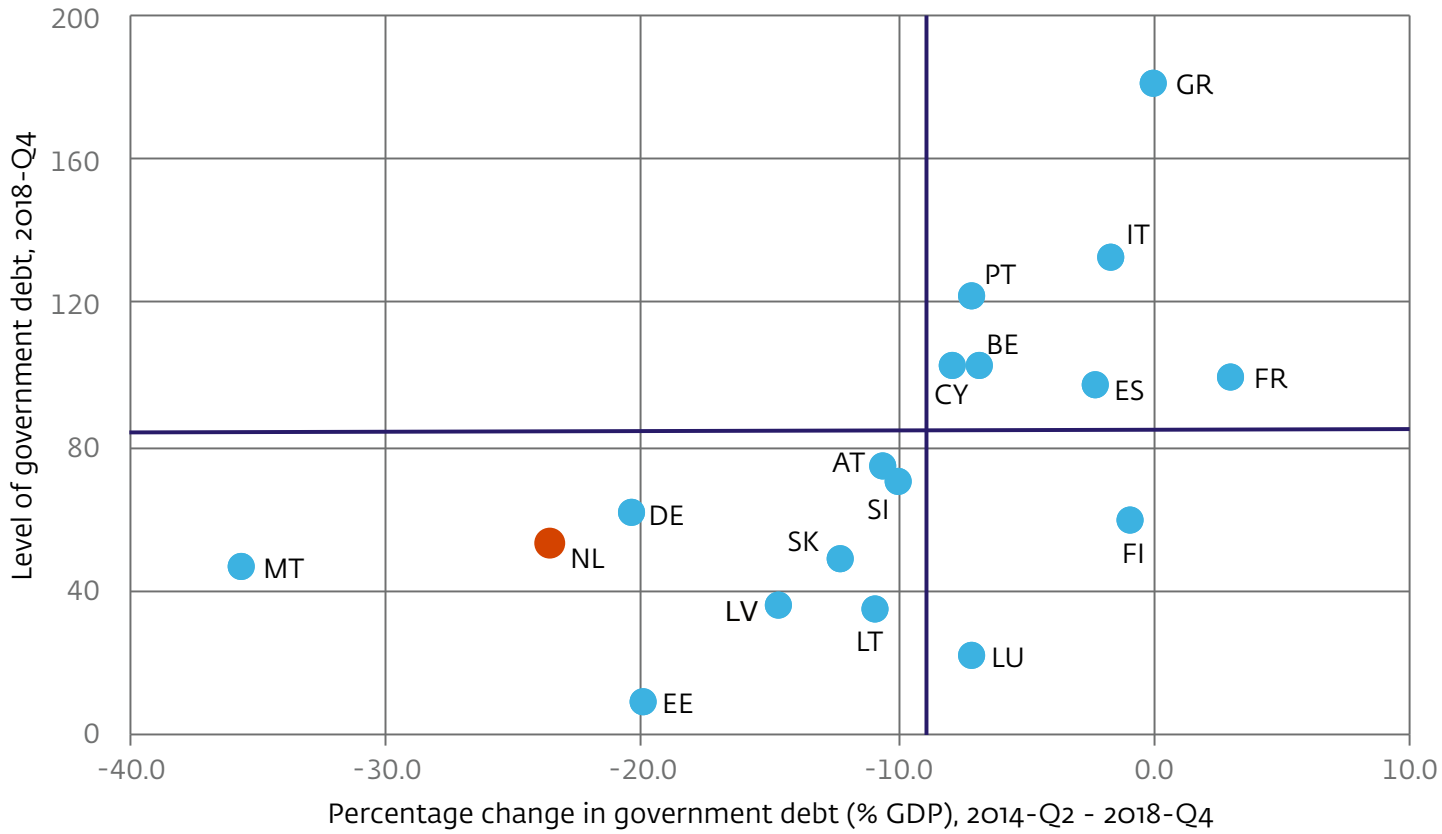
Figure 20 Public debt reduction is relatively slowest in debt-laden countries.

Percentage points; as a percentage of GDP



Source: ECB.

Note: The blue line represents the euro area average.

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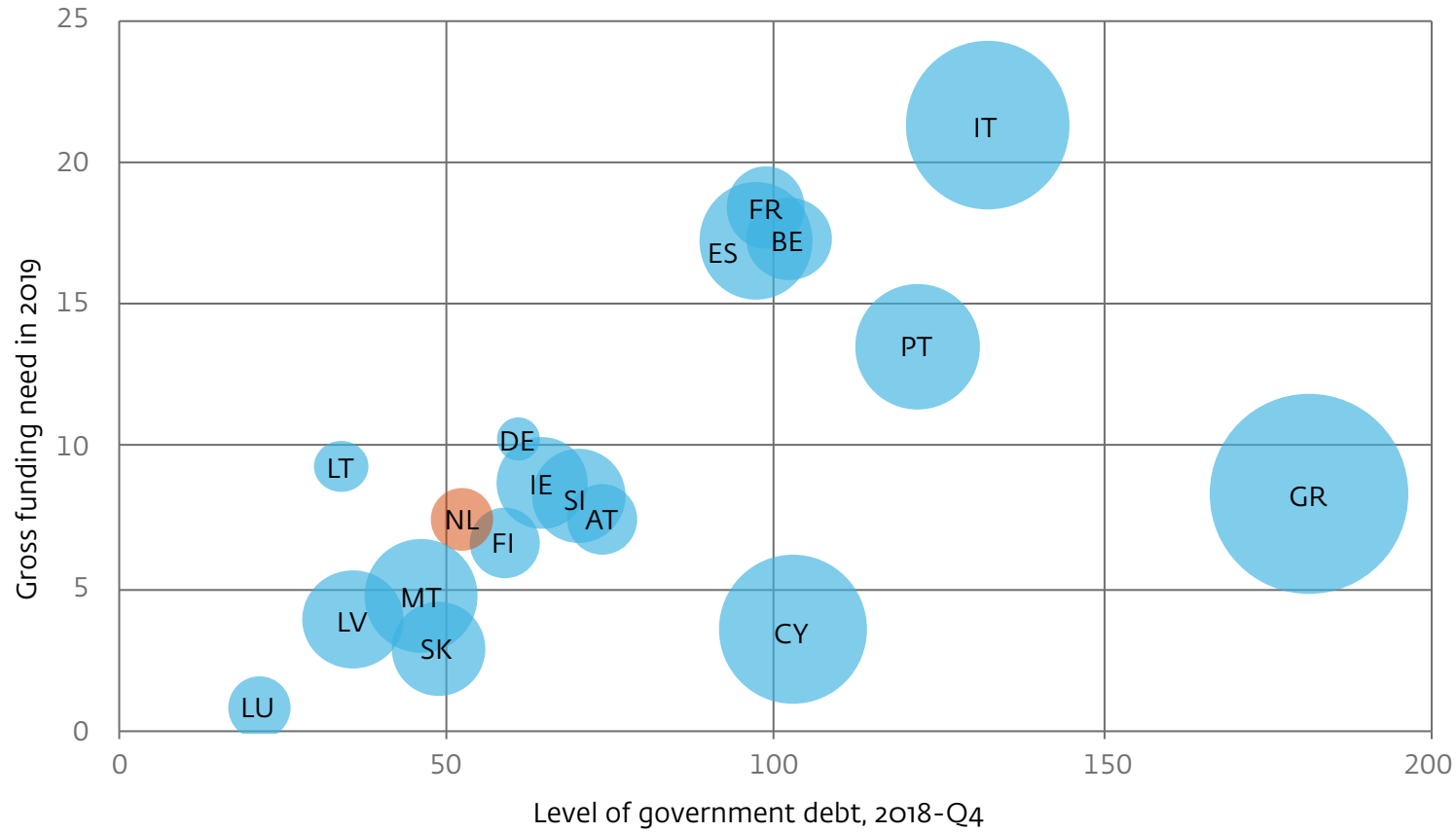
Risk map

Figure 21 Italy in particular has a high gross funding need in 2019.

As a percentage of GDP



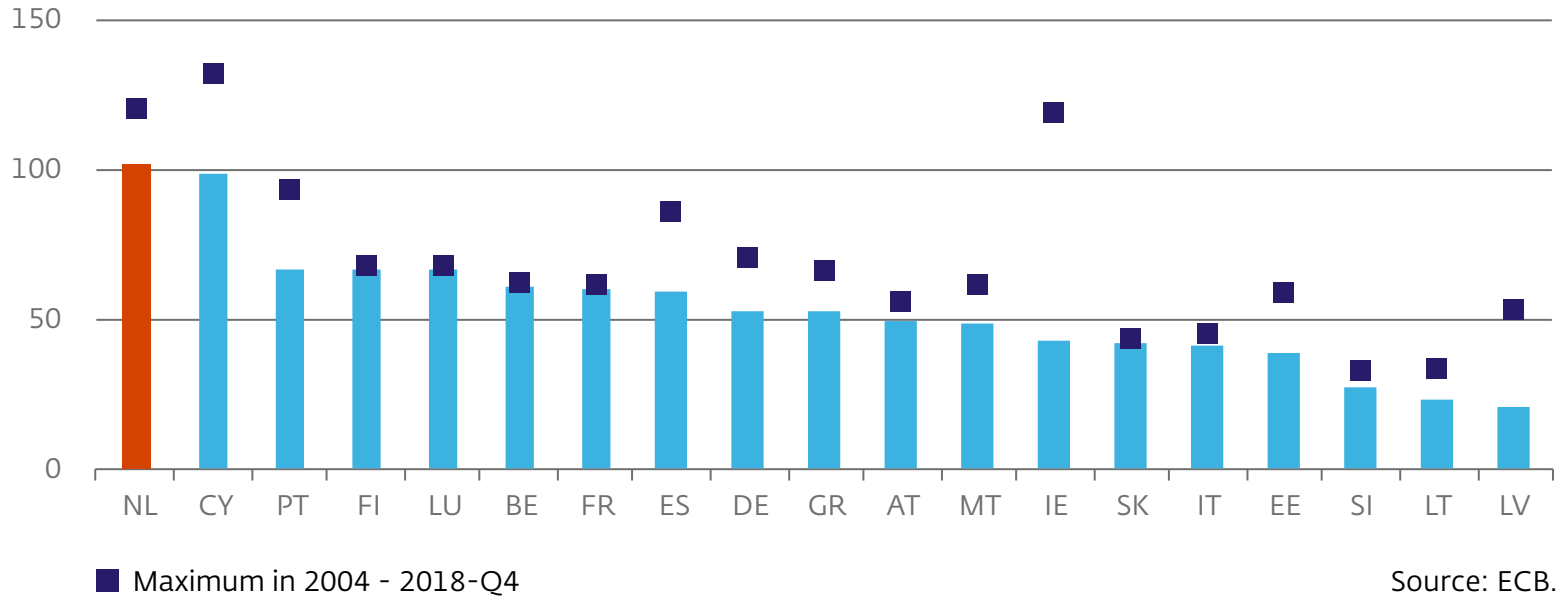
Source: Eurostat.

Note: The size of the spheres is determined by the interest on ten-year government paper.

Risk outline
Risk map

Figure 22 Level and development of household debt in the euro area varies substantially.

As a percentage of GDP, 2018-Q4

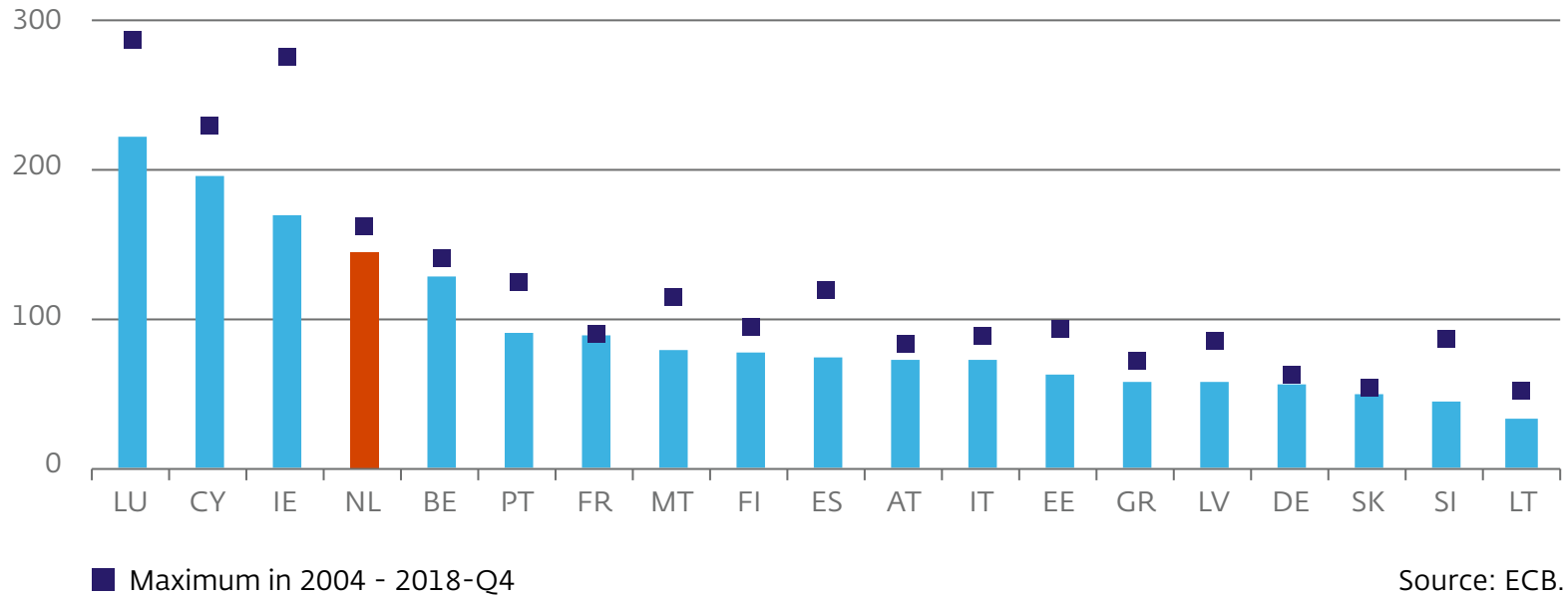


Source: ECB.

Risk outline
Risk map

Figure 23 Level and development of corporate debt in the euro area varies substantially.

As a percentage of GDP, 2018-Q4



Source: ECB.

Risk outline
Risk map

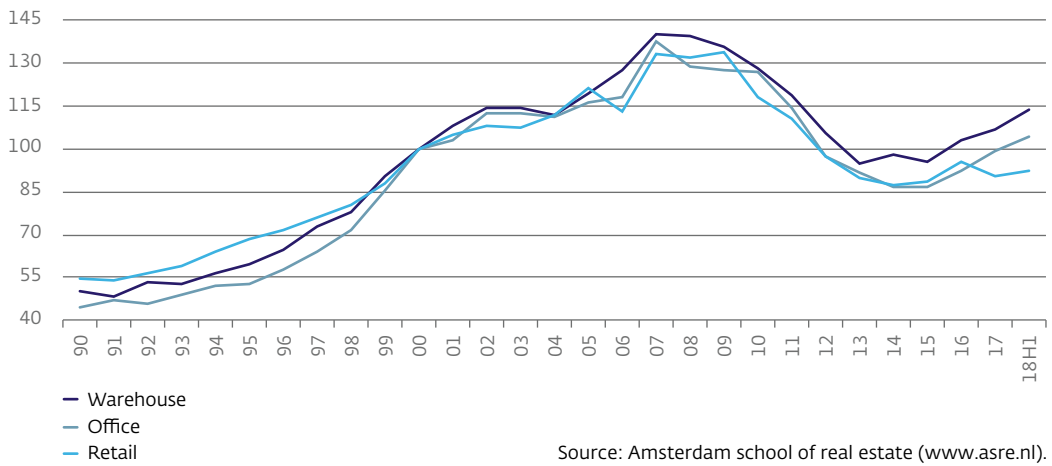
Turnaround in the Dutch commercial real estate market

- Price increases in the Dutch commercial real estate market are subject to vast regional differences. Particularly in prime locations, the sharp price increases seen in recent years now weigh down on investment yields.
- New risks may emerge during the current economic boom, especially if financing conditions on new loans are eased.
- Structural vulnerabilities have also emerged, such as declining office space per employee and increasing online sales.
- Financial institutions must closely monitor the risks inherent in their real estate exposures and exercise restraint in granting high-risk loans.
- Creating a statutory framework for real estate appraisals and improving data availability and quality could help improve the real estate market's functioning.

Find out more? Click on the tabs.

Figure 24 Prices of Dutch commercial real estate have gone up over the past years.

Index, 2000=100



Source: Amsterdam school of real estate (www.asre.nl).

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Turnaround in the Dutch commercial real estate market: Background

Price increases in the Dutch commercial real estate market are subject to vast regional differences. After prices had plummeted by over 30% during the financial crisis, they have rebounded in the past few years. Most notably, prices of warehouses and offices are surging. However, there are large regional differences in the commercial real estate market. Retail property investors focus primarily on major cities and other prime locations. Vacancy rates are declining there, but growing in smaller cities. The office rental market also features large differences. Half of all new office floor surface rented out in 2018 was located in the five major cities, i.e. Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven.

Yields are under pressure. Rental income is still lagging behind price growth. In Amsterdam's city centre, office and retail yields have dropped to historical lows of 3.25% and 2.85% respectively as a consequence.

Structural vulnerabilities exacerbate the cyclical risks. Trends such as declining office space per employee and increasing online sales permanently reduce demand for larger retail and office properties, most notably in peripheral areas. Owners of properties in less attractive locations could explore their options for conversion into residential units, possibly in consultation with financiers.

The commercial real estate market is sensitive to the economic cycle and may therefore harbour systemic risks. Demand for real estate is closely related to economic conditions, which means that it can change abruptly as the economy turns around. Amid low price elasticity of supply, changes in real estate demand are immediately reflected in pricing. Furthermore, commercial real estate represents a significant asset class among domestic and international investors, making it sensitive to financial market developments. Commercial real estate typically plays a major role in financial crises in a confluence of events: a cyclical downturn, a drop in real estate prices and increasing funding problems.

A sudden downturn in the commercial real estate market is bound to result in losses. A survey held among Dutch real estate investors shows that the majority of the respondents believe the best times for commercial real estate are already behind us. Over half reckon that the real estate cycle is currently peaking, while a substantial portion (19%) believe that it is in the early downward phase (see Figure 25). A reversal in market sentiment, rising risk-free interest rates or widening risk premiums due to economic or political uncertainty could lead to a downturn in the commercial real estate market. Foreign investors in particular – which manage more than half of all investments in Dutch real estate – could move fast to repatriate capital, thereby exacerbating price drops and potentially intensifying losses.

Read more →

Risk outline
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Turnaround in the Dutch commercial real estate market: Background

The large Dutch banks have scaled back their exposures to commercial real estate and have improved their risk management. Between them, the large Dutch banks have well over EUR 76 billion in commercial real estate exposures in their balance sheets. Representing around 4% of their total assets, this is below pre-crisis levels. Indirect exposure to commercial real estate serving as loan collateral totals EUR 172 billion. Since the asset quality reviews performed by DNB and the ECB between 2012 and 2014 the risk management of banks has improved. That said, a shock in the real estate market could still result in losses on commercial real estate loans. As interest rates go up while real estate prices go down, the probability of default increases, as will losses in the event of default. In a scenario featuring a 3 percentage point interest rate hike, a 25% real estate price decline and a 10% increase in the vacancy rate, Dutch banks will suffer losses amounting to EUR 1 to 1.5 billion on top of their current loan loss provisions. However, banks have sufficient buffers to absorb such losses.

New risks may emerge during the current economic boom. Financial market operators have indicated that they apply less stringent financing conditions and lower redemption requirements. In addition, average loan-to-value (LTV) percentages on newly issued real estate loans have risen relative to 2016. On a positive note, average LTVs would appear to have stabilised somewhat over the past year.

Greening is a key trend in commercial real estate. Investors are well-advised to keep track of energy labels and be alert to potential costs. By 2023, every office building larger than 100m² must have at least a level C energy label. Properties that do not meet this requirement by the deadline may no longer be used for office purposes. This will slow down demand for non-sustainable real estate. Dutch banks have become more cautious in financing non-sustainable real estate, and making it more sustainable will require investment efforts on the part of retail owners. To date, Dutch banks do not yet have the energy label data for all their real estate portfolio exposures, but the situation is improving. At year-end 2018, energy label data for 62% of their exposure were available, up from 17% two years earlier. Of all properties whose energy labels were known to banks, over 40% had energy label A, B or C (see Figure 26).

Risk outline
Risk map

Turnaround in the Dutch commercial real estate market: Policy

Financial institutions must closely monitor the risks inherent in their real estate exposures and exercise restraint in granting highly leveraged loans with low financing conditions. Loans issued towards the end of a boom period tend to carry higher risks. It is therefore all the more important that these risks are clearly identified.

Availability of more and better data on prices, investments, financing and energy labels is central to a smoothly functioning real estate market. In 2016, the European Systemic Risk Board (ESRB) issued recommendations aimed at remedying gaps in the supply of data on the residential and commercial real estate markets in the EU. We have collected granular data on banks' real estate portfolios for several years. Also, together with Statistics Netherlands, we launched an initiative to establish a national price index for commercial real estate.

DNB and the AFM have asked the Dutch Ministry of Finance to develop statutory standards for real estate appraisers, in cooperation with the Ministry of the Interior and Kingdom Relations. Reliable appraisals are essential when assessing risks and making proper investment and lending decisions. The lack of quality standards that ensure high-quality and consistent appraisals may induce excessively generous loan terms and overvaluation of properties.

Find out more?

- Chapter 2 of the Autumn 2018 Financial Stability Report discusses the risks in the Dutch commercial real estate market in more detail.

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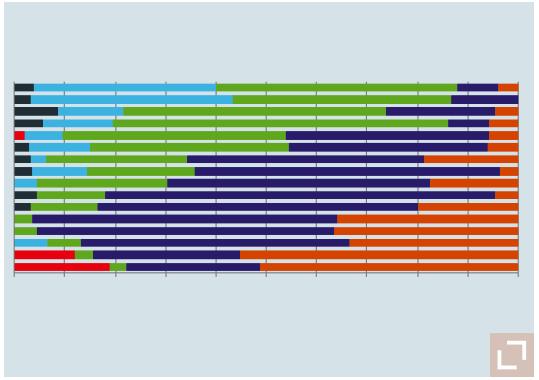
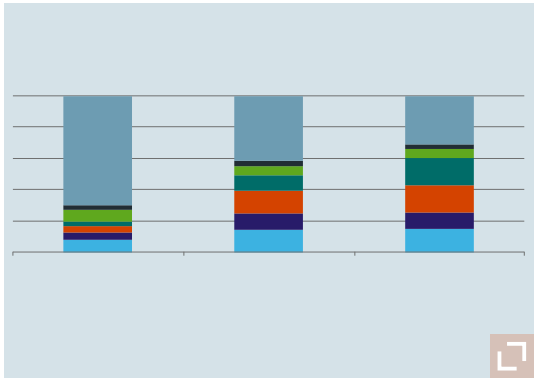
Turnaround in the Dutch commercial real estate market: Figures



Market respondents estimate that real estate is at or beyond cycle peak.

See Figure 25 →



In 2018, 43% of the real estate exposures of Dutch major banks of which the energy label is known, have energy label A, B or C.

See Figure 26 →

Risk outline
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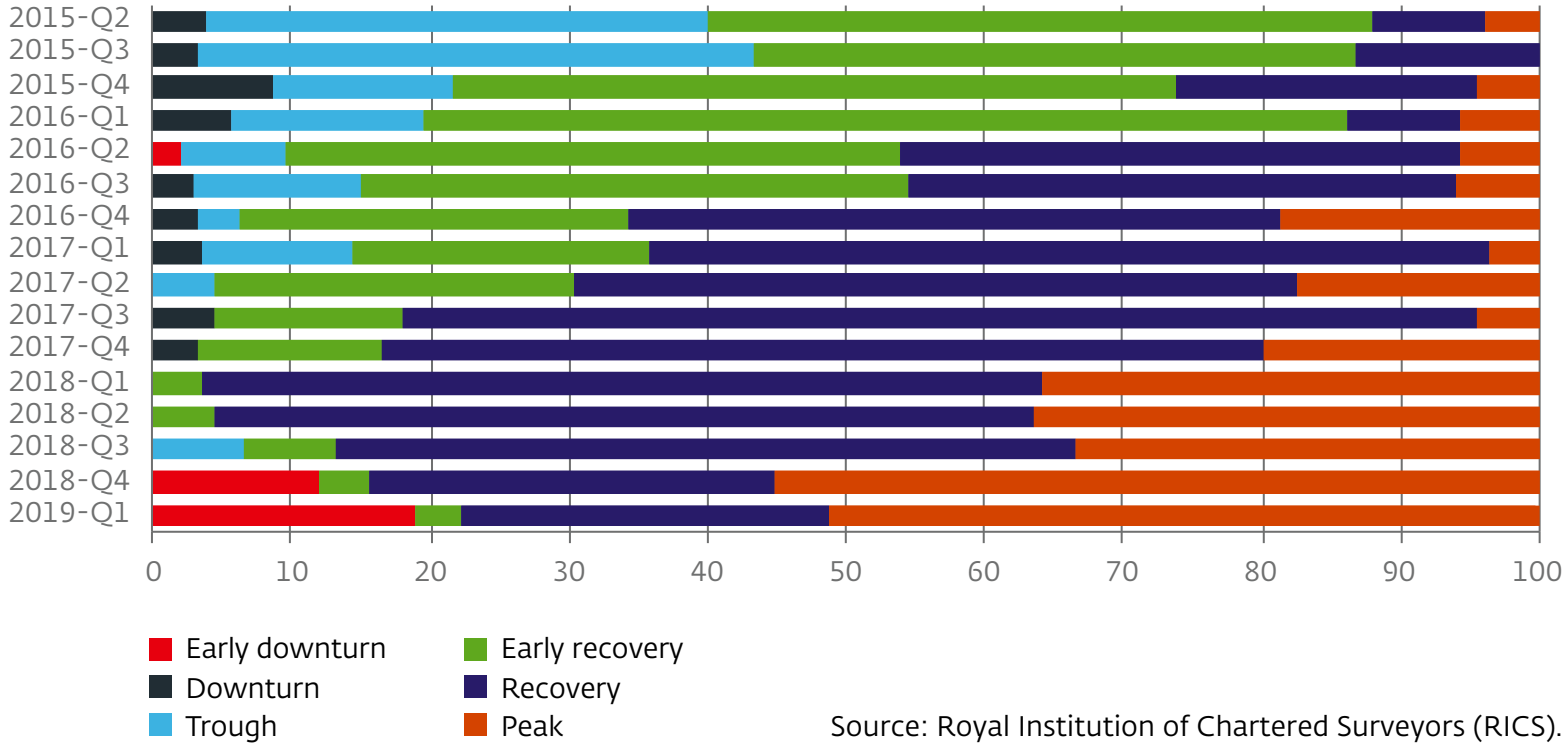
Figure 25 Market respondents estimate that real estate is at or beyond cycle peak.

Percentage of respondents



Source: Royal Institution of Chartered Surveyors (RICS).

Risk outline
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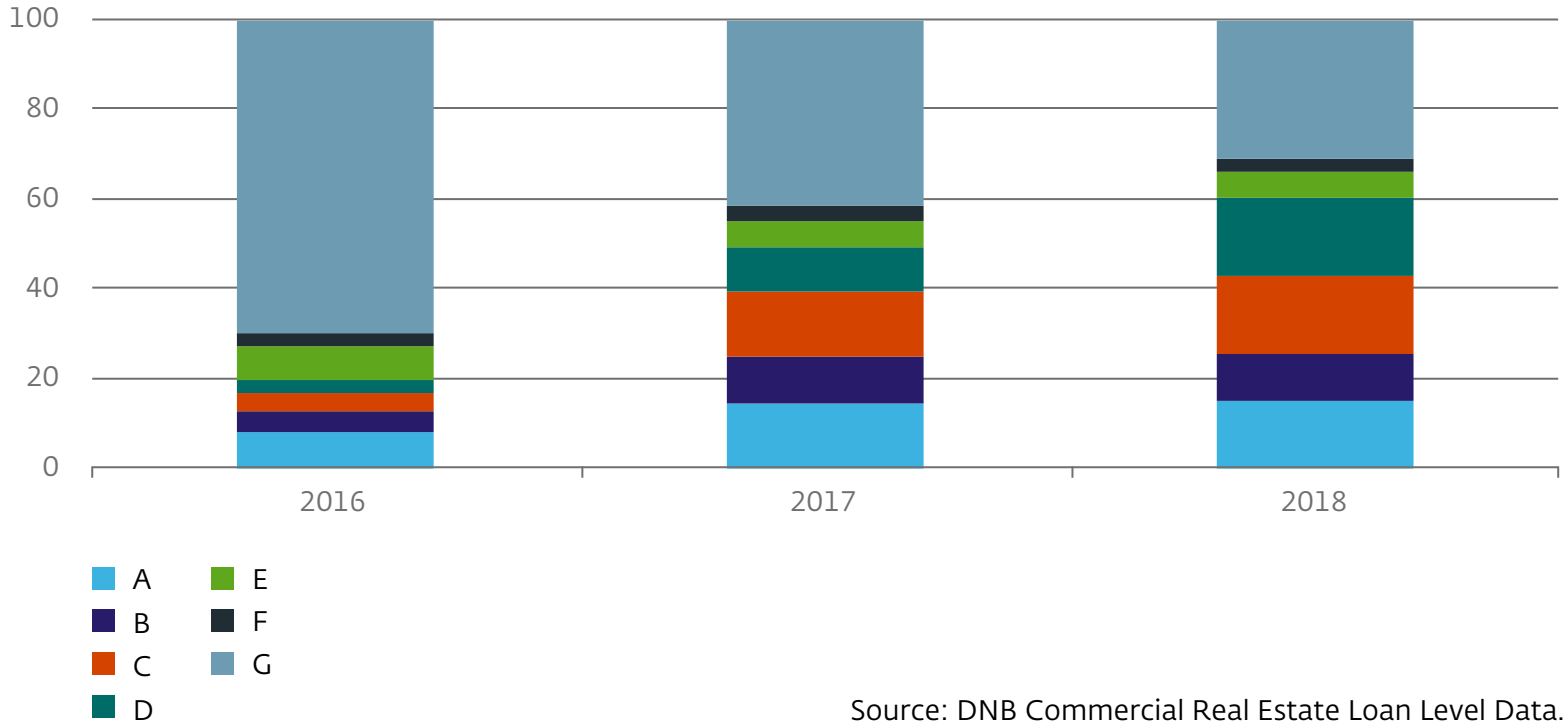
Figure 26 In 2018, 43% of the real estate exposures of Dutch major banks of which the energy label is known, have energy label A, B or C.

Percentages



Source: DNB Commercial Real Estate Loan Level Data.

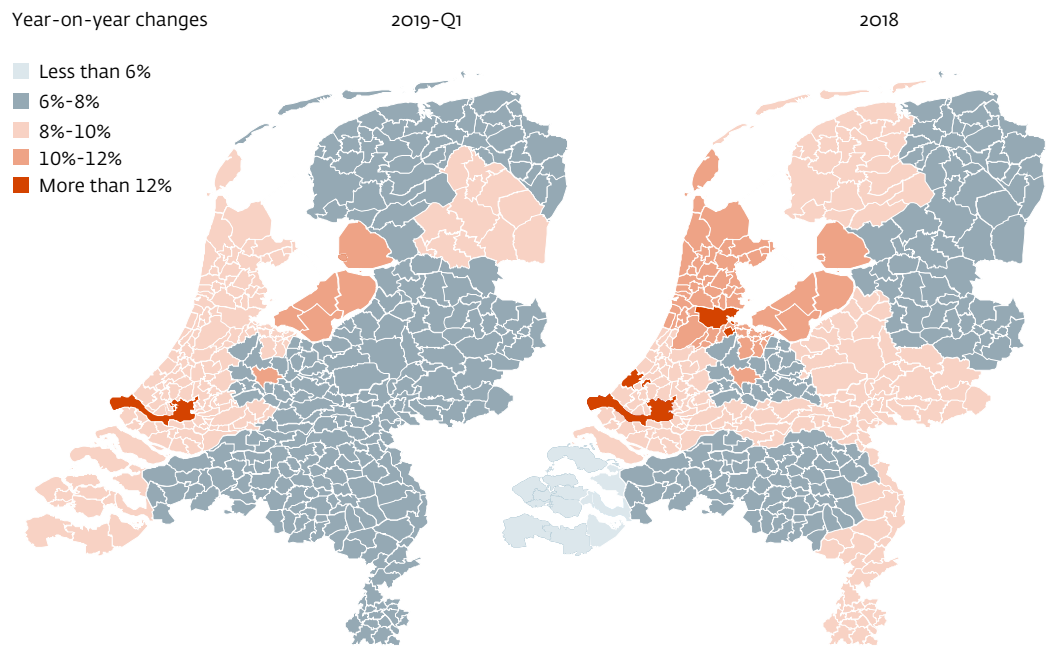
Risk outline
Risk map

Imbalances in the Dutch housing market

- House prices in the Netherlands keep rising, if at a lower rate than before (see Figure 27). Affordability is deteriorating further, and tightness continues to prevail in the Dutch housing market.
- Developments in the housing market amplify the cyclical fluctuations in the Dutch economy. Due in part to the long household balance sheets, a potential future house price correction could have significant ramifications for the Dutch economy and hit banks indirectly as well.
- Bringing the LTV limit further down and addressing the procyclicality of the LTI system would help contain cyclical outlays and galvanise households' shock resilience.
- The countercyclical capital buffer is maintained at 0%.

Find out more? Click on the tabs.

Figure 27 House prices are still rising, but at a lower rate than in 2018.



Source: Statistics Netherlands and DNB calculations.

Risk outline
Risk map

Imbalances in the Dutch housing market: Background

House prices continue to move upward, causing affordability to deteriorate further. Prices of existing homes increased by 9% in 2018, in a price development not witnessed for 17 years. The first quarter of 2019 saw a continued rise, if at a slightly more moderate pace: 7.9% on the year before. In the Netherlands' major cities, real prices are now 17% above their previous peak, with financing charges for full annuity-based loans exceeding pre-crisis levels (see Figure 28). In the rest of the country, real prices are still 11% below the previous peak, but prices and financing charges are also going up rapidly. The sharp price increases have lifted many mortgage loans above water. In 2013, over 35% of Dutch home owners still owed mortgage debts in excess of the value of their homes. This was down to 5% by the fourth quarter of 2018. Expectations are that prices will rise by approximately 6% in 2019. While this is below the rates seen in previous years, it likely exceeds income growth. New housing supply will only increase gradually in the short term, due to such factors as capacity constraints in the construction sector, zoning restrictions and lengthy municipal and provincial procedures.

Tightness continues to prevail in the Dutch housing market. The number of houses sold fell by 9% in the first quarter of 2019 compared with a year earlier, and houses continue to change hands very quickly. On average, a house sells after 45 days, 9 less than a year earlier. The available supply of housing in the first quarter of 2019 was also lower compared to a year ago.

Mortgage lending growth has remained subdued. Mortgage lending growth in 2018 came to 1.4% and was almost entirely accounted for by non-banks. Gross mortgage production by banks is still substantial; in 2018 it amounted to 8.4% of the outstanding debt. Voluntary redemptions continued to put a brake on the increase in net mortgage indebtedness. Moreover, first-time buyers have been obliged since 2013 to make annual redemption payments to qualify for mortgage interest tax relief, which has triggered growth in mortgage redemptions since.

Risky borrowing is seen especially among first-time buyers. The proportion of first-time buyers borrowing the full or almost full purchase price of their home showed a steadily decline, but this appears to have come to a halt. Some two-thirds of first-time buyers take out mortgage loans with loan-to-value ratios of over 90%. The maximum loan-to-income (LTI) limit in the Netherlands is determined by the financing costs criteria of the National Institute for Family Finance Information (NIBUD). Half of all first-time buyers take out loans at very high LTIs, at over 90% of the criteria (see Figure 29).

Developments in the housing market amplify the cyclical fluctuations in the Dutch economy. The sharp price increases in the housing market

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have given economic growth a generous boost. Over a fourth of economic growth witnessed since the second quarter of 2013 can be attributed to the upturn in the housing market. Housing investment boomed after 2013. In addition, there is a close correlation between house price rises and private consumption in the Netherlands. A rise (or fall) of real house prices of 1% leads to a rise (or fall) in real private consumption of 0.18% in the short term. During the crisis the correction seen in the housing market deepened the economic downturn. The Dutch economy's inherent volatility results in uncertainties and adjustment costs, which does not benefit financial stability.

The volatility of the Dutch housing market and economy is closely related to the households' long balance sheets. The Dutch households' financial assets consist primarily of housing wealth and accumulated pension entitlements, meaning they are largely illiquid.

"The volatility of the Dutch housing market is not beneficial to financial stability."

The unavailability of these assets for absorbing negative income shocks forces households to adjust consumption patterns sooner. In addition, mortgage interest tax relief and relatively generous loan-to-income (LTI) and loan-to-value (LTV) limits have pushed up Dutch households' mortgage indebtedness to relatively high levels by international standards. Various empirical studies, including a recent IMF panel study, show that high mortgage debts make house prices more volatile (see also Figure 30). Greater borrowing capacities drive up demand for houses, thereby fuelling price rises if housing supply does not increase correspondingly. In the Netherlands, housing supply is relatively insensitive to house price developments, among other things due to strict zoning policies and capacity constraints among construction firms and municipal services. When prices drop, high mortgage loans will sooner end up under water. Households that find themselves in negative equity are less likely to put their home up for sale, or will only do so for a relatively high price. This reduces the number of transactions, exacerbating price declines.

Volatility in the Dutch housing market is also driven by systematic overvaluation in residential property appraisals caused by flaws in the system of residential property appraisal. A study we conducted shows that in almost 60% of the cases, appraisal values exceeded purchase prices, while one-third of all appraisal values was perfectly identical to purchase prices. It would appear that appraisal values are based on purchase prices rather than on independent

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appraisal. This drives overheating in the housing market and undermines the effectiveness of the LTV limit, which expresses the maximum loan amount as a percentage of a property's appraisal value. Systematic overvaluation enables households to borrow excessively in spite of the LTV limit, thereby driving up prices in the housing market. Moreover, it causes financial institutions to underestimate credit risks inherent in their mortgage loan portfolios.

Due in part to the long household balance sheets, a potential future house price correction could have significant ramifications for the Dutch economy and hit banks indirectly as well. This is what happened in the post-2008 price correction. While immediate losses on mortgage loans were limited, the sluggish housing market contributed to the relatively poor performance of the Dutch economy, and Dutch banks suffered dire consequences. In the past two years, banks have eased their credit standards for mortgage loans. In addition, they have again applied lower risk weights to mortgage loans, reducing the amount of capital they need to hold for their mortgage loan portfolios (see Figure 31). Their reduced risk perception contrasts with the heightened concerns over housing market overheating. The sustained strong price growth and high valuations have increased the risk of a housing market correction.

Find out more?

- We published a study of the Dutch housing market in the major Dutch cities in 2017.
- We recently examined the quality of residential property appraisals.
- We will shortly publish a book on housing markets in major cities around the world, following up on an international seminar we hosted in May 2018.

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Imbalances in the Dutch housing market: Policy

In recent years, the Dutch government has taken various measures that contribute to lowering mortgage indebtedness, thereby contributing to more stable house price developments. It lowered the LTV limit to 100% of a home's appraisal value, while newly issued mortgage loans no longer benefit from mortgage interest relief unless the loan is repaid within 30 years, at least on an annuity basis, and is used to purchase, improve or maintain the home. The tax rate against which mortgage interest payments are tax-deductible is being gradually reduced from 52% to 37%. The pace of reduction will be accelerated from 2020 onwards, from 0.5 to 3 percentage points annually. These measures reduce tax incentives for debt financing, thereby contributing to more stable house price developments.

Central to the issue, however, is that more measures are taken to reduce procyclicality at the demand side of the housing market.

"It is important to take measures that reduce the procyclicality of the housing market."

Borrowing criteria in the Netherlands (LTV and LTI limits) are still very generous from an international perspective, and the way in which the LTI limit is calculated amplifies cyclical price fluctuations. For example, the tax cuts scheduled for 2020 will increase the borrowing capacity of some households by over 10%, thereby contributing to further price rises in an already tight housing market. This is why, together with the AFM, we are arguing in favour of reviewing the system used to determine the LTI limit. Further cuts in the mortgage interest relief facility would reduce the housing market's procyclicality. In addition, it would allow the private rental segment in the Netherlands to develop further. This segment is very small at present, due in part to mortgage interest tax relief for home owners and subsidies in social rented housing. Likewise, measures are needed aiming to improve the independence of appraisals and prevent systematic overvaluation. In tandem with the AFM, we argued, in our 2018 legislative letter, in favour of statutory standards designed to improve the quality of residential property appraisals, and we welcome the ongoing efforts by the Ministry of the Interior and Kingdom Relations aimed at achieving such improvements.

The housing market's procyclicality could be reduced by stepping up the production of housing and aligning it more closely to demand. Whenever demand for housing increases, supply should respond more swiftly. Supply is currently inadequate, especially in the mid-price segment of the rental market,

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Imbalances in the Dutch housing market: Policy

meaning that supply must be expanded. The Dutch government and local authorities are pursuing policies that seek to do just that. We welcome the fact that the Ministry of the Interior and Kingdom Relations has assumed a stronger coordination role, having now set a target figure for residential construction. After all, municipalities and housing corporations are not always being given the right incentives to provide the right type of housing at the right places.

The countercyclical capital buffer (CCyB) is maintained at 0%. The countercyclical capital buffer is a macroprudential instrument to protect banks against systemic risks arising from excessive credit growth. It is a variable add-on to the prevailing minimum capital requirements of up to 2.5% of risk-weighted assets – or higher, if circumstances so require. 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 is still markedly negative. We also consider other indicators, such as credit growth in specific subsectors. Net mortgage lending to households (newly issued mortgage loans minus redemptions) remains subdued at 1.4%. Net bank lending to businesses is currently receding (-0.5%).

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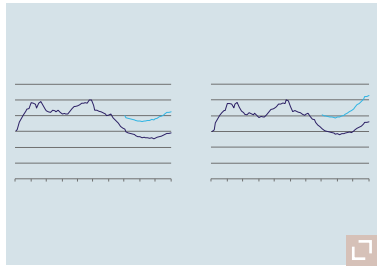
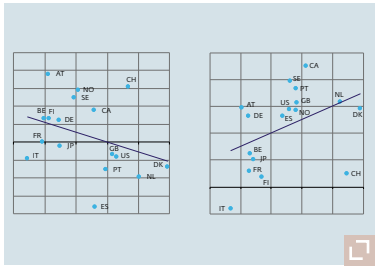
Imbalances in the Dutch housing market: Figures



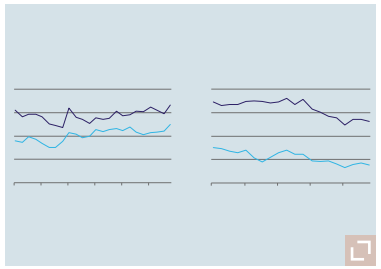
The affordability of residential property is further deteriorating: in the four major cities, financing costs for full annuity-based loans are higher than just before the crisis.

See Figure 28 →



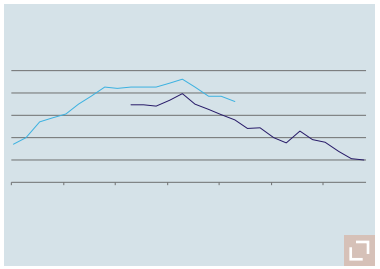
Countries with relatively high household debts saw a relatively strong drop in house prices between 2008-2013, while between 2014-2018 house prices rose sharply in those countries.

See Figure 30 →



Half of all first-time buyers currently opt for a very high LTI; the decline in the share of new loans with a very high LTV seems to have stopped.

See Figure 29 →



The risk weights that Dutch banks apply to mortgage loans have fallen in recent years.

See Figure 31 →

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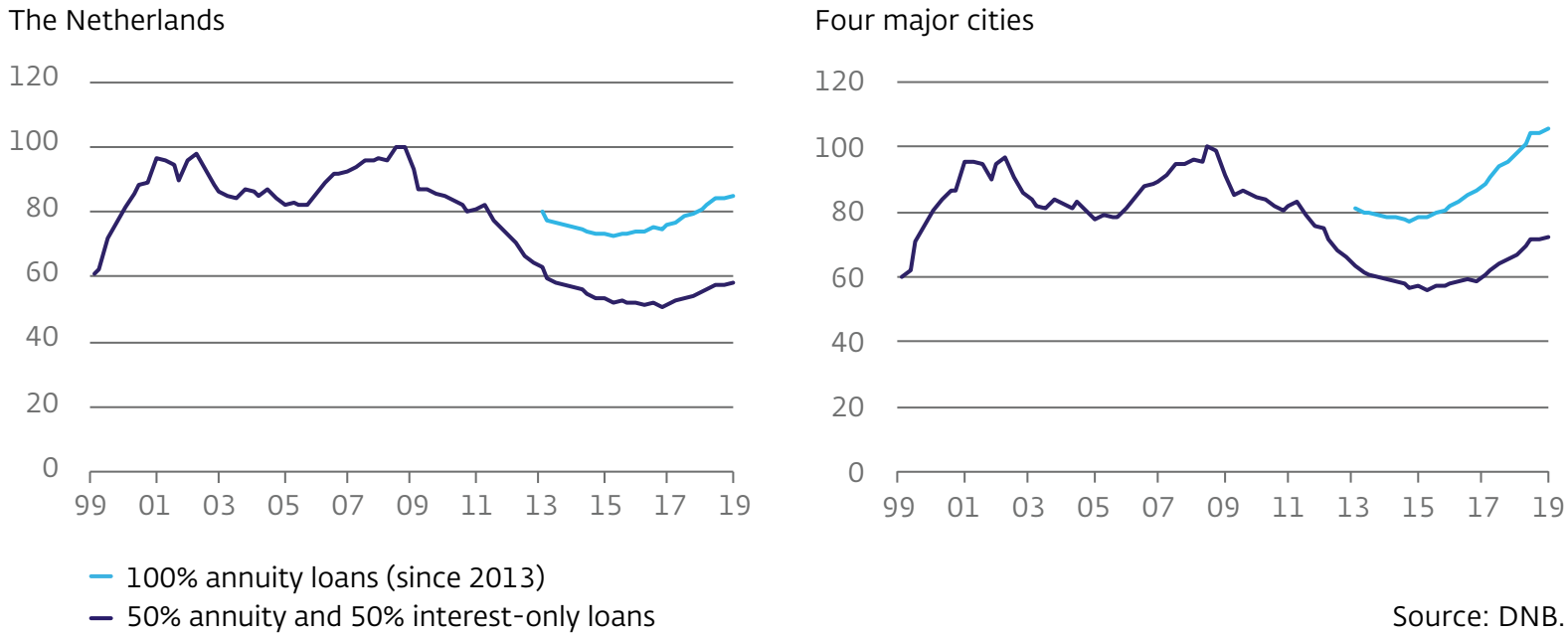
Risk map

Figure 28 The affordability of residential property is further deteriorating: in the four major cities, financing costs for full annuity-based loans are higher than just before the crisis.

Index, 2008-Q3=100



Source: DNB.

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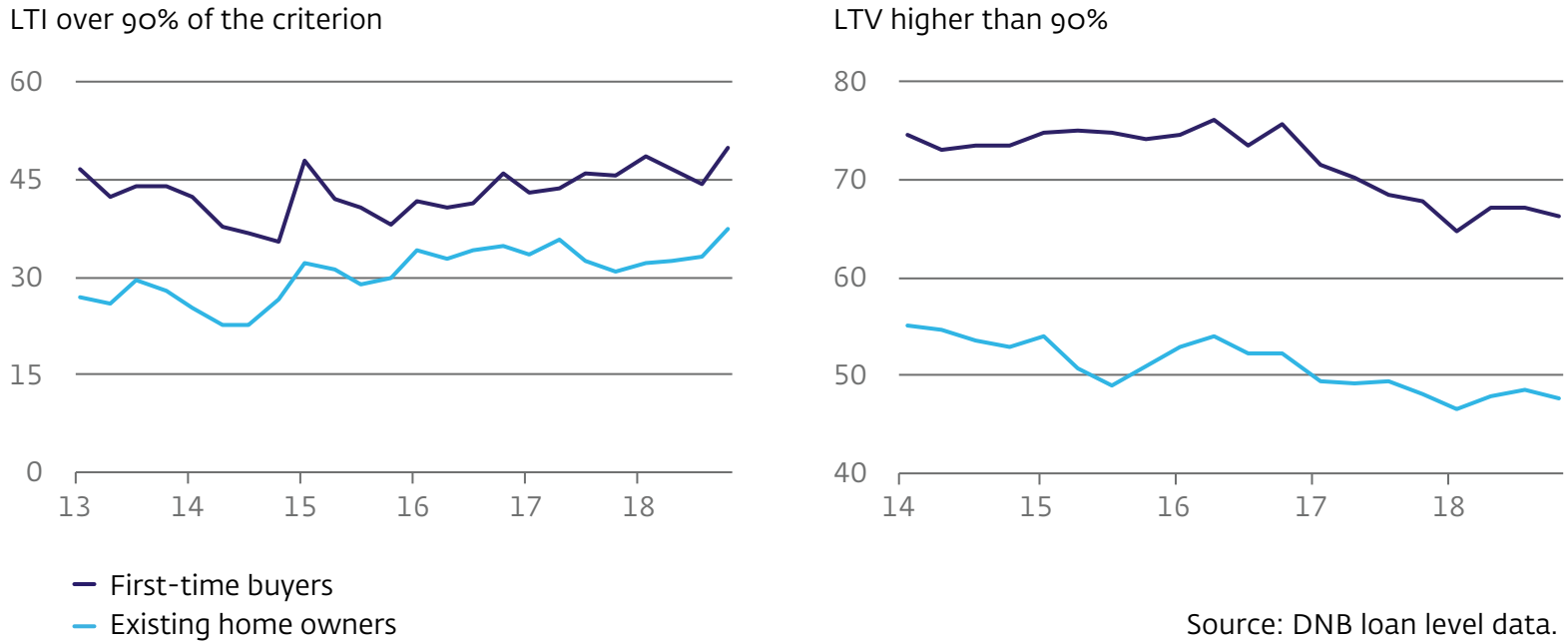
Risk map

Figure 29 Half of all first-time buyers currently opt for a very high LTI; the decline in the share of new loans with a very high LTV seems to have stopped.

Percentage of new production



Source: DNB loan level data.

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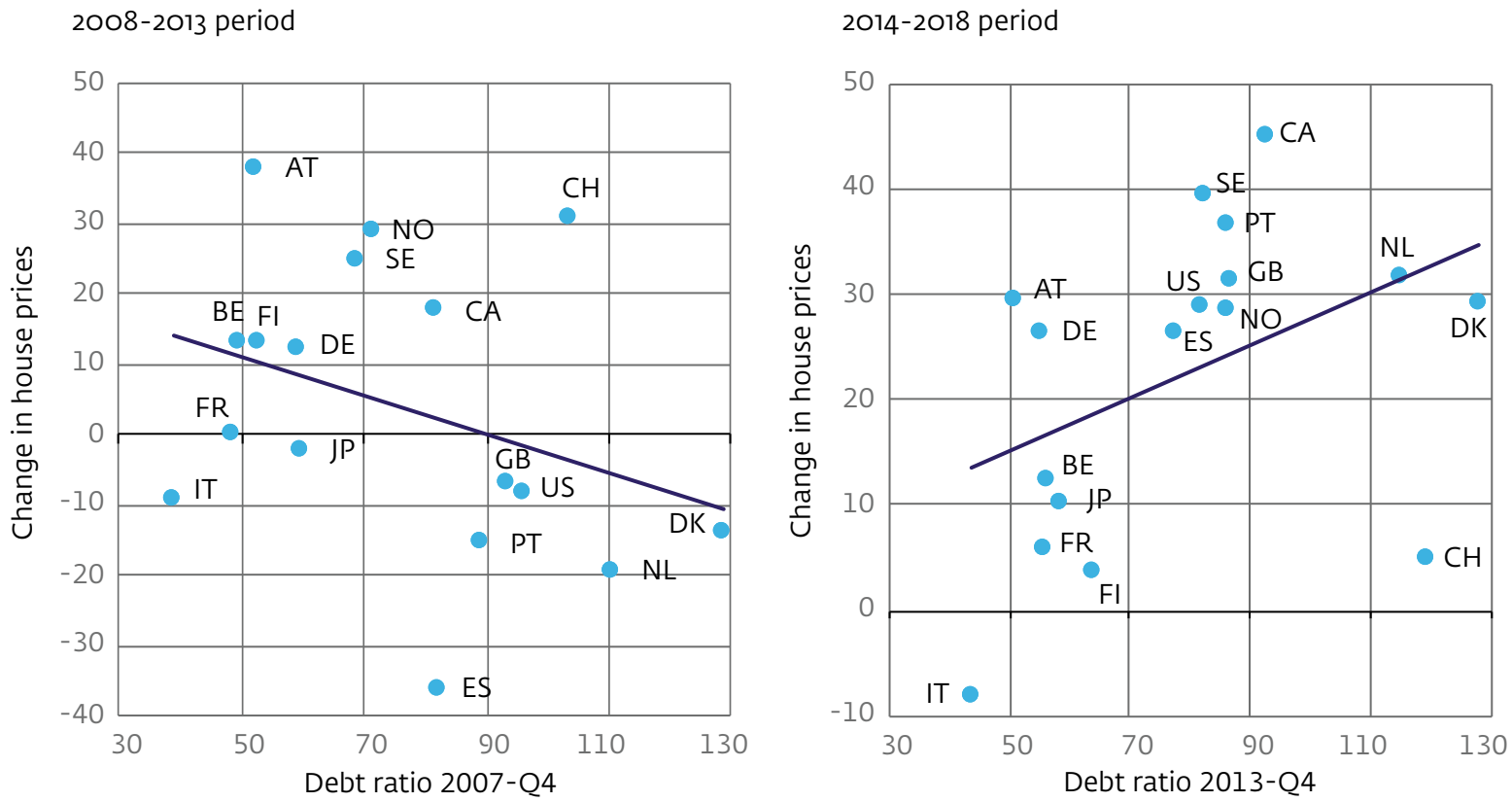
Figure 30 Countries with relatively high household debts saw a relatively strong drop in house prices between 2008-2013, while between 2014-2018 house prices rose sharply in those countries.

Percentages per period; debt ratio in percentages of GDP



Source: BIS.

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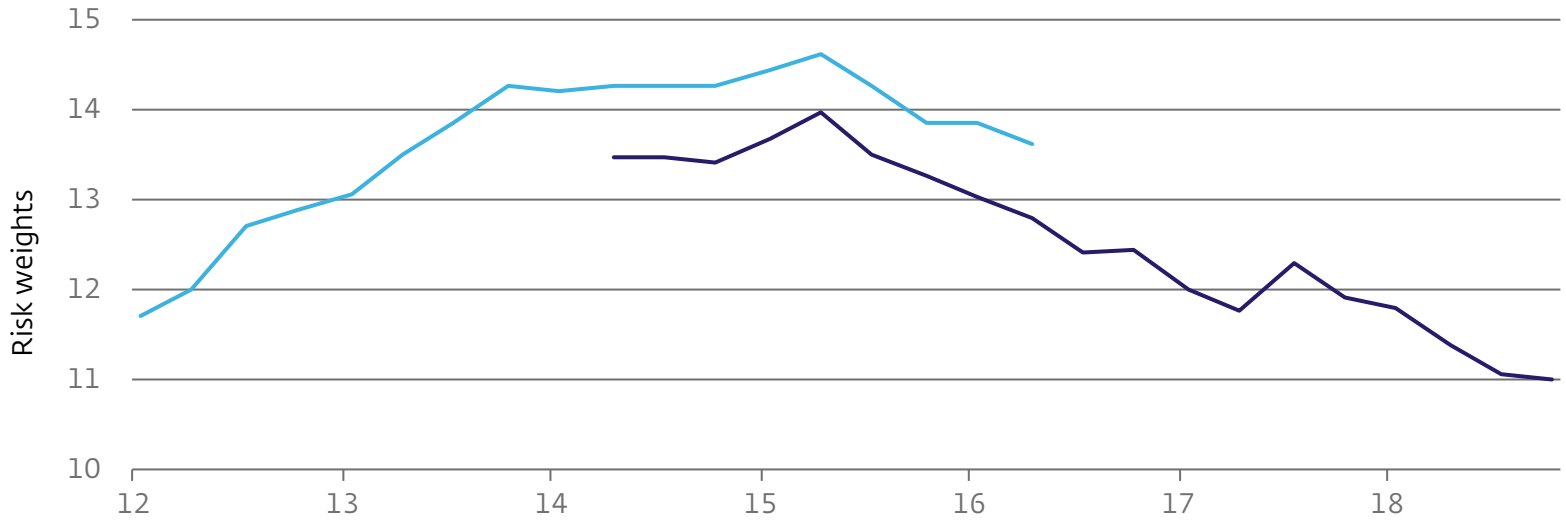
Figure 31 The risk weights that Dutch banks apply to mortgage loans have fallen in recent years

Percentages



Source: DNB.

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Risk map

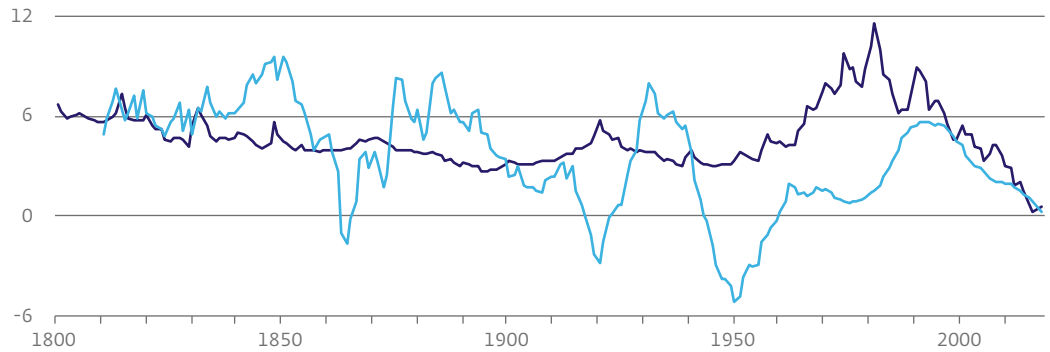
Low interest rates

- Interest rates are currently at an unprecedented low (see Figure 32). The prolonged period of low interest rates has put the financial position of insurance firms and pension funds under pressure.
- Persistently low interest rates may incite insurers and pension funds to look for higher yields from new investment opportunities. This could make them more vulnerable to market corrections.
- For financial institutions, being capable of managing these risks and ensuring that risk profiles continue to match obligations will be key.

Find out more? Click on the tabs.

Figure 32 The Dutch nominal interest rate is at historically low levels.

Annual percentages



Source: CBS, DNB, Reinhart/Rogoff-database.

Note: Real long-term interest rates are a ten-year moving average based on consumer prices (from 1900) and various sources (prior to 1900, source: Reinhart/Rogoff database).

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Low interest rates: Background

Interest rates are at low levels. Although capital market rates have edged up from their mid-2016 lows, short-term and long-term rates are still low (see Figure 33). The prolonged low long-term interest rates are a global phenomenon and are largely attributable to structural factors such as a lower potential growth, an increased savings appetite and a lower propensity to invest. In addition, the low interest rates are the result of the ECB's accommodating monetary policy. Due to low inflation, the ECB set the main refinancing rate at 0% and the deposit facility rate at -0.4% in March 2016. The ECB has announced that it expects key ECB interest rates to remain at their present levels at least through the end of 2019.

The low long-term interest rates have put the financial position of insurance firms and pension funds under pressure. In the past three decades, long-term interest rates have followed a downward trend. This has worked out badly for financial institutions with long-term liabilities, such as insurers and pension funds. First of all, low interest rates lead to higher values of liabilities, as future liabilities are discounted at low interest rates. In addition, low interest rates put investment returns of insurance firms and pension funds on the asset side of their balance sheets under pressure.

The return guarantees given by Dutch insurers have made them vulnerable to low interest rates. The majority of their long-term liabilities consist of guaranteed return policies. On average, however, return guarantees issued on policies in insurers' portfolios have been above the risk-free interest rate since 2009. This makes it more difficult to deliver on return guarantees. The stress test that EIPOA conducted in 2018 confirms the Dutch insurers' sensitivity to a low interest rate scenario. This is due mainly to the fact that the insurers participating in the stress tests have a relatively concentrated exposure to long-term life insurance policies. A positive point, however, is that life insurers have issued fewer and lower return guarantees these over the past few years (DNB, 2018).

Whereas insurers have made strides in future-proofing their sector, pension funds have not seen their financial position improve to any significant extent. The introduction of Solvency II in 2016 makes comparing solvency ratios over time a complex exercise. Even so, it is clear that the sector has managed to improve its financial soundness by cutting costs, consolidating, and reducing return guarantees. The average solvency ratio has gone up since 2016, most notably among life insurers. Falling and persistently low interest rates, together with rising life expectancy, considerably deteriorated the financial position of pension funds during the crisis, which has hardly recovered since then (see Figure 34).

Read more →

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Low interest rates: Background

In the current low interest rate environment, insurance firms and pension funds might look for new investment opportunities, which could boost asset prices, thereby constituting a risk to financial stability. Prompted by the low interest rates, insurers and pension funds may in their search for yield start investing in less liquid and higher-yielding asset classes. Although search-for-yield behaviour is difficult to pinpoint, international studies provide increasing evidence of such behaviour among institutional investors. In the Netherlands, too, several indications suggest that pension funds and insurers are examining new investment options. For example, both life and non-life insurers have brought down the proportion of sovereign bonds in their investment portfolios, while stepping up investments in mortgage loans, corporate bonds and real estate (see Figure 35). In addition, the credit quality of the corporate bond portfolios of life insurers has worsened. Likewise, many Dutch pension funds replaced part of their sovereign bonds with mortgage loans over the past few years. It should be noted that the more prominent role played by pension funds and insurers in mortgage loan origination contributes to a more balanced funding of long-term loans.

If pension funds and insurers reallocate investments to higher-risk and less liquid asset classes, they become more vulnerable to a market correction. The impact of a market shock on a financial institution will depend on the location of the shock and the institution's exposure to the relevant assets. For example, the stock exchange correction in late 2018, which hit equity markets most severely, mainly affected Dutch pension funds seriously. This is mainly due to the fact that pension funds apply a riskier investment mix than insurers (see Figure 36). Pension funds use a relatively large equity allocation due to their long-term investment horizon in combination with their indexation ambitions (see DNB, 2019).

Find out more?

- The Spring 2017 Financial Stability Report discusses the consequences of persistently low interest rates.
- The Dutch insurance sector's vulnerabilities are addressed in the Autumn 2018 Financial Stability Report.

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Low interest rates: Policy

If financial institutions increase their risk profiles, being capable of managing the new risks and ensuring that risk profiles continue to match liabilities will be key. Persistently low interest rates may put the business models of financial institutions under pressure, inciting them to search for yield from new and riskier investment opportunities. This makes them potentially more vulnerable to market corrections. Financial institutions should primarily take account of the likelihood of potentially steep market corrections as part of their own risk management. Financial institutions can perform their own stress tests to assess the effect of potential shocks.

Adequate valuation of liabilities continues to be of the essence. Consistent balance sheet valuations based on current values will immediately bring to light the effects of low interest rates. It is against this backdrop that we are arguing in favour of adjustments as part of the evaluation of the long-term guarantee (LTG) measures under Solvency II that reduce and keep in check the discrepancy between the statutory and the economic financial position of insurers.

It remains imperative that allowance be made for unintended effects of regulation. To an extent, regulation counters risk-seeking behaviour among pension funds and insurers. For example, if an insurer or pension fund assumes higher risks, it must hold more capital or own funds. At the same time, however, rules can have unintended effects. Applying the volatility adjustment under Solvency II, for instance, may incite insurers to take increased investment risks. Part of our contribution to the Solvency II review is that we draw attention to the volatility adjustment's unintended effects.

Further reducing return guarantees is advisable. Reducing guarantees, e.g. by limiting their level or maturity, will make insurers less vulnerable to prolonged low interest rates. Dutch insurers have already become more cautious in issuing such guarantees, but further reductions are desirable (see DNB, 2018).

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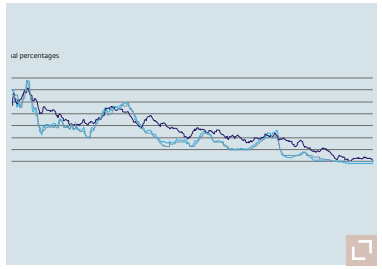
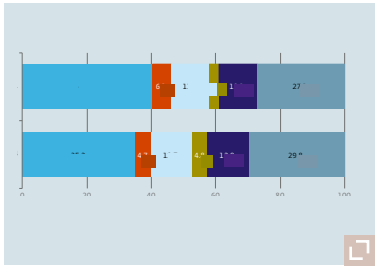
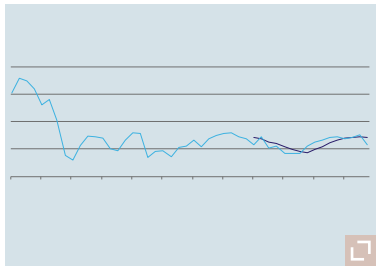
Low interest rates: Figures



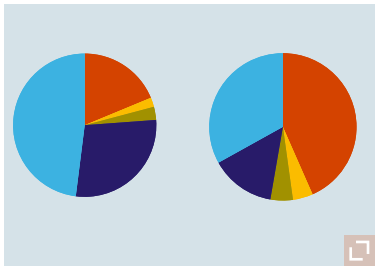
Short-term and long-term rates in the Netherlands are at historically low levels.
See Figure 33 →



Life insurers increasingly invest in mortgages, corporate bonds and real estate.
See Figure 35 →



Funding ratio of pension funds has plunged since the crisis and hardly recovered since then.
See Figure 34 →



Pension funds in particular have large and relatively risky investment portfolios.
See Figure 36 →

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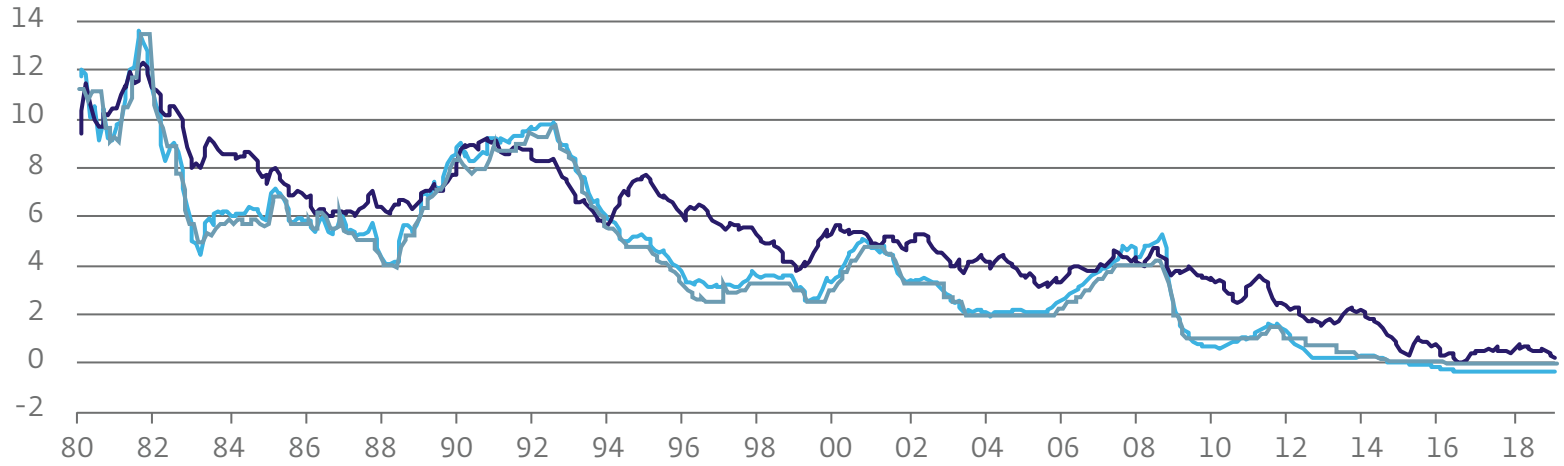
Figure 33 Short-term and long-term rates in the Netherlands are at historically low levels.

Annual percentages



Source: DNB, ECB.

Note: The official rates for 1980-1998 refer to the interest on special loans of DNB and as of 1999 they refer to the refinancing loans of the ECB.

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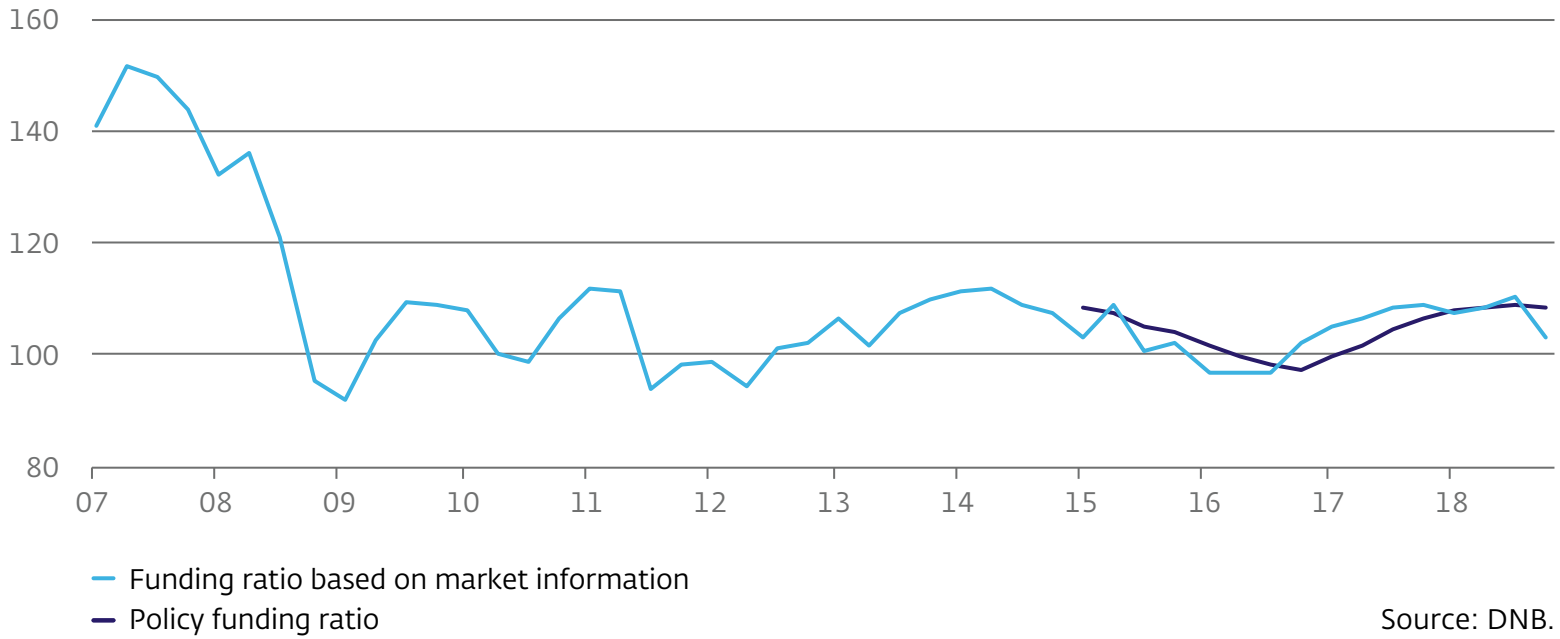
Figure 34 Funding ratio of pension funds has plunged since the crisis and hardly recovered since then.

Percentages



Source: DNB.

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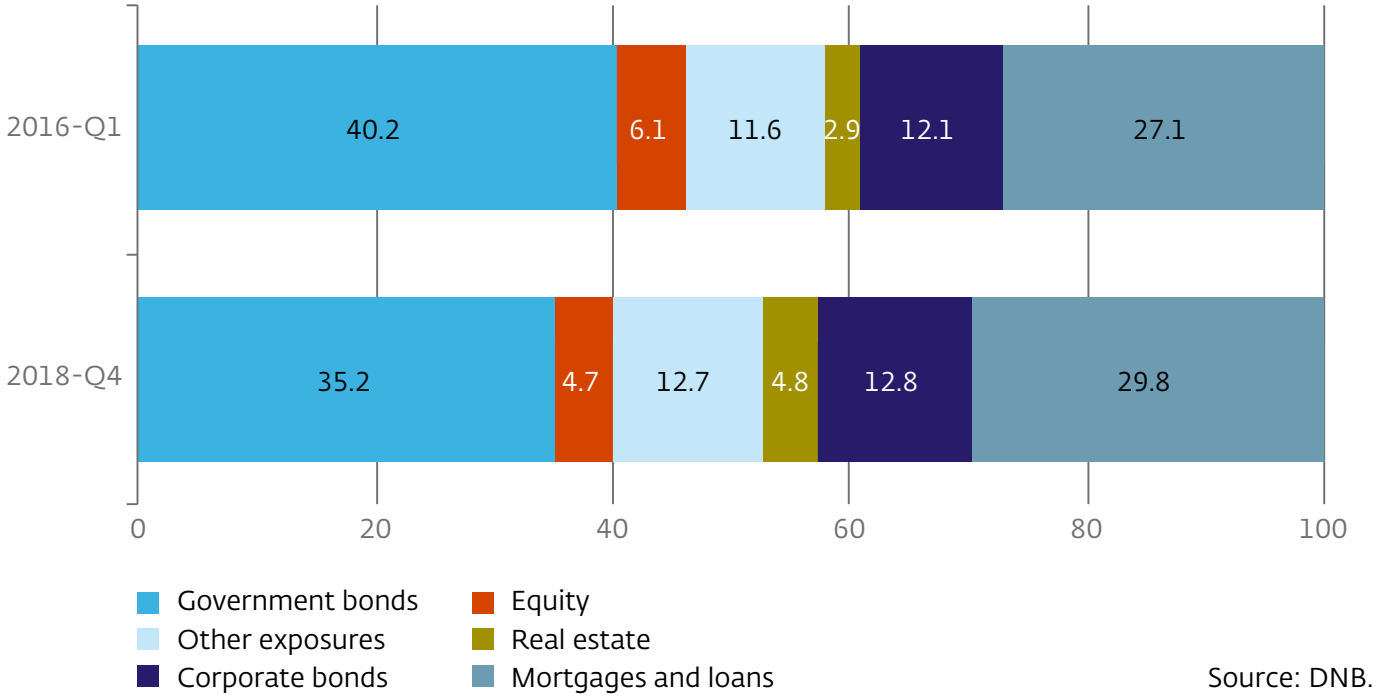
Figure 35 Life insurers increasingly invest in mortgages, corporate bonds and real estate.

Proportion of total investment portfolio in percentages



Source: DNB.

Note: These figures exclude unit-linked and index-linked products.

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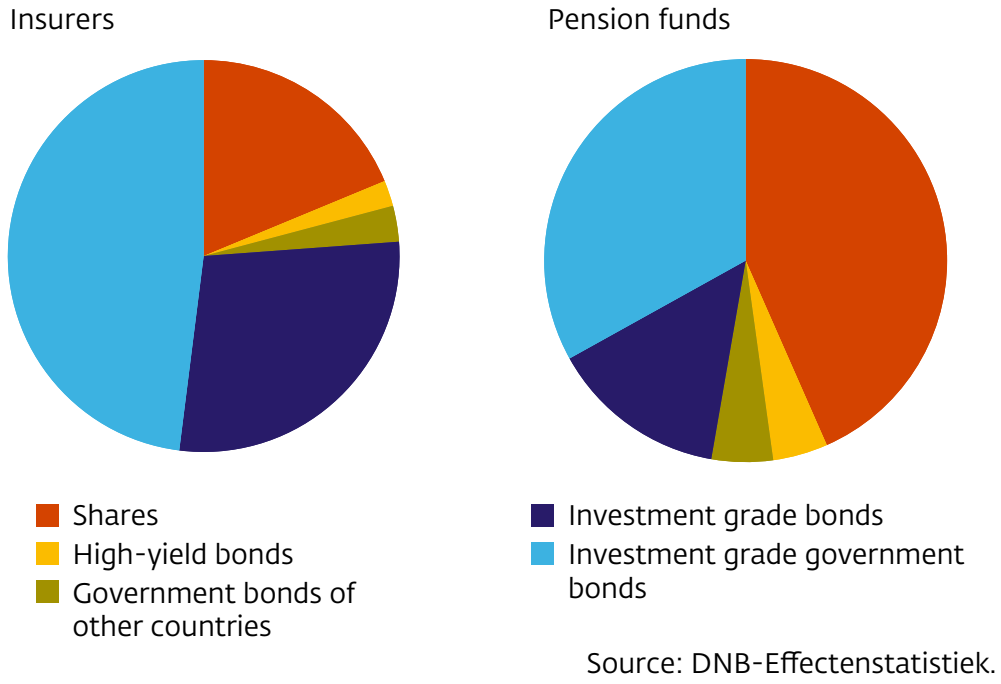
Figure 36 Pension funds in particular have large and relatively risky investment portfolios.

Share in total equity and bond portfolios, 2018-Q3



Source: DNB-Effectenstatistiek.

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