# Financial Stability Report

December 2018

BANCO DE PORTUGAL
EUROSYSTEM

# Financial Stability Report

December 2018

The data underlying the charts presented in this report can be found at the Banco de Portugal website, with some exceptions for private sources data (only in Portuguese).

BANCO DE PORTUGAL
EUROSYSTEM

Lisbon, 2018 • www.bportugal.pt

**Financial Stability Report** | December 2018 • **Banco de Portugal** Av. Almirante Reis, 71 | 1150-012 Lisboa • www.bportugal.pt • **Edition** Financial Stability Department • **Design** Communication and Museum Department | Design Unit • **Print** 20 • **ISSN (print)** 1646-2246 • **ISSN (online)** 2182-0392 • **Legal deposit No.** 227536/05

# Content

# Overview

In 2018 the Portuguese economy saw a range of favourable developments from a financial stability standpoint. The indebtedness ratios of the non-financial private sector (households and non-financial corporations – NFCs) narrowed further, while the level of NFC capitalisation continued to increase. Public debt, net of general government deposits, continued to move along the downward path that started in mid-2017. In terms of the balance of payments, developments in the first half of the year give credence to the perspective of maintaining a combined current and capital account surplus over the year as a whole.

Likewise, the Portuguese banking system evolved favourably in the first half of the year in a range of relevant areas. Profitability continued to recover amid lower impairment losses on loans and increasing operational efficiency. Non-performing loans declined further at a fast pace while impairment coverage ratios continued to grow. The liquidity position remained at comfortable levels. The total capital ratio was boosted by the issue of eligible own funds instruments.

Thus, vulnerabilities in the Portuguese economy and banking system decreased further, in particular when compared to the situation that preceded the international economic and financial crisis, bolstering their resilience to adverse shocks.

However, it should be highlighted that this improvement trend needs to be continued and indeed reinforced in view of the persistence of major constraints, namely the low potential growth of the Portuguese economy. This is particularly noteworthy given the still significant sources of systemic risk, most notably those stemming from the current international environment.

No relevant progress in the European institutional architecture has been achieved, be it at banking union level or even, at a more general level, in terms of monetary union, both of which remain incomplete and vulnerable to new crises, thus amplifying risks to financial stability. The absence of a European Deposit Insurance Scheme, the third pillar of the Banking Union, is an example of this.

In this context, the main risk to financial stability in Portugal is still the significant and abrupt reassessment of risk premia, either triggered by a global reassessment movement or a more idiosyncratic movement at European level. This risk has intensified compared to the assessment presented in previous issue of the *Financial Stability Report*. In fact, in recent months there have been some indications of it materialising, albeit short-lasting and/or with no evidence of significant contagion. However, the adoption of new protectionist measures with an impact on world trade, monetary policy normalisation in the main global economic regions (most notably, the United States), uncertainty over the outcome of Brexit or episodes of financial instability associated with the political situation in euro area countries are all events that have the potential to cause this risk to increase in the near future.

As future developments in the issues mentioned above gain more serious momentum than that currently anticipated by most economic agents, they have the potential to have significant effects on international financial markets and economic activity. Indeed, output is already decelerating in various regions, and growth prospects have been revised downwards in several countries, especially at European level. The materialisation of such a scenario would certainly impact on the Portuguese economy and financial sector and the outlook for interest rate developments. These implications are associated particularly with the funding costs and negative effects on external demand for Portuguese goods and services or also in terms of the potential adverse effects on the real estate market, where non-residents have played an important role. Both channels

have benefited the banking sector in the recent past, and may therefore experience negative developments in the risk scenario described.

Therefore, the potential for a significant and abrupt reassessment of risk premia, particularly if it has significant implications in real terms, could make way for reductions in the value of a wide range of financial and non-financial assets. Considering the significant share of government bonds and real estate assets in banks' balance sheets, the impact of the aforementioned reassessment on the latter could be substantial. These effects could be amplified by the adoption of less prudent criteria in the granting of loans, which tend to be procyclical. At an advanced stage of the current economic expansion, this risk is amplified by very low interest rates and the significant valuation of collateral, namely immovable property, which in some areas/cities has been particularly marked. It should be stressed that this context has a short-term nature and should not prevent the correct assessment of the credit risk on loan agreements, based on well-founded expectations of losses over the entire time horizon of the credit operation. Against this background, it is worth emphasising that, as well as other initiatives, a careful implementation of IFRS 9 may mitigate this risk. The Recommendation of Banco de Portugal within the legal framework of new credit agreements for consumers and relating to residential immovable property is also of particular importance.

Considering the above, and although the correction in macrofinancial imbalances continued to advance in 2018, in a number of major components of the Portuguese economy, it is key that the vulnerabilities discussed here are further addressed, particularly given the prevailing systemic risks. This requirement also stems from the fact that, even in the baseline scenario, changes in the economic, monetary and financial environment are foreseeable, which in the recent past has been particularly favourable, but is expected to become progressively less benign.

At the general government level, structural fiscal adjustment efforts must continue in order to ensure that general government indebtedness moves along a downward path that is less susceptible to adverse shocks to economic activity and financing conditions.

As regards the non-financial private sector, the financial position of excessively leveraged agents must be adjusted further. Steps should be taken to promote an increase in the savings rate, which in the case of households has dropped to very low levels in both European and historical terms. Likewise, the increase in firm capitalisation must remain a priority, to bolster their resilience against less favourable economic and financial developments, such as the increase, even if gradual, in interest rates in the future. Corporations' profits should be distributed in a way that adequately assesses their sustainability, considering the underlying potential risks.

In the case of households, it is also important to consider, from a financial stability standpoint, the link between population ageing and a public social security system that is expected to witness a considerable fall in income from the time of retirement, against a background in which households have debts with long maturities, often exceeding borrowers' working lives. This is one of the underlying reasons for the designing of the macroprudential measure within the legal framework of new credit agreements for consumers and relating to residential immovable property.

Finally, the Portuguese banking system must still overcome a range of significant challenges, stemming from the low short-term interest rate environment in the euro area and the need to:

- proceed with the reduction of non-performing assets (particularly NPLs), in line with the plans submitted to the supervisory authorities,
- invest in technological infrastructure to take advantage of the potential associated with digitalisation in the provision of financial services, thus promoting the sustainability of banks' business model,

- address potential competition from specialised firms (fintech),
- cut operating costs without jeopardising the appropriate allocation of resources to control duties, namely in terms of money laundering and terrorist financing, as well as operational and financial risk management, and
- issue debt instruments eligible as regulatory capital, for the purposes of complying with the MREL.

It is also key to consider the risks to the baseline scenario for economic activity developments and the high indebtedness levels of most resident economic sectors. In this context, it is important on the one hand to ensure the sustainability of the recent improvement in banking sector profitability and, on the other, to strengthen the absorption of negative shocks to the capital position of banks. This warrants prudent distribution policies of profit, particularly as regards the distribution of dividends.

# I Financial stability outlook

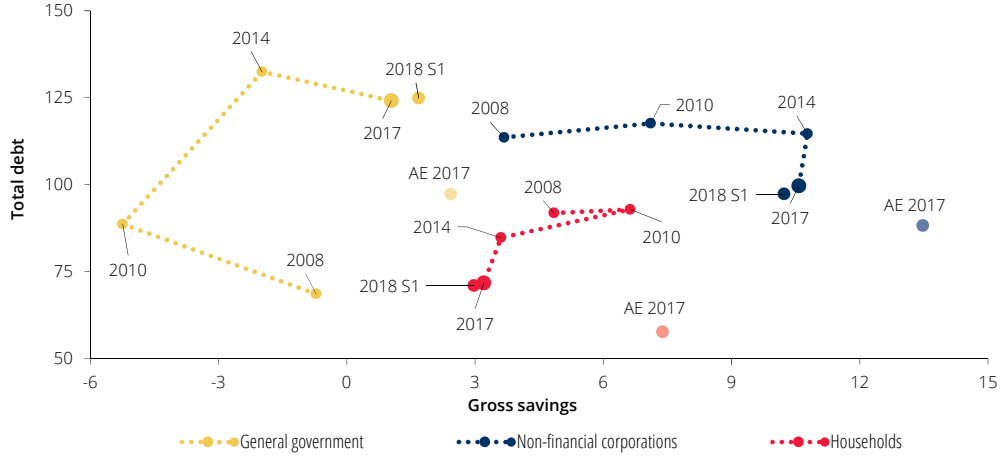
# 1 Vulnerabilities, risks and macroprudential policy

## 1.1 Vulnerabilities

### High indebtedness amid low potential growth continues to be one of the main vulnerabilities for the Portuguese economy

Despite the adjustment seen over the past few years, the Portuguese economy is still characterised by high indebtedness levels. In fact, and in spite of the reduction that started in mid-2015, Portugal's net external debt remains among the highest in the euro area (approximately 92.7% of GDP in the first half of 2018), reflecting the build-up of external imbalances in the period leading to the financial crisis. Therefore, the Portuguese economy remains sensitive to adverse developments in income and funding costs, namely those associated with changes in the risk perception of investors. Despite the recent substantial decrease, the still high level of general government indebtedness (124.9% of GDP at the end of the first half of 2018) constrains the sovereign risk premium and access conditions to international financial markets by other economic agents, particularly financial institutions, but also large enterprises. Furthermore, the very low level of savings rates compared with the EU is an additional vulnerability for these economic agents. Regarding the non-financial corporations (NFCs), the saving rate increased significantly in the period after the onset of the international economic and financial crisis, although recently it has dropped somewhat and is now below the euro area average (Chart I.1.1).

**Chart I.1.1** • Total debt and savings (general government, non-financial corporations and households) | Percentage of GDP

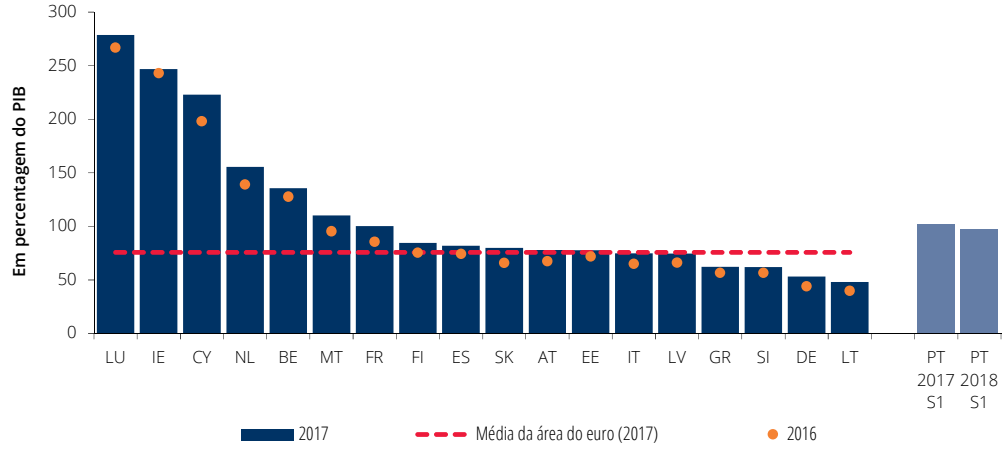



Sources: Eurostat and Banco de Portugal. | Notes: EA 2017 refers to euro area averages in 2017. Indebtedness comprises total debt (loans, securities and trade credits of non-financial corporations and households. Public debt is calculated according to the definition used in the excessive deficit procedure (Regulation (EC) No. 479/2009), i.e. gross general government consolidated debt at nominal or face value, the so-called Maastricht debt.

Debt of the non-financial private sector (NFPS), as a percentage of GDP, has significantly decreased from its peak. In June 2018 household indebtedness stood at 71% of GDP (104% of disposable income), down by 24 p.p. from the peak in 2009, but still far above the euro area average. On the same date, NFCs' total consolidated debt accounted for 97.3% of GDP, down by 29 p.p. since the historical peak seen at the end of 2012. These developments were accompanied by a very substantial increase in capitalisation. The lower debt ratios reflect not only a deleveraging of these sectors but also an upturn in economic activity as of 2014, which is the largest contribution to this momentum since 2015. However, there was a marked slowdown in the deleveraging process compared with the previous year.

The high indebtedness levels of the NFPS are a significant constraint for the Portuguese potential output growth. The current prospects of a slowdown in economic activity in the coming years in Portugal and the euro area may have adverse effects, both on household income and NFC profitability. Furthermore, this juncture may curtail their debt servicing. Given that a substantial share of household debt is linked to a floating interest rate[1] and that the NFC funding structure chiefly comprises short-term loans, debt service in these sectors is particularly sensitive to interest rate changes. However, if the key ECB interest rates were to increase, projections indicate that they would do so very gradually and would be linked to an economic upturn in the euro area.

**Chart I.1.2** • Non-financial corporations' total debt | Percentage of GDP



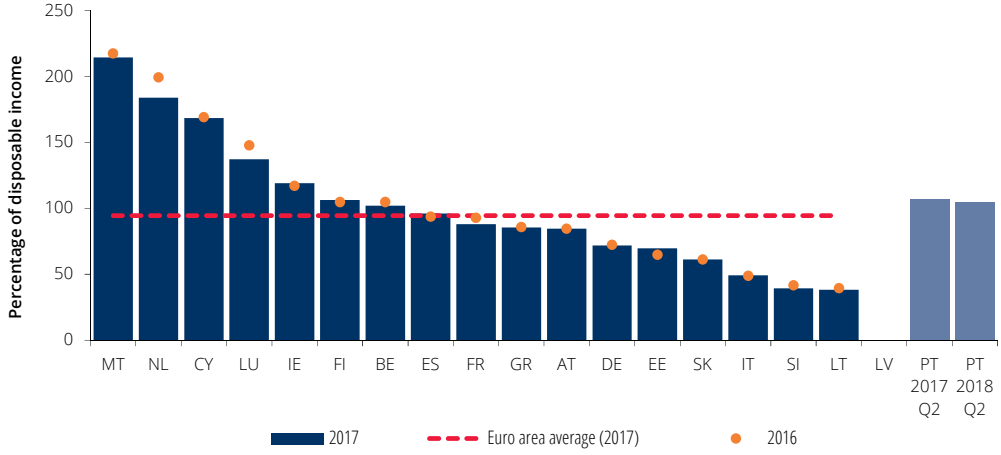

Sources: Banco de Portugal and Eurostat. | Note: Total debt (includes loans, debt securities and trade credits) on a consolidated basis.

As mentioned above, in the most recent period, NFCs have continued to reduce their nominal debt, but at a slower pace (Chart I.1.2). As regards bank loans, non-performing loans (NPLs) decreased further, while performing loans rose and the overall stock of loans also declined. This was seen alongside a replacement of corporate funding sources, with a reduction in debt held by the non-resident sector, an increase in loans granted by the domestic financial sector and greater NFCs' capitalisation.[2] Furthermore, there is still a positive differential in the growth of domestic bank loans to exporting corporations and companies with higher credit quality, particularly in sectors such as trade, accommodation and food services, and manufacturing, mining and quarrying, compared with higher risk firms.[3]

1. It should be noted, however, that over the past few years recourse to floating rate funding by households has decreased.
2. For more details, see Section 3.2.2 "Non-financial corporations".
3. For more details, see the October 2018 issue of the *Economic Bulletin*.

Total nominal household debt rose by 0.6% from June 2017 (Chart I.1.3). Underlying this growth is, on the one hand, an increase in consumer credit, which continued to grow at a particularly fast pace (annual rate of change of 14.2% in June 2018). On the other hand, the annual rate of change in loans for house purchase granted by the resident financial sector remained slightly negative (-1.2% in June 2018).

**Chart I.1.3** • Households' total debt | Percentage of disposable income




Sources: Banco de Portugal and Eurostat. | Note: Total debt (includes loans, debt securities and trade credits) on a consolidated basis.

The general government fiscal deficit, adjusted for one-off factors,[4] stood at 0.9% of GDP in the first half of 2018, accounting for a 1.1 p.p. decrease from the same period one year earlier (Section 3.1 General government). However, as mentioned above, Portuguese public debt is still among the highest in the European Union. Therefore, in order to strengthen the resilience of the Portuguese economy against adverse shocks, it is key that the adjustment in the structural balance is not interrupted.

## Portuguese banks have reduced the volume of NPLs further, and it is key that this effort continues to be pursued in line with the plans to decrease non-performing assets

Over the past few years, the banking sector has also undergone a substantial adjustment and consolidation process, which has made it possible to improve its solvency levels, reduce non-performing assets (in particular NPLs) and improve operating efficiency. This, together with the adjustment in the general government and an upturn in economic activity, has contributed to an improvement in international investors' perception of the Portuguese banks and sovereign, as substantiated in a decrease in risk premia and the upgrades to sovereign debt rating, such as the recent revision by Moody's. Currently, the three major credit rating agencies classify

4. These operations correspond to the transfer from the Resolution Fund to Novo Banco, a loan granted by the State to the *Fundo de Recuperação de Créditos* (Credit Recovery Fund) and the ruling by the Supreme Court of Justice regarding the payment of compensation in a judicial proceeding concerning a concession of land. For more details, see the October 2018 issue of the *Economic Bulletin*.

Portuguese sovereign debt as investment grade,[5] thus expanding the range of potential investors in Portuguese public debt, also with a positive impact on Portuguese banks. To increase the resilience of the banking sector, it is key that banks proceed with their plans to reduce non-performing assets submitted to supervisory authorities. This will be more relevant as the projections point to the need, in the short to medium-term, to issue eligible instruments for compliance with the minimum requirement for own funds and eligible liabilities (MREL).

Since 2016, good progress has been made in reducing the stock of NPLs and in increasing the coverage of such assets by impairments. In June 2018 the NPL ratio declined by 3.6 p.p., to 11.7%, and the impairment coverage ratio rose by 7.1 p.p., to 52.9%, from one year earlier. Since the historical peak in June 2016, the Portuguese banking system has undertaken a substantial adjustment, reducing NPLs by approximately €18 billion, of which around €12 billion stemmed from loans to NFCs (Section 4.2 Asset quality). This reflects the strategies adopted by the sector, as substantiated in the plans to reduce non-performing assets submitted to supervisory authorities. The increase in solvency of major banks, improvements in economic activity and developments in real estate prices have created a favourable environment, supportive of the reduction in non-performing assets. However, amid a slowdown in the economy, together with a positive link between the business cycle and lower impairment flows, the stock of NPLs may stagnate, or even reverse the recent trend.

In the first half of 2018 the Portuguese banking sector's profitability and operating efficiency improved significantly year-on-year (Section 4.1 Profitability). The recovery in profitability over the past few quarters was largely due to a decrease in credit impairments, despite the still high levels of NPLs among some banks. In line with other European banking systems, the return on capital is not enough to counterbalance the respective costs. However, the banking system should keep up their efforts to improve operating efficiency, without jeopardising the appropriate allocation of resources to supervisory duties, particularly those regarding the prevention of money laundering and terrorist financing,[6] as well as risk management. As such, and despite recent progress, the Portuguese banking system continues to face some challenges, particularly as regards the prudent allocation of profits and distribution of their dividends.

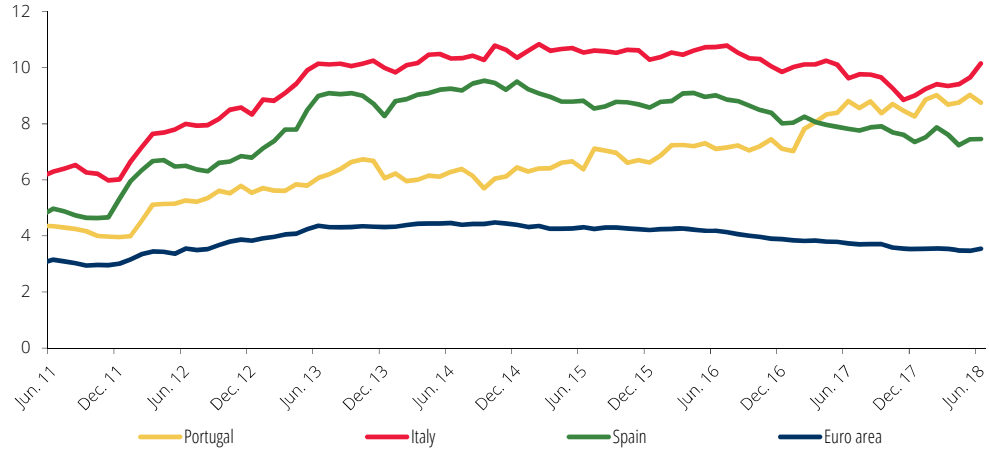
The low interest rate environment poses challenges to banks in terms of profit generation. Despite expected gains, the operating adjustment process tends to entail additional costs in the short run, more specifically, those related to staff changes. In turn, investment behind the technological shift must be strengthened. The new regulatory framework (namely the Revised Payment Services Directive, PSD 2) and the introduction of new technology in the financial intermediation sector, particularly digitalisation, pose new challenges in terms of cybersecurity and potentially increased competition in many activities by technology-based companies, but are also an opportunity for greater efficiency in the banking sector. However, to date, the introduction of the PSD2 has resulted in the use of fintech services by banks, but as yet without any evidence of increased competition, given that this Directive has entered into force only recently[7] (Box 2 "Fintech – financial stability perspective").

5. More specifically, in the second half of 2017 the ratings assigned to the Portuguese Republic's long-term debt were revised upwards by Fitch and Standard & Poor's (S&P) to investment grade. In April 2018, DBRS also upgraded the rating by one notch, from BBB- to BBB, with a stable outlook. More recently, in October 2018, Moody's also revised its rating to Baa3, with a stable outlook.
6. On the importance of this subject, see the recent cases such as, Danske Bank (EE), ING Bank (NL) and Versobank (EE).
7. Entry into force on 13 November 2018.

## The Portuguese banking system continues to concentrate a substantial share of its assets on public debt and property-related assets

The high concentration of the Portuguese banking system's investment in specific asset classes is another source of vulnerability. In particular, its exposure to government bonds remains high (12.7% of total assets of resident banks as at June 2018), mainly in the form of securities issued by the domestic sovereign (around 9% of total assets), which has followed an upward path and is still among the highest in the euro area (Chart I.1.4). In the case of the insurance sector, exposures to the domestic sovereign have decreased in recent years, but its weight in total assets remains far above that of the banking sector (Chart I.1.6). Since 2011 the Portuguese banking system has also increased its exposures to government bonds issued by other euro area countries, most notably Spain and Italy (Chart I.1.5). In fact, in the first half of 2018, exposures to securities issued by the two countries accounted for 3.2% of total assets of resident banks (2.8 p.p. more than at the end of 2011).

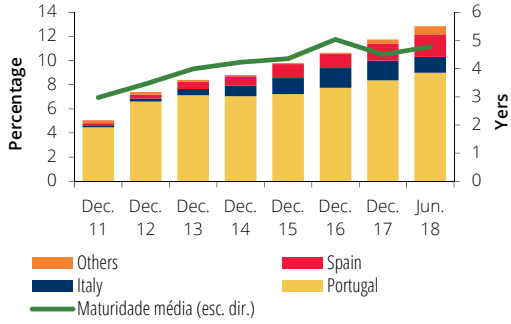
**Chart I.1.4** • Banking system's exposure to sovereign debt securities | Percentage of total assets




Sources: European Central Bank (Banco de Portugal calculations).

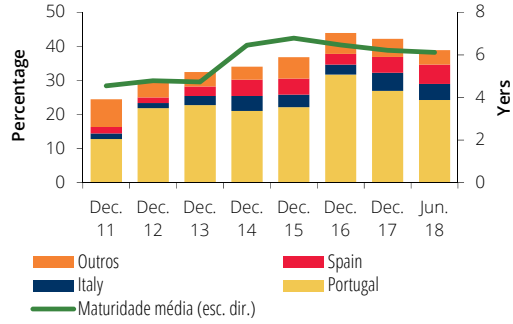
Against a background of geopolitical uncertainty and potential reassessment of risk premia, this exposure constitutes a vulnerability for the Portuguese banking system. Moreover, and to the extent, that yield changes in European sovereign debt are positively correlated, diversification gains may be limited. In this respect, the residual average maturity of the government bond portfolio has increased, which also boosts banks' exposure to interest rate risk in the absence of a hedging strategies (Chart I.1.5).

**Chart I.1.5** • Resident banking sector's exposure to sovereign debt securities and average portfolio maturity




Sources: Banco de Portugal and Thomson Reuters. | Note: End of the period values.

**Chart I.1.6** • Resident insurance sector's exposure to sovereign debt securities and average portfolio maturity



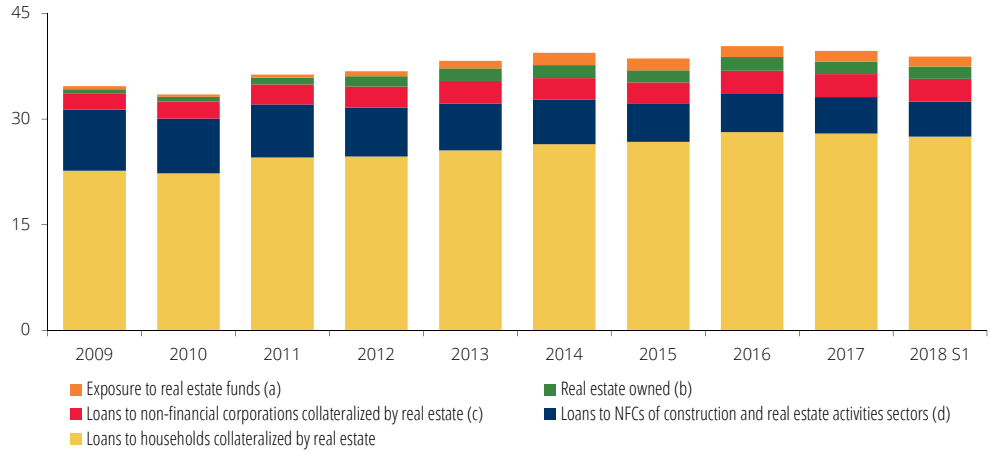

Sources: Banco de Portugal and Thomson Reuters. | Note: End of the period values.

Since the first quarter of 2017, the decrease in Portuguese government bond yields, together with an upgrade in the Portuguese Republic's rating to investment grade by credit rating agencies, had a positive impact on banks' regulatory capital ratios. In a very low interest rate environment, the higher bond yields make investment in Portuguese sovereign debt more attractive than other euro area sovereign issuers, with negative yields across a wide range of maturities.

However, the high amount of exposures to this asset class, held by Portuguese banks, makes them particularly sensitive to risk premia reassessments in financial markets, given that a substantial share of these securities is recorded at fair value. According to a sensitivity analysis of the Common Equity Tier 1 (CET 1) ratio, a 100 b.p. rise in yields on domestic government bonds held by Portuguese banks would have a negative direct impact of approximately 47 b.p. on the regulatory capital ratio (excluding any hedging strategies). This impact incorporates the removal of a prudential filter (as of 1 January 2018), allowing banks to make regulatory capital ratios immune to changes in the value of public debt, as well as the reclassification of government bonds under the new accounting framework (IFRS 9).[8] Indeed, following the introduction of the new accounting standard, most Portuguese banks reclassified a significant proportion of these debt instruments at amortised cost,[9] and as a result making their capital immune to the impact of changes in the market value of domestic public debt.

8. For more details, see the Special Issue "IFRS 9 – Main changes and impacts anticipated for the banking system and financial stability", *Financial Stability Report*, June 2017.
9. In the current accounting framework (IFRS 9), approximately 31% of government bonds held by Portuguese banks are classified at "amortised cost". By contrast, only around 7% of this asset class was classified as "held to maturity" in the previous accounting framework (IAS 39).

**Chart I.1.7** • Banking sector's exposures to the real estate sector | Percentage of total assets




Source: Banco de Portugal. | Notes: (a) Includes loans and shares; (b) gross values; (c) excludes loans to NFCs in the construction and real estate activities sectors; (d) it does not exclude loans granted to projects not related to the real estate sector, as public works. End of the period values.

At the end of the first half of 2018, Portuguese banks continued to be highly exposed to real estate assets (38.9% of total assets, 1.5 p.p. down from the end of 2016). This type of exposure is mostly indirect, particularly via residential real estate used as collateral in the mortgage market, accounting for approximately 28% of Portuguese banks' total assets (Chart I.1.7).

Another relevant component of banks' indirect exposures to the real estate sector is credit granted to firms in the construction and real estate activities sector (5% of total assets as at June 2018), which has decreased since 2011 (by 2.5 p.p.). Nevertheless, still one-third of outstanding loans granted to younger enterprises[10] is associated with the construction and real estate activities sector (Section 3.2.2 Non-financial corporations). Although this sector accounts for 24% of total loans granted to NFCs, the volume of NPLs is proportionally greater compared to other sectors (approximately 40% of corporate NPLs is accounted for by enterprises in the construction and real estate activities sector).

The current economic environment, characterised by low interest rates and competitive pressure in the mortgage market (reflected particularly in the lower interest rate spreads on loan agreements), is conducive to a loosening in credit standards. In this respect, the purpose of the Recommendation issued by Banco de Portugal[11] for new credit agreements for consumers (more specifically, credit related to residential immovable property, credit secured by a mortgage or equivalent guarantee and consumer credit agreements) is to contribute to a more resilient Portuguese banking system, as well as to the sustainability of household financing. More specifically, by complying with this measure, consumers and Portuguese banks will be able to tackle more easily the potentially adverse effects of a gradual increase in short-term interest rates and a reduction in real estate asset prices, or in borrowers' income, and will tend to mitigate the effects of a decrease in borrowers' income by the time of retirement.

10. That have started their business as of 2013.

11. Recommendation of Banco de Portugal within the legal framework of new credit agreements for consumers, in force as of July 2018 (https://www.bportugal.pt/en/page/ltv-dsti-and-maturity-limits).

The exposures to some developing economies that depend on commodity exports continue to be significant for some Portuguese banks. This exposure is also indirect, mainly through loans and credit lines granted to NFCs more exposed these economies. As such, developments in these exposures and the economic performance of those economies should be monitored further.

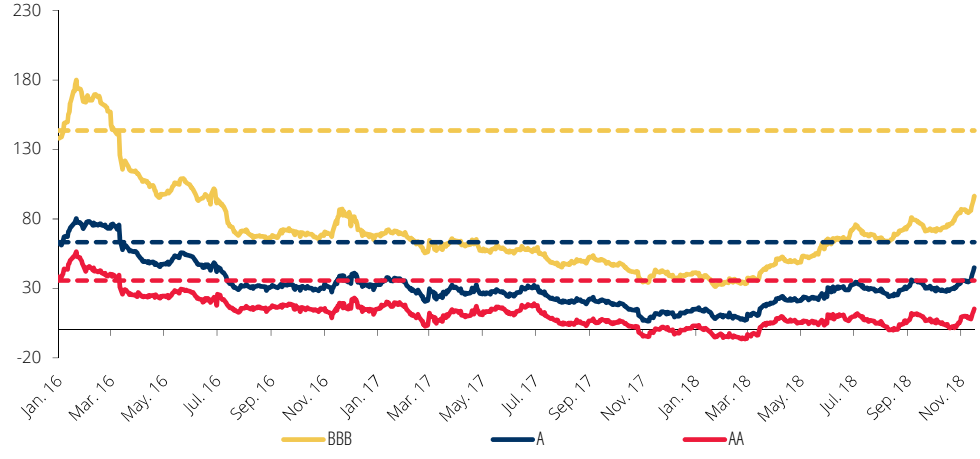
## 1.2 Risks to financial stability

The macrofinancial environment of the Portuguese economy is largely determined by the euro area framework. Furthermore, the high degree of economic and financial integration of the euro area in the world economy explains the overall extent of the risks listed in this Report. The risks identified herein may interact together and, should they materialise, mutually enhance one another.

### The risk of a significant and abrupt reassessment of risk premia intensified amid a less favourable macrofinancial environment

The main risk to financial stability in Portugal is still the significant and abrupt reassessment of risk premia, either triggered by a global reassessment or a more idiosyncratic event. This risk has intensified compared to the assessment presented in the previous issue of the *Financial Stability Report*. Increased geopolitical and economic uncertainty, both at global and European level, the partial materialisation of some risks stemming from trade tensions and the normalisation of the US monetary policy, and a background of expected deceleration in world economic growth over the coming years may lead to risk-aversion behaviour and risk premia reassessments across several financial market segments. Risk premia paid by euro area NFCs remain at historically low levels, despite a slight increase since the first quarter of 2018, particularly in riskier classes (Chart I.1.8).

**Chart I.1.8** • Private sector risk premia | Basis points




Sources: Thomson Reuters and Banco de Portugal calculations. | Notes: Spread between the average yield of iBoxx Index of private non-financial corporations and the average mid-swap interest rate for the maturities of one to ten years, by credit risk notation. The dashed lines represent the 2000-18 averages. Latest update: 16 November 2018.

Trade tensions between major economic blocks are still among the main sources of global political uncertainty and pose important downside risks to economic growth in the short to

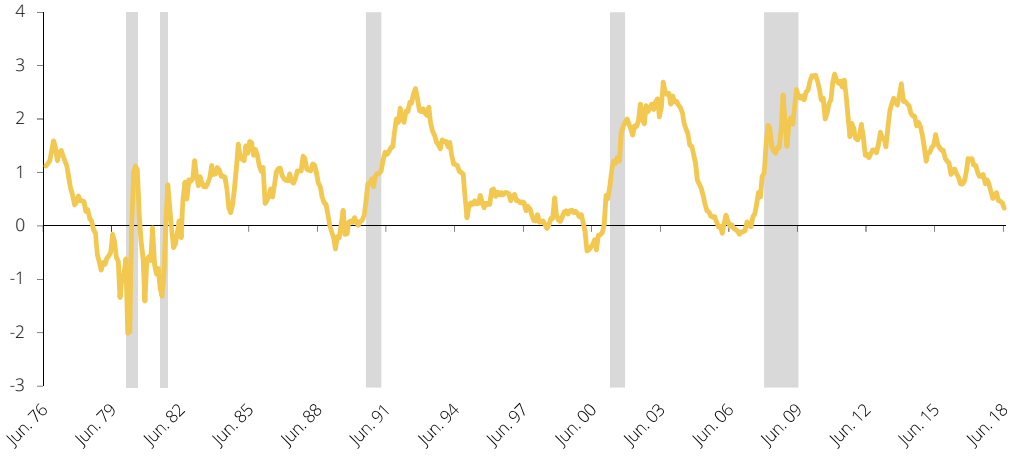
medium run.[12] A simulation study shows that increased protectionist tensions may bring about a cumulative negative impact in the course of a three-year period on Portuguese GDP, of 0.7% to 2.5% compared with the baseline scenario, from limited trade war or generalised trade war scenarios, respectively. In both cases, the more substantial effects result from a decrease in exports, due to lower external demand.[13]

Despite the trade agreements already in place between the US and the EU, as well as with Canada and Mexico, their terms and conditions remain an open question. The materialisation of trade tariffs between China and the US, as well as the threat of further trade tariffs on all goods traded between both countries, weigh on economic agent expectations, particularly firms, already with an impact on economic sentiment.

The US economy continued to grow firmly in the first half of 2018, partly due to the effects of an expansionary fiscal policy. The Federal Reserve System (Fed) proceeded with monetary policy normalisation, with future expectations of a fourth interest rate increase in December 2018 and the continued rise in interest rates in 2019. The Fed also alluded to the possibility of an increase in the Fed Funds Rate to levels above the long-term interest rate to contain an overheating economy, mainly due to the pro-cyclical nature of the fiscal policy.

However, some uncertainty persists on the maintenance of this momentum in the US economy. The spread between ten-year and two-year government bond yields is at an all-time low. The flattening of the yield curve may signal the onset of a recession, as seen in the past (Chart I.1.9). However, evidence suggests that the predictive power of this indicator may have decreased, in particular given that long-term yields on US government bonds may be reflecting a decrease in the long-term interest rate due to structural factors, such as lower productivity and population ageing.[14]

**Chart I.1.9** • Spread between 10-year and 2-year yields – US | Per cent



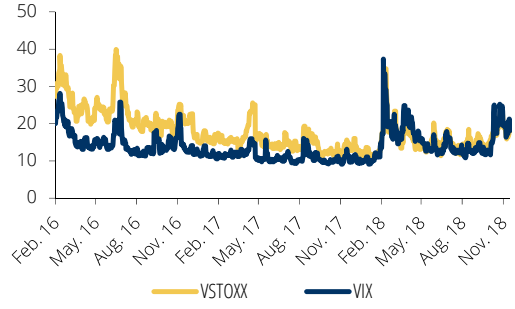

Sources: NBER and Federal Reserve of St. Louis (FRED). | Notes: The grey areas refer to periods of economic cycle contraction in the US and calculated by NBER's Business Cycle Dating Committee (http://www.nber.org/cycles/cyclesmain.html). Latest available data: 1 August 2018.

12. IMF, *World Economic Outlook*, October 2018.
13. For more details, see Box 5 "Macroeconomic impact of a rise in global protectionist tensions", *Economic Bulletin*, June 2018. In the limited war scenario, there is an increase across all import tariffs by the US for all goods from third countries, leading to a 10% increase in prices on exports from such countries to the US. Subsequently, these economies would retaliate by imposing 10% tariffs on US imports. The generalised trade war scenario assumes that all countries impose custom duties on the imports from other countries, with an impact of approximately 10% on international trade prices.
14. See "The Slope of the Yield Curve and the Near-Term Outlook", published by the San Francisco Fed on 15 October 2018.

Strong economic growth in the US, the appreciation of the US dollar and the interest rate increase by the Fed have also contributed to a deterioration in financing conditions in some emerging market economies (EMEs), particularly those with greater macrofinancial imbalances and US dollar-denominated external financing (e.g. Turkey, Argentina and South Africa). The contagion effects of these risk premia reassessment episodes on other economies were relatively muted. However, many euro area banking systems are considerably exposed to these economies.

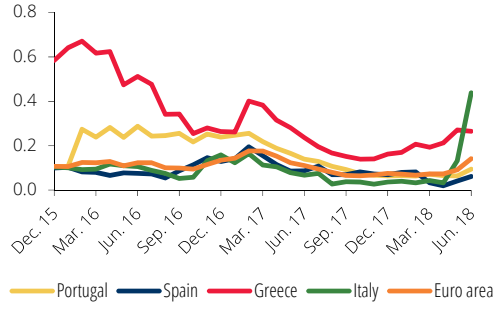
Following the marked increase in early 2018, equity market volatility fell back again to levels close to those seen in 2017. However, in October 2018, a sell-off was once again sparked in US equity markets, mostly among technology firms, thus interrupting the valuation trend seen over the past few years. This mirrors abrupt changes in the market sentiment, which may reflect, inter alia, the normalisation of the US monetary policy at a more rapid pace than initially expected by investors, trade tensions, political uncertainty and expectations for a deceleration in world growth. These factors may have been magnified due to automated buying and selling strategies, which have gained traction in the market over the past few years. Some market players have indicated that these bouts of risk reassessment may have stemmed from a broader change from an investment perspective, anticipating lower liquidity conditions in international financial markets. These movements have passed through to other markets, particularly in China and, to a lesser extent, in Europe (Section 2.2 Financial markets, and Chart I.1.10). In the latter case, in addition to contagion from the events mentioned above, its developments have been impacted by political uncertainty in Italy.

**Chart I.1.10** • Implied volatility in equity markets | Per cent




Source: Thomson Reuters. | Notes: Implied volatility in prices of options on the Euro Stoxx 50 and S&P 500 equity indices, represented respectively by the VIX (USA) and VSTOXX (area euro) indices. Latest update: 16 November 2018.

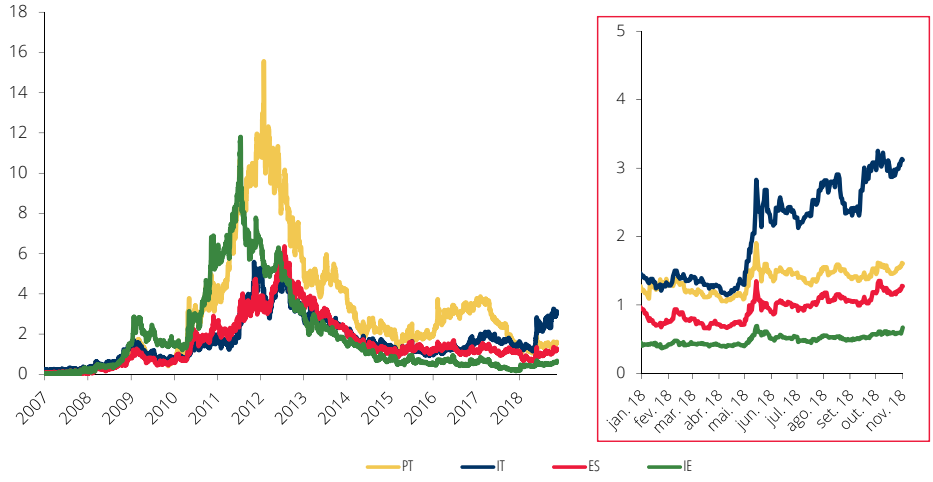
**Chart I.1.11** • Sovereign systemic stress composite indicator | Between 0 and 1




Source: European Central Bank. | Note: This indicator is calculated using the approach developed in *Beyond spreads: Measuring sovereign market stress in the euro area*, WP No. 2185, October 2018.

Following the elections in Italy and the formation of the new government, Italian government bond yields rose markedly across maturities. This reflects concerns about sovereign debt sustainability and uncertainty related to the implementation of economic policies by the new government. To date, contagion to yields on other euro area economies has been relatively limited (Charts I.1.11 and I.1.12). However, if the budgetary situation in Italy deteriorates, particularly following the launch of an excessive deficit procedure by the European Commission, there may be an additional reassessment of Italy's risk premium, the resurgence of redenomination risks, and financial and economic fragmentation in the euro area. This may lead to the deterioration in market sentiment towards other Member States, most notably those with indebtedness levels above the euro area average and/or whose banking systems still suffer from vulnerabilities.

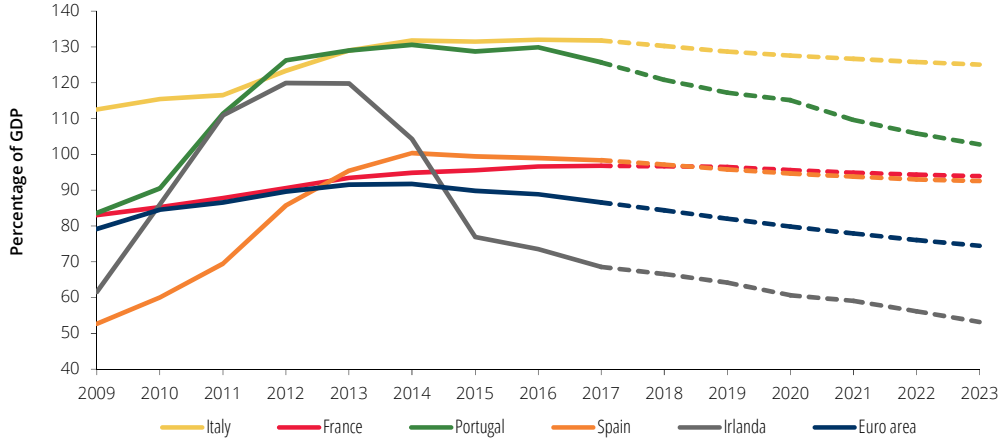
**Chart I.1.12** • 10-year sovereign debt securities – spreads versus Germany | Basis points




Sources: Thomson Reuters (Banco de Portugal calculations). | Note: Last update: 16 November 2018.

Despite the possibility of contagion from the situation in Italy to other economies, the expectedly different adjustment pace in public debt may help mitigate the materialisation of this risk (Chart I.1.13).

**Chart I.1.13** • General government gross debt | Percentage of GDP




Source: IMF, Fiscal Monitor October 2018. | Note: Dashed lines represent projected values.

Still at European level, given its importance to financial markets, the possibility of a no-deal scenario in the context of the United Kingdom (UK) withdrawing from the European Union (the so-called "hard Brexit") is another factor that may bring turmoil to international financial markets and result in risk premia reassessments worldwide. Furthermore, the risk and high uncertainty surrounding the effects of an interruption in the euro area-UK relationship, particularly concerning financial contracts and the ensuing economic impact.

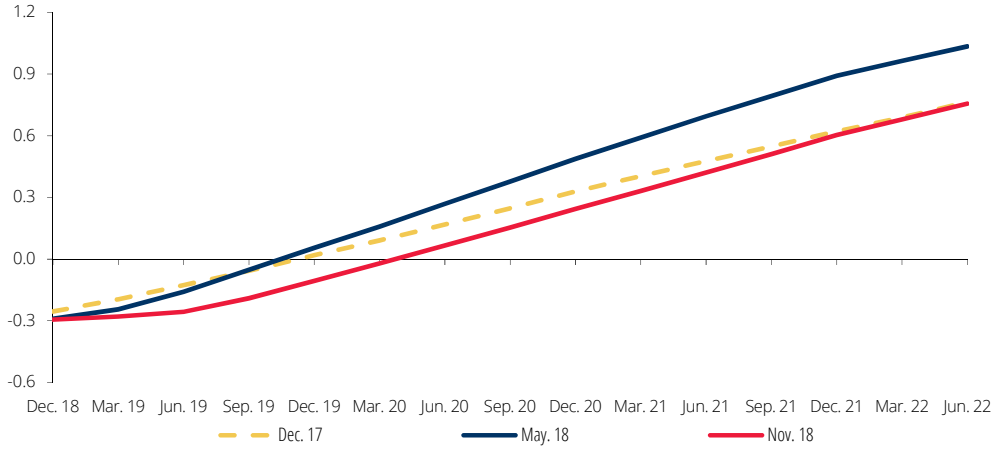
The current macrofinancial environment and high uncertainty levels may result in greater financial market volatility, with an impact on financing conditions, especially for issuers with lower liquidity buffers. In the case of persistently deteriorating risk premia, market financing conditions will tend to worsen, even for domestic economic agents with longer-term debt, more diversified sources

of financing and more widely available liquidity. As such, it is essential to pursue policies that promote the sustainability of public finances, potential output growth of the Portuguese economy and a more resilient banking system, as these factors influence risk perception by investors.

## Amid expectations of a very gradual increase in short-term interest rates or a possible delay in this rise, risks to financial stability remain

The prospect of normalising monetary policy by the ECB – in the wake of lower net asset purchases as of the end of 2018 and the possibility of an increase in key interest rates as of mid-2019 – indicates a very gradual increase in market interest rates. Compared with the previous issue of the *Financial Stability Report*, the interest rate curve implied by the three-month Euribor futures shifted downwards, with Euribor interest rates expected to enter positive territory not before June 2020 – previously, October 2019 (Chart I.1.14). The low interest rate environment has curtailed the improvement of profitability among financial institutions in Europe and Portugal, despite the positive effects on NPLs.

**Chart I.1.14** • Implied interest rate in the three-month EURIBOR futures contracts | Per cent




Source: Thomson Reuters (Banco de Portugal calculations). | Note: 90-day average value of the interest rate implicit in the three-month EURIBOR futures contracts traded in the London International Financial Futures and Options Exchange (LIFFE). Latest update: 16 November 2018.

The low interest rate environment has led investors to seek higher profitability from riskier assets, thus increasing their exposure. In turn, the excessive narrowing of risk premia renders international financial markets more sensitive to the materialisation of an abrupt reassessment of risk premia.

In the banking sector, lower short-term interest rates have a negative impact on net interest margin, given the asymmetric pass-through of these interest rates to borrowing and lending operations. On the one hand, interest income, particularly on loans to customers, reflects relatively quickly developments in short-term interest rates, to the extent that a very substantial share of the stock of these loans was granted at a floating interest rate, which is gradually reset at relatively shorter maturities. On the other hand, as regards interest expenses, developments in market interest rates are reflected only partly in the deposit component (demand deposits tend

to bear no interest rate), while time deposits are re-priced only upon roll-over, which reinforces the existing lag. Furthermore, interest rates on customer deposits cannot fall below zero. A greater volume of bank lending can partly offset this price effect. However, and for most of the non-financial private sector, the stock of loans granted by the financial sector continues to post near-zero annual rates of change, against a background of still high overall indebtedness levels.

Consequently, the very low interest rate environment, along with the search for yield by the banking sector, produce incentives to looser credit standards, resulting, inter alia, in the narrowing of spreads (due to competitive pressure) or less strict terms and conditions of agreements.

**Chart I.1.15** • Spreads on new credit business and deposits – Non-Financial Corporations | Percentage points

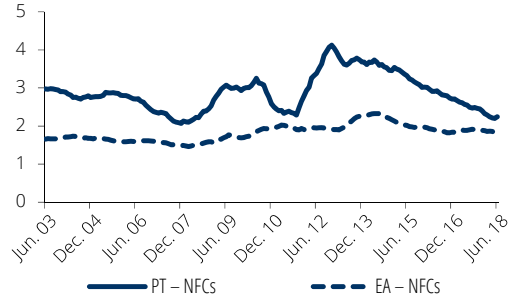
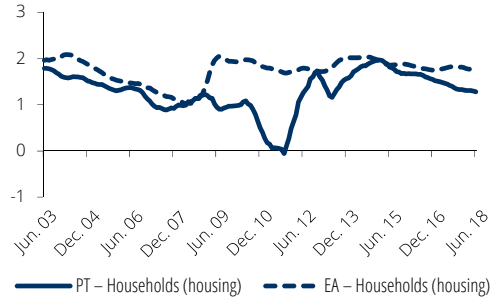



**Chart I.1.16** • Spreads on new credit business and deposits – Households for house purchase | Percentage points




Source: European Central Bank (Banco de Portugal calculations). | Note: Difference between MFI interest rates for new business loans (NFCs or households for house purchase, respectively) and a weighted average rate of new deposits from households and NFCs. Values for euro area computed as a simple mean. Half-year flows. The dashed lines represent the 2003-18 averages.

In the case of NFCs, some banks participating in the October 2018 Banking Lending Survey indicated a narrowing of the spreads on medium-risk loans to both SMEs and large enterprises. In the first half of 2018, the interest rate reduction was accompanied by a lower degree of differentiation of spreads according to NFC risk levels (Section 4.3. Credit standards). Interest rate spreads have followed a downward path since 2013, thus approaching euro area levels, which were relatively stable (Chart I.1.15). Although the narrowing of spreads coexists with a better performance of firms in the short run, to the extent that it is associated with the channelling of funds at a lower cost than the remuneration of implied risks, it may benefit firms with low economic sustainability. In fact, attempting to increase lending by setting interest rate spreads that do not cover the risk inherent in the loans will lead to increased credit default in the future.

Looking at the household sector, most institutions participating in the October 2018 Bank Lending Survey reported that credit standards had tightened, and indicated that the macroprudential measure implemented by Banco de Portugal was the main factor behind this. This resulted in the tightening of the loan-to-value (LTV) ratio, stricter limits to amounts granted and to maturities. However, the tightening of other conditions, such as spreads, remained unchanged or was reported as diminishing, due to competitive pressure in the credit market. This indication is in line with the decrease in the interest rate margin between new loans for house purchase and new deposits, which has fallen below the euro area levels since June 2015 (Chart I.1.16). At the same time, there has been an upturn in new loans to house purchase, although still clearly below that the level observed before the international financial crisis.

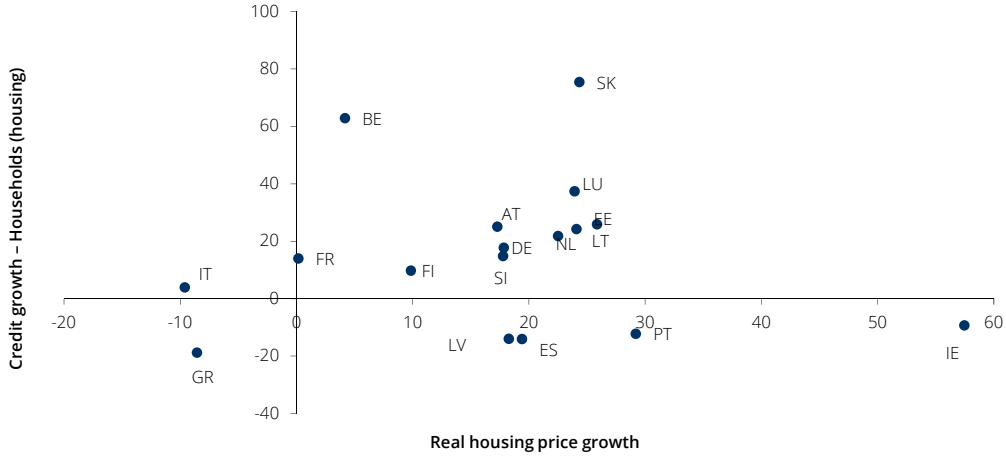
Consumer credit continued to accelerate in the first half of 2018, and the flows of new loans drew nearer to the volume recorded prior to the financial crisis, but with a shift towards loans with longer maturities. The interest rate applied in this type of operation was relatively stable, at high levels, in the first half of 2018.

Bearing in mind these developments, against a background of a highly indebted non-financial private sector and low savings rates (particularly significant in the household sector), the outlook of rising short-term interest rates (albeit at a gradual pace) and a deceleration in economic activity, it is essential that credit risk assessment and pricing are suitable, thus containing losses in the event of adverse scenarios and the ensuing reduction in debt servicing.

## Real estate price growth in Portugal continued to be driven by demand from non-residents

In recent quarters, some signals, albeit limited, have emerged that aggregate residential real estate prices have been overvalued, with possibly more marked overvaluation episodes at regional/local level (Section 2.3. Residential real estate market). This has been linked to the strong momentum in tourism and direct investment by non-residents. The recovery in residential real estate market prices should not be dissociated from the upturn in the Portuguese economy, which has contributed to an improved perception from domestic and international investors. The acceleration in residential real estate prices between the end of 2013 and the first half of 2018 was broadly based across many euro area countries, in a few cases along with robust home loan growth (Chart I.1.17).

**Chart I.1.17** • Cumulative changes in residential real estate prices and in loans for house purchase | Per cent




Sources: European Central Bank and Organization for Economic Co-operation and Development (OECD). | Notes: Cumulative changes between 2013Q4 and 2018Q2, with exception of France (2018Q1). Cyprus and Malta are excluded from the sample due to the lack of data. Cumulative changes of the stock of loans to households for house purchase. Residential real estate prices measured in real terms.

However, available evidence suggests that credit granted by resident banks in Portugal is not the main factor behind price developments in the residential real estate market, with the continued decrease in the stock of home loans, although at an increasingly slower pace. Between the end of 2013 and the first half of 2018, residential real estate prices rose by approximately 29%, while

loans for house purchase declined by 12% over the same period. Looking at this information broken down by region, the decrease in the share of bank loans to households for house purchase in total transactions between 2010 and the year that ended in June 2018 was more marked in the Lisbon Metropolitan Area and Algarve, which may be related to the greater weight of purchases by non-residents or firms.[15]

The higher demand for real estate had a positive impact on the domestic banking system, easing the sale of real estate received as payment in kind held in banks' portfolios and contributing to the reduction in NPLs associated with loans granted against real estate collateral. However, the same trend may result in the market's increased sensitivity to the international environment, particularly in the case of abrupt risk premia reassessments at global level, and in the deterioration in financing conditions of non-resident investors, which tend to experience larger volatility. The materialisation of geopolitical uncertainty episodes and the slowdown in global economic activity may have an adverse impact on external demand for Portuguese goods and services, most notably affecting tourism exports.

Given that the banking system is highly exposed to the residential real estate market, a sudden price adjustment in this market poses risks to the sector, particularly if credit institutions inadequately internalise price dynamics when assessing credit risk on new loans for house purchase. This effect should be mitigated by Banco de Portugal's macroprudential recommendation as regards new credit agreements for households, thus reducing the risk of an interaction between domestic loans and real estate prices. Looking at the stock of loans for house purchase or granted against real estate collateral, the negative impact of any price correction may be mitigated by a store of value, on the back of the valuation initially used when assessing credit and a possible increase in the value of real estate in the meantime, and also taking into account the loan repayment already made. A scenario where real estate prices are abruptly corrected may also negatively affect the banking sector's ability to sell real estate received as payment in kind and to reduce NPLs collateralised by this type of asset, as has been the case since mid-2016.

## Despite its advantages, technological innovation may affect confidence in the financial system and has been considered the main risk from a financial stability standpoint

Over the past few years, a new wave of technological innovation in financial services has been introduced in the market, the so-called fintech, comprising new entities, activities and processes in this area. This wave has materialised in greater diversity of entities providing financial services, and in developments in the business model of most entities directly or indirectly active in this market, which makes it possible to expand the provision of these services and the customer base and to potentially cut associated costs, which should allow for gains for the economy. However, fintech may also be a source of risk or a channel for the propagation of systemic risks. Box 2, entitled "Fintech – financial stability perspective" reviews this topic, as well as the complexity of the monitoring of fintech from a financial stability standpoint.

15. For more details, see Box 5, entitled "Recent developments in the sale of family dwellings and loans to households for house purchase: regional heterogeneity", *Economic Bulletin*, October 2018.

Fintech is altering the financial system across the board, and may substantially change relationships with financial service customers. In this context, confidence in the financial system, a central component of stability, must be safeguarded, irrespective of how and who carries out financial intermediation and economic activity financing activities. However, to date, there is no evidence of risk materialisation at European level.

## The ultimate goal of regulation is to make the banking sector more resilient. However, the transition process may entail some risks.

In order to comply with the minimum requirement for own funds and eligible liabilities MREL, banks will need access to international financial markets. As such, the market sentiment of domestic issuers will gain importance. Given that this requirement applies to the European banking system in its entirety, it will very possible result in a substantial increase in issues of eligible instruments for meeting the MREL in a relatively short period of time. A more adverse macrofinancial environment – for instance, should the risk of a reassessment of risk premia materialise, impacting on the domestic sovereign – may have significant implications for access and/or the cost of issuing these assets for the Portuguese banking sector. A more limited capacity to access international financial markets may force banks to pursue other strategies in order to comply with the MREL, most notably, deleveraging, which would have a negative impact on credit supply.

The recent financial crisis – of an unprecedented scope – exposed the vulnerabilities of a fragmented European institutional architecture and risks to the euro area financial stability stemming from the correlation between sovereign risk and banking risk. With this key objective in mind (i.e. breaking the link between the sovereign and banks), European leaders made a commitment in 2012, based on the so-called Four Presidents' Report, in full agreement on the urgency of establishing a true Banking Union, through immediate, effective and concerted action.

Although the first two pillars of the Banking Union are fully operational – the Single Supervisory Mechanism (SSM) since November 2014 and the Single Resolution Mechanism (SRM) since January 2016 –, the lack of a European Deposit Insurance Scheme (EDIS) – the third and last pillar – has helped intensify financial stability risks inherent to the perpetuation of imbalances of an incomplete European institutional architecture.

These imbalances chiefly arise from the fact that decision-making centres on institutions' supervision and resolution matters have been upscaled to European level, while any costs arising from these decisions are still borne by national 'safety nets', which could potentiality impact on national public accounts. Consequently, the ultimate responsibility for the safeguarding of financial stability still lies with national authorities, which are now materially limited in their ability to act given the available instruments and in a landscape crossed by the influence of monetary policy measures and prudential supervision/resolution measures.

Three years after the European Commission's proposal on the establishment of the EDIS, Member States have yet to reach political understanding as regards key aspects of the scheme, most notably how losses are shared in the long run (i.e. whether comprising liquidity only, a system of coinsurance or full mutualisation). Furthermore, in light of the roadmap approved in June 2016, their positions differ on the 'proper' hierarchy of priorities that should be followed in the deepening of the EMU.

As such, political discussions have converged to a polarised stalemate among Member States. On the one hand those which, concerned that their banking systems would systematically subsidise other Member States, maintain that additional risk-reduction measures must be in place prior to risk mutualisation. On the other end of the spectrum, Member States that, in view of the important steps already taken and the risks to financial stability of an incomplete Banking Union, call for progress in increased risk sharing (via EDIS), in line with the commitments made, and thus pursue the ultimate goal of breaking the link between banking risk and sovereign risk.

The Communication from the European Commission, of 11 October 2017, exposed the complexity of negotiations and difficulties in securing an agreement among European leaders to increase risk sharing, which is a major structural step backwards from the 2015 draft legislation on EDIS.

Furthermore, the conclusions of the Euro Summit on 29 June 2018 – which, as regards the Banking Union, mirror the Meseberg Declaration, a French-German agreement – suggest that the political stalemate surrounding the EDIS may not stem solely from diverging positions among Member States, but from the fact that, at least for now, they are irreconcilable. The summit results fell short of economic agents' expectations about the Banking Union issue, given that, with the exception of the backstop to the Single Resolution Fund (SRF) (i.e. a last resort common fiscal backstop mechanism), all other decisions were postponed.

More specifically, as regards the EDIS, in the June 2018 summit, political leaders agreed that "[a]dhering to all elements of the 2016 roadmap in the appropriate sequence, work should start on a roadmap for beginning political negotiations on the European Deposit Insurance Scheme". Turning to the common fiscal backstop to the SRF, it was decided that the European Stability Mechanism (ESM) would provide that 'safety net'. Its role in crisis management, moreover, should be reinforced as part of the ESM reform, as set out in the 25 June letter sent by the Eurogroup President to the European Council President, which would include the implementation of the backstop ahead of the end of the transition period (i.e. prior to 2024), conditional on the prior assessment of whether risks have sufficiently decreased among banking systems on the back of NPLs reduction and the loss-absorbing capacity gauged by MREL build-up. A key aspect to these conditions is that no Member State or participating financial institution will be excluded from access to this backstop.

However, risks to financial stability lie ahead if the future model to assess whether risk reduction measures are sufficient – either for the backstop to the SRF or also extended to the establishment of the EDIS – relies on a mechanicist/rigid evaluation as to the strict compliance of certain predefined quantitative targets, without providing for the different points of departure in each Member State and without taking into account their particularities (e.g. macroeconomic situation, drivers for the high level of certain legacy assets) and of their respective banking systems (e.g. size, business models, financing structure). Only a comprehensive review, focusing on both quantitative and qualitative factors, will allow for a grounded comparison of the progress made. Furthermore, a forward-looking analysis is crucial to capture the progress that, albeit ongoing, has yet to materialise substantially (e.g. legislative initiatives under implementation).

Alongside the swift operationalisation of the common fiscal backstop to the SRF and on the basis of an appropriate governance architecture, building a liquidity support tool and an interim funding scheme for the SRF transition period is also key to enhance the SRM's credibility and effective capacity to act when carrying out a resolution action, without potentially impacting on national budgets, and thus promoting financial stability.

Despite the agreement reached on the common fiscal backstop to the SRF, the importance of the third pillar of the Banking Union should not be downplayed: both are likewise indispensable to

a truly operational and sound crisis management system in the euro area, due to their ex-ante impact on economic agents' confidence in its actual capacity to act, thus protecting taxpayers when dealing with crises. For more details on the need for an EDIS model consistent with the ultimate goal of a true Banking Union, see the June 2018 issue of the *Financial Stability Report*.

However, taking into account the fragile outlook about the sequencing of reforms towards the deepening of the EMU, policymakers are faced with a major challenge: assess whether risks to financial stability stemming from the banking system being subject to a number of transitional requirements (either to access the EDIS or as part of the transition to loss sharing), to address legacy issues identified in banks' balance sheets, are warranted in view of possible future benefits from the EDIS, particularly if it comes to be stripped of its component associated with full mutualisation of losses in the long run.

Until such time as the benefits from being part of a true EMU can be fully reaped, namely because the remaining elements of an institutional architecture for a true Banking Union are not yet in place (including the backstop to the SRF and the EDIS), and as long as the safeguarding of financial stability – both in the Union as a whole but also in each Member State – is not seen as an end in itself and a key priority in the action taken by European authorities, it is vitally important that, in the course of the transition period, Member States have the necessary national instruments in place to ensure that they are suitably skilled to protect taxpayers and financial stability in their jurisdiction.

Therefore, amid prevailing vulnerabilities stemming from a European crisis management regime relying, however, on the 'safety nets' of each Member State – which brings us to Mervyn King's quote that "global banks are global in life, but national in death" –, it is imperative to rethink the initiatives and trends in European banking regulations that may pose obstacles to the host national competent authorities' ability to mitigate risks to financial stability stemming from the activities carried out by systemically important cross-border banking groups in their jurisdiction. As such:

- It seems unwise to carry on with the debate about: (i) the proposed introduction of a derogation from capital requirements, on an individual basis, for subsidiaries of cross-border banking groups, and (ii) making the current derogation from liquidity requirements more flexible on an individual basis across borders. For more details, see the Special Issue "Revision of the CRD IV-CRR: what's new?". Underlying this is the argument that it is key to boost circulation and efficient allocation of resources among groups with cross-border activities in the European Union and the resulting emergence of global players in a single jurisdiction. However, this will only be feasible in a truly integrated market, which provides common guarantees to safeguard financial stability in all Member States where a given entity carries out its business.
- It is also to be expected that, with regard to options and discretions, Member States remain entitled to apply large exposure limits for intra-group exposures. Although curtailing the effect of the derogation by the European banking supervisory authority from liquidity requirements on an individual basis, this is a national safeguard that should be in place in the transition to a complete Banking Union.
- It is advisable to rethink the possibility of banking groups to choose how to carry out their business in other Member States – either as a branch or a subsidiary – and the powers conferred on national competent authorities to refuse the establishment of such branches or to carry their supervision.
- A discussion is warranted about the dissemination across the Banking Union of the single-point-of-entry (SPE) resolution for cross-border banking groups – as opposed to multiple-point-of-entry resolution (MPE) –, to the extent that the first approach implies and fosters integration and dependence among the group's subsidiaries. For that purpose, when planning and implementing

resolution measures, financial stability concerns should be addressed both at group level and as regards the systemic importance of each subsidiary in its jurisdiction (particularly when the strategy actually implemented in the event of resolution differs from the resolution plan).

Furthermore, by postponing the implementation of crucial action for the deepening of the EMU, thinking up decisive and effective solutions may be precipitated by a new crisis, with the increased risk of suboptimal solutions.

In the absence of a cross-border centralised 'safety net' and, consequently, in light of the maintenance of a direct link between banking risk and sovereign risk, the banking system is still exposed to risks inherent to a still incomplete European institutional architecture, which are partly due to the lack of a cross-border 'safety net' capable of withstanding systemic shocks.

## **1.3** Macroprudential policy

As the national macroprudential authority, Banco de Portugal is entrusted with defining and implementing macroprudential policy, most notably by identifying, monitoring and assessing sources of systemic risk, as well as by proposing and adopting measures to prevent or mitigate such risks, so as to bolster financial sector resilience. Systemic risk can be defined as the risk of disruption in financial services that may, inter alia, affect the flow of credit, stemming from risk materialisation in the financial system as a whole, or part thereof, with potentially negative consequences for the real economy.

To date, Banco de Portugal has chiefly focused on the development of the conceptual framework of macroprudential policy and the activation of macroprudential instruments it deems, ex ante, suited to address the build-up of systemic risk. Examples include the capital conservation buffer (CCB), the Other Systemically Important Institution buffer (O-SII) and the Recommendation of Banco de Portugal within the legal framework of new credit agreements for consumers.

Borrower-based measures, such as the aforementioned Recommendation, are intended to reduce the build-up of systemic risk, while the countercyclical capital buffer (CCyB), the capital conservation buffer and the Other Systemically Important Institution buffer are aimed at making the banking system more resilient to risk materialisation.

### The Recommendation of Banco de Portugal within the legal framework of new credit agreements for consumers entered into force on 1 July

The economic upturn, in a low interest rate environment, and the upward trend in real estate prices are conducive to the further loosening of credit standards. On 1 February 2018, Banco de Portugal issued a Recommendation within the legal framework of new credit agreements for consumers, with the purpose of taking preventive action, on the one hand, by discouraging credit institutions and financial corporations from taking unreasonable risks on new lending, thus contributing to financial sector resilience and, on the other hand, by encouraging access to sustainable funding by borrowers, thus minimising default risk.[16]

16. For further details regarding Banco de Portugal's macroprudential recommendation, relating to residential immovable property and new consumer credit agreements, see section 1.3 Macroprudential Policy in the Financial Stability Report of Banco de Portugal, June 2018, and Banco de Portugal's website, https://www.bportugal.pt/en/page/ltv-dsti-and-maturity-limits.

The limits introduced by the Recommendation were calibrated, on the one hand, so as to constrain lending to borrowers with a higher risk profile without affecting lending in general. On the other hand, this calibration takes into account the expected rise in interest rates and the likely reduction in the borrower's income upon retirement. This macroprudential recommendation applies to new credit agreements concluded from 1 July 2018 onwards, both relating to residential immovable property and new consumer credit agreements. It covers all credit institutions and financial corporations, having their head office or branches in Portuguese territory authorised to grant this type of credit in Portugal.

Recent developments in housing prices are out of synch with the credit cycle in Portugal. However, greater pressure from credit-backed demand for housing may contribute to an ongoing upward trend for prices, which is an undesirable scenario, as it poses risks to financial stability. Therefore, Banco de Portugal considers that in the current environment of marked growth in residential real estate market prices, setting these limits will tend to mitigate interlinkage risks between residential real estate prices and the credit cycle, with positive consequences for financial stability.

With the purpose of assessing the implementation of the aforementioned Recommendation, Banco de Portugal contacted major institutions in the Portuguese financial system and institutions specialising in consumer credit.[17]

Compiled information suggests that as at 31 July all institutions operated within the limits established in the Recommendation in its retail distribution channels. In turn, at that time, the implementation of limits in the digital channels of a number of institutions was more incipient, but institutions seem to have adapted their offer in these channels in accordance with the limits established in the Recommendation.

Overall, the implementation of the Recommendation seems to have improved the creditworthiness assessment of borrowers by institutions, given that it has set harmonised minimum criteria for credit agreements. For a number of institutions, the criteria set out in the recommendation are supplemented with previously applied criteria, such as income net of expenditure and debt servicing capacity, inter alia. Furthermore, for the vast majority of institutions, where any of the criteria set out in the Recommendation is not met, the loan application is moved up the decision-making process, as a means to monitor the limits and the exceptions laid down by Banco de Portugal.

Although most consumer credit is already granted at a fixed rate, following the Recommendation's entry into force, evidence suggests that the supply of credit products has changed, for instance, with an increase in consumer credit products with a fixed interest rate and a decrease in products with a grace period for payment of interest and/or principal.

According to the data collected, a complete analysis cannot be made of the Recommendation's impact on credit developments over the first few months, given that in a number of institutions the limits set out in the recommendation were implemented only gradually. Also, the analysis is affected by credit operations for which creditworthiness assessment took place prior to the Recommendation's entry into force, but whose funds were only released after 1 July 2018. This is particularly noteworthy in credit agreements relating to residential immovable property, for which the period between the creditworthiness assessment and the release of funds is longer than for consumer credit agreements. Moreover, available data for some institutions includes loans 10 times below the minimum monthly wage, which are excluded from the macroprudential measure, thus affecting the calculation of the debt-service-to-income (DSTI) ratio and the loan-to-value (LTV) ratio.

17. These institutions represent about 94% of the total consumer credit agreements and credit agreements relating to residential immovable property, as at 30 June 2018.

However, the LTV ratio seems to have become stricter, to the extent that total credit granted now depends on the lower of the purchase price and the appraisal price. Indeed, overall, the purchase price is below the appraisal price. For instance, prior to the implementation of this measure, it was standing practice among institutions that the cap for the LTV ratio for own and permanent residence stood between 80% and 90% of the appraisal value.

Turning to loan maturity, most institutions had no upper limits in place as regards the maturity of new credit agreements longer than those established in the Recommendation and do not seem to have reported significant breaches to the caps set out therein. However, before the Recommendation of Banco de Portugal entered into force, as regards credit agreements relating to residential immovable property, a number of institutions offered loans with a maximum maturity date of 50 years. As regards the gradual convergence to an average maturity of 30 years for credit agreements relating to residential immovable property, although no specific action has been taken yet, institutions expect that, by ceasing to grant loans with a maturity of over 40 years, this will lead the average loan maturity towards the recommended limit (30 years).

Looking to data on the monitoring of developments in the credit categories excluded from the scope of the Recommendation, there seems to have been no change in the pattern of loans below 10 times the minimum monthly wage or the provision/use of credit lines and cards.

In the October 2018 Banking Lending Survey, most institutions indicated that credit standards applied to household loans have tightened, both in credit agreements relating to residential immovable property and consumer credit agreements. As regards the terms and conditions of agreements, in credit relating to residential immovable property, institutions reported changes towards stricter collateral requirements, the LTV ratio and other limits to volume/maturity. According to respondents, the main factor behind such developments was compliance with the macroprudential measure adopted by Banco de Portugal. Banco de Portugal will continue to closely monitor the institutions' compliance with the macroprudential measure, and will act accordingly, if it deems necessary.

## The countercyclical capital buffer remained unchanged in the last quarter of 2018, at 0% of total outstanding exposures

In view of the persistent negative credit-to-GDP gap in relation to its long-term trend, Banco de Portugal kept the countercyclical capital buffer at 0% for the last quarter of 2018. Most indicators used to compute the countercyclical capital buffer do not indicate a build-up of cyclical systemic risk, except for real estate asset prices, which continue on an upward path, as well as spreads applied to home loans and corporate loans, which are still decreasing.

At European level, in line with the upswing in the credit cycle, there is an increasing trend towards the activation of the countercyclical buffer, as discussed in greater detail in Box 3, entitled "Implementation of countercyclical capital buffers in the European Union".

## The capital conservation buffer will continue to be phased in until 1 January 2019

The phase-in of the capital conservation buffer has remained unchanged and is nearing completion. On 1 January 2019 the capital conservation buffer will become fully effective and correspond to 2.5% of a bank's total exposures, rising by 0.625 percentage points compared with 2018.

The purpose of the capital conservation buffer is to absorb losses experienced in a potentially adverse macroeconomic and financial scenario, thus bolstering the resilience of institutions and helping maintain stable financing flows to the real economy.

## The Other Systemically Important Institution buffer reached half of the total requirement established as of 2021

Despite a slight adjustment in the scores used to identify systemically important institutions, the phase-in of capital buffers for these institutions remained unchanged. As such, and as illustrated in Table I.1.1, on 1 January 2019 the second stage of implementation will start. This macroprudential tool, whose purpose is to mitigate the build-up of systemic risks stemming from misaligned incentives and moral hazard associated with institutions deemed too big to fail, should be fully completed on 1 January 2021.

**Table I.1.1** • O-SII buffer applied to each banking group from 1 January 2019 onwards
| Percentage of total exposures

| Banking group | O-SII buffer | | |
|---|---|---|---|
| | 1 January 2019 | 1 January 2020 | 1 January 2021 |
| Caixa Geral de Depósitos | 0.500% | 0.750% | 1.000% |
| Banco Comercial Português | 0.375% | 0.563% | 0.750% |
| Novo Banco | 0.250% | 0.375% | 0.500% |
| Santander Totta, SGPS | 0.250% | 0.375% | 0.500% |
| Banco BPI | 0.250% | 0.375% | 0.500% |
| Caixa Económica Montepio Geral | 0.125% | 0.188% | 0.250% |

## Recommendation ESRB/2017/6 helps mitigate or prevent sources of systemic risk associated with liquidity mismatches and the use of excessive leverage in investment funds

To date, macroprudential policy instruments used across the EU have been directed to the banking sector, with the purpose of preventing or mitigating the build-up of systemic risk or bolster the resilience of institutions upon risk materialisation. However, the European Systemic Risk Board (ESRB) has recently issued Recommendation ESRB/2017/6, to address potential systemic risks stemming from investment funds. This Recommendation aims at bolstering the resilience of investment funds to liquidity shocks, thereby fostering the practical use of stress tests. Furthermore, it aims at developing a harmonised UCITS (undertakings for collective investment in transferable securities) reporting framework across the EU and a macroprudential tool to limit leverage in alternative investment funds (AIFs).

The Special Issue entitled "Investment funds as a source of systemic risk" looks into the most relevant features of investment funds, how these entities may help amplify risks in the financial system, and the size of investment funds in Portugal. It also discusses tools to prevent or mitigate such sources of systemic risk. The conclusion is that, at national level, it does not seem necessary for Banco de Portugal, as the macroprudential authority, to consider taking action to

address potential risks to the financial system stemming from investment funds. This conclusion notwithstanding, Banco de Portugal considers that having a set of instruments available as suggested in Recommendation ESRB/2017/6 will help mitigate, where necessary, the potential systemic risk stemming from fund activity.

## The revision of the regulatory package for the banking sector (CRR/CRD) strengthens the macroprudential policy framework

In 2016 the European Commission (EC) launched a public consultation about the revision of the macroprudential policy framework in the EU, encompassing the banking regulatory package and the institutional architecture, including the mandates of the various authorities involved and the coordination between these authorities. In fact, the current regulatory framework was agreed before national macroprudential authorities were appointed across Member States, as it also pre-dates the establishment of the Banking Union, including the Single Supervisory Mechanism (ECB/SSM) and the Single Resolution Mechanism (SRM). As such, one of the items addressed in the EC's public consultation was the need to exactly set out the coordination and cooperation mechanisms between authorities promoting financial stability.

In its response to the EC's public consultation, Banco de Portugal enumerated several principles that should govern the revision of the macroprudential policy framework.[18] Overall, these principles aim to: (i) foster a clear allocation of responsibilities and policy instruments, (ii) provide macroprudential authorities with sufficient powers and tools to identify and monitor systemic risk and strengthen their action in financial sectors other than the banking sector, and (iii) maintain their flexible approach to systemic risk mitigation.

However, given the short period of macroprudential policy implementation in the EU, the EC decided that it was too early to propose a full revision of the regulatory framework. Therefore, the proposed revisions are included in the additional risk-reducing measures for the banking sector, with the approach being consistent with that adopted for the other components of the banking regulation package (CRD[19]/CRR[20]), given that it was not revised in its entirety. At present, discussions cover not only the initial EC proposal, but also other proposals presented by the European Council and the European Parliament as part of the ongoing legislative process. As such, the final version will result from negotiations among the European co-legislators and, therefore, it may still be changed.

18. These principles are summed up in Box 1, entitled "Changes to the macroprudential policy framework in the European Union: main priorities from Banco de Portugal's perspective", *Financial Stability Report*, June 2017.
19. Directive 2013/36/EU of the European Parliament and of the Council, of 26 June 2013, on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms.
20. Regulation (EU) No. 575/2013 of the European Parliament and of the Council, of 26 June 2013, on prudential requirements for credit institutions and investment firms.

One of the legislative amendments under discussion refers to the possibility of using Pillar 2[21] instruments exclusively to mitigate specific risks at institution level, thus precluding their use in the application of common supervisory measures to institutions with similar risk profiles, which falls under the macroprudential policy remit. Indeed, powers associated with Pillar 2 instruments were assigned to microprudential authorities and, due to their confidentiality, cannot be used to properly signal risks, as a macroprudential tool should. Given the impossibility of using Pillar 2 instruments to mitigate systemic risks, macroprudential authorities should have alternative tools in place to mitigate such risks or be able to make use of existing tools more flexibly. The purpose of the revision of the framework is to align the goal, the mandate and the instruments in place for each authority.

The Special Issue 2, entitled "Revision of the CRD IV-CRR: what's new?" looks with greater detail into changes to the macroprudential framework that are still under negotiation, duly framed within the set of amendments to the regulatory package (CRR/CRD) for the banking sector.

21. Pillar 2 – Supervisory measures and powers – is one of the three supervisory architecture components, according to the Basel II agreement, and makes it possible for supervisory authorities to assess the specific risks of institutions and, inter alia, impose additional capital requirements to mitigate them. In the current framework, these powers are set out in CRD IV (Articles 102 to 107). In particular, Article 103 addresses the application of supervisory measures to institutions with similar risk profiles and, therefore, is of a macroprudential nature.

# 2 Macroeconomic and markets environment

## 2.1 Macroeconomic situation and short-term prospects

### Economic activity in Portugal continued to post positive growth, despite decelerating

In the first half of 2018, the Portuguese economy grew by 2.3% year on year, close to euro area growth. These developments reflected the continuation of the intra-annual deceleration that had been observed in 2017, specifically in investment and exports. By contrast, private and public consumption accelerated slightly. Similarly to the past few years, the Portuguese economy recorded a net borrowing position in the first half of the year. The observed net borrowing position is predominantly seasonal in nature, but has nevertheless been higher than in the same period of 2017. These developments are nonetheless compatible with the maintenance of an external surplus for the year as a whole.[22]

In line with the economic growth path, labour market conditions continued to improve. Employment grew by 2.8% in the first half of 2018 year on year and the unemployment rate declined to 7.3%.[23] The drop in the unemployment rate continued to reflect a sharp decline in long-term unemployment, while the pace of reduction in youth unemployment remained below that of total unemployment. The decline in the unemployment rate and the increase in the minimum wage at the start of the year contributed to a pick-up in wage growth. The rate of inflation decreased by 0.5 p.p. compared with 2017, to 1.1%, reflecting in particular a deceleration in services prices.[24]

World economic growth remained robust but more mixed across geographies, slightly decelerating in main advanced economies, with the exception of the United States. World trade continued to grow above economic activity, despite slowing down. Protectionist measures adopted over the course of 2018 apply to a relatively small share of world trade, but increased trade tensions and uncertainties due to the possibility of further protectionist measures in the future have amplified their impact. Monetary and financial conditions, although still favourable overall, have become slightly tighter, reflecting risks of contagion inherent to a number of emerging market economies.

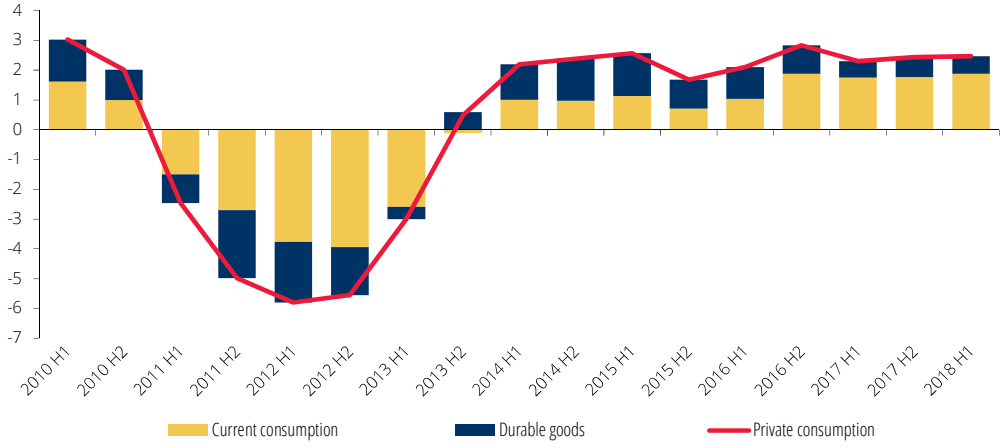
Euro area economic activity continued to post positive growth, despite decelerating. The slowdown recorded in the four largest euro area economies contributed to a deceleration in external demand for Portuguese goods and services, which grew by 3.4% year on year (-1.5 p.p. than in the second half of 2017).[25]

22. National Accounts data for 2018 are preliminary.
23. According to Statistics Portugal's Portuguese Labour Force Survey.
24. For a more detailed analysis of the Portuguese economy in the first half of 2018, see Banco de Portugal, *Economic Bulletin*, October 2018.
25. Source: Eurosystem. External demand for Portuguese goods and services is calculated by the ECB as a weighted average of growth in volume of goods and services imports by Portugal's main trading partners. Each country/region is weighted according to its share in Portuguese exports.

## Buoyant domestic demand mitigated the smaller contribution of net exports to growth

Underlying developments in private consumption in the first half of the year were a slight acceleration in current consumption and lower growth in durable goods consumption (Chart I.2.1), which nevertheless remained high (5.8% year on year), in particular the motor vehicle component. The momentum in private consumption occurs against a background of high confidence levels, a continued increase in household disposable income and marked growth in consumer credit. In nominal terms, as private consumption continued to grow slightly above household disposable income, the saving rate remained at record low levels.

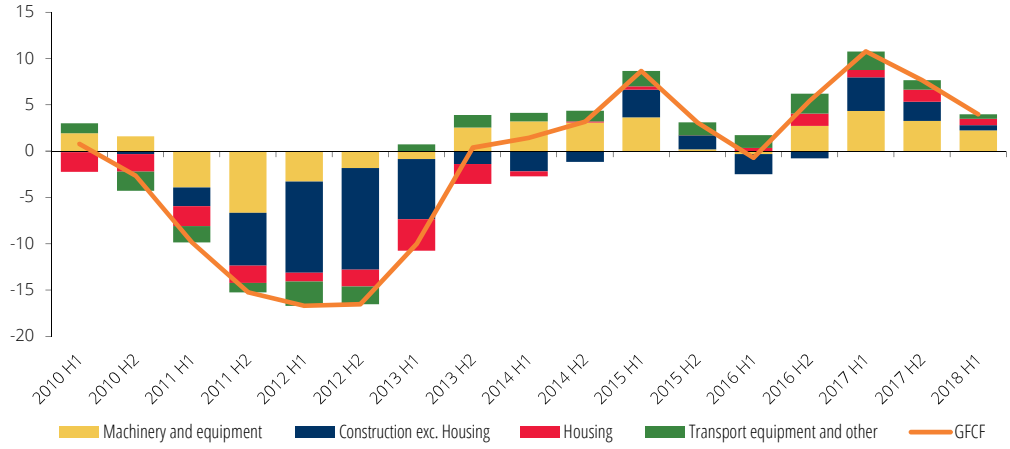
**Chart I.2.1** • Developments in private consumption and contributions from its components
| Year-on-year rate of change, in percentage, and contributions, in percentage points




Sources: Statistics Portugal and calculations by Banco de Portugal.

Investment continued to grow above economic activity, despite decelerating. These developments reflected a slowdown in most components, in particular GFCF in construction excluding housing (Chart I.2.2). These developments are expected to have been influenced by the base effect of a considerable increase in public works in 2017, while confidence in construction continued to improve. In the construction and public works survey, firms have gradually improved their overall assessment of activity in the sector. As regards the other GFCF components, machinery and equipment are of particular relevance. Despite decelerating, this component continued to grow markedly (by 8.2% year on year). This was the only investment component to have already exceeded the level recorded immediately before the international financial crisis.

**Chart I.2.2** • Developments in GFCF and contributions from its components | Year-on-year rate of change, in percentage, and contributions, in percentage points




Sources: Statistics Portugal and calculations by Banco de Portugal.

Economic growth was broadly based across economic sectors, although less differentiated compared with 2017. The growth rate in trade and accommodation and food services stabilised somewhat. In turn, manufacturing, construction, transportation and storage and services to enterprises decelerated.[26]

The Portuguese economy's net borrowing position reached 1.8% of GDP in the first half of 2018, posting an increase of 0.7 p.p. year on year. These developments reflected an increase in domestic investment and, to a lesser extent, a decline in savings. By institutional sector, net borrowing of non-financial corporations increased by 0.9 p.p., to 2.1% of GDP, and household net lending declined by 0.6 p.p., to a slight net borrowing position (0.2% of GDP). Turning to external transactions, in the first half of 2018 the energy and non-energy goods balance continued to deteriorate year on year and the surplus in the services balance related to travel and tourism continued to increase. In parallel, the deficit in the primary income balance increased, reflecting an increase in dividends paid to non-residents and a decline in dividends received.

The international investment position (IIP) deteriorated by 1.1 p.p. from the end of 2017, standing at -106% of GDP at the end of June. Against a background of significant growth in nominal GDP, these developments mainly reflected a negative contribution of value/price changes (devaluation of assets against non-residents and valuation of liabilities of resident entities) and, to a lesser extent, net financing flows from non-residents.[27]

26. The analysis of economic activity by economic sector on the basis of preliminary or provisional National Accounts data should be interpreted with caution, as underlying this analysis is a non-negligible probability of revision.

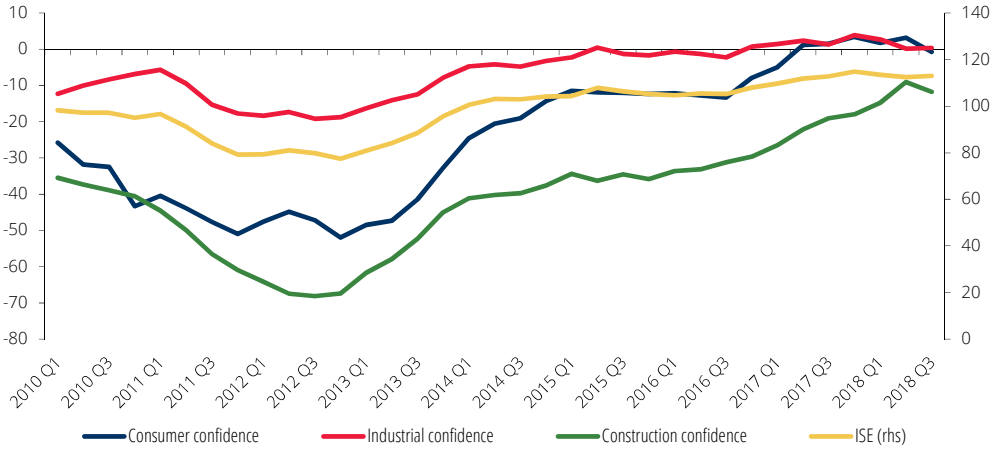
27. A number of factors determining developments in the IIP are markedly seasonal (for example, net transactions). In the third quarter of 2018, the IIP improved by 2.9 p.p. (to -103.1% of GDP), reflecting positive contributions from net transactions and price changes.

## Economic growth is expected to remain positive in Portugal and in most advanced economies, but downward risks have intensified

Projections for the Portuguese economy published in June continued to point to positive, although decelerating, growth over the 2018-20 horizon (Table I.2.1). Compared with the March 2018 projections, mentioned in the previous issue of this Report, changes in developments in the main components of expenditure were particularly relevant. In particular, growth in private consumption was projected to increase in 2018 and investment and exports were expected to be revised downwards for the 2018-19 period. In addition, the net lending position of the Portuguese economy was projected to be maintained and the household saving rate was projected to remain at historically low levels.

In the third quarter of 2018, economic growth continued to follow a declining path. Coincident indicators for economic activity and private consumption maintained a trend of gradual decrease.[28] However, main confidence indicators remained at high levels (Chart I.2.3) and the unemployment rate declined to 6.7%.

**Chart I.2.3** • Economic sentiment indicator (ISE) and confidence indicators




Source: Statistics Portugal. | Notes: Balances of respondents. Seasonally adjusted figures. Quarterly average. Last observation: 2018Q3.

Economic indicators for the third quarter of 2018 point to a stabilisation of economic growth in main advanced economies in the second half of the year, following the slowdown recorded in the first half of the year. According to the International Monetary Fund (IMF), world growth is projected to remain at 2017 levels for 2018 and 2019 (Table I.2.1). Forecasts published in the October 2018 *World Economic Outlook* provide a slightly downward revision compared with the April 2018 issue, reflecting deteriorating prospects for main euro area economies, particularly in 2018, and a number of emerging market economies, in particular in 2019. Risk factors remain qualitatively unchanged, but have intensified in the past six months. For Portugal, downward risks are mainly associated with (i) political uncertainty in the euro area, reflecting in particular developments in Italy, (ii) the upsurge in pressures in international financial markets, (iii) developments in a number of emerging market economies, (iv) the aggravation of geopolitical tensions, and (v) the adoption of protectionist measures worldwide.

28. Coincident indicators are composite indicators that capture underlying developments in year-on-year changes in the respective macroeconomic aggregate.

**Table I.2.1** • GDP growth | Annual rate of change, in percentage

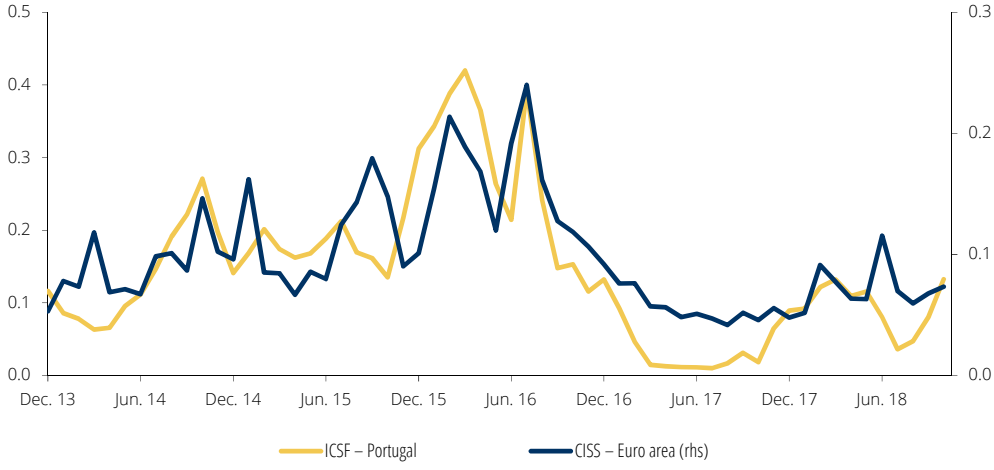
| | | | | | Revisions** | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018P | 2019P | 2020P | 2017 | 2018P | 2019P |
| Portugal | 2.8 | 2.3 | 1.9 | 1.7 | 0.1 | 0.0 | 0.0 |
| World economy | 3.7 | 3.7 | 3.7 | - | -0.1 | -0.2 | -0.2 |
| Advanced economies | 2.3 | 2.4 | 2.1 | - | 0.0 | -0.1 | -0.1 |
| USA | 2.2 | 2.9 | 2.5 | - | -0.1 | 0.0 | -0.2 |
| Euro area | 2.4 | 2 | 1.9 | - | -0.1 | -0.4 | -0.1 |
| Germany | 2.5 | 1.9 | 1.9 | - | 0.0 | -0.6 | -0.1 |
| France | 2.3 | 1.6 | 1.6 | - | 0.3 | -0.5 | -0.4 |
| Italy | 1.6 | 1.2 | 1.0 | - | -0.0 | -0.3 | -0.1 |
| Spain | 3.0 | 2.7 | 2.2 | - | -0.1 | -0.1 | 0.2 |
| United Kingdom | 1.7 | 1.4 | 1.5 | - | -0.1 | -0.2 | 0.0 |
| Emerging market and developing economies | 4.7 | 4.7 | 4.7 | - | -0.1 | -0.2 | -0.4 |
| China | 6.9 | 6.6 | 6.2 | - | 0.0 | 0.0 | -0.2 |
| Brazil | 1.0 | 1.4 | 2.4 | - | 0.0 | -0.9 | -0.1 |
| Russia | 1.5 | 1.7 | 1.8 | - | 0.0 | 0.0 | 0.3 |

Sources: Banco de Portugal and IMF. | Notes: p – projected. The projections for the Portuguese economy refer to the June 2018 update. For more detail, see Banco de Portugal, *Economic Bulletin*, June 2018. The projections for the remainder geographies are those published by the IMF in the *World Economic Outlook*, October 2018. ** Revisions compared to that presented in the *Financial Stability Report*, June 2018. For Portugal the projections had as reference the note "Projections for the Portuguese economy: 2018 – 2020, March 2018. For the remainder geographies the projections had as reference the *World Economic Outlook*, IMF, April 2018.

## **2.2** Financial markets

Over the course of 2018, there were periods of heightened tension in international financial markets and risk aversion to a number of market segments and geographies. The level of tension in Portuguese financial markets increased from 2017, in line with developments in the euro area (Chart I.2.4), mostly reflecting increased volatility in stock markets. The main developments observed were sharp falls in US stock exchanges in February and October, strong depreciations in the currencies of a number of emerging market economies against the US dollar and a marked increase in the spreads of Italian sovereign debt. However, these developments had a moderate impact on the financing conditions of economic agents in Portugal. The global economic environment remained favourable and, although the pace of monetary policy normalisation in the US was much higher than expected by market participants, monetary conditions remained broadly accommodative, in particular in the euro area. Although risk premia increased somewhat in the recent period, search for yield behaviours still contributed to a significant compression of risk premia worldwide. Ongoing tensions in US-China trade relations contributed to increase volatility, but actual impacts – for example, in financial asset valuations – have been limited, with the exception of the falls seen in the Chinese stock market.

**Chart I.2.4** • Composite indicator of financial stress for Portugal (ICSF) for Portugal and Composite indicator of systemic stress (CISS) for the euro area




Sources: Banco de Portugal and ECB. | Notes: Data on a monthly basis. Last observation: October 2018.

## Monetary conditions remained broadly accommodative

The normalisation of US monetary policy proceeded at a faster pace than expected by market participants at the start of the year. The US Federal Reserve (FED) raised the federal funds rate by 25 basis points three times (in March, June and September), no longer referring to the monetary policy stance remaining accommodative since the September meeting. In mid-November, market participants still assigned a high probability to a fourth increase in the federal funds rate, to 2.25-2.5%, by the end of the year. The median estimate published in September by the Federal Open Market Committee points to monetary policy interest rates of 3.1% in 2019 and 3.4% in 2020. Continued increases in interest rates led to an appreciation of the US dollar against most currencies, revealing, in particular, the vulnerability of emerging market economies with a larger amount of debt denominated in US dollars, such as Argentina and Turkey. In parallel with interest rate changes, the plan of gradually reducing the FED's balance sheet – announced in September 2017 – continued to be implemented.

The Bank of England (BoE) increased Bank Rate by 25 basis points to 0.75% only in August. After a temporary slowdown in the first quarter of 2018, economic activity in the United Kingdom accelerated again in the second quarter. These developments, together with inflation remaining above the 2% target, justified an increase in the reference rate. In monetary policy decisions, the BoE continued to signal that future increases in the interest rate will be at a gradual pace and to a limited extent and to recognise that the economic outlook may be considerably affected by developments associated with the United Kingdom leaving the European Union, a process that remains highly uncertain.

In the euro area, key interest rates remained unchanged. The ECB changed its communication slightly, signalling, since the June meeting, that rates should remain "at their present levels at least through the summer of 2019, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to levels that are below, but close to, 2% over the medium

term".[29] As regards the Asset Purchase Programme (APP), a reduction of the pace of the net asset purchases from €30 billion to €15 billion from October was announced in June and confirmed in September, with the objective of ending net purchases by the end of the year if inflation data confirm expectations.

Euro area inflation accelerated throughout 2018, mostly reflecting a positive contribution from the energy component. The year-on-year rate of change in the Harmonised Index of Consumer Prices (HICP) reached 2.1% in September. Despite continued economic growth, underlying HICP inflation excluding energy and food remained slightly above 1%, compared with a rate of change of around 2.0% in the core private consumption deflator[30] of the United States. Projections for euro area inflation by international institutions continue to be broadly aligned,[31] having been revised upwards slightly for 2018 and 2019. In particular, projections underlying the ECB macroeconomic projection exercise of September 2018 point to HICP inflation stabilising at 1.7% over the 2018-20 horizon.

In the euro area, expectations of an increase in the deposit facility rate, implicit in market instruments,[32] were adjusted over the course of the year. In mid-November, the probability of an increase by June 2019 was small, while the probability of an increase by the end of 2019 remained high (around 75%). Against this background, euro money market interest rates remained negative, with longer maturities increasing slightly from May onwards, in particular the 12-month maturity. In turn, the euro area yield curve estimated from AAA-rated Treasury bonds recorded a more pronounced downward shift at medium-term maturities.

## The deteriorating situation in Italy had a limited impact on the euro area sovereign debt market

Following the increase observed at the start of the year, 10-year government bond yields of countries less affected by the sovereign debt crisis embarked on a declining path. However, from mid-August – and although a number of euro area economic indicators decelerated – yields increased again, reflecting contagion effects related to developments in US Treasury yields. At the start of October, the deteriorating situation in Italy and an increase in stock market volatility led to flight to safety flows, which resulted in a further decline in the yields of countries less affected by the sovereign debt crisis.

In turn, in countries more affected by the sovereign debt crisis, developments in 10-year rates were more mixed. Three different periods can be distinguished: (i) from the start of the year to mid-May there was a relative synchronisation between the yields of Portugal, Spain, Italy and Ireland; (ii) from mid-May to mid-August, the deteriorating situation in Italy had considerable contagion effects on Portugal and Spain, while the behaviour of the Irish yield came closer to that of countries less affected by the crisis; (iii) from mid-August, there was a gradual decline in PT/IT and ES/IT correlations, which became considerably more pronounced following the

29. In the April meeting, expectations were that key ECB interest rates would "remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases".
30. The official name is Core PCE (Personal Consumption Expenditure) Index.
31. ECB, OECD, European Commission, IMF, inter alia.
32. On the basis of probabilities of an increase implied in swap agreements on the euro area overnight interest rate.

uncertainty surrounding the Italian State Budget. Despite a slight volatility over the course of the year, the 10-year government bond yield differential vis-à-vis the countries less affected by the crisis, in particular Germany, did not change considerably in Portugal and Spain, and widened significantly in Italy (Chart I.1.12, Section 1.2 Risks to financial stability).

From the end of August, the three main rating agencies published decisions on the medium to long-term risk of Italian sovereign debt. Fitch and S&P changed their outlook from stable to negative and S&P lowered its rating by one notch. In all three, Italy maintains its investment-grade rating. Revisions for Portugal went in the opposite direction. S&P changed its outlook from stable to positive and Moody's removed Portugal from the speculative investment category.[33] The differentiation between Portuguese sovereign risk and Italian sovereign risk was visible in the second half of the year, reflecting a buoyant economic activity in Portugal, favourable fiscal indicators – including government debt developments (Chart I.1.13, Section 1.2 Risks to financial stability) – and an improved outlook for the banking sector. Underlying developments in the euro area sovereign debt market was the ongoing public sector purchase programme (PSPP).

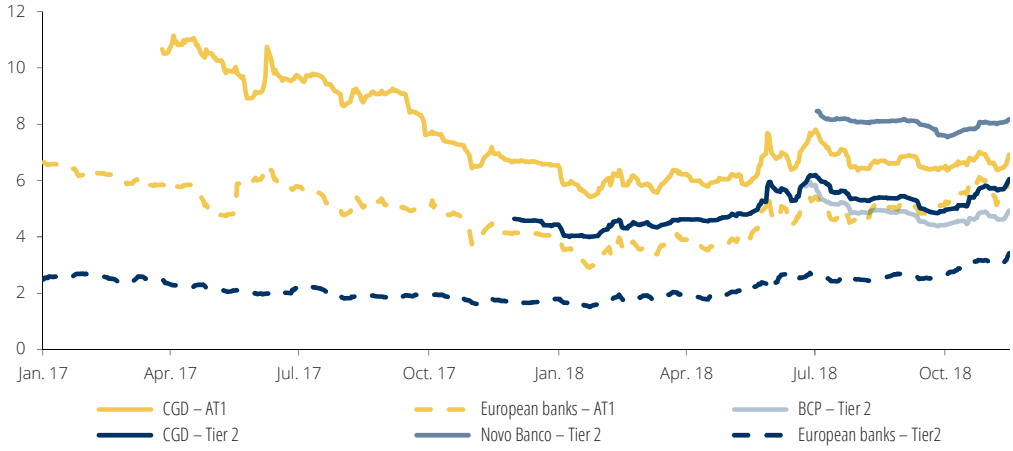
## Risk premia associated with debt of European firms and banks increased throughout 2018

Risk premia increased gradually in the corporate debt market, in particular in lower credit quality segments, which may be considered a positive development from a financial stability perspective, after the considerable compression of the second half of 2017. From January to September 2018, despite decelerating, gross issuance of debt securities by euro area non-financial corporations increased slightly. In Portugal, similarly to the past few years, the issuance of marketable private debt remained residual. In turn, Portuguese banks continued to issue subordinated debt, most notably Tier 2 issuances amounting to €500 million and €400 million by CGD and Novo Banco respectively. In the first half of the year, yields on debt securities issued by Portuguese banks in the secondary market accompanied the trajectory of a set of securities issued by European banks with similar features. From July onwards, despite the volatility observed, the differential narrowed between securities issued by Portuguese banks and European banks (Chart I.2.5). In the euro area, bank funding via debt securities continues to be more buoyant than in Portugal. Debt issuance costs increased considerably with the worsening situation observed in Italy in May, in particular for subordinated debt, which entails a higher risk. Similarly to 2017, throughout 2018 there was an increased issuance of euro area non-preferred senior debt securities[34], which are eligible for compliance with the subordinated component of MREL requirements, at a lower cost than AT1 and Tier 2 instruments.

33. The latest rating decision on Spain was made in April 2018.

34. These instruments were created by Directive (EU) 2017/2399 of the European Parliament and of the Council, which entered into force on 28 December 2017. The Directive requires, for example, that Member States "create a new class of non-preferred senior debt that should rank in insolvency above own funds instruments and subordinated liabilities that do not qualify as own funds instruments, but below other senior liabilities". The draft law transposing Directive (EU) 2017/2399 was approved by the Council of Ministers at the start of November.

**Chart I.2.5** • Yields on AT1 and Tier 2 debt securities in the secondary market | Per cent




Sources: Bloomberg and calculations by Banco de Portugal. | Notes: Data on a daily basis. Last observation: 16 November 2018. The yield on the European banks sample of AT1 (Tier 2) corresponds to a weighted average of secondary market yields, of 6 (15) AT1 (Tier 2) debt securities of European banks, issued in euro, with a remaining maturity up to the early redemption date close to that of CGD debt securities – March 2022 (BCP debt securities – December 2022, CGD debt securities – June 2023 and NB debt securities- July 2023).

## Stock market developments were rather mixed across geographies

After the sharp fall in US stock exchanges at the start of February, which then spread worldwide, stock market volatility remained at levels above those observed in 2017. Developments in major stock market indices were rather mixed for the remainder of the year. Major US indices resumed an upward path and accumulated significant gains from April to September, supported by improved corporate earnings and sound economic growth (Chart I.2.6). In major European economies, a recovery was observed until mid-May, followed by a downward trend, accompanied by considerable volatility (Chart I.1.10, Section 1.2 Risks to financial stability). These developments partly reflected the negative performance of European banks, closely associated with the worsening situation in Italy and renewed fears about the systemic impact of the link between banks, insurance companies and the sovereign. In turn, the Portuguese stock market closely followed the dynamics of the European market.

The start of October saw renewed turbulence in international financial markets, with the S&P 500 dropping by 8% in that month. Although a number of economic fundamentals support these developments, for example the significant yield increase in the previous week or the slight downward revision of the IMF's world economic outlook, the magnitude of the correction seems to reflect an environment of heightened risk aversion and an overreaction by investors to negative economic and financial developments. As was the case with the correction observed at the start of February, the price drop is expected to have been amplified by an increase in sell orders for investment products which bet on volatility remaining at low levels and/or follow passive investment strategies, amplifying market changes. One of the main stock market developments over the course of 2018 was the sharp drop in Chinese stock prices. The Shanghai Composite Index dropped by 19% from January to mid-November, reflecting signs of a slowdown in the Chinese economy and negative effects associated with tensions in US-China trade relations and with the contagion of emerging market economies.

**Chart I.2.6** • Stock market indices | December 2016 = 100


Source: Thomson Reuters. | Notes: Data on a daily basis. Last observation: 16 November 2018.

## 2.3 Residential real estate market

Against the background of an ongoing recovery in residential real estate prices in Portugal, there is evidence of a slight overvaluation in aggregate terms. At present, this overvaluation is expected to be contained, but there may be situations of a more pronounced overvaluation in certain geographies and market segments.

Despite the price dynamics, the outstanding amount of loans for house purchase is still on a downward trend (Chart I.1.16). In addition, gross flows of loans for house purchase have maintained their relative importance in total sales amounts, but stand markedly below the levels observed before the international financial crisis.

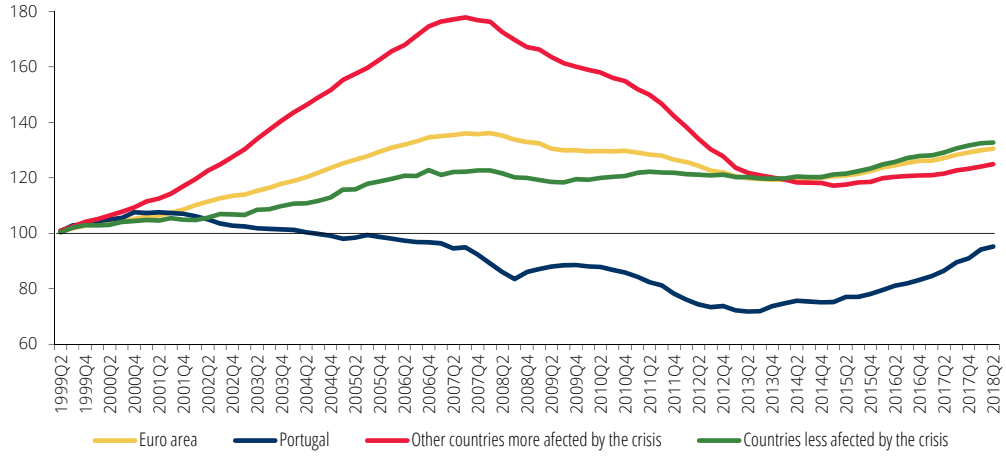
Compliance with the Recommendation issued by Banco de Portugal on new credit agreements for consumers (specifically, credit agreements relating to residential immovable property, credit agreements secured by a mortgage or equivalent guarantee, and consumer credit agreements) may mitigate the risk of interaction between house prices and bank loans, which tends to be particularly detrimental to financial stability. A sustained adjustment between supply and demand in the real estate market also requires the institutional framework with an impact on the functioning of the market to be optimised and stabilised (for example, as regards the justice and tax system or market rules). This would make it safer to invest in this type of asset and might encourage the supply of rental housing.

### In Portugal, the residential real estate market has experienced a recovery in the past few years, with prices and transactions increasing

In the first half of 2018, house prices in Portugal remained on the recovery path that had started in the second quarter of 2013. Since then, and up to the second quarter of 2018, prices increased by 33% in real terms, after dropping by 26% from 2007 to 2013. Compared with the same period of 2017, house prices grew by 10.1% in real terms in the second quarter of 2018, slowing down slightly compared with the first quarter.

In Portugal, the acceleration in house prices in real terms observed from mid-2013 to the second quarter of 2018 was broadly based across a large number of euro area countries (Chart I.2.7). However, developments in house prices in Portugal in the pre-crisis period were very different from developments in other countries that were also affected by the financial crisis, in particular Ireland and Spain. Indeed, the residential property market in these countries was characterised by a substantial overvaluation in the pre-crisis period, followed by an abrupt adjustment, which was not the case in Portugal.

**Chart I.2.7** • Real House Prices | Index 1999Q1=100



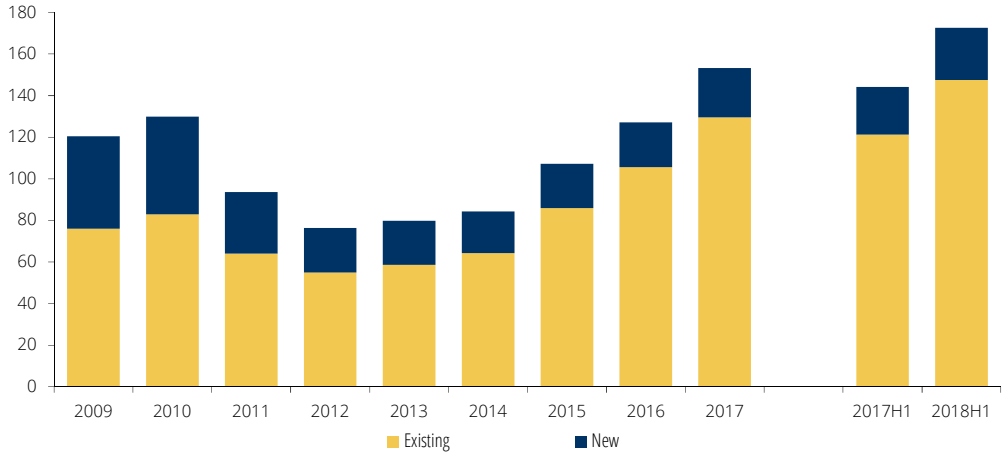

Sources: Organization for Economic Cooperation and Development and European Central Bank. | Note: The other countries more afected by the crisis include Greece, Ireland, Italy, Slovenia and Spain. Cyprus is not considered for lack of data. The countries less afected by the crisis considered are Austria, Belgium, France, Finland, Germany and the Netherlands. Aggregation is based on nominal GDP.

Since the start of 2016, all countries under analysis (Chart I.2.7) – with the exception of Italy, Greece and Finland – posted positive real rates of change in house prices. The persistence and scope of these developments suggest that the impact of shared factors, such as economic growth and continued very low interest rates for a protracted period of time, is dominating the impact of idiosyncratic domestic factors.

In Portugal, house price growth continued to occur in the context of a sharp increase in the number and amount of housing transactions (Chart I.2.8). In the first half of 2018, the total number of real estate transactions increased by around 20%, compared with the same period a year earlier (an increase of 30% in sales amounts) and reached the highest level since the start of the series.[35] Transactions in existing dwellings accounted for 85% of total transactions during this period. In line with an increase in completed dwellings, transactions in new dwellings have been picking up, although at a slower pace than transactions in existing dwellings.

35. Statistics Portugal provides data from 2009 onwards.

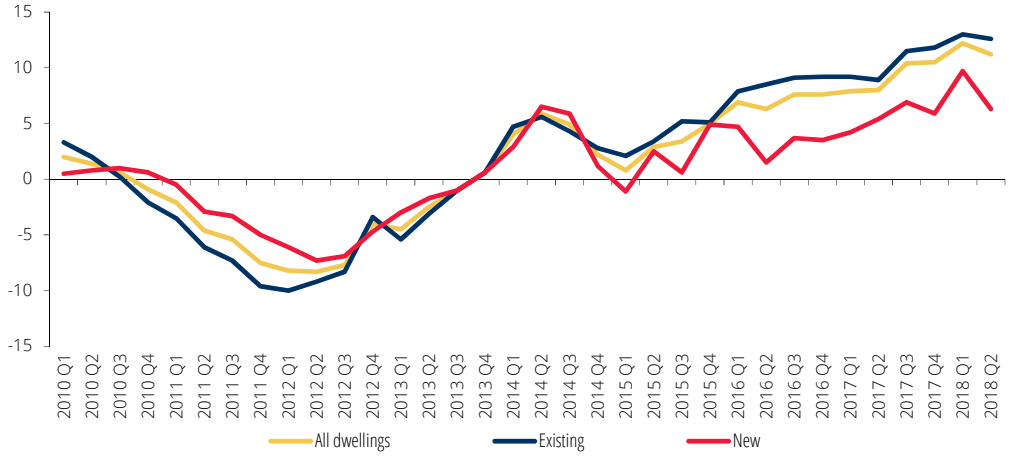
**Chart I.2.8** • Residential real estate transactions by segment | Thousands




Source: Statistics Portugal. | Note: six-month figures are annualised.

In the second quarter of 2018, prices of existing dwellings increased by 12.6% compared with the same period of 2017, while prices of new dwellings grew by 6.3%, posting an overall increase of 11.2% (Chart I.2.9).[36] Prices decelerated compared with the first quarter, in particular for new dwellings. The differential between the growth in prices of new and existing dwellings remained negative and significant, as observed since 2016.

**Chart I.2.9** • House prices in Portugal – Existing and new dwellings | Annual rate of change



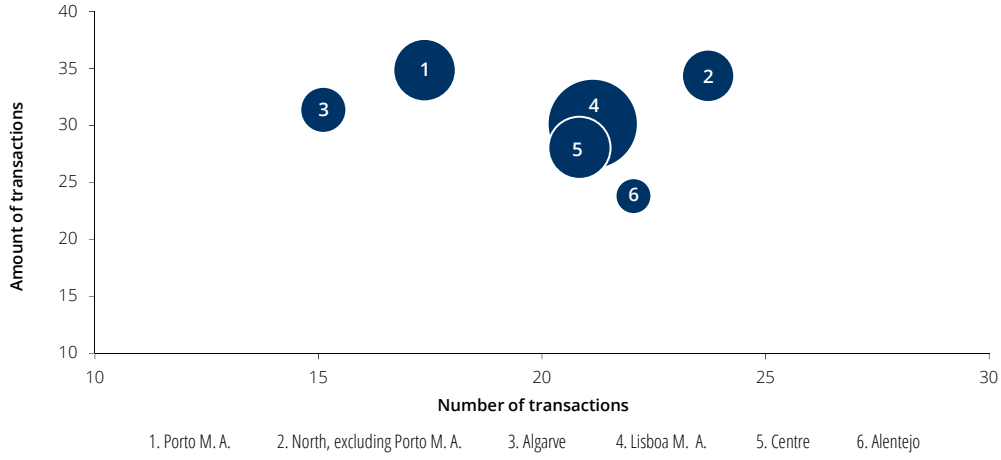

Source: Statistics Portugal.

Across the country, the trend of an increase in the number and average value of transactions – which has been observed since mid-2014 – continued in the first half of 2018 (Chart I.2.10).

36. The house price index published by Statistics Portugal is a chain-linked Laspeyres-type hedonic price index.

All regions of mainland Portugal posted record sales in quarterly terms in the second quarter of 2018. The average value of transactions increased overall, in particular in Algarve and the Porto Metropolitan Area. This increase in the average value of transactions is consistent with a year-on-year increase of 8% in the median value of sales of family dwellings per square metre in Portugal.[37] Lisboa, Porto and Faro stood out in this indicator, growing by more than 20% in the second quarter of 2018, compared with the same period of 2017.

**Chart I.2.10** • Transactions in family dwellings – changes from 2017H1 to 2018H1 | Per cent




Source: Statistics Portugal. | Note: the size of the circles signals the weight of transactions in each region in total transactions carried out in mainland Portugal in the first half of 2018.

## There is evidence of a slight, although contained, overvaluation of house prices in Portugal in aggregate terms

The recent momentum in Portuguese residential real estate prices raises questions about the adequacy of the levels that have already been reached, compared with underlying fundamentals. Within this context, it is important to point out that (i) the recovery seen in the past few years occurs after a significant drop in prices observed from 2007 to 2013, (ii) the levels reached in real terms are similar to those of 2008, and (iii) since mid-2013, together with very accommodative monetary conditions, the Portuguese economy has experienced continued growth, with unemployment declining considerably and consumer confidence rising to record high levels. Together with other factors, this contributed to lower risk perceptions among domestic and international investors, which added to a search for yield, specifically for non-financial assets.

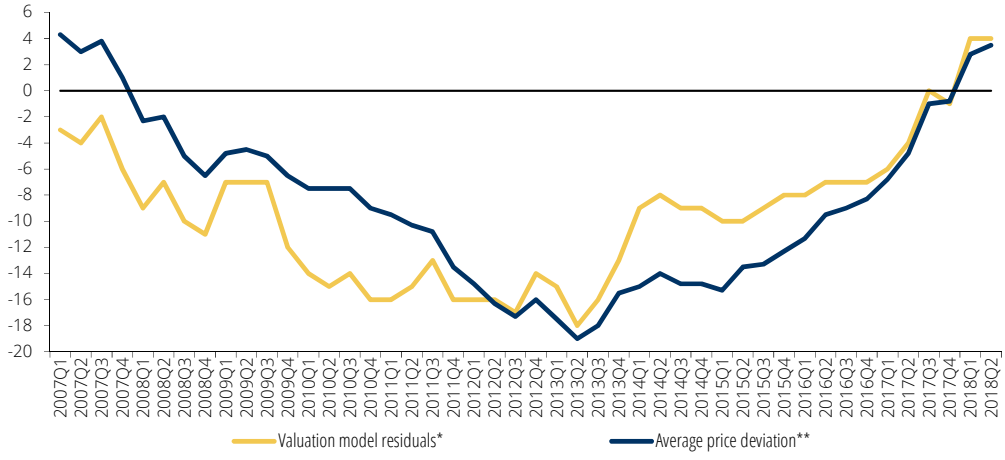
In order to assess whether house prices are in line with economic fundamentals or are showing signs of undervaluation/overvaluation, the ECB calculates and publishes two measures for a set of euro area countries.[38] For Portugal, these measures signal an increasing undervaluation of prices against economic fundamentals until the first half of 2013 (Chart I.2.11). Since then and

37. Data from the first quarter of 2016 onwards available on the Statistics Portugal website at: https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0009490&contexto=bd&selTab=tab2&xlang=en.

38. The two measures used are calculated from: the ratio of house prices to disposable income per capita; the price-to-rent ratio; an asset pricing model and a Bayesian inverted demand model. For further details, see the June 2011 and November 2015 issues of the ECB *Financial Stability Review*.

accompanying the increase in house prices, these two indicators have reversed the downward trend and have started to follow an upward path. More recent developments in these measures signal a slight – although limited – misalignment of residential real estate prices with economic fundamentals, which suggests a slight overvaluation in aggregate terms.

**Chart I.2.11** • Estimates of price over/undervaluation in the Portuguese residential real estate market | Per cent



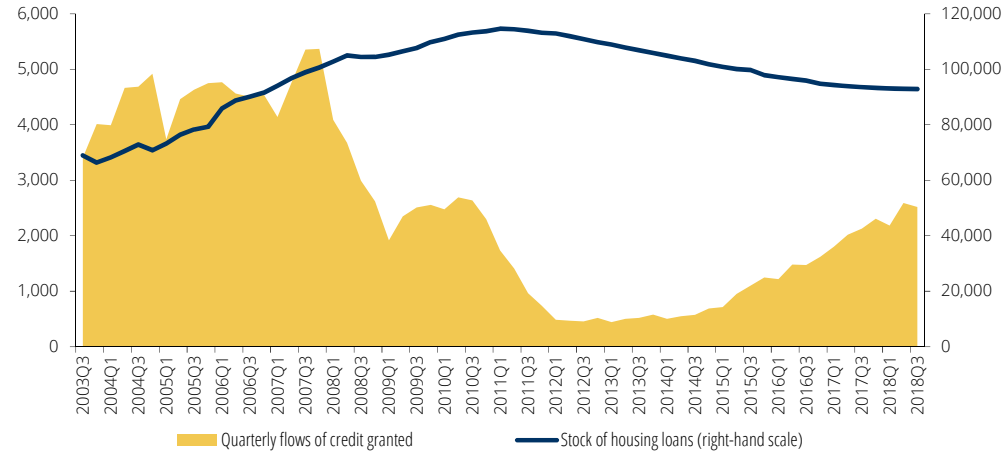

Source: European Central Bank - Statistical Data Warehouse. | Note: (*) Residuals of a valuation model estimated on the basis of economic fundamentals, positive values signal overvaluation. (**) The average price deviation is a synthetic measure based on four valuation methods, putting together housing demand and supply indicators and asset pricing models, positive values signal overvaluation.

However, the estimates derived from the methodologies used are characterised by a certain degree of uncertainty, together with the fact that it is particularly difficult to assess potential phenomena of house price overvaluation in Portugal in the recent period. In particular, these methodologies might not appropriately capture the participation of non-residents in the market and the role played by tourism in determining housing supply and demand. Both factors have evolved considerably in Portugal in the past few years. However, their treatment as fundamental determinants of residential real estate prices is uncertain.

## Credit flows have maintained their relative importance in total sales amounts but are considerably below the levels observed before the international financial crisis

Over the course of the first three quarters of 2018, gross flows of new bank loans for house purchase maintained the upward trend observed since mid-2013, although they remain considerably below pre-crisis levels (Chart I.2.12). For the four quarters ending in September 2018 as a whole, flows of new loans increased by around 27% from the same period of 2017, and slowed down compared with the end of 2017. In turn, the year-on-year rate of change in the outstanding amount of bank loans for house purchase has followed an increasingly less negative trend, standing close to 1% in the third quarter of 2018, thus contributing to the ongoing fall in household indebtedness ratios.

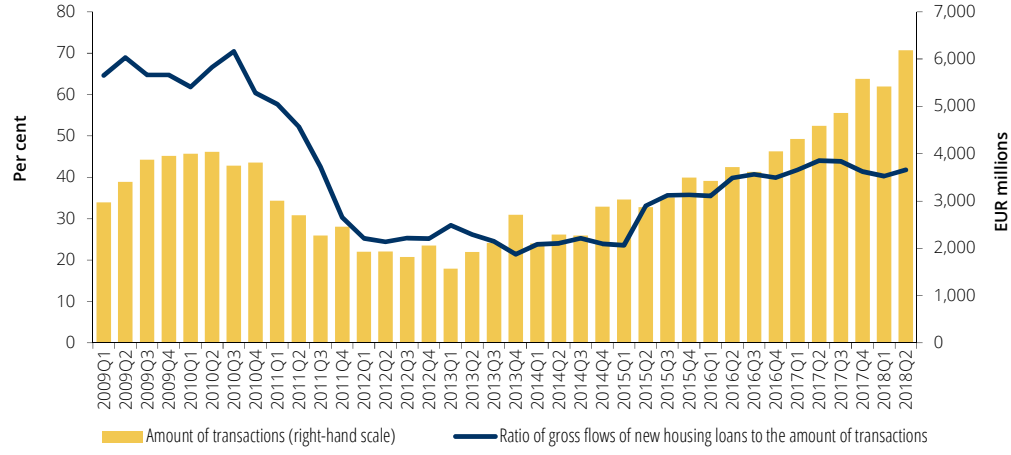
**Chart I.2.12** • Gross flows and stocks of housing loans | EUR millions




Source: Banco de Portugal.

The ratio of gross flows of new housing loans to the amount of transactions in family dwellings stabilised in recent quarters at the level reached at the end of 2016 of close to 40% (Chart I.2.13). This is clearly below the level observed in 2010 (around 65%). The decline in the share of loans in total sales was mainly a result of an increase in the number of dwellings not financed by loans to households by banks in Portugal.[39] Compared with 2010, this decline is broadly based across regions, but more important in the Lisboa Metropolitan Area and Algarve, where foreign investment, real estate purchases by other resident sectors or real estate purchased by households with their own equity may account for a greater share of transactions.

**Chart I.2.13** • Amount of transactions and ratio of gross flows of new housing loans to the amount of transactions in family dwellings




Sources: Statistics Portugal and Banco de Portugal.

39. For further details, see Box 5 "Recent developments in the sale of family dwellings and loans to households for house purchase: regional heterogeneity, *Economic Bulletin*, Banco de Portugal, October 2018.

The current economic environment, the low levels of interest rates and developments in the real estate market increase competitive pressure among credit institutions, which leads to an easing of credit standards on loans to households for house purchase. This results in a compression of interest rate spreads on loans and other standards used by banks in their transactions. Against this background, the Recommendation issued by Banco de Portugal on new credit agreements for consumers (specifically, credit agreements relating to residential immovable property, credit agreements secured by a mortgage or equivalent guarantee, and consumer credit agreements), in effect since July 2018, is particularly relevant. Compliance with the Recommendation will help Portuguese households obtain sustainable funding and will consequently contribute to more resilient credit institutions. In particular, it will help these two sectors to more easily accommodate the effects of a monetary policy normalisation – specifically through a gradual increase in short-term interest rates, usually used as reference rates – and of potential adverse shocks on the prices of real estate assets and/or borrowers' income. In addition, compliance with the macroprudencial recommendation may mitigate the risk of interaction between house prices and bank loans, which tends to be particularly detrimental to financial stability.

## Demand by non-residents continues to boost the real estate market in Portugal, although at a slower pace

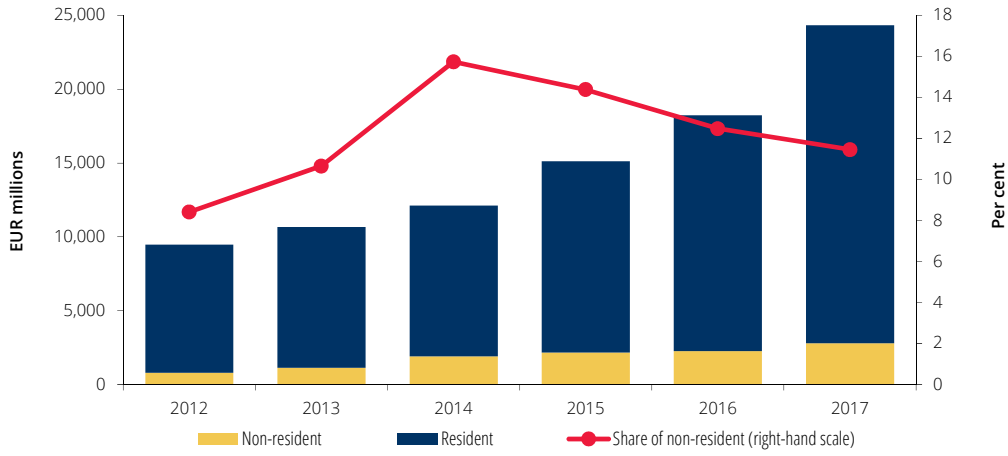
As mentioned, demand for real estate by non-residents continued to be an important factor behind the momentum in the Portuguese real estate market. Non-resident investment has grown since 2012 both in terms of number of properties and transaction amounts.[40] These developments are linked to the introduction in 2009 of a more favourable tax regime for non-regular residents and the approval in 2012 of the Golden Visa regime. The recovery observed in the real estate market is also the result of buoyant tourism, which has boosted demand for real estate by investors, particularly for local accommodation.

In 2017, 8% of real estate properties sold in the Portuguese territory were purchased by non-residents,[41] corresponding to 12% of the sales value (Chart I.2.14). The average value of real estate properties sold to non-residents was almost 50% higher than the average value of total transactions carried out in that year. Compared with 2016, investment grew by 19% and 23% respectively in terms of number and value. However, the share of non-residents in the total sales value has been gradually declining since 2014 (from 16% in that year).

40. Statistics Portugal recently published data on the purchase of real estate by non-residents. Published data cover real estate property for housing, trade, manufacturing and other purposes and are grouped into three categories: urban, rural and mixed. Data are available on Statistics Portugal website at https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=344332942&DESTAQUESmodo=2&xlang=en and refer to the 2012-17 period.

41. The classification by Statistics Portugal as non-resident takes into account the buyer's country of residence.

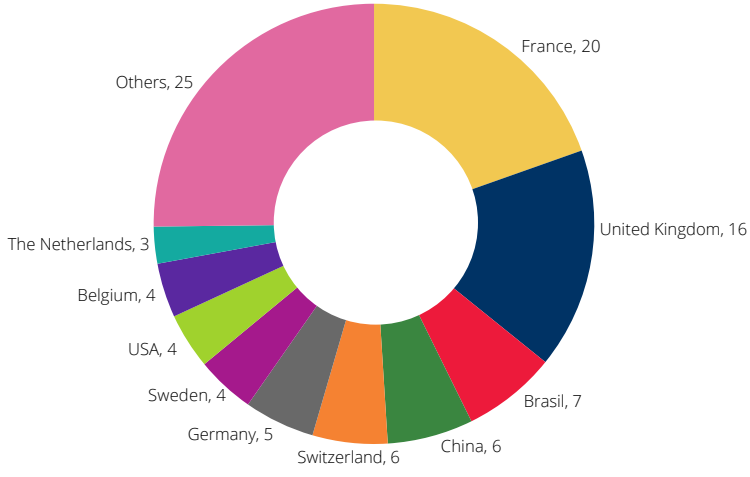
**Chart I.2.14** • Investment in the Portuguese real estate market by investor origin




Source: Statistics Portugal.

In 2017 non-resident investors mainly came from France and the United Kingdom, which together accounted for 36% of transaction amounts (Chart I.2.15). In regional terms, the regions with the highest number of transactions with non-residents were Algarve and the Lisboa Metropolitan Area, which together accounted for 78% of the total sales value by non-residents in Portugal.

**Chart I.2.15** • Country of residence of non-resident investors in real estate – 2017 | Per cent




Source: Statistics Portugal.

From the end of 2017 to the third quarter of 2018, the number of permits granted and the amount invested in real estate as a result of residence permits granted for investment purposes (Golden Visas) grew by 18%, specifically for the purchase of real estate.[42]

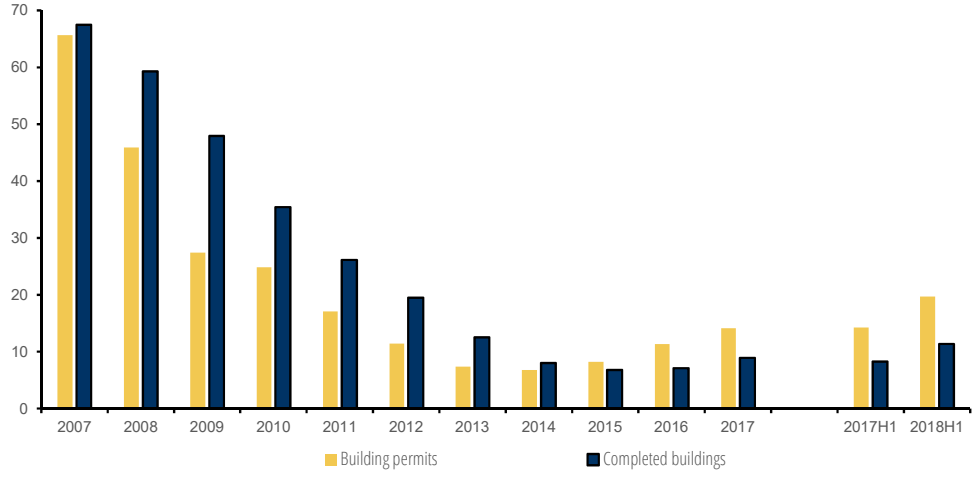
42. Statistical data available on the website of the Portuguese Immigration and Borders Service at https://www.sef.pt/en/Documents/Mapa_ARI_EN_september18.pdf.

The strong momentum in the residential real estate market in Portugal, particularly in the country's main tourist areas, is related in particular with increased activity in local accommodation. The trend of an increase in the number of registrations for this activity that began in 2014 continued in the first three quarters of 2018. Registrations grew considerably in the districts of Lisboa, Porto and Faro (42% in aggregate terms compared with the same period of 2017), already exceeding the total recorded in 2017.[43] However, the dynamics observed in the third quarter are expected to have been influenced by the approval in July – and subsequent entry into force at the end of October – of new, more stringent, rules on access to this activity.

## Housing supply showed signs of a recovery, despite remaining contained in historical terms

In addition to demand for housing, the price dynamics in the residential real estate market reflect developments in the supply of this type of property. The number of housing completions continued to increase in the first half of 2018, continuing on the path observed since 2016 (Chart I.2.16). Following an increase of 25% in 2017 compared with 2016, the number of housing completions grew by 37% year on year in the first half of 2018. Although all regions in mainland Portugal grew by more than 20%, the Lisboa Metropolitan Area posted the most significant increase (63%).

**Chart I.2.16** • Completed and licenced buildings | Thousands




Source: Statistics Portugal. | Note: six-month figures are annualised.

43. According to data on the website of Registo Nacional de Alojamento Local (Portuguese registry of local accommodation), available in Portuguese at https://rnt.turismodeportugal.pt/RNAL/ConsultaRegisto.aspx?Origem=CP&FiltroVisivel=True.

The number of building permits also increased, with the rate of change in the first half of 2018 at a similar level to that of housing completions. Consequently, the differential widened between the number of building permits and the number of housing completions. This differential has been positive and increasing since 2015. Given the lag between building permits and housing completions, the number of housing completions is expected to continue to increase considerably in the next few quarters, which may dampen the upward pressure on prices. However, the current level of housing completions and building permits stands significantly below the levels observed before the most recent financial crisis.

In addition, the rehabilitation of existing buildings will tend to contribute to changes in the pattern of supply, in particular where this results in increased supply for certain quality segments and geographies, where pressure is higher on the demand side. Against this background, although the number of buildings in the entire territory where rehabilitation works were completed in the first half of 2018 only increased by 3% from the same period of 2017, the rate of change in the Lisboa Metropolitan Area reached 31%. Nevertheless, the share of rehabilitated housing stood close to 25% of total building permits and housing completions, predominantly new residential buildings.

In view of the buoyant residential real estate market, it would be important to promote a sustained adjustment between supply and demand that would address social concerns, as well as concerns about the efficiency of resource allocation in the economy and financial stability. This would also require the institutional framework with an impact on the functioning of the real estate market to be optimised and stabilised (for example, as regards the justice and tax system or market rules). This would make it safer to invest in this type of asset and might encourage the supply of rental housing.[44]

In this respect, it is important that future real estate supply takes into account aspects relating to the current environment – visible in recent price dynamics – but also structural aspects that affect demand, such as household creditworthiness, demographic trends and the sustainability of demand from non-residents. It should be noted that, despite a considerable decline in the past few years, household indebtedness ratios in Portugal remain above the euro area average. This issue is particularly relevant in the real estate market, as there is a time gap between responses on the supply side to increases in demand, related to the long production process in the construction sector.

In addition, credit institutions should adequately assess risks arising from pronounced valuations in real estate when taking on exposures to real estate assets. Although this does not yet significantly reflect the market's situation in aggregate terms, there may be situations of more significant overvaluation in certain geographies and market segments.

44. A functioning rental market, with an appropriate balance between landlord and tenant rights, has the potential to broaden the choice for economic agents. This may have positive effects on the economy (e.g. by reducing costs associated with geographic mobility, promoting urban regeneration and creating an alternative for investing savings).

# 3 Financial position of the General Government and of the Non-financial Private Sector

## 3.1 General government

During 2018, general government financing continued to benefit from a favourable economic environment in Portugal and the euro area, and from the maintenance of favourable financing conditions. The stress in euro area sovereign debt markets increased since May, reflecting the political developments in Italy. However, contagion effects affecting other euro area countries – including Portugal – were relatively contained (Section 1.2 Risks to financial stability). Portugal must maintain structural budget adjustment efforts in order to ensure a downward trend of general government indebtedness. Such efforts are essential to diminish vulnerability to adverse shocks on economic activity and financing conditions.

### Budget balance continued to improve excluding non-recurrent factors

The general government deficit on a national accounts basis was 1.9 per cent in the first half of 2018. Year-on-year budget balance developments (-4.2 p.p.) were affected by non-recurrent operations in 2017 and, although to a lesser extent, in 2018.[45] Excluding these transactions, the deficit fell 1.1 p.p. of GDP, reflecting declines in primary expenditure and interest expenditure to GDP ratio. Taking into account the intra-annual profile of the last few years, the deficit of the first half of the year was consistent with the official target for the whole year (0.7% of GDP), as defined in the Stability Programme (PE 2018-22) and reiterated in the State Budget Report for 2019 (OE 2019).

The European Commission's autumn forecasts also point to the budget deficit standing at 0.7% of GDP in 2018.[46] As for the structural balance, an improvement of 0.4 p.p. is expected (after 0.8 p.p. in 2017), mainly reflecting a decrease in interest expenditure. For 2019, the Commission forecasts a deficit of 0.6% of GDP (keeping the spring forecast unchanged), which is 0.4 p.p. higher than the value registered in the State budget for 2019.

The most recent projections by the European Commission on budget balance developments in euro area countries in 2018 and 2019 are somewhat more heterogeneous across the countries compared with the spring projections. In countries less affected by the sovereign debt crisis the budget balance was revised upwards, except for France, which is projected to record a more

45. It is important to emphasise in particular the impact of capital injections into CGD (2.0 p.p. of GDP) in 2017 and into Novo Banco (0.4 p.p.) in 2018 due to their magnitude. For further details on general government financing in the first half of 2018, including the set of non-recurrent factors affecting general government balance, see Banco de Portugal, *Economic Bulletin*, October 2018.

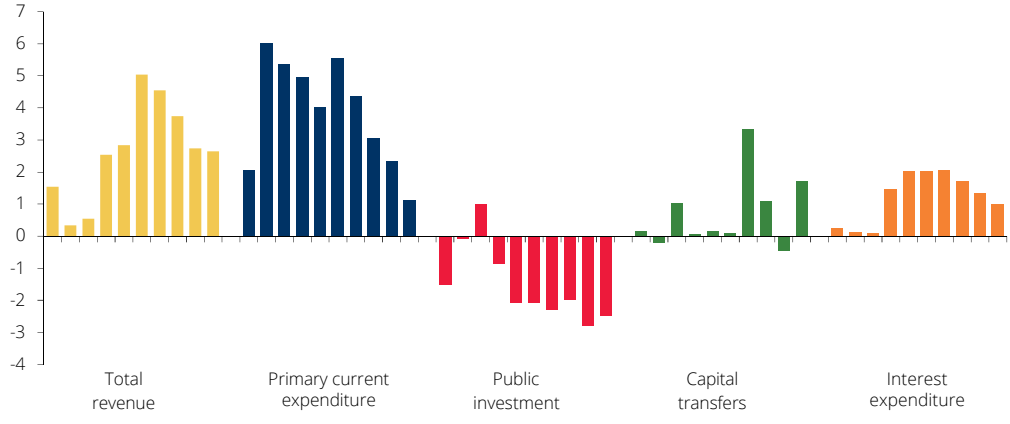
46. This represents a 0.2 p.p. improvement on the spring forecast. For further details, see European Commission, European Economic Forecast, autumn 2018.

negative balance in 2018.[47] Also, there are downward revisions of the budget balance in Italy, mainly for 2019, and to a lesser extent in Spain. In structural terms, and for the euro area as a whole, the projection keeps indicating a virtual stabilisation of the balance in 2018 and its slight deterioration in 2019, reflecting an expansionary fiscal policy stance across most euro area countries. In this context, a significant number of countries, including Portugal, will probably continue to show a structural budget balance falling short of the medium-term objective set within the framework of the preventive arm of the Stability and Growth Pact.

The high general government indebtedness level in Portugal keeps requiring a remarkable fiscal consolidation effort, namely by restraining government expenditure. Since 2013, and despite slight nominal growth, the ratio of primary current expenditure to GDP shows a marked downward path (Chart I.3.1).[48] Also, since 2014 developments in interest expenditure have contributed continuously to an improvement on the budget balance, reflecting the issuance of new market debt with more favourable price conditions than repaid debt. At the same time, the recent improvement on the fiscal situation, measured by developments in the budget balance adjusted for non-recurrent operations, has been occurring in a context of maintenance of historically low levels of public investment, similarly to other countries with high levels of public indebtedness. On the other hand, since 2013 total revenue as a ratio of GDP has also shown a downward path, remaining virtually unchanged in the recent past.

The fiscal consolidation strategy should ensure a level and quality of public investment over the medium term which will not jeopardise the potential growth of the economy. Furthermore, priority should be given to an effort to contain primary current expenditure, especially in a context of pressures to increase expenditure on pensions and healthcare associated with population ageing.

**Chart I.3.1** • Developments in general government revenue and expenditure from 2008 to 2017 | Difference in each year vis-à-vis the average figure for the 1998-2007 period, in percentage points of GDP




Sources: Statistics Portugal and calculations by Banco de Portugal. | Note: Capital transfers include financial sector support measures and other non-recurrent measures.

47. In Germany there was an upward revision in 2018 (+0.4 p.p.) and a smaller downward revision in 2019 (-0.2 p.p.).

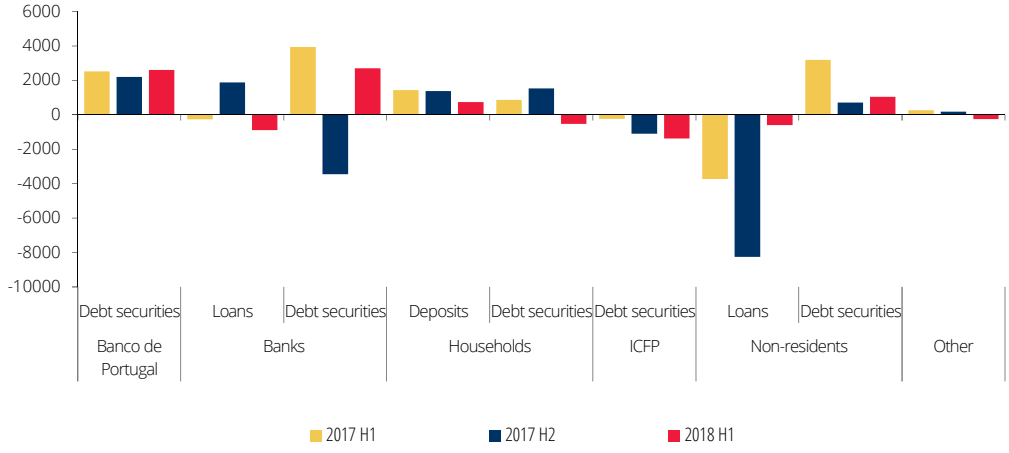
48. For further details on public expenditure in structural terms, see Banco de Portugal, *Economic Bulletin*, May 2018.

## Financing through retail instruments decelerated and financing from resident banks remained high

In the first half of 2018 general government financing through retail instruments, mostly placed with households,[49] continued to increase, but to a lower extent than in 2017 and 2016. Net subscriptions of Treasury certificates recorded a significantly lower figure compared to that observed in the same period in recent years. This may have reflected a decrease in the remuneration on new subscriptions of retail instruments, in particular Treasury certificates. On the other hand, there were residual net redemptions of savings certificates and no new issues of floating rate bonds.[50] As a whole, financing from households increased only marginally in the first half of the year (Chart I.3.2).

Financing from resident banks increased in the first half of 2018, though less sharply compared with the same period of the previous year. This contrasts with a fall during the second half of 2017, particularly in financing in the form of debt securities. This reduction was partly related to realisation of capital gains by banks, whose portfolios have benefited from a decrease in yields on Portuguese government debt securities in the secondary market. In turn, financing from insurance corporations and pension funds kept its marked downward path, following a considerable increase in 2016. Despite the reduction in the volume of monthly net purchases under the ECB's public sector purchase programme (PSPP), Banco de Portugal's portfolio of Portuguese government debt maintained growth similar to that observed in the recent past.

**Chart I.3.2** • General government financing by counterparty and instrument | Eur millions




Source: Banco de Portugal. | Notes: Households' deposits in the general government comprise savings certificates and Treasury certificates. The acronym ICFP refers to Insurance corporations and pension funds.

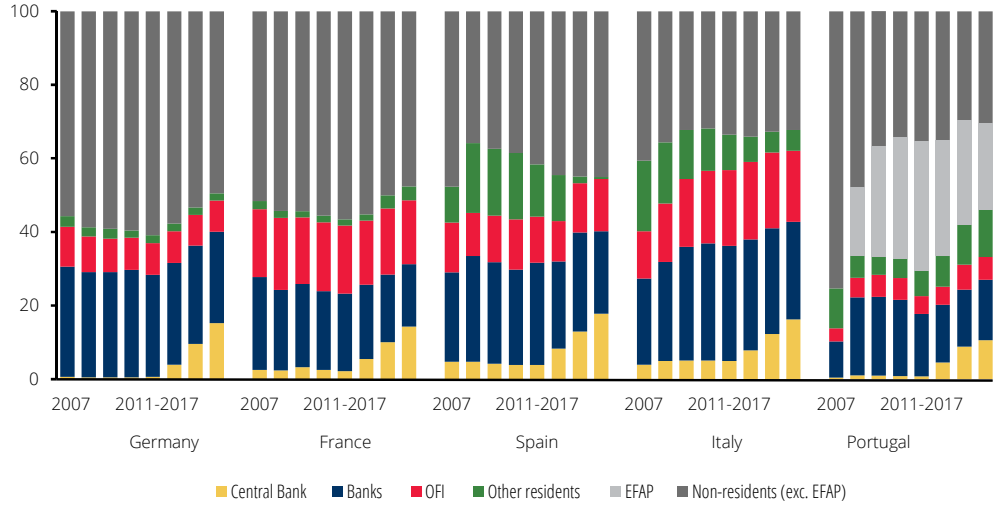
## Market financing from non-residents increased slightly, but it remained at a historically low level

49. In year-on-year terms or analysing the year ended in the second half.
50. The analysis of general government financing flows is based on the National Financial Accounts available on the date of publication of this Report with reference to June 2018. However, in July the Portuguese Treasury and Debt Management Agency (Agência de Gestão da Tesouraria e da Dívida Pública – IGCP) issued new floating rate bonds totalling €1 billion with a maturity of approximately seven years. Floating rate bonds placed with a more diversified set of investors, i.e. not exclusively targeted at household savings.

Concerning the loans under the economic and financial assistance programme (EFAP), in January a new repayment of the IMF loan was made (€0.8 billion) and permission was requested to make an additional repayment in December. Therefore, the State continued its strategy to repay debt at a higher cost, which in 2017 materialised in the early repayment of the IMF loan of about €10 billion.

Financing from non-residents, excluding loans under the EFAP, remained virtually unchanged. The debt securities component increased slightly, but the share of non-residents remained at a fairly low level historically. Between 2007 and 2011, the share of public debt held by non-residents within the structure of public debt holders decreased in Portugal and, although to a lesser extent, in other countries more affected by the sovereign debt crisis (Chart I.3.3). Since 2011, developments in the share of non-residents have been more differentiated. In Spain the component held by non-residents recovered, while in Italy it remained stable, and in Portugal it continued decreasing.[51] As stated in the previous issue of this Report, the decline in the share of non-residents makes the State's financing conditions less vulnerable to changes in conditions and in the degree of risk aversion in international financial markets. However, together with the ongoing fiscal consolidation process, maintaining a diversified investor base is important to ensure regular debt refinancing under favourable price conditions, in particular against a background of a predictable end of monthly net purchases under the PSPP by the end of the year. The Eurosystem should nevertheless continue to reinvest the principal payments from maturing securities purchased under the programme for an extended period. For the last few years, a distinctive feature of the structure of public debt holders in Portugal has been the increased share of other resident sectors, especially households. Household demand for Portuguese public debt has been showing high elasticity against changes in the remuneration of the different savings instruments.

**Chart I.3.3** • Structure of public debt holders | Per cent, end-of-period figures



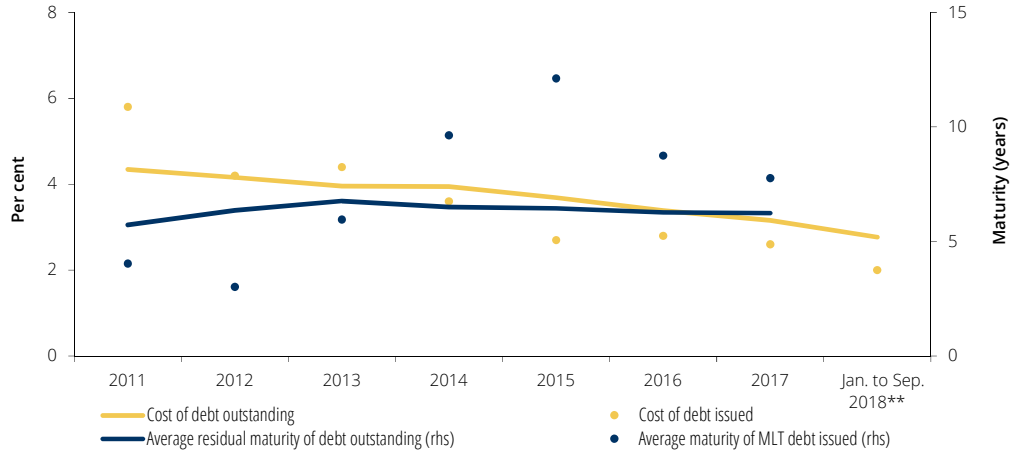

Sources: Banco de Portugal, ECB and Portuguese Treasury and Debt Management Agency (IGCP). | Notes: Public debt from Maastricht. The acronym OFI refers to other (non-monetary) financial institutions. The acronym EFAP refers to Economic and Financial Assistance Programme.

51. Recently, there has been a significant disinvestment in Italian public debt by non-residents that was offset by an increase in the weight of Italian banks.

## Financing conditions in sovereign debt markets remained relatively favourable, despite the turbulence due to political developments in Italy.

In the course of 2018, the average cost of issued debt remained below the average cost of the stock (Chart I.3.4), but with some fluctuation throughout the year, reflecting increased stress in euro area sovereign debt markets. The average allotment rate in Treasury bond tenders with an approximate maturity of 10 years reached 1.9% for tenders conducted until October, 0.9 p.p. less than for 2017 as a whole.[52] In turn, the average allotment rate in Treasury bill tenders stood at -0.34% for tenders conducted during the same period in 2018, compared with -0.24% in 2017. The average maturity of issued medium and long-term debt increased significantly compared with 2016 and 2017, reflecting in particular placements of securities with an approximate maturity of 15 and 30 years. Annual medium and long-term debt refinancing needs are relatively contained until 2020, with higher volumes expected for 2021 and 2022.

**Chart I.3.4** • Cost and maturity of public debt




Sources: Banco de Portugal, ECB, IGCP and Statistics Portugal. | Notes: The cost of debt issued is weighted by issuance amount and maturity and comprises Tbills, PGB, FRN and MTN issued in the corresponding year. The average maturity of medium- and long-term debt issued considers PGB and MTN issued in the corresponding year. ** The cost of debt outstanding refers to the first half of 2018 (annualized figure).

## The stabilisation of public debt-to-GDP ratio in the first half of 2018 is compatible with a reduction in the year as a whole

At the end of the first half of the year, the public debt-to-GDP ratio remained virtually unchanged compared to the end of 2017 (124.9% of GDP). Similarly to 2017 as a whole, the positive primary balance and the negative differential between the implicit cost of debt and nominal GDP growth (dynamic effect) contributed to the ratio decrease. On the other hand, deficit-debt adjustments, partly associated with a differentiated recording of time-lagged operations, have led to a ratio

52. Comprising Treasury bond tenders with a residual maturity between 9 and 11 years. Excluding amounts placed during the non-competitive phase of tenders and amounts associated with syndicated issuances.

increase, an effect that should be mitigated in the year as a whole. The estimate for public debt ratio included in the State Budget Report for 2019 points to a reduction to 121.2% of GDP by the end of the year.

International institutions[53] keep signalling risks to developments in public debt ratios in Portugal and in most highly indebted countries in the euro area. The increase in the overall interest rate level, the abrupt reassessment of risk premia at global level, the upsurge in tensions in sovereign debt market, and the slowdown in economic activity are the main risks in the medium term. Political developments and economic perspectives deteriorating in Italy are a recent example of the materialisation of some of these risks, with a non-negligible impact on Italian public debt yields at different maturities, on Italian bank debt yields and on their stock market value. So far, contagion to Portugal has been relatively limited. However, Portugal must maintain structural fiscal adjustment efforts in order to ensure a downward trend of general government indebtedness, that is less liable to adverse shocks affecting economic activity and financing conditions and compatible with the sustainability of public finances.

## **3.2** Financial position of the non-financial private sector

In the first half of 2018, the household savings rate continued to decrease, reaching a historically low value and clearly below the euro average. In Portugal, the low household savings rate is a particularly relevant vulnerability in the backdrop of ageing population and a public social security system associated with expectations of a considerable fall in income on retirement, against a background in which households are still highly indebted and, most importantly, with loans with long maturities that exceed borrowers' working lives. This is one of the factors considered in the design of the macroprudential measure on new credit agreements for consumers, in particular credit relating to residential immovable property, credit secured by a mortgage or equivalent guarantee, and consumer credit announced by Banco de Portugal in February 2018.

The household indebtedness ratio continued to decrease, although at an increasingly slower pace, while the nominal value of debt rose. In a context where the household indebtedness ratio is still higher than euro area average, the interruption in the downward trend in the debt nominal value emphasises the vulnerability of this sector, especially given the expectations of a slowdown in economic activity.

Regarding non-financial corporations (NFC), the decline in the savings rate in 2017 and in the first half of 2018 was fairly limited, taking into account its strong recovery since 2009 to levels closer to (but lower than) those of the euro area average. However, it is key that this is a temporary decrease in order not to jeopardise the recovery of business investment nor the ongoing fall in corporate indebtedness, which is still high.

Uncertainty related to international trade developments, which may contribute to a steeper downturn in economic activity, shows how important it is for companies to keep up their capitalisation efforts in order to promote their resilience in a more sustainable manner.

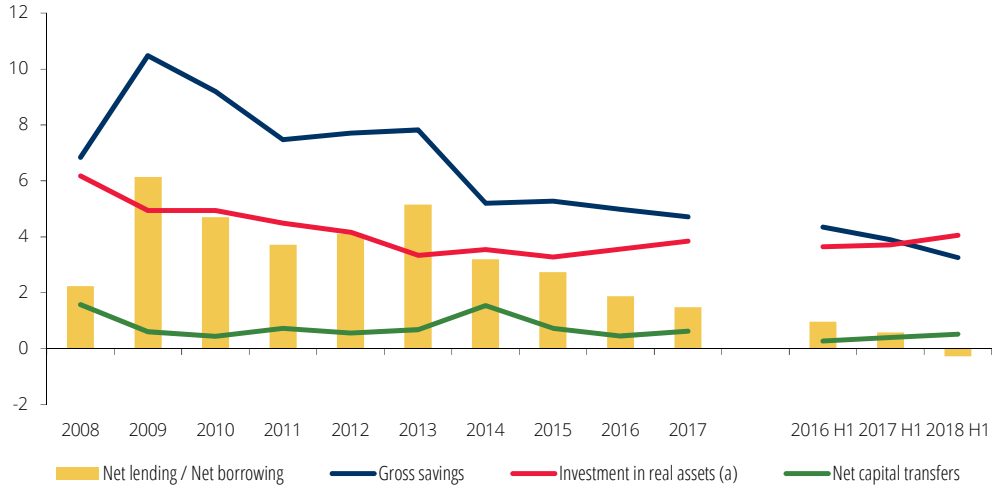
53. IMF, European Central Bank and European Commission.

### 3.2.1 Households

## In the first half of 2018, households recorded a net borrowing position, albeit slight, with a decline in the savings rate to a historically low level

According to currently available national accounts data published by Statistics Portugal, in the first half of 2018 household net borrowing was approximately 0.3% of disposable income, which contrasts with a net lending of 0.6% of disposable income in the same period of 2017 (Chart I.3.5).[54] It is important to mention that net borrowing/lending of this institutional sector follows a seasonal pattern in which the first half of the year normally presents levels lower than those of the second half of the year (and of the year as a whole).[55]

**Chart I.3.5** • Savings, investment and net lending/net borrowing of households | Percentage of disposable income



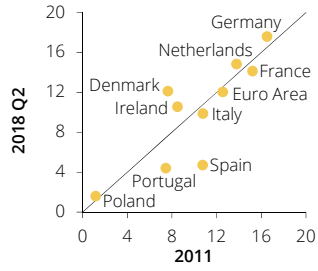

Source: Statistics Portugal (Banco de Portugal calculations). | Notes: The half-year figures are calculated from the quarterly national accounts. (a) Corresponds to the sum of gross fixed capital formation, changes in inventories, acquisitions less disposals of valuables, and acquisitons less disposals of non-produced non-financial assets.

These developments reflected a decline in the savings rate (from 3.9% in the first half of 2017 to 3.3% in the period under review)[56] and an increase in household investment in real assets (from 3.7% to 4.1% of disposable income, respectively),[57] maintaining the trend observed since the second half of 2015. The decrease in the savings rate has reflected significant private consumption growth, on average above that of disposable income, the latter being supported most recently by job and wage recovery.

54. In terms of annual flows, household net lending declined from 1.5% of disposable income in 2017 to 1.1% of disposable income in the year ending in June 2018.
55. The last time that households posted a net borrowing position was in the first half of 2008, of approximately 2.4% of disposable income, although there was a net lending of 2.2% in the year as a whole.
56. In annual terms, from 4.7% in 2017 to 4.4% in the year ending in June 2018.
57. In annual terms, from 3.8% to 4.0% of disposable income in 2017 and in the year ending in June 2018, respectively.

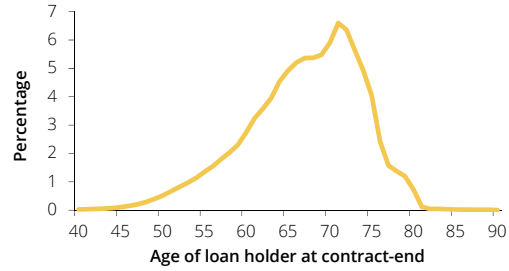
Since 2011, the household savings rate has decreased in some euro area countries, as was the case in Portugal (Chart I.3.6). Spain, Italy and France, which posted significant declines, are particularly noteworthy, although, with the exception of Spain, kept their savings rate significantly higher than Portugal.

**Chart I.3.6** • Household savings rate | Percentage of disposable income




Source: Eurostat (Banco de Portugal calculations). | Note: The figures for the second quarter of 2018 are those of the year ending in that quarter.

**Chart I.3.7** • Distribution of outstanding loans for house purchase in June 2018, by the age of the loan holder at contract-end | Percentage




Source: Banco de Portugal. | Notes: Data on housing loans are calculated on the basis of the Central Credit Register. Loans to self-employed are not considered.

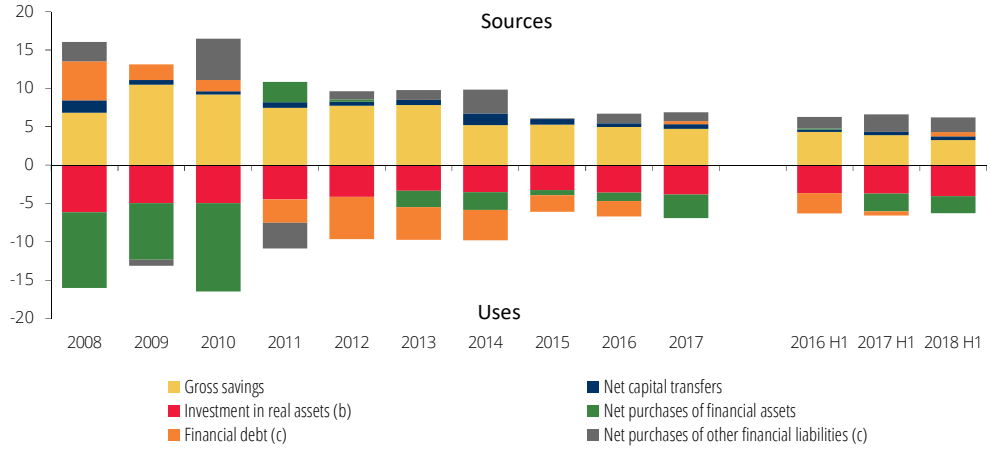
In Portugal, the low household savings rate is a particularly relevant vulnerability in the backdrop of ageing population and a public social security system associated with expectations of a considerable fall in income on retirement, against a background in which households are still highly indebted and, most importantly, with loans with long maturities that exceed borrowers' working lives. In June 2018, the stock of housing loans related to borrowers aged over 65 (70) at contract-end was 62% (35%) (Chart I.3.7). This was one of the factors considered in the design of the macroprudential measure of new credit agreements for consumers, in particular credit relating to residential immovable property, credit secured by a mortgage or equivalent guarantee, and consumer credit announced by Banco de Portugal in February 2018.

In addition, the low savings rate of Portuguese households indicates that shocks affecting the debt service financial effort, either by an income reduction or by a cost of financing increase,[58] will tend to reflect on a decrease in consumption or increase in default, with potential consequences to economic growth and/or financial stability. The decrease in the savings rate in the first half of 2018 would have emphasised this weakness.

58. The financial vulnerability of Portuguese households was analysed in Box 4 of the December 2017 issue of the *Financial Stability Report*, according to which a significant number of households have a very low or even negative savings rate, making them particularly vulnerable to shocks impacting on their income (such as retirement, unemployment or an interest rate rise).

In terms of financial savings,[59] household net borrowing in the first half of 2018 translated into a positive net flow of financial debt of about 0.6% of disposable income, in contrast to the net repayment of the same period of 2017, accounting for 0.5% of disposable income. Nevertheless, it should be noted that the trend for net repayment of households' financial debt that started in 2011 had been interrupted in 2017, with an annual positive net flow of 0.4% of disposable income. Additionally, in the first half of 2018, net acquisition of financial assets accounted for 2.2% of disposable income, an amount similar to that of the same period of 2017 (Chart I.3.8).

**Chart I.3.8** • Sources and uses of funds by households | Percentage of disposable income




Source: Banco de Portugal and Statistics Portugal. | Notes: The half-year figures are calculated from the quarterly national accounts. (a) Gross disposable income. (b) Corresponds to the sum of gross fixed capital formation, changes in inventories, acquisitions less disposals of valuables, and acquisitions less disposals of non-produced non-financial assets. (c) Corresponds to the sum of loans and debt securities.

## In the first half of 2018 there was an increase in household investment in bank deposits, resuming the trend observed since 2015 and interrupted in 2017

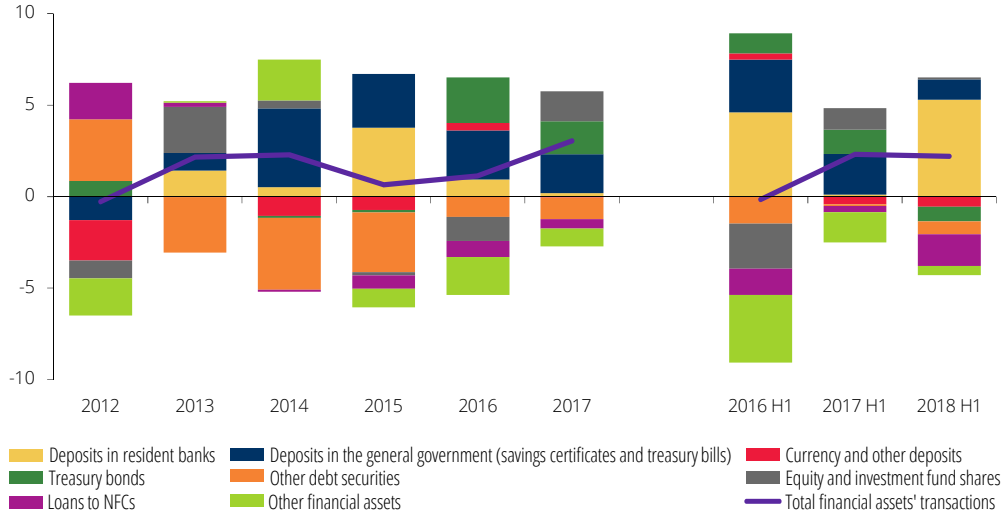
In the first half of 2018, the households' financial asset portfolio saw a shift towards bank deposits, similarly to what happened in 2015 and 2016. Thus, in the period under review, households' bank deposits had a net increase of about 5.3% of disposable income, compared with 0.1% in the same period of 2017.

In the first half of 2018 net investment in Portuguese government debt instruments amounted to approximately 0.3% of disposable income, with positive net transactions of Treasury bills, even though lower than those observed in the same period of 2017, and with negative net transactions of floating rate Treasury bonds (Portuguese acronym: OTRV).

Against a backdrop of particularly low interest rates on deposits, this pattern of the portfolio investment by households may have reflected a preference for more liquid assets and usually perceived as lower risk. Investment in bank deposits normally has a seasonal pattern and, within this period, may be influenced by the availability of alternative investments in a half-year with no Treasury bonds issues and by the non-extension of the twelfth-payment scheme for Christmas and holiday bonuses in effect since 2013 (Chart I.3.9).

59. Financial savings correspond to the difference between net transactions in financial assets and net transactions in financial liabilities.

**Chart I.3.9** • Transactions in financial assets of households | Percentage of disposable income




Source: Banco de Portugal and Statistics Portugal.

Real estate assets continue to stand out among the assets targeted for investment by Portuguese households. Estimates indicate that households' real estate property has increased by approximately 16% between 2014 and 2017 (compared with a 7% increase in financial assets within the same period). This preference may reflect the high return on real assets, in a context where low risk financial investments have low or zero return, and the opportunities related to the tourism buoyancy, especially in main urban and tourist centres (Section 2.3 Residential real estate market).

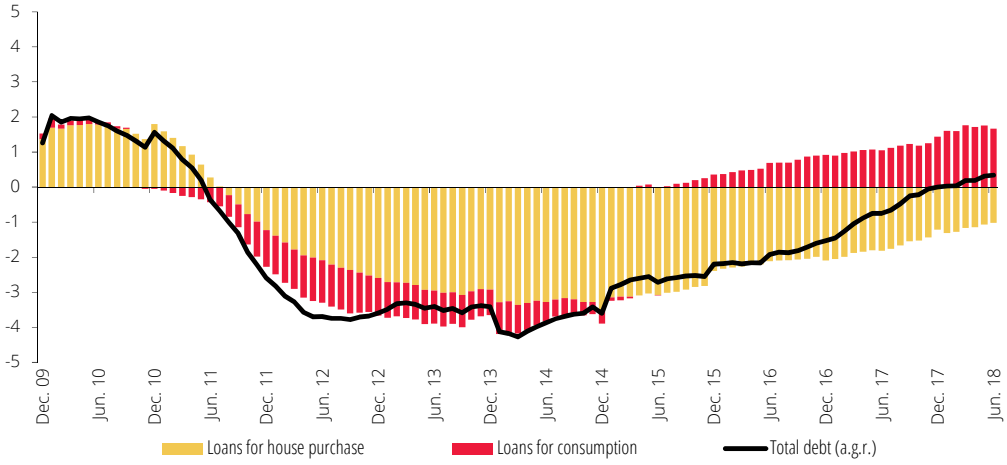
## Loans to households had an increase close to zero, with an acceleration of credit for consumption to high levels, close to those observed before the financial crisis

In June 2018, the annual rate of change in loans to households stood at around 0.3%[60] (0.0% at the end of 2017), after a period of continuous decrease since June 2011, with an annual average change of approximately -2.6%. Credit for consumption has been increasingly contributing to these developments, maintaining rising annual rates of change that reached levels close to those of 2007, before the financial crisis (Chart I.3.10). The annual rate of change in housing loans has become less negative, reaching -1.3% at the end of June 2018 (compared with -1.7% at the end of 2017). This recovery is based on a progressive increase in gross flows of new bank lending for house purchase, the majority of which were granted to debtors that have not made full early repayments of housing loans in the prior six months.[61] However, gross flows of new loans are still well below those observed before the financial crisis. Despite the developments in credit for consumption, the share of housing loans in total household debt continues to be very high (around 71% in June 2018).

60. Annual rate of change in loans granted to households by all other resident and non-resident sectors.

61. For more information on this subject, see Box 2 "New loans to households for house purchase and loan repayments: an analysis with microeconomic data", *Economic Bulletin*, May 2018, and *Retail Banking Markets Monitoring Reports*, Banco de Portugal.

**Chart I.3.10** • Contributions to the annual rate of change of households' total loans | Annual growth rates and percentage points



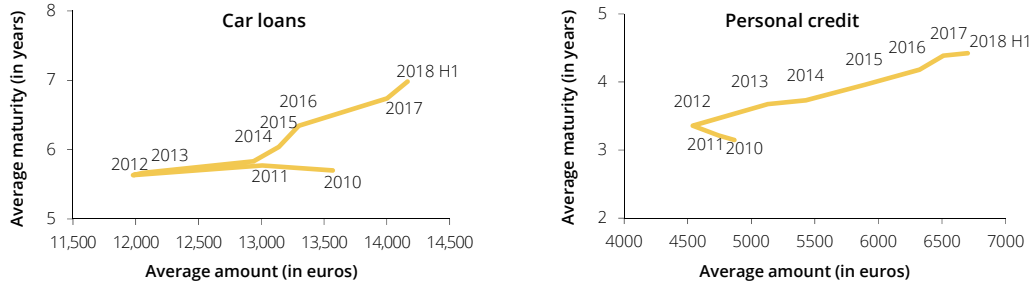

Source: Banco de Portugal. | Note: Total debt includes loans for house purchase, and loans for consumption and other purposes.

Credit for consumption had an annual growth of 14.2% in June 2018 (12.3% at the end of 2017). This acceleration may be associated with the upturn of the business cycle, reflected in unemployment decline and higher wages, despite the relatively high interest rates, in real terms, of this type of credit. Yet, competition pressure between credit institutions within this market segment has translated into a downward path of the nominal interest rate on credit for consumption[62] and looser credit standards applied to this type of loans.[63]

Since 2012, credit for consumption growth has moved in tandem with changes in the respective agreement characteristics, resulting in higher contractual maturities and higher average amounts agreed (Chart I.3.11). In the segment of credit for car purchase, accounting for almost half of the annual volume flows of new consumer credit, the agreements with a maturity over eight years accounted for 40% of the credit agreements entered into during the first half of 2018 (compared with 15% in 2012). Higher average maturities increase the rigidity of the pace of debt reduction, within a framework where the household indebtedness ratio is still very high in international terms and as a percentage of disposable income. For that reason it is important to proceed with the deleveraging process of this institutional sector, especially given the expectations of a slowdown in economic activity. On the other hand, higher average maturities make it possible to borrow higher amounts without involving higher instalments. Unlike housing credit, debt service on these loans is only negligibly sensitive to possible interest rates rises as they comprise mostly fixed-rate loans. In addition, the increase in consumer credit continues to be largely due to new borrowers entering the credit market[64] and not to greater indebtedness of already indebted households.

62. Despite the downward path of interest rates on new consumer credit operations, the interest rate on the balance of loans for consumption and other purposes was 7.0% at the end of the first half of 2018 (9.3% in November 2008, when it reached the highest level of the current series).
63. See the Bank Lending Survey.
64. See *Financial Stability Report*, June 2018.

**Chart I.3.11** • New consumer loans




Source: Banco de Portugal. | Notes: Car loans are granted for the purchase of cars or other vehicles, new or used. Personal credit is granted for the acquisition of goods and services, such as house equipment, education or health services. This type of credit may also be granted without a specified purpose. On new consumer credit considered on both charts, the amount, maturity and reimbursement scheme are set at contract origination, i.e. credit cards, credit lines, bank credit accounts and overdraft facilities are excluded.

## At the end of the first half of 2018, total household debt accounted for approximately 104 per cent of disposable income, only 1 percentage point below that observed at the end of 2017

In June 2018, total household debt was 104% of disposable income, compared with 105% at the end of December 2017, keeping on the downward path generally observed since 2009. However, the reduction in the debt ratio has gradually slowed down and, in the year ending in June 2018, it resulted from an increase in the nominal value of disposable income in a period where the nominal value of household debt also rose, reflecting in particular the continued momentum in credit for consumption (Chart I.3.12). In a context where the household indebtedness ratio in Portugal is still higher than the euro area average, and the its pace of reduction is expected to be slower due to the high relative weight of housing loans, the interruption in the decline of the debt nominal value emphasises the vulnerability of this institutional sector, especially given the expectations of a slowdown in economic activity.

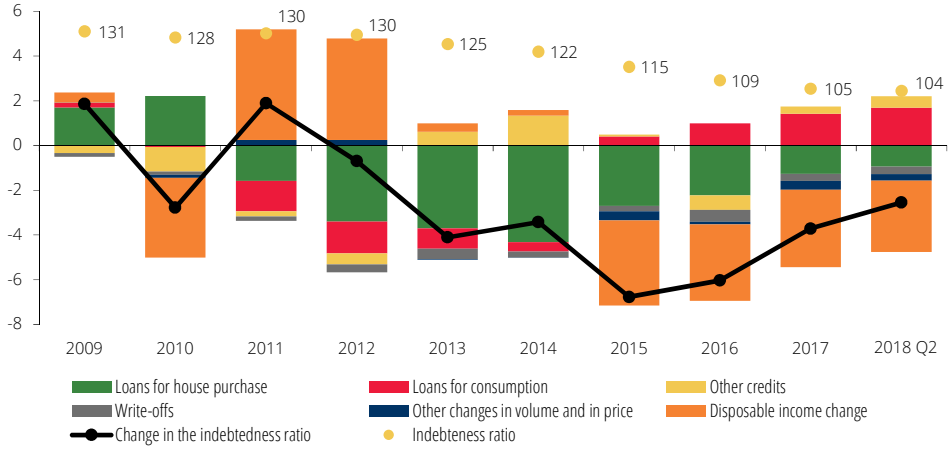
Most euro area countries with currently high levels of household indebtedness as a percentage of disposable income increased their share of financial debt in total household financial assets (leverage ratio) in the period prior to the financial crisis. In Portugal, this ratio reached 47% in 2008, compared with a 33% average ratio in euro area countries. Similarly to Portugal, those countries have reduced their leverage ratio in the past few years. Between the end of 2011 and the end of 2017, the leverage ratio of Portuguese households decreased by 11 p.p. to 34% (unchanged in the first half of 2018), while Spain and Ireland posted decreases of approximately 16 p.p. and 21 p.p., standing at 33% and 37% respectively at the end of 2017 (Chart I.3.13).

Furthermore, most of the housing credit agreements are floating-rate loans,[65] and therefore more sensitive to possible interest rates rises,[66] although the relative weight of new floating-rate operations has decreased in the past few years (Chart I.3.14). In any case, short-term interest rates are expected to rise gradually.

65. In 2017, the floating rate remained as the most frequent interest-rate type for new housing credit agreements (approximately 81%), followed by mixed-rate agreements – comprising an initial fixed-rate period, followed by a floating-rate period (accounting for 17%). For further details, see *Retail Banking Markets Monitoring Report*, Banco de Portugal, 2017.

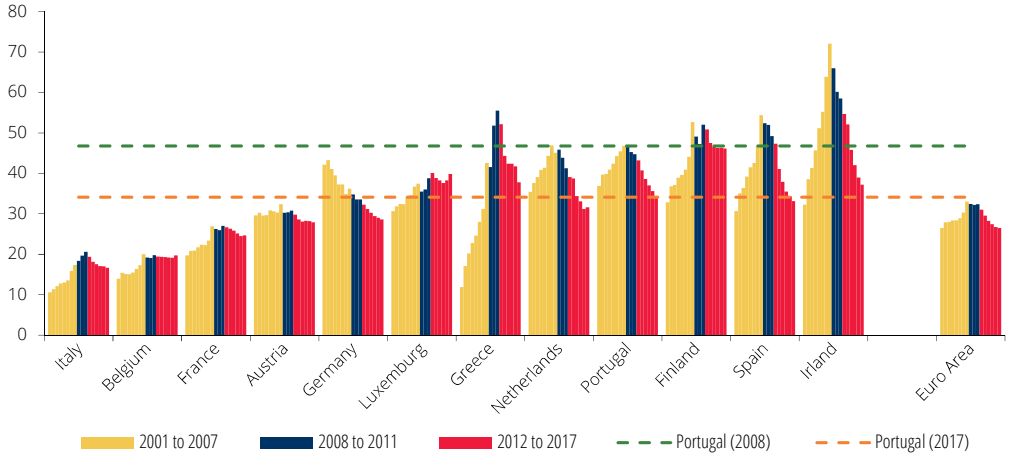
66. As for the credit stock at the end of December 2017, estimates indicate that a 200 b.p. increase in the indexes associated with housing credit agreements would lead to a decline in households' disposable income above 1%, ceteris paribus, only in interest payable.

**Chart I.3.12** • Households' indebtedness ratio and contributions to its change | Percentage of disposable income and percentage points



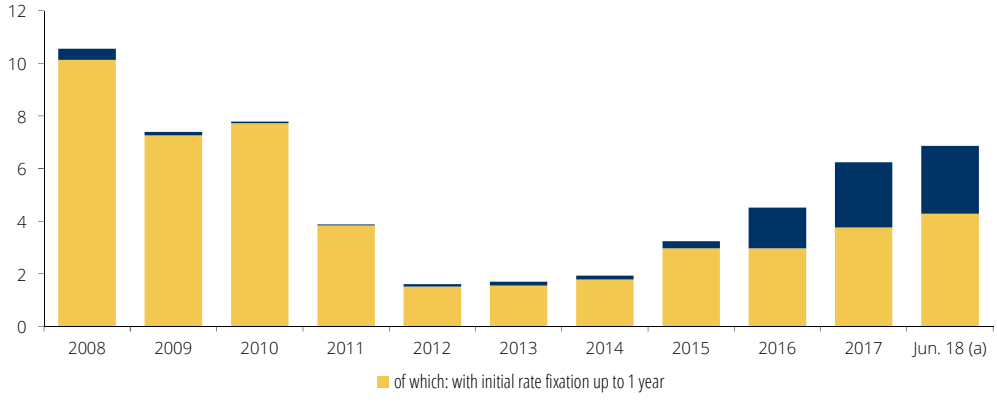

Source: Banco de Portugal and Statistics Portugal

**Chart I.3.13** • Households leverage ratio | In percentage of financial assets




Source: ECB and Eurostat (Banco de Portugal calculations). | Note: Leverage ratio calculated as the ratio between financial debt and total financial assets.

**Chart I.3.14** • New loans for house purchases by monetary financial institutions to households | Percentage of disposable income



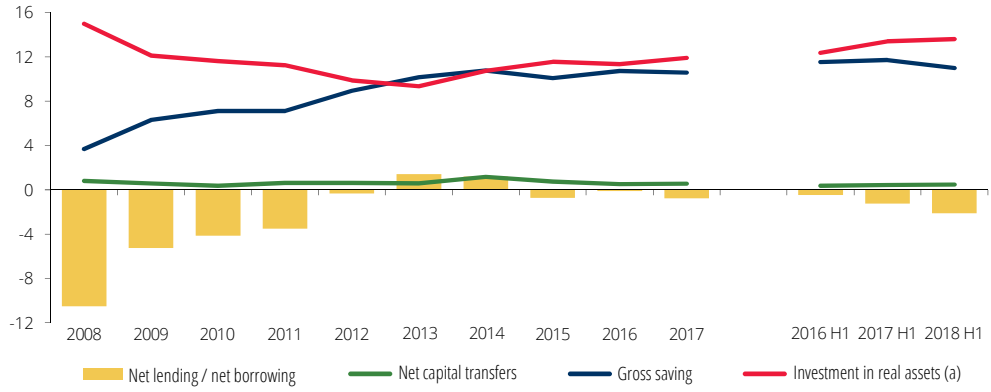

Source: Banco de Portugal. | Note: (a) Year ending in June 2018.

### 3.2.2 Non-financial corporations

## Net borrowing of NFCs increased in the first half of 2018 as a result of a decrease in savings and a slight increase in investment

The net borrowing of NFCs was 2.1% of GDP in the first half of 2018, a 0.9 p.p. increase from the first half of 2017 (Chart I.3.15). The decline in savings (to 11% of GDP, which corresponds to a reduction of 0.7 p.p., compared with the first half of 2017) and a slight increase in investment (from 13.4% of GDP to 13.6% of GDP) largely explain this change.[67]

**Chart I.3.15** • Savings, investment and net lending/net borrowing of NFCs | Percentage of GDP



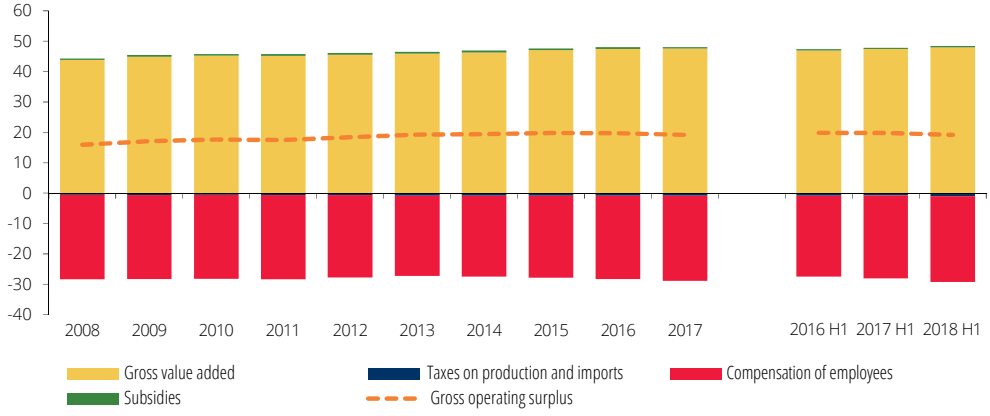

Source: Statistics Portugal (Banco de Portugal calculations). | Notes: The half-year figures are calculated from the quarterly national accounts. (a) Corresponds to the sum of gross fixed capital formation, changes in inventories, acquisitions less disposals of valuables, and acquisitions less disposals of non-produced non-financial assets.

The net borrowing of this institutional sector was met essentially through an increase in financial liabilities, with emphasis on an equity increase, especially through unlisted shares and other equity. On the other hand, there was a net repayment of loans and debt securities by NFCs. At the same time, financial assets held by this sector increased further, especially in deposits (2.1% of GDP). In June 2018, total currency and deposits held by NFCs corresponded approximately to 22.7% of GDP, a new peak of the historical series and close to the euro area average level in December 2017 (23.1%). In fact, currency and deposits held by NFCs in Portugal have increased in tandem with most euro area countries. As mentioned in previous issues of this Report, during the 2010-16 period the increase in currency and deposits was more significant in companies with lower debt-to-assets ratios.[68] Against a backdrop of low remuneration of bank deposits, accumulation of liquid financial assets may be justified by the prevention of adverse liquidity events due to the low opportunity cost of holding these funds. Particularly, the share of companies identifying return on investment as the main limiting factor in INE's Investment Survey increased slightly in 2018, after a decline in 2017, thus returning to 2016 levels and accounting for a peak since 2006.[69]

67. Following INE's release of the final results of the economic accounts for 2016 and the interim results for 2017, some of the aggregates usually analysed in the FSR were revised. For information concerning the reviews refer to INE website at: https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=314609278&DESTAQUESmodo=2&xlang=en.
68. See *Financial Stability Report*, June 2018, especially Chart I.3.20.
69. The share of companies identifying return on investments as the main factor limiting investment was 20.9% in 2018, compared with 20.6% in 2017. The results of the Investment Survey are interim results until the survey in June of the following year and comprise companies reporting investment constraints.

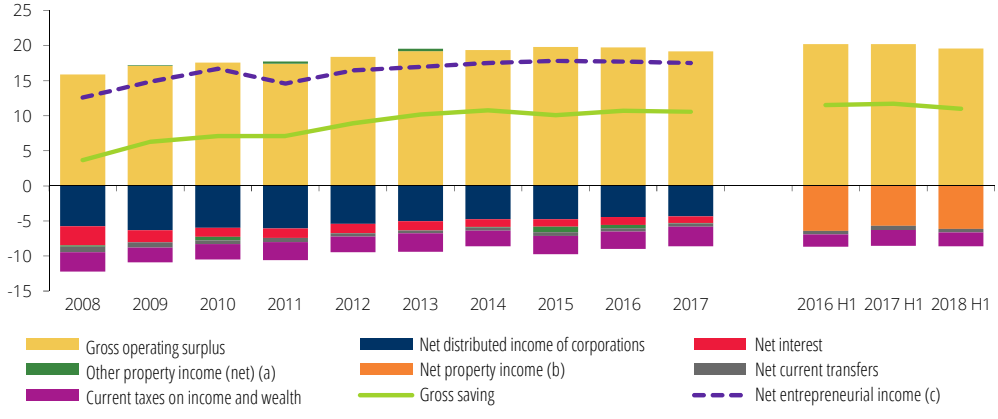
The lower NFC savings rate reflected both a decrease in net entrepreneurial income[70] as a percentage of GDP and an increase in distributed income. In the first case, the decrease in gross operating surplus (0.6 p.p. of GDP) is noteworthy, and it mainly resulted from an increase in compensation of employees, reflecting, in line with the current stage of the business cycle, the wage and employment recovery, which more than offset the growth in NFC gross value added (Chart I.3.16 and Chart I.3.17). This increase in costs related to the labour input should reflect gradually on the price of goods, enabling the recovery of entrepreneurial income.[71] On the other hand, in the first half of 2018, distributed income of corporations increased significantly, reaching (as a percentage of net entrepreneurial income) the highest level since the beginning of the Economic and Financial Assistance Programme (EFAP), and marginally higher than the one observed in the euro area in December 2017.

**Chart I.3.16** • Decomposition of NFCs' gross operating surplus | Percentage of GDP




Source: Statistics Portugal (Banco de Portugal calculations). | Note: The half-year figures are calculated from the quarterly national accounts.

**Chart I.3.17** • Uses of NFCs' gross operating surplus | Percentage of GDP



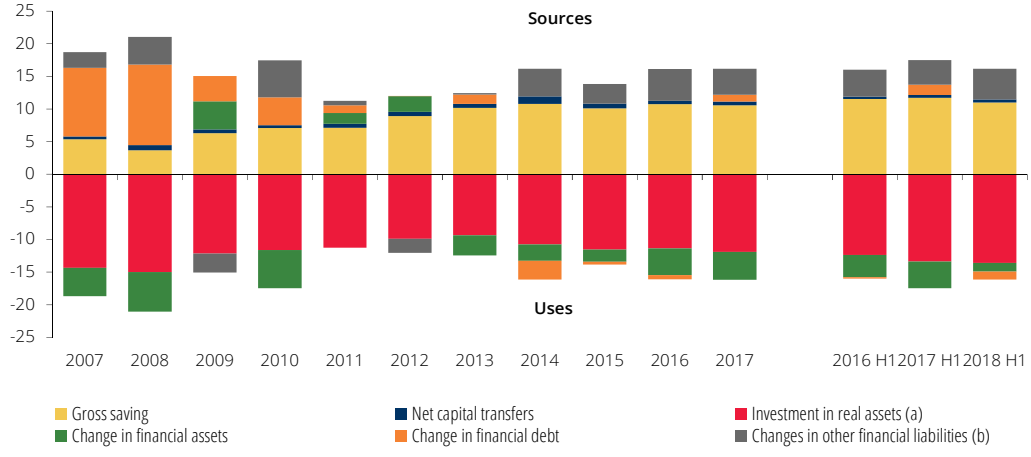

Source: Statistics Portugal (Banco de Portugal calculations). | Notes: The half-year figures are calculated from the quarterly national accounts. 'Net' stands for the difference between sources and uses, except for the net entrepreneurial income. (a) Includes reinvested earnings of foreign direct investment, other investment income and rents. (b) Corresponds to all categories of property income (i.e., interest, distributed income of corporations, reinvested earnings of foreign direct investment, other investment income and rents), in the absence of detailed quarterly data. (c) Net entrepreneurial income corresponds to the balance of primary income added to uses for distributed income of corporations and reinvested earnings of FDI (entrepreneurial income) net of taxes on income and wealth.

70. Corresponding to the balance of primary income added to uses for distributed income of corporations and reinvested earnings of FDI (entrepreneurial income) net of taxes on income and wealth.

71. The developments of some volatile components associated with tourism and corporate profit margins may limit wage pressure on inflation. For a detailed discussion on the projections for the Portuguese economy, see *Economic Bulletin*, October 2018, particularly Chapter II: *Projections for the Portuguese economy in 2018*.

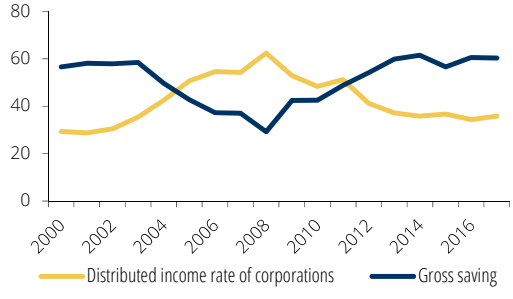
In fact, taking into account the average savings rate, either prior to or during the financial and economic crisis, the decrease in NFC savings that started in 2017 is still limited (Chart I.3.18).[72] During those two periods, the contribution of the distributed income of corporations was important to savings rate developments. Particularly, positive changes in distributed income significantly exceeded positive changes in net entrepreneurial income in the period prior to the financial and economic crisis, resulting in an increase in the distributed income rate of corporations[73] (Chart I.3.19). In Portugal, the distributed income rate of corporations was higher than the euro area rate between 2005 and 2011 (Chart I.3.20).

**Chart I.3.18** • Sources and uses of funds by NFCs | Percentage of GDP



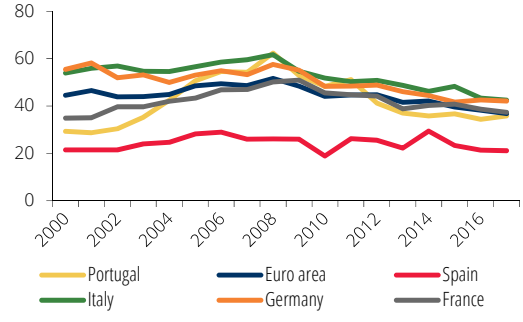

Sources: Banco de Portugal and Statistics Portugal. | Notes: The half-year figures are calculated from the quarterly national accounts. (a) Corresponds to the sum of gross fixed capital formation, changes in inventories, acquisitions less disposals of valuables and acquisitions less disposals of non-produced non-financial assets. (b) Includes the statistical discrepancy between net lending/net borrowing computed within the scope of the capital and financial account.

**Chart I.3.19** • NFCs distributed income rate | Percentage of net entrepreneurial income




Source: Statistics Portugal (Banco de Portugal calculations). | Notes: The NFC distributed income rate of corporations corresponds to the ratio of distributed income of corporations to net entrepreneurial income. On the other hand, net entrepreneurial income corresponds to the balance of primary income added to uses for distributed income of corporations and reinvested earnings of FDI (entrepreneurial income) net of taxes on income and wealth.

**Chart I.3.20** • NFCs distributed income rate | Percentage of net entrepreneurial income




Source: Eurostat (Banco de Portugal calculations). | Notes: The NFC distributed income rate of corporations corresponds to the ratio of distributed income of corporations to net entrepreneurial income. On the other hand, net entrepreneurial income corresponds to the balance of primary income added to uses for distributed income of corporations and reinvested earnings of FDI (entrepreneurial income) net of taxes on income and wealth.

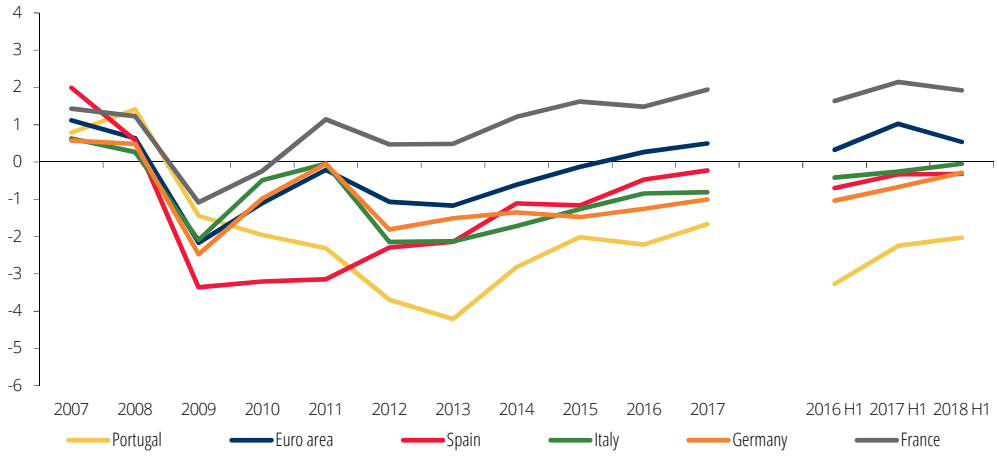
72. The savings rate for the year ending in the first half of 2018 was 10.2% of GDP, compared with the NFC average savings rate of 7.2% and 6.4% in the period 1999-2006 and in the period 2007-12 respectively.

73. The NFC distributed income rate corresponds to the ratio of distributed income of corporations to net entrepreneurial income. On the other hand, net entrepreneurial income corresponds to the balance of primary income added to uses for distributed income of corporations and reinvested earnings of FDI (entrepreneurial income) net of taxes on income and wealth.

Portugal was one of the countries where NFC net entrepreneurial income grew the most since 2007, reaching 17.5% of GDP in 2017, compared with 14.5% in 2007, mainly supported by an increase in gross operating surplus. The growth of net entrepreneurial income, as well as the decrease in distributed income during the EFAP, contributed decisively to an increase in the NFC savings rate between 2009 and 2014. After a decrease in 2015 that was reversed in the following year, the NFC savings rate remained relatively stable between 10.6% and 10.8% of GDP, in line with the stabilisation in gross operating surplus, which remained above its historical average (1999-2017) as a percentage of gross value added.

However, it is crucial that the recent decrease in the NFC savings rate is a temporary phenomenon such that business investment may continue to recover in tandem with a decrease in the high level of corporate indebtedness. In fact, business investment still falls short of the average values of the 1999-2006 period and is below euro area growth (Chart I.3.21).

**Chart I.3.21** • NFCs investment, change to average figures of 1999-2006 | Percentage points of GDP




Source: Eurostat (Banco de Portugal calculations). | Notes: Investment in real assets corresponds to the sum of gross capital formation and acquisitions less disposals of non-produced non-financial assets. For all countries depicted, half-year values are equal to the sum of the first two quarters of each given year.

## Decrease in the financial debt ratio occurred simultaneously with an increase in the capitalisation of companies in June 2018

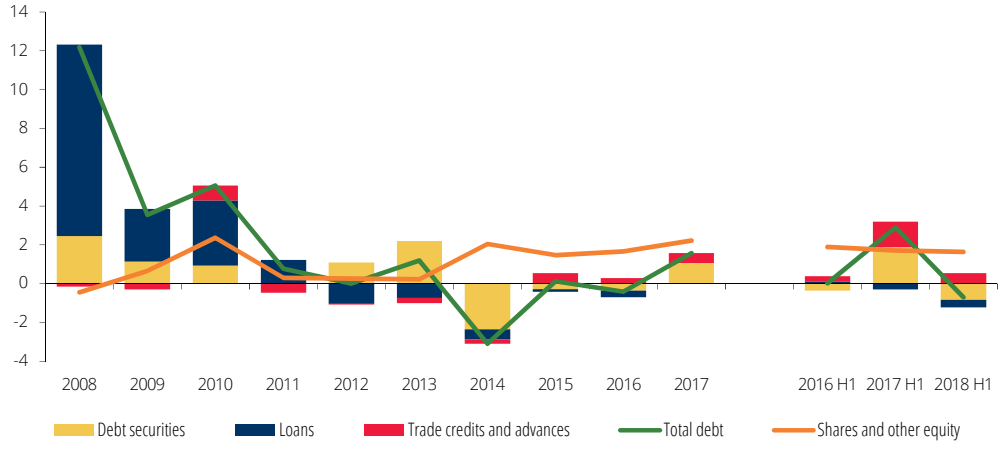
In the first half of 2018, the financial debt ratio of NFCs[74] as a percentage of GDP decreased by 2.5 p.p. to 90.8%, reflecting a net repayment of both debt securities and loans (a -0.6 p.p. contribution to changes in the ratio) and GDP growth (a -1.4 p.p. contribution). Write-offs[75] contributed with 0.5 p.p. to changes in the debt ratio, similar to that recorded in the first half of 2017. The deleveraging of Portuguese NFCs has made it possible to narrow the difference to the average indebtedness ratio of the euro area, which was approximately 13 p.p. of GDP in December 2017, after a 37 p.p. maximum difference at the end of 2012.

74. NFC financial debt corresponds to the sum of debt securities and loans.

75. It corresponds to credit written off from assets in the balance sheets of resident monetary financial institutions.

This deleveraging process has continued alongside a steady NFC capitalisation that began in the second half of 2013 and went on into in the first half of 2018.[76] During this period, net issues of shares and other equity by NFCs amounted to 1.6% of GDP (Chart I.3.22). The increase in equity value of companies (3.5%) was also affected by a valuation of listed and unlisted shares and other equity, mainly due to retention of earnings by the companies.

**Chart I.3.22** • NFCs financing flows, financial liabilities | Percentage of GDP




Sources: Banco de Portugal and Statistics Portugal. | Note: Total debt corresponds to the sum of debt securities, loans and trade credits and advances.

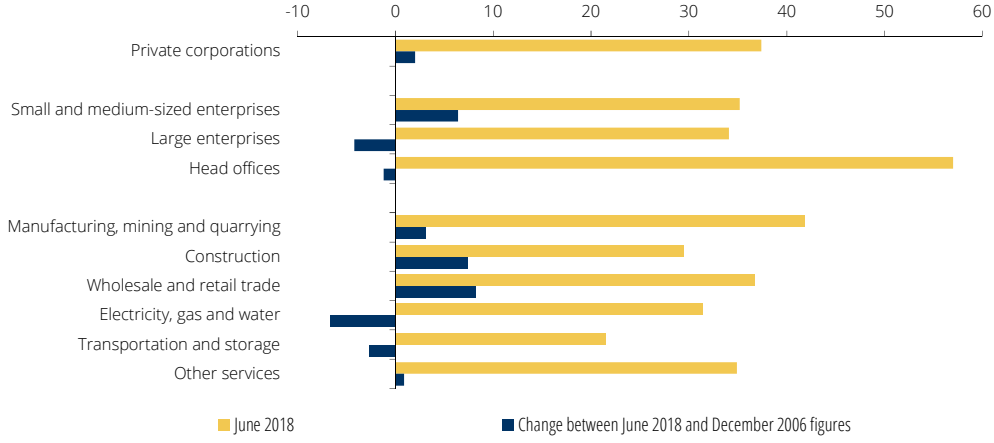
NFC capitalisation shows some heterogeneity when companies are considered by size and sector of activity, and indicates structural changes in the capitalisation of some groups of enterprises vis-à-vis the figures prior to the economic and financial crisis. Actually, successive increases in the capitalisation of small and medium-sized enterprises led to an increase in their equity-to-assets ratio which significantly exceeded the level of December 2006[77] (Chart I.3.23). By contrast, large enterprises and head offices reduced this ratio in relation to December 2006, even though it was a lower decrease for head offices, whose ratio has been significantly higher than all other companies during the period under review.[78] In June 2018, the increase in the equity-to-assets ratio against the same month in 2017 was similar for small and medium-sized enterprises and large enterprises, of approximately 2 p.p. During the same period, head offices increased their ratio by 1 p.p. There were also significant differences by economic activity between the current equity-to-assets ratio level and the one observed for each sector of activity in December 2006, with emphasis on a more significant increase in the equity ratio in trade, construction and manufacturing.

76. Turning to transactions in NFC shares and other equity, the impact of real estate purchases by non-residents must be taken under consideration, since they are accounted for in National Accounts as foreign direct investment (FDI) by non-resident individuals. According to the methodology adopted by the National Accounts (SNA 2008 and ESA2010), real estate is always an asset of the economy where it is located. Thus, real estate transactions by non-residents are considered uses in the equity of resident notional companies purchasing/holding such real estate (on this matter see §11.88 of SNA 2008 and §3.182(b) of ESA2010). Given the large amount totalled by transactions by non-residents in real estate located in the national territory during the last few years, the significance of this segment in transactions in NFC shares and other equity has been growing. Yet, that segment excluded, the flows of this financial instrument are positive in recent times, accounting for approximately 40% of the consolidated transactions in NFC equity in the first half of 2018.

77. The set of series of the Central Balance Sheet Database has a quarterly frequency, and the first data correspond to December 2006.

78. Available as of December 2006, the whole series presents a higher equity-to-assets ratio of head offices in relation to all other groups of NFCs.

**Chart I.3.23** • Equity-to-assets ratio in June 2018 and change between June 2018 and December 2006 | Percentage and percentage points




Source: Banco de Portugal. | Notes: Information on NFCs from the central balance sheet dataset. Excludes Section A of NACE Rev.2: Agriculture, forestry and fishing.

Uncertainty about international trade developments, monetary policy normalisation, and the slowing down of economic activity shows how important it is to strengthen the capital position and to deleverage Portuguese companies in order to ensure their resilience in a sustainable manner.

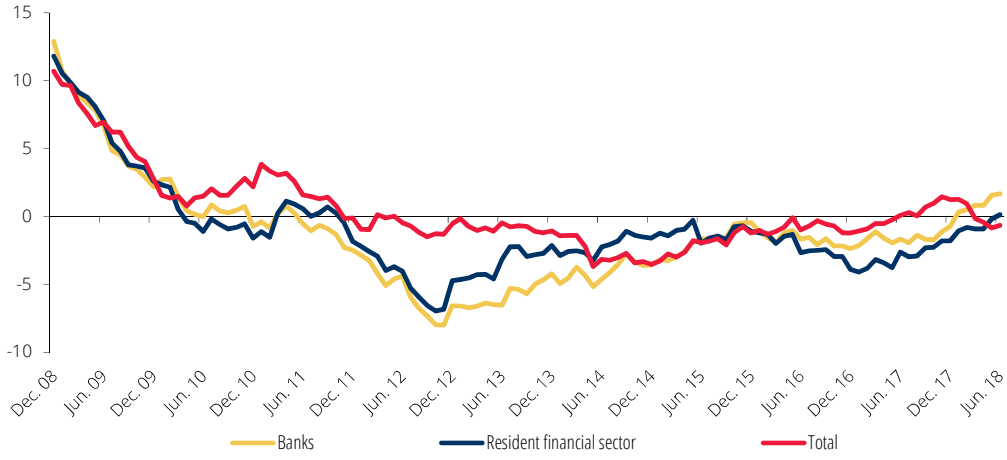
## Positive annual rate of change of bank credit to NFCs, for the first time since 2011

The annual rate of change of total credit to NFCs was -0.6% in June 2018, lower than in December 2017, when it increased by 1.3%. The negative change in June 2018 was caused by a decrease in loans (-0.5%) and in debt securities (-2.3%).

Yet, in the first half of 2018 there was a positive net flow of credit granted by resident financial institutions, to which banks and other credit institutions contributed. The annual rate of change in credit granted by banks was 1.7%, due to a rise in loans (1.5% in June 2018 from a nil change in December 2017) and in debt securities held by banks (2.8% in June 2018, from -5% in December 2017) (Chart I.3.24).[79] Thus, the rate of change in loans granted to NFCs was positive for the first time since 2011.

79. Said annual rates of change in credit are estimated based on net figures for credit sold without recourse, write-offs, reclassifications and tariff deficit transfers. Between December 2017 and June 2018 there was an increase of around 53% in write-offs by other monetary financial institutions. In comparison with the data presented in Table A.9 of the Statistical Bulletin of Banco de Portugal, the time series loans granted to NFCs adjusted for sales of loan portfolios should be considered, even though this series is not net of tariff deficit transfers. According to that table, the annual rate of change in loans to NFCs was 0.7% in June 2018.

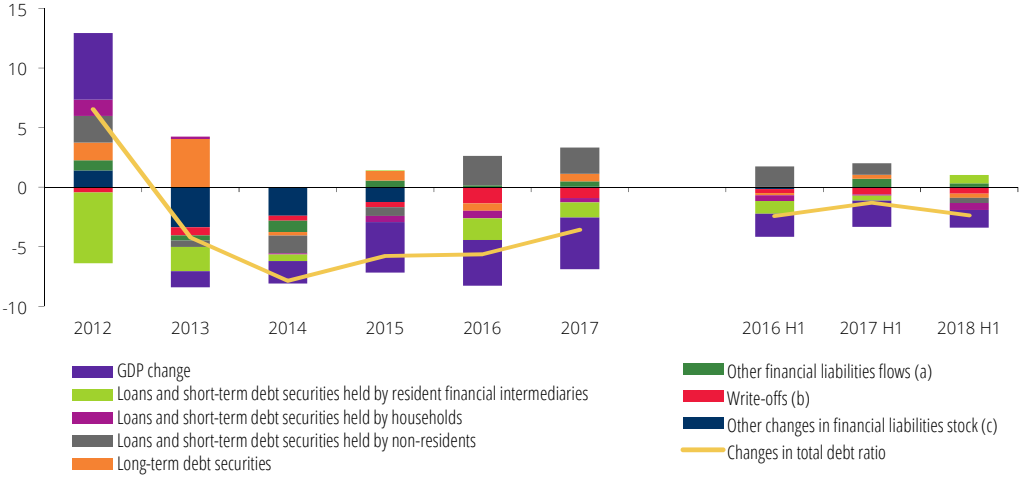
**Chart I.3.24** • Annual rate of change in credit granted to NFCs | Percentage




Source: Banco de Portugal.

Conversely, there was a net repayment of loans granted by resident non-financial sectors and non-residents. The net increase of loans granted by resident financial institutions together with the net reduction of loans granted by non-residents are significantly in contrast with the changes observed since the onset of the economic and financial crisis. Except for the first half of 2014, NFCs funding by resident financial institutions was progressively repaid and replaced by loans and debt securities granted by non-residents (Chart I.3.25).

**Chart I.3.25** • Contributions to changes in NFCs' total debt ratio | Percentage points of GDP




Sources: Banco de Portugal and Statistics Portugal. | Notes: Half-year contributions consider changes from preceding end-of-year figures. (a) Correspond to loan and debt securities flows from general government, insurance corporations and pension funds and trade credit and advances flows. (b) Corresponds to credit written off from assets in the balance sheets of resident monetary financial institutions. (c) Corresponds to other changes in volume and in prices, excluding write-offs of resident monetary financial institutions.

## New loans with an interest rate fixation period of over one year have grown since 2015, despite the marginal decrease in their share of new loans in the first half of 2018

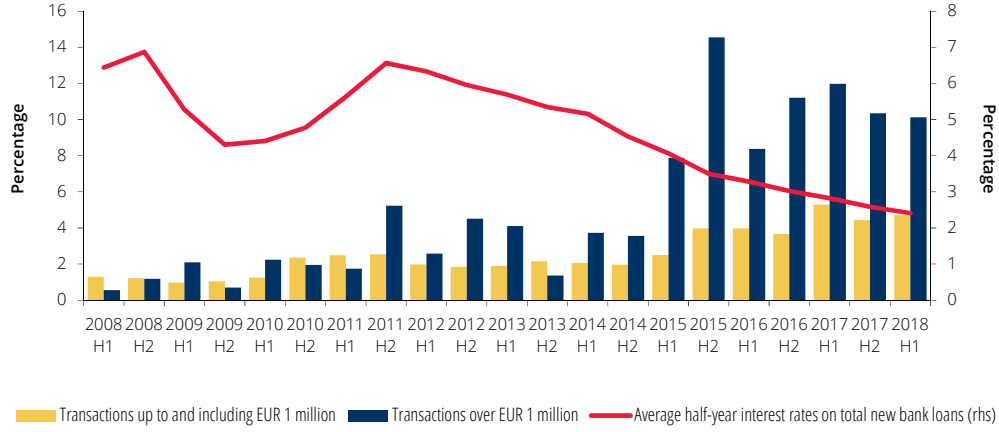
The gross flow of new loans to NFCs increased by 9% in the first half of 2018 from the same period in 2017. In this period of time, gross flows of new loans to manufacturing and trade increased and gross flows to construction and real estate activities decreased slightly. New gross flows of loans to both the manufacturing and trade sectors are mainly associated with enterprises in lower risk classes. Conversely, the riskier class records a significant share of new flows of loans to enterprises in construction and real estate activities (Section 4.3 Credit standards).

According to banks participating in the Bank Lending Survey (BLS) in June 2018, there was a slight reinforcement of demand for new loans by NFCs as a way of funding investment. The general level of interest rates also led enterprises to apply to these institutions for loans. The most recent survey, in October 2018, came up with results similar to those of the June 2018 survey, though showing greater stability in the expectations of all loan demand factors for enterprises.

Indeed, within a context of low interest rates, new loan agreements with longer initial rate fixation periods could limit exposure to potential interest rate rises, even gradual ones, as a consequence of the normalisation of monetary policy as well as to a possible tightening in credit standards.

The share of new business with an initial rate fixation period of more than one year has increased since 2015, particularly for loans of over €1 million (Chart I.3.26). In the first half of 2018, the share of new loans granted with an initial rate fixation period of more than one year declined marginally for loans both up to and above €1 million, when compared with the first half of 2017.

**Chart I.3.26** • Weight of new bank loans with initial rate fixation period of more than 1 year on new bank loans | Percentage



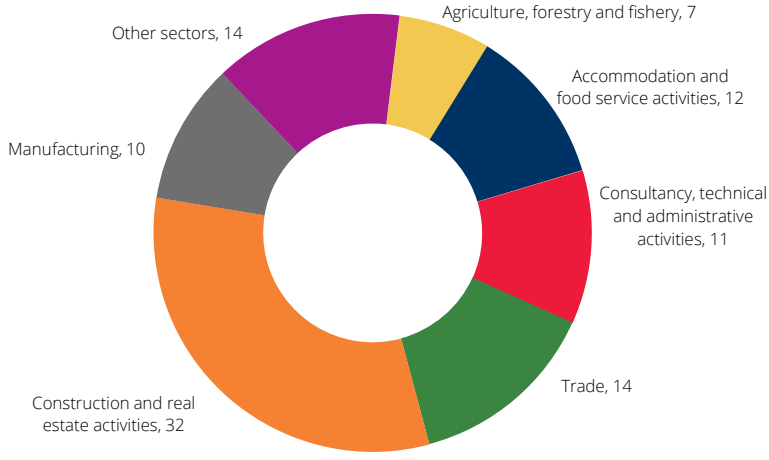

Source: Banco de Portugal.

Although credit standards for new loans remained unchanged overall in the first half of 2018, banks participating in the BLS pointed out that bank lending to NFCs has been favoured by a decrease in the idiosyncratic risks of enterprises and of each activity sector, as well as by favourable developments in the economy (Section 4.3 Credit standards).

## The construction and real estate activities sector holds a significant share of total loans to enterprises incorporated since 2013

Considering only enterprises that started operating since 2013 – i.e. at a time of economic recovery – the outstanding amount of loans granted by the resident financial sector to enterprises in the construction and real estate activities sector was of around one third by the end of June 2018[80] (Chart I.3.27). Also in this sector, the share of the outstanding amount of loans granted to younger enterprises was higher than in other activity sectors in general, except for agriculture, forestry and fishery and accommodation and food services: 11% in construction and real estate activities, against 18% in agriculture, forestry and fishery, 16% in accommodation and food service activities, 9% in consultancy, technical and administrative activities, 8% in trade and 5% in manufacturing.

**Chart I.3.27** • Outstanding amount in June 2018 of loans granted by the resident financial sector to enterprises which started operating since 2013 | Percentage




Source: Banco de Portugal. | Notes: Loan information obtained from the CCR. None of the sectors of activity included in 'Other sectors' held a share larger than those of the individual sectors of activity depicted in the chart.

Although credit granted to the different sectors follows current favourable developments in their activities, investment and borrowing decisions made by enterprises should take into consideration their own specifics and the cyclical features of the sector where they operate, so as to prevent losses from a downturn in the business cycle and an increase in default.

80. Considering loans to enterprises that had no records in the CCR for three or more months prior to 2013 (proxy for enterprises that never received loans from the resident financial sector) overall the same conclusions would be reached, though there was a slight decrease in accommodation and food services (10%) and a slight increase in consultancy, technical and administrative activities (15%). The amount of outstanding loans associated to enterprises that started operating since 2013 corresponds to approximately 68% of loans to enterprises that had no records in the CCR for three or more months prior to that year.

# 4 Banking sector

In the first half of 2018, banking system profitability continued on a recovery trend. This improvement took place as lower credit impairment losses were recorded and operational efficiency increased. Non-performing loans (NPLs) continued to decline while impairment coverage ratios increased again. The liquidity position remained at comfortable levels. The total capital ratio was strengthened by the issue of debt instruments eligible for own funds.

These developments took place in a favourable macroeconomic and financial environment in which real estate asset prices were rising. However, the Portuguese banking system continues to be constrained by the low-interest-rate environment in the euro area, by the persistence of high NPL stock, by the need for investment in technology infrastructure to face the challenges posed by the digitalisation of financial services, by the potential competition from specialised firms (fintechs), by the need to rescale operational cost structures and by the need for the issuance of highly subordinated debt instruments eligible for regulatory capital, to comply with MREL in the short to medium term.

Despite the current improvement in profitability, the challenges still facing the Portuguese banking system on the one hand require the adoption of prudent application of results, particularly in regard to dividend distribution. On the other hand, the efforts to reduce operational costs must not compromise the adoption of suitable policies for controlling the risks inherent to banking activity. In particular, institutions must ensure suitable assessment and control not only of the financial risks, but also operational risk, namely in regard to combating money-laundering and terrorist financing, and the mitigation of cyber risk.

Finally, the adoption of IFRS 9 on 1 January 2018 led to the transition from an incurred loss model to an expected loss model, with an impact on the banks' recognised impairments and capital. This standard results in faster recognition of impairment losses, in line with the financial assets' credit risk. Also in this regard, the implementation of the addendum to the ECB guidance on provisioning of non-performing loans[81] creates a significant incentive for recognising more promptly impairment losses in credit agreements which become non-performing.

Over the last few years, the main institutions of the Portuguese banking system have carried out restructuring processes and followed non-performing asset reduction plans, which together were designed to increase future profitability and resilience to adverse shocks, and to im-prove the conditions for carrying out their financial intermediation role. However, in general, the institutions are at different phases in the adjustment, despite a fall in heterogeneity within the banking system.

81. For more information on the addendum to the ECB guidance on provisioning of non-performing loans see: https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.npl_addendum_201803.en.pdf.

# 4.1 Profitability

## Banking system profitability increased, mainly reflecting lower provisions and impairments

In the first half of 2018, the Portuguese banking system's results increased significantly year-on-year. Return on assets (ROA) was 0.7% and return on equity (ROE)[82] was 7.7% (Table I.4.1). In regard to the main institutions with significant international activity,[83] developments in profitability also reflected a greater contribution from this activity compared to the same period the year before.

**Table I.4.1** • Banking system's statement of profit or loss

| | EUR milion (annualized) | | | In percentage of average assets | | | Contributes to change in ROA (pp) |
|---|---|---|---|---|---|---|---|
| | 2017 H1 | 2017 | 2018 H1 | 2017 H1 | 2017 | 2018 H1 | 2018 H1 |
| 1. Net interest income | 6,137 | 6,109 | 6,164 | 1.59 | 1.59 | 1.62 | 0.01 |
| 2. Net fees and commissions | 2,777 | 2,853 | 2,921 | 0.72 | 0.74 | 0.77 | 0.04 |
| 3. Income from financial operations | 1,087 | 840 | 767 | 0.28 | 0.22 | 0.20 | -0.08 |
| 4. Other operating income | -356 | 1,001 | -327 | -0.09 | 0.26 | -0.09 | 0.01 |
| 5. Operational costs | -5,838 | -5,706 | -5,498 | -1.51 | -1.48 | -1.45 | 0.09 |
| 6. Provisions and impairments | -3,010 | -4,255 | -2,022 | -0.78 | -1.11 | -0.53 | 0.26 |
| 7. Other results | 362 | 260 | 569 | 0.09 | 0.07 | 0.15 | 0.05 |
| Profit or loss before tax | 1,318 | 1,184 | 2,746 | 0.34 | 0.31 | 0.72 | 0.37 |
| Memorandum items: | | | | | | | |
| Core operating income [=1+2-5] | 3,075 | 3,256 | 3,586 | 0.80 | 0.85 | 0.94 | 0.13 |
| Total operating income [=1+2+3+4] | 9,644 | 10,803 | 9,523 | 2.50 | 2.81 | 2.50 | -0.03 |
| Impairment on credit | -1,727 | -2,464 | -1,232 | -0.45 | -0.64 | -0.32 | 0.13 |
| Average of total assets | 385,467 | 384,563 | 380,293 | | | | 0.01 |

Source: Banco de Portugal | Note: Return on assets (ROA) is computed using Profit or Losses before taxes, as a percentage of average assets.

Profitability was driven chiefly by a substantially lower flow of provisions and impairments compared to the same period of 2017. This component contributed 0.26 p.p. to the increase in ROA – about two-thirds of it. This took place in a context of economic recovery in Portugal, with credit default by borrowers falling, in parallel with increasing prices on associated collateral. However, as there is evidence of a positive relationship between economic growth and bank profitability due to the procyclicality of impairments, this dynamic could stagnate or reverse should the economy slow down.[84] Given the persistence of high NPL stock, the recognition of impairment losses should continue in the next few years, in line with the plans submitted to the supervisory authorities.

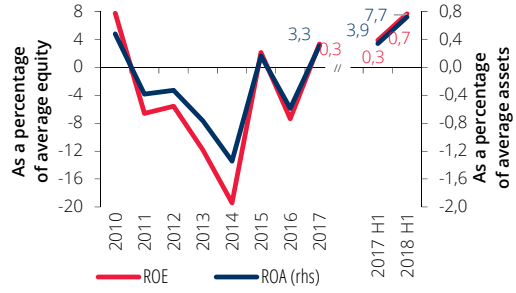
82. ROA and ROE correspond to the ratios between annualised earnings before tax and average assets and average equity respectively.
83. International activity is deemed significant when the non-domestic share of the total exposure is above 10%.
84. For more details on the influence of the macroeconomic factors on the banking sector's profitability, see Special Issue "Profitability of the Portu-guese banking system – determinants and prospects", Banco de Portugal, *Financial Stability Report*, June 2017, and Martinho et al (2017), "Bank profitability and macroeconomic factors", Financial Stability Papers, Banco de Portugal.

Banking system profitability has important implications for the financial system's stability level, as profit retention helps strengthen institutions' solvency. Thus, despite the current improvement in profitability, the challenges still facing Portuguese institutions require the prudent application of results, particularly in regard to dividend distribution.

The lower leverage levels are a key feature of the banking systems' overall adjustment in the years following the international financial crisis that began in 2008, reflected in the increased resilience to adverse shocks. This fact is consistent with the current relationship between the ROE and ROA levels, which reflect greater equity levels per unit of asset (Chart I.4.1).

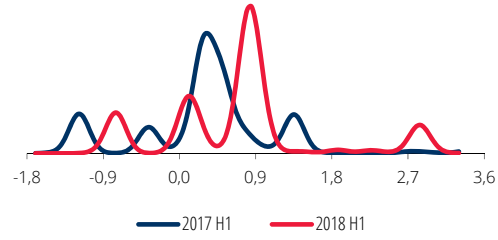
The greater profitability in the banking system, in aggregate terms, was accompanied by a rightward shift in ROA's distribution, meaning the increase in this indicator was broad-based, in particular for some of the larger institutions (Chart I.4.2). Furthermore, the dissipation of the negative base effect caused by the recognition of negative foreign exchange reserves arising from the deconsolidation of BFA by BPI in June 2017 also contributed to the increase in the banking system's ROA.[85]

**Chart I.4.1** • Return on equity and return on assets (ROE and ROA)




Source: Banco de Portugal. | Notes: Return is computed using Profit or Losses before taxes, as a percentage of average assets. Annualized figures.

**Chart I.4.2** • Return on assets (ROA) – Empirical distribution | Percentage of average assets

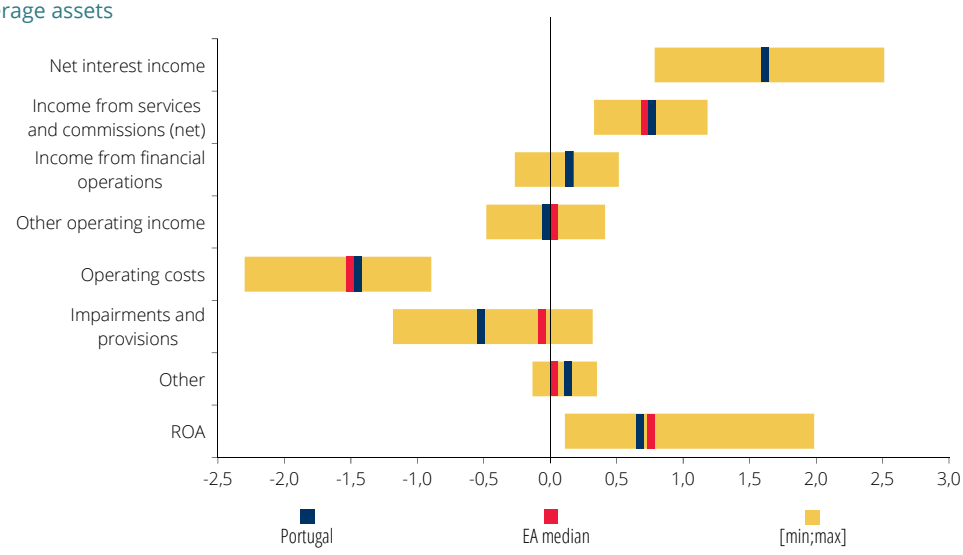



Source: Banco de Portugal. | Notes: Empirical distribution obtained using a Gaussian kernel that weights institutions according to their assets. Bandwidth=0.12. Return on assets (ROA) is computed using Profit or Losses before taxes, as a percentage of average assets. Annualized figures.

In the first half of 2018, the Portuguese banking system's ROA was slightly below the median for the euro area (Chart I.4.3). This relative position continues to be justified mainly by a larger flow of provisions and impairments recorded by the Portuguese banking system compared to its European counterparts. Importantly, the (negative) contribution made by operational costs to ROA was lower than the euro area median.

85. For more details, consult Section "3.4 Profitability" of the *Financial Stability Report*, December 2017.

**Chart I.4.3** • ROA – International comparison of contributions (2018 H1) | Percentage of average assets

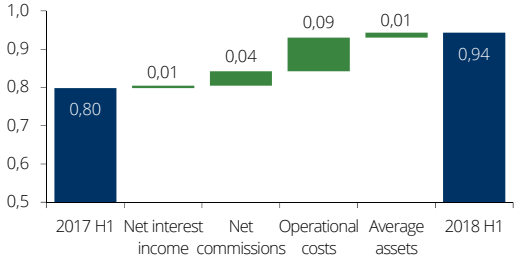



Source: European Central Bank (Consolidated Banking Data). | Notes: The 'Other' item includes negative goodwill, appropriation of income from subsidiaries, joint ventures and associates, and income from non-current assets held for sale and not qualifying as discontinued operations. Data for some items are unavailable for certain countries. However, this should not affect the analysis substantially. Annualized figures.

## Operating result improved in a context of declining heterogeneity between institutions

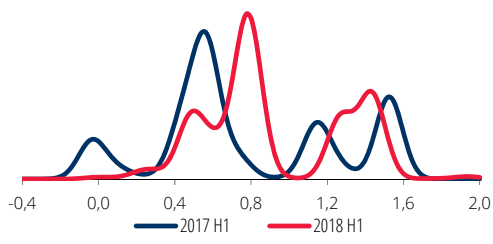
In the first half of 2018, the contribution to ROA made by the recurring operating result[86] in-creased by 0.13 p.p. (Chart I.4.4). This followed the increases in net interest income and in net fees and commissions and, most significantly, the reduction in operational costs. The increase observed was driven by an improvement in this indicator by the institutions with a lower recurring operating result (Chart I.4.5). In the first half of 2018, the institutions with a higher recurring operating result stabilised at values similar to those observed for the same period the year before. Therefore, heterogeneity between institutions declined in the first half of 2018.

**Chart I.4.4** • Operating result – Level and contributions to change | Percentage of average assets and percentage points




Source: Banco de Portugal. | Notes: Recurring operating result is aggregate net interest income and net fees and commissions less operational costs. The blue bars correspond to recurring operating result as a percentage of average assets. The other bars correspond to contributions made to changes in the ratio. Annualized figures.

**Chart I.4.5** • Operating result – Empirical distribution | Percentage of average assets



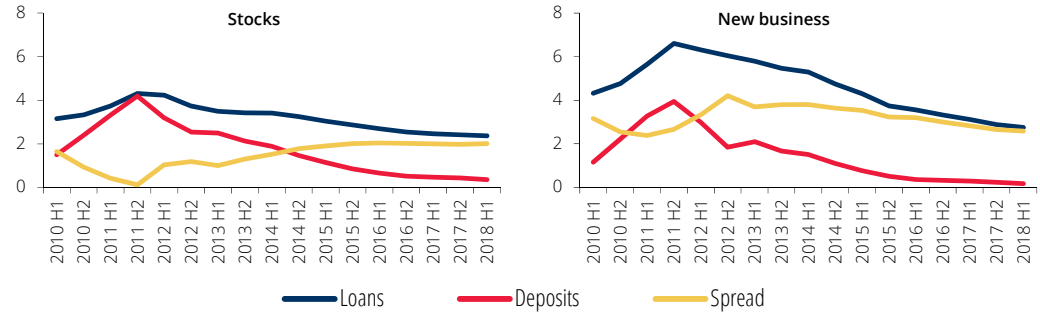

Source: Banco de Portugal. | Notes: Empirical distribution obtained using a Gaussian kernel that weights institutions according to their assets. Bandwidth=0.07. Annualized figures.

86. Recurring operating result is defined by aggregate net interest income and net fees and commissions less operational costs.

Net interest income, i.e. the difference between total interest received and total interest paid, increased marginally year-on-year, increasing its contribution to ROA to 1.62% of average as-sets. This was the result of an increase in the implicit interest rate spread, with the implicit interest rate on liabilities falling more than the implicit interest rate on assets. The fall in the implicit interest rate on liabilities arose principally from the reduction of the implicit cost of financing through customer deposits and securities. Additionally, developments in net interest income continued to benefit from the recomposition of the financing structure observed over the last few years, in favour of customer deposits and to the detriment of securities and finan-cial derivatives held for trading. In the opposite direction was a reduction in the loan portfolio granted to the non-financial private sector, as well as this portfolio's implicit interest rate, re-sulting in a reduction in interest received.

As regards lending to and deposits from customers, net interest income declined year-on-year in the first half of 2018. This was due to the fall in interest received, both through the reduction in the loan portfolio granted to the non-financial private sector, and due to the reduction in the associated implicit interest rate. This effect was partly offset by the reduction in the implicit interest rate on customer deposits. In domestic activity, the spread between the interest rates on new loans and deposits with the non-financial private sector continued to narrow, closing the gap between this spread and that of balances (Chart I.4.6).

**Chart I.4.6** • Interest rates on outstanding amounts and new time deposits with the non-financial private sector – Domestic activity | Per cent




Source: Banco de Portugal. | Notes: Includes loans to non-financial corporations and individuals. Half-yearly average rates weighted by outstanding amounts (left panel) and new time deposits (right panel) for loans and deposits.

Income from services and commissions (net) increased 5.2% year-on-year, due to the increase in fees received being greater than the increase in fees paid. This increase was driven by the institutions that had lower income from commissions in the same period the year before, with heterogeneity in the banking system falling. The increase in commissions received was mainly due to the increase in the commissions from payment services which represented around 41% of all commissions received.

The current favourable developments in income from services and commissions may, on the one hand, be challenged by additional competitive pressures, mainly on payment services provision, with the transposing of the Revised Payment Services Directive (PSD 2) into Portuguese law[87] which will facilitate the entry of new enterprises into the market. However, there is still no evidence of

87. Decree-Law No. 91/2018, which transposes PSD 2 into the Legal Framework for Payment Services and Electronic Money, was published in the Official Gazette on 12 November 2018, entering into force the day after its publication.

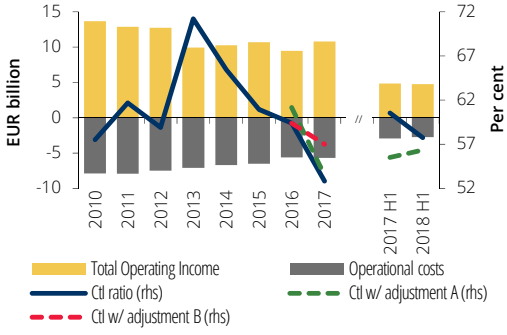
significant competition by fintechs, as the Directive only entered into force recently. On the other hand, the building of synergies between the incumbent institutions and the new financial service providers through digital means may also contribute to the increase in the banking system's operational efficiency.

## Banking system efficiency, measured by the cost-to-income ratio, continued to improve in the first half of 2018.

The cost-to-income ratio[88] fell 2.8 p.p. in the first half of 2018, indicating an increase in the banking system's efficiency (Chart I.4.7). This was the result of falling operational costs, given the slight reduction in total operating income. In the first half of 2017, various non-recurrent events caused the cost-to-income ratio to increase.[89] Correcting for these events, this indicator stands at about 56%, which is slightly lower than that observed at the end of the first half of 2018 after applying similar adjustments.

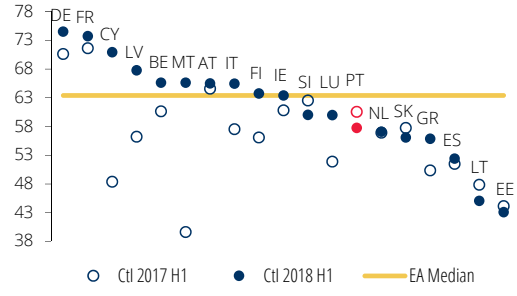
The Portuguese banking system's cost-to-income ratio was below the euro area median in the first half of 2018 (Chart I.4.8). This was due to the improvement in the Portuguese banking system's efficiency as mentioned above, and the deterioration of this ratio in other geographies.

**Chart I.4.7** • Cost-to-income (CtI), operational costs and total operating income




Source: Banco de Portugal. | Note: The cost-to-income ratio with adjustment A was adjusted by the restructuring processes, collective labour agreement (CLA) revision, the triggering of the contingent capitalisation scheme upon the sale of Novo Banco, and the loss arising from the deconsolidation of BFA by BPI. The ratio with adjustment B was only adjusted by the triggering of the contingent capitalisation scheme upon the sale of Novo Banco.

**Chart I.4.8** • Cost-to-income (CtI) – International comparison (2018 H1) | Per cent




Source: European Central Bank (Consolidated Banking Data).

In the first half of 2018, operational costs fell 5.8% year-on-year, mainly due to the fall in staff costs. This item represents around 57% of the banking system's operational costs. The other administrative expenses and depreciation and amortisation also fell year-on-year. The fall in operational costs made a 0.09 p.p. contribution to the increase in ROA, stemming mainly from the institutions with greater operational costs per asset.

88. Ratio between operational costs and total operating income.

89. The events considered in the adjustments were: (i) revisions of collective labour agreements (CLAs), which reduced operational costs (with an impact in 2017 H1 and 2018 H1); (ii) restructuring processes, which raised operational costs (2017 H1 and 2018 H1); (iii) the loss arising from the deconsolidation of BFA by BPI, with a negative impact on the 'Other operating income' item (2017 H1).

Over the last few years, the changes in operational costs for most of the Portuguese banking system's institutions have been driven mainly by the restructuring processes under way, de-signed to increase their operational efficiency. In particular, although the early retirement pro-grammes, voluntary retirements and collective labour agreement (CLA) revisions may continue to involve added costs at the time of their implementation, they are expected to help increase the banking system's future profitability.

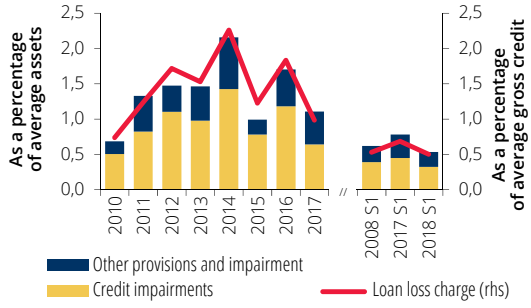
However, the institutions' efforts to reduce operational costs must not undermine adequate control of the risks inherent to banking activity. In particular, the institutions must ensure suita-ble assessment and control not only of the financial risks, but also operational risk, namely in regard to combating money-laundering and terrorist financing, and the mitigation of cyber risk. Finally, the banking system should follow an investment policy in digitalising its structures, with a view to improving their operational efficiency and mitigating effects of potential competition from fintechs.

## The loan loss charge reached its lowest value since June 2008

In the first half of 2018, the loan loss charge[90] fell 0.2 p.p. year-on-year, to 0.5%, a level similar to that of the first half of 2008. This was mainly driven by the reduction of credit impairments by around 29% (Chart I.4.9).

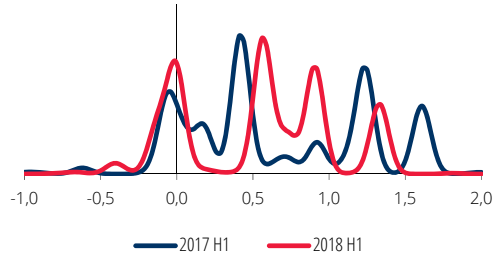
The recording of credit impairments was heterogeneous across the banking system's institu-tions (Chart I.4.10). Indeed, a negative correlation was observed between the quality of the credit portfolio and the recording of impairments on those assets.[91] However, the loan loss charge fell more sharply among the institutions for which this indicator was higher in the first half of 2017.

**Chart I.4.9** • Impairments, provisions and loan loss charge




Source: Banco de Portugal. | Notes: The loan loss charge corresponds to the flow of credit impair-ments and provisions as a percentage of total average gross credit granted to customers. Annualized figures.

**Chart I.4.10** • Loan loss charge – Empirical distribution | Percentage of average assets




Source: Banco de Portugal. | Notes: Empirical distribution obtained using a Gaussian kernel that weights institutions according to their assets. Bandwidth=0.06. The loan loss charge corresponds to the flow of credit impairments as a percentage of total average gross credit granted to customers. Annualized figures.

In the current context of economic recovery, increasing real estate prices and low interest rates, the flow of impairment losses (net of reversals) declined in the first half of 2018. On the one hand, this resulted from a lower materialisation of credit risk, i.e. from a lower flow of new NPLs,

90. The loan loss charge corresponds to the flow of credit impairments and provisions as a percentage of total average gross credit granted to customers.

91. For more details, see Section 4.1 "Profitability", *Financial Stability Report*, June 2018.

resulting in a lower need for recording impairments on the credit portfolio. On the other hand, the more favourable economic situation will tend to switch loans from non-performing to performing (termed 'cures'), due to the improvement in the debtors' financial position. Similar-ly, the current context has facilitated the increase in value of real estate collateral, reducing the expected loss. Thus there will possibly be room for reversing part of the impairments recorded previously.

However, as mentioned above, there are signs of a positive relationship between economic growth and the reduction in the flow of impairments. Hence, the current dynamics may flatten out or reverse should the economy slow down. Furthermore, the effects of applying IFRS 9 and the addendum to the ECB guidance on provisioning of non-performing loans may lead to higher impairments. Finally, the convergence of asset quality indicators towards international stand-ards requires the continuation of efforts to reduce the stock of NPLs and, in certain cases, the recording of impairments.

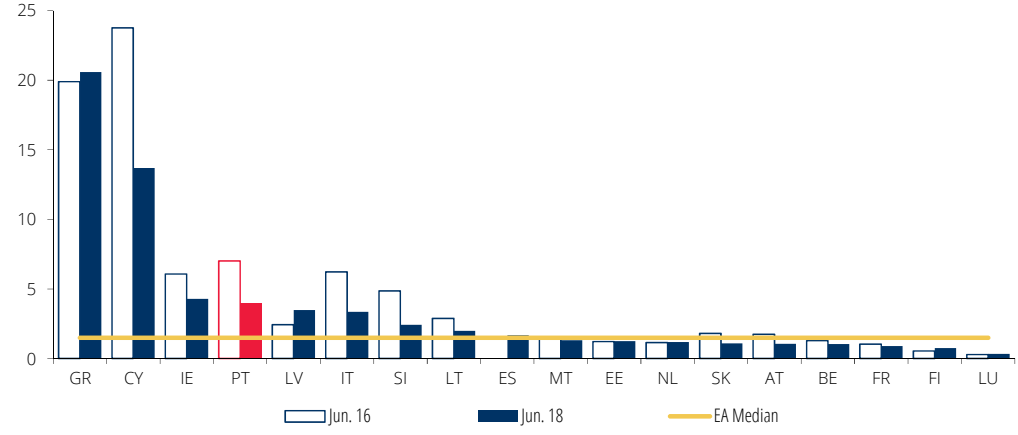
With a view to applying the accounting principles laid down in IFRS 9 consistently, Banco de Portugal published a Circular Letter[92] giving its understanding of the benchmark criteria and principles supporting the assessment of the calculation methodologies for expected losses on credit for institutions under its supervision.

## 4.2 Asset quality

### The NPL ratio continued to decline

The Portuguese banking system has made remarkable progress in the average quality of the credit portfolio due to sales and write-offs, and loans transitioning from non-performing to performing (cures). The share of NPLs net of impairments in total assets in Portugal is more or less identical to that in Ireland and Italy (Chart I.4.11). However, the NPL level continues to be significant and compares unfavourably to other European countries.[93] Thus, in the current con-text of recovery of banking system profitability, the institutions must promote profit retention to increase capital levels, improving the conditions for further reducing the high level of NPLs.

**Chart I.4.11** • NPL (net of impairments) to total assets ratio – International comparison | Per cent




Source: European Central Bank (Consolidated Banking Data). | Notes: NPLs according to the EBA definition. Certain countries are not represented due to lack of data.

92. Circular Letter No. CC/2018/00000062, issued on 15 November 2018.

93. However, implementation of the NPL definition proposed by the EBA is not yet fully harmonised across euro area countries, which may bias international comparisons. For more details, see Special Issues "Strategy to address the stock of non-performing loans (NPLs) ", *Financial Stability Report*, December 2017 and "Concepts used in the analysis of credit quality", *Financial Stability Report*, November 2016.

Thus it is important that the current NPL reduction trend is maintained and losses on assets with little chance of recovery continue to be recognised, in accordance with the non-performing asset reduction plans submitted to the supervisory authorities which are to be implemented by the institutions. Also in this regard, the implementation of the addendum to the ECB guidance on provisioning of non-performing loans and the adoption of IFRS 9 create a significant incentive for recognising more promptly impairment losses in credit agreements which become non-performing, allowing a swifter exit of these assets from institutions' balance sheets.

In June 2018, the NPL ratio[94] stood at 11.7%, 1.6 p.p. down on December 2017 (Table I.4.2). This was driven principally by the reduction of NPL stock by around €4.6 billion. The reduction of the NPL ratio benefited above all from significant flows of write-offs and cures (net of new loans becoming non-performing) (Chart I.4.12). These two factors are estimated to account for over two-thirds of the decline in the NPL ratio in the first half of 2018. The public information availa-ble for some of the principal institutions indicate the continuation of the NPL stock reduction trend in the second half of 2018.

**Table I.4.2 • Loan portfolio quality**

| | Notes | Unit | Jun. 2016 | Dec. 2016 | Jun. 2017 | Dec. 2017 | Jun. 2018 | Δ Jun. 2016 Jun. 2018 | Δ Dec. 2017 Jun. 2018 |
|---|---|---|---|---|---|---|---|---|---|
| All sectors | | | | | | | | | |
| NPL | | 10⁶€ | 50,459 | 46,361 | 42,276 | 37,001 | 32,468 | -17,992 | -4,533 |
| o.w. Unlikely-to-pay | | 10⁶€ | 18,747 | 18,046 | 15,661 | 14,443 | 11,946 | -6,801 | -2,497 |
| o.w. Past-due | | 10⁶€ | 31,713 | 28,315 | 26,615 | 22,558 | 20,522 | -11,191 | -2,036 |
| NPL ratio | (1) (2) | % | 17.9 | 17.2 | 15.4 | 13.3 | 11.7 | -6.2 pp | -1.6 pp |
| Non-financial corporations | | | | | | | | | |
| NPL | | 10⁶€ | 33,151 | 30,160 | 27,232 | 24,184 | 21,123 | -12,028 | -3,061 |
| NPL ratio | (2) | % | 30.3 | 29.5 | 27.5 | 25.2 | 22.3 | -8.0 pp | -2.9 pp |
| Households | | | | | | | | | |
| NPL | | 10⁶€ | 12,865 | 12,030 | 11,154 | 9,824 | 8,722 | -4,142 | -1,102 |
| Housing | | 10⁶€ | 8,297 | 7,929 | 7,232 | 6,297 | 5,329 | -2,967 | -968 |
| Consumption and other | | 10⁶€ | 4,568 | 4,101 | 3,922 | 3,527 | 3,393 | -1,175 | -134 |
| NPL ratio | (2) | % | 9.2 | 8.7 | 8.1 | 7.1 | 6.4 | -2.8 pp | -0.7 pp |
| Housing | (2) | % | 7.2 | 7.0 | 6.5 | 5.7 | 4.9 | -2.3 pp | -0.8 pp |
| Consumption and other | (2) | % | 19.0 | 16.2 | 15.0 | 13.1 | 12.6 | -6.4 pp | -0.5 pp |

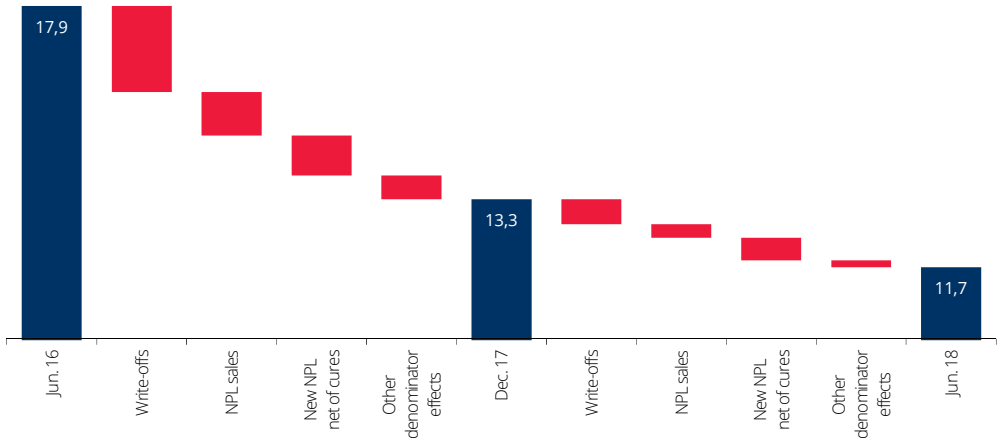
Source: Banco de Portugal | Notes: End-of-period figures. NPLs according to the EBA definition. (1) – as well as loans to customers, includes cash and cash balances at central banks and other credit institutions; (2) – corresponds to the sum of NPLs in relation to total loans.

From its peak in June 2016, the NPL ratio fell 6.2 p.p., corresponding to a decline of around €18 billion of NPL stock (-36%). Over this period, the change in NPL stock was explained chiefly by write-offs and, to a lesser extent, by sales and (net) cures of NPLs. These three factors together are estimated to have accounted for around 90% of the change in the NPL ratio since June 2016.

The NPL ratio for non-financial corporations (NFCs) stood at 22.3% at the end of June 2018, falling 2.9 p.p. since December 2017. This reduction in the NPL ratio was due to a decline in NPL stock of around €3 billion in this segment, which accounts for around 65% of total NPLs in the banking system. Around 60% of the fall in the NPL ratio was due to the flow of write-offs and cures (Chart I.4.14). The cumulative decline of NPL stock among NFCs since June 2016 came to €12 billion.

94. Ratio between the gross value of the NPLs and the total gross value of the loans.

**Chart I.4.12** • NPL ratio – Contributions to developments | Per cent and percentage points

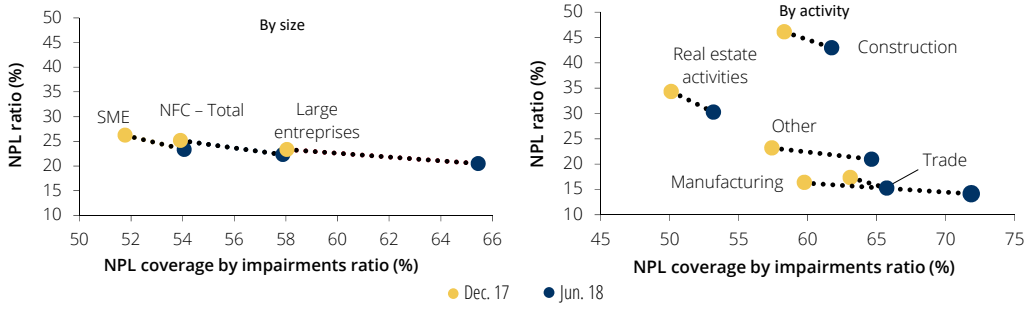



Source: Banco de Portugal (internal calculations). | Notes: NPLs according to the EBA definition. NPL sales include securitisations. The 'New NPLs, net of cures' item reflects all the NPL inflows and outflows for reasons other than write-offs, sales and securitisations, namely new NPLs net of cures, amortisations and foreclosures. Other denom-inator effects reflect changes in the stock of loans that are not related with the NPL stock (e.g. net flow of performing loans).

In the first half of 2018, the reduction in the NFCs' NPL ratio, combined with the strengthening of the NPL impairment coverage ratio, was broadly based across SMEs and larger enterprises (Chart I.4.13). However, the increase in the impairment coverage ratio was greater among larger enterprises.

By activity sector, there was also a generalised decline in the NPL ratio, as well as an increase in the impairment coverage ratio (Chart I.4.13). In manufacturing, the coverage ratio increased, in the first half of 2018, to a level above that observed in the other industries.

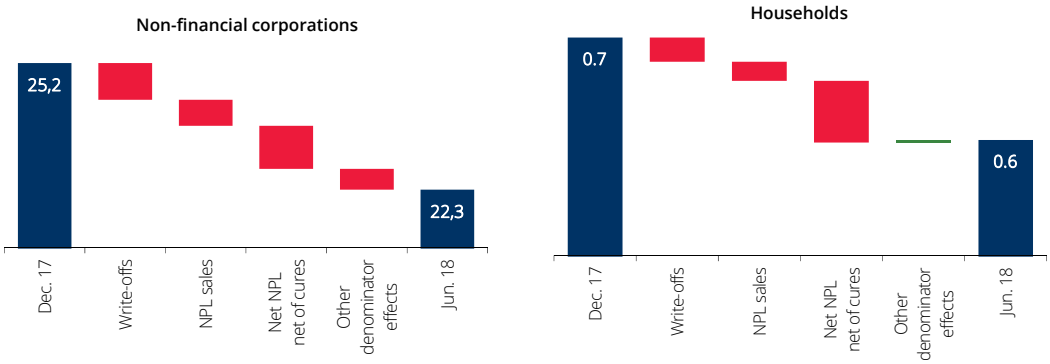
**Chart I.4.13** • NFCs' NPL ratio and impairment coverage ratio – by size and activity | Per cent




Source: Banco de Portugal. | Notes: NPLs according to the EBA definition. NPL sales include securitisations. The 'New NPLs, net of cures' item reflects all the NPL inflows and outflows for reasons other than write-offs, sales and securitisations, namely new NPLs net of cures, amortisations and foreclosures. Other denom-inator effects reflect changes in the stock of loans that are not related with the NPL stock (e.g. net flow of performing loans).

In turn, the NPL ratios on loans to households for house purchase and for consumption and other purposes stood respectively at 4.9% and 12.6%. The decline in NPL ratios in these seg-ments was essentially the result of a reduction of around €1 billion euros in NPL stock on hous-ing loans and around €134 million on loans for consumption and other purposes, since De-cember 2017. The main driver of the reduction in the NPL ratio in loans to households was (net) cures, accounting for more than half of this change (Chart I.4.14).

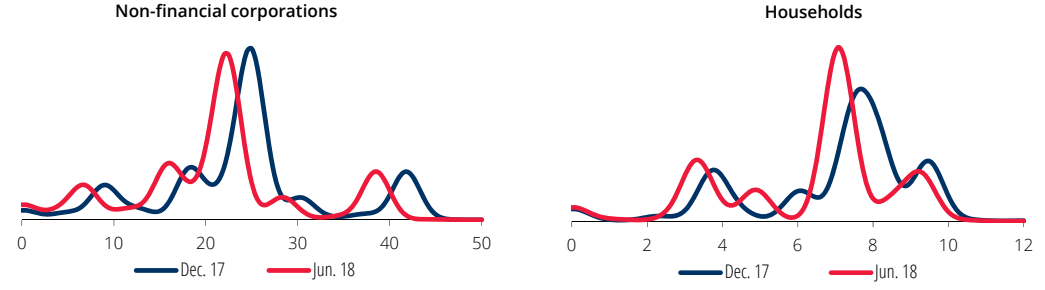
**Chart I.4.14** • NFC and household NPL ratios – Contributions to developments in the first half of 2018 | Per cent and percentage points




Source: Banco de Portugal (internal calculations). | Notes: NPLs according to the EBA definition. NPL sales include securitisations. The 'New NPLs, net of cures' item reflects all the NPL inflows and outflows for reasons other than write-offs, sales and securitisations, namely new NPLs net of cures, amortisations and foreclosures. Other denom-inator effects reflect changes in the stock of loans that are not related with the NPL stock (e.g. net flow of performing loans).

Between the end of 2017 and June 2018, there was a decline in the NPL ratios for most of the banking system's institutions (Chart I.4.15). However, there was still high heterogeneity be-tween institutions.

**Chart I.4.15** • NFC and household NPL ratios – Empirical distribution | Per cent




Source: Banco de Portugal. | Notes: Empirical distribution obtained using a Gaussian kernel that weights institutions according to their assets. Bandwidth=0.7 (NFCs) and Bandwidth=0.04 (households). NPLs according to the EBA definition.

## The impairment coverage ratio in the NFC segment increased sharply

In the first half of 2018, the impairment coverage ratio on NPLs[95] increased 3.5 p.p. to 52.8% (Table I.4.3). This reflected the increase in this ratio in the loans to NFCs (4.0 p.p.) and loans to households for house purchase (3.2 p.p.) segments, while the impairment coverage ratio on NPLs in the loans to households for consumption and other purposes segment fell (-1.7 p.p.).

95. Ratio between impairments recorded for NPLs and their gross value.

**Table I.4.3** • Coverage of NPLs by impairments, collateral and guarantees

| | Notes | Unit | Jun. 2016 | Dec. 2016 | Jun. 2017 | Dec. 2017 | Jun. 2018 | Δ Jun. 2016 Jun. 2018 | Δ Dec. 2017 Jun. 2018 |
|---|---|---|---|---|---|---|---|---|---|
| All sectors | | | | | | | | | |
| NPL impairment coverage ratio | (1) (2) | % | 43.2 | 45.3 | 45.9 | 49.4 | 52.8 | 9.7 p.p. | 3.5 p.p. |
| NPL total coverage ratio | (1) (3) | % | 85.9 | 87.2 | 88.5 | 90.5 | 92.2 | 6.3 p.p. | 1.7 p.p. |
| Non-financial corporations | | | | | | | | | |
| NPL impairment coverage ratio | (2) | % | 46.4 | 48.9 | 49.1 | 53.9 | 57.9 | 11.5 p.p. | 4.0 p.p. |
| NPL total coverage ratio | (3) | % | 84.1 | 85.0 | 87.0 | 89.0 | 92.9 | 8.8 p.p. | 3.9 p.p. |
| Households | | | | | | | | | |
| NPL impairment coverage ratio | (2) | % | 36.7 | 35.4 | 36.5 | 37.1 | 39.6 | 2.9 p.p. | 2.5 p.p. |
| Housing | (2) | % | 23.9 | 21.0 | 21.9 | 22.8 | 26.0 | 2.1 p.p. | 3.2 p.p. |
| Consumption and other | (2) | % | 60.0 | 63.2 | 63.5 | 62.6 | 60.9 | 0.9 p.p. | -1.7 p.p. |
| NPL total coverage ratio | (3) | % | 97.9 | 96.3 | 96.3 | 95.8 | 91.6 | -6.3 p.p. | -4.2 p.p. |

Source: Banco de Portugal. | Notes: End-of-period figures. NPLs according to the EBA definition. (1) – as well as loans to customers, includes cash and cash balances at central banks and other credit institutions; (2) – corresponds to the sum of accumulated impairments on NPLs in relation to total NPLs (3) – corresponds to the sum of accumulated impairments, collateral and guarantees associated with NPLs in relation to total NPLs.

The implementation of accounting standard IFRS 9 from January 2018, led to the introduction of a new model for calculating impairment by financial institutions.[96] This new model involves recognition of impairment losses on an expected loss basis, as opposed to the incurred loss concept used by the prior model (IAS 39). This approach introduces three stages, correspond-ing to the following financial asset classes: performing, underperforming and non-performing (Table I.4.4).

**Table I.4.4** • Expected loss impairment model of IFRS 9

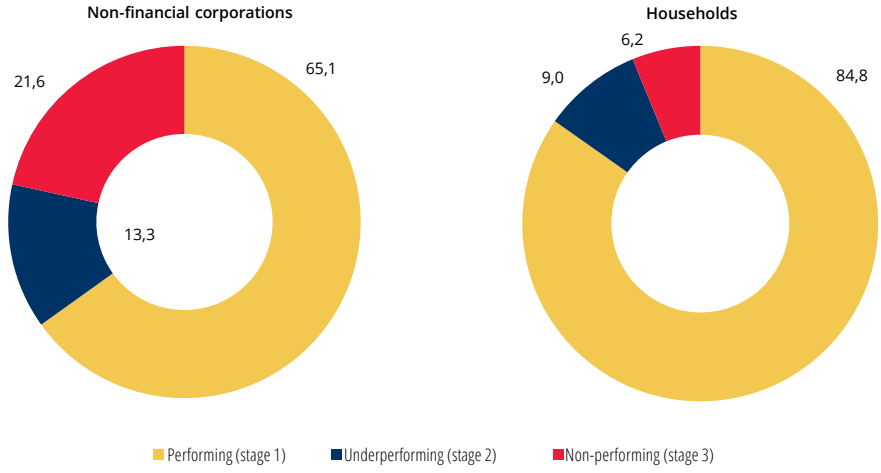
| | Stage 1 | Stage 2 | Stage 3 |
|---|---|---|---|
| Classification | Performing | "Underperforming (Operations with significant risk increase since recognition)" | "Non-performing (credit-impaired)" |
| Time horizon used in impairment calculation | 12 months | Remaining term to maturity | Remaining term to maturity |
| Probability of default (PD) | "PD 12 months Point-in-time" | "PD lifetime Point-in-time" | "100% Point-in-time" |
| Loss given default (LGD) | Point-in-time | Point-in-time | Point-in-time |
| Recognition of interest in profit or loss (interest rate incidence) | Gross value | Gross value | Net value (of impairments) |

Source: Banco de Portugal

96. Special Issue 2 "IFRS 9 – Main changes and impacts anticipated for the banking system and financial stability", *Financial Stability Report*, June 2017.

In accordance with European regulation on non-performing exposures,[97] credit-impaired financial assets according to the applicable accounting standard must be classified as non-performing in prudential terms. In the case of the institutions applying IFRS 9, it may be ex-pected that most of the assets classified as NPL are in stage 3. In fact, the loans granted to NFCs and households classified in stage 3 represented 21.6% and 6.2% of the total of their respec-tive portfolios in June 2018, only slightly below the NPL ratios in these segments (Chart I.4.16).

**Chart I.4.16** • Classification of the loans according to the IFRS 9 impairment model – June 2018




Source: Banco de Portugal.

## 4.3 Credit standards

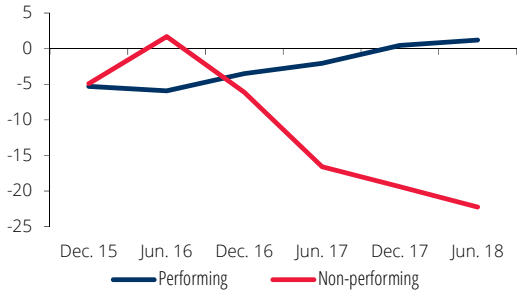
### In the first half of 2018, the annual rate of change of bank credit to NFCs was positive, while consumer credit's annual rate of change increased

The value of the customer loan portfolio (net of credit impairments) continued the falling trend that began in 2011, decreasing 1.6% between December 2017 and June 2018. This behaviour was chiefly the result of the reduction of loans to NFCs and households. In June 2018, this port-folio represented 59% of assets, the lowest value since 2008 (when the time series started), with the NFC segment representing around 21% of assets, loans to households for house pur-chase 28%, loans to households for consumption 5% and loans to households for other pur-poses 2%. The decline in the value of the portfolio of loans to the non-financial private sector is partly due to the banks' drive to reduce the high NPL stock, as the performing component of the loan portfolio has been increasing (Chart I.4.17). These developments began in the loans to households for consumption and other purposes segment and, more recently, in the NFCs segment also.

97. EBA/ITS/2013/03/rev1: EBA Final draft Implementing Technical Standards on supervisory reporting on forbearance and non-performing expo-sures under article 99(4) of Regulation (EU) No. 575/2013 of 24 July 2014, adopted by the Commission through Commission Implementing Regu-lation (EU) No. 680/2014 of 16 April 2014, subsequently altered by Commission Implementing Regulation (EU) No. 295/227 of 9 January 2015.

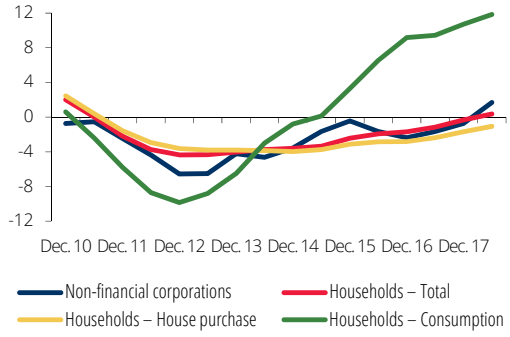
In domestic activity, the adjusted annual rates of change[98] for bank credit to households and NFCs were slightly positive in June 2018 (Chart I.4.18). This fact was observed after a prolonged period of decreasing balances of loans to these sectors.

**Chart I.4.17** • Loans granted to the non-financial private sector – Year-on-year rate of change | Per cent




Source: Banco de Portugal. | Note: NPLs according to the EBA definition.

**Chart I.4.18** • Bank credit granted to the non-financial private sector – Annual rate of change | Per cent




Source: Banco de Portugal. | Notes: Annual rates of change adjusted for securitisation operations, reclassifications, write-offs and exchange rate and price revaluations and, where relevant, for the effects of credit portfolio sales. Bank credit to non-financial corporations includes debt securities held by banks. Credit granted by monetary financial institutions resident in Portugal to residents in the euro area. Solo basis activity.

The slight growth of loans granted to households (0.4%) was driven by the 11.8% increase in consumer loans, with housing loans continuing to decline, although at an increasingly slower rate (-1.1%) (Section 3.2.2 Non-financial corporations). The seven largest institutions accounted for around 50% of new credit operations to households for consumption, compared to around 90% in other segments. Additionally, a significant proportion of new consumer credit operations are granted by institutions owned by international groups.

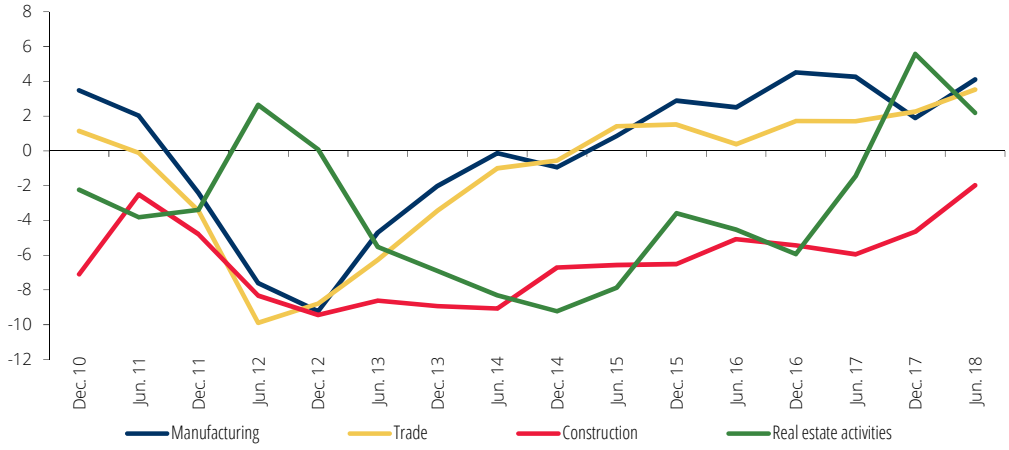
Bank credit to NFCs (loans and debt securities) increased 1.7% year-on-year. In terms of activity sectors, bank credit to NFCs continued to post positive annual rates of change in June 2018 in Manufacturing[99] and Trade[100] (Chart I.4.19). Total credit granted to real estate sector enterprises has posted a rapid recovery, although with a slowdown in June 2018, likely to be due to the buoyant real estate market. In turn, credit granted to enterprises in the construction industry continues to decline, although at a slowing pace.

98. Adjusted for securitisation operations, reclassifications, write-offs and exchange rate and price revaluations. Where relevant, the values are ad-justed for the effects of credit portfolio sales.

99. Includes manufacturing, mining and quarrying.

100. Includes wholesale and retail trade; repair of motor vehicles and motorcycles, as well as accommodation, food services and the like.

**Chart I.4.19** • Bank credit granted to non-financial corporations by activity – Annual rate of change | Per cent

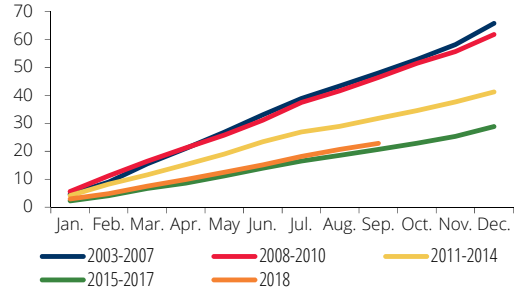



Source: Banco de Portugal. | Notes: Annual rates of change adjusted for securitisation operations, reclassifications, write-offs and exchange rate and price revaluations and, where relevant, for the effects of credit portfolio sales. Bank credit to non-financial corporations includes debt securities held by banks. Credit granted by monetary financial institutions resident in Portugal to residents in the euro area. Solo basis activity.

## Spreads on new bank loans to NFCs narrowed across all the risk classes

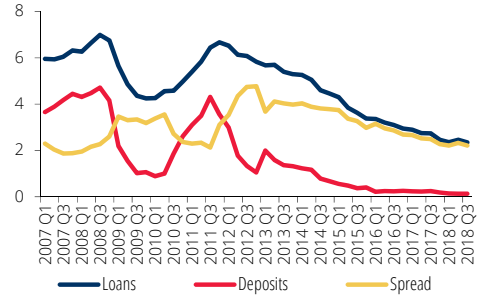
Total new bank loans to NFCs are in line with that observed for the average for the first nine months of the years 2015 to 2017. However, these values are substantially lower than those of before the financial crisis (Chart I.4.20). Additionally, the spreads between the interest rates on new loans and deposits with NFCs continued to narrow, approaching those observed in the euro area (Section 1.2 Risks). At the end of the third quarter of 2018, the spread level was simi-lar to that of before the financial crisis (Chart I.4.21).

**Chart I.4.20** • New bank loans to NFCs – Cumulative flows | EUR billions




Source: Banco de Portugal. | Notes: New operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

**Chart I.4.21** • Interest rates on new bank loans and deposits – NFCs | Per cent

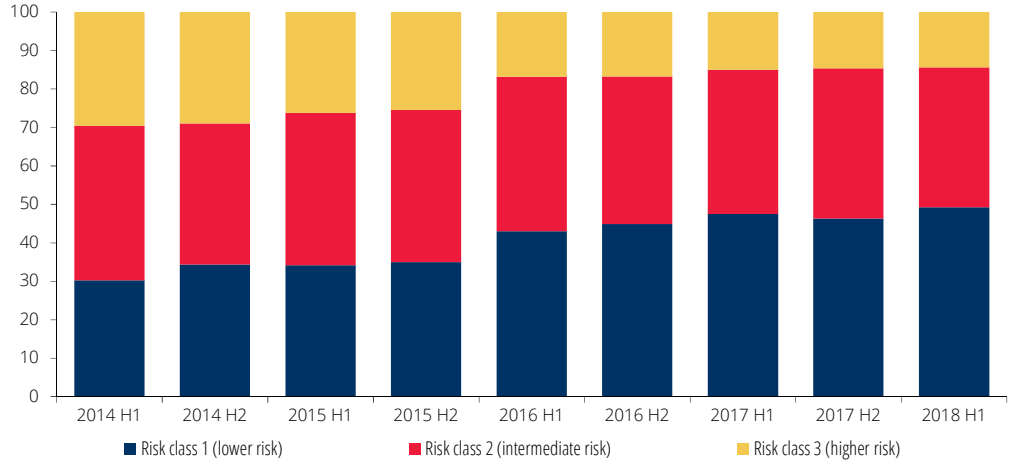



Source: Banco de Portugal. | Notes: Quarterly average rates weighted by the amounts of new operations. Interest rates on new operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity."

According to the various editions of the Bank Lending Survey (BLS) of 2018,[101] the credit stand-ards and terms and conditions on credit agreements for enterprises remained largely un-changed. However, factors such as the improvement in general and sectoral economic condi-tions and competition between institutions are likely to have made credit policy looser. This is thought to have affected principally the spread applied to medium-risk enterprises and to a lesser degree higher-risk enterprises. In terms of enterprises' demand for credit, no significant change was mentioned by the institutions surveyed.

In the first half of 2018, the sum of new bank loans to NFCs continued to be higher among low-er-risk enterprises. Since 2016 lower-risk enterprises have increased their share of new loans, due to both fewer reductions and more increases in new loans to those enterprises (Chart I.4.22). Also, the total change in loan stock granted by the resident financial sector continued to come from the enterprises in the best risk classes during the period under review, as has been observed since the first half of 2013.[102]

**Chart I.4.22** • New loans granted to NFCs by risk class | Per cent




Source: Banco de Portugal. | Notes: The attribution of risk information to each enterprise follows the methodology of Antunes, A. et al. (2016), "Firm default probabilities revisit-ed", Economic Studies, Banco de Portugal. New operations regarding enterprises are used, with the risk information available, to calculate the weights of each risk class and the total new operations series. Lower risk class (risk class 1) corresponds to the enterprises with a probability of default (PD) in one year of 1% or less; risk class 2 corresponds to enterprises with a PD in one year of above 1% and below or equal to 5% and the higher risk class (risk class 3) corresponds to the enterprises with a PD in one year of above 5%. New operations regarding enterprises without risk information were not considered, which totalled approximately 40% in 2014, 30% in 2015, 30% in 2016, 33% in 2017 and 34% in the first half of 2018. The amounts relating to enterprises that improved their risk class in each year are relatively constant, with no evidence suggesting exclusively passive management of new loan concession by monetary financial institutions. New operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

As mentioned above, heterogeneity between activity sectors continued in regard to new loan concession. In particular, the greater allocation of new loans to enterprises in the lower risk class is associated with the manufacturing and trade sectors. In contrast, new loans in the build-ing and real estate sectors are in general associated with higher-risk classes.

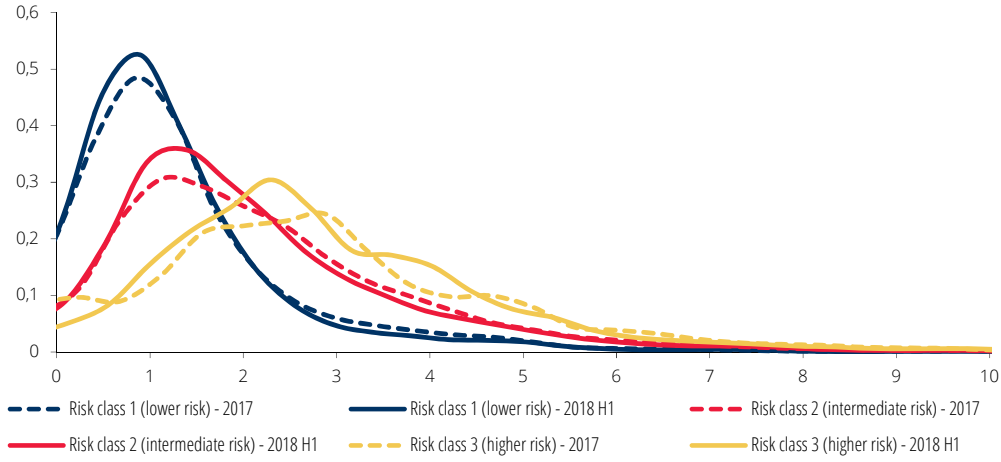
In the first half of 2018, the spreads on lending interest rates to NFCs continued to be seg-mented according to credit risk. However, there was a general narrowing of the interest rate

101. Bank Lending Surveys of April, July and October 2018, Banco de Portugal.

102. For further details see *Economic Bulletin*, October 2018, in particular Chart I.3.18.

spreads on loans to NFCs, especially for the higher risk classes (Chart I.4.23).[103] The median spread of risk class 1 (lower risk) narrowed by 8 p.b., that of risk class 2 (intermediate risk) narrowed by 10 p.b. and that of risk class 3 (higher risk) by 13 p.b.. The leftward shift of the spreads' distributions is likely to be associated with the improvement in the enterprises' finan-cial position, arising from the more favourable macroeconomic and financial environment. This behaviour is broadly consistent with the results of the October BLS, in which the institutions indicated a slight narrowing of spreads for medium-risk enterprises, and to a lesser extent higher-risk enterprises.

**Chart I.4.23** • Spreads on new bank loans to private NFCs – Empirical distribution | Percentage points




Source: Banco de Portugal. | Notes: Kernel = Epanechnikov, bandwidth = 0.3. Distribution truncated below 0% and above 10%. Loans granted by the seven largest banking groups operating in Portugal. Spreads weighted by loan amounts. The attribution of risk information to each enterprise follows the methodology of Antunes, A. et al. (2016), "Firm default probabilities revisited", Economic Studies, Banco de Portugal. New operations regarding enterprises are used, with the risk information available, to calculate the shares of each risk class and the total new operations series. Lower risk class (risk class 1) corresponds to the enterprises with a probability of default (PD) in one year of 1% or less; risk class 2 corresponds to enterprises with a PD in one year of above 1% and below or equal to 5% and the higher risk class (risk class 3) corresponds to the enterprises with a PD in one year of above 5%. New operations regarding enterprises without risk information were not considered, which totalled approximately 40% in 2014, 30% in 2015, 30% in 2016, 33% in 2017 and 34% in the first half of 2018. Interest rates on new operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

## With the economy recovering and unemployment falling, new consumer lending is at a record high

In the first half of 2018, credit standards and the terms and conditions on credit agreements with households remained stable, despite competitive pressure being cited in the BLS as a contributing factor to the squeezing of spreads on housing loans and, to a lesser degree, on consumer credit. However, in the October BLS, the banks indicated that the terms and condi-tions applying to new loans for house purchase and, to a lesser extent, to consumer loans, became tighter in the third quarter. In the July survey, the banks were already reporting a tight-ening in credit standards for households in the third quarter. Most institutions in the October survey said that the factor

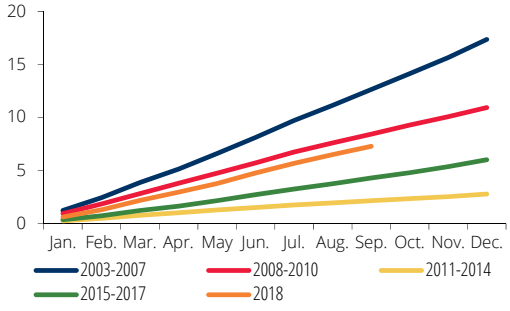
103. The credit risk of non-financial corporations is measured by the Z-score estimated according to the methodology set out in Antunes et al. (2016). Enterprises were subsequently divided into three credit risk classes, according to their default risk, with those in risk class 1 presenting the lowest default risk and those in risk class 3 the highest. For more information, see Special Issue "Risk segmentation on the interest rate spreads of new bank loans to non-financial corporations", *Financial Stability Report*, December 2017.

contributing the most to the tightening of standards was compliance with Banco de Portugal's Recommendation on new housing and consumer loans, in force since July 2018.

The boost in consumer confidence, the outlook for the housing market and the general interest rate level continued to contribute to households' increased demand for credit.

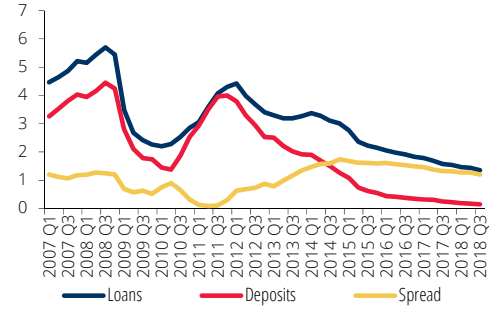
In the first nine months of 2018, the cumulative total of new housing loans granted to house-holds was on average significantly above that observed for the first nine months of the years following the start of the Financial Assistance Programme (EFAP). Despite the rapid recovery of the volumes of new credit in this segment, new business is at levels far below those observed before the financial crisis (Chart I.4.24). In addition, the spreads between the interest rates on new housing loans to households and those on household deposits have narrowed since the end of 2015 (Chart I.4.25). This narrowing has brought spreads to below those found in the euro area (Section 1.2 Risks).

**Chart I.4.24** • New housing loans – Cumulative flows | EUR billions




Source: Banco de Portugal. | Notes: New operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

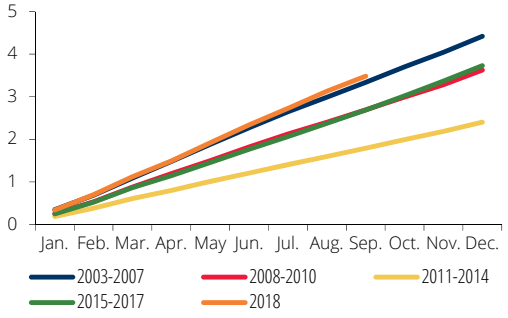
**Chart I.4.25** • Interest rates on new bank loans and deposits – Households, housing purposes | Per cent




Source: Banco de Portugal. | Notes: Quarterly average rates weighted by the amounts of new operations. Interest rates on new operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

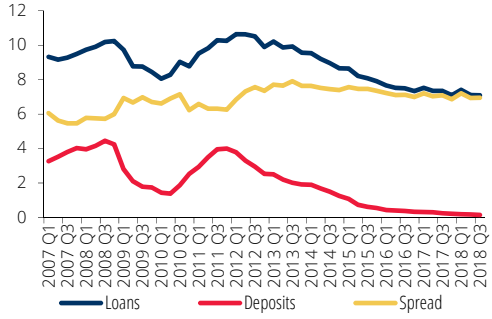
In regard to the loan segment to households for consumption, the cumulative total of new op-erations are at levels slightly above those found before the financial crisis (Chart I.4.26). The spread between the interest rates on new consumer loans to households and those on house-hold deposits remained stable from the first half of 2017 (Chart I.4.27).

**Chart I.4.26** • New consumer loans – Cumulative flows | EUR billions




Source: Banco de Portugal. | Notes: New operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

**Chart I.4.27** • Interest rates on new loans and deposits – Households, consumption purposes | Per cent




Source: Banco de Portugal. | Notes: Quarterly average rates weighted by the amounts of new operations. Interest rates on new operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity.

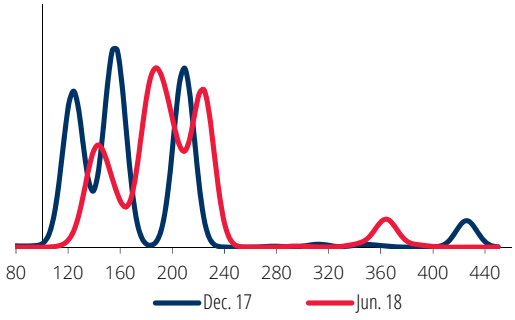
# 4.4 Liquidity and funding

## The banking system's liquidity position improved due to the increase in liquid assets

In the first half of 2018, banking system liquidity stayed at comfortable levels, with the liquidity coverage ratio (LCR)[104] growing by 16 p.p., to 190%. The increase was observed principally in the institutions with a lower ratio, thereby contributing to the reduction of heterogeneity between institutions (Chart I.4.28). Developments in the LCR were essentially due to the increase in the liquidity buffer.[105] In June 2018, the Portuguese banking system's LCR was above the median for the euro area (Chart I.4.30).

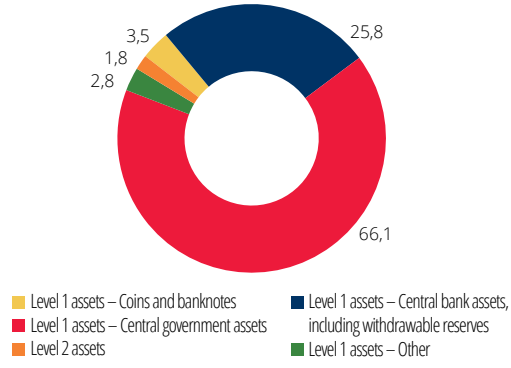
The liquidity buffer increased by approximately 10% in the first half of 2018, mainly public debt and reserves in central banks (Chart I.4.29). The public debt component was the main driver of the liquidity buffer increase (9 p.p.). Level 1 liquid assets, such as debt securities issued by general governments of the EU, are not given a weighting in the liquidity buffer calculation, as they are considered of extremely high liquidity and credit quality.

**Chart I.4.28** • Liquidity coverage ratio – Empirical distribution | Per cent




Source: Banco de Portugal.

**Chart I.4.29** • Liquidity buffer – Structure | Per cent

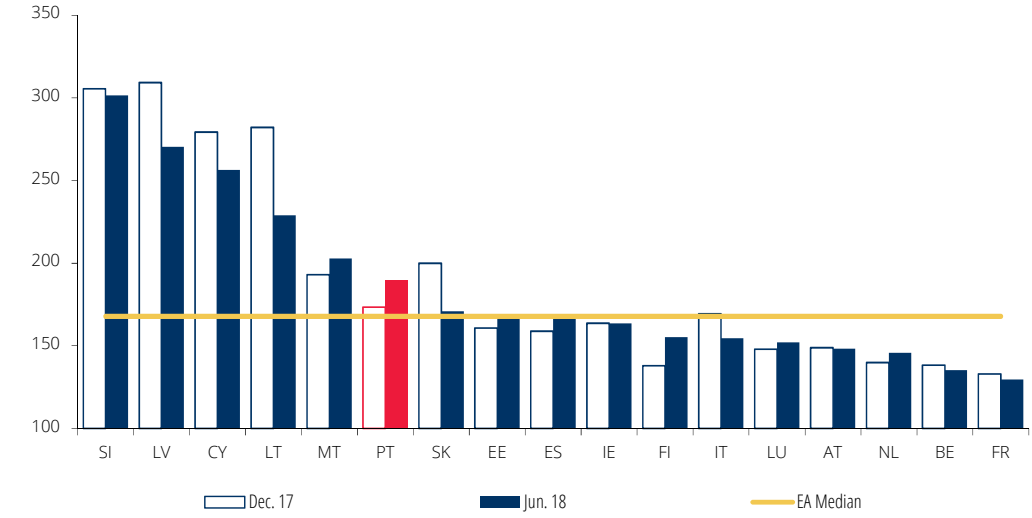



Source: Banco de Portugal.

104. The LCR corresponds to the ratio of available liquid assets and net cash outflows calculated under a 30-day stress scenario.

105. The liquidity buffer comprises the liquid assets held by credit institutions that satisfy requirements set in the Commission Delegated Regulation (EU) 2015/61 of 10 October 2014.

**Chart I.4.30** • Liquidity coverage ratio – International comparison | Per cent

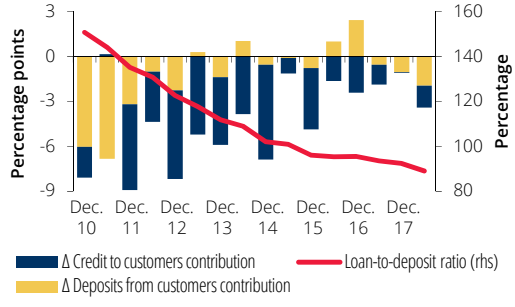



Source: European Central Bank (Consolidated Banking Data). | Notes: Certain countries are not represented due to lack of data.

In the first half of 2018, the asset encumbrance ratio[106] declined by 1.5 p.p. to 18.8%, indicating a greater percentage of assets available for use as collateral to obtain liquidity in the financial markets. In the same vein, the percentage of assets available as collateral for monetary policy operations also increased.[107]

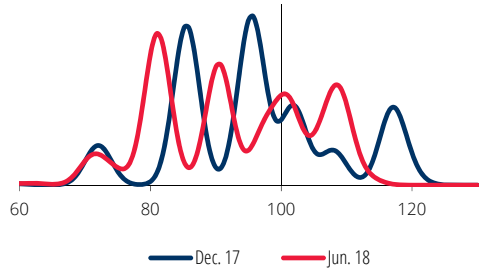
The loan-to-deposit ratio declined steadily, falling 3.4 p.p. from December 2017 to 89% (Chart I.4.31). The decline observed was due to a fall in the loans to customers, following an increase in customer deposits. This decrease in the loan portfolio was similar in size for both house-holds and NFCs (-1.1%). The loan-to-deposit ratio's distribution shifted left, with the median value falling 4.7 p.p. (Chart I.4.32).

**Chart I.4.31** • Loan-to-deposit ratio – Contributions




Source: Banco de Portugal.

**Chart I.4.32** • Loan-to-deposit ratio – Empirical distribution | Per cent




Source: Banco de Portugal.

106. The asset encumbrance ratio measures the share of total assets (and collateral received) that is used as collateral to obtain liquidity.

107. For more information on indicators to assess systemic liquidity risk, see Special Issue "Monitoring systemic liquidity risk in the Portuguese banking system – some indicators", *Financial Stability Report*, June 2018.

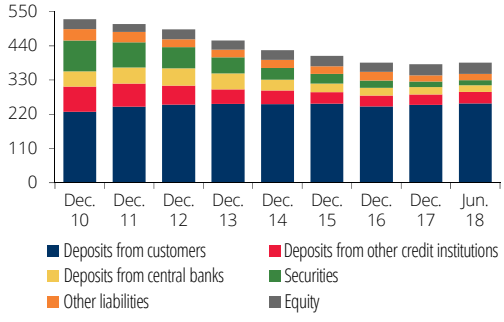
## NFCs' and households' deposits increased, while debt securities fell

In the first half of 2018, the banking system's liabilities increased 1.5% from December 2017. This reflected growth in deposits from customers and other credit institutions, and a decline in financing from central banks and debt securities (Chart I.4.33).

Customer deposits increased 2.2% from December 2017, increasing their share in the financ-ing structure (66% of total liabilities and equity). This increase was more evident in households' and NFCs' deposits, with each sector contributing 1 p.p. to customer deposit behaviour. At the same time, demand deposits continued to increase, and time deposits continued to fall, reflect-ing the low opportunity cost of holding liquidity in a context of very low interest rates.

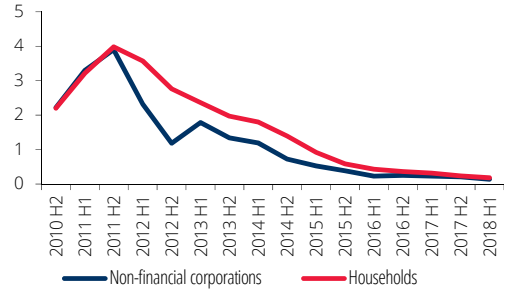
In domestic activity, total new NFC and household deposit operations fell year-on-year in the first half. Additionally, the cost associated with new deposits also fell (Chart I.4.34).[108] The aver-age half-yearly interest rate on NFCs' deposits fell 7 b.p. and the rate for households' deposits fell 6 b.p.. The reduction of interest rates on new deposit operations took place in a context of record low, even negative, market interest rates, reflecting the ECB's accommodative monetary policy.

**Chart I.4.33** • Financing structure | EUR billions




Source: Banco de Portugal. | Notes: The 'Other liabilities' item includes short positions and derivatives.

**Chart I.4.34** • Interest rates on new operations applied to time deposits | Per cent




Source: Banco de Portugal. | Notes: Half-yearly average rates weighted by the amounts of new operations. Interest rates on new operations performed by monetary financial institutions resident in Portugal (excluding central bank) with residents in the euro area. Solo basis activity."

In the first half of 2018, interbank financing (net of cash balances at other credit institutions) increased 14.2%, to €23.4 billion, representing 6.3% of assets net of cash balances at other credit institutions. This increase reflects growth in deposits of other credit institutions and a stabilisation in cash balances at other credit institutions.

Central bank funding fell in the first half of 2018, reaching 4.7% of total assets. As such, this source of financing has continued its decline from the record high reached under the Financial Assistance Programme, in June 2012 (cumulative fall of around 7 p.p. of total assets). In June 2018, financing obtained from central banks mainly comprised targeted longer-term refinancing operations (TLTROs).

108. The adjustment seen from 2011 onwards also reflected measures taken by Banco de Portugal, more specifically the introduction of deductions of own funds from new deposit operations with interest rates of more than 300 b.p. above Euribor (Instruction of Banco de Portugal No. 28/2011, which entered into force in November 2011). This regime was subsequently reinforced by Instruction of Banco de Portugal No. 15/2012, which doubled the penalty on own funds and increased the penalty on short-term and demand deposits (April 2012). Both measures had a sizeable impact on interest rates and amounts of new deposits.

Debt securities as a percentage of assets fell 0.5 p.p. to 4.2% from December 2017, as a result of the 19% decline in covered bonds. This took place while some of the banking system's prin-cipal institutions issued instruments eligible for both own funds and MREL. In the first half of 2018, CGD and Novo Banco issued €500 million and €400 million in instruments eligible for Tier 2 capital respectively. Additionally, on 8 November a draft law was approved by the Council of Ministers transposing Directive (EU) 2017/2399, regarding the position of unsecured debt instruments in the insolvency hierarchy. This type of instrument is eligible for MREL but not for own funds.

## 4.5 Capital

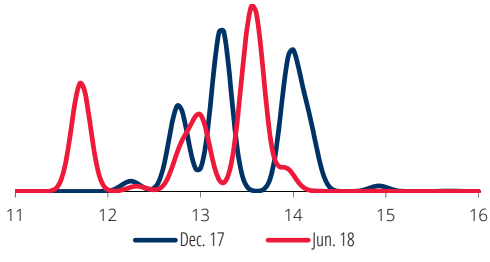
### The total capital ratio was strengthened in the first half of 2018

The Common Equity Tier 1 capital (CET1) ratio[109] stood at 13.4% in June 2018, decreasing 0.5 p.p. from December 2017 (Chart I.4.35). This was due chiefly to the reduction in CET1, with the risk-weighted assets (RWA) declining marginally (balance sheet dynamics and risk weight).[110] The decline in the CET1 ratio was accompanied by the increase in its dispersion across banking system institutions (Chart I.4.36).

**Chart I.4.35** • CET1 ratio – Contributions | Per cent and percentage points


Source: Banco de Portugal.

**Chart I.4.36** • CET1 ratio – Empirical distribution | Per cent




Source: Banco de Portugal.

In the first half of 2018, developments in the Portuguese banking system's capital were influenced by the application of IFRS 9 from 1 January 2018. The adoption of this new accounting standard resulted in the reclassification of financial assets between categories and the increase in impairments on these assets, by virtue of the increase in expected loss. However, the im-pact on the banking system's CET 1 capital was mitigated by the adoption by some institutions of the transitional arrangements provided for in Regulation (EU) No. 575/2013, allowing for the gradual recognition over five years of the negative impact on CET 1 due to the application of this standard.

109. Ratio between Common Equity Tier 1 capital and risk-weighted assets.

110. The (average) risk weight corresponds to the ratio between the risk-weighted assets and total assets.

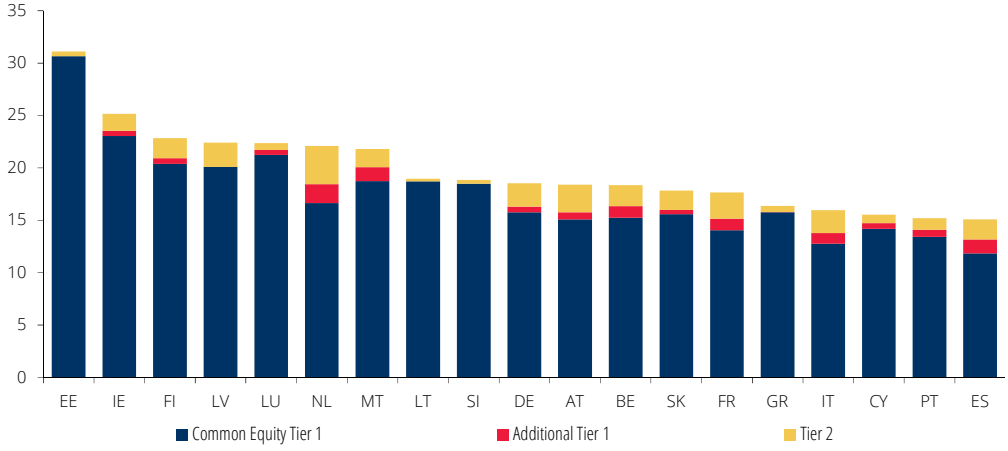
The increase in fair value losses accumulated in the 'Other comprehensive income' item had a 0.41 p.p. negative impact on the banking system's CET1 ratio, partly explained by the reclassification of financial instruments under IFRS 9.

The elimination of most of the transitional provisions on own funds, established under Regulation (EU) No. 575/2013 (Capital Requirements Regulation – CRR) and Directive 2013/36/EU (Capital Requirements Directive – CRD IV), which ended on 1 January 2018, had a 0.36 p.p. negative impact on the CET1 ratio.

The 'Other CET1 changes' item made a 0.29 p.p. positive contribution to the CET1 ratio, with half of that coming from 'Other reserves'. In the first half of 2018, the increase in this item was in-fluenced by the triggering of the contingent capital mechanism laid down in the Novo Banco sale contracts, totalling around €726 million. In the 2017 financial year, the value linked to the triggering of that mechanism was recorded in profit or loss for the year.

The total capital ratio[111] stood at 15.2% in June 2018, increasing 0.1 p.p. from the end of 2017. The behaviour of this ratio in the first half of 2018 was chiefly due to the increase in total own funds, as the RWA stayed stable. However, the Portuguese banking system continues to pre-sent one of the lowest capital ratios in the euro area (Chart I.4.37).

**Chart I.4.37** • Total capital ratio – International comparison | Per cent




Source: European Central Bank (Consolidated Banking Data).

The divergence between the total capital ratio and the CET1 ratio is due to the increase in Additional Tier 1 capital and above all Tier 2 capital (Table I.4.5). In the first half of 2018, two issues of instruments eligible for Tier 2 were made. Caixa Geral de Depósitos issued €500 million of debt instruments, concluding their recapitalisation plan. Novo Banco put instruments eligible for Tier 2 on the market worth €400 million. Also, Haitong Bank issued instruments eligible for Addi-tional Tier 1 totalling USD 130 million. The issue of these instruments in the financial markets could be relevant in the context of the future MREL requirements, since the aforementioned Tier 2 instruments have a maturity of 10 years.

111. Ratio between total own funds and risk-weighted assets.

**Table I.4.5 • Composition of banking system own funds**

| | Dec. 2014 | Dec. 2015 | Dec. 2016 | Dec. 2017 | Jun. 2018 | Δ Dec. 2014 Jun. 2018 | Δ Dec. 2017 Jun. 2018 |
|---|---|---|---|---|---|---|---|
| Own funds | 29,480 | 31,083 | 26,449 | 30,641 | 30,756 | 1,276 | 116 |
| Tier 1 capital | 27,421 | 29,371 | 25,230 | 29,193 | 28,509 | 1,089 | -683 |
| Common equity tier 1 | 27,150 | 28,966 | 24,583 | 28,062 | 27,143 | -8 | -919 |
| Additional tier 1 | 270 | 405 | 647 | 1,131 | 1,367 | 1,097 | 236 |
| Tier 2 capital | 2,060 | 1,712 | 1,220 | 1,448 | 2,247 | 187 | 799 |
| Risk weighted assets | 240,564 | 233,242 | 215,502 | 202,265 | 202,208 | -38,355 | -57 |
| Memorandum item: | | | | | | | |
| Common equity tier 1 – fully phased in | 19,506 | 24,896 | 20,778 | 26,305 | 25,950 | 6,444 | -355 |

Source: Banco de Portugal.

Despite the aforementioned Additional Tier 1 and Tier 2 issues, the own funds structure of the main institutions (and the system's structure) continues to comprise CET 1 for the most part (88%). At euro area level, the prevalence of CET 1 in the Portuguese banking system's own funds structure is at the median.

However, the idiosyncratic factors of the various banking systems, most notably the varying importance of internal rating based approaches (IRB) for credit risk, affect international comparisons. In June 2018, the percentage of original exposures for which IRB models were used to calculate banking system exposures at risk varied between 81% in the Netherlands and 0% in Malta, with Portugal at 29.1%. Due to their high level of flexibility and discretion, the use of IRB models to measure the exposures' risk and thereby to determine the RWA should be taken into account in the comparison of the institutions' capital ratios. Additionally, the comparison between banking systems is undermined by the different macroprudential requirements between jurisdictions and the different Pillar 2 prudential requirements between institutions. In July 2016, the EBA published the final draft of the regulatory technical standards designed to promote standardisation in the national competent authorities' prudential assessment, which must be implemented by the end of 2020.[112]

In the first half of 2018, the leverage ratio fell 0.1 p.p. to 7.7%, far above the minimum requirement defined by the Basel Committee on Banking Supervision (3%). This behaviour mainly reflected an increase in the total exposure, as well as the slight fall in the banking system's Tier 1 capital.

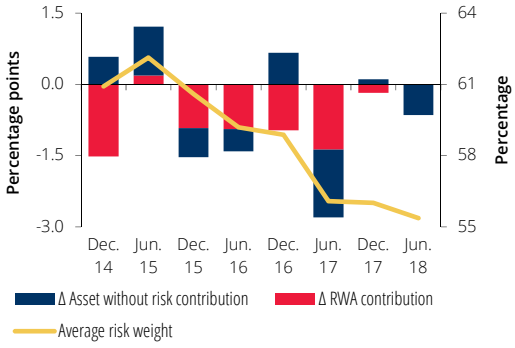
## The banking system's average risk weight declined

In the first half of 2018, the RWA remained stable, making a practically nil contribution to the change in the capital ratios. This fact occurred despite the increase in the banking system's total assets, as this derived from the change in the public debt securities portfolio and the cash in central banks, which carry a 0% risk weight in the RWA calculation. Thus, the average risk weight fell from December 2017 (Chart I.4.38).

112. See the EBA Discussion Paper on the future of the IRB Approach (http://www.eba.europa.eu/documents/10180/1003460/EBA-DP-2015-01+DP+on+the+future+of+IRB+approach.pdf) and the final draft of the Regulatory Technical Standards (https://www.eba.europa.eu/documents/10180/1525916/Final+Draft+RTS+on+Assessment+Methodology+for+IRB.pdf/e8373cbc-cc4b-4dd9-83b5-93c9657a39f0).

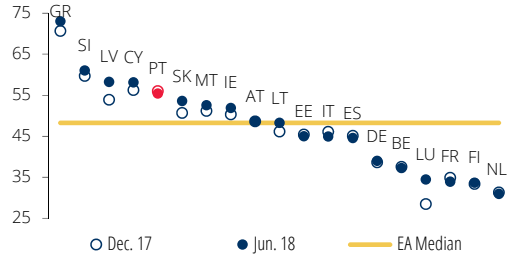
Despite the improvement in its relative position internationally, in June 2018 the Portuguese banking system still had one of the highest RWA ratios per unit of assets in the euro area, re-flecting the lower use of IRB models by Portuguese banks in defining their capital requirements (Chart I.4.39). However, it is important to note that the application of IRB models to measure exposures' risk, and thereby to determine the capital requirement, involves a high degree of flexibility and discretion.

**Chart I.4.38** • Average risk weight – Contributions | Per cent




Source: Banco de Portugal. | Note: The average risk weight corresponds to the ratio between the risk-weighted assets and total assets.

**Chart I.4.39** • Average risk weight – International comparison | Per cent

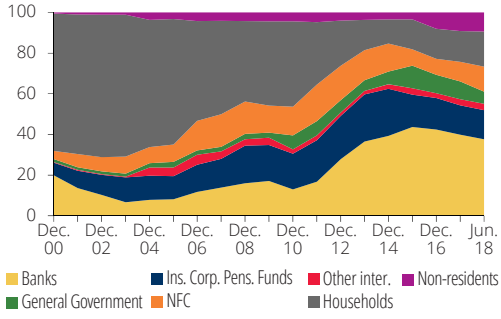



Source: European Central Bank (Consolidated Banking Data).

## Box 1 • Real estate investment funds resident in Portugal[113]

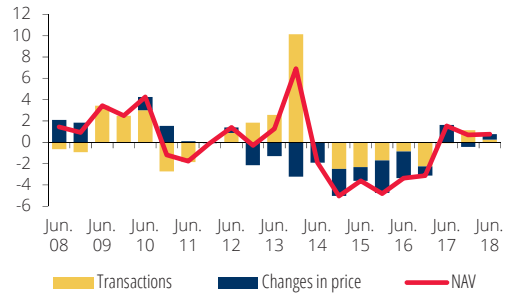
The activity of real estate investment funds (REIFs) consists of managing a real estate asset portfolio, mainly buildings and land, but which can comprise holdings in real estate companies. Likewise, the asset portfolio may also be diverse as regards exposure by geography and country. As mentioned in previous issues of this Report, non-resident investment funds have been gaining decisive importance in terms of the total number of transactions in the Portuguese commercial real estate market.[114] From the investors' perspective, the possibility of diversifying exposure to real estate risk is one of the main advantages of REIFs, adding to the possibility of not bearing the full cost of a direct exposure to a building/land, namely maintenance and renovation costs.

**Chart C1.1** • REIF unit-holders | Per cent




Source: Banco de Portugal.

**Chart C1.2** • Investment Fund units – Rate of change and half-yearly contributions | Per cent and percentage points




Source: Banco de Portugal.

Although prior to the international financial crisis, households were the main investors in REIFs, holding on average more than 60% of investment fund units, currently they hold less than 20% (Chart C1.1). Despite the decrease of the share held by resident banks, these are the main investors in REIFs, holding around 40% of units in June 2018. The recovery of the real estate market in Portugal, as well as of the rental market, and the still low level of market interest rates, may further promote the downward trend of banks as REIF unit-holders.

In Portugal, there is a significant link between the banking sector and real estate investment funds, where about 50% of total REIF assets as at December 2017 were managed by management companies belonging to financial groups. This link became more evident during the 2012-13 period when, due to the low return on REIFs, banks and insurance companies acquired units that were redeemed by households (Chart C1.2) in order to avoid a higher price devaluation and the potential reputational risk involved (indirect exposure). This trend broadened the interconnection channels between both sectors. During the same period, some banking groups also financed REIF activity through bank loans. Furthermore, as a result of an increase of non-performing loans, REIFs have also proved to play a role in a more dedicated management of real estate assets that banks receive in lieu of payment.

113. Under the definition harmonised at the European Union level, the real estate fund class includes funds of funds investing predominantly in other real estate funds. Although this analysis does not include such funds, they have a very residual significance in the Portuguese market.

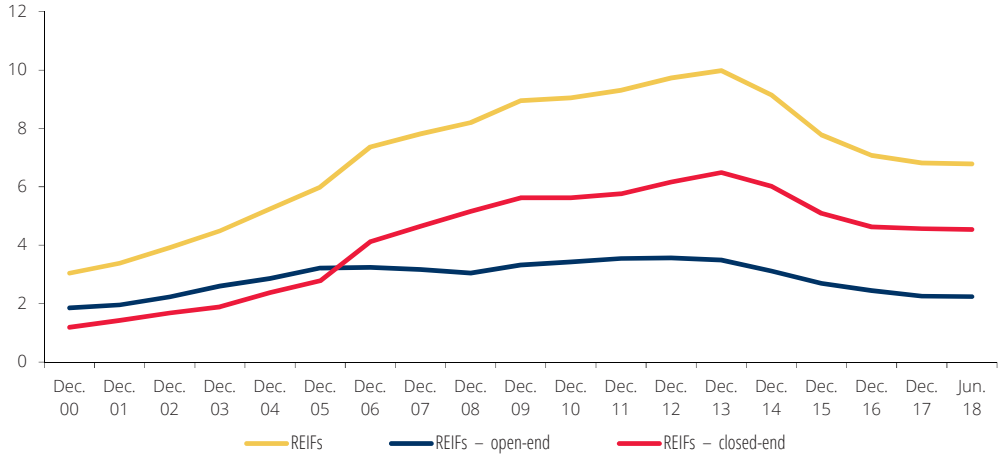
114. See Section 3 of the June 2018 *Financial Stability Report* on real estate developments.

**Closed-end REIFs have determined the overall REIF activity in Portugal.**

REIF activity in Portugal gained some momentum up to the end of 2013, when these funds' assets reached a peak of 10% of GDP. Similarly to REIFs in the euro area, the momentum of national REIFs was mainly determined by closed-end funds[115] which from 2006 onwards account for the majority of assets under management (67% in June 2018) and 54% of the net asset value[116] (64% in June 2018). Although following the international financial crisis open-end funds stabilised somewhat, it was only as of 2013 that there was a decrease of the assets under management of national REIFs, which was driven by a devaluation of real estate holdings and by the redemption of fund units (Chart C1.3).

At the European level, REIFs have been gaining importance with an upward trend for the last 10 years, accounting for about 27.4% of GDP in the euro area as a whole in June 2018.[117] However, despite the significance gained at the euro area level, it reflects a high geographical concentration, with 90% of total REIF assets in the euro area belonging to resident REIFs of 5 countries: Germany, the Netherlands, France, Luxembourg and Italy.[118]

**Chart C1.3** • REIF assets – positions | As a percentage of GDP




Source: Banco de Portugal.

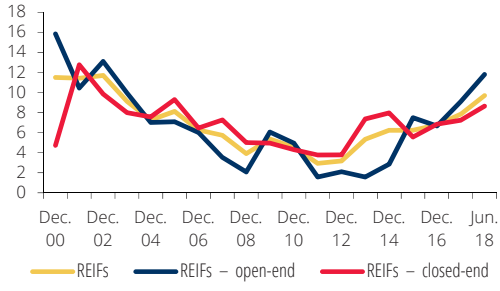
**At the height of the financial crisis, a higher exposure to liquidity and leverage risk increased the vulnerability of open-end funds**

REIFs are mainly exposed to real estate market risk by holding real estate assets and shares in real estate companies representing 83% and 4% of total assets, respectively, in June 2018. This differs from the euro area reality where real estate assets represent almost half of total REIF assets, which is justified by the buoyancy of the equity market and by a greater portfolio of liquid assets (deposits, public debt and quoted shares).

115. Investment funds with a fixed number of fund units. Closed-end fund subscription is possible only for a predefined period, and redemption may only occur on the date of the fund winding-up.
116. The net asset value of a fund correspond to its asset value (duly evaluated) less actual and outstanding charges.
117. The following countries were excluded due to lack of information: Belgium, Cyprus, Malta and Slovenia.
118. For further information, refer to EU Shadow Banking Monitor No. 3/September 2018.

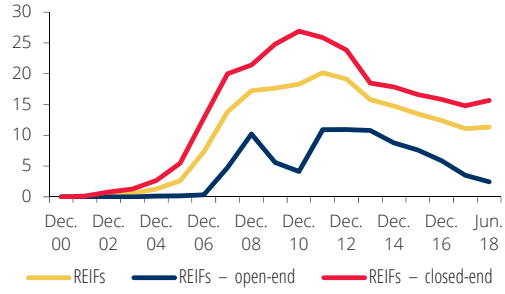
The absence of sufficiently liquid assets to address non-expected redemptions may pose an additional risk (liquidity risk) for open-end funds. In this context, although the liquidity ratio[119] of open-ended funds was 12% in June 2018 (Chart C1.4), it deteriorated at the height of the financial crisis, reaching levels of around 2%. These ratios are slightly below those of all open-end REIFs in the euro area. However, taking a broader concept of liquid assets under consideration (deposits, public debt, securities issued by banks, shares and investment fund units/shares), euro area REIFs reach liquidity ratios (about 30%) much higher than those of national funds since as already mentioned euro area REIFs have less real estate in their portfolios.

**Chart C1.4** • Liquidity ratio | Per cent




Source: Banco de Portugal.

**Chart C1.5** • Financial leverage ratio | Per cent




Source: Banco de Portugal.

Taking into account the nature of the assets concerned, REIFs are expected to show some dependence on bank lending. However, although the financial leverage ratio[120] reached a peak of 20% in 2011, it is now at far lower levels (11% in June 2018) and below the level of euro area REIFs (14% in June 2018). This ratio is mainly determined by the leverage of closed-end REIFs which was at 16% during the first half of 2018 (Chart C1.5).

After the international financial crisis, several legislative measures were applied to mitigate the systemic risk involved in the activity of investment funds (see Special Issue on Investment funds as a source of systemic risk). Nevertheless, such measures are generally preventive measures rather than measures aiming at limiting matters related to contagion (see the forthcoming ESRB Occasional Paper on The interconnectedness between shadow banks and other parts of the financial system: Mapping the regulatory framework).

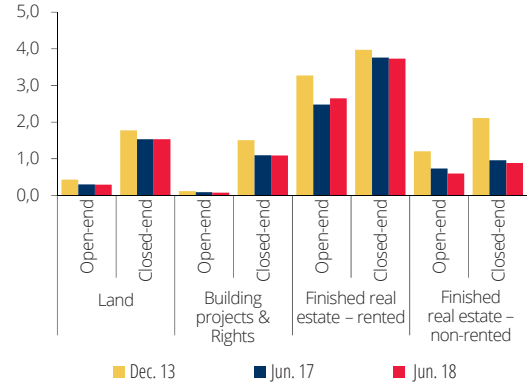
### Most REIF real estate assets are rented

The recovery of the real estate market in Portugal is also visible in the performance of national REIFs, which showed an improvement in June 2018 compared to total return in June 2017 and March 2018 (according to the APFIPP/IPD Index for Portuguese real estate investment funds).

REIF return is also affected by rental market constraints as rented real estate represents about 60% of real estate assets in June 2018 (74% for open-end REIFs and 52% for closed-end REIFs). Land is also relevant in closed-end REIF portfolios, representing about 21% of real estate assets (Chart C1.6).

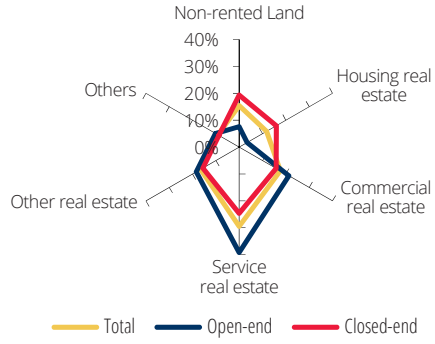
119. The liquidity ratio is defined as the ratio of deposits to assets of the fund.
120. The financial leverage ratio is defined as the ratio of loans to assets of the fund.

**Chart C1.6** • Real estate characteristics | EUR billion




Source: Banco de Portugal.

**Chart C1.7** • Real estate according to purpose – Composition in June 2028 | Per cent



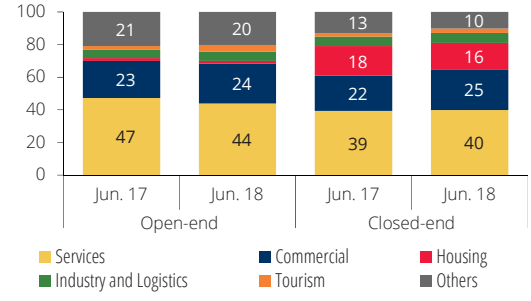

Source: Banco de Portugal.

Taking into account that REIF total return is determined by the value of real estate asset portfolios, as well as of the rents it generates, the rise of rented real estate between June 2007 and June 2018 shows an increase in the relative importance of rents as a source of income, reflecting nevertheless a higher exposure to default risk resulting from rent arrears. Although a considerable share of real estate is located in the Lisbon municipality (30% of real estate holdings, followed by Oeiras and Oporto municipalities with 7% and 6 respectively), the increase is dispersed across other regions.

Regarding the purpose of real estate assets (Chart C1.7), in June 2018 these were related to services (29%), however with a greater concentration in the case of open-end REIFs (39%).[121] To a lesser extent, real estate for commercial purposes accounted for 21% and 16% of open-end and closed-end REIF portfolios respectively. Unlike open-end funds, non-rented land and housing real estate have a significant weight in closed-end funds, 19% and 16% respectively.

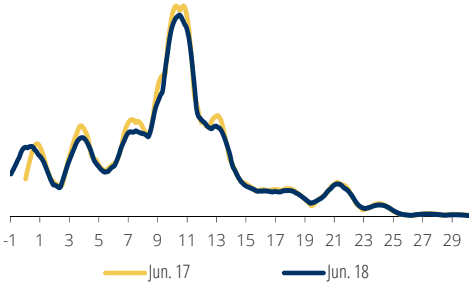
In June 2018 rented real estate assets were mainly for service and commercial purposes, accounting for 42% and 25% of the total respectively, with the share of real estate for commercial purposes increasing on a year-on-year basis (Chart C1.8). Housing real estate kept their relevance to closed-end funds, as observed at the analysis by purpose.

**Chart C1.8** • Purpose of rented real estate assets | Per cent




Source: Banco de Portugal.

**Chart C1.9** • Duration of real estate asset portfolio – Empirical distribution | Years




Source: Banco de Portugal. | Note: The duration of real estate is the difference between the acquisition period and the reference period for the holdings. For the comparability of the two periods, one year was added to the duration of real estate holdings in June 2017. The empirical distribution was obtained using an Epanechnikov kernel that weights real estate by its value.

121. It is not possible to present the characteristics of other types of property.

**Over the last year, the real estate asset portfolio remained relative stable**

Over the last year, real estate assets remained in the REIF portfolio, in particular those with a longer existence in the portfolio. Indeed, based on the average duration[122] of real estate assets using an empirical distribution (Chart C1.9) for two periods in time (June 2017 and June 2018) and adjusting the effect of passing of time between these two periods,[123] the low impact of real estate purchase and sale is evident,[124] as distributions almost overlap. This is consistent with the fact that the REIF portfolio is mostly composed of rented real estate assets.

Compared to closed-end REIFs, in open-end REIFs real estate assets remained longer in the portfolio. However, in the most recent period, the latter is converging to a similar level to the one observed in open-end REIFs.

In a nutshell, despite the recent improvement in risk and profitability indicators associated with REIFs as a result of real estate market developments, their exposure to this market makes them vulnerable to adverse developments that may occur in the future. Furthermore, investment funds also present specific risks, particularly the risk of interconnection with the financial sector.

122. Duration measured as the difference between the acquisition period and the reference period for the holdings.

123. One year was added to the property duration in June 2017.

124. The acquisition and sale effect corresponds to the difference between lines, and the acquisition of real estate accounts for the values of the duration lower than 1.

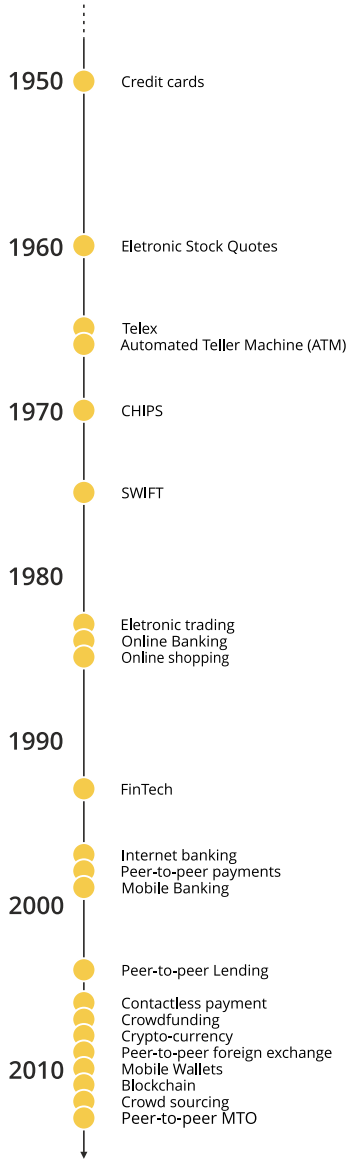
## Box 2 • Fintech – financial stability perspective[125]

Fintech (acronym for financial technology) is defined as technology-enabled innovation in financial services which may result in new business models, applications, processes or products, with an associated material effect on the provision of financial services.[126] The evolution of the financial system has been accompanied by several significant technological development episodes, such as the introduction and use of credit cards (Figure C2.1). The term 'fintech' refers to the current wave of technological innovation, which differs from previous episodes because of the speed at which innovation is occurring and the perception of the broad potential impact on business models, including the provision of and access to financial services (of which the evolution of the so-called fintech[127] credit is an example) (Chart C2.1).

Accelerated innovation in financial activity has been enabled by the widespread use of information technologies and data processing (e.g. internet, artificial intelligence, big data) and driven by financial services consumer demands, especially those associated with the banking sector, by inefficiencies of the financial services market and by the new regulatory and supervisory framework.[128]

This box develops a conceptual approach to fintechs, focusing on the implications to financial intermediation and the main risks for financial stability.

**Figure C2.1** • Technological innovation in financial services




Source: IMF (2007).

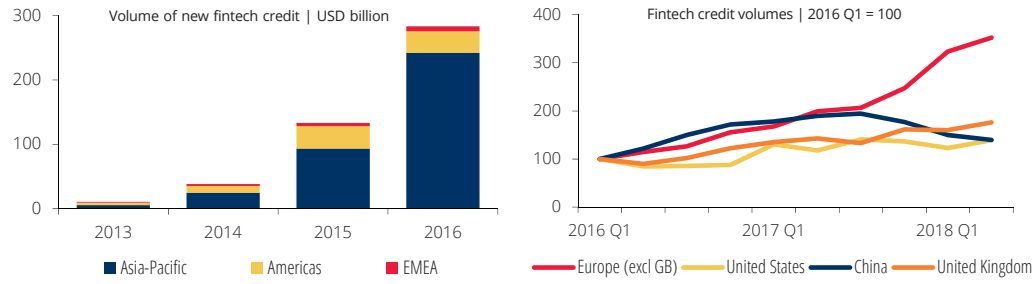
125. This box uses fintech-related terms. For further support, refer to the Financial Stability Committee (2017) glossary.

126. Definition pursuant to the Financial Stability Committee (2017). The term 'fintech' may refer to entities that develop and provide financial services based on innovative technologies, or to the technologies used by those entities, banks or other entities within the financial system.

127. Fintech credit comprises credit facilitated by electronic platforms promoting direct contact between debtors and creditors. Usually, it includes the so-called 'crowdfunding' and 'peer-to-peer' (P2P) activities.

128. In particular, the CRR/CRD IV legislative package, which reflects more demanding regulatory requirements on the banking sector and may trigger business opportunities in different areas, as well as the new European Payment Services Directive (PSD 2, acronym for the Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, applicable as from 13 January 2018, and transposed into the Portuguese legal framework by Decree-Law No. 91/2018 of 12 November 2018) that endows greater access to this segment.

**Chart C2.1** • Fintech credit evolution




Source: BIS (2017). | Note: EMEA includes Europe, Middle East and Africa.

### Impact of fintechs on financial intermediation

Exploring opportunities to improve market efficiencies has been one of the motives underpinning the establishment of several fintechs, and for that reason the new wave of technological innovation and players in the financial services market will necessarily have consequences on its structure and functioning. These are potential changes and may take different forms, where their actual materialisation will depend, inter alia, on the characteristics of the system itself and of the financial institutions.

- Market structure

There is no certainty on fintechs' impact on the financial sector's market structure. On the one hand, the effect most often referred to has been a reduction in costs associated with the provision of some financial services and, thus, a reduction of barriers to the entry of new players and the promotion of greater decentralisation and diversification in the provision of such services.[129] This is the case of business areas such as credit-granting or asset management, which have benefitted from the progress made in artificial intelligence applications and big data management and processing.[130]

Fintechs development may also lead to increased competition in business areas where financial institutions benefit from greater market power. In this case, on the contrary, it might be possible to observe a higher concentration depending on how big technology companies (the so-called 'bigtech')[131] participate in the financial services market, as such companies have a significant customer base and the capacity to absorb the remaining competition.

A possible scenario may be the evolution of the financial system to benefit from technological developments, both in terms of back-office and support functions and in terms of its relationship with bank customers, where the boundaries and materialisation of such progress differs according to the financial services market segment, reflecting the role of the different players (authorities, fintechs, and incumbents).[132]

129. Financial Stability Committee (2017) and IMF (2018).
130. One example would be the progress made in credit risk assessment models.
131. In this context, the so-called GAFA (acronym for Google, Apple, Facebook, e Amazon) play a key role.
132. See WEF (2017).

- Efficiency

There are several fintechs focused on the provision of services to financial system institutions and applying technological innovation to optimise back-office and support functions.[133] The so called 'regtech'[134] entities and activities are one example, and so are fintechs that develop credit risk assessment models or fraud detection models based on big data, allowing financial institutions to benefit from significant efficiency and effectiveness gains.

- Wider access to financial services

Fintechs may promote easier and widespread access to financial services, whether by reducing the costs related to those services or by diversifying the means of access to such services. These gains will be proportionate to the barriers which existed before the introduction of the various innovations and probably the greatest benefits will occur in regions with less accessibility to banking services provided in a traditional way or for customers with a lower level of financial sophistication. An example is the impact of the use of mobile banking services in sub-Saharan African countries. Within the context of developed countries, a recent example is wealth management apps relying on artificial intelligence, allowing more households and small-sized enterprises to benefit from this service, which was previously inaccessible due to heavy initial investments and/or high fees. Crowd-based loan and investment platforms may have a similar effect.

**Fintech as a potential risk and a shock amplifier**

The impacts mentioned above are usually associated with an increased offer of financial services[135] to a wider customer base at a lower cost, which should result in gains for the economy. In terms of financial stability, however, the assessment of fintechs' potential impact is more complex due to the interaction with other exogenous factors such as: (i) blurring boundaries between intermediaries, markets and providers of financial services, as promoted by fintechs; (ii) characteristics of financial institutions (e.g. governance, strategic planning, attitude towards innovation), (iii) characteristics of the financial system (e.g. interconnections, concentration, levels of competition),[136] and, related to these two latter factors, (iv) risk dissemination channels. Thus, it is essential to take all these dimensions under consideration, as well as the interconnections between the potential risks and benefits related to each fintech in order to understand how to promote innovation without undermining the stability of the financial system.

Systemic risk sources (and amplifiers of the impact of pre-existing sources) that could potentially emerge from the transformation of the financial system triggered by fintechs are described below.

- Reputational and contagion risk

Trust between providers of financial services and their customers is crucial for financial stability. Fintechs may influence this relationship through several channels. Firstly, to the extent that fintechs may be unregulated or covered by less demanding regulatory and supervisory schemes, and thus not subject to the same scrutiny.[137] This may result in inefficient and less conservative

133. These are part of a larger group of fintech entities and activities which are not offered directly to financial service customers (usually called B2B – business to business – or B2B2C – business to business to customer), as opposed to the B2C (business to customer) segment, in which fintechs engage directly with customers.

134. Fintechs applied to meet regulatory and compliance requirements.

135. This extension reflects on the type of financial service and the potentially higher diversity of providers.

136. See Financial Stability Committee (2017) for a further analysis of the characteristics of the financial system and institutions, and their relation to potential benefits and risks to financial stability.

137. According to the survey presented by EBA (2017), only 9% of the fintechs surveyed are credit institutions under the CRD, 18% are payment institutions under the Payment Services Directive, and 11% are investment institutions under the Markets in Financial Instruments Directive. 39% are not subject to any regime or are subject to unidentified regimes.

risk management (e.g. over-reliance on automatic processes without the appropriate control mechanisms) or misconduct (e.g. in the relationship with customers or the handling of confidential information). Losses incurred by customers of one fintech can undermine the trust in every fintech perceived as similar or even in a large part of the financial sector, especially when such losses affect retail customers (households and small-sized corporations). These customers might not have a clear perception of the risk associated with the financial assets in which they invest, nor make a distinction between financial services provided by regulated and supervised institutions and fintech companies which are intermediating or facilitating the service.

The possible inefficient risk management by fintechs may also undermine the financial system indirectly, in so far as several regulated financial institutions are also clients of such fintechs or have integrated them into their business model.

- Procyclicality and excessive credit growth

Some fintechs can potentially enhance procyclicality as they make it easier for non-financial institutions to have access to or provide financial services previously largely provided or intermediated by financial institutions. Lending platforms and other fintech credit activities are one example, as they allow entities outside the financial sector to grant credit in a non-professional capacity. Another example are asset management platforms and apps that may encourage non-qualified agents to invest directly in shares and other financial assets associated with a higher risk. In so far as the behaviour of entities investing through fintechs is more likely to react in the same way to information conveyed by investment platforms and Apps, fintechs may contribute to enhance the pro-cyclical dynamics of financial markets and sectors. In extreme situations, some investment apps may be autonomous to initiate market orders. The dynamics could be heightened due to the fact that many apps are based on similar algorithms, generating correlated reactions from the investors. The financial system could be affected to the extent of its direct or indirect exposure to the economic agents or sectors affected by such movements.

Excessive credit growth is a source of risk to financial stability. Within this framework, fintech credit represents a new business model that can be developed outside the group of institutions authorised to grant credit in a professional capacity, and that could be a significant vulnerability if fintech credit reaches substantial volumes, thereby contributing to non-sustainable customer indebtedness levels. Furthermore, macroprudential policy instruments currently envisaged to mitigate excessive credit growth do not cover the majority of fintech credit.

- Volatility

One characteristic shared by many fintechs is speed, which makes them prone to increase market volatility. This may be particularly true for electronic trading fintechs based on algorithms that react quickly to changes in market conditions, thus increasing price volatility. Additionally, fintechs operating in the payments area facilitate and accelerate the movement of funds within the banking system, and that can increase the volatility of deposits, in particular in situations of increased stress on financial markets and liquidity shortage.

- Systemic relevance

There are certain providers of financial services or market infrastructures that are not systemically important institutions as defined by macroprudential policy, but which may have systemic relevance in the context of fintechs due to their widespread use by financial institutions or financial service customers. This relevance is emphasised by new business models of fintech entities that, in many cases, show a greater – sometimes total – dependence on certain technological infrastructures.

This could be the case of cloud computing technologies, with an increasingly widespread use and a relatively limited number of suppliers. This potential dependence of the provision of financial services on a limited number of suppliers makes them systematically relevant. The risk associated with these situations is heightened by the possibility that the interconnection between financial institutions is not identified and safeguarded, and that the suppliers of such services are outside the scope of prudential regulation.

in turn, fintechs may contribute to the widespread use of certain alternative technological infrastructures that challenge more traditional options (e.g. distributed ledger technology (DLT) that can be applied for clearing securities), which may pose a systemic risk depending on (i) the capacity of the financial system to resist to a disruption of that infrastructure, and (ii) the existence of mechanisms to regulate and monitor those infrastructures.

It is also important to emphasise the growing relevance of big databases and unstructured data sources (e.g. social media, news websites) in the framework of fintechs. In so far as it is not possible to control or validate some of such data at source and as they are more prone to disruptions and errors, they may pose a systemic risk.

- Cyber-risk and operational risk

The financial system's increasing dependence on technology has emphasised the relevance of cyber-risk, which is particularly relevant due inter alia to: (i) the diversity of points vulnerable to a cyber-attack; (ii) the existence of several direct and indirect channels through which a cyber-attack can impact on the financial system and economic activity; and (iii) the high frequency of attacks, not limited by geographical barriers.

In addition, information systems may fail for other reasons, and the disruption caused by such failure may have a greater impact in a context where fintechs promote information systems' dependence and interconnection and a greater dependence on third-party service providers.

**Final considerations**

It is of particular importance to reach a balance that allows taking advantage of technological innovation without hampering the stability of the financial system. Within this balance it is essential to safeguard confidence in the financial system, a key element for preserving its stability, regardless of the channel, form and players that ensure the financial intermediation activity and economic activity funding. Thus, fintechs must be assessed and monitored from a financial stability perspective, which is a challenge given the diversity of interconnected dimensions that have to be considered.

To the extent that fintechs blur the boundaries between institutions and jurisdictions, it is necessary to ensure adequate articulation between different national and international authorities. Nonetheless, given the fast pace of innovation and the scarcity of quantitative information on these entities and activities, measuring their relevance and quantifying the associated risks is a complex task.[138]

Furthermore, the assessment of such risks must be carried out against the backdrop of a conceptual framework focused on the type of financial service provided, bearing in mind the underlying technology, and reducing the relevance of the type of institution providing the service.[139]

138. In most situations information is obtained using non-periodic surveys with higher costs and a greater time lag in the release of results.

139. See Financial Stability Committee (2017) and IMF (2018) for concrete proposals for classifying technological innovations according to this rationale.

Currently there is no indication of the adoption (on a significant scale) of particularly sophisticated technologies by the European financial system,[140] nor of the materialisation of risks to financial stability deriving from fintechs.[141] In addition, from a historical perspective, the banking sector has shown the ability to adapt to technological innovation in financial services, internalising it in order to maintain and strengthen its customer base. However, the current innovation wave happened almost concurrently with the economic and financial crisis (or during a period where a large number of the financial institutions in Europe were still recovering from the crisis). This may be related to the relevance and growth of the new market players,[142] differently from previous innovation episodes that occurred mainly internally in banks. However, the banking system has been an active player in current developments, both as an investor in fintechs[143] and as a partner or client of those entities, and it may even benefit from this interaction in terms of the cost structure. Thus, even in the financial services' segment where fintechs relate directly with final customers,[144] it seems unlikely that their growth would undermine the viability of the more traditional banking sector. However, fintechs require (or accelerate) the evolution and adjustment of business models, as well as the way the banking system perceived as more traditional interacts with financial service customers. Within this context, the positioning of big technology companies in this market is also relevant.

**References:**


European Banking Authority (2017), *Discussion Paper on the EBA's approach to financial technology* (FinTech), EBA/DP/2017/02, 4 August 2017.

European Banking Authority (2018), *EBA Report on the prudential risks and opportunities arising for institutions from fintech*, 3 July 2018.

Bank for International Settlements (2018), *Quarterly Review*, September 2018.

Financial Stability Committee (2017), *Financial stability implications from FinTech: Supervisory and regulatory issues that merit authorities' attention*.

DNB, De Nederlandsche Bank (2016), ´The implications of technological innovation for financial stability´, *Overview of Financial Stability*, January 2016.

International Monetary Fund (2017), *fintech and financial services: initial considerations, IMF Staff discussion note*, June 2017.

KPMG (2018), *The pulse of fintech* 2018.

World Economic Forum (2017), *Balancing financial stability, innovation, and economic growth, White paper*.

World Economic Forum (2018), *The global financial and monetary system in 2030, Global Future Council on Financial and Monetary Systems*.


140. See European Banking Authority (2018).
141. See Financial Stability Committee (2017) and WEF (2017).
142. According to the survey conducted by the European Banking Authority (2017), currently in Europe there is a significant and increasing number of fintechs operating in a wide range of financial services. KPMG (2018) mentions that, during the first six months of 2018, investment in fintechs surpassed the results recorded in 2017.
143. KPMG (2018), WEF (2017).
144. According to the European Banking Authority (2017), the majority of fintechs target final customers.

## Box 3 • Implementation of countercyclical capital buffers in the European Union

The current economic setting, featuring an expansion of the business and credit cycles, particularly the increase of real estate prices, has been the reason given by a larger number of macroprudential authorities for recently deciding to apply countercyclical capital buffers.[145] This situation has led various countries to adopt capital-based measures. These differ from those that target credit standards, the so-called borrower-based measures.

The countercyclical capital buffer and changes to risk weights applied to assets of credit institutions for calculating minimum capital requirements are one of the most relevant capital-based tools used to mitigate cyclical systemic risk.[146]

Considering the signs of inversion of the financial/credit cycle, a set of EU countries have chosen, as a capital-based measure, to activate the countercyclical capital buffer (hereinafter the countercyclical buffer). The use of this capital buffer takes into account its well known part in mitigating systemic risk associated to excessive credit growth, which is one of the intermediate goals of macroprudential policies identified by the European Systemic Risk Board (ESRB). Thus, the growing use of this instrument by the national macroprudential authorities of the various Member States justifies its analysis, as was done in the previous *Financial Stability Report* regarding macroprudential measures targeting credit standards for household loans.[147]

These are standardised tools applied to all credit exposures. They contrast with those that target only some types of credit, discriminating between different exposures, and that are not harmonised across the different countries, for instance, measures that are based on the loan-to-value ratio (LTV), and the debt-service-to-income ratio (DSTI).

The countercyclical buffer aims to strengthen the resilience of the banking sector to losses during economic downturns following periods of excessive growth of credit to the private non-financial sector. In addition, as an indirect effect, additional capital requirements throughout the financial/credit cycle may also contribute to mitigate the procyclicality of the banks' lending criteria, common in economic and financial expansion cycles. Finally, this buffer is to be reduced when the risks materialise, thus contributing to an adequate and steady flow of funds into the economy.[148] It falls to each national macroprudential authority to define and announce every quarter the countercyclical buffer rate for credit exposures to the domestic private non-financial sector. This rate is set at a range between 0% and 2.5% of the total risk exposure amount and may exceed 2.5% when duly justified, in which case the mandatory recognition by other EU macroprudential authorities is not required. This buffer is calibrated in multiples of 0.25 percentage points.

145. For further details see the Financial Stability Review of the European Central Bank, https://www.ecb.europa.eu/pub/pdf/fsr/ecb.fsr201805.en.pdf.

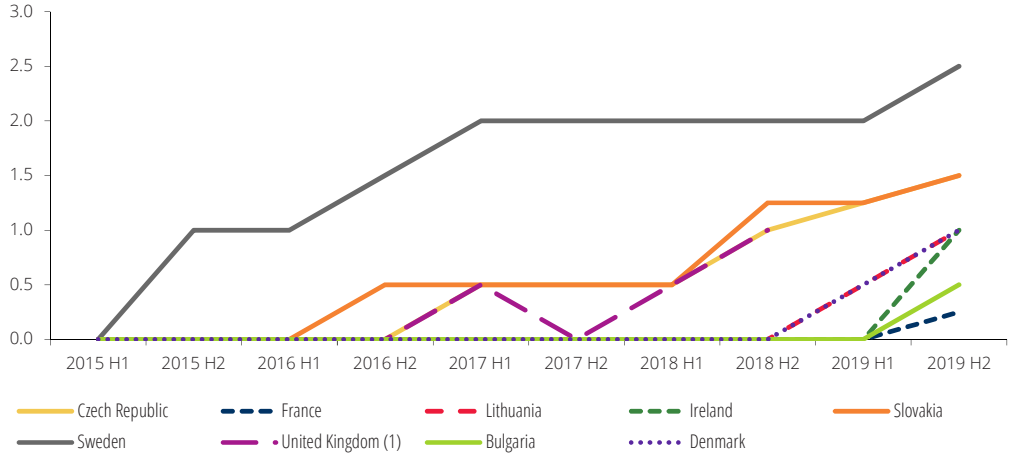
146. "Strategy and instruments of macro-prudential policy", article published in the *Financial Stability Report* of May 2014.

147. For further details on these measures, in a European context, see Box 1 "Implementation, at European level, of macroprudential tools targeting credit standards for loans to households" in the *Financial Stability Report* of Banco de Portugal, June 2018, https://www.bportugal.pt/sites/default/files/anexos/pdf-boletim/ref_06_2018_en.pdf.

148. For further details on all the capital buffers introduced after the 2008 financial crisis, part of the legislative package called CRD IV and CRR, see Box 4 "Initiatives to strengthen capital buffers" published in the *Financial Stability Report* of Banco de Portugal, November 2015, as well as the methodological documents available on Banco de Portugal's website, at https://www.bportugal.pt/en/page/countercyclical-capital-buffer.

Sweden was one of the first EU countries to activate a countercyclical buffer, in 2015, due to high credit growth and significant indebtedness of the private non-financial sector observed in that country. Between the beginning of 2017 and November 2018, nine EU Member States' authorities announced an increase in the countercyclical buffer (Slovakia, the United Kingdom, the Czech Republic and Sweden) or the application, for the first time, of a buffer rate other than zero per cent (Bulgaria, France, Denmark, Ireland and Lithuania) (Chart C.3.1).[149] Until now, no EU country has surpassed the countercyclical buffer rate of 2.5%, though Sweden is expected to reach this threshold in the second half of 2019, as announced last quarter by its national macroprudential authority.

**Chart C3.1** • Developments in countercyclical capital buffers in a set of EU countries | Percentage of total risk exposure amount




Source: European Systemic Risk Board | Notes: The rates for the first and second half of 2019 are the rates announced by the respective national macroprudential authorities for the period in question, but not yet applied. Other rates refer to the moment they were applied. (1) The rate for the first half of 2017 was not fully applied and the buffer was reduced before the end of the 12-month period counting from the increase announcement.

Presently, all the countries have set the date from which countercyclical buffers apply, following the pattern set forth in the CRD IV (Capital Requirements Directive), i.e. 12 months after the date when the increased buffer setting is announced. A shorter period can be set if properly justified on the basis of exceptional circumstances.

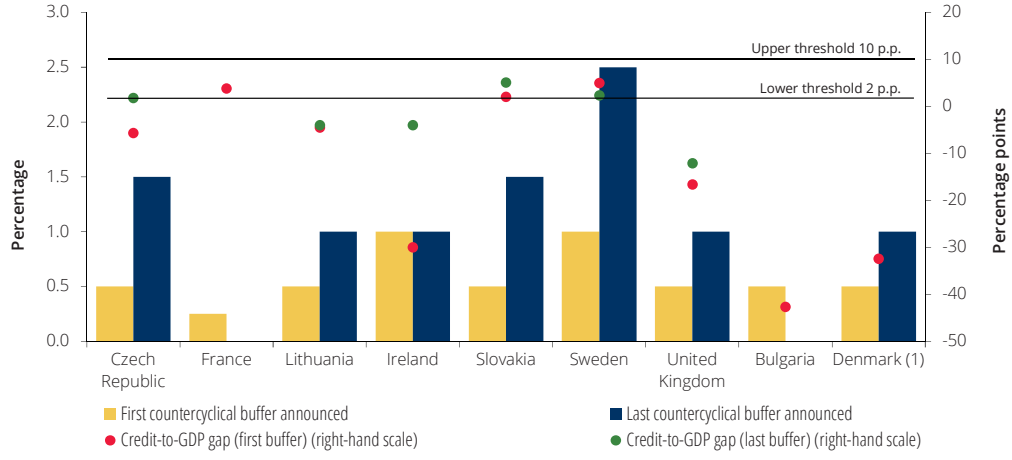
Regarding the methodology to implement the countercyclical buffer, most authorities follow the guidelines issued by the Basel Committee on Banking Supervision (BCBS) and by the ESRB (Recommendation ESRB/2014/1), which recommend using the credit-to-GDP gap (also known as the Basel gap) as the main measurement to identify cyclical systemic risk and subsequently calibrate the countercyclical buffer. In accordance with BCBS guidance, the countercyclical buffer rate is to increase linearly from 0% to 2.5% of the value of exposures when the credit-to-GDP ratio exceeds its long-term trend by 2 percentage points, reaching its maximum level when this gap reaches 10 percentage points.

149. For further details on the buffer's application in the various countries, see the list of rates announced by the European macroprudential authorities at the ESRB website https://www.esrb.europa.eu/national_policy/ccb/all_rates/html/index.en.html.

However, so as to capture the specificities of each Member State, the ESRB Recommendation states that the authorities responsible for setting the rate may exercise their discretionary powers, using quantitative and qualitative information, in what the ESRB calls 'guided discretion'. In fact, Chart C.3.2 shows that the economies of most authorities that activated the countercyclical buffer exhibited a Basel gap that was negative or below the lower threshold of 2 percentage points, the threshold used as a reference for signalling the need to activate the countercyclical buffer.

The credit-to-GDP gap may in some cases underestimate the signalling of a build-up of cyclical systemic risks, particularly after long periods of excessive credit growth. This is due to the fact that these cycles, especially if long-lasting, contaminate the long-term trend that is used to calculate the measurement above. In addition, the most recent figures of the credit-to-GDP gap are substantially revised whenever additional data become available and this may lead to less precise policy decisions.[150] In fact, for instance, Lithuania's decision to increase the buffer rate was made even though the credit-to-GDP gap was not significantly closer to the activation range than the initial value for the first decision. This effect can also be seen in decisions to activate the buffer made by the authorities of Bulgaria, Denmark and Ireland, which took into account parameters other than the credit-to-GDP gap.

**Chart C3.2 • Relationship between countercyclical buffer rates announced and the credit-to-GDP gap**




Sources: European Systemic Risk Board and Bank for International Settlements | Notes: The first countercyclical buffer announced corresponds to the first rise in this capital buffer rate to figures above 0%. Horizontal lines correspond to the thresholds recommended by the BCBS and the ESRB for activating the buffer, between 2 p.p. and 10 p.p. Figures for the credit-to-GDP gap are those reported/published by the macroprudential authorities of each country. (1) Data on the credit-to-GDP gap for the last buffer rate decision were not available.

Therefore, below are the methodologies and indicators used by some macroprudential authorities to guide their decisions to activate and deactivate the countercyclical buffer.

Regarding the indicators used to activate and deactivate this buffer, most national authorities follow the ESRB recommendation (ESRB/2014/1)[151] which provides, in addition to the credit-to-

150. For further details see the Financial Stability Review of the European Central Bank, May 2017.

151. Banco de Portugal, in its role as national authority responsible for macroprudential policy, follows and applies the recommendation issued by the ESRB, using the indicators recommended, as well as exercising the discretionary powers for the use of additional indicators. For further details on the methodology and indicators used by Banco de Portugal see "Countercyclical capital buffer in Portugal: how will it work?", published in December 2015 on Banco de Portugal's website, https://www.bportugal.pt/sites/default/files/anexos/ccb_portugal_en_0.pdf.

GDP gap, seven sets of variables that signal the build-up of system-wide risk associated with periods of excessive credit growth.[152]

Some authorities, such as Slovakia and the Czech Republic, base their countercyclical buffer decisions on a composite indicator. In Slovakia this is called 'cyclogram' and it aggregates a set of core macroeconomic and financial indicators and a set of supplementary indicators. Core indicators are the credit-to-GDP gap, credit growth, non-performing loans' dynamics and indicators on debt burden of households and non-financial corporations. The methodology used by the Czech authority is also based on a composite indicator, called 'aggregate financial cycle indicator', and on the credit-to-GDP gap adjusted to the characteristics of the Czech economy, which is based on shorter time series unlike the BCBS/ESRB methodology. This aggregate indicator includes six indicators, which are credit growth, credit-granting conditions, non-financial corporations indebtedness, financial and real estate asset prices and the current account deficit as a percentage of GDP.

Other countries use stress tests to set the countercyclical buffer rate, so that it is enough to absorb losses in an adverse scenario. The United Kingdom[153] and France[154] are two of these countries.

Another matter that merits attention is macroprudential authorities' timing for deciding to activate the buffer: at the recovery stage of the credit cycle, when there are only moderate signs of build-up of cyclical systemic risk, or at a later stage of the cycle, associated to fast growth of loans to the private non-financial sector. For the authorities of Lithuania, the United Kingdom and the Czech Republic, the countercyclical buffer in a context of moderate risk should be 1%, not 0%. This argument backed the increase to 1% in all three countries, Lithuania (June 2018), the United Kingdom (November 2017) and the Czech Republic (May 2017).[155]

Lastly, the stage of the credit cycle should be taken into consideration when choosing which instruments should be activated, i.e. capital-based instruments or borrower-based instruments, since it contributes to making each instrument more or less effective in mitigating systemic risk.

According to international experience (Table C.3.1), optimal effectiveness of borrower-based instruments may be achieved if they are implemented at an initial stage of build-up of systemic risk, loosing effectiveness if implemented at a later stage of the credit cycle. At this stage, capital-based instruments are considered more appropriate, so as to endow the financial system with capital buffers that make it resilient enough to absorb losses resulting from the materialisation of risks later on.

152. The sets of variables mentioned are listed in Recommendation C (2) and regard measures of: (a) potential overvaluation of property prices, (b) credit developments, (c) external imbalances, (d) strength of bank balance sheets, (e) private sector debt burden, (f) potential mispricing of risk, and (g) measures derived from models that combine the credit-to-GDP gap and a selection of the above measures.

153. A detailed analysis of the macroprudential policy strategy can be found at Bank of England's website, in the Policy Statement "The Financial Policy Committee's approach to setting the countercyclical buffer ", at https://www.bankofengland.co.uk/-/media/boe/files/statement/2016/the-financial-policy-committees-approach-to-setting-the-countercyclical-capital-buffer.pdf?la=en&hash=DE1BDDDA9A8628694A5881D6559DE782AFF3A7B1.

154. A detailed analysis of the macroprudential policy strategy can be found in the *Working Paper* An analytical framework to calibrate macroprudential policy, available at Banque de France's website, at https://publications.banque-france.fr/sites/default/files/medias/documents/wp648.pdf.

155. For further detail on the methodologies used by the authorities see the Special Feature B "Use of the countercyclical buffer – a cross-country comparative analysis" in A Review of Macroprudential Policy in the EU ", published by the ESRB in April 2018, available on its website: https://www.esrb.europa.eu/pub/pdf/reports/esrb.report180425_review_of_macroprudential_policy.en.pdf?4b6e5f604e78b7d772b788f2f81fc0c8.

**Table C3.1 • Borrower-based instruments used by the different national macroprudential authorities that activated the countercyclical buffer**

| | Income measures (1) | LTV | Maturity | Countercyclical buffer |
|---|---|---|---|---|
| Czech Republic | √ | √ | √ | √ |
| France | | | | √ |
| Lithuania | √ | √ | √ | √ |
| Ireland | √ | √ | | √ |
| Slovakia | √ | √ | √ | √ |
| Sweden | √ | √ | | √ |
| United Kingdom | √ | | | √ |
| Bulgaria | √ | √ | √ | √ |
| Denmark | √ | √ | | √ |

Source: European Systemic Risk Board | Notes: The borrower-based measures in the table can be analysed in greater detail in the *Financial Stability Report* published in June 2018 (see footnote 147.). (1) These include DSTI (debt-service-to-income), DTI (debt-to-income), LSTI (loan-service-to-income) and LTI (loan-to-income).

In fact, most of the authorities that activated the countercyclical buffer had, at an earlier stage of the credit cycle, activated borrower-based instruments targeting mainly loans granted to households. This could indicate that such instruments, which act only on borrowers with higher risk profiles, may not have been sufficient to mitigate the build-up of systemic risk associated with the excessive increase in loans to the private non-financial sector. Thus, it was necessary to enhance the financial system's resilience, so that it may absorb the shocks that could arise from the materialisation of risks, particularly from the losses caused by excessive credit growth. While borrower-based instruments target only certain credit segments and usually new loans, the countercyclical buffer applies to all exposures to the private non-financial sector. Therefore, their simultaneous activation could be justified by the fact that the two instruments complement each other.

To conclude, the credit-to-GDP gap, in the present European context and for most EU countries, remains under the lower threshold of 2 percentage points, which may suggest not activating the countercyclical buffer. Yet, bearing in mind the apparent inversion of the credit cycle in some of the EU Member States, this indicator has not been a major factor for the various macroprudential authorities when making decisions on the countercyclical buffer. Thus, for precautionary reasons and considering the positive stage of the business and financial cycles, there is a growing trend to use this macroprudential policy instrument. As recommended by the ESRB, decisions are based on different indicators related to credit growth, overvaluation of assets, external imbalances, indebtedness of the non-financial private sector, among other, as well as on qualitative criteria.

Therefore, should the current stage of the credit cycle continue in the future, an even larger number of European countries may decide to activate the countercyclical buffer, with such decisions being grounded on a broad set of macroeconomic and financial indicators as well as on other qualitative information reflecting national specificities.

# II Special issues

## Investment funds as a source of systemic risk

## Amendment of the CRD IV-CRR: what is new?

# Investment funds as a source of systemic risk

## 1 Introduction

After the global financial crisis of 2007-08, the transfer of financial intermediation from the banking sector to non-bank financial intermediaries (Shadow Banking)[1] increased significantly as a result of heightened regulatory requirements to banks and compliance costs related to Basel III, inter alia, which led to constraints in growth in banking activity or even triggered a deleveraging process in the banking sector (International Monetary Fund (IMF), 2015).

The 2009 de Larosière Report (European Commission, 2009) indicates growth in non-bank financial intermediation as one of the main factors behind the 2007 crisis and possibly enhancing systemic risk. The Financial Stability Board (FSB) lists the following entities as some of the entities involved in Shadow Banking, as well as the potential risks they pose to financial stability and respective transmission channels:[2]

- Entities raising funds with features similar to those of bank deposits. Units in these entities, namely investment funds, are often perceived as demand deposits by their holders. A devaluation in units not anticipated by market participants may give rise to large redemptions of these units, which in turn may trigger fire sales in investment fund asset portfolios to meet such redemptions, negatively affecting the price of these assets;
- Entities promoting liquidity or maturity transformation: liquidity risk (or transformation) refers to investment in assets with low liquidity by entities allowing disinvestment/redemption on a very short notice. Disinvestment/redemption on short notice relies on asset sales. However, as asset maturities tend to be longer than the required advance notice of redemption, the sale of assets before maturity normally occurs at a discount, generating losses (maturity risk);
- Entities repeatedly relying on leverage as a source of funding for their investments to maximise returns on invested capital (Singh et al, 2018). Securities financing transactions are some of the instruments that may expose entities to significant losses. Under stressed market conditions, the value of the collateral will tend to decrease and margins on securities financing transactions will tend to increase, potentially leading to a sudden portfolio deleveraging through asset fire sales.

At the end of 2017, Shadow Banking in the European Union (EU) accounted for approximately 40% of financial assets in the financial system, having doubled in size since 2010, with investment funds representing about one-third (European Systemic Risk Board (ESRB), 2018).[3] In Portugal, Shadow

1. Shadow Banking was used to refer to credit intermediation involving entities (or activities) outside the regular banking system (http://www.fsb.org/wp-content/uploads/r_110412a.pdf). The FSB currently uses the term 'non-bank financial intermediaries'. Throughout this Special Issue, both terminologies will be used interchangeably. Using a broader measure, Shadow Banking comprises money market funds, investment funds (other than money market funds), and Other Financial Intermediaries and Financial Auxiliaries (OFI) (other than investment funds).
2. This analysis focuses on the entity perspective already mentioned in previous issues of the *Financial Stability Report* (see the box entitled "Delimitation of the shadow banking perimeter (from the entity perspective)" in the May 2014 issue of Banco de Portugal's *Financial Stability Report*), Banco de Portugal (2014a). However, the sector's characterisation by the FSB also includes an activity perspective (http://www.fsb.org/wp-content/uploads/r_130829c.pdf) (FSB, 2013).
3. In addition to investment funds, other financial market participants that may be included in the concept of Shadow Banking are: financial holding companies, leasing companies, factoring companies, special investment vehicles and financial credit institutions.

Banking only represented about 20% of financial assets at the end of 2017, with investment funds accounting for around 13%. In the period under review and in contrast to the EU, the value of financial assets in the shadow banking system in Portugal decreased by around 27%.

In the last decade, assets under management in investment funds grew significantly in several EU countries,[4] in a context of very low interest rates, associated with demand for securities with higher returns but potentially with less market liquidity. Investment funds thus became important participants in the financial market in general, and in the fixed income market in particular, and therefore became an important source of funding for the non-financial private sector. However, an abrupt and sharp reversion in risk premia or simply a sudden materialisation of losses in securities in the funds' portfolios may lead investors to redeem their units, which might imply that this source of funding is more sensitive to investors' risk perception. Mismatches between the liquidity and maturity of open-ended investment fund assets and the redemption profile of their investors may increase the funds' sales volume. These sales may have a significant impact on asset prices, in particular during periods of financial market uncertainty, affecting not only financial market participants that hold the same assets, but also those holding assets with their price closely correlated with the fund's assets. This movement may significantly affect the resilience of the financial system if investment funds hold a large share of financial assets with low liquidity and/or high leverage. In addition to these risk transmission channels, investment funds may spread risk through their investors' behaviour, and are therefore a potential channel for transmitting shocks to other institutions.

Consequently, although investment funds help diversify the sources of funding for the non-financial private sector, it is important to understand whether an increase in financial intermediation by investment funds may contribute to amplify systemic risk in the financial system or, in a worst case scenario, affect the resilience of the financial system as a whole.

This Special Issue describes the most relevant features of investment funds and how these entities may contribute to amplify risks in the financial system, and provides an assessment of the size of investment funds in the EU and Portugal. Finally, it identifies a number of tools to prevent or mitigate such sources of systemic risk, as laid down in Recommendation ESRB/2017/6.[5]

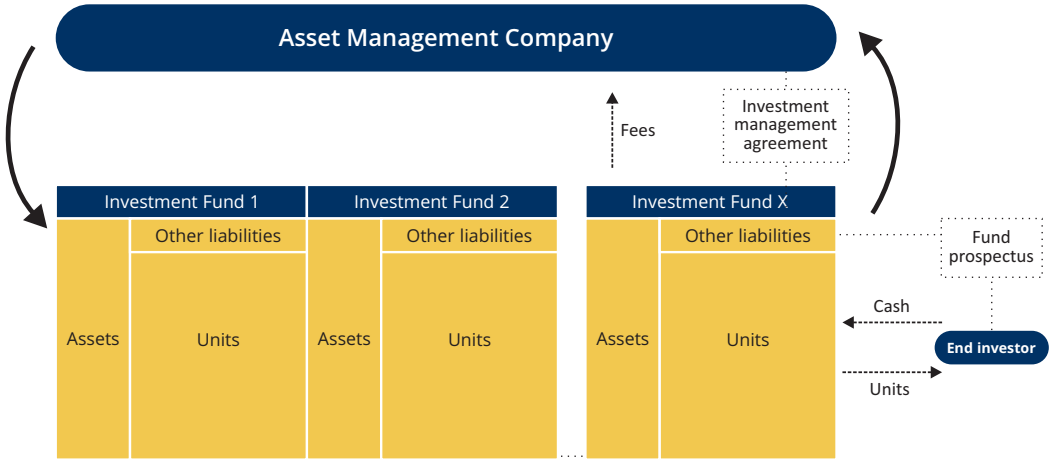
## 2 What is an investment fund?

Investment funds are collective investment undertakings,[6] i.e. entities created with the purpose of managing assets, generating value for their unit-holders. Investment fund units are securities representing equity held by the fund's investors, granting each investor the same rights and obligations. Each end-investor is the holder of a part of the investment fund corresponding to the

4. Investment funds mainly differ from money market funds from a statistical point of view. According to the box entitled "Portuguese financial system: from the statistical classification to the prudential approach", in the November 2013 issue of Banco de Portugal's *Financial Stability Report*, Banco de Portugal's statistical classification includes money market funds in Other Monetary Financial Institutions, taking into account their role in raising funds with similar characteristics to bank deposits and in monetary policy transmission (Banco de Portugal, 2013). Thus, considering their liquidity and maturity risk is low (as they invest in short-term assets and are consequently very liquid) and although they are covered by the FSB classification, money market funds are not the main focus of this analysis. However, they are formally collective investment undertakings, i.e. a specific type of mutual fund.
5. This Special Issue does not analyse potential effects arising from changes in the volume of investment by non-residents in resident investment funds. In addition, the impact of deleveraging by investment funds on the financing of the non-financial private sector is not addressed in this Special Issue.
6. In Portugal, mutual funds, real estate funds, venture capital funds, alternative investment funds and pension funds are examples of collective investment undertakings. Money market funds are a specific type of investment fund. Nevertheless, owing to a different statistical classification, any reference to investment funds in this Special Issue comprises mutual funds, real estate funds, venture capital funds and alternative investment funds. Pension funds are not included in the Shadow Banking category, and therefore are not included in what is designated as investment fund in this Special Issue.

investment made. Fund investors therefore own the assets and the income those assets generate in proportion to their investment in the fund's units. Investment funds are thus constituted autonomously and run by a management company called 'asset management company', which may manage several funds.[7] This company independently manages the various dimensions of the portfolios of the funds: asset management, risk management, liquidity management and compliance, inter alia (Figure 1).

**Figure 1 • Relationship between investment funds and the asset management company**




Source: Banco de Portugal, adapted from IMF (2015).

From the point of view of the end-investor (unit-holder), investment funds have some advantages: (i) risk diversification, as they allow investment in a broader pool of assets; (ii) access to professional asset management; (iii) lower trading and custody costs, as investors will only pay fund-related fees; (iv) investment in markets or securities that would not be available for low cash amount investments; and (v) easy withdrawing of invested capital in the form of unit redemptions, normally on short notice.[8] However, there is an asymmetry of information, as end-investors that choose to invest through an investment fund format are not provided with individual and complete information on the exact makeup of the fund's portfolio. Indirect investment through an investment fund transfers the discretion in investment decisions to the asset management company. However, although investors cannot ascertain the asset portfolio's constitution at any given time, they have the opportunity to review the fund's prospectus, namely at the time of initial subscription, before taking an investment decision. The prospectus serves to disclose beforehand to potential investors the features of the assets that may be in the fund, specifically type (e.g. equity, bonds, real estate), maturity and issuer. It is therefore possible to conclude that there is an implicit trade-off between information and portfolio diversification for investors investing through funds: the decision on the fund's composition is transferred to the asset management company and, in exchange, investors are provided with a diversified and professional investment. The costs of this trade-off for investors are included in the fees charged by the management company.

Table 1 contains a non-exhaustive list of the most representative fund features.

7. Société d'investissement à Capital Variable (SICAV) may choose between self-management and delegating the management task to an asset management company.
8. In the case of open-ended funds.

**Table 1** • Features of main investment funds

| | |
|---|---|
| **On redemption ability** | |
| Open-ended funds | In open-ended funds, investors may subscribe and redeem units at any time (the number and value of units depend on demand). Normally, units may be subscribed and redeemed very frequently. The portfolio is usually comprised of fairly liquid securities. |
| Closed-ended funds | Closed-ended funds issue a fixed number of units, which investors may subscribe or redeem within a certain period specified beforehand in the prospectus regulating the fund. |
| **On income distribution** | |
| Funds with an income share type | Funds periodically distributing generated income among end-investors in the fund. |
| Funds with an accumulation share type | Funds that do not distribute income generated by the assets in the portfolio, reinvesting it. |
| **On the investment policy or type of portfolio assets** | |
| Money market funds | Funds investing in short-term debt securities, which, as such, are expected to be highly liquid. Taking these factors into account, these may be classified as low-risk funds with some features similar to bank deposits. |
| Short-term funds | Funds mainly investing in highly liquid assets, similarly to money market funds. However, assets in the portfolio normally have a longer duration than the assets in money market funds. In open-ended funds, redemptions are normally granted on a few days' notice and not on the same date of the request for redemption, as is normally the case with money market funds. These funds may not invest in the equity market or in securities with features similar to equity shares. |
| Bond funds | Funds with a portfolio mainly comprised of public or private debt securities (so-called bonds). These funds generally have more risk than money market funds or short-term bond funds, due to the longer maturities of the debt securities comprising the portfolio. Bond funds may also be characterised into: floating rate bond funds, which mainly invest in bonds with a coupon linked to a floating rate, or fixed-rate bond funds, which invest mainly in bonds with a coupon linked to a fixed rate at issue date. |
| Equity funds | Funds with a portfolio composed mainly of equity shares. |
| Funds of funds | Funds with a portfolio composed mainly of units in other funds. |
| Index funds | Funds trying to replicate, in whole or in part, a securities index in terms of portfolio composition and subsequent profitability. |
| Mixed funds | Funds investing in equity shares and bonds, which may invest predominantly in one or the other asset class. |
| Real estate funds | Funds investing essentially in real estate assets. |
| Retirement/education funds | Funds that finance retirement/education plans (PPR/E). |
| Equity savings funds | Funds that fund the investment of end-investors in equity saving plans (PPA). |
| **On the legal framework regulating them** | |
| Harmonised funds | These are investment funds regulated by the Portuguese legislation that transposed Council Directive 85/611/EEC of 20 December 1985, the first version of the so-called UCITS Directive (Undertakings for Collective Investment in Transferable Securities). In Portugal, these funds are denominated as *Organismos de Investimento Coletivo em Valores Mobiliários* (OICVM). |
| Non-harmonised funds | Non-harmonised investment funds are funds which are not constituted in accordance with the Portuguese legislation that transposed Directive 85/611/EEC. Non-harmonised investment funds comprise non-harmonised mutual funds, real estate funds, venture capital funds and alternative investment funds. Under the Portuguese legal framework, alternative investment funds (AIFs) or alternative investment undertakings were initially called *Fundos Especiais de Investimento* or *Organismos Especiais de Investimento*. In general, these funds' purpose is the collective investment in securities or other financial assets (with the exception of real estate assets), bearing some similarities to hedge funds.[9] |

Sources: Portuguese Securities Market Commission and Portuguese Association of Investment Funds, Pension Funds and Asset Management. | Notes: Council Directive 85/611/EEC of 20 December 1985 combines the laws, regulations and administrative provisions relating to some OICVM. The main purpose of this Directive was to establish a single European market for retail investment funds, which would ensure investor protection. These funds may be freely traded within the EU once they are approved by the supervisory authority of their country of origin. The legal framework currently applicable to OICVM generally results from the transposition of Directive 2009/65/EC. Specific rules on investment and leverage limits are described in Chapter VII of this Directive. The classification shown here was based on the sources mentioned above and may not directly correspond to the statistical classification of Banco de Portugal.

9. Funds investing in different assets with the purpose of generating the highest possible return for a given level of risk, relying on any market strategy without limiting their strategy.

## 3 Sources of systemic risk associated with non-bank financial intermediaries

According to the ESRB, there are several sources of systemic risk related to financing through non-bank financial intermediaries (ESRB, 2016b) (see Table 2).

**Table 2** • Potential risks and vulnerabilities from financing by non-bank financial intermediaries

| |
|---|
| I. Excessive maturity and liquidity mismatches |
| II. Interconnectedness of financial system entities and related risk of contagion |
| III. Excessive growth in credit to the non-financial private sector with the use of excessive leverage |

Source: Adapted from the European Systemic Risk Board.

The potential risks and vulnerabilities listed in the table above show significant interactions, making it difficult to evaluate the effects of each one of them individually – especially in a global context of very low interest rates characterised by a search for higher yields, even when these result from investment in portfolios with less liquid assets and worse credit quality (search for yield).

The first source of systemic risk is related to the fact that end-investors regard investment funds as undertakings offering savings products generating yields. Fund managers are therefore encouraged to seek these yields either by investing in assets with longer maturities than the required notice of redemption or by using leverage strategies. There is an implicit trade-off between yield and liquidity: by investing in assets with higher yields and longer maturities than those of the required notice of redemption, the investment fund will have greater difficulty to meet an unexpectedly high level of redemptions.

In a stressed market condition, if the fund uses leverage, assets in the investment fund will have to absorb not only their own valuation changes, but also changes in the value of assets used as collateral, as well as additional margin calls of securities financing transactions. These margin calls and the additional discount related to the assets used to leverage the portfolio may generate pro-cyclical movements, amplifying asset valuation movements and, as such, potentially triggering asset fire sales. The use of leverage consequently enhances the probability of fire sales of investment fund assets at increasingly lower prices, which might generate a downward spiral of market prices (a 'negative feedback loop').

In addition, investors will have an incentive to redeem as soon as possible whenever they fear the value of their investment is declining (so-called 'first-mover advantage').[10] In case of a severe drop in market liquidity or increased volatility in the asset market, and considering that investment funds operate with maturity mismatches between assets and liabilities, investors may be encouraged to redeem their units in open-ended funds and thus withdraw the capital invested. This type of behaviour also encourages asset fire sales, putting negative pressure on asset prices.

The effects on the price dynamics may be exacerbated if the funds invest in illiquid assets and/or are leveraged, thereby amplifying the contagion effects, with material consequences for the

10. Investors have an incentive to redeem in the early stages of financial market turbulence, as the costs of liquidating the assets which will generate liquidity to meet the redemption will be borne by all other investors remaining in the fund, assuming that the net asset value (representing the fund's value for investors) is constant. Funds with a variable net asset value also have this advantage, as fund managers tend to sell more liquid assets first, leaving in the fund assets with higher liquidity risk – and consequently with a higher potential for declining in value – for the remaining investors. For further information, see IOSCO (2012) and Hannam (2013).

portfolios of institutions holding the same assets or holding assets that have their return closely correlated with these assets. Indeed, leveraged investment funds holding liquid assets may make quick adjustments to their portfolio if they have additional margin calls associated with derivative instruments or security financing transactions. Even in a stressed market condition, in which the fund is required to sell assets at a discount in order to cope with sudden redemptions and there are fluctuations in leverage costs, liquid assets will potentially mitigate against a fragile overall liquidity position of the fund. The existence of an appropriate ratio of liquid assets in the fund's portfolio is therefore recommended, especially the higher the leverage in the fund.

The second source of systemic risk identified by the ESRB is related to the interlinkages between financial system entities and the related risk of contagion. Contagion between investment funds and banks can occur through different channels. On the one hand, directly through (i) holdings of units in investment funds by banks, (ii) deposits in banks by investment funds, (iii) transactions with derivative instruments, loans and securities financing transactions between investment funds and banks. Of these channels, the most frequent are deposits in banks by investment funds and bank loans to investment funds, as holding units in investment funds is costly for banks in terms of capital requirements, discouraging such holdings. In the case of deposits in banks by investment funds, which may often play a relevant role in bank financing, their volatility may pose a number of risks to financial stability, which tends to become apparent under stressed market conditions, when investment funds will have to mobilise deposits in order to cope with potential unit redemptions. On the other hand, contagion can also occur indirectly through (i) holdings of debt securities or shares of banks by investment funds; (ii) common exposures in investment fund and bank portfolios; and (iii) the behaviour of fund investors. The latter becomes noticeable mainly when investors are not able to redeem their units: these investors may react to this unmet demand for liquidity by redeeming units in another fund or even sell securities also held by a bank, having an indirect impact on its securities portfolio.

In addition, there is evidence that investors in investment funds show a herding behaviour. This herding behaviour means that investors make decisions based on the investment decisions of other investors and not based on quantifiable factors (IMF, 2015). The existence of pro-cyclical behaviours by fund investors is also mentioned in the literature, as they tend to redeem their units when investment funds have low returns and to subscribe units when these have high returns (Baranova et al, 2017). In turn, the behaviour of investors has an impact on the behaviour of fund managers, encouraging them to invest in higher-yielding assets, in order to make them more attractive to potential fund investors, and thus worsening the pro-cyclical effects mentioned above (IMF, 2015).

The third source of systemic risk mentioned in Table 2 is related to the role investment funds play in granting credit, in particular to the non-financial private sector. A protracted period of low interest rates has been promoting increased demand for debt securities issued by riskier non-financial corporations. Additionally, the supply in the bond market issued by non-financial corporations increased, owing to low financing costs and deleveraging by banking institutions, as a consequence of the financial crisis and, possibly, stricter regulatory requirements. Consequently, other financial intermediaries have replaced banks in granting credit to non-financial corporations. As such, from a financial stability perspective, the impacts that may arise from an increase in risk premia associated with a protracted period of low interest rates should be analysed.

An increase in risk premia or an event of increased volatility in financial markets can lead to an unexpected high level of redemptions by investors, thereby propagating this shock to other financial and non-financial institutions. As a result, the high sensitivity of fund investors to financial

market volatility amplifies flows (both for subscription and redemption) in investment funds. Simultaneously, an increase in risk premia – and consequently in interest rates – may have an effect on the ability of non-financial corporations to service debt. Presumably, this might have an impact on the risk and future profitability assessment of these corporations, which may lead several financial intermediaries to sell debt securities issued by these corporations, thus leading to a drop in the prices of these debt issues, which may spill over to other financial market participants.

Investment funds have been investing and participating in the growth of debt securities. In the case of funds, as there is potentially a maturity mismatch between assets and liabilities – specifically in regard to market liquidity mismatches between assets and liabilities – the securities investment funds[11] which may be more susceptible to liquidity risk should be identified. According to the ESRB, bond funds and mixed funds and, to a certain extent money market funds, are the funds that are most susceptible to liquidity risk (ESRB, 2018). Money market funds may be affected by liquidity risk because they allow daily redemptions. In turn, bond funds, as entities investing most of their portfolio in debt securities, are the funds most susceptible to maturity and credit risk. Several authors have collected evidence that the debt market at a global level (particularly for non-financial corporation debt) became less liquid and decreased in size after the financial crisis, which increased even more the sensitivity of bond funds to liquidity risk (ESRB, 2016a; Bank of England, 2016; IOSCO, 2017). Equity funds and mixed funds will have a lower liquidity risk, as they invest in equity shares, which are normally traded in more liquid and larger markets than the over-the-counter market, where debt securities are typically traded.

## 4 Investment funds in Portugal

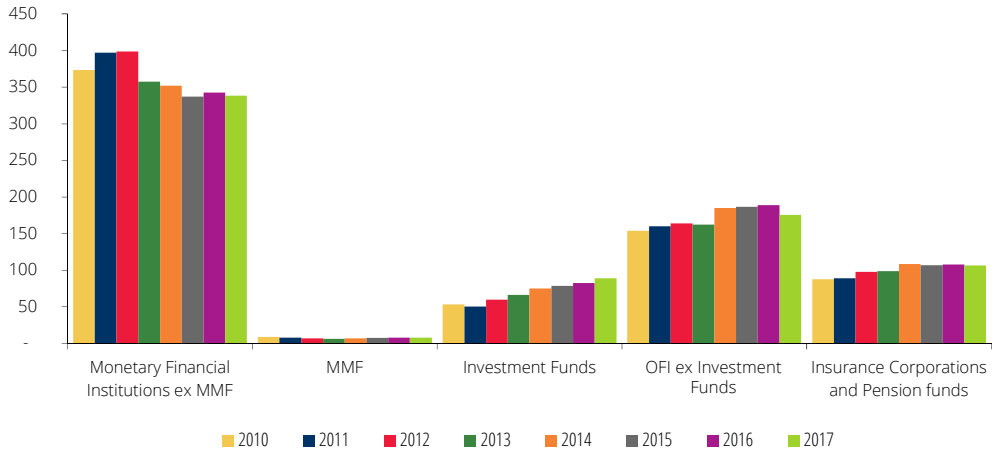
Investment funds are a vehicle to raise funds, offering an easy way to invest or disinvest (redemption) and the possibility of investing in a diversified portfolio with specialised management at a relatively low cost. In the 2010-17 period, characterised by a search-for-yield phenomenon, in a context of very low interest rates, the importance of EU investment funds increased considerably, with financial assets under management more than doubling, while the banking system's total financial assets[12] increased by only 8.4%.

From 2010 to 2017, Shadow Banking[13] played an increasingly relevant role in the EU's financial system, with its financial assets growing by around 50%. At the end of 2017, Shadow Banking accounted for close to 40% of total financial assets in the EU financial system, with over €42 trillion in assets, i.e. around 273% of GDP (Chart 1). By comparison, during the same period, EU investment funds accounted for around one-third of overall Shadow Banking in the EU (ESRB, 2018) and around 89% of GDP generated in 2017.

However, developments in Shadow Banking in Portugal have been rather different from those seen in this type of institution in the EU. From 2010 to 2017, the value of financial assets in the Portuguese Shadow Banking declined by around 27%. At the end of 2017, Shadow Banking in Portugal therefore held around 20% of total financial assets in the system, corresponding to around 73% of Portuguese GDP (Chart 2).

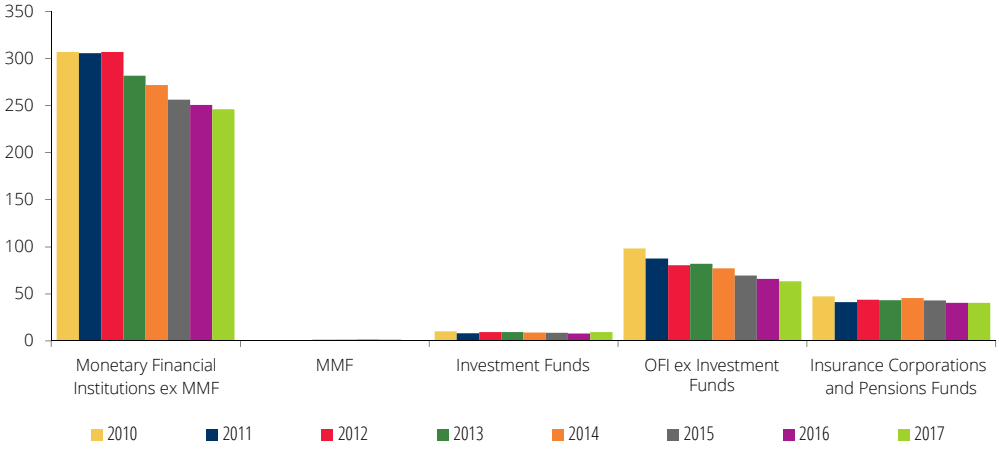
11. Real estate funds invest in assets traditionally classified as illiquid. However, a list of less liquid assets at the European level by the European Securities and Markets Authority (ESMA) is expected to confirm or refute this assumption. In addition, in June 2018, real estate funds showed a liquidity ratio of about 10%, a level close to that observed prior to the financial crisis (see Box 1, "Real estate investment funds resident in Portugal").
12. Also including central bank balance sheets.
13. See footnote 1.

**Chart 1** • Total financial assets in the EU financial system | As a percentage of GDP




Sources: European Central Bank and European Systemic Risk Board and Banco de Portugal calculations. | Notes: Financial assets mainly correspond to investments in assets other than real estate assets. The sample includes euro area countries and Bulgaria, Croatia, Czech Republic, Denmark, Poland, Romania, Sweden and the United Kingdom. The composition of euro area countries varies over the period under review. Annual GDP for 2017 was estimated for Bulgaria, Poland and Romania. Annual GDP for 2013 was estimated for Croatia. MMF stands for Money Market Funds. OFI stands for Other Financial Intermediaries and Financial Auxiliaries. Monetary Financial Institutions excluding MMF includes central banks, in addition to Monetary Financial Institutions, and excludes Money Market Funds.

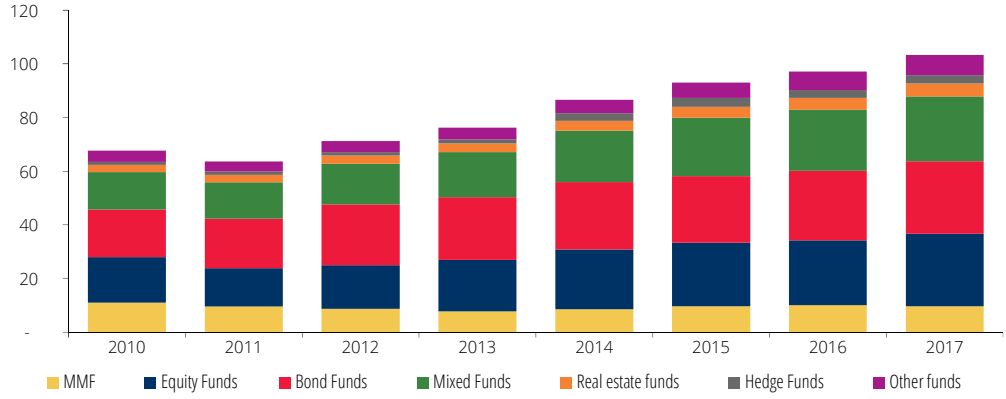
**Chart 2** • Total financial assets in the Portuguese financial system| As a percentage of GDP




Source: Banco de Portugal. | Notes: Financial assets mainly correspond to investments in assets other than real estate assets. OFI stands for Other Financial Intermediaries and Financial Auxiliaries. MMF stands for Money Market Funds. Monetary Financial Institutions excluding MMF includes the Central Bank and excludes Money Market Funds.

In the EU, the value of hedge fund units, despite their small size (3.1% of GDP in 2017), grew by 218% from 2010 to 2017. During this period, real estate funds and mixed funds also recorded significant growth, more than doubling the value of units issued. In turn, the value of units issued by bond and equity funds recorded lower relative growth, increasing by around 80% and 87% respectively (Chart 3). These were the main type of funds in the EU – measured by the value of units as a percentage of GDP – at the end of 2017, each accounting for 27%. Mixed funds are the third largest category, accounting for 24% of GDP at the end of 2017, with the value of units growing by 104% during the 2010-17 period.

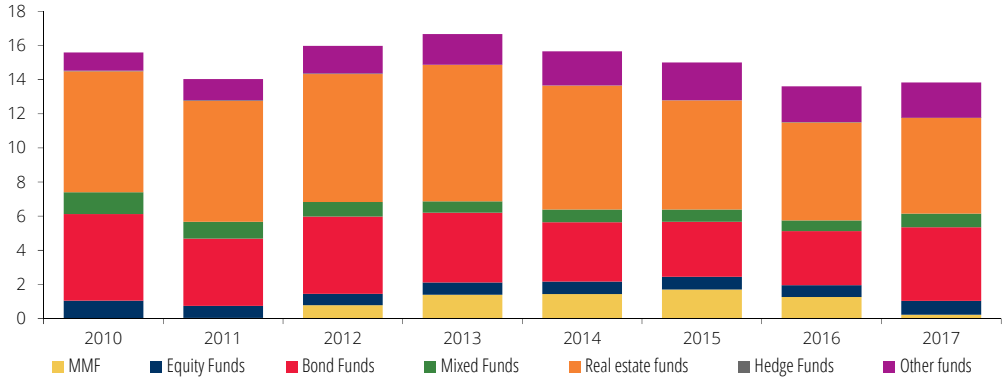
**Chart 3** • Value of units of EU investment funds and money market funds by type of fund | As a percentage of GDP




Sources: European Central Bank and European Systemic Risk Board and Banco de Portugal calculations. | Notes: The value of units corresponds to net asset value and includes the value of investments by the investment fund plus other assets less loans and other liabilities. Excluding data for Bulgaria, Croatia, Denmark, Sweden and the United Kingdom. In 2016, a number of hedge funds were reclassified as "Other funds". This classification is carried out in accordance with the ECB's Manual on investment fund statistics, harmonised at EU level. Funds are classified under the category of the assets in which they primarily invest. For Portugal, venture capital funds are classified under "Other funds" and funds of funds are classified together with the type of funds in which they primarily invest. MMF stands for money market funds.

While in the EU there is a clear upward trend in investment funds as a percentage of GDP, in Portugal this growth was not observed in the 2010-17 period. In Portugal, "Other funds"[14] was the only category recording an increase in the value of units issued in the 2010-17 period (Chart 4). During this period, growth in venture capital funds partly explains the increase of 108% in "Other funds". However, the increase observed in this category as a percentage of GDP stands at around 1 p.p. At the end of 2017, the largest investment funds resident in Portugal in terms of relative size compared to GDP were real estate funds and bond funds.

**Chart 4** • Value of units of investment funds and money market funds resident in Portugal by type of fund | As a percentage of GDP




Source: Banco de Portugal. | Notes: The value of units corresponds to net asset value and includes the value of investments by the investment fund plus other assets less loans and other liabilities. This classification is carried out in accordance with the ECB's Manual on investment fund statistics, harmonised at EU level. Funds are classified under the category of the assets in which they primarily invest. In Portugal, venture capital funds are classified under the category "Other funds" and funds of funds are classified together with the type of funds in which they primarily invest. MMF stands for money market funds.

14. The classification of investment funds by Banco de Portugal is carried out in accordance with the ECB's Manual on investment fund statistics: http://ec.europa.eu/eurostat/ramon/statmanuals/files/ECB_investment_fund_statistics_2017_en.pdf. Generally, the manual on investment fund statistics defines "Other funds" as a residual category (i.e. investment funds other than bond funds, equity funds, mixed funds, real estate funds or hedge funds). The glossary further specifies that the criteria for classifying investment funds are derived from the public prospectus, fund rules, statutes, subscription documents or investment contracts, marketing documents, or any other statement with similar effect.

Given that developments in investment funds in Portugal were rather different to those in Europe – particularly considering their small size relative to GDP and the lack of growth in the value of units issued in the 2010-17 period – it is important to assess, from a financial stability perspective, how the sources of systemic risk associated with investment funds (described in Table 2) have evolved in Portugal. In parallel, an analysis is carried out on the dynamics associated with the most relevant types of funds in Portugal (real estate funds and bond funds) and the sources of risk identified before.

Real estate funds have a high percentage of relatively illiquid assets (real estate). At the end of 2017, real estate funds held 41% of total investment fund units issued in Portugal. This importance is not dissociated from the economic and financial crisis, which resulted in high levels of non-performing enterprises in construction and real estate activities. Indeed, Portuguese banks had substantial exposure to the real estate sector through loans guaranteed by real estate and loans to enterprises in construction and real estate development. Following the crisis, banks were forced to execute the collateral associated with some of these loans, thereby increasing the real estate transferred in lieu of payment. Banks transferred part of these real estate assets to real estate funds, which explains why these are, for the most part, closed-ended funds. In this regard, despite the low liquidity of real estate assets, this type of fund is not subject to the risk of a maturity mismatch and therefore is not in itself a source of systemic risk for the Portuguese financial system.

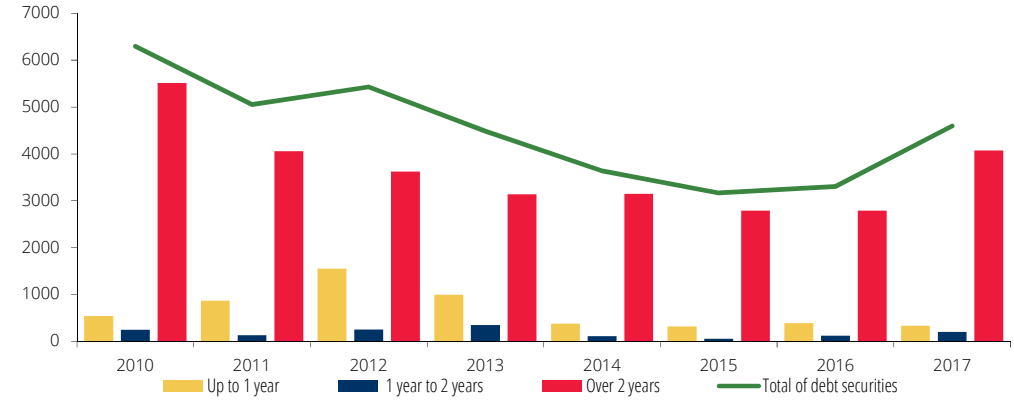
In turn, bond funds – in addition to traditionally operating with a maturity mismatch between assets and liabilities – invest in the debt securities market, against a background of reduced liquidity in this market (Bank of England, 2016). Consequently, these funds simultaneously incur a maturity and a liquidity risk. At the end of 2017, bond funds[15] resident in Portugal accounted for around 32% of total assets under management by investment funds. In addition, in terms of redemption ability (Table 1), most bond funds resident in Portugal were open-ended at the end of this year.

It is important to establish whether open-ended bond funds increased their exposure to longer-term debt securities in the period under review, thereby increasing the funds' potential liquidity risk, as expected in a search-for-yield movement. From 2010 to 2015, open-ended bond funds resident in Portugal followed a downward trend in their exposure to debt securities (Chart 5), partly reversing this trend until 2017. From 2010 to 2017, the decline in the exposure of open-ended bond funds to debt securities stood at around 27%. By comparison, the value of these funds' units decreased by around 7.5%, which may indicate a reduction in these funds' exposure to the debt market.[16] In terms of maturity, from 2010 to 2012, open-ended bond funds increased their exposure to short-term debt securities (up to 1 year), with exposure to longer-term debt securities (over 2 years) only recording a sharp increase at the end of 2017. Therefore, given that these funds' exposure to debt securities, in general, and to longer-term debt securities, in particular, is lower than in 2010, the potential mismatch between maturity and liquidity risk that may arise from these funds is expected to have decreased.

15. Excluding money market funds. Money market funds may incur a liquidity risk because they are subject to daily redemptions, which may not completely correspond to assets in the short term. However, by type of fund established in Portugal, money market fund units only accounted for 1.6% of total units issued, at the end of 2017.

16. At the start of 2017, changes to the investment policy of a money market fund led to its statistical reclassification as a bond fund, which may partly affect the analysis. Not considering this fund, the value of open-ended bond fund units would have decreased by around 19%.

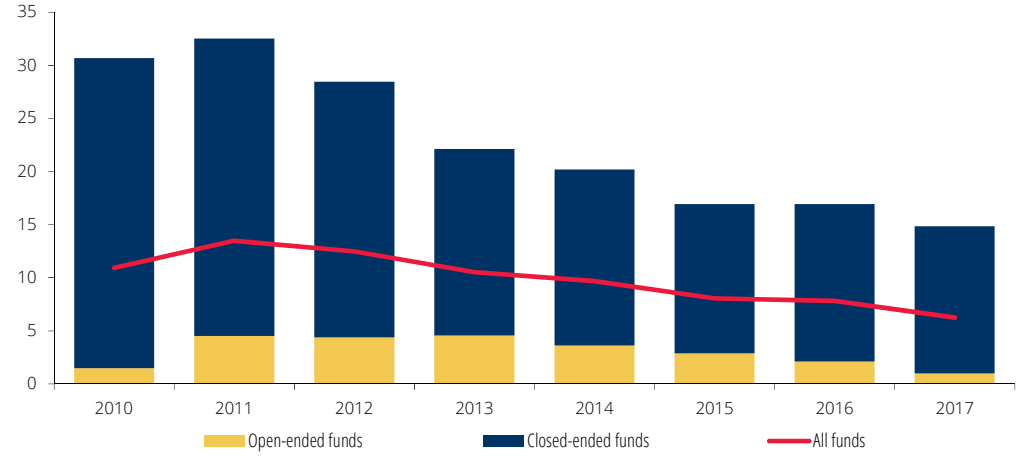
**Chart 5** • Investments of open-ended bond funds resident in Portugal in debt securities by original maturity | EUR millions




Source: Banco de Portugal.

From 2010 to 2017, the highest leverage ratio was observed in 2011, reaching around 28% and 4.5% for closed-ended funds and open-ended funds respectively (Chart 6). Since then, the ratio has followed a downward trajectory. The leverage levels of closed-ended funds were always significantly higher than those of open-ended funds. The leverage of closed-ended funds is mostly concentrated in real estate funds.[17] Open-ended real estate funds posted a leverage ratio[18] of only 2% in June 2018 (see Box 1, "Real estate investment funds resident in Portugal"). From a financial stability perspective, the risk arising from excessive leverage is mitigated by the fact that this leverage is concentrated in closed-ended funds.

**Chart 6** • Leverage ratio of investment funds resident in Portugal | Per cent




Source: Banco de Portugal. | Notes: The leverage ratio is calculated as the ratio of loans granted to the fund to the value of units issued. This ratio is a proxy for total leverage, as it excludes derivative instruments. Only includes investment funds, excluding money market funds.

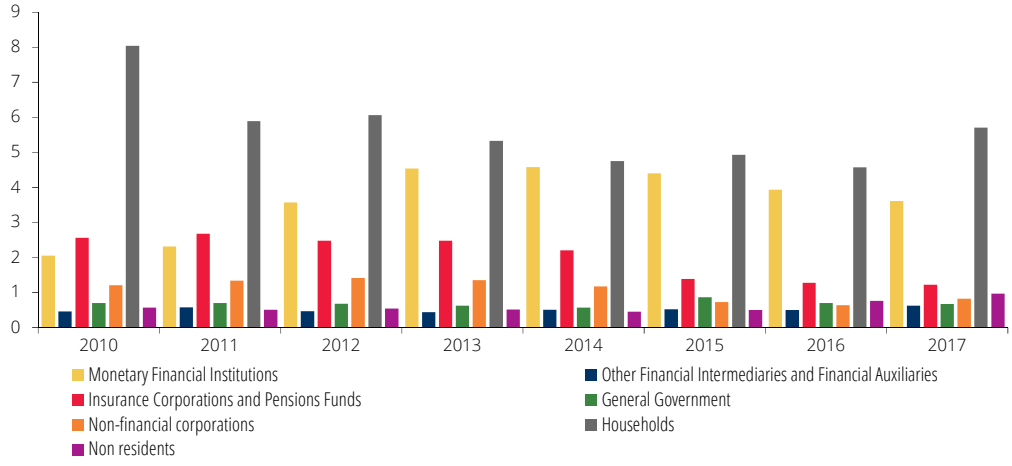
The interlinkages and the risk of contagion between financial system entities are a second source of systemic risk. From 2010 to 2017, banks and households continued to be the sectors most exposed to investment funds. In the period preceding the financial crisis, households were

17. In 2017, 64% of closed-ended funds were real estate funds.

18. The leverage ratio is calculated as the ratio of loans to the value of units issued.

the institutional sector investing the most in investment funds resident in Portugal (Chart 7).[19] Following the economic and financial crisis, household investment in investment funds declined considerably (to around 6% of GDP in 2011 and around 4.8% of GDP in 2014), with banks replacing households as the largest holders of investment fund units. This may be explained, in the context of the sovereign crisis, by the lack of access of the Portuguese banking sector to international wholesale financial markets and the subsequent need to raise funds from customers, namely by including in the balance sheet customer resources that were outside the consolidation perimeter – such as amounts in investment funds – which led to a decline in the exposure of households to investment funds. In turn, in a period of financial asset depreciation, banks needed to acquire investment fund units – particularly open-ended fund units – in order to avoid fire sales and loss recognition, which, considering the close link between Portuguese banking groups and asset management companies in Portugal, could have resulted in reputational side effects. In the more recent period, the exposure of banks to funds has declined, remaining nevertheless higher than before the financial crisis. In the period under review, insurance companies and pension funds and non-financial corporations followed a downward trend in their exposure to resident investment funds. Conversely, non-residents and the general government were more exposed to funds at the end of the period considered (2017), although accounting for only 1% of GDP.

**Chart 7** • Value of units invested in investment funds resident in Portugal by institutional sector | As a percentage of GDP




Source: Banco de Portugal. | Notes: Monetary Financial Institutions comprises banks, in general, as well as money market funds. Other Financial Intermediaries and Financial Auxiliaries (OFI) comprises other financial intermediaries and auxiliaries, most notably investment funds. Including only exposure by institutional sectors to investment funds, excluding exposure to money market funds.

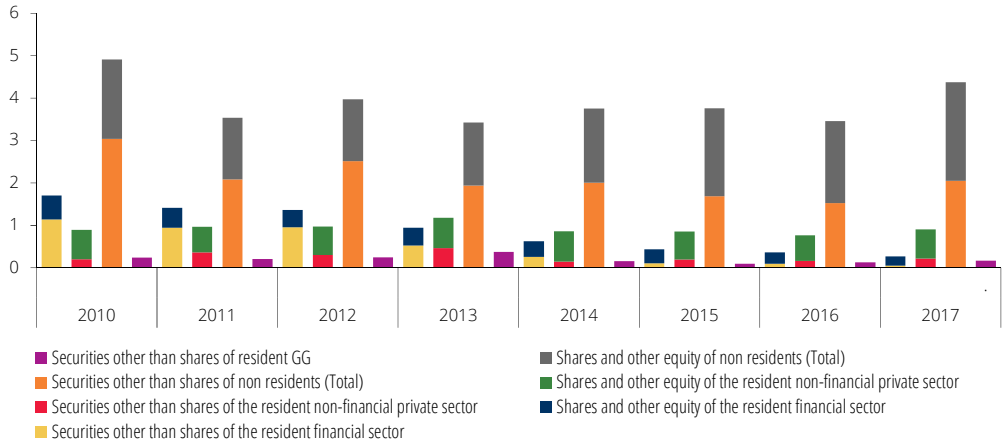
In addition, the relationship between investment funds and other economic sectors should be analysed in greater detail, given the potential interlinkages and contagion between their portfolios.

From 2010 to 2017, the exposure of funds to assets issued by non-residents, although with some variation, remained high and relatively unchanged at the end of the period compared with the start, as opposed to exposure to securities issued by residents, which recorded a decline/rebalance (Chart 8). The reduction in the exposure to the resident financial sector – in particular debt securities, and, to a lesser extent, shares and other equity – was partly offset by an increase

19. Although Chart 7 identifies Monetary Financial Institutions, which also includes money market funds, owing to their small size in Portugal, the movement shown in this item is mostly due to banks.

in exposure to securities issued by the non-financial private sector, in particular in the format of shares and other equity. The exposure of investment funds to Portuguese public debt can be broken down into three different periods: an increase until 2013, followed by a decline until the end of 2015, and an increase in the past two years. However, in 2017 the exposure of investment funds to Portuguese public debt was lower than at the start of the period under review and remained at very low levels over the review period.

**Chart 8** • Investment of investment funds resident in Portugal | As a percentage of GDP




Source: Banco de Portugal. | Notes: The resident financial sector comprises Monetary Financial Institutions and Other Financial Intermediaries and Financial Auxiliaries. The non-financial private sector comprises non-financial corporations and households. GG stands for General Government. Including only investment funds, excluding money market funds.

To sum up, at the end of 2017 the most relevant type of fund resident in Portugal in terms of net asset value was real estate funds and bond funds. The first are mostly closed-ended, and therefore are not subject to unanticipated redemptions by investors, which mitigates the probability of these engaging in fire sales in a less liquid market. In addition, all open-ended investment fund categories (real estate funds, inter alia) have low levels of leverage. Since 2015, bond funds have increased their exposure to longer-term securities, despite following a trend of lower relative holdings of debt securities in the period under review. Finally, the risk of contagion between investment funds and other resident sectors also seems contained.

## 5 Macroprudential policy action in investment funds

From the ESRB's perspective, there are several tools which may prevent or mitigate identified sources of systemic risk (ESRB, 2016b). In terms of liquidity, it was concluded that UCITS, in regulatory legislation, were subject to detailed eligibility rules on assets, in addition to minimum liquidity requirements. In parallel, UCITS must regularly conduct stress tests. As for alternative investment funds, it was concluded that these should adopt redemption policies that are compatible with the liquidity profile of the investment strategy and to regularly conduct stress tests under normal and exceptional liquidity conditions. In terms of leverage, the ESRB's work concluded that limits to mitigate excessive leverage are already in place for UCITS. However, for alternative investment funds, although microprudencial authorities may impose corrective actions on excessive leverage, there is a higher level of discretion. Consequently, the European Securities and Markets Authority (ESMA) may additionally determine whether the leverage used

by an alternative investment fund manager (AIFM) or a group of AIFMs poses a significant risk to the stability and integrity of the financial system and may issue recommendations to competent authorities, specifying the corrective action that should be taken, including leverage limits.[20]

Subsequently, in 2017, following its work on the definition of Shadow Banking, the FSB published 14 recommendations to relevant authorities on previously identified vulnerabilities in the asset management sector (FSB, 2017). As regards investment funds, recommendations focused on the prevention or mitigation of potential liquidity mismatches and on how to improve its management. In this respect, the FSB recommended increasing the amount of information available and the transparency on fund liquidity, both for authorities and investors, and the development of liquidity management tools, particularly in periods of increased volatility to mitigate "first-mover" effect. In addition, the FSB addressed the need to develop more comprehensive stress tests that could capture effects of collective selling by funds and test the resilience of financial markets and the financial system more generally. Lastly, the FSB addressed the need to develop consistent measures of leverage to help enable direct comparisons between funds.

In this context, in 2017 the ESRB published five recommendations to ESMA – given its coordinating role in relation to national competent authorities (NCAs) – and to the European Commission.[21]

Recommendation A addresses the need to create a diversified set of liquidity management tools for funds in all Member States, in particular when funds face considerable redemptions as a consequence of stressed market conditions. It was requested that the European Commission formulates a common EU legal framework to ensure a wide range of additional and specific liquidity management tools which could be activated, in particular under stressed market conditions. In addition, Recommendation A calls for NCAs to further clarify the potential use of a suspension of redemptions.

Recommendation B is designed to prevent potential liquidity mismatches in open-ended AIFs. In particular, it establishes the need for such funds to demonstrate their capacity to maintain their investment strategy on an ongoing basis. Given that some AIFs hold a large proportion of their asset portfolio in less liquid assets,[22] it is requested that the European Commission grants ESMA the ability to prepare and to update a list of inherently less liquid assets and legislate on a requirement for the managers of open-ended alternative investment funds to demonstrate to the NCA their capacity to maintain their investment strategy under foreseeable market conditions.

Recommendation C is aimed at ESMA, following the development of harmonised guidance on the parameters of liquidity stress testing at investment fund level. Although stress testing is already a requirement for UCITS and AIFs,[23] there is at present considerable heterogeneity in terms of the parameters, frequency and sophistication of stress testing. Thus, ESMA should define the scenarios to be used in the liquidity stress tests, the internal use of stress test results and the appropriate timing and frequency to conduct the stress tests.

Recommendation D intends to establish a harmonised UCITS reporting framework across the EU. A harmonised reporting framework for these funds does not currently exist. Although a number of Member States have reporting obligations for UCITS, reporting practices differ widely in terms of frequency and data reported. Consequently, the European Commission should make legislative

20. Directive 2009/65/EC (and subsequent revisions) and Directive 2011/61/EU.
21. https://www.esrb.europa.eu/mppa/recommendations/html/index.en.html.
22. The ESRB Recommendation specifies the following as less liquid assets: real estate, unlisted securities, loans and other alternative assets.
23. Except for unleveraged closed-ended AIFs or for UCITS for which it is deemed inappropriate.

changes that enable comparisons between funds, given the need for assessing and monitoring the potential contribution of UCITS to financial stability risks. The European Commission is also recommended to produce a regulatory framework that allows for the availability of data to the NCAs of other Member States, ESMA and the ESRB.

Recommendation E provides guidance on the establishment of a framework on leverage risks enabling the design, calibration and implementation of a macroprudential tool to limit leverage in alternative investment funds.[24] Specifically, this Recommendation proposes the development of a common approach for competent authorities to use this tool.

Specific macroprudential tools are expected to be developed by 2021, which might in particular mitigate the effects of adverse liquidity scenarios and excessive leverage by alternative investment funds, predict the most appropriate course of action in adverse macroeconomic scenarios or circumstances and improve the quality of information available to competent authorities and asset managers, in order to mitigate potential risks arising from investment funds.

## 6 Conclusions

The aim of macroprudential policy is to promote financial stability by enhancing the resilience of the financial system (Banco de Portugal, 2014b). Investment funds deserve special attention from macroprudential policy not only due to their specific characteristics in spreading risk but also due to the strong increase in assets under management in the EU in the past decade.

The analysis carried out on Shadow Banking in Portugal shows that it did not accompany the increase observed at European level. In particular, investment funds have a small size in the context of the Portuguese financial system, as their importance declined following the economic and financial crisis and they are yet to rebound to their pre-crisis level. Open-ended bond funds, which have a higher likelihood to generate systemic risk in the Portuguese financial system, do not show increasing exposures to debt markets or to longer-term securities in the debt market (and, as such, with greater potential to cause liquidity or maturity mismatches). In what regards leverage, it is mostly concentrated in closed-ended real estate funds, and thus less likely to spread potential liquidity risks. With respect to the potential linkages and transmission of risks to other parts of the financial system, this analysis shows that direct and indirect channels of contagion remain contained.

It is recognised that the use of the set of tools arising from the ESRB's recent recommendations (ESRB/2017/6) will mitigate the potential systemic risk arising from funds' activities. However, it can be concluded that at present there is no need at the national level to consider measures to address potential risks to the financial system arising from investment funds. In particular, Recommendation D should be highlighted, as it will help harmonise UCITS data reporting (the majority of funds resident in Portugal), once it has been implemented, and Recommendations B and C, which will help explicitly identify lists of inherently less liquid assets and increase the level of harmonisation of stress tests to be carried out by funds, thereby contributing to early-warning signals of risks to the financial system and, ultimately, to financial stability in Portugal.

24. Generally, Article 25 of Directive 2011/61/EU.

# 7 Bibliography


Banco de Portugal (2013), *Financial Stability Report*, November 2013.

Banco de Portugal (2014a), *Financial Stability Report*, May 2014.

Banco de Portugal (2014b), *Macro-prudential policy in Portugal: objectives and instruments*, https://www.bportugal.pt/sites/default/files/anexos/politicamacroprudencialemportugal_2.pdf.

Bank of England (2016), "Market liquidity and review of leverage direction", *Financial Stability Report* No. 39 (Box 2).

Baranova, Y.; Coen, J.; Lowe, P.; Noss, J.; Silvestri, L. (2017), "Simulating stress across the financial system: the resilience of the corporate bond market and the role of investment funds", Bank of England, *Financial Stability Paper* No. 42.

European Commission (2009), *Report of the High-Level Group on Financial Supervision in the EU chaired by Jacques de Larosière*.

European Systemic Risk Board (2016a), *Market liquidity and market making*.

European Systemic Risk Board (2016b), *Macroprudential policy beyond banking: an ESRB strategy paper*.

European Systemic Risk Board (2017), *Recommendation of the European Systemic Risk Board on liquidity and leverage risks in investment funds*.

European Systemic Risk Board (2018), *EU Shadow Banking Monitor*, No. 3/September 2018.

Financial Stability Board (2013), *Strengthening Oversight and Regulation of Shadow Banking-Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities*.

Financial Stability Board (2017), *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities*.

Hannam M., (2013), *Money Market Funds, Bank Runs and the First-Mover Advantage*, Institutional Money Market Fund Association.

International Monetary Fund (2015), *Global Financial Stability Report: Navigating Monetary Policy Challenges and Managing Risks* (Chapter 3), pp 93-135.

International Organisation of Securities Commissions (2012), *Policy Recommendations for Money Market Funds*.

International Organisation of Securities Commissions (2017), *Regulatory Reporting and Public Transparency in the Secondary Corporate Bond Markets*.

Singh M., Alam Z., (2018), "Leverage – A Broader View", *IMF Working Paper*.

# Amendment of the CRD IV-CRR: what is new?

## 1 Overview

On 23 November 2016, the European Commission published the legislative proposals[1] for amending the CRD IV,[2] CRR,[3] BRRD[4,5] and SRMR.[6,7] These proposals address the objectives to develop and adopt further measures to reduce risk in the banking sector and weaken the link between the banks and their respective sovereign entities ('risk reduction component'), announced by the Commission[8] at the time of the presentation of the legislative proposal for the European Deposit Insurance Scheme (EDIS, the 'risk-sharing' component).[9] The proposals also address the calls from the Economic and Financial Affairs Council (ECOFIN) to present legislative initiatives in that area with the ultimate goal of completing the Banking Union,[10] following the action taken in response to the financial crisis that began in 2007-2008.

The risk reduction measures aim to improve the institutions' resilience and strengthen the European banking system, while boosting the confidence of the various market participants, taking into account the developments in international standards in this field.

The European Commission's original legislative proposal features three main subjects:

**a)** Updating the prudential regulatory framework by adopting several standards of the Basel Committee on Banking Supervision (BCBS),[11] finalised in the meantime under the agreement known as Basel III. However, most of the amendments agreed by the BCBS in December 2017 are excluded from this revision, apart from the additional capital buffer based on the leverage ratio and applicable to global systemically important

1. See the legislative proposal here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A0850%3AFIN.
2. Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms.
3. Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms.
4. Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms.
5. See the legislative proposal here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A0852%3AFIN.
6. Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund.
7. See the legislative proposal here: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1491993170238&uri=CELEX%3A52016PC0851.
8. Communication "Towards the completion of the Banking Union": http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0587&from=EN (see specifically Part 5).
9. See the legislative proposal here: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1539251888511&uri=CELEX:52015PC0586.
10. See the Council's conclusions on the roadmap to completing the Banking Union: https://www.consilium.europa.eu/en/press/press-releases/2016/06/17/conclusions-on-banking-union/pdf.
11. The 'Basel standards' are accords on regulation and supervision issued by the Basel Committee on Banking Supervision. These accords are not legally binding, but are applied by decision of the legislators of the respective jurisdictions. Furthermore, the standards are designed for the regulation and supervision of large, internationally active banks, due to which their application to other smaller or different institutions depends on the options followed in the jurisdictions which adopt them.

institutions (G-SIIs).

Acknowledging certain characteristics of the European Union banking sector, the following is proposed in this area: (i) adjustments to the original BCBS standards; (ii) additional proportionality for certain types of institutions or business models (e.g. simpler calculation approaches for certain capital requirements, namely counterparty credit risk and market risk, for smaller institutions, or even exclusion of particular business models from compliance with certain requirements) and (iii) alignment with other standards already adopted in the European Union on the same subject (e.g. ensuring coherence between the liquidity coverage ratio already implemented and the proposed net stable funding ratio).

**b)** Adoption of the Financial Stability Board standard on Total Loss-Absorbing Capacity, which applies to G-SII, and its articulation with the BRRD requirement for Minimum Requirements for Own Funds and Eligible Liabilities (MREL), within the bank resolution framework.

**c)** Amendment of various other topics of the current regulatory framework such as: (i) revision of the list of institutions exempted from compliance with the requirements of the bank regulation package (CRD-CRR); (ii) imposition of an authorisation requirement for holding companies that are parent undertakings whose holdings are predominantly in credit institutions or investment companies; (iii) a requirement to establish a holding company in the European Union for certain groups with third country parent undertakings, but with subsidiaries established in the European Union; (iv) introduction of amendments to the Pillar 2 legal framework;[12] (v) amendments to the waiver granted to subsidiaries from capital requirements on an individual basis, in order to allow its concession on a cross-border basis (which is currently not permitted); (vi) amendments to the adjustment factor for credit risk capital requirements regarding exposures to small and medium-sized enterprises and concerning the financing of essential infrastructure projects, as a way to encourage financing economic activities deemed structural in the European Union; (vii) introduction of transitional provisions on the calculation of own funds, phasing in the impact of applying IFRS 9 on provisions for expected credit losses from 1 January 2018.

The negotiation of this legislative proposal ultimately covered not only the topics contained in the Commission's initial proposal but also additional proposals, introduced by the two European co-legislators, the European Council and the European Parliament, such as the amendments to the macroprudential framework. The final text of the legislative package will result from the negotiation process and, as such, it may still change.

12. The supervisory architecture defined in Basel II is based on three mutually-reinforcing pillars. Pillar I covers the capital requirements for credit risk, market risk and operational risk. Pillar II relates to the supervisory review and evaluation process (SREP). Lastly, Pillar III covers rules on the information the banks must disclose, commonly known as the market discipline pillar.

This Special Issue presents and analyses some of the amendments to the CRD and CRR in view of their relevance for the Portuguese banking system. However, it does not cover the changes to the resolution framework (TLAC and MREL) and the topics for which legislation has already been adopted (the transitional frameworks for the impact of introducing IFRS 9 and legislation regarding the limits to large risks for certain exposures to sovereigns/public sector entities denominated in non-domestic currency).[13]

## 2 Entry into force

The definition of the time frame for applying the new CRD V and the new CRR II, which will result from the revision of the CRD IV and the CRR, is crucial for allowing an appropriate preparation both of the institutions supervised and the supervisors. Uncertainty over the dates in question and the complexity of the calendar is a challenge for all parties involved. However, the time frame will only be completely clarified upon finalisation of the negotiations. Should these negotiations end by 2018, it is expected that the date for applying the majority of the provisions will be in 2020-2021 (one and a half to two years after publication and respective entry into force). However, should the negotiations continue into early 2019, it is expected that this date will be 2021.[14]

The period until entry into force is important for the institutions to start preparing for the introduction of the new requirements, either through impact studies that put the new rules into perspective or by developing the methodologies needed for applying the new concepts and requirements, in order to ensure that they will be ready to comply.

## 3 Finalising the adoption of the Basel III standards

The following table summarises the main subjects to be adopted by the European Union in this revision, in the context of the Basel III standards, which are key to the risk reduction package developed after the financial crisis. Some European specificities are expected to be safeguarded, as analysed by the European Banking Authority (EBA), to ensure that the solutions created are technically coherent and suitable under the Single Rule Book.[15]

13. The proposals relating to these transitional frameworks were separated from the original proposal, giving rise to Regulation (EU) 2017/2395 of the European Parliament and of the Council of 12 December 2017, applying from 1 January 2018.
14. If agreement is reached in the first half of 2019, the subsequent translation and language revision process will still be necessary, with the legal texts entering into force 20 days after their publication.
15. A legal framework involving a unique system of standardised prudential rules, which apply to all credit institutions and investment firms authorised to operate in the European Union.

**Table 1** • Scope of the CRD IV - CRR amendment

| Subject | Bases for the Legislative Proposal |
|---|---|
| Credit risk (equity investment funds)<br>Proposal for amending the CRR on credit risk capital requirement calculation for exposures held indirectly through funds | BCBS standard (December 2013) |
| Leverage ratio (LR)<br>Proposal for introducing the LR into the CRR as a Pillar 1 requirement with a 3% minimum | BCBS standard (January 2014)<br>EBA Report on the leverage ratio requirements under Article 511 of the CRR, EBA-Op-2016-13 (August 2016) |
| Counterparty credit risk<br>Proposal for amending the CRR on capital requirements for counterparty credit risk determined in accordance with the standard approach | BCBS standard (March 2014)<br>EBA Report: Response to the European Commission's CfA on Standardised Approach for Counterparty Credit Risk and Own Funds Requirements for Market Risk, EBA-Op-2016-19 (November 2016) |
| Requirements for exposures to central clearing counterparties (CCPs)<br>Proposal for amending the CRR on capital requirements for exposures to CCPs | BCBS standard (April 2014) |
| Framework for large exposures<br>Proposal for amending the CRR on the limits to large exposures, specifically regarding the benchmark capital and the various exemptions laid down in the CRR | BCBS standard (April 2014)<br>EBA Report: Review of the large exposures regime: the EBA's response to the European Commission's Call for Advice, EBA-Op-2016-17 (October 2016) |
| Net Stable Funding Ratio (NSFR)<br>Proposal for introducing the NSFR into the CRR as a Pillar 1 requirement with a 100% minimum level | BCBS standard (October 2014)<br>EBA Report on Net Stable Funding Requirements under Article 510 of the CRR, EBA-Op-2015-22 (December 2015) |
| Pillar III (disclosure requirements)<br>Proposal for amending the CRR on disclosure requirements by credit institutions and investment firms | BCBS standard (January and June 2015) |
| Market risk<br>Proposal for amending the CRR on capital requirements for market risk, arising from the Fundamental Review of the Trading Book | BCBS standard (January 2016)<br>EBA Report: Response to the European Commission's CfA on Standardised Approach for Counterparty Credit Risk and Own Funds Requirements for Market Risk, EBA-Op-2016-19 (November 2016) |

Significantly, in June 2017 and March 2018, the BCBS announced the continuation of work on reforming the market risk standard (Fundamental Review of the Trading Book) by proposing some revisions to the 2016 standard[16] in a public consultation, which raised doubts over the date for applying the respective reform proposals. Thus, solutions to be considered as part of the legislative review in progress may include providing for longer transitional periods or simply imposing a reporting requirement on this topic, until the finalisation of the BCBS's work.

16. Consultation documents available here: https://www.bis.org/bcbs/publ/d408.pdf and https://www.bis.org/bcbs/publ/d436.pdf.

The next section presents the amendments following the adoption of some of the Basel standards.

## **3.1** Leverage ratio: Pillar 1 requirement with a 3% minimum level

In the years before the financial crisis, there was a general increase in financial institutions' leverage which was not always captured adequately by the existing regulatory requirements that use risk-based approaches. This weakened those institutions and the financial system itself. Although the financial institutions' intermediation activity justifies a significant leverage level, the crisis showed the need for regulatory measures to prevent excessive leverage.[17]

The BCBS then developed the leverage ratio, presented as a simple and transparent measure that is not risk-sensitive, to complement the existing capital adequacy ratio system. The leverage ratio was included in the version in force of the CRD IV-CRR package and, as was the case with Basel, was included as a reporting and disclosure requirement. The current amendment of the CRR follows the discussion over calibrating the leverage ratio with a view to introducing it as a compulsory Pillar 1 measure for all institutions covered by the aforementioned legislative package. Currently, there is a consensus that the compulsory minimum for this ratio should be 3%, which means that an institution must keep a minimum Tier 1 capital level that corresponds to at least 3% of the total of its relevant exposures (including on- and off-balance-sheet assets and derivatives).

$$\text{Leverage ratio} = \frac{\text{Tier 1 capital}}{\text{Total exposure}} \geq 3\%$$

Thus, an upper limit would be imposed on the institution's balance sheet according to its Tier 1 capital, irrespective of the applicable risk weights for the purposes of calculating the current capital requirements.[18]

## **3.2** Net stable funding ratio: Pillar 1 requirement with a 100% minimum level

In December 2010, the BCBS announced the introduction of a liquidity coverage ratio (LCR) and a net stable funding ratio (NSFR) into its standards, to be implemented in 2015 and 2018 respectively. These new regulatory measures were designed for liquidity risk management, to address the inadequacy of the liquidity buffers in adverse scenarios and funding structures which proved mismatched to the assets' average duration, which led to the institutions' liquidity and financing being seriously affected during the financial crisis. In reality, these fragilities stretched over a long time, creating uncertainty in the markets and leading many institutions to hold on to liquidity, which harmed the financial condition of other institutions in

17. See for example Altunbas, Manganelli and Marquez-Ibanez (2011): "Bank risk during the financial crisis: Do business models matter?", ECB *Working Paper* No. 1394; Batista and Karmakar (2017) "Understanding the Basel III Leverage Ratio Requirement", Banco de Portugal, Economic Studies, 4, volume III; Beltratti and Stulz (2012): "The credit crisis around the globe: Why did some banks perform better?", Journal of Financial Economics 105, 1-17; Blundell-Wignall and Roulet (2012): "Business models of banks, leverage and the distance-to-default", OECD Journal: Financial Market Trends 2012/2; Gambacorta and Karmakar (2016): "Leverage and Risk and Weighted Capital Requirements", BIS Working Papers No. 586; Haldane, A (2015): "Multi-polar regulation", International Journal of Central Banking, Volume 11(3); Kalemli-Ozcan, Sorensen and Yesiltas (2011): "Leverage across firms, banks, and countries", NBER *Working Paper* No. 17354.

18. For more information on the components comprised in the ratio, see the Special Issue "Banks' Leverage Ratio – the Portuguese case". *Financial Stability Report*, Banco de Portugal (December 2017).

need of liquidity. In certain cases, the State had to intervene, providing specific liquidity lines or guarantees on the issuance of debt,[19] to prevent defaults and possible bankruptcies as a result, with all the costs that entails, in particular for financial stability and the financing of economic activity.[20]

As mentioned above, the amendment of the CRR introduces the NSFR, with a minimum level of 100%, which works as a longer-term structural requirement (one-year time horizon) to mitigate the lags in liquidity that crop up naturally in banking activity. The NSFR requires that the institutions retain a stable funding structure in the long term, given the composition of their assets and off-balance-sheet items. The ratio's numerator and denominator are calculated through the multiplication of individual components by factors defined in the CRR, in order to reflect the stability and liquidity level of those components.

$$NSFR = \frac{\text{Available stable funding}}{\text{Required stable funding}} \geq 100\%$$

Currently the CRR provides for a waiver, on a cross-border basis, from liquidity requirements on an individual basis, for specific liquidity subgroups. Thus, with the introduction of the NSFR, the institutions already benefiting from the LCR waiver on an individual basis may also be authorised by the respective supervisory authority to benefit from a waiver from the NSFR requirement on an individual basis (in line with the EBA's proposal).[21]

## 4 Waivers from prudential requirements on an individual basis

The proposals[22] for introducing a waiver, on a cross-border basis, from capital requirements on an individual basis and for broadening the current waiver from LCR on an individual basis were controversial, restarting the discussion on the balance between the powers attributed to the supervisory authorities in the country of origin of the group's parent undertaking (home country) and the powers awarded to the supervisory authorities of the country where that group operates through a subsidiary (host country). This proposal is warranted on the principle of the possibility of a more efficient allocation of capital and liquidity among groups with cross-border activity at European Union level and is a corollary to the concept of the Banking Union as a single jurisdiction. It was particularly well received by the ECB, whose responsibilities as consolidating supervisor under the SSM place a strong emphasis on the efficient management of the institutions at the level of the group to which they belong. However, this proposal is not consistent with a logic of risk reduction measures at the current Banking Union juncture and would only be justified in the scope of a 'complete' Banking Union. Thus, most Member States

19. As was the case in other countries, the Portuguese State issued personal guarantees in favour of the banking groups, from 2009 to 2014, which allowed those institutions to carry out certain financing operations.
20. See for example International Monetary Fund (IMF), Francisco Vazquez and Pablo Federico: "Bank Funding Structures and Risk: Evidence from the Global Financial Crisis" (2012); Huang and Ratnovski (2011): "The dark side of bank wholesale funding"; Dagher and Kazimov (2013): "Banks' Liability Structure and Mortgage Lending During the Financial Crisis"; Lallour and Mio (2015): "The impact of liquidity Regulation on Banks".
21. https://www.eba.europa.eu/-/eba-recommends-introducing-the-nsfr-in-the-eu.
22. Articles 7 and 8 of the CRR. Currently, the CRR allows for the liquidity coverage ratio (LCR) to be met through liquidity subgroups formed by entities from the same group established in different Member States. For example, where a subsidiary in a Member State does not meet the LCR requirement on an individual basis, it may be met at subconsolidated level or at the consolidated parent undertaking level, even where the latter is located in another Member State. This option does not now exist in the CRR in regard to capital adequacy ratios, compliance with which on an individual basis cannot be waived should the parent undertaking of that subsidiary be in another Member State.

reject the proposal to introduce waivers from capital requirements and broaden the current waiver from liquidity requirements on a cross-border basis, given that the Banking Union is incomplete. Indeed, adding conditions to these waivers is seen as insufficient (e.g. provision by the parent undertaking of collateral at 50%) to mitigate the risks in play, with the Banking Union still incomplete, in which the costs arising from the supervision and resolution decisions taken at European level still accrue to the Member States' 'safety nets'.

Indeed, the third pillar of the Banking Union is yet to be concluded, namely the European Deposit Insurance Scheme (EDIS). In this regard, although the supervision and resolution decisions are primarily European, the ultimate guarantee of financial stability remains at national level, potentially influencing national public finances. This disconnect can give rise to misaligned objectives and interests and lead to asymmetric situations with serious consequences for the national financial systems.

The decision to waive on a cross-border basis individual-basis capital requirements in the current context of an incomplete Banking Union would also create new channels of systemic risk contagion at European level, unless the right tools to safeguard financial stability are also provided for, not only at European level but also at the level of each Member State, running contrary to the creation of risk reduction measures, which, as has been mentioned, was the purpose behind the current legislative proposal.[23] For more information on this and other measures of a national nature warranted in the current context, see Section 1.2 "Risks".

Although, under normal circumstances, structural efficiency gains are available through the centralisation of capital and liquidity management at banking group level, when, for example, the parent undertaking deteriorates financially and is no longer capable of supporting its subsidiaries financially, this jeopardises their continuity. Thus, the application of individual capital requirements at subsidiary level is key to preserving financial stability, both domestically and externally, ensuring fair competition.

The recent example of the resolution of Banco Popular Español highlights the need to apply rules to subsidiaries scrupulously and judiciously. It is particularly important to assess carefully the concession of cross-border waivers from prudential requirements on an individual basis in regard to (i) the acceptance of policies of centralised capital and liquidity management; (ii) the possibility of centralising group financing; (iii) the level of integration of the risk decision and management; and (iv) the acceptance of a reduction of the risk position by means of guarantees granted by its parent undertaking. If Banco Popular Español had actually been liquidated, the Portuguese deposit guarantee fund would have had to reimburse the deposits in the subsidiary in Portugal, despite the Portuguese authorities having had neither supervisory nor resolution powers over this institution.[24]

23. Also in regard to the need to complete the Banking Union to allow cross-border activity in the banking system, see Lorenz E., Schmitz, M., Tirpák, M., ECB, *Working Paper Series*, No. 2130, February 2018, p. 14..

24. Carlos da Silva Costa (2018). "Ten years after the 2008 financial crisis – where are we heading now?" International Finance and Banking Society Conference 2018. Porto Business School. https://www.bportugal.pt/intervencoes/intervencao-de-abertura-do-governador-carlos-da-silva-costa-na-international-finance. In a similar vein, Elisa Ferreira (2018). "Banking Union at a crossroads" CIRSF Annual International Conference 2018. https://www.bportugal.pt/intervencoes/intervencao-da-vice-governadora-elisa-ferreira-na-cirsf-annual-international-conference.

# 5 Pillar 2

The Pillar 2 requirements (P2R) known as 'supervisory measures and powers' comprise one of the three components of the supervisory architecture defined in Basel II,[25] through which the supervisory authorities assess institution-specific risk and the institutions' control mechanisms as implemented, and, based on that assessment, impose institution-specific measures where necessary, including additional capital requirements.

Amendments at Pillar 2 level aim to address discrepancies in its application in the European Union and to increase its transparency. First, clarifications are proposed on the application of Pillar 2. Second, its microprudential nature is specified, with the removal of the possibility to impose the P2R as a single requirement for sets of institutions with similar risk profiles (the macroprudential aspect), and finally the Pillar 2 Guidance (P2G) concept is formally introduced.

## 5.1 Clarifications of the Pillar 2 requirements: flexibility and transparency

The discussions on the Pillar 2 requirements (P2R) aimed to strike a balance between the flexibility awarded to supervisors in applying these measures as part of the supervisory review and evaluation process (SREP), and the establishing of rules for its definition, including additional capital requirements.

Given the concerns arising over supervisors' accountability on this topic, supervisory authorities are justifiably required to produce more reasoning behind the imposition of these measures on institutions. The rules laid down in CRD IV for applying Pillar 2 measures constitute basic principles that were complemented by EBA Guidance[26] providing specifics and details, with the European Commission proposing to move towards a common legal framework, based on legislative acts.

In this regard, the initial revision proposal from the European Commission aimed to reduce the flexibility of the Pillar 2 framework ('constrained flexibility'), containing proposals, as mentioned above, for drafting legislative acts and an exhaustive, closed list of measures that could be taken by the supervisor in the context of Pillar 2. However, in the process of negotiating the legislative package, changes to the initial proposal have arisen, preserving flexibility for the supervisor within the SREP, providing for (among other things): (i) the assessment of risk taking while considering each institution's specific situation, (ii) the imposition of the most appropriate measures in each case, (iii) ad hoc information requests and (iv) the possibility of defining the composition of additional own funds imposed, including compliance solely through CET1.

## 5.2 Microprudential nature of Pillar 2

Pillar 2 is microprudential by nature, generally being applied in the assessment of each institution's idiosyncratic risks.

However, the current wording of CRD IV allows the supervisor to determine a single Pillar 2 measure for a set of institutions with a similar risk profile, a provision which the legislative proposal presented by the Commission proposes to revoke (by eliminating Article 103 of CRD IV). The development of a macroprudential regulatory framework and the creation of the

25. See footnote 12.

26. https://www.eba.europa.eu/regulation-and-policy/supervisory-review-and-evaluation-srep-and-pillar-2/guidelines-for-common-procedures-and-methodologies-for-the-supervisory-review-and-evaluation-process-srep-and-supervisory-stress-testing.

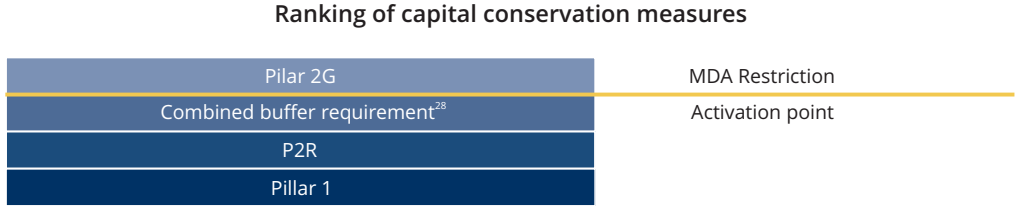
authorities implementing it brings the need for better clarification of the boundaries between the regulatory instruments available to the macroprudential and microprudential supervisory authorities. Therefore, ending the use of Pillar 2 measures to address systemic risks is justified.

Although the general principle of separation between the regulatory instruments attributed to the microprudential supervisory authorities and the regulatory instruments attributed to the macroprudential authorities does not raise doubts in conceptual terms, in practice, it leads to certain issues, in particular in Member States with a stronger tradition of adopting a systemic approach to the individual assessment of each institution. As such, this revision of the CRD-CRR rightly aims to improve the macroprudential framework, in order to offset the impossibility of using Pillar 2 measures for macroprudential purposes (see point 6).

## **5.3** Pillar 2 guidance

Pillar 2 guidance (P2G) establishes additional capital expectations that the supervisory authorities may communicate to each institution, estimated largely through stress tests that have improbable but plausible scenarios underlying them. This guidance is additional to Pillar 1 requirements, capital increases under Pillar 2 requirements (P2R) and the combined buffer requirement (see image below). P2G is therefore an objective to be met by the institutions, but importantly, non-compliance does not in legal terms automatically lead to restrictions, for example in the context of dividend distribution.[27] However, if the institution repeatedly fails to comply with P2G, the supervisor may adopt additional measures, including the conversion of the guidance on an additional capital requirement under P2R.

**Figure 1** • Capital conservation measures




Note: Not to scale. MREL/TLAC requirements not considered in this diagram.

In its formal drafting, P2G has the objective of increasing the transparency and predictability of the supervisory mechanisms to which institutions are subject, including consistent and comparable application of the rules. Indeed, although the additional capital expectations that the supervisory authorities communicate to the institutions were already standard practice, they had no formal drafting in a legislative text.

As this legislative process progressed, one topic under discussion related to the public disclosure of P2G – specifically, the compulsory nature of that disclosure to allow market participants to use

27. I.e. they do not reduce the maximum distributable amount (MDA) that the institutions may distribute to holders of equity and debt.

28. The combined buffer requirement comprises the capital conservation buffer + countercyclical capital buffer + Max (G-SII/O-SII buffer; systemic risk buffer), except for where the systemic risk buffer is applied only to domestic positions at risk, in which case the two requirements become additive. For a description of the various capital buffers and the calculation of the combined buffer requirement, both in the legal framework in force and in terms of revision proposals, see point 6 of this Special Issue.

relevant information, or, on the contrary, whether this disclosure should be forbidden or optional on principle. In this regard, it is important to ensure that the formal drafting of the P2G should not lead to this instrument losing its nature as 'Guidance'. Indeed, the disclosure of capital guidance communicated to each institution by the supervisor may compromise that purpose, to the extent that the disclosure may be perceived incorrectly by the market as a compulsory requirement.

# 6 Macroprudential policy framework

The changes introduced to Pillar 2 have brought the need to add greater flexibility to some macroprudential instruments, ensuring their effectiveness and efficiency, as was proposed by the Council and the European Parliament in the legislative package under review. Some macroprudential instruments were not subject to major conceptual revisions and, as such, will not be examined separately.

An alternative assessment method has been introduced to identify G-SIIs, which does not consider exposures to other Member States participating in the SSM as cross-border exposures, thereby reducing the systemic importance of a number of these institutions. However, this alternative assessment cannot constitute grounds for a group to be declassified as a G-SII. This change has come about from the progress already made on the Banking Union, but given that it remains incomplete, this option appears to be premature.

Still as regards G-SIIs, following the introduction of a minimum leverage ratio of 3% and to keep in line with Basel developments, the revised legislative package provides for an accompanying Common Equity Tier 1 buffer, applicable only to G-SIIs, which corresponds to 50% of the G-SII risk-based buffer requirement.

## 6.1 Buffer for other systemically important institutions (O-SIIs)

The purpose of the O-SII buffer is to compensate for the higher risk that O-SIIs represent for the financial system, due to their size, importance for the economy of the EU or respective Member State, complexity or interconnectedness to other financial institutions and, in case of failure, their potential contagion to the rest of the financial and non-financial sectors. By strengthening their loss-absorbing capacity, this additional requirement reduces O-SIIs' probability of default and mitigates their incentives to take risks.

In compliance with the current framework at European level, the buffer is set between 0% and 2% of the total risk exposure amount, calibrated according to the systemic risk presented by the institution. Furthermore, the buffer that applies to the subsidiary of a European banking group, established in the European Union, cannot exceed the higher of: (i) the G-SII or O-SII buffer rate applicable to the group at consolidated level, and (ii) 1% of the subsidiary's total risk exposure amount.

These caps were established in order to maintain the integrity of the European single market, thereby ensuring that institutions are subject to similar requirements across Member States, irrespective of where they are established or where their activities are located. However, they may restrict decision-making by national macroprudential authorities regarding the optimal calibration of the instrument, if they are lower than the requirement found appropriate by those authorities. Furthermore, the cap on subsidiaries may jeopardise the equal treatment of all institutions established in the same Member State, solely on the basis of the origin of their capital. Consequently, a number of macroprudential authorities have used other instruments, such as the systemic risk buffer (SRB) or Pillar 2 requirements, to set higher own funds requirements, where necessary.

As part of the ongoing negotiation process, an increase in the O-SII buffer cap to 3% of the total risk exposure amount has been agreed, including the possibility of macroprudential authorities setting a higher rate, upon authorisation of the European Union. As regards subsidiaries established in the European Union, the O-SII requirement cannot exceed the lower of (i) the G-SII or O-SII buffer rate applicable to the group at consolidated level, plus 1%, and (ii) 3% of the subsidiary's total risk exposure amount.

## **6.2** Systemic risk buffer (SRB)

Under the current legislative framework, the purpose of the SRB is to mitigate long-term non-cyclical systemic or macroprudential risks. This buffer may be specific to a sub-group of institutions and applied to total exposures or domestic exposures only.

In the proposal for the revised macroprudential framework, the flexibility inherent in this instrument was enhanced: the reference to long-term non-cyclical risks was removed and the buffer may also be applied to a predefined set of domestic exposure sub-sectors. As such, given this change in the SRB, systemic risks stemming from a particular sub-sector may be mitigated through targeted measures. In turn, the SRB shall not be applied to risks mitigated by the G-SII/O-SII buffer or the countercyclical capital buffer (CCyB).

Pursuant to the legislation in force, which establishes a pecking order of instruments, the SRB must be used to mitigate risks that cannot be addressed through other instruments, such as the tightening of capital requirements on mortgage loans,[29] Pillar 2 measures or other macroprudential capital buffers. Following the current revision, the SRB may be used without prior consideration of the tightening of the capital requirements on mortgage loans or the implementation of Pillar 2 measures.

## **6.3** Calculation of the combined capital buffer requirement (CBR)

The various macroprudential instruments should be used to effectively mitigate the risks for which they were set up, while avoiding any overlaps. As such, the purpose of raising the O-SII buffer cap to 3% is to stop the SRB from being used to mitigate risks stemming from the systemic significance of institutions.

Under current law, each institution is required to comply with the higher of the applicable G-SII/O-SII buffer rate and the SRB applicable to the total risk exposure amount.[30] Following the revision of the macroprudential framework, the two instruments are expected to cover different sets of risks, such that the rule of the higher of the buffer rates would no longer be justified and the sum of the two buffers would apply. This change to the rule for calculating the combined buffer requirement (CBR) will be the accompanied by the establishment of a cap on the aggregate value of the two requirements (of 5% of the total risk exposure amount), which can only be exceeded with the authorisation of the European Commission.

Empirical studies carried out with the purpose of establishing the optimal capital of a monetary financial institution are not conclusive. On the one hand, most of these studies[31] conclude that,

29. Articles 124 and 164 of the CRR.

30. Except in the cases where the SRB only applies to domestic exposures. In those cases it is cumulative with the other buffer.

31. See, for instance, Brooke, M., Bush, O., Edwards, R., Ellis, J., Francis, B., Harimohan, R., Neiss, K. and Siegert, C., "Measuring the macroeconomic costs and benefits of higher UK bank capital requirements", Bank of England, Financial Stability Paper No. 35 – December 2015; Miles, D., Yang, J., and Marcheggiano, G., "Optimal bank capital", The Economic Journal, Vol. 123, pp. 1–37, March 2013; and An assessment of the long-term economic impact of stronger capital and liquidity requirements, BIS, 2010.

up to a certain level, the benefits of higher minimum capital requirements, resulting in the decreased probability of bank failure by bolstering resilience, outweigh the costs of lower credit and its impact on GDP, due to the possible weakening of their financial intermediation role. Furthermore, the benefits from higher minimum capital requirements will only be reaped in the medium to long term, while costs will be felt in the short run. On the other hand, when establishing the optimal capital, the effects of the most recent regulatory changes and of those still to be implemented in full should be taken into account, such as the introduction of resolution regimes and the MREL/TLAC minimum requirements, as well as the leverage ratio. Moreover, in practice, it is difficult to establish a direct link between capital requirements and the risks they mitigate. As a result, these requirements may overlap. Consequently, it would be appropriate to introduce a cap on the capital requirement that sums the O-SII/G-SII buffer rates and the SRB.

## **6.4** Tightening of capital requirements on mortgage loans

Under current law, the microprudential supervisory authority may tighten the risk weights applicable to mortgage loans to calculate minimum capital requirements under the standardised approach or restrict the conditions for applying such weights, as well as to raise the minimum loss given default (LGD) values applied by institutions opting for the internal ratings-based approach. The use of this instrument by the supervisory authority may be informed by loss experience or forward-looking developments in the real estate market, but may also be substantiated solely on the basis of financial stability concerns.

In the proposed revision, the national legislator has the option to attribute the activation of these measures to the microprudential supervisory authority, as is now the case, or to nominate another authority to this effect, most notably, the national macroprudential authority. The proposed revision also provides for the coordination between both authorities.

The new wording clarifies that the authority responsible for activating these measures may set out different requirements for the various geographical areas in a jurisdiction.

# **7** Proportionality

Co-legislators, most notably the European Parliament, have acknowledged the complexity of existing regulations, which has been one of the most debated matters under this revision of the CRD IV-CRR package. In response to this, additional measures will be introduced in the new legislative text to make requirements to specific segments of the financial sector more proportional and streamlined.

The concept of proportionality is not new in either supervision or banking regulation. Indeed, proportionality is implicitly covered in a number of areas in the current regulations, which makes it possible for different types of institutions and activities to be treated distinctively in specific matters, according to function or complexity (for instance, the possibility of employing simpler approaches to calculate capital requirements and of reporting a smaller amount of data where their business model is simpler or their activity is lower). However, institutions have pointed out increased challenges in reading, understanding and implementing regulations. Indeed, a number of representatives from the financial sector indicate that these challenges stem from the greater complexity in regulations due to more complex businesses but are also due to the continuous proliferation of new, interconnected rules.

On the one hand, it was noted that the implementation of the Basel principles, which were developed for large, internationally active banks, is unsuitable for a number of institution types, particularly small, not systemically important institutions, those with simple business models, or those combining these types. On the other hand, the problem may lie less in compliance with regulatory requirements, and more in the difficulty to understand which requirements must be met and which are optional, thus shifting the focus to compliance costs. Large, internationally active banks argue that the rules must be simplified across all types of institutions, and not only for those considered smaller or less complex. Any institution, even if only domestic and small at European level, is often interconnected with other institutions and, as such, may grow in systemic importance in their home jurisdiction. Representatives of the financial sector all seem to agree that reporting to supervisory authorities and disclosure requirements are unduly complex, costly and disproportionate.[32]

This discussion is of particular importance to Portuguese institutions, which, due to their size or type of activity, may benefit from amendments fostering greater proportionality or simplification introduced in the CRD IV-CRR package. Against this background of heterogeneous national banking systems in the EU and diverse institutions in each Member State, co-legislators are trying to streamline the implementation of the CRD IV-CRR package, making it more proportional while ensuring that prudential rules do not become ineffective. Indeed, the objectives of financial stability, the soundness of the banking system and the protection of depositors should always take precedence and be met, even in the case of simplified rules for institutions deemed less systemically important and/or with lower-risk business models.

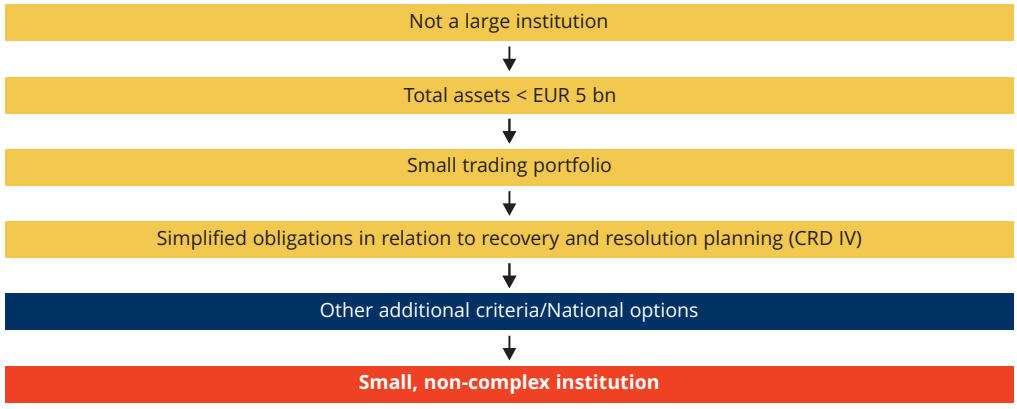
For institutions that fulfil certain criteria or whose activity is below specific thresholds, the revised CRR provides for the simplification of reporting to supervisory authorities and disclosure requirements under Pillar 3. It also provides for more streamlined methodologies to calculate capital requirements for counterparty credit risk and market risk. Furthermore, amendments to rules on remuneration are under discussion, to allow for increased proportionality as regards requirements for variable remuneration and the reduction in compliance costs.

The ongoing legislative revision provides for the introduction of a definition of a "small and non-complex institution",[33] which may be subject to simplified requirements and benefit from exemptions. This entails the cumulative fulfilment of a set of criteria, including those presented on the figure below.

32. It has also been argued (see, for instance, International Monetary Fund, 2015) that the complexity of banking regulations, which creates a barrier to entry, may lead to the transfer of financial intermediation from the banking sector to non-bank financial intermediaries (shadow banking), which increased markedly in size in the period following the global financial crisis that started in 2007-08.

33. The ongoing revision also looks into the definition of a "large institution", which may be any institution fulfilling at least one of the following criteria: (i) has been identified as G-SII or O-SII; (ii) is one the three largest institutions, in terms of total of assets, in its home Member State; (iii) the total value of their assets on an individual or consolidated basis (where applicable) is at least €30 billion. As a result, applicable rules will vary for "large institutions", "small, non-complex institutions" and other institutions not falling into either category.

**Figure 2** • Classification requirements for "small, non-complex institutions"




However, the simplification of calculations and methodologies could deliver less risk-sensitive results, which should be offset by closer scrutiny of compliance with capital requirements.

## 8 Conclusion

The ongoing legislative reform is primarily intended to bolster the resilience of institutions and the financial system, with expected benefits in the medium to long term. However, short-term capital and operating costs, inherent to the proper implementation of these reforms, pose challenges to institutions and, as such, should be suitably addressed. Management bodies must pay close attention to these changes, beginning their internal preparations for the implementation of the new rules, by assessing their impact and planning their decisions in good time to reasonably accommodate them.

The implementation of the new rules does not cover the ongoing process of reforms, given that the BCBS standards released in December 2017 will be subsequently incorporated in the EU regulations. The purpose of these standards, the so-called "Basel III: Finalising post-crisis reforms",[34] is to adequately balance simplicity, comparability and risk sensitivity and include: (i) the revision of the approaches for credit risk, operational risk and credit valuation adjustment risk; (ii) the introduction of a 72.5% output floor, i.e. the ratio between capital requirements calculated using the internal ratings-based approach and requirements calculated using the standardised approach (which means that the former shall not be lower than 72.5% of the latter); (iii) the revision of the definition of the leverage exposure ratio, and (iv) an additional leverage ratio buffer applicable to G-SIIs. As outlined above, the current revision of the CRD IV-CRR only provides for the incorporation of an additional leverage ratio buffer. Therefore, the extent of future amendments is far from negligible, given their importance and expected impact.[35] Indeed, in some literature the new revision has already been referred to as 'Basel IV'.

34. See: https://www.bis.org/bcbs/publ/d424.pdf.

35. Lyons, G. J., Ahmad, A., and Xu, C., "Prudential Regulation in an Age of Protectionism". Banking & Financial Services Policy Report, Vol. 36, No. 1, January 2017, p. 8.