Banking in a low interest rate environment: the case of Portugal

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For the first time since 2010, the five major Portuguese banks returned to profitability in 2018. The main factors behind this swing into profits were a faster decline in interest expense than in interest income, and tight control over operating expenses and the cost of risk. The widening of the net interest margin offset the decline in the outstanding amount of bank loans, increasing net interest income. Other things being equal, the decrease of the interest rates also contributed to the reduction in the cost of risk and the clean-up of bank balance sheets. Although the non-performing loan ratio and outstanding amount were halved, they remain at high levels. Recent trends on the profit and loss account of the major Portuguese banks show, amongst other things, how low interest rates are having a certain impact on a banking system that is primarily geared towards retail activities and variable-rate loans.

The five major Portuguese banking groups[1] returned to profitability in 2018 thanks largely to a faster decline in interest expense than interest income, and to the reduction in operating expenses and the cost of risk. Costs were reduced as part of the macroeconomic adjustment programme that Portugal negotiated with the European Commission, the European Central Bank (BCE) and the International Monetary Fund (IMF) in April 2011[2]. In exchange for the authorisation of a EUR 78 billion credit line, only a third of which has been disbursed (EUR 26 billion), Portugal had to carry out reforms whose main objectives were to restore a sustainable fiscal policy, resorb internal and external imbalances and stabilise the financial sector. Portugal exited this adjustment programme in June 2014.

The financial sector was stabilised in part through recapitalisation of several banks, including Millennium BCP (Banco Comercial Português), Banco BPI and Banco Internacional do Funchal (Banif), for a total of EUR 6 billion. Caixa Geral de Depósitos was also recapitalised for EUR 1.6 billion during the adjustment programme, but the Portuguese government is the sole shareholder. The former Banco Espírito Santo was split up in August 2014, after the end of the adjustment programme, and its good part was renamed Novo Banco.

The stabilisation of Portugal's financial sector was not accompanied by a major consolidation movement within the banking system. According to ECB figures, the number of banks in Portugal declined from 162 in September 2010 to 149 in November 2019. There were no major mergers or acquisitions during this period either. The relatively mild consolidation of the Portuguese banking system recently is mainly a reflection of the previously high level of concentration. Over the past decade, a relatively high and stable share of the total consolidated assets of the domestic banking system (about 80%) has been held by the five major Portuguese banks[3]. This high degree of concentration can be attributed to a previous period of consolidation initiated in the mid-1980s, and that was amplified when the European Economic Community's second banking directive was transposed into Portuguese law[4]. Currently, 32 universal and commercial banks dominate the market in terms of total assets, compared to 86 mutual agricultural credit banks (*caixas de crédito agrícola mútuo*). Portuguese banks are largely geared towards the retail banking business, which involves granting loans, collecting deposits and providing payment services on behalf of a clientele of individuals, professionals and small & mid-sized enterprises.

A study of recent profit and loss account trends for the major Portuguese banks shows some of the effects that low interest rates are having on a banking system geared mainly towards retail banking activities and variable-rate loans. The decline in the outstanding amount of bank loans was offset by an increase in the net interest margin, which can be attributed to a faster decline in interest expense than interest income. Other things being equal, the decline in interest rates also helped reduce the cost of risk, which in 2018 returned to the pre-2007 level. The non-performing loan ratio was halved from the Q2 2016 peak, thanks to a similar-sized reduction in the non-performing loan outstanding amount. Although profitability is still low, solvency ratios have continued to improve thanks to the reduction in risk-weighted assets. The period of low interest rates temporarily improved the overall situation of the major Portuguese banks. In the medium term, however, "low for long" interest rates are bound to have a less favourable impact on the dynamics of banking income and risks, especially given the prospects of an economic slowdown.

[1] Listed by total consolidated assets in 2018: Caixa Geral de Depósitos, Millennium BCP (Banco Comercial Português), Santander Totta, Novo Banco (ex-Banco Espírito Santo) and Banco BPI

[2] European Commission, 2011, *The economic adjustment programme for Portugal*, Directorate-General for Economic and Financial Affairs, Occasional Papers 79, June

[3] By size of assets in 2018, Portugal's third and fifth major banks are both subsidiaries of Spanish banks. Santander Totta is a subsidiary of Banco Santander SA, and Banco BPI has been a fully-owned subsidiary of CaixaBank since end 2018.

[4] Second Council Directive 89/646/CEE of 15 December 1989, which amends directive 77/780/CEE, aims to co-ordinate the laws, regulations and administrative provisions relating to the taking up and pursuit of the business of credit institutions.

A faster decline in interest expense than interest income helps stabilise operating income

For the five major Portuguese banks, operating income has been fairly stable since 2017 (see table 1). After declining for eight consecutive years, it levelled off at EUR 6.5 billion in 2018 [5], compared to EUR 6.8 billion in 2017. From a historical perspective, however, this is still relatively low: operating income surpassed EUR 10 billion between 2007 and 2010 after several years of growth. Annualised operating income for the first three quarters of 2019[6] has been roughly the same. For Portuguese banks, the stabilisation of operating income is essentially due to the continuous growth of net interest income since 2015.

Declining returns on assets and loan outstanding amount have reduced interest income

Under the ECB's accommodating monetary policy, there has been a regular reduction in the interest rates applied to non-financial private sector lending in Portugal since 2012. Yet lower interest rates were not accompanied by an increase in the outstanding amount of bank loans, which has declined by nearly a third over the past ten years.

Historically low interest rates for non-financial private sector lending

Other things being equal, the currently low level of interest rates has helped reduce the interest income of Portuguese banks. With the exception of new household overdraft rates, the rates applied to all other new loans have generally declined since April 2012. In September 2019, they were almost all at the lowest levels reported during the observation period (see chart 1).

Theoretically, at constant loan outstanding amounts, interest income declines as new loans with lower yields replace existing loans and account for an ever bigger share of bank balance sheets. For the Portuguese banks, the unfavourable impact of low interest rates on interest income was reinforced by the high proportion of variable-rate loans. Contractually, variable-rate loans must be adjusted downwards, further reducing the interest income banks receive on loan outstanding amount. On average, 85% of the new loans granted to resident households for house purchase, between September 2009 and September 2019, were variable-rate loans. This compares to an average of 26% for the euro area, 14% for Germany and 6% for France[7]. In a banking system making greater use of fixed-rate loans, the impact of a decline in interest rates on interest income would depend more on the duration of the loan portfolio: the longer the duration, the longer the adjustment period over which the bank's interest income could adjust to lower interest rates.

Interest rates on new bank loans to the NFCs' decrease overall

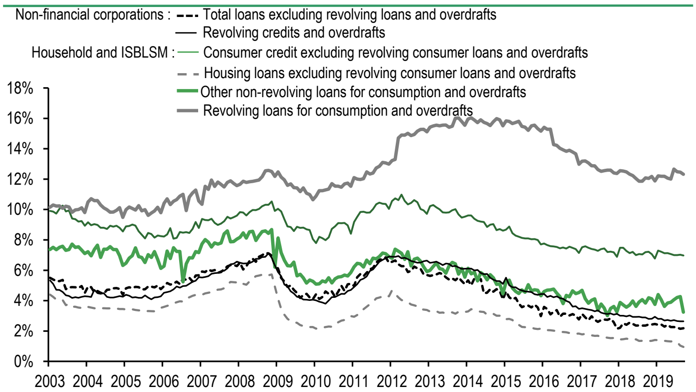

Chart 1 Source : ECB, BNP Paribas

The outstanding amount of bank loans to the non-financial private sector have declined by nearly a third in ten years

After peaking at EUR 264 billion in June 2011, the outstanding amount of bank loans to the non-financial private sector have contracted by 29%, to EUR 188 billion in May 2019. This is comparable to the October 2005 level (see chart 2). Clearly, lower interest rates did not trigger a volume effect during the period. The main two explanations are the sharp deterioration in the cyclical environment and the initially high level of household indebtedness (see below).

In Portugal, the decline in the outstanding amount of bank loans to the non-financial private sector is largely due to the decline in loans to non-financial corporates (NFC). Between June 2011 and May 2019, the outstanding amount of loans to NFC declined by 41%, from EUR 122 billion to EUR 71 billion.

Outstanding loans to the non-financial private sector reduced to its 2005 level

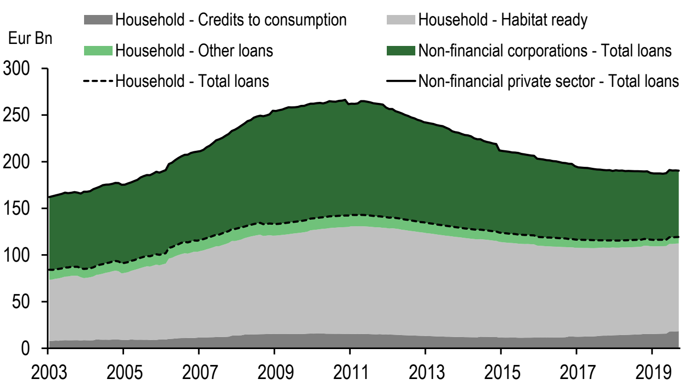

Chart 2 Source: ECB, BNP Paribas

[5] Rounded off from EUR 6,549,570,000.

[6] It is possible to compare operating income with previous years given the low seasonal nature of most of the items on the profit and loss account of Portuguese banks. Given its exceptional nature, Q4 2018 was excluded from our calculations.

[7] For the most part, loans granted to non-financial corporates (NFC) are variable-rate loans, regardless of the country under consideration.

Aggregated profit and loss account of the five major Portuguese banking groups

Million euro	2013	2014	2015	2016	2017	2018	*2019e**
Net banking income	7 310	6 672	7 016	6 187	6 789	6 550	*6 790*
o/w Net interest income	3 697	3 402	3 602	3 895	4 121	4 372	*4 500*
o/w Net fee and commission income	2 491	1 969	2 036	1 956	2 042	2 115	*2 125*
o/w Other operating income	1 121	1 301	1 378	337	626	63	*164*
Total operating expenses	-4 984	-4 065	-4 250	-4 008	-3 830	-3 962	*-3 514*
o/w Personnel expenses	-2 679	-2 232	-2 357	-2 048	-2 081	-2 033	*-2 086*
o/w Other operating expenses	-2 305	-1 833	-1 893	-1 960	-1 749	-1 929	*-1 428*
Gross operating income	2 326	2 608	2 766	2 180	2 959	2 588	*3 276*
Cost of risk	-4 177	-3 346	-2 940	-4 966	-2 827	-955	*-1 455*
Net income before tax from continuing operations	-1 851	-738	-174	-2 786	132	1 633	*1 820*
Profit or loss from discontinuted operations	-34	268	658	-83	-748	-29	*329*
Corporate income tax	-467	257	197	-1 223	897	1 116	*713*
Other nonreccuring income and expenses	0	0	0	47	25	53	*18*
Minority interests	250	316	342	316	124	166	*143*
Net income	-1 668	-1 044	-55	-1 915	-1 613	375	*1 310*

* *2019 data is estimated with this of the first three quarters

Table 1 Source: BNP Paribas calculations

Over the same period, the outstanding amount of loans to households declined by 18%, from EUR 143 billion to EUR 116 billion. Automatically, bank loans to NFC as a share of the outstanding amount of total bank loans to the non-financial private sector declined to 38% in May 2019 from 46% in June 2011.

Since June 2019, the growth of loans to households (both for house purchase and consumption) has exceeded the ongoing decline in NFC loans. As a result, the outstanding amount of loans to the non-financial private sector rose mildly. The increase in loans to households as a share of total loans to the non-financial private sector might contribute to the reduction of the volatility of the interest income of Portuguese banks. This is because loans to households are less sensitive to cyclical fluctuations than loans to NFC.

Bank intermediation declines as a share of NFC indebtedness

The decline in the outstanding amount of bank loans to NFC was not offset by greater use of the bond market. Like bank loans, the outstanding amount of debt securities issued by NFC also diminished between June 2011 and May 2019. The outstanding amount of NFC debt securities dropped from EUR 40 billion to EUR 29 billion. Since this 30% decline was smaller than the decline in the outstanding amount of bank loans, debt securities increased as a share of total NFC indebtedness (narrowly-defined). As a result, financial intermediation for resident NFC decreased from 75% in Q2 2011 to 71% in Q2 2019. Bank intermediation was thus lower than the euro area average, which at the same dates came to 85% and 76%, respectively.

Loans to households for house purchase recently picked up again

Loans for house purchase, which are almost exclusively mortgage loans, accounted for 79% of the outstanding amount of total bank loans to resident households in September 2019. This figure has remained relatively stable throughout the observation period (starting in January 2003). Since October 2018, the outstanding amount of loans for house purchase has increased moderately, halting the decline observed between November 2011 and September 2018 (a cumulative 18% decline). During this period, the outstanding amount of loans to resident households for house purchase diminished continuously, from EUR 114 billion to EUR 94 billion. This decline might seem surprising given the observed decline in lending rates. Yet it can be explained to a certain extent by the preponderance of variable-rate loans, which reduce the incentive for households to borrow when rates are low (compared to a system of predominantly fixed-rate loans).

The recent increase in the outstanding amount of loans for house purchase was accompanied by a 379% increase in the 12-month moving average of new loans for house purchase between September 2014 (EUR 184 million) and September 2019 (EUR 880 million). After virtually stagnating at historically low levels (see chart 3), new loans for house purchase returned to the June 2008 level of EUR 1161 million. Yet this figure still falls far short of the July 2007 peak of EUR 1875 million. Lastly, new loans cumulated over 12 months grew at an average annual rate of 37% between September 2014 and September 2019.

The dynamic momentum of new loans for house purchase cannot be attributed to buybacks or renegotiations, which remain low in Portugal (since December 2014, they have accounted for 9% of new loans on average, compared to 34% in France). Given the low proportion of fixed-rate loans, only a small fraction of loans are potentially affected by such operations.

New production of real estate loans to households increases by 379% in 5 years

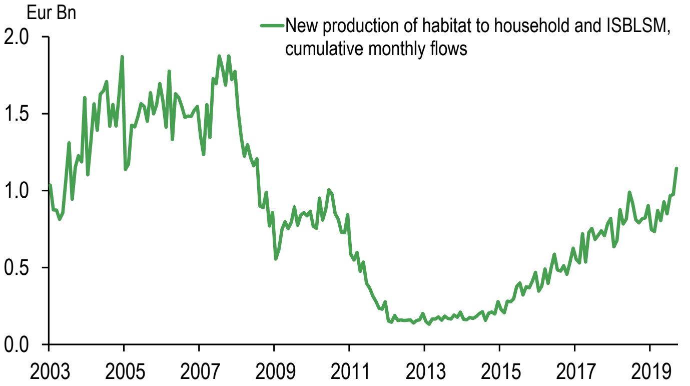

Chart 3 Source: ECB, BNP Paribas

Bank of Portugal recommendations could scale back this trend

Since 1 July 2018, the Bank of Portugal "recommends"[8] that credit institutions authorised to lend within its jurisdiction set several limits on their business[9]. According to the national central bank, these recommendations aim in part to reduce the incentives for some banks to ease their lending standards in order to create a volume effect to offset the squeeze on margins, due notably to greater competitive pressures and low interest rates. They are also designed to reduce the indebtedness ratio of resident households, who might be attracted by currently low lending rates, although this phenomenon is not yet reflected in the figures (see above, outstanding amount of loans to households).

Inversely, the household indebtedness ratio[10] has dropped off sharply in recent years, bringing it closer to the euro area average (95% and 94%, respectively, in Q2), after widening constantly between 2000 and 2007 (see chart 4). The household indebtedness ratios for Portugal and Spain have followed very similar trajectories, in line with their respective cyclical environments. In the Bank of Portugal's first recommendation, banks are requested to limit the loan-to-value ratio (LTV) on new loans for primary residences to 90% of the value of the purchased or built real estate asset.

[8] A recommendation is not legally binding. However, banks must comply with it or justify their position, otherwise the Bank of Portugal could take prudential measures against them.
[9] Bank of Portugal, *Macroprudential measure within the legal framework of credit for consumers*, 1 February 2018
[10] Loan outstanding amounts as a share of gross disposable income adjusted for changes in the amount of shares that households hold in pension funds.

Household debt ratio in a few Eurozone countries

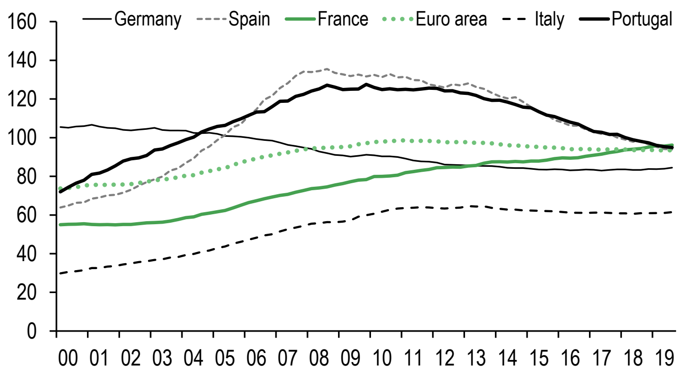

Chart 4 Source: ECB, BNP Paribas

Between July 2018 and March 2019[11], the share of new loans for house purchase with a LTV ratio of more than 90% was virtually nil, compared to about 20% previously. As a result, the share of total new loans for house purchase with a LTV ratio of between 80% and 90% more than doubled to about 45%. In contrast, the share of new loans with a LTV ratio of less than 80% declined by more than 10 percentage points over the same period. The average LTV ratio seems to be in the process of converging at between 80% and 90%.

The Bank of Portugal's second recommendation is to limit the debt service-to-income ratio (DSTI) by limiting the amount of monthly payments to 50% of the borrower's monthly income[12]. The DSTI ratio must take into account all loans already contracted by the borrower as well as the potential upturn in interest rates given the preponderance of variable-rate loans. The proportion of new loans for house purchase with a DSTI ratio of less than 50% rose to 89% in March 2019 from 77% in July 2018. The level of data aggregation prevents us from getting a more precise picture of the breakdown of new loans for house purchase with a DSTI ratio of less than 50%.

Third, the Bank of Portugal is asking banks to limit the original maturity of new loans for house purchase to 40 years. The recommendation aims at reducing the average maturity of new loans for house purchase to 30 years by the end of 2022. In comparison, the original maturity of loans for house purchase in France averaged 20.4 years in September 2019. In Q1 2019, the original maturity in Portugal was 32.7 years, compared to 33.7 years in Q1 2018[13]. Although the recommendation seems to be paying off, the outstanding amount of loans for house purchase with an original maturity of more than 30 years was the only category to progress in Q2 2019 (+3.5%) while those with an original maturity of less than 30 years declined sharply (-10.3%). These two trends have intensified since they first appeared in September 2017. The original maturity of new loans for house purchase is thus converging on 30 years due to both the shortening of longer maturities and the prolongation of maturities of less than 30 years.

[11] Most recently available observation period. Bank of Portugal, 2019, *Macroprudential recommendation on new credit agreements for consumers – Progress report*, May 2019
[12] Net annual income divided by 12.
[13] Bank of Portugal, 2019, *Relatório de acompanhamento dos mercados bancários de retalho* - 2018

Fourthly, the Bank of Portugal recommends that banks avoid grace periods to borrowers on payments of principal and interest, whenever possible. Through payment extensions, however, banks can offer greater flexibility to borrowers experiencing temporary troubles, thereby avoiding a "credit event" whenever possible, and an increase in the cost of risk. To our knowledge, there is no data that can be used to evaluate the impact of this recommendation.

Interest expense has fallen due to the decline in bank funding costs and a change in the structure of liabilities

The decline in interest expense for the major Portuguese banks can be attributed to the decline in the overall bank funding costs and the change in bank liabilities in favour of less costly funding.

Bank funding costs continued to decline

In 2018, the interest paid by Portuguese banks on refinancing operations with central banks as a share of the outstanding amount of such loans (the implicit interest rate) reached a historically low level of -0.2%. The implicit rate was negative for the first time since 2014, the first available observation date for this data series. This bank funding is comprised mostly of liquidities issued from the second targeted longer-term refinancing operations (TLTRO), which explains why the average refinancing rate is negative. The cost of debt securities issued by banks also fell from 4.3% in 2014 to 2.4% in 2018.

The customer deposit rate also fell to 0.4% in 2018 from 1.5% in 2014. Deposit rates are downwardly rigid because banks are reluctant to pass on rates at the zero lower bound or that are negative to retail customers [14], not only for commercial reasons, but also because customers can easily convert part of their deposits into cash. In Portugal, regulations also ban the application of negative interest rates on both households and non-financial companies [15]. Persistently low interest rates clearly limit the effectiveness of monetary policy.

Moreover, in a negative interest rates environment, a high loan-to-deposit ratio tends to become a handicap whereas it was rather advantageous when rates were more positive. As the Bank of Portugal points out[16], Portuguese banks managed to reduce their loan-to-deposit ratio by 42% in ten years, with a big reduction in the dispersion of ratios between banks.

Customer deposits make up more than two thirds of the liabilities of Portuguese banks

Household and NFC deposits comprise a growing share of the total liabilities of Portuguese banks, and this percentage rose to 67% in December 2018 from 46% in December 2008. The uninterrupted increase in this proportion since 2009 can be attributed to the increase in the outstanding amount of customer deposits (+17% between 2010 and 2018) while the outstanding amounts of other types of bank funding contracted. Given the decline in their opportunity cost, time deposits have been largely replaced by sight deposits according to the latest Bank of Portugal figures[17]. Arbitraging by depositors helps explain the decline in the implicit interest rate on customer deposits over and beyond the decline in money market rates.

After peaking at more than 11% in 2012, the share of central bank refinancing steadily ebbed until it reached only 5.3% of the liabilities of Portuguese banks in 2018. All in all, the outstanding amount of liquidities obtained by the Portuguese banking system under the LTRO programmes was about EUR 18 billion at October 2019. Consequently, Portuguese banks should make only limited use of TLTRO III for the sole purpose of replacing the credit lines obtained under TLTRO II (which ran from June 2016 to March 2017), which reach maturity in June, September and December 2020 and in March 2021.

The TLTRO programmes also enabled the major Portuguese banks to improve their liquidity coverage ratio (LCR). They were able to use certain sovereign debt securities to increase their reserves with the central bank, which are eligible as high quality liquid assets (HQLA), the numerator of the LCR. The change in the structure of bank liabilities enabled them to reduce the opportunity cost linked to the ownership of HQLA. Within the European Union, the Portuguese banking system has one of the highest average regulatory liquidity coverage ratios. After an 84bp increase since Q4 2016, the average LCR culminated at 227% in Q1 2019, compared to 153% for the EU banking system as a whole.

Net interest margin widens

The net interest margin for Portugal's major banks has increased as interest expense declined faster than interest income. Moreover, given the volatility of revenues generated by market activities and the relative weakness of net commissions, neither can be envisioned as a new source of growth to replace net interest income, at least not in the short term.

Interest expense fall more rapidly than interest income

Between 2014 and 2018, the net interest margin of the major Portuguese banks rose from 1.2% to 1.7%, which is higher than the average for the European Union banking system as a whole (1.4% in 2018[18]). The net interest margin continued to widen in the first three quarters of 2019, lifted by the decline in interest expense at a time when interest income was showing signs of levelling off (see chart 5).

The impact of interest rate fluctuations on the net interest margin depends on the respective duration of banking assets and liabilities. Theoretically, the net interest margin rises during phases of falling interest rates because bank funding can be replaced more rapidly by other less costly resources than assets can be replaced by lower-yielding ones. This phenomenon is naturally linked to the traditional activity of maturity transformation. The cost of funding for Portugal's major banks has adjusted more rapidly to the decline in interest rates than the return on assets, even though the preponderance of variable-rate loans means that returns fall more rapidly than if they were fixed-rate instruments.

[14] In Portugal, there are no regulated savings accounts comparable to the Livret A in France, for example.
[15] Bank of Portugal, 2009, *Carta-Circular nº 33/2009/DSB*, 23/03/2009
[16] Bank of Portugal, 2019, *Financial Stability Report*, June 2019
[17] Bank of Portugal, 2019, *Financial Stability Report*, June 2019
[18] EBA Risk Dashboard – Data as of Q2 2019

Lastly, the positive impact of a higher net interest margin on net interest income neutralised the negative effect arising from the decline in the outstanding amounts of bank loans. Net interest income for the major Portuguese banks grew at an average annual rate of 6.5% between 2014 and 2018, from EUR 3.4 billion to EUR 4.4 billion. In Q3 2019, the year-on-year increase in net interest income was 8.8%. In comparison, net interest income for the euro area's 183 biggest banks rose only 0.4% over the same period.

Interest expenses are falling faster than revenues

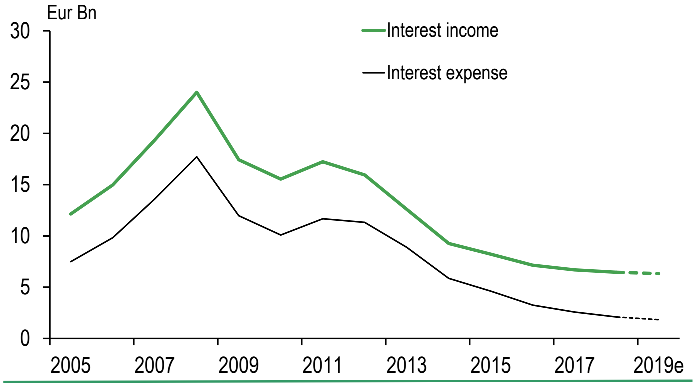

Chart 5 Source: SNL, BNP Paribas

Portuguese banks have increased their dependence on net interest income

Net interest income as a share of operating income for the major Portuguese banks has increased steadily since 2005. In 2018, this proportion reached an all-time high of 67% (compared to 51% in 2005). The breakdown of the different types of revenues (interest, commissions, gains or losses on financial instruments, etc.) is generally better balanced for the larger banks compared to their smaller competitors. Although the increasing share of net interest income can be largely explained by the decline in other revenues, less diversity in terms of the types of revenue increases the major Portuguese banks' dependency on interest income, which has been declining over the past several years.

Nonetheless, net commissions collected by the major Portuguese banks continued to increase in 2018 (+3.6% year-on-year, vs +4.4% in 2017). Yet this positive trend is not yet strong enough to serve as a new source of growth to replace net interest income. At an annualised EUR 2.1 billion in 2019, net commissions still fell short of the 2010 peak of EUR 2.8 billion.

Hit by a bout of weakness in 2018, other income amounted to only EUR 63 million, down from EUR 2.6 billion in 2005. This sharp drop is mainly due to the decline in income generated by market activities. Between 31 December 2017 and 31 December 2018, for example, CGD reported an 85% decline in net trading income[19]. Similarly, in 2018 Novo Banco reported a net trading loss of EUR 242 million after a net gain of EUR 179 million in 2017. These losses can be attributed to the Nata project, under which Novo Banco sold some of its assets to a consortium of funds managed by the American KKR and the Luxembourg-based LX Investment Partners[20].

Tight cost controls

Net banking income for the major Portuguese banks has levelled off thanks to cutbacks in the cost of funding. Yet net income increased is due to cutbacks in total operating expenses and the cost of risk.

The major Portuguese banks cut total operating expenses by 31% in 10 years

Portuguese banks were forced to make major adjustments in the wake of the troubles experienced during a series of crises in 2007-2008 and then in 2010-2011. As a result, total operating expenses were reduced by 31% on average between 2006-2008 and 2016-2018 (see chart 6). Cutbacks in personnel costs and other operating expenses contributed to this decline, with cuts averaging 34% and 27%, respectively, between 2006-2008 and 2016-2018. Tight cost controls offset the decline in operating income. As a result, the major Portuguese banks have managed to maintain their cost-to-income ratio at an average of about 60% since 2005, although small improvements can be seen in 2018 and so far in 2019 as well.

Outstanding lending to the non-financial private sector has been reduced to its 2005 level

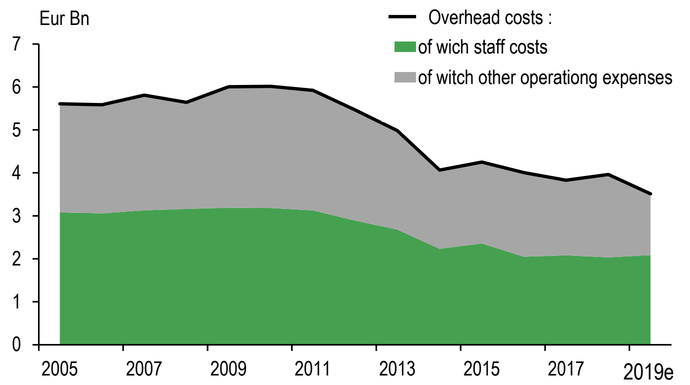

Chart 6 Source: SNL, BNP Paribas

Personnel expenses continued to fall in 2018

Like most of the other euro area countries, the Portuguese banking system has scaled back capacity over the past ten years. Bank staff in Portugal was reduced by 19% between 2008 and 2018, compared to 17% for the euro area banks as a whole.

Personnel expenses for the major Portuguese banks continued to decline to EUR 2 billion in 2018, from a 2009 peak of EUR 3.2 billion. Most of these cutbacks occurred between 2011 and 2014, although they continued at a slower pace between 2015 and 2018.

[19] Caixa Geral de Depósitos, 2018 annual report

[20] Novo Banco, 2018 annual report

The decline in other operating expenses helped keep total operating expenses under control

Other operating expenses, including rent, advertising expenses and costs pertaining to information and communications technology, did not decline quite as fast as personnel expenses. Even so, the number of Portuguese bank branches was reduced by 35% between 2008 and 2018, compared to a euro area average of 27% for the same period. As the Bank of Portugal points out[21], the intensification of digitalisation plans and investments by Portuguese banks undoubtedly helped drive up other operating expenses. Novo Banco, for example, set up a "digitalisation circle" to transform the group by focusing more on customers, streamlining procedures and reducing risks[22]. The bank also pooled together its main digital sector skills and expertise within an internal entity called "Novo Banco Digital" in 2018. On 4 December 2019, Caixa Geral de Depósitos director Maria João Carioca announced that the group intended to invest EUR 200 million over 5 years to accelerate the bank's digital transformation.

Compared operating coefficients of some European banking systems

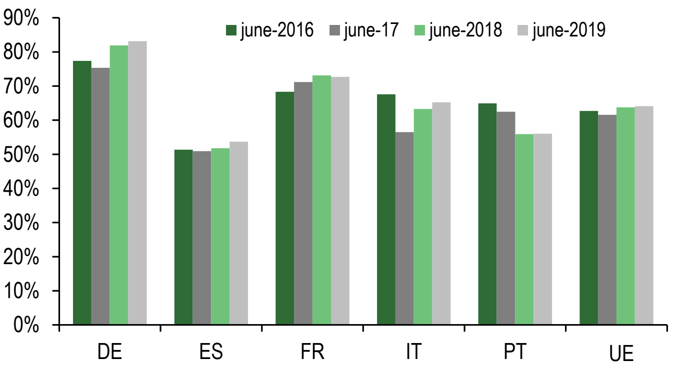

Chart 7 Source: ECB, BNP Paribas

Lastly, the cost-income ratio of Portuguese banks improved slightly in 2018 and has continued to improve so far in 2019 (see chart 7) after fluctuating around an average of 60% since 2005. It is now lower than the average cost-to-income ratio for the EU banking system as a whole. In this respect, the major Portuguese banks stand apart from the average of the major EU banks as a whole, whose cost-to-income ratio has tended to erode since 2017. Yet the divergent trajectories between banking systems must be kept in perspective: the decline in income from corporate and investment banking activities probably contributed to the deterioration in the cost-to-income ratios of banking systems that rely more heavily on these activities to generate a their income.

In 2018, international activities made a large contribution to the net income of the major Portuguese banks

Thanks to the lower bank funding costs and tight cost controls, the major Portuguese banks swung into positive territory in 2018 for the first time since 2010, with net income of EUR 375 million. This is still far short of the 2005-2007 average of EUR 2.6 billion. In the first three quarters of 2019, net income for the five major Portuguese banks remained positive thanks to the reduction in Novo Banco losses.

Net profit of the major Portugueses banks, between reduction of domestic losses and increase of the result of activities abroard

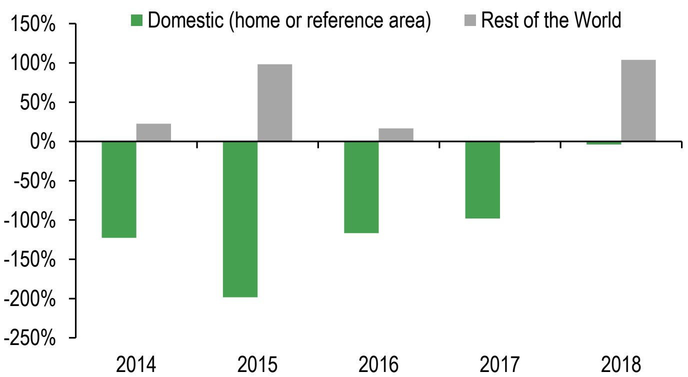

Chart 8 Source: Financial communications of banks, BNP Paribas

International activities made a big contribution to the consolidated net income of the major Portuguese banks (see chart 8). The main international markets are Spain and France, where Caixa Geral de Depósitos and Novo Banco are very active. Millennium BCP has a bigger foothold in Poland and Mozambique. BPI has a major subsidiary in Angola, where Caixa Geral de Depósitos and Novo Banco also have operations. Though a Portuguese-speaking country, Brazil is not a significant market for Portuguese banks. Although international activities make a positive contribution to the consolidated net income of Portuguese banks, this contribution is bound to diminish if they go ahead with plans to sell-off non-strategic assets. In 2018, Novo Banco sold off its activities in Venezuela, Italy, and Cape Verde, and Caixa Geral de Depósitos has put several subsidiaries up for sale, including in Brazil and Spain.

The return on equity improved in 2019 but remains low

The return on equity for the major Portuguese banks was naturally positive in 2018, although it remains low. The weighted average return on equity was 1.5% during the year (see chart 9), whereas it surpassed 15% prior to 2008. It was also much lower than the average return for the other large EU banks in 2018. In 2019, in contrast, the big Portuguese banks began to approach the euro area average.

International comparison of financial profitability of major banks in several EU countries*

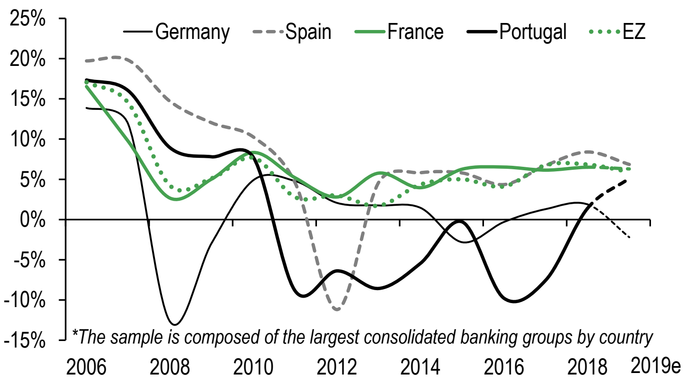

Chart 9 Source: SNL, BNP Paribas

[21] Bank of Portugal, 2019, *Financial Stability Report*, June 2019
[22] See Novo Banco, 2018 annual report

In the short term, however, the adjustments that had to be made during the crisis years should continue to strain the returns of the major Portuguese banks. In the longer term, these cost adjustments should help increase returns, although their impact could be delayed by slower growth and a persistently accommodating monetary policy for many more quarters.

Lower interest rates helped reduce risks

All things being equal, low interest rates have reduced the cost of risk for the major Portuguese banks and helped clean up their balance sheets. The reduction in the cost of risk helped limit the erosion of equity capital, but it still declined. The regulatory solvency ratios of the major Portuguese banks improved essentially because risk-weighted assets declined faster than equity capital.

Non-performing loan ratios and outstanding amounts continue to decline

The cost of risk[23] for the major Portuguese banks dropped from a peak of EUR 5.6 billion in 2011 to EUR 1 billion in 2018 (see chart 10). It has now fallen below the 2007 level of EUR 1.1 billion. The temporary upturn in 2016 can be largely attributed to Caixa Geral de Depósitos' plan to clean up its balance sheet. Excluding CGD, the cost of risk for the major Portuguese banks would have declined continuously between 2012 and 2018. Changes in the cost of risk at Novo Banco (formerly BES) largely determined the dynamics for all of the major Portuguese banks. Novo Banco was largely responsible for the general downward trend in 2016, but also for the upturn in the first three quarters of 2019.

Along with the decline in the cost of risk, the non-performing loan ratio was halved for the major Portuguese banks, from a peak of 20.1% in Q2 2016 to 8.9% in Q2 2019. Even so, the NPL ratio is still nearly three times higher than the average for the main EU banks (see chart 11).

Evolution of the cost of risk of Portuguese banks

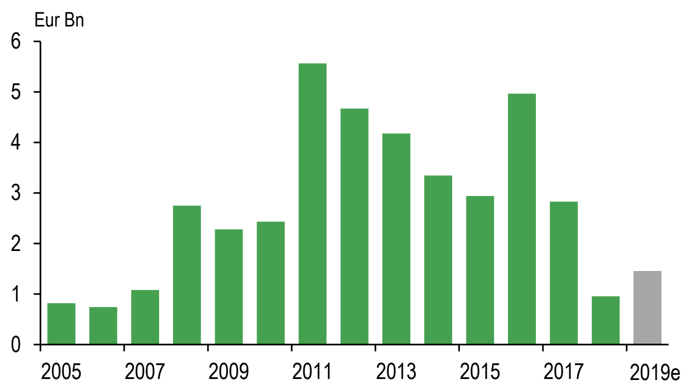

Chart 10 Source: SNL, BNP Paribas

[23] Impairment allowances and reversals, amounts recovered on impaired loans and losses on non-recoverable loans.

International comparison of non-performing loan ratios

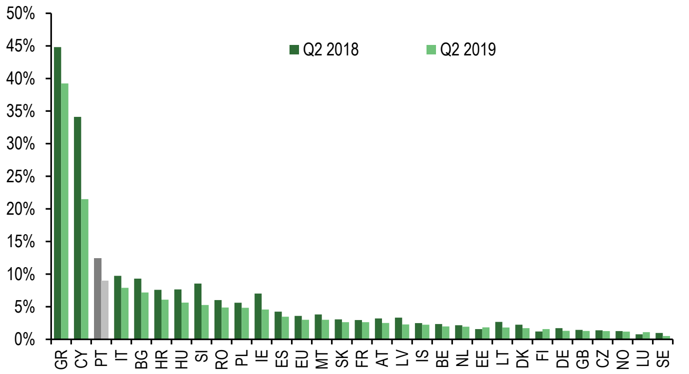

Chart 11 Source: BAE, BNP Paribas

According to Bank of Portugal figures[24], the decline in the NPL ratio is mainly due to a reduction in the outstanding amount of non-performing loans (the ratio's numerator). The outstanding amount of NPL was halved, from EUR 50 billion in Q2 2016 to approximately EUR 25 billion in Q1 2019. Over the same period, the outstanding amount of total bank loans (the ratio's denominator) contracted by 8%. This means that the decline in the NPL ratio was not due to dilution but to the clean-up of bank balance sheets.

The tightening of bank lending conditions in 2011/2012[25], which were maintained thereafter, helped reduce the cost of risk for Portuguese banks. Lower interest rates also eased the solvency requirement that weighed on borrowers in the repayment process.

Bank balance sheets were largely cleaned up through sales and securitisations

Sales and securitisations of non-performing loans were one of the main channels for cleaning up the balance sheets of Portuguese banks in 2018. These operations reduced the NPL ratio by 1.7 percentage points during the year[26]. Their cumulative total reduced the NPL ratio by 2.9 percentage points from the Q2 2016 peak. As part of Project Sertorius, for example, Novo Banco sold off EUR 488 million in non-performing real-estate loans to Cerberus Capital Management at 33% of its gross book value in August 2018. The price is comparable to the ones paid for other sales in Spain and Italy, although it naturally depends on the quality of the loan portfolio being sold. Novo Banco is also conducting Nata 2, which should lead to the sale of another non-performing loan portfolio by the end of 2019[27]. Given the planned amount of the disposal (EUR 3.3 billion initially), this operation should have a significant impact on Novo Banco's non-performing loan ratio, and to a lesser extent, on the NPL ratio of the entire Portuguese banking system.

[24] Bank of Portugal, 2019, *Financial Stability Report*, June
[25] Bank of Portugal, 2012, *Bank Lending Survey*, January 2012 and Bank of Portugal, 2011, *Bank Lending Survey*, October 2011
[26] The range of banks covered by Bank of Portugal data is broader than that of EBA data. This also explains the slight differential between the two NPL ratios.
[27] Novo Banco, 5 September 2019 press release

Write-offs have reduced the non-performing loan ratio of Portuguese banks by 3 percentage points since the 2016 peak, including 1 point during the year 2018. At 31 December 2018, the total reduction in the NPL ratio was 8.5 points, which means that write-offs have been the main channel so far for cleaning up the balance sheets of Portuguese banks, ahead of sales and securitisations. Yet the relative contribution of write-offs to the decline in the NPL ratio has gradually decreased while that of sales and securitisations has increased. These trends suggest that Portuguese banks initially cleaned up their balance sheets by selling their most deteriorated exposures with the highest provision ratios and lowest valuations. Thereafter, they sold and/or securitised their less deteriorated non-performing exposures with higher valuations. The breakdown may have been determined in part by the time it takes to set up sales and securitisation operations. In addition, low interest rates may have influenced the growing use of sales and securitisations, because all things being equal, a reduction in the discount rate increases asset value.

The net flow of non-performing loans, i.e. the difference between new non-performing loans and non-performing loans reclassified as performing, plus impairment and repossessions, contributed to 1.8 percentage points of the total decline in the NPL ratio. Lastly, dilution arising from the flow of performing loans made only a small, 0.8-point contribution to the decline in the NPL ratio of Portuguese banks.

Portuguese banks are expected to continue cleaning up their balance sheets in the quarters ahead, notably because some have been required to submit NPL reduction plans to the Bank of Portugal. Moreover, the introduction of accounting standard IFRS 9 on 1 January 2018 could increase the cost of risk when a cyclical slowdown is expected. This accounting standard recognises expected credit losses (and not only incurred credit losses as was the case under the previous IAS 39 standard), as well as minimum coverage requirements for non-performing exposures imposed by the European Commission and the ECB's "supervisory expectations for prudential provisioning"[28]. As a result, the Portuguese banks' situation may seem to have deteriorated even without an intrinsic deterioration in the quality of their portfolio.

Better loss absorbing capacity

The major Portuguese banks have strengthened their capital adequacy ratios despite low profitability and the clean-up of balance sheets. Ongoing clean-up efforts, however, are likely to further strain bank equity. Moreover, under certain conditions, the fiscal treatment of deferred tax assets (DTA) provides the major Portuguese banks with additional loss absorbing capacity equivalent to 15% of their CET1, without it counting as equity capital.

Despite low profitability, Portuguese banks have nearly doubled their capital ratios over the past 5 years

Regulatory capital ratios for the major Portuguese banks have increased since 2014. They had a fully-loaded Common Equity Tier 1 (CET1) ratio of 13.2% in Q2 2019, up from 7.9% in Q3 2014. Despite this significant improvement in the solvency of the major Portuguese banks, it still falls short of the weighted average CET1 ratio for the major EU banks as a whole, which came to 14.4% and 11.3%, respectively, at the same dates (see chart 12).

International comparison of CET1 ratios of major EU banks

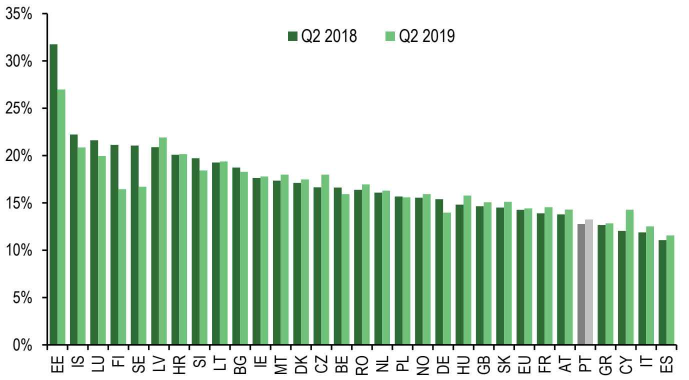

Chart 12 Source: BAE, BNP Paribas

None of the Portuguese banks made it on the list of Global Systemically Important Banks (G-SIBs) established by the Financial Stability Board (FSB). Consequently, they are not subject to additional regulatory requirements.

Risk-weighted assets decline faster than equity

The process of cleaning up the balance sheets of Portuguese banks and to a lesser extent the introduction of IFRS 9 on 1 January 2018 hampered the improvement in capital adequacy ratios. The outstanding amount of CET1 of the major Portuguese banks rose by 105% between 2007 and 2012, from EUR 13 billion to EUR 27 billion, before contracting by 24% to EUR 21 billion in 2018. Capital adequacy ratios continued to improve in the recent period because risk-weighted assets declined faster than equity capital. Risk-weighted assets declined by 31% between 2012 and 2018, from EUR 226 billion to EUR 157 billion[29].

For the major Portuguese banks, a lasting return to profitability would boost improvements in capital adequacy ratios, this time through an increase in equity. The major Portuguese banks have also strengthened their loss absorbing capacity thanks to issues of subordinated debt eligible as Tier 2 capital. In 2018, for example, Novo Banco and Caixa Geral de Depósitos issued EUR 400 million and EUR 500 million, respectively, in Tier 2 capital. Additional requirements for Total Loss Absorbing Capacity (TLAC) and the Minimum Requirement for Own Funds and Eligible Liabilities (MREL) should continue to support debt securities issues eligible as Tier 2 capital.

DTA eligible for a special tax regime represent additional loss absorbing capacity equivalent to 15% of CET1

Like in the Spanish and Italian banking systems, deferred tax assets (DTA) comprise a major part of the regulatory capital of the Portuguese banking system according to European Commission calculations[30].

[28] Humblot, T., 2018, *The project to remove non-performing loans from the European banking system*, Eco Flash, BNP Paribas

[29] Without more recent data, we were unable to make acceptable estimates for 2019.

[30] See European Commission, *Coping with the international financial crisis at the national level in a European context – Impact and financial sector policy response in 2008-2015,* Commission staff working document, November 2017

After the introduction of the Capital Requirements Regulation (CRR)[31] in 2013, banks were required, as of 1 January 2018, to deduct all of their deferred tax assets that rely on future profitability, and some of those that did not, from their regulatory capital. At 31 December 2018, DTA eligible as equity capital comprised roughly 4% of CET1 outstanding amount for the major Portuguese banks, after peaking at 9% in 2016, which reflects the losses reported during this period. On average, DTA eligible as equity capital accounted for less than 10% of all the DTA of the major Portuguese banks between 2014 and 2018.

Since 2014, Portugal's tax code stipulates that under certain conditions part of bank DTAs can be converted into a tax credit to cover losses[32]. Since the latter is payable by the Treasury, it can be used to preserve capital adequacy ratios. In return for the conversion of DTA into tax credits, a special reserve is created with an amount equivalent to 110% of the converted DTAs, and securities convertible into ordinary shares are issued for the same amount to the Portuguese state. Based on data published by the major Portuguese banks, about 50% of their deferred tax assets were eligible for this special regime in 2018. This increased their loss absorbing capacity by about EUR 3 billion, or nearly 15% of CET1 in 2018.

In 2016, for example, Novo Banco converted deferred tax assets into a tax credit for a definitive amount of EUR 154 million after the bank reported a loss in 2015. In return, a special reserve was created amounting to EUR 169 million, i.e. the amount of DTA converted into a tax credit plus 10%[33]. Similar operations were conducted for an end tax credit of EUR 99 million in 2017 and an estimated EUR 152 million in 2018, pending validation by the tax authorities in 2019. All in all, through the conversion of DTA into tax credits, the Portuguese government will hold convertible debt amounting to 6.5% of Novo Banco's equity capital at 31 December 2018 (the tax credit is postponed by a year from the year under consideration) and 10.3% according to the H1 2019 financial statement. To a certain extent, the special tax regime applied to the DTA of Portuguese banks shelters their capital adequacy ratios from any book losses.

Risks associated with "low for long" interest rates

Although lower interest rates seem to have had a rather positive impact so far on the major Portuguese banks, the levelling off of interest rates at low levels for a prolonged period, also known as "low for long", is likely to be less favourable for them in the future.

The continuation of an accommodating monetary policy combined with greater competitive pressures, notably from entities in other sectors with more flexible prudential regulations, should continue to exert downward pressure on lending rates. Yet rates are likely to fall at a slower pace as they converge on the zero lower bound. In Portugal, where lower rates have not yet stimulate growth in loan outstanding amounts, the Bank of Portugal's recommendations are likely to curb the growth of loans to households. All things being equal, "low for long" rates should also support bank lending to NFC, but the upcoming slowdown in growth is likely to hamper demand. Under these conditions, interest income is might continue to decline for the major Portuguese banks.

With interest rates already at such low levels, it seems reasonable to assume that most of the decline in bank funding costs has already occurred. The ban on applying negative rates to customer deposits serves as a floor for the funding costs of Portuguese banks. Moreover, as long as the opportunity cost for households to hold sight deposits remains so low, the structure of liabilities for the major Portuguese banks is likely to remain relatively akin. As a result, interest expense should continue to decline very moderately.

"Low for long" interest rates could end up reversing recent trends: interest income might begin to fall more rapidly than interest expense. This would squeeze the net interest margin while the positive volume effect necessary to offset its erosion would become hypothetical at best. Lastly, the outlook for operating income growth for the major Portuguese banks continues to be hampered by GDP growth forecasts (1.9% in 2019 and 1.4% in 2020 according to our scenario, compared to 3.5% in 2017 and 2.4% in 2018). Without sufficient new sources of growth, the major Portuguese banks will have little choice but to pursue their cost-cutting strategies.

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[31] EU regulation n° 575/2013 of the European Parliament and Council of 26 June 2013
[32] Law no. 61/2014 of 26 August 2014 and law no. 23/2016 of 19 August 2016
[33] Novo Banco, 2018, *Consolidated Financial Statement*

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