Euro area bank profitability and consolidation

Édouard Fernandez-Bollo, Desislava Andreeva, Maciej Grodzicki, Lise Handal and Rose Portier

EUROPEAN CENTRAL BANK

Édouard Fernandez-Bollo is member of the Supervisory Board of the ECB. Desislava Andreeva and Maciej Grodzicki belong to the Systemic Risk and Financial Institutions Division, Directorate General Macroprudential Policy and Financial Stability of the ECB. Lise Handal and Rose Portier belong to the Division 1, Directorate General Universal and Diversified Institutions of the ECB. Corresponding author: maciej(dot)grodzicki(at)ecb(dot)europa(dot)eu. Comments by Audrey Limouzin, Fatima Pires, Massimiliano Rimarchi, Francisco Ramón-Ballester and an anonymous referee are gratefully acknowledged. The authors also thank Julius Schneider for excellent research assistance.

This article is the exclusive responsibility of the authors and does not necessarily reflect the opinion of the Banco de España, the European Central Bank or the Eurosystem.



Resumen

La consolidación del sector bancario del área del euro ha avanzado con lentitud desde que terminó la crisis financiera global, pese a la persistente debilidad de la rentabilidad bancaria. La pandemia de coronavirus (COVID-19) ha acrecentado los riesgos para la rentabilidad de este sector en el área del euro, y ha coincidido con una peor evolución de algunos bancos, en especial de aquellos con un nivel excesivo de préstamos dudosos acumulados. La consolidación de entidades bancarias puede reportar beneficios desde la perspectiva tanto micro- como macroprudencial, mediante la generación de sinergias de costes, una mayor diversificación de los ingresos y el fortalecimiento de la resiliencia del sector bancario. No obstante, este proceso comporta riesgos de ejecución que los bancos deben gestionar de forma adecuada. La consolidación puede dar lugar a problemas de competencia, aunque la evidencia empírica sugiere que en algunos países del área del euro hay margen para una mayor concentración nacional, y también para aumentar la integración transfronteriza del mercado bancario europeo. Las fusiones bancarias también incrementan la relevancia sistémica de las entidades resultantes, que podría afrontarse con los marcos macroprudenciales y de resolución existentes. El Banco Central Europeo analiza las consolidaciones desde una perspectiva prudencial, y centra la atención en la capacidad actual y futura de la entidad combinada para cumplir los requerimientos prudenciales. A tal fin, en enero de 2021 publicó una Guía en la que aclara sus expectativas y su enfoque en relación con tres aspectos prudenciales clave que se plantean en el contexto de las consolidaciones: la determinación de los requerimientos de capital de Pilar 2, el tratamiento del fondo de comercio negativo (badwill) y el uso de modelos internos.

Abstract

Consolidation in the euro area banking sector has been slow since the end of the global financial crisis, despite the persistent weak bank profitability. The coronavirus (COVID-19) pandemic has reinforced profitability risks in the euro area banking sector, and coincided with worse performance of some banks, notably those burdened with legacy non-performing loans. Consolidation among banks may bring benefits from both a micro- and a macroprudential perspective by generating cost synergies, increasing revenue diversification and strengthening the resilience of the banking sector. However, it comes with attendant execution risks, which need to be properly managed by banks. Consolidation may give rise to competition concerns, although empirical evidence suggests that there is room for further domestic concentration in some euro area countries and for greater cross-border integration of the European banking market. Bank mergers also increase the systemic footprint of the resulting institutions, which might be addressed by the existing macroprudential and resolution frameworks. The European Central Bank assesses consolidation from a prudential perspective, focusing on the current and future ability of the combined bank to comply with prudential requirements. To this end, it published a Guide in January 2021 in which it clarified its expectations and approach to three key prudential issues arising in the context of consolidation: setting Pillar 2 capital requirements, treatment of badwill and use of internal models.

1 Introduction

Consolidation has long been seen by policymakers as part of the solution to the excess capacity and weak profitability of the euro area banking sector [see, among others, Constâncio (2014) and Af Jochnick (2019)]. In spite of the lively discussion on the need for bank consolidation and related challenges and obstacles, not many bank mergers and acquisitions have taken place in the last decade. Many of these acquisitions were executed in the context of resolution or financial distress of the target bank, rather than being driven by purely commercial interests. At the same time, bank profitability remained subdued during the economic upswing between 2013 and 2019. The COVID-19 pandemic, and the likely pressure it will put on banks' profits, has again brought the challenges associated with weak bank profitability and the related discussion on bank consolidation into the spotlight, and some consolidation has begun to happen.

This article revisits the arguments in favour of consolidation as a remedy for bank profitability challenges and elaborates on ways in which consolidation in the banking sector can contribute to improving financial stability. In doing so, the article combines

micro- and macroprudential perspectives. Highlighting the latest supervisory expectations announced by the European Central Bank (ECB), the article outlines the key areas of supervisory attention and the approach to selected key issues [ECB (2021)]. It also points to other issues which are relevant for consolidation, but which lie outside of the remit of micro- and macroprudential authorities.¹

2 Why bank profitability matters for financial stability and banking supervision

Sustainable bank profitability is one of the necessary conditions for achieving financial stability. The ECB defines financial stability as a state in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances [Fell and Schinasi (2005)]. Banks play a key role in the financial system in the euro area, being the largest provider of credit. Their profits are a key source of the new capital that is needed to support financial intermediation and economic growth. Strong earnings also provide the first line of defence against losses in a downturn, which increases the resilience of banks and helps them fulfil their role as lenders to the real economy [Jiménez et al. (2012)]. In turn, robust credit supply facilitates recoveries from economic downturns.

Focusing on the safety and soundness of individual institutions, bank supervisors take an interest in bank profitability for similar reasons. Weak profitability reduces the resilience of banks, indicating heightened risks to capital. It may also be a symptom of structural weaknesses in business models. The European Banking Authority (EBA) expects bank supervisors in the European Union (EU) to conduct regular business model analysis as part of the annual Supervisory Review and Evaluation Process (SREP), which leads to the setting of bank-specific Pillar 2 capital requirements. Through such analysis, authorities aim to determine whether a bank is able to generate acceptable returns over a horizon of at least three years [EBA (2014a)].

The presence of unprofitable banks in the economy could amplify risks to financial stability. Banks which do not earn their cost of capital may face a higher cost of funding and be more vulnerable to liquidity runs, which may cause contagion to other banks. Unprofitable banks may also have an incentive to take on additional risk (or otherwise gamble for resurrection), as the downside to their shareholders would be limited, while they stand to benefit under an optimistic outcome in which risks do not materialise [see Baldursson and Portes (2013)]. Such behaviour could also put unhealthy competitive pressure on the sounder banks, thereby negatively affecting the wider banking sector. At the systemic level, exuberant risk-taking may fuel credit booms and asset price bubbles, which, once burst, can cause financial crises and severe recessions.

¹ Throughout this article, the terms "microprudential authority" and "macroprudential authority" commonly refer to "competent authority" and "designated authority", respectively, under the EU capital requirements directive and regulation (CRD/CRR).

3

Euro area bank profitability during the COVID-19 crisis

Euro area banks were already underperforming vis-à-vis their international peers before the start of the pandemic. Chart 1 below shows that the return on equity (RoE) in the euro area in 2017, 2018 and 2019 was persistently lower than that achieved by US banks. Moreover, for many banks, returns were below the estimated cost of equity, which is the return investors would require to invest in bank equity (see Chart 2). That being said, some euro area banks were able to earn more than their cost of equity before the outbreak of the coronavirus in 2020, and these well-performing banks could be found among banks following different business models and operating in different countries [ECB (2018)]

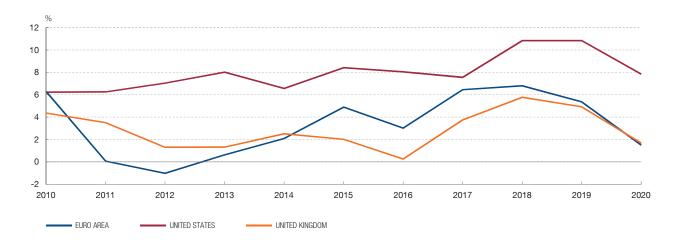
Both cyclical and structural factors explain the low bank profitability in the euro area. As regards the former, the macro-financial environment in the euro area after 2007 was challenging. The global financial crisis of 2007/2008 morphed into the sovereign debt crisis, leading to a double-dip recession. Consequently, provisioning costs surged, resulting in a strong decline in bank profits between 2010 and 2012 (see Chart 1), while at the same time banks accumulated a large stock of non-performing loans (NPLs). In the second half of 2010s, amid a more supportive growth environment, bank profitability recovered from the trough. Yet, it never returned to levels in line with cost of equity. In response to the very low inflation prevailing in that period, monetary policy adopted a historically accommodative stance. In that environment, bank interest margins were gradually eroded, adding cyclical challenges to profitability. On the other hand, monetary policy reduced the cost of credit risk and cost of funding, and enabled banks to benefit from one-off capital gains associated with higher asset prices [see Albertazzi et al. (2020) and Altavilla et al. (2019)].

While cyclical factors are important, they only partly explain weak bank profitability in the euro area. Structural inefficiencies, in particular operational inefficiencies at the level of individual banks and significant overcapacity in the sector overall, are also relevant [see ECB (2018)]. As already explained by Andreeva et al. (2019), these two phenomena are related. Overcapacity in the euro area tends to manifest itself in a fragmented marketplace with numerous competitors with limited capacity to sustainably cover their costs, including the cost of risk (too many weak banks). These in turn maintain costly overlapping branch networks (excess of physical infrastructure) [see Gardó and Klaus (2019)].

Much of the weakness in euro area bank profitability in the period 2015-2018 was found to relate to a set of institutions which persistently underperformed throughout that period [see Andreeva et al. (2019)]. Although, at first sight, these underperforming institutions were quite diverse in terms of geographical location, balance sheet structure and size, they in fact formed three relatively clearly defined groups. The first group included banks that were burdened by high levels of NPLs. They also

Chart 1

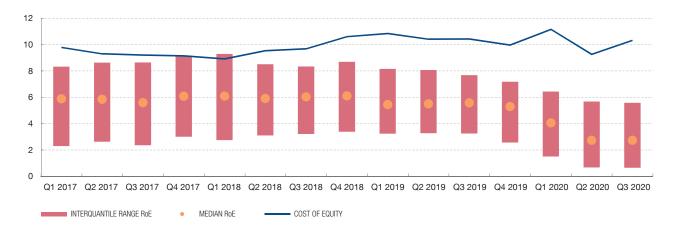
BANK PROFITABILITY SINCE 2010 (RETURN ON EQUITY; PERCENTAGES PER ANNUM)



SOURCES: Bloomberg and ECB calculations.

NOTE: Based on a sample of 21 banks in the euro area, five in the United Kingdom and 17 in the United States for which long time series are available. Aggregate RoE equal to the sum of net income divided by the sum of total equity for all banks in each region.

Chart 2
DISTRIBUTION OF EURO AREA BANKS' RoE (PERCENTAGES PER ANNUM; TRAILING FOUR QUARTER PROFITABILITY)



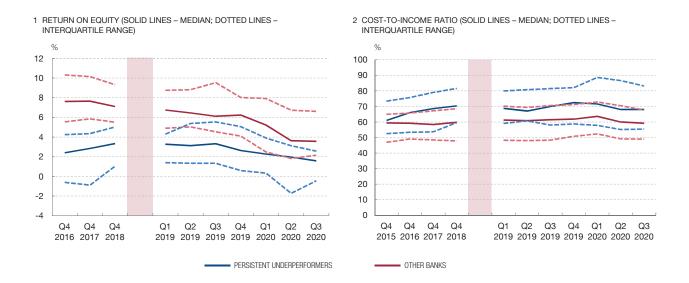
SOURCES: CB and ECB calculations.

NOTE: RoE based on a sample of significant institutions. Cost of equity estimates based on a model averaging approach [see Altavilla et al. (2021)].

exhibited relatively high income-to-assets ratios (probably reflecting higher interest rates on loans, given the risky profile of their borrowers) and clearly elevated cost-to-income ratios (probably reflecting the cost of managing a large legacy asset portfolio). The second group comprised banks with a weak income-generating capacity, all of which displayed a low income-to-assets ratio. Despite a lean cost structure, their cost-to-income ratios were clearly elevated between 2015 and 2018. The third group included banks with multiple sources of weak profitability, typically a combination of cost-side and revenue-side problems.

Chart 3

BANKS THAT UNDERPERFORMED BETWEEN 2015 AND 2018 CONTINUE TO COMPARE UNFAVOURABLY TO THEIR PEERS



SOURCES: ECB and ECB calculations.

NOTE: Based on a sample of significant institutions. The group of underperformers includes 37 banks.

Unfortunately, these institutions are continuing to underperform. Chart 3 compares the evolution of RoE and cost-to-income ratios of these underperforming banks and their healthier peers. Looking at the median bank in each group, underperformers continue to generate only half the RoE of their peers and operate at a cost-to-income ratio comparable to the top quartile of other banks.

The decline in profitability in 2020 has been steeper for the set of institutions carrying a high burden of legacy NPLs (see Chart 4) as their cost of risk increased, although this partly reflects management actions initiated before the pandemic. These banks continued to make progress in cleaning balance sheets from legacy assets (visible in a continued decline in NPL ratios) and improved their operational efficiency (a combination of leaner cost structures and stronger revenue sides). Moreover, given that their RoE was the lowest to start with, in late 2020 (the latest data available) the high NPL group was in fact making sizable losses. By contrast, the group of institutions with weak income-generating capacity was not as significantly affected.

Overall this result is not surprising. A key difference between the high NPL group and the weak income-generators is the average riskiness of their assets. The legacy asset carriers have lending relationships with riskier borrowers, while banks with weak income-generating capacity are focused on low-risk, low-return investments. Since weaker borrowers are generally affected more strongly and quickly by cyclical downturns, and may not have been able to benefit from

Chart 4
THE COVID-19 CRISIS DISPROPORTIONATELY AFFECTED BANKS BURDENED WITH HIGH NPLs (PERCENTAGE POINT CHANGES BETWEEN Q4 2019 AND Q3 2020)



SOURCES: ECB and ECB calculations.

NOTES: Based on a sample of significant institutions. Changes in cross-sectional median RoE, CET1 ratio, NPL ratio and cost-to-income ratio between Q4 2019 and Q3 2020 (the latest available data point). There were 37 underperforming banks, of which seven were in Group 1, 11 in Group 2 and 19 in Group 3.

government support measures such as loan guarantees,² the provisioning costs of the high NPL group increased markedly, adversely affecting bottom-line profitability.

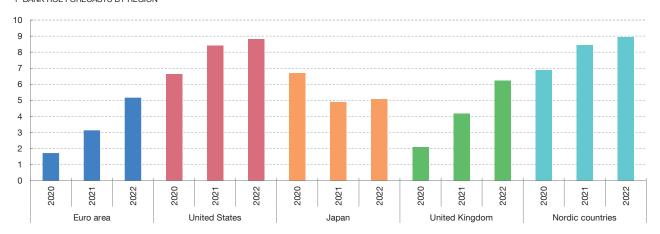
Financial market participants expect a gradual recovery in euro area bank profitability over the next two years (see Chart 5). Industry analysts expect RoE to be around 3% in 2021 and to increase further to 5% in 2022. As in the pre-pandemic period, the performance of euro area banks compares unfavourably to their international peers (see Chart 5, left panel). In 2022 more than half of the listed institutions for which analyst expectations are available are expected to generate RoE of less than 6%, the lower end of the range for banks' cost of equity. The availability of earnings forecasts is limited and does not allow firm conclusions to be drawn on the expected profitability of underperforming banks, even less so of the three groups of underperformers. Nonetheless, market analysts continue to see them lagging behind their peers in early 2021 (see Chart 5, right panel).

The performance of the three groups of underperforming banks reaffirms the conclusions of Andreeva et al. (2019), who identified consolidation as the most appropriate strategy for banks with sound balance sheets but weak incomegenerating capacity. Indeed, this group of banks seems to not only have been the

² Access to such measures was often conditional upon borrowers having no prior financial difficulties, so as to confine government support to viable companies.

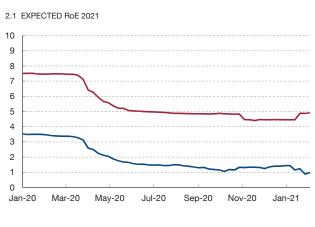
EXPECTED BANK PROFITABILITY IN THE EURO AREA IS WEAKER THAN IN OTHER ADVANCED ECONOMIES POST-COVID-19

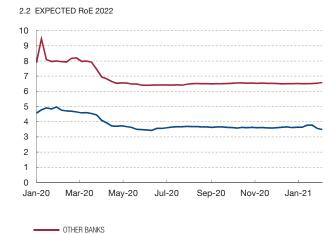




2 ANALYST EXPECTATIONS FOR RoE OF EURO AREA BANKS IN 2021 AND 2022 FOR UNDERPERFORMING BANKS AND THEIR PEERS (Percentages, average within group)

UNDERPERFORMING BANKS





SOURCES: Bloomberg and Refinitiv.

NOTE: The chart shows the median analyst forecast across listed banks in each jurisdiction based on a large sample of listed banks. Nordea is included in the Nordic region. Based on 36 listed euro area banks.

most resilient among underperformers to the shock of the pandemic but also more resilient than the average bank which did not underperform in the past, indicating that the financial risks arising from their hypothetical participation in mergers and acquisitions (M&As) would have been contained. These banks also made progress towards reducing their excessive cost base during the pandemic. By contrast, Andreeva et al. (2019) suggested that where profitability was weak due to a high stock of NPLs, and NPL problems were idiosyncratic to a specific bank, acquisition of the sound parts of the business by a healthy bank may be possible. Where NPL problems are systemic in nature, system-wide measures to reduce NPLs may have to complement consolidation in remediating the weak profitability.

Consolidation as part of the solution

Consolidation in the banking sector may address some of the root causes of weak bank profitability in the euro area. Acquisitions can reduce overcapacity and provide an opportunity to decisively reduce the excessive cost base of the banking sector, but they also entail risks for the banks involved and side effects for competition, market structure and financial stability which need to be carefully analysed. Although consolidation activity may give rise to substantial benefits, the ECB remains neutral on specific consolidation projects, which should be first and foremost driven by market forces and the economic interests of the parties involved. The role of supervisors is to assess such transactions from a prudential perspective. Consolidation may also not always be the right solution, and should not crowd out other means of restoring sustainable profitability, such as tackling cost inefficiencies and improving income diversification.

Potential benefits and risks associated with bank M&As

Merger and acquisition activity in the European banking sector has been slow since the end of the global financial crisis [see ECB (2020)]. Consolidation of European banks proceeded in two waves. Strong domestic M&A activity in the late 1990s and early 2000s³ was followed by a brief slowdown during the economic downturn, reaching a trough in 2003. As the European economy grew rapidly and European economic and financial integration progressed in the run-up to the global financial crisis, cross-border transactions accounted for a major part of overall M&A activity, culminating in 2007.4 Since the crisis, the value of bank mergers has remained at a small fraction of pre-crisis levels. This has been ascribed to low bank valuations, weak profitability, and increasing regulatory constraints [Hartmann et al. (2017) and Krusec (2020)]. Low valuations in particular may have discouraged banks from bidding for potential acquisition targets during this period, as the costs of consolidation (e.g. in terms of restructuring charges) were seen as difficult to absorb without raising new, costly capital, which could dilute existing shareholders. However, low valuations of a potential target offer an opportunity for a healthy acquirer who may be able to purchase the target at a sizeable discount relative to the fair value of acquired assets and liabilities. The resulting badwill could help absorb the costs of consolidation and reinforce the capitalisation of the merged entity. In such cases, robust valuation of badwill would be essential, as an overly generous estimate of badwill might be perceived as inflating the value of assets which may in the future

³ For example, this wave resulted in the creation of BBVA through the merger of BBV and Argentaria (1999), the creation of Unicredit and Banca Intesa through a series of mergers of Italian banks, and the merger of Banque Nationale de Paris and Paribas to form BNP Paribas (2000).

⁴ Prominent examples include the 2007 acquisition of ABN AMRO by a consortium of Fortis, Royal Bank of Scotland and Banco Santander, which at the time was the largest bank merger in the world, as well as the acquisitions of Bayerische Hypo- und Vereinsbank by Unicredit in 2005 and of Abbey National by Banco Santander in 2004.

require a write-down. Lifting some misconceptions about these issues in order to favour resilient consolidations was one important motivation for the publication of the Guide on the ECB's supervisory approach [see ECB (2021)].

Motivations for bank consolidation vary depending on the type of transaction. Bijsterbosch and Deghi (2017) found that cost synergies are a frequent rationale for mergers, particularly in the domestic context, and that less cost-efficient banks have a greater probability of becoming the target of an acquisition. At the same time, cross-border transactions are often associated with seeking new business opportunities, although the dearth of cross-border mergers since the global financial crisis suggests that this case for mergers might have lost some of its appeal amidst the overall reduction in the size and international footprint of European banks in recent years. The literature also notes that some M&A transactions may not follow value-creation objectives. Misaligned incentives generated by management remuneration linked to the growth of banks may be a motivation for acquisitions [Anderson et al. (2004)]. Such transactions may be particularly problematic from a prudential perspective, because bank executives may not have the right incentives to conduct appropriate due diligence or to manage the risks of the transaction.

By enabling investment, unlocking economies of scale and allowing diversification, consolidation should facilitate banks' preparations to face long-term challenges. Lower marginal costs allow the merged entity to invest and adjust its business model to the long-term challenges, such as those related to adoption of digital technologies and the transition towards a low-carbon economy. The scale of such investments may be unsustainable for smaller banks, but achievable for the merged entities.

The track record of bank mergers is mixed and indicates that proposed transactions should be carefully evaluated. Altunbas and Marqués-Ibáñez (2004) assessed the effect of mergers on bank profitability in Europe as moderately positive based on data from the 1990s and early 2000s. They also noted the strategic diversification benefits provided by cross-border mergers. But more recent assessments have come to less positive conclusions. Beccalli and Frantz (2009), whose data end in the mid 2000s, found that M&As undertaken by European banks led to a slight deterioration in bank profitability, as efficiency gains were largely passed on to the customers. Behr and Heid (2011) estimate the medium-term effects to be broadly neutral. Based on a review of empirical literature, Kolaric and Schiereck (2014) conclude that the evidence of performance improvements following M&A transactions is mixed and may vary across countries. When focusing on stock market reactions to M&A transactions, they find that shareholders in target entities seem to benefit from M&As, but that the benefits to the acquirer are less clear-cut.

Case studies underscore the financial and operational risks that bank mergers bring. Examining one of the most prominent banking collapses in the global financial crisis, namely Royal Bank of Scotland (RBS), the UK Financial Services Authority [FSA (2011)]

concluded that the acquisition of ABN AMRO by RBS was among six key factors in its subsequent failure. The FSA found that the acquisition had been conducted without appropriate heed to the risks and with insufficient due diligence. RBS was judged to have overpaid for the target, to have accepted a risky funding strategy for the deal, and to have been overconfident in its ability to integrate the business of ABN AMRO. Similarly, insufficient due diligence regarding legacy assets acquired in the takeover of Dresdner Bank contributed to the financial distress and state-led recapitalisation of Commerzbank in 2008. Analysing the factors that led to the financial sector assistance programme for Spain, the European Commission (2012) noted that bank mergers in the savings bank sector - owing to the specificities of their applicable regulations and their limitations to raise capital – involved institutions with the same business model, helped reduce excess capacity and sometimes created larger entities that were not more resilient. Subsequently, several of the savings banks required recapitalisation by the Spanish authorities.⁵

Consolidation can carry benefits and risks to financial stability and market structure. A transaction which improves the resilience and business models of individual firms is likely to be positive from a financial stability perspective, as the merged entity becomes more resilient and therefore a shock absorber rather than a shock amplifier in times of crisis. By absorbing weaker targets, acquirers would remove the weakest players that have been unable to earn their cost of capital for many years, sometimes since the financial crisis of 2008. When well-designed and well-executed, consolidation transactions can contribute to the overall financial soundness of the banking system [Fernandez-Bollo (2020)]. When mature acquirers decide to absorb weaker targets in the market, the latter benefit from the best practices and good governance framework of the acquirers, which creates significant efficiency gains for the system [Shaffer (1993), Ayadi et al. (2013)]. This would also strengthen the stability and resilience of the banking system. In the monetary union, cross-border bank penetration leads to stronger private risk-sharing, which helps smooth the effect of domestic shocks on consumption [Giovannini et al. (2018)].

There is evidence that, despite risks to competition, further consolidation may improve the structure of the euro area banking market. On one hand, consolidation may distort the competitive banking market structure. Increasing their market power, larger banks could extract rent from customers, leading to a socially suboptimal provision of financial services. Hartmann et al. (2017) and Andreeva et al. (2019) show that concentration and market power in the European banking market have increased over the last two decades and that the market power of euro area significant institutions is markedly higher than that of less significant institutions. Nevertheless, at least on aggregate, consolidation of the euro area banking sector

⁵ The Spanish authorities committed €10.5 billion in 2010 to facilitating integration processes among savings banks. Spanish banks received further capital support amounting to €44.3 billion between 2011 and 2013 directed mainly at the former savings banks [see FROB (2019)].

has not come at the expense of customers. The increase in estimated market power came through reduced marginal cost of providing banking services, rather than through banks' ability to charge higher mark-ups. Anolli et al. (2015) also conclude that there is further room for consolidation that would not give excessive market power to individual banks. The competitive landscape in the European banking sector could therefore become healthier, while maintaining a sound degree of competition. Cross-border consolidation may also be beneficial to customers if new entrants improve the quality of banking services or are able to offer lower prices than incumbents.

Consolidation may also raise concerns about increased systemic risks owing to the increasing importance of large banks, although these are mitigated by the international regulatory framework. The creation of even larger and more systemically important banks through mergers may have adverse side effects, as the merged banks may increasingly benefit from an implicit subsidy associated with them being perceived as "too big to fail". The presence of very large banks may also make the financial sector prone to contagion, as sparse interbank networks dominated by a few central nodes could be less resilient to stress than more decentralised banking systems [Acemoglu et al. (2015)]. Excessive size may also lead to diseconomies of scale, as large financial conglomerates may be unwieldy to manage [Huljak, Martin and Moccero (2019)]. Following the global financial crisis, global and European regulators have scrutinised the systemic importance of large and complex banks and have adopted a range of reforms aimed at containing the systemic risks posed by such institutions and at ensuring that they can be resolved in an orderly fashion if they fail. Their evaluation is ongoing, and the preliminary findings suggest that banks have been made more resilient and resolvable [FSB (2020)]. However, the effectiveness of these reforms remain to be tested in practice.

4.2 Compatibility of M&As with prudential objectives: an assessment framework

The above considerations show clearly that not every proposed M&A transaction would improve financial stability and resilience of the firms involved. Banking supervisors should carefully assess each transaction on its own merits. Consolidation among banks should meet a number of criteria (see below) to ensure that it is compatible with prudential objectives and that the risks outlined in the previous section do not materialise.

4.2.1 Generate synergies

A consolidation project should lead to operating and financial synergies that will enhance revenues, reduce operating costs and lower capital costs [Copeland and

Weston (1988), Ayadi et al. (2013)]. Cost and revenue efficiencies are key elements in ensuring that the merged bank is less exposed to risks and becomes more resilient [Fiordelisi et al. (2011)]. However, to achieve these synergies, the merged entity needs to formulate a strategy that would identify, assess and exploit them efficiently, while avoiding over-optimistic assumptions. More precisely, the strategy underlying the consolidation project should consider cost complementarities, the integrations of infrastructures and the rationalisation of banking networks [Ayadi et al. (2013)].

4.2.2 Diversify sources of revenue

The consolidation strategy should provide a clear understanding of the main profitability drivers of the project. The strategy should aim at diversifying the sources of revenue and exploiting the revenue synergies resulting from the business combination. In the current low interest rate and low growth environment, there is an increasing pressure on banks to generate revenue. With low organic growth in mature banking markets in Europe, acquisition offers a possible way for banks to remediate the long-lasting concern about revenue generation. It is also a way to diversify revenue sources through access to new products or markets, for example by increasing fee income activities and diversifying from net interest income, or by accessing a new geographical market. Moreover, cross-border mergers can provide strategic diversification benefits [Altunbas and Marqués-Ibáñez (2004)]. A more diversified business mix can be more resilient to risks as long as individual business lines are not perfectly correlated [Elsas et al. (2010)]. This can help banks to become more profitable, increase performance and reduce risks. Diversification benefits should be measured and managed in a prudent and balanced way.

4.2.3 Ensure that the merged firm is well capitalised

An important criterion for a successful consolidation is the capitalisation level of the merged entities, as the capitalisation of banks affects their efficiency [Berger and DeYoung (1997), Kwan and Eisenbeis (1997), Williams (2004)]. Indeed, well-capitalised banks are more likely to reduce their costs through an adequate cost-reduction strategy and to become more efficient [Jeitschko and Jeung (2005), Fiordelisi et al. (2011)]. Stronger capitalisation also provides larger capital buffers to deal with the materialisation of any downside risks to the transaction. It is therefore important that the strategy underlying the consolidation project sets up a proper capitalisation plan that ensures full compliance with regulatory requirements and that can be adequately monitored by the merged entity. A thorough capital plan is a key factor in obtaining long-term efficiency gains that will ultimately guarantee the sustainability of the bank.

4.2.4 Ensure a stronger refinancing base

The consolidation project should be based on a sound funding strategy that guarantees a funding mix in line with the business model of the merged entity. It should aim at achieving stable funding. Lower risk and improved profitability catalysed by the merger can translate into a lower cost of funding and better funding conditions, and deliver a stronger refinancing base for the merged entity.

4.2.5 Strong governance and management of change

Acquirers should be well-equipped to integrate the target, at both the operational and the strategic level. Indeed, in order to obtain the desirable technical efficiency and resilience, the consolidation project should rely on a proper strategy to manage the merged entities' resources and adopt adequate input-output mixes depending on prices, costs, the risk diversification strategy and revenue synergies [Ayadi et al. (2013)].

Nevertheless, execution of the strategy is as important as its design and planning in ensuring a successful consolidation. Strong governance and management structures are key elements in ensuring the monitoring and proper steering of the operational and strategic aspects of the consolidation project. For the consolidation to be efficient, the merged entity should be able to take managerial actions which translate the strategy into tangible results. Its management body and board of directors should be able to respond with corrective actions in the event of deviations from the initial strategy [Weber (2017)]. A strong management structure should generally follow the principles set out in the EBA Guidelines on internal governance (EBA/ GL/2017/11). More precisely, in the case of a consolidation project, those principles imply developing, for the post-merger phase, a clear decision-making capacity for the new structure of the group, a consistent allocation of responsibilities and decision-making processes, a strong leadership team with a proven track record, not only in banking but also in consolidation projects, and a risk management and internal control framework which should be implemented in a timely fashion to be efficient. Furthermore, the consolidation strategy needs to be supported by adequate remuneration schemes to ensure that management incentives are aligned with the objectives of the merger.

5.1 ECB guide on consolidation: overview of the supervisory approach

5.1.1 Role of the ECB as a supervisor in the context of consolidation

In the context of consolidation, the role of ECB Banking Supervision is to assess from a prudential perspective M&A transactions arising in the market. Consolidation must remain a market-driven process, and therefore supervisors do not aim to promote specific types of consolidation. They monitor whether transactions prompted by the market comply with prudential requirements and supervisory expectations. Transactions should be based on a credible business and integration plan which improves the sustainability of the business model and respect high standards of governance and risk management to ensure that the combined entity achieves a viable and sustainable prudential position overall.

Over recent years, market participants have expressed an increasing interest in understanding how ECB Banking Supervision would assess proposed mergers and acquisitions concerning banks under its supervision. Although the risks associated with low profitability and overcapacity in the banking sector in Europe are widely recognised, there might have been a misperception in the market that ECB Banking supervision was in practice opposed to consolidation [Enria (2020)].

In order to address market concerns and clarify its supervisory expectations regarding sustainable consolidation projects, on 12 January 2021 ECB Banking Supervision published its Guide on the supervisory approach to consolidation in the banking sector [ECB (2021)].

Greater transparency is intended to make supervisory actions more predictable and to avoid any misperceptions of supervisory expectations. This article is part of ECB Banking Supervision's effort to increase the transparency and predictability of supervisory approaches and supervisory outcomes.

5.1.2 Main principles followed by the ECB in the assessment process

The Guide lays down the main principles that ECB Banking Supervision uses as a starting point when assessing consolidation projects. However, as ECB Banking Supervision knows from experience, there cannot be a "one size fits all" approach to banking sector consolidation. Consequently, ECB Banking Supervision takes a case-by-case approach, based on the proportionality principle, and the main principles of its Guide will be tailored to the specificities of each transaction.

The ECB expects the applicants to present a credible strategy underlying the consolidation transaction. That strategy should be based on conservative assumptions and demonstrate that the merged entity would be able to maintain full compliance with the applicable prudential requirements. The ECB will assess the plausibility of the strategy in the light of expected macroeconomic and financial developments. In doing so, it will take into account the criteria for consolidation outlined in the previous section. Among other elements, it will review balance sheet and profitability projections, the liquidity and funding structure and the governance and risk management framework. Regarding the latter, the ECB expects that it would follow the principles laid down in the applicable EBA guidelines and that it would be adequate to deal with possible execution risks and integration challenges.

The Guide provides particularly focused guidance on three key prudential aspects: the setting of Pillar 2 capital requirements and guidance, the treatment of badwill and the use of internal models. In so doing, the Guide aims to clarify how supervisors use their powers with respect to consolidation projects within the current regulatory framework.

5.1.3 Capital requirements

The Guide clarifies that the determination of Pillar 2 requirements (P2R) and Pillar 2 guidance (P2G) of the combined entity will use the weighted average of the premerger P2R and P2G levels of the two combining entities as a starting point. Subject to a case-by-case assessment, this starting point can be adjusted upwards or downwards. More precisely, two principles will be given due consideration for the determination of the post-merger P2R and P2G:

- an assessment of the risk profile with a particular focus on the strategy to mitigate the weaknesses of the combined entity and the execution risk in the business plan;
- the reflection of the risk profile of the combined entity in the level of Pillar 2 capital.

ECB Banking Supervision undertakes to provide an indication of the capital requirements applicable to the combined entity during the application process. These capital requirements are expected to remain unchanged for a least a year in order to provide certainty to the combined entity. Adjustments to these initial requirements can be expected if any substantial new developments arise during the implementation phase. As a general rule, it is expected that the first post-merger regular SREP will not result in an increased own funds requirement. However, following the completion of the consolidation project, the combined entity will be

subject to enhanced monitoring, which may lead to further adjustments to capital requirements

The intensity of the supervisory response of ECB Banking Supervision will mainly reflect material deviations from the business plan, considering that the costs of a business combination are generally frontloaded, whereas the benefits come later. Capital requirements could be lowered if the bank is able to demonstrate that the business combination is generating an effective improvement in the resilience and risk profile of the merged entity, for example owing to materialisation of diversification benefits and/or cost synergies.

In its action, where appropriate ECB Banking Supervision will liaise with relevant authorities, such as the Single Resolution Board, to anticipate, inter alia, issues regarding the resolvability of the combined entity. ECB Banking Supervision will also liaise with the relevant macroprudential authorities.

5.1.4 Badwill

ECB Banking Supervision expects profits stemming from badwill to contribute to the capital of the combined entity. In its Guide, ECB Banking Supervision clarifies its supervisory expectations regarding the treatment of badwill. Badwill is generated if an entity acquires another entity at a price that is below the estimated fair value of its assets net of the value of its liabilities. This accounting gain is recognised as a one-off profit. However, badwill is likely to reflect external investors' uncertainties regarding the valuation and the profitability perspectives of the acquired entity. Therefore, in order to address those concerns, the acquirer is expected to invest in the sustainability of the business model of the combined entity and not to pay out profits stemming from badwill as dividends until the soundness of the business model has been firmly established.

ECB Banking Supervision expects badwill to be subject to a thorough and prudent valuation. It will recognise "duly verified accounting badwill from a prudential perspective, expecting it to be appropriately calculated after thorough accounting recognition and valuation of assets and liabilities". This valuation is also expected to fully reflect the adjustments required by prudential regulations and to take into account ECB Banking Supervision guidance.

5.1.5 Internal models

In the case of a consolidation transaction, the continued use of internal models can raise concerns, as approval to use internal models is not transferable from one legal entity to another. As explained in the Guide, if the consolidation transaction results

in the formation of a new legal entity, a legal issue arises, as new legal entities cannot have approval to use internal models from the outset. If the consolidation transaction results in one legal entity absorbing another legal entity, the acquirer may have neither approval to apply its internal models to the newly acquired exposures, nor permission to use the model of the acquired entity.

However, ECB Banking Supervision will accept the temporary use of existing internal models subject to a strong roll-out plan aimed at tackling specific internal model issues created by the merger. This temporary tolerance will apply until banks have adapted their models to the new consolidated entity and received approval for their use. Indeed, a temporary return to the standardised approach could lead unnecessarily to higher capital requirements and a reduction in risk sensitivity. Therefore, the aim of this temporary tolerance is to prevent any supervisory burden that could result from such a situation.

ECB Banking Supervision will set the duration of this temporary tolerance, taking into account the specificities of each situation. Sufficient time will be provided for such transition to be performed smoothly and ensure that the updated internal model framework of the combined entity fully meets the requirements of ECB Banking Supervision.

5.2 Issues outside of the remit of the banking supervisor

The expected interest in bank consolidation is also likely to raise issues that fall outside the remit of banking supervisors. M&A transactions affect the structure of the market, may reduce competition, and could amplify systemic risks associated with the presence of large and complex banks. These issues are of concern to, among others, macroprudential authorities. They may also be of interest to competition authorities, resolution authorities and other stakeholders in the public sector. Cooperation between these authorities and microprudential supervisors is therefore essential when assessing a specific consolidation proposal.

5.2.1 Market structure and competition concerns

Within the single market and the banking union, consolidation could be assessed from a competition and market structure angle from both a European and a national perspective. The choice of perspective may be related to the nature of the business. Some banking services lend themselves more to being offered on a cross-border basis, such as investment banking or lending to large corporates, while markets for other services may be domestic or even, as in case of retail banking services in some countries, regional. As a general consideration, the implications of consolidation for market structure and competition may be of less concern in the case of cross-

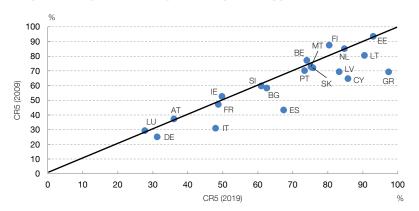
border mergers than domestic mergers and in the case of mergers which aim at diversifying revenues than mergers aimed at generating cost synergies.

Market structures differ substantially between national banking markets in the euro area, and this has implications for the desirable direction of further consolidation. The share of the five largest credit institutions, which is a standard measure of market concentration, varies from about 30% in Luxembourg and Germany to over 90% in Estonia, Greece and Lithuania (see Chart 6). Looking at a broader range of competition indicators, Gardó and Klaus (2019) also conclude that the contribution of competition to the comprehensive indicator of overcapacity in the euro area banking sector varies significantly between countries. Recent ECB studies suggest that, at the aggregate euro area level, there is room for further consolidation without endangering financial stability, and that the recent increases in concentration seem advantageous to financial stability [Huljak, Reghezza and Rodriguez d'Acri (2019)]. However, this aggregate conclusion may not apply to every country, and the room for domestic consolidation in the countries where the banking sector is already highly concentrated and individual banks command high market power may therefore be limited.

Further reduction in competition may lead to suboptimal outcomes for both consumers and financial stability. Lower market power of banks is often associated with greater access to finance and lower cost of finance [Claessens and Laeven (2005), Chauvet and Jacolin (2017)], although evidence supporting an opposite view has also been brought forward [Fungacova et al. (2017)] and ascribed to a weakening of lending relationships caused by increased competition, which in turn increases monitoring costs for lenders. Economic literature suggests that the relationship between competition and financial stability is ambiguous and may vary due to country-specific factors [Beck, De Jonghe and Schepens (2013)]. More competition could encourage stronger risk-taking [Allen and Gale (2004)], but also serve as an incentive to improve the efficiency of banks and to lower lending rates, which increases the prospect that borrowers might be able to repay their debts [Martínez-Miera and Repullo (2010)]. This may produce an inverted U-shaped relationship in which both too little and too much competition could put financial stability at risk.

Concerns regarding market power are a matter for competition authorities, whose approval is required for consolidation operations alongside approval from supervisory authorities. It is the role of competition authorities to assess whether concentration is detrimental to customers and ECB Banking Supervision takes their stance fully on board when assessing consolidation projects. There is a balance to be struck between competition which encourages market participants to innovate and to improve their products, and competition which might lead market participants to take excessive risks, for example by increasing their share of riskier assets, a situation that could be detrimental to financial stability.

Chart 6
CONCENTRATION IN NATIONAL BANKING MARKETS IN THE SSM AREA



SOURCE: ECB macroprudential database.

NOTE: CR5 denotes the share of the five largest credit institutions in the total assets of the national banking sector. Countries below (above) the bisecting line show a higher (lower) concentration ratio in 2019 than in 2009. Countries: AT - Austria, BE - Belgium, BG - Bulgaria, CY - Cyprus, DE - Germany, EE - Estonia, ES - Spain, FI - Finland, FR - France, GR - Greece, IE - Ireland, IT - Italy, LT - Lithuania, LU - Luxembourg, LV - Latvia, MT - Malta, NL - The Netherlands, PT - Portugal, SI - Slovenia, SK - Slovakia. For Croatia (HR), the CR5 stands at 79.8% in 2019 (no data available for 2009).

Competition authorities and prudential authorities need to liaise closely to find this balance [Angeloni (2016)].

Cross-border consolidation may offer a solution to competition concerns. In principle, take-overs of domestic banks by new entrants would not materially change the market structure, but could help unlock synergies and diversification benefits. Nevertheless, cross-border consolidation comes with specific risks that warrant careful assessment.

Remaining regulatory impediments to cross-border mergers in the Single Market should be carefully assessed and, where possible, lifted. The development of the single rulebook has significantly reduced the regulatory fragmentation of the European banking landscape, and the creation of the Single Supervisory Mechanism (SSM) led to further harmonisation of supervisory practices. The SSM also harmonised the application of many of the existing national options and discretions available to supervisors in EU Member States participating in the banking union [ECB (2016)]. These actions should facilitate cross-border consolidation by addressing many of the constraints identified in the economic literature [Buch and DeLong (2012)]. The existence of a Single Resolution Mechanism (SRM) is also an important factor in ensuring homogeneous treatment of banking difficulties in the banking union. That notwithstanding, national specificities remain embedded in national laws [see Gardella et al. (2020)].

Cross-border banking groups are often unable to manage their capital and liquidity on a fully consolidated basis. Among other issues, this is due to the presence of national large exposure limits and to ring-fencing of capital and bail-in-able liabilities in the local subsidiaries [Praet (2018)]. While supervisors may grant liquidity waivers

to banking groups, liquidity requirements applied at the individual bank level and national ring-fencing measures may prevent parent companies from efficiently managing their liquidity resources within the group, even within the banking union [see Enria and Fernandez-Bollo (2020), who estimate that about €200 billion of high-quality liquid assets in cross-border subsidiaries of significant credit institutions are not transferable].

Further harmonisation would only be possible if lawmakers take the initiative to reduce further such obstacles to cross-border consolidation. Indeed, more can be done to remove incentives for ring-fencing by providing safeguards for the resilience of subsidiaries in cross-border groups. In particular, the enforceability of intra-group financial support agreements could be strengthened. As proposed by Enria and Fernandez-Bollo (2020), one possibility would be to link the granting of cross-border liquidity waivers to the presence of adequate intragroup financial support agreements included in the recovery plans to map out the appropriate triggers for providing intragroup support at an early stage, which would be well before the bank might be considered to be failing or likely to fail, and granting the supervisor the power to enforce the provision of support under specific circumstances.

5.2.2 Macroprudential concerns related to systemically important banks

Macroprudential authorities also need to assess concerns related to consolidation where it would increase the systemic footprint of large banks. As with all macroprudential instruments specified in EU law, the role of the ECB in this context is laid down in the SSM Regulation. The national designated authorities are tasked with setting macroprudential capital buffers, subject to a review by the ECB, which has the power to object to the national decisions or to set higher capital buffers than proposed by the national authorities.

The regulatory framework already provides for instruments that address the systemic risks generated by the presence of large and complex banks.

Since the global financial crisis, regulators have implemented an integrated set of policy measures to reduce the probability and impact of the failure of systemically important financial institutions. While consolidation may mechanically lead to an increase in the systemic importance of a bank, this effect could be countered by appropriate macroprudential measures and measures taken to ensure that the merged bank remains resolvable. Macroprudential authorities are mandated to set capital buffers for systemically important institutions, at both the global level (G-SIIs)

⁶ Article 5 of the Council Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (OJ L 287, 29.10.2013, p. 63).

and the domestic level (referred to as Other Systemically Important Institutions or O-SIIs). The calibration of these capital buffers should be related to the size, interconnectedness, cross-border activities, complexity and substitutability of activities of the identified banking groups vis-à-vis the rest of the banking system [EBA (2014b)]. In most EU countries, macroprudential authorities have adopted bucket schemes based on ranges of scores of systemic importance to determine the calibration of O-SII capital buffers [EBA (2020)]. This standard approach mechanically links a meaningful increase in the systemic footprint of a merged firm to a larger capital buffer, thereby in principle recognising and appropriately addressing the greater risks resulting from the increased systemic importance at the domestic level. From 2023 onwards, G-SIIs will be additionally subject to a surcharge on their leverage ratio requirements. Banks are also required to hold additional lossabsorbing capacity to facilitate their effective resolution. Finally, concerns about increased systemic footprint could also be mitigated by the positive effects of risk diversification which consolidation often aims to achieve.

Notwithstanding this progress, the buffer framework, owing to its reliance on consolidated group-level data, may put cross-border mergers at a disadvantage, in particular in the banking union setting, where the resolution of systemically important banks is funded and implemented at the European level. A cross-border transaction would substantially increase the systemic importance of the acquiring bank, and that increase would be particularly steep if the bank is based in a country where the banking sector is domestically focused.⁷ The acquisition of a bank operating in another country may, in certain circumstances, be more capital-intensive than a domestic acquisition of the same size.8 However, this would not account for two important dimensions. A cross-border acquisition could produce diversification benefits that reduce the risk to the domestic financial sector. In the banking union context, where the large banks fall under the remit of the Single Resolution Board (SRB), the risks associated with the potential failure of an internationally active bank would also fall on the entire banking union and not solely on the domestic financial sector.

EU lawmakers have already accounted for the existence of the banking union in the context of the capital buffers for G-SIIs. In addition to the standard and wellestablished methodology agreed by the Basel Committee on Banking Supervision

⁷ Under the harmonised scoring methodology provided for under the EBA Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs) (EBA/GL/2014/10), cross-border exposures have a fixed weight of 16.66% in the total O-SII score. In an extreme case where the banking sector has no prior cross-border exposure, a foreign acquisition may therefore increase the score of the acquiring bank mechanically by at least 1,666 basis points, which is likely to significantly increase the applicable O-SII buffer rate. These effects would be less pronounced if the acquiring bank operates in a banking system which has non-negligible cross-border operations.

⁸ In fact, as the O-SII framework provides a relative measure of banks' systemic importance within the system, it can eventually yield a perverse outcome in which the O-SII buffer applicable to the bank taking over a foreign bank increases mechanically, while the O-SII buffers of its competitors decrease (as the higher score obtained by the merged bank mechanically reduces in the scores of the other banks).

(BCBS), national designated authorities may also use an alternative EU-specific methodology which treats cross-border activities within the banking union as domestic activities. They may subsequently reduce the capital buffer for a G-SII based in their country if the G-SII score obtained under this alternative methodology is suitably lower.9

Extending such an approach to the O-SII framework would address the currently unequal treatment of domestic and other cross-border exposures within the banking union. As a European authority, the ECB treats the euro area and all other EU countries participating in European banking supervision as a single jurisdiction. A European perspective on systemic importance and "too big to fail" - which is different from the national perspective of the Member State - is justified by the common supervision and resolution framework applicable within the banking union.

ECB Banking Supervision fully recognises the potential issues raised by the increased systemic importance of banks participating in mergers and acquisitions. The ECB monitors the level of O-SII buffers to ensure that relevant systemic and macroprudential risks are addressed in a consistent manner within and across SSM countries, as specified in the SSM Regulation, in close relationship with macroprudential authorities. As resolvability is a key part of risk mitigation, resolution authorities, in particular the Single Resolution Board, also play an important role in addressing the side effects of bank consolidation on the systemic footprint of large banks.

Conclusions

Euro area bank profitability was weak prior to the COVID-19 pandemic, and the weaknesses have been amplified by the macro-financial shocks associated with the pandemic. However, the decline in profitability was unevenly distributed among the underperformers, as banks holding large legacy NPL stocks saw a steep decline in profitability. Another major group of weak performers - banks whose income-generating capacity was low - seem to have been more resilient, as their aggregate profitability remained broadly unchanged, albeit at a continued low level.

The pandemic could be a catalyst for bank consolidation which could, in the medium to long term, address some of the profitability challenges in the euro area banking

⁹ This alternative methodology allows national macroprudential authorities to assign a G-SII to the next lower subcategory of G-SIIs than that implied by the standard G-SII score. G-SIIs already assigned to the lowest subcategory cannot be moved to a lower subcategory. See Article 131(10)(c) of the Capital Requirements Directive (CRD) (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, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, OJ L 176, 27.6.2013, p. 338) and the EBA's draft regulatory technical standard amending Commission Delegated Regulation (EU) No. 1222/2014 on the specification of the methodology for the identification of global systemically important institutions (RTS/2020/08).

sector. Consolidation could unlock cost savings and revenue synergies and improve the operational and financial resilience of the institutions involved. It could also be beneficial from a financial stability perspective, by improving the resilience and efficiency of the banking system and strengthening its ability to adapt to structural challenges. However, as illustrated by many historical case studies, bank consolidation may give rise to execution and financial risks, and it comes with side effects, such as the increase in the systemic importance of large banks and in the market power of individual banks. Some of these side effects could be addressed by cross-border consolidation within the Single Market.

In view of the expected interest in bank consolidation, the ECB has recently issued supervisory expectations which clarify how the ECB will assess mergers from a microprudential perspective. Consolidation should remain a market-driven process, but not all mergers would be aligned with the micro- and macroprudential objectives. The merger applicants should demonstrate that a specific transaction would not put compliance with prudential requirements at risk, and that the financial and execution risks are well understood and managed. The ECB has also clarified its approach to capital requirements, use of internal models, and prudential treatment of badwill. Mergers may also require an assessment by competition authorities, and may have structural implications for macroprudential policy. The ECB will continue to liaise with relevant authorities as appropriate.

Finally, more regulation targeted at furthering financial integration will be necessary to complete the banking union, and further contribute to enhancing the level playing field in the Single Market in order to achieve a genuinely single rulebook for banking, free from national discretions and "home biases". Ultimately, implementation of the European Deposit Insurance Scheme should fully remove incentives for ring-fencing. Higher integration is expected to facilitate cross-border consolidation and crossborder banking, thereby allowing the banking sector to fully reap the profitability and financial stability gains of a truly single banking jurisdiction.

REFERENCES

- Acemoglu, D., A. Ozdaglar and A. Tahbaz-Salehi (2015). "Systemic Risk and Stability in Financial Networks", American Economic Review, 105(2), pp. 564-608.
- Af Jochnick, K. (2019). "Banking performance, competition and financial stability: a supervisory view", speech at the 7th Frankfurt Conference on Financial Market Policy entitled "European Banking - Too Much Competition?", 15 November.
- Albertazzi, U., D. Andreeva, M. Belloni, A. Grassi, C. Gross, J. Mosthaf and T. Shakir (2020). "Prospects for euro area bank lending margins in an extended low-for-longer interest rate environment", Financial Stability Review, ECB, November.
- Allen, F., and D. Gale (2004). "Competition and Financial Stability", Journal of Money, Credit and Banking, Vol. 36, pp. 453-480.
- Altavilla, C., D. Andreeva, M. Boucinha, and S. Holton (2019). Monetary policy, credit institutions and the bank lending channel in the euro area, Occasional Paper Series, No. 222, ECB, June.
- Altavilla, C., P. Bochmann, J. De Ryck, A.-M. Dumitru, M. Grodzicki, H. Kick, C. Melo Fernandes, J. Mosthaf, C. O'Donnell and S. Palligkinis (2021). Measuring the cost of equity of euro area banks, Occasional Paper Series, No. 254, ECB, January.
- Altunbas, Y., and D. Marqués-Ibáñez (2004). Mergers and acquisitions and bank performance in Europe the role of strategic similarities, Working Paper Series, No. 398, ECB, October.
- Anderson, C., D. Becher and T. Campbell (2004). "Bank mergers, the market for bank CEOs, and managerial incentives", Journal of Financial Intermediation, Vol. 13, pp. 6-27.
- Andreeva, D., M. Grodzicki, C. Móré and A. Reghezza (2019). "Euro area bank profitability: where can consolidation help?", Financial Stability Review, ECB, November, pp. 107-118.
- Angeloni, I. (2016). "Bank Competition and Bank Supervision", speech at CaixaBank, Barcelona, 4 July.
- Anolli, M., E. Beccalli and G. Borello (2015). "Are European banks too big? Evidence on economies of scale", Journal of Banking & Finance, Vol. 58, Issue C, pp. 232-246.
- Ayadi, R., J.-P. Boussemart, H. Leleu and D. Saidane (2013). "Mergers and Acquisitions in European banking: higher productivity or better synergy among business lines?", Journal of Productivity Analysis, Vol. 39(2), pp. 165-175.
- Baldursson, F., and R. Portes (2013). Gambling for resurrection in Iceland: the rise and fall of the banks, CEPR Discussion Paper, No. 9664, September.
- Beccalli, E., and P. Frantz (2009). "M&A Operations and Performance in Banking", Journal of Financial Services Research, Vol. 36.
- Beck, T., O. De Jonghe and G. Schepens (2013). "Bank competition and stability: Cross-country heterogeneity", Journal of Financial Intermediation, Vol. 22, pp. 218-244.
- Behr, A., and F. Heid (2011). "The success of bank mergers revisited. An assessment based on a matching strategy", Journal of Empirical Finance, Vol. 18, pp. 117-135.
- Berger, A. N., and R. DeYoung (1997). "Problem loans and cost efficiency in commercial banking", Journal of Banking & Finance, Vol. 21, pp. 849-870.
- Bijsterbosch, M., and A. Deghi (2017). "Cross-border mergers and acquisitions in the EU banking sector: drivers and obstacles", Financial Stability Review, ECB, November, pp. 154-157.
- Buch, C., and G. DeLong (2012). "Banking Globalization: International Consolidation and Mergers in Banking", in A. Berger, P. Molyneux and J. Wilson (eds.), The Oxford Handbook of Banking, Oxford University Press.
- Chauvet, L., and L. Jacolin (2017). "Financial Inclusion, Bank Concentration, and Firm Performance", World Development, Vol. 97, pp. 1-13.
- Claessens, S., and L. Laeven (2005). Financial Dependence, Banking Sector Competition, and Economic Growth, Policy Research Working Paper, No. 3481, World Bank.
- Constâncio, V. (2014). "Banking Union: meaning and implications for the future of banking", speech at Banking Union Conference organised by the Master in Banking and Financial Regulation, Navarra University, Madrid, 24 April.
- Copeland, T. E., and J. F. Weston (1988). Financial Theory and Corporate Policy, Pearson, 3rd edition.

- Elsas, R., A. Hackethal and M. Holzhäuser (2010). "The anatomy of bank diversification", *Journal of Banking & Finance*, Vol. 34, Issue 6, pp. 1274-1287.
- Enria, A. (2020). Introductory statement at the press conference on the results of the 2019 SREP cycle, Frankfurt, 28 January.
- Enria A., and É. Fernandez-Bollo (2020). "Fostering the cross-border integration of banking groups in the banking union", *The Supervision Blog*, ECB, 9 October.
- European Banking Authority (2014a). Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP) (EBA/GL/2014/13), December.
- European Banking Authority (2014b). Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-Slls) (EBA/GL/2014/10), December.
- European Banking Authority (2017). Guidelines on internal governance under Directive 2013/36/EU (EBA/GL/2017/11), September.
- European Banking Authority (2020). EBA report on the appropriate methodology to calibrate O-SII buffer rates, December.
- European Central Bank (2016). ECB Guide on options and discretions available in Union law, November.
- European Central Bank (2018). SSM thematic review on bank profitability and business models Report on the outcome of the assessment, September.
- European Central Bank (2020). Financial Integration and Structure in the Euro Area, March.
- European Central Bank (2021). Guide on the supervisory approach to consolidation in the banking sector.
- European Commission (2012). The Financial Sector Adjustment Programme for Spain, European Economy Occasional Papers, No. 118, October.
- Fell, J., and G. Schinasi (2005). "Assessing financial stability: Exploring the boundaries of analysis", *National Institute Economic Review*, No. 192, April.
- Fernandez-Bollo, É. (2020). "Consolidation can secure safe and sound banks", Supervision Newsletter, ECB, August.
- Financial Services Authority (2011). The failure of the Royal Bank of Scotland: Financial Services Authority Board Report, December.
- Financial Stability Board (2020). "Evaluation of the effects of too-big-to-fail reforms", 28 June.
- Fiordelisi, F., D. Marqués-Ibáñez and P. Molyneux (2011). "Efficiency and risk in European banking", *Journal of Banking & Finance*, Vol. 35, pp. 1315-1326.
- FROB (2019). 10 years of FROB. 2009-2019. A decade for financial stability, Madrid.
- Fungacova, Z., A. Shamshur and L. Weill (2017). "Does bank competition reduce cost of credit? Cross-country evidence from Europe", *Journal of Banking & Finance*, Vol. 83, pp. 104-120.
- Gardella, A., M. Rimarchi and D. Stroppa (2020). *Potential regulatory obstacles to cross-border mergers and acquisitions in the EU banking sector,* EBA Staff Paper Series, No. 7, February.
- Gardó, S., and B. Klaus (2019). *Overcapacities in banking: measurements, trends, and determinants,* Occasional Paper Series, No. 236, ECB, November.
- Giovannini, A., P. Hartmann, J. Imbs and A. Popov (2018). "Financial integration, capital market development and risk sharing in the euro area", keynote speech at the 8th International Conference of the Financial Engineering and Banking Society, Rome, 4 June.
- Hartmann, P., I. Huljak, A. Leonello, D. Marqués-Ibáñez, R. Martin, D. Moccero, S. Palligkinis, A. Popov and G. Schepens (2017). "Cross-border bank consolidation in the euro area", *Financial Integration in Europe*, ECB, May.
- Huljak, I., R. Martin and D. Moccero (2019). *The cost efficiency and productivity growth of the euro area banks,* Working Paper Series, No. 2305, ECB, August.
- Huljak, I., A. Reghezza and C. Rodriguez d'Acri (2019). "Market power, competitiveness and financial stability of the euro area banking sector", *Financial Stability Review*, ECB, November.
- Jeitschko, T. D., and S. D. Jeung (2005). "Incentives for risk-taking in banking A unified approach", *Journal of Banking & Finance*, No. 29, pp. 759-777.
- Jiménez, G., S. Ongena, J. Peydró and J. Saurina (2012). "Credit Supply and Monetary Policy: Identifying the Bank Balance Sheet Channel with Loan Applications", *American Economic Review*, Vol. 102, pp. 2301-2326.

- Kolaric, S., and D. Schiereck (2014). "Performance of bank mergers and acquisitions: a review of the recent empirical evidence", Management Review Quarterly, Vol. 64, pp. 39-71.
- Krusec, D. (2020). "Cross-border bank consolidation in the euro area: a global perspective", Financial Integration and Structure in the Euro Area, ECB, March.
- Kwan, S., and R. Eisenbeis (1997). "Bank Risk, Capitalization and Operating Efficiency", Journal of Financial Services Research, Vol. 12, pp. 117-131.
- Martínez-Miera, D., and R. Repullo (2010). "Does Competition Reduce the Risk of Bank Failure?", The Review of Financial Studies, Vol. 23, pp. 3638-3664.
- Molyneux, P., K. Schaeck and T. M. Zhou (2014). "Too systemically important to fail' in banking Evidence from bank mergers and acquisitions", Journal of International Money and Finance, Vol. 49, pp. 258-282.
- Praet, P. (2018). "Creating an enabling environment for pan-European banks in the Banking Union", speech at the Eurofi Financial Forum 2018, Vienna, 5 September.
- Shaffer, S. (1993). "Can megamergers improve bank efficiency?", Journal of Banking & Finance, Vol. 17(2-3), pp. 423-436.
- Weber, A. (2017). Bank Consolidation, Efficiency, and Profitability in Italy, IMF Working Paper, WP/17/175.
- Williams, J. (2004). "Determining management behaviour in European Banking", Journal of Banking & Finance, Vol. 28, pp. 2427-2460.