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Financial stability and financial system

Is there a need for greater banking consolidation in France and Europe?

In an environment of persistently low interest rates and low profitability, coupled with the impact of the health crisis, the European banking sector is facing many challenges, some of which may be partly related to overcapacity issues. Since 2009, mergers and acquisitions have slowed down in Europe, following the many deals made in response to the 2008 financial crisis. This article analyses the links between bank concentration and financial stability. It provides an overview of bank concentration in France and Europe and compares it to that observed in the United States. Finally, it highlights the importance of completing the European Banking Union to foster consolidation and contribute to enhancing the profitability of the European banking sector in the face of international competition and the emergence of new players in the era of digital transformation.

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JEL codes
E58, G21,
G28

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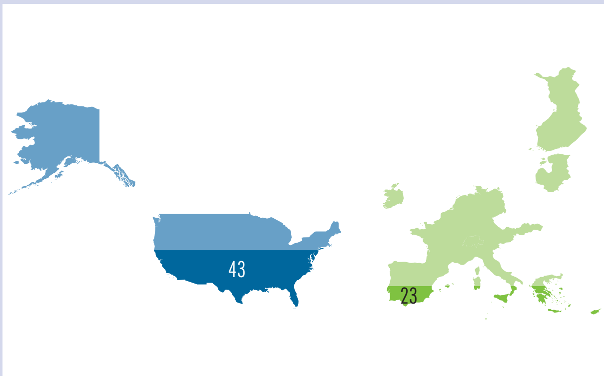
23%
euro area market share of the top five European banks in 2019 as a percentage of the sector's consolidated assets

43%
US market share of the top five US banks in 2019 as a percentage of the sector's consolidated assets

6.3%
euro area banks' return on equity, compared with 11% for US banks

Share of the top five US and euro area banks in their respective markets in 2019
(%)



Sources: US Federal Reserve, European Central Bank and authors' calculations.

1 Bank concentration and financial stability: an ambivalent relationship

The economic impact of financial crises can be particularly strong: in the aftermath of the 2008 financial crisis, the intervention costs[1] for banks in 25 Organisation for Economic Co-operation and Development (OECD) countries included in the study were estimated at just over 7% of the gross domestic product (GDP) of these countries on average over the 2008-2014 period (Grimaldi, Hofmeister, Schich, and Snethlage, 2016). The wave of bank concentration in the 1990s (observed at a global level) had raised the question of the impact of banking consolidations on risk-taking and financial stability (Group of Ten, 2001). The 2008 financial crisis further illustrated the need for greater resilience of the banking sector, while highlighting the risks associated with the presence of "too big to fail" institutions.

From a theoretical point of view, the relationship between bank concentration and financial crises is ambivalent and two opposing schools of thought have emerged in academic literature.

Overly concentrated banking systems may be fragile

Boyd and De Nicolò (2005) establish a negative causality between competition and risk-taking: **in a more concentrated system, banks tend to take greater risks.** Indeed, while increased bank concentration may yield benefits, notably in terms of diversification (especially geographic), cost reduction and productivity gains (see below), it is also accompanied by less competition, which can lead to higher risk asset portfolios. The increase in risky exposures in banks' balance sheets may be linked to an increase in borrowers' risk, as they are faced with higher interest rates in a less competitive market, or to less selective control over the granting of credit, as the dominant banks have less incentives to ration credit given the associated monitoring costs. This exposes them more to aggregate risk, ultimately weakening their balance sheets and increasing their probability of default (Caminal and Matutes, 2002). In addition, when banking systems are concentrated in too few groups, they may become so large, complex, and interconnected that their disorderly failures trigger other failures by contagion effect and cause lasting damage to the financial system and the real economy.

In the absence of appropriate resolution and safeguard mechanisms, governments could therefore be forced to intervene and carry out a direct rescue by mobilising public funds (bail out) in order to prevent any negative effects on the rest of the financial system and on the real economy. **This is the case for institutions considered as "too big to fail".** For a bank, knowing that it will be systematically rescued by government constitutes de facto an implicit subsidy and a form of public insurance for part of the risks it bears, creating a moral hazard situation (Financial Stability Board – FSB, 2020) as well as a competitive advantage by reducing its financing costs accordingly.

If we take this issue into account, an overly concentrated banking system may therefore lead "too big to fail" institutions to take on greater risks and this may, ultimately, lessen financial stability. It was precisely to mitigate this risk of moral hazard and to avoid having recourse to direct public intervention, as was the case during the 2008-09 global financial crisis, that an international regulatory framework on systemically important banks was introduced in 2010.[2] Similarly, a single resolution framework in Europe was set up within the Banking Union.[3]

Bank concentration may nevertheless also promote financial stability

According to Allen and Gale (2001, 2003 and 2004),[4] the reasons why bank concentration promotes financial

1 The (ex post) intervention costs are the direct financial costs of resolving an institution following its failure. In other words, it is equivalent to the immediate cost of making an insolvent institution solvent again (in the sense that the market value of its assets is at least equal to its total liabilities).

2 In 2010, the G20 endorsed the Financial Stability Board's (FSB) proposed framework for reducing the risk of moral hazard risk posed by Systemically Important Financial Institutions (SIFIs). This framework was further clarified by the FSB in 2011 (see FSB, 2011).

3 The Single Resolution Mechanism (SRM) aims to facilitate the resolution of bank failures with the least possible impact on taxpayers and the real economy. The SRM, one of the pillars of the European Banking Union, consists of a resolution authority at the level of the Banking Union (the Single Resolution Board) and a joint resolution fund financed by the banking sector.

4 Based on an Arrow-Debreu general equilibrium model that integrates a financial crisis model into a model of complete markets for which perfect competition leads to efficiency.

stability are mainly related to the benefits associated with the emergence of the most efficient economic model: "*In a complete market and under perfect competition, the incidence of failure is optimal in a laissez faire equilibrium*". In an ideal theoretical situation, competition determines the survival of institutions; bank concentration thus enables the most efficient economic model to prevail.

Several arguments are put forward:

- first, **concentrated banking systems may strengthen banks' market power and raise their profits**. Large profits enable banks to build up capital buffers against shocks and increase their franchise value (i.e., the capitalised value of expected future profits). This lowers the incentives for bank shareholders and managers to take excessive risks by extending poor quality loans (Hellmann et al., 2000) and thus reduces the likelihood of a systemic banking crisis (Beck, Demirgüç-Kunt, and Levine, 2006);

- second, all other things being equal, banks in concentrated systems will be larger and tend to be more diversified than smaller banks in more fragmented banking systems. Thus, **concentrated banking systems with a few large, well-diversified banks would be less vulnerable** than banking systems with many small banks;

- third, **it is a priori easier to supervise a few banks in a concentrated system** than a large number of banks in a fragmented system. A concentrated system would therefore increase the efficiency of banking supervision and limit the risk of contagion and systemic crisis (Allen and Gale, 2001).

Finally, an overly fragmented sector, with too many institutions in the market, may also reflect important structural weaknesses. As regards the European banking sector, a situation of "overbanking" has sometimes been put forward (European Systemic Risk Board – ESRB, 2014, and, more recently, Nouy, 2017): too many banks, with high fixed costs and too low performance, would have more difficulty building up capital reserves. They would therefore have a greater tendency to take excessive risks in order to offset low returns with potentially higher profits on riskier instruments, with ultimately a negative impact on financial stability.

Reducing costs and raising income, but also diversifying it, can be an incentive for consolidation (Group of 10, 2010; Dermine and Schoenmaker, 2010). This increased diversification of banking groups resulting from the aggregation of various business models may be viewed as beneficial by investors, insofar as it stabilises income (notably by reducing its vulnerability to asymmetric shocks).

Thus, the relationship between bank concentration and financial stability is ambivalent and suggests **the existence of an optimal degree of concentration associated with efficient supervision**. This optimal level of concentration would reduce the disadvantages of being "too big to fail", while ensuring that banking groups have the critical size to generate sufficient profits to build up a strong capital base, which guarantees their resilience.

2 The degree of concentration in France and the euro area

The French banking system is highly concentrated but does not have a dominant group

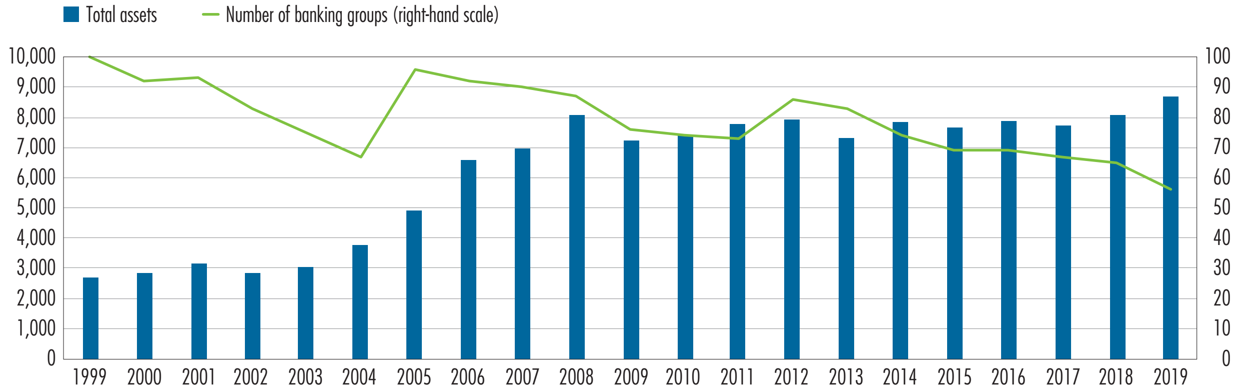
In France, the size of the banking sector, as measured by the assets held by banking groups, increased sharply between 1999 and 2019, swinging from EUR 2,700 billion to EUR 8,671 billion, while the number of banking groups fell sharply, dropping from 100 to 56 over the same period (see Chart 1). Growth was particularly marked between 2003 and 2008 due to acquisitions between French and European banking groups.[5]

Over the same period, the size of the French banking system, expressed in terms of the total value of assets relative to GDP, rose from 192% to 358%, and the share of total assets held by the five largest French banking groups increased from 72% to 84%. The banking system's overall growth was thus accompanied by a higher concentration of assets in the top five groups.

5 In particular, the acquisition of the Italian bank Banca Nazionale del Lavoro by BNP Paribas for close to EUR 9 billion in 2006, the acquisition of Citibank Deutschland by Crédit Mutuel for about EUR 5 billion at end-2008, and the acquisition of Cariparma by the Crédit Agricole Group for about EUR 5 billion in October 2006.

C1 Total assets and number of banking groups in France (1999-2019)

(assets in EUR billions and number of groups in units)



Source: *Autorité de contrôle prudentiel et de résolution* (ACPR – Prudential Supervision and Resolution Authority).
Note: Total assets at the highest level of prudential consolidation (i.e. excluding insurance subsidiaries). Groups with at least two institutions in France are counted here.

Box 1

Methods for measuring the degree of concentration

The market share of one or more banks in the banking system is generally used to measure the degree of concentration, combined with a set of key indicators, which are representative of the structure of the sector,[1] or composite indicators such as concentration indices or systemicity scores.

Among the most commonly used concentration indices, the Herfindahl-Hirschman Index (HHI) is obtained by adding the squared market shares of each firm present in a given market. For the banking sector, market shares can be calculated by using total assets, but also loans granted to the non-financial private sector or deposits collected. The higher the value of the index, with a theoretical maximum value of 1 (monopoly situation), the more concentrated the sector.

In addition, the level of concentration can also be measured by the evolution of the number of mergers and acquisitions over time.

1 See Gabrieli and Jimborean (2020) for an analysis of the structural characteristics of the banking sector.

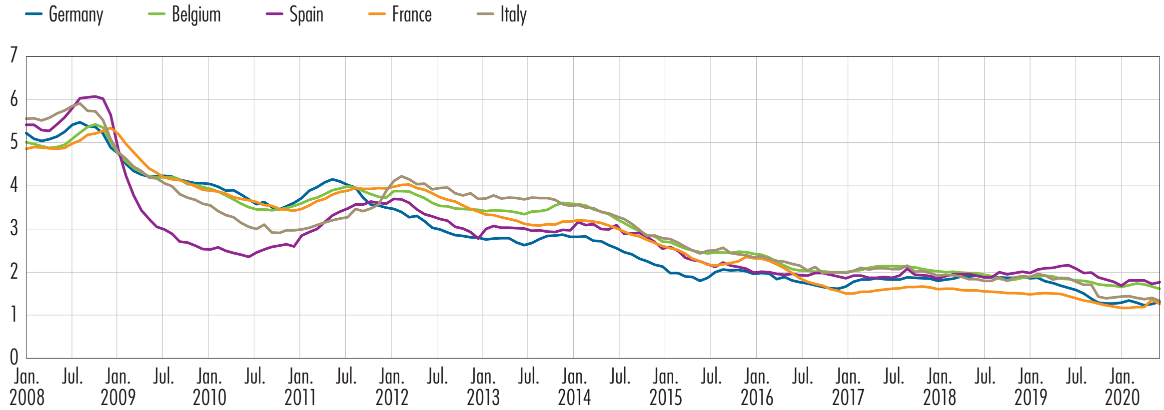
The Herfindahl-Hirschman Index (HHI) of the French banking sector averaged 0.14 between 1999 and 2019, reflecting a rather high degree of concentration. Its calculation also takes into account the presence (or absence) of a dominant market position: by way of comparison, a banking system made up solely of seven groups of identical size would have an HHI of 0.14, while a banking system made up of a dominant banking group with a market share of 51% and six other banking groups of equivalent size (8.2%) would have an HHI of 0.30. The HHI rises as dominant positions within a sector increase.

Despite a rather high degree of concentration, **the French banking sector has remained a competitive oligopoly** compared to its European counterparts thanks to its structure,[6]

6 While relatively few groups account for the bulk of the assets, the resulting level of concentration is put into perspective by the competition between these groups, which weakens the market's position of collective dominance.

C2 Average borrowing costs of euro area households (January 2008 - May 2020)

(interest rates in %)



Sources: European Central Bank, authors' calculations.
Note: The indicator is calculated from the weighted averages of the short and long term interest rates of euro area monetary and financial institutions applied to households for house purchases. New business volumes are smoothed by a rolling average of observations over the previous 24 months.
For a detailed explanation of the methodology: *https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/bank_interest_rates/composite_cost_of_borrowing/html/index.en.html*

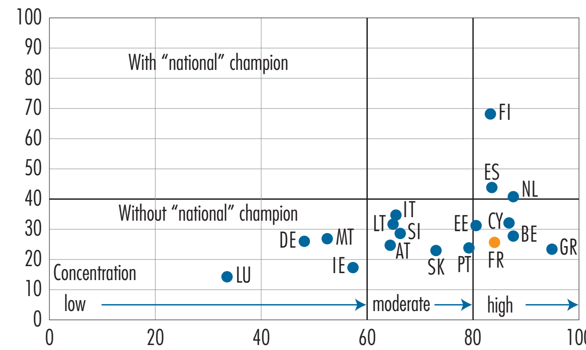
among other things. Competition between national banking groups is reflected in the cost of borrowing for home loans granted to households. Indeed, borrowing costs in France are among the lowest in Europe, reflecting the strong competitive pressure on the domestic market (see Chart 2).

The degree of bank concentration is heterogeneous across the euro area

In order to compare the concentration of different national banking sectors in Europe, we use the systemicity scores of other systemically important institutions (O-SIIs) to construct a summary indicator of bank concentration (see Chart 3). The systemicity scores of institutions classified as O-SII are calculated by each competent national authority in the European Union for its domestic banking sector in accordance with the provisions of the European Banking Authority (EBA) guidelines. Each score represents a summary market share of a banking group or institution in its domestic banking system, corresponding to the weighted average of ten individual market shares over ten relevant indicators for measuring bank systemicity (see Box 2 below). Applying the same calculation methodology across the European Union enables us to use these O-SII systemicity scores to make comparisons between national banking systems.[7]

C3 Comparison of the concentration of European banking systems in 2019

(in %; y-axis: market share of the largest banking group; x-axis: market share of the top five banking groups)



Sources: Notifications by national authorities to the European Systemic Risk Board and authors' calculations (excluding Latvia, which does not disclose the individual score). Data at end-2018 for three countries (Germany: DE, Finland: FI, Slovakia: SK), as unavailable for end-2019.
Note: The market shares represented here are based on the systemicity scores of domestic banks (O-SIIs). The 60% and 80% thresholds – delineating moderate and high concentrations, respectively – are chosen on the basis of expert judgement; the same applies to the 40% threshold, which identifies systems with a national "champion". Depending on the country, there are not always five leading banking groups.

7 The specificities of national banking systems, and their possible specialisations at the European level (for example in the management of investment funds), are not restated for the calculation of the synthetic indicator.

Box 2

Systemicity scores for other systemically important institutions (O-SIIs)

Following the 2008 financial crisis, it was decided to identify systemically important entities in order to apply specific supervisory measures to them. The objective is to lower the risks posed by these institutions and to limit the moral hazard resulting from the implicit public guarantee that they receive. Supervisors therefore designate global systemically important institutions (G-SIIs), as well as institutions that are considered systemically important at the national or regional level. In the European Union, these identifications are governed by the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD) IV, as well as by European Banking Authority (EBA[1]) guidelines for O-SIIs.

As the methodology is relative, the O-SII systemicity score, which corresponds to a synthetic market share of each institution, is expressed in basis points and is calculated as the weighted average of ten market shares over ten indicators divided into four categories.

For a banking system made up of *n* groups, the calculation method thus consists in determining, for each banking group *G* and for each indicator *k*, the following market share (or sub-score), expressed in basis points:

$$\text{Sub-score}_{k,\,G} = \frac{Ind_{k,\,G}}{\sum_i^n Ind_{k,\,i}}$$

This market share calculation is repeated for each indicator, which is then given a weighting (see table below). A weighting of 25% is applied to the "balance sheet size" indicator, while all other indicators are given a lower, identical weighting (8.33%). The weighted average of these market shares (or sub-scores) yields the O-SII systemicity score.

The categories and indicators used are the following:

Category	Indicator	Weighting (%)
Size	Total assets	25
Importance	Value of domestic payments	8.33
	Private sector deposits from EU depositors	8.33
	Private sector loans to EU beneficiaries	8.33
Complexity/Cross-border activity	Value of OTC derivatives (notional)	8.33
	Cross-border liabilities	8.33
	Cross-border claims	
Interconnection	Liabilities within the financial system	8.33
	Assets within the financial system	8.33
	Outstanding debt securities	8.33

Further information is available on the page dedicated to systemically important institutions on the website of the *Autorité de contrôle prudentiel et de résolution* (ACPR – Prudential Supervision and Resolution Authority).
https://acpr.banque-france.fr/en/prudential-supervision/banking-supervision/systemic-entities-banking-sector

1 For a detailed description of the methodology, see the European Banking Authority's guidelines on the criteria to be used to determine the conditions for the application of Article 131(3) of Directive 2013/36/EU (Capital Requirements Directive) with regard to the assessment of other systemically important institutions (O-SIIs).

In Finland, the Netherlands and Spain (see Chart 3 *supra*), the concentration of the banking sector, as measured by the aggregate score of the top five banking groups, is high (above 80%) and the leading O-SII stands out significantly from the other O-SII, with a score above 40%. **This reflects the presence of a "national champion" whose position is largely dominant compared to the other groups**: the market share of the Finnish champion is around 70% and that of the Spanish and Dutch champions around 45% and 40% respectively. The economic and financial stability implications are worth stressing: the dominant position of a single group makes it more difficult for other domestic groups to absorb its failure, whereas a market made up of several large groups of similar size would be better able to compensate for the failure of one of them.

Conversely, in other countries, notably Germany and Luxembourg, the banking system is more fragmented: the score of the leading group represents only 25% and 15% of the total score of all the institutions active in the national sector (for Germany and Luxembourg respectively) and the market share of the leading five groups is below 60%.

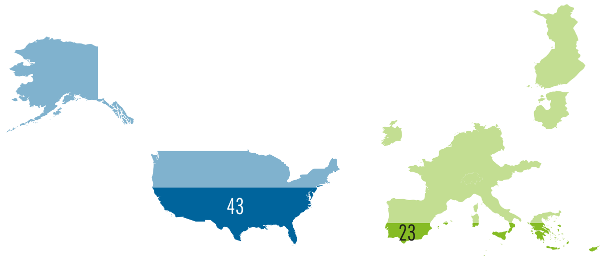
Given the weight of the top five banking groups (around 84% of assets), France also displays a high level of concentration. However, unlike in Finland, Spain and the Netherlands, where the market share of the largest domestic systemically important group is 25%, **the market structure of the French banking system is closer to an oligopoly than to a monopoly**. The presence of several banking groups of comparable size suggests a more competitive market than in countries where there is a national champion.

In the euro area, consolidation has been declining since 2009

As noted in the European Central Bank's (ECB) latest report on financial structures (ECB, 2020a), the annual value of mergers and acquisitions in the euro area posted a sharp decline in the late 2000s, dropping from around EUR 40 billion in 2009 to less than EUR 20 billion in 2010, and has remained at a very low level since then, below EUR 20 billion. In addition, the share of European banks in global mergers and acquisitions has remained below 20% since 2013, while the share of NAFTA[8] countries has remained stable or even increased. Even though the number of less significant institutions (LSIs) within the Banking Union decreased between 2014 and 2018 (from over 3,000 to 2,453), the current situation in the banking sector is still characterised as overbanking, with the consequence that too many institutions are less profitable.

C4 Share of the top five US and euro area banks in their respective markets in 2019

(%)



Sources: US Federal Reserve, European Central Bank and authors' calculations.

A comparison with the United States enables us to put the European system into perspective with its strongest competitor. By way of illustration, in 2019, the market share of the top five US banks was 43% of consolidated domestic assets, while that of the top five banks in the euro area was only 23%.

3 The completion of the Banking Union and banking consolidation in Europe

The main factors behind the consolidation of an industry are both exogenous (globalisation, digitalisation) and endogenous (search for cost reduction, income diversification in order to maximise profit). However, they may also be the result of a regional economic integration drive, as was the case, for example, with the introduction of the euro, which accelerated the integration of financial markets, banking consolidations, especially national ones, and cross-border trade in Europe. The wave of banking consolidation in the United States in the 1990s followed the adoption of two US laws

8 North American Free Trade Agreement.

(the Riegle-Neal Act in 1994 and the Gramm-Leach-Bliley Act in 1999) that removed barriers between regions and lifted restrictions on banking activities in order to create a more integrated banking market at the national level (Choulet and Quignon, 2012).

The US market thus appears to be more profitable: at the end of 2019, the **return on equity of banking groups was only 6.3% in the euro area (6.6% in France), compared to 11% in the United States**.[9] Several structural and cyclical factors explain this lesser profitability in Europe: weaker economic growth, a larger stock of non-performing loans which lower banking income, and lower efficiency due to overcapacity in fragmented European banking sectors (Constâncio, 2017).

This lower profitability of the European banking sector – close to half of European banks are currently unable to cover their cost of capital (EBA, 2020) – represents a structural weakness in a context where the consequences of the health crisis are creating additional risks. Among these is the risk of a significant increase in the weight of non-performing loans on banks' balance sheets, which is linked to the inevitable rise in unemployment and corporate bankruptcy rates. In this respect, **several European banking supervisors have recently stressed the need to initiate a consolidation of the European banking sector, in particular through cross-border mergers** (Nouy, 2017; Enria, 2019; Villeroy de Galhau, 2020a and 2020b). Compared to domestic consolidation, cross-border mergers would enable the groups concerned to benefit from the effects of geographic diversification, as domestic markets may show asynchronous economic cycles. This would also encourage the emergence of sufficiently large European "champions" to compete with their US counterparts – particularly in the area of digital investments[10] – in order to preserve the necessary European sovereignty in banking and payment services and access to international investment markets.

At the level of the Banking Union, (EU) regulations and decisions of the single supervisor (the ECB) could further encourage such consolidation by removing possible blocking factors. This could involve allowing cross-border groups with subsidiaries in several Banking Union countries to manage capital and liquidity at group level, for example in a liquidity subgroup (or "pool") established by the parent company. This supervisory treatment could, for example, be implemented by linking the granting of cross-border liquidity waivers to, among other things, the existence of adequate intra-group financial support agreements included in European groups' recovery plans (Enria and Fernandez Bollo, 2020).

More generally, **it is necessary to continue harmonising the national legislative and regulatory frameworks of European Banking Union member states** so that future cross-border mergers, while conducted in accordance with the competition rules in the European Union (articles 101-109 of the TFEU[11]), may be carried out under harmonised conditions, in particular with regard to the most important aspects, i.e. the hierarchy of creditors in the context of bankruptcy proceedings and debt recovery procedures. An important step towards harmonisation has nevertheless already been taken with the effective implementation of two of the three pillars of the Banking Union: (i) the Single Supervisory Mechanism (SSM), in place since November 2014, and (ii) the Single Resolution Mechanism (SRM),[12] made up of the Single Resolution Board (SRB), set up in January 2015, and the Single Resolution Fund (SRF), which is funded by European banks and will be fully mutualised by 2022.[13] The third pillar, the European Deposit Insurance Scheme (EDIS), is still under discussion, which has been slowed down by the Covid-19 crisis. Its implementation will make it possible, beyond regulatory harmonisation and financial integration, to complete the Banking Union, which is "a necessity to avoid another banking crisis spreading to the real economy and to public finances" (French National Assembly, 2020).

9 Sources: European Banking Authority (2020), Key risk indicators (Germany, Italy, France, Spain, Netherlands), S&P Global Market Intelligence and authors' calculations (Japan, United Kingdom, United States).

10 Whose particularly high, even predominant, fixed costs are more easily amortised thanks to the size effect.

11 TFEU – Treaty on the Functioning of the European Union.

12 The objective of which is to facilitate the resolution of bank failures within the Banking Union, without having recourse to public funds.

13 The Fund will gradually build up over an eight-year period (2016-2023) to reach at least 1% of the amount of covered deposits of all licensed credit institutions in all participating member states, i.e. EUR 55 billion. It will be possible to mobilise funds, as from 2022, if need be, following the adoption of the Treaty establishing the European Stability Mechanism (ESM) as amended on 30 November 2020.

In conclusion, given the many challenges they face (lower for longer interest rates, low profitability, increased competition from large international banks and new players such as bigtech and fintech at a time of digitisation of banking activities, etc.), European banks will have to continue to adjust their business models, while dealing with overcapacity problems. This will require, among other things, greater banking consolidation through the creation of genuine pan-European banking groups within a "genuine single banking market" (Villeroy de Galhau, 2020b). The benefits would be improving the financial soundness of the banking system, preserving the diversity of business models and resolving problems of overcapacity and low profitability (ECB, 2020b), while enjoying the other advantages of geographic diversification. While it is indeed up to market participants to take the initiative of mergers and acquisitions that will strengthen the European banking sector, the completion of the Banking Union remains a prerequisite, as it will provide the necessary regulatory framework. Finally, a fully completed Banking Union will enhance its attractiveness to non-euro area EU countries, which could, as Bulgaria and Croatia did on 1 October 2020, join the Banking Union in the framework of close cooperation.

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