Competition policy in banking in the European Union[1]

Joaquín Maudos[a,b] and Xavier Vives[c]

Abstract

We examine the evolution of competition in banking in the EU in its interaction with regulatory developments and the parallel evolution of the application of competition policy in the sector. The crisis of 2007-09 interrupted the normalization of competition policy in banking started in the early 1980s and also reversed some advances in competitive pressure due to market integration and the introduction of the euro. Competition policy has to cope post crisis with a sector that is systemic and subject to regulatory failure. There is ample room to improve both competition and stability in banking by refining regulation.

Key words: antitrust, concentration, market integration, financial stability

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[a] University of Valencia. Departamento de Análisis Económico, Edificio departamental Oriental, Avda. de los Naranjos, s/n. 46022 Valencia, Spain. joaquin.maudos@uv.es
[b] Ivie. C/Guardia Civil 22, Esc. 2, 1º, 46020 Valencia, Spain.
[c] IESE Business School, Av. Pearson, 21, 08034 Barcelona, Spain.

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1. Introduction

Competition in the European banking sector has evolved over the past 25 years with deregulation, technological change, and market integration as key drivers starting with the single market initiative of 1992. The banking directives, the introduction of the euro in 1999, and the financial and debt crisis from 2007 until 2012 with its regulatory reform changes have punctuated this evolution. Changes in regulation have been present throughout the period, highlighting the importance of the Second Banking Directive (single banking license, home country control, mutual recognition, and freedom of cross-border services), the successive Basel agreements, and the Financial Services Action Plan (1999-2005). More recently, the pillars of the banking union (the Single Supervisory Mechanism and the Single Resolution Mechanism in 2014 and 2015, respectively) have been added.

Competition was suppressed in banking after the Great Depression in the 1930s and up to 1970s, and competition policy was not enforced despite the inefficiencies induced by financial repression. In this period, central banks and regulators in a range of countries tolerated collusion agreements among banks and preferred to deal with a concentrated sector characterized by soft rivalry. This started to change when the idea that competition enhances efficiency took hold in the sector and liberalization and deregulation ensued. Pushed by changes in information technology and competition, banking has been transformed from the traditional loan, deposit, and intermediation operations for maturity transformation to a more services-oriented industry with a higher market-based component. In the European Union (EU), the European Commission (EC) did not apply the two main competition articles of the Rome Treaty (85 and 86) to banking until the early 1980s (*Züchner* case). This was followed by a process of removal of banking exceptions to competition policy at the national level. The "1992" single market program did not transform banking into a competitive industry[2] because of the many frictions and market failures in the sector. Competition authorities were increasingly active and up to the 2007–09 crisis, market integration efforts went underway, and competition policy in banking was getting closer to being implemented as in any other sector of economic activity, but still with some special provisions. This "normalization" of

[2] See Vives (1991) for an early analysis.

competition policy in banking was truncated by the crisis. State aid distorted competition and mergers were allowed without concern for market power. The aftermath of the crisis has posed a host of new questions on the relationship between competition and financial stability, as well as between competition policy and regulation in banking.

In general, as in other jurisdictions, regulation has lagged behind the process of liberalization of the financial sector. Competition issues have been intertwined with market integration. The authorities had expressed concern about competition problems in the banking sector well before the 2007–09 crisis and in connection with the banking liberalization process.[3] As we will show, financial integration has progressed slowly and unevenly across different activities and segments. The financial crisis has produced a negative effect on financial integration, particularly in the euro area, which has suffered more deeply from the effects of the sovereign debt crisis that started in 2010. The relevance of the analysis of competition policy in banking derives from the crucial importance of the sector in any modern economy, as we have witnessed with the consequences of the recent crisis. Competition is widely perceived as a source of efficiency but in banking a trade-off with stability may appear.

The aim of this paper is to assess the development of the competition policy in banking in the European Union in the last 25 years focusing on five aspects: M&A, cartels, state aids, "too big to fail" policies, and the regulatory architecture where the competition authority operates. We describe first the key trends in three areas, which are key when assessing competition policy: market concentration, financial integration, and market power. The introduction of the single market and of the euro allowed an advance of integration, which created conditions for more competition. However, the crisis and regulatory failures reversed previous advances to the detriment of competition.

[3] See European Commission (2005).

The plan of this paper is as follows. Section 2 reviews the trends in concentration, market integration, and competition in the EU banking sector. Section 3 surveys the evolution of competition policy in banking as explained, and section 4 concludes.

2. Trends in concentration, market integration, and competition

The deregulation period that took place during the development of the Single Market Program led to an intense expansion of the EU banking systems. After the birth of the EMU the growth was even more intense, with the assets of the euro area Monetary Financial Institutions (MFIs) reaching a maximum equivalent to 3.5 times of the GDP in 2016. Despite this fact, the share of MFIs in the total assets of financial intermediaries has declined steadily up to a minimum value of 46% in 2016 reflecting the growing competition by non-bank rivals.[4] The 2007-09 crisis reverted furthermore the expansion of banking assets over GDP (in particular in countries more affected by the crisis). Europe may be overbanked according to ESRB (2014) and the European banking sector displays overcapacity, the more so after the crisis. In response, the sector is restructuring by reducing the number of branches and employment.[5]

The indicators used in this section allow us to detect key trends in the evolution of three items that are central to the analysis of the competition policy in banking: market concentration, financial integration, and competitive rivalry. The analysis made allows us to conclude that the sharp fall in the number of competitors that has taken place in the period analyzed is explained mostly by M&A. The effect has been an increase in the concentration of the European banking markets. The creation of the euro led to an advance in the degree of market integration but it does not seem to have implied greater competition. Furthermore, the subsequent decline in integration with the outbreak of the crisis gave way to a period in which market power increased. However, these general trends reflect the average evolution of the European banking sector, and mask differences between countries in the evolution of

[4] See Figure 2.5 in Vives (2016).
[5] Branches in the euro area have been reduced by 17% since 1997, which represents the closure of almost 32,000 branches. Employment has fallen with somewhat less intensity since 2008, with a 12% reduction as of 2017.

concentration and market power.

2.1 Market concentration

Deregulation and the increase of competitive pressure have induced consolidation in order to reap economies of scale and to attempt to maintain market power.[6] Consolidation may deliver the advantages of size, eliminating excess capacity in the branch network (when the networks of the merging banks overlap and as a way to reduce excess workforce in rigid labor markets) and improving diversification, especially if the banks operate in regions with non-synchronized cycles. For example, in the euro area, and despite the successive incorporation of new countries to the current 19, the number of credit institutions has been reduced by 43% from 1998 to 2017.

Market concentration has increased in most EU countries from 1997 to 2017, with the exception of Austria, Hungary, Czech Republic, Denmark, Finland and Slovenia. With the outbreak of the last crisis, consolidation has accelerated in the countries that have suffered most from it and been subject to restructuring banking sectors, with increases in the Herfindahl index, for example, in Greece and Spain (figure 1).[7] In 2017, there are significant differences in the degree of concentration of the European banking sectors, as it ranges from a minimum of 250 points in Germany to a maximum of 2,419 in Estonia.

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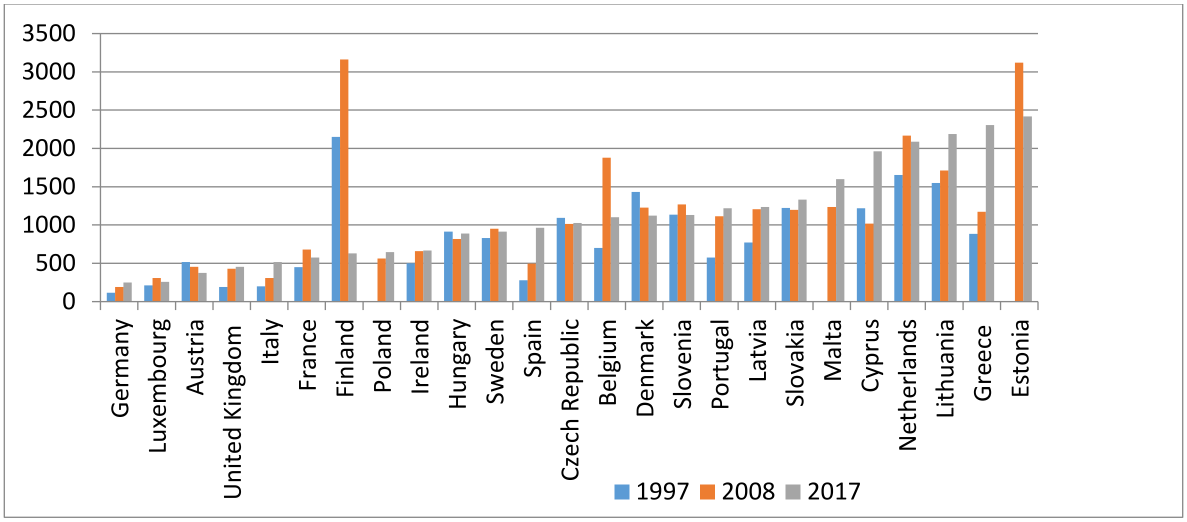
[6] Gual (1999) studies the effect of deregulation in the market structure of European banking in the period 1981–1995 and finds that concentration increases notably with deregulation.

[7] From 1998 to 2017 the number of credit institutions in the EU has fallen by 32%. The restructuring took place in the years of crisis from 2008, with a drop since then of 26%, with maximum values of 70% in the Netherlands, 43% in Spain and 42% in Greece.

Figure 1. European banking market concentration: the Henfindahl index.



Source: ECB

It is worth emphasizing that the appropriate concentration measures in banking as a multiproduct industry for competition purposes are those pertaining to the relevant product and geographic market. Aggregate measures provide an imperfect indication of the concentration in the relevant markets. For example, the increase in aggregate concentration in both the United States and Europe may hide different competitive situations. Indeed, indicators at the national level can mask important differences in local markets. The scant evidence available suggests that nationwide concentration ratios are associated with higher local market concentration ratios.[8] The impression is that concentration in local markets has tended to decrease (moderately) in the United States (at least up to the crisis) despite the increase in merger deals, while this is not the case in Europe. In general, there have been fewer deals in the euro area than in the United States and relatively fewer cross-border deals in the euro area than interstate deals in the United States.[9] In Europe, with the exception of the UK in retail banking, the promotion of national champions has been the norm, since national regulators have at times tried to block cross-border M&As and the national antitrust

[8] See Baer and Mote (1985).

[9] According to ECB (2017a), cross-state M&A transactions in the USA represented between 31% and 52% of the total number of transactions between 2000 and 2016. The equivalent share in the EMU was between 5% and 19%.

authority has allowed domestic consolidations. This fact together with a natural pecking order of M&As—in terms of first privileging domestic mergers to reap economies of scale of branch rationalization and the same legal and cultural framework, then regional mergers where the legal systems and culture are more similar, and finally unrestricted cross-border mergers—may explain the dearth of cross-border M&As in Europe.[10] The financial crisis has inhibited further cross-border deals in the euro area (but not interstate deals in the United States). The long period with low interest rates in the euro area, as a response to the 2007–09 crisis and subsequent sovereign debt crisis, has put further pressure on bank margins and profitability, and provides incentives for banks to consolidate.[11]

2.2 Market integration

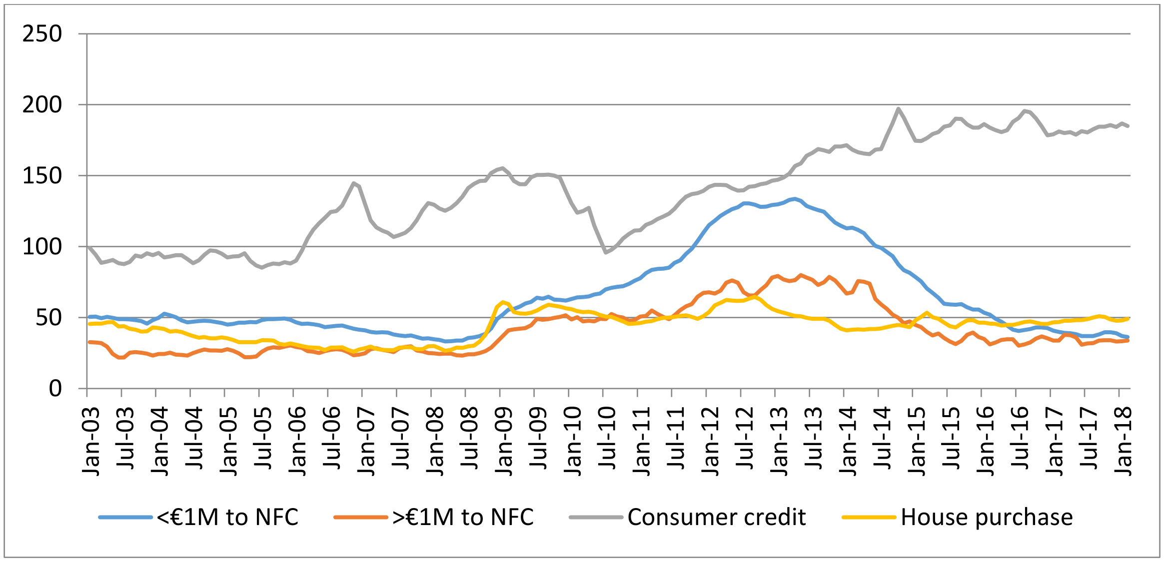
From the point of view of competition, the level and the evolution of the degree of financial integration is relevant since the more integrated a market is the lower barriers to entry. Financial integration has progressed slowly and unevenly across different activities and segments. It became high in wholesale banking and in certain areas of corporate finance (especially in public corporate bond issuance and private equity markets) as a consequence of the introduction of the euro before the 2007–09 crisis, modest in some relationship aspects of banking, and low in retail banking, particularly in loans to consumers.[12] The financial crisis has produced a negative effect on financial integration, particularly in the euro area in both retail and wholesale banking.

Wholesale markets have a higher level of financial integration than retail. The latest available data shows that while cross-border business with other EU countries represents 26.7% in interbank loans (wholesale market), in the non-interbank business (retail market) the percentage is only 7.8%. In both markets, although with greater intensity in wholesale, increasing integration is appreciated until 2008. A similar view is obtained when analyzing the evolution of the interest rate differences of bank loans between euro area countries. Figure

[10] See Danthine et al. (1999) and Barros et al. (2005). Campa and Hernando (2006) find that the cumulative abnormal returns of M&As announced in the EU in 1998–2000 are lower in regulated industries such as banking and that those abnormal returns are in fact negative for cross-border M&As, a sign of the obstacles they face.
[11] See ECB (2017b).
[12] See Barros et al. (2005) and ECB (2007).

2 (with European Central Bank data) allows us to conclude that: a) from 2003 to 2008 there was a clear advance in financial integration, given that a process of convergence of interest rates took place between countries; b) with the outbreak of the crisis and until the beginning of 2013, the differences in interest rates between countries intensified, which is largely explained by the impact of the different sovereign risk premiums; c) the measures of the European Central Bank (ECB) and the progress towards the banking union have allowed to reduce the difference in interest rates, returning in some cases to pre-crisis levels; and d) the differences in interest rates within the euro area are much higher in consumer loans than in the rest (loans to companies and for the purchase of housing), the current rate differences being in loans to consumption much higher than those that existed before the crisis.

Figure 2. Standard deviation of bank interest rates (new business). Euro area.

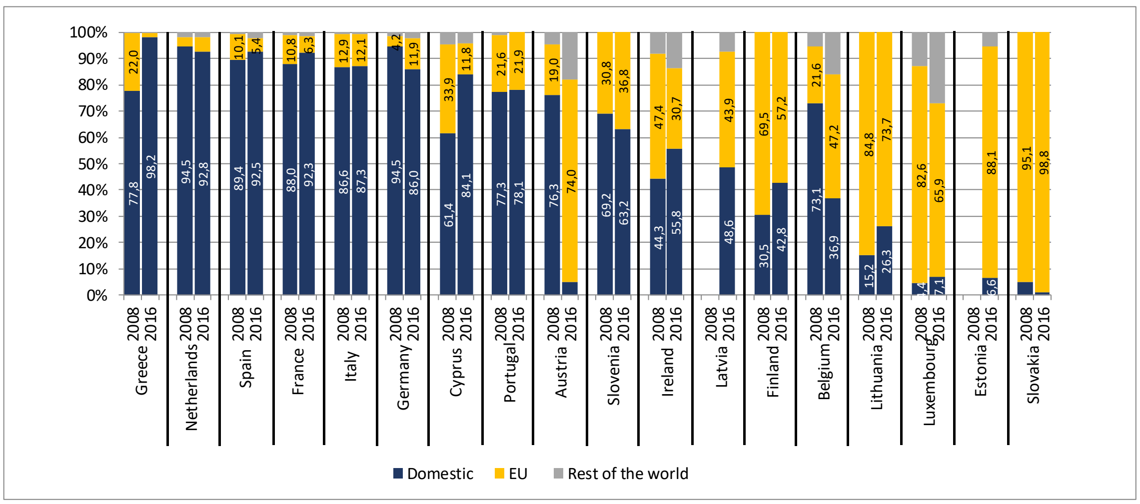


Source: ECB

Retail banking remains regional despite the inroads made by online banking because the proximity to clients, soft information, and long-term relationships are still key competitive drivers. Cross-border banking is performed in the target jurisdiction, mostly with subsidiaries (rather than with branches), and this tendency has been reinforced by the crisis. Foreign establishments expanded their role before the crisis, although they still only accounted for approximately 18% of the total banking assets in 2008. This share decreased to reach pre-crisis levels in 2012, accompanied by an increase in the heterogeneity between countries.[13]

As figure 3 shows for the banking sectors of the euro area, countries in almost 100% of the banking business is in the hands of foreign banks coexist with others where the market share of these banks does not reach to 10%. Since 2008 (the first year for which the ECB reports information) the market share of foreign banks has been reduced in many countries. If we focus on the market share of banks in the rest of the EU as an indicator of integration in the European banking market, the share has fallen since 2008 in many countries, which is evidence of the negative impact that the crisis has had on the financial integration.[14]

Figure 3. Composition of banking sector assets: domestic vs foreign credit institutions.



Source: ECB

In summary, the vision that emerges is that European retail markets remain national, with a small market share of foreign competitors, and with a reduced weight of cross-border activity.

[13] See ECB (2017a).

[14] The small market share that foreign banks have in several European countries is partially explained by the type of M&A that has taken place, where domestics have predominated.

2.3 Competition

There are several indicators for the measurement of competition, among them, the H-statistic of Panzar and Rosse, the Lerner index, the Boone indicator, and the conduct parameter of Bresnahan. The H-statistic, the Lerner index, and the Boone indicator present limitations as indicators of competition, while the Bresnahan indicator (and other structural model-based measures) are complex to estimate from the econometric point of view. We know also that higher concentration does not necessarily mean low competition (and vice versa).[15] Faced with these problems, the Lerner index has some advantages since it is easier to estimate and it allows obtaining an indicator of competition at the bank level. However, it does not account for risk when applied to loan markets.

Carbó and Rodriguez (2007) show the existence of important discrepancies when comparing the Herfindahl index and indicators of competition (H-statistic, Boone-indicator, Lerner index) in the banking sectors of the EU in the period 1995-05. Carbó et al. (2009), in a sample of European banks in the period 1995-01, find that the different measures consistently identify however the most and least competitive banking markets, among the fourteen studied countries. Furthermore, all markets are monopolistically competitive, but the competition rankings with the different indicators are not consistent.

Maudos and Fernández de Guevara (2007) show that market power increased in the loan market, but decreased in the deposit market for most EU-15 countries in the period 1993-02. They show that margins are negative in the deposit markets, suggesting that banks follow a loss leader pricing strategy. Moreover, they argue that while margins fell in 10 out of the 14 EU banking sectors studied over 1993-02, the reduction can be compatible with a weakening of competitive conditions (an increase in market power).

[15] Claessens and Laeven (2004) in a sample of fifty countries in the period 1994–2001 show that most banking markets are monopolistically competitive with H between .6 and .8. The authors also highlight that typically entry barriers and not concentration is what determines competition: greater foreign entry and fewer restrictions on entry or activity yield more competitive outcomes. In this line, several papers have shown that concentration is need not be a good proxy for competition (Casu and Girardone, 2009; Carbó et al. 2009; OECD, 2010; Liu et al. 2013; etc.)

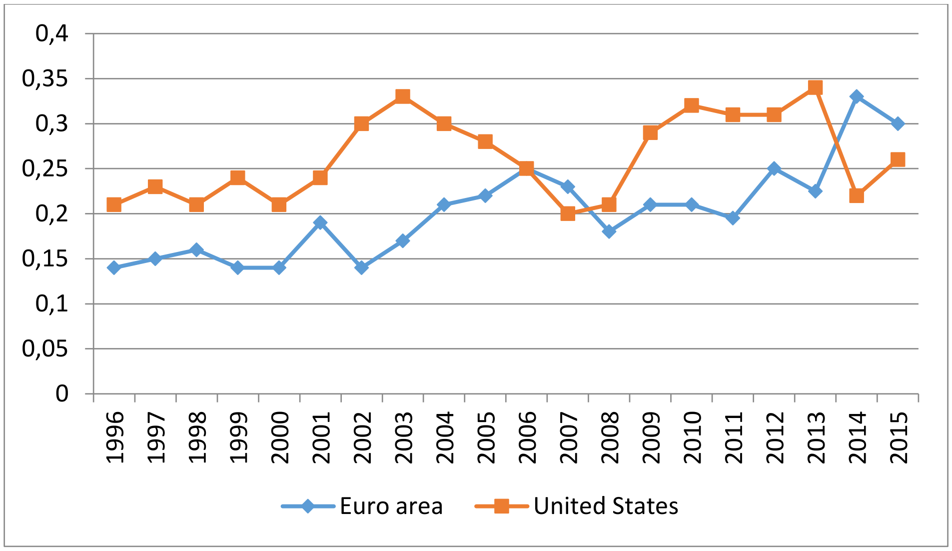
Casu and Girardone (2009) assess the outcome of EU deregulation and competition policies on the competitive conditions of the main (Germany, France, Italy, Spain and United Kingdom) EU banking markets. Their results show that there is no evidence of an increase of competitive pressure over the period 2000-2005, using the Lerner index and H-statistic as indicators. Further, there are important differences among countries suggesting that significant barriers to the integration of EU retail banking markets exist.

De Jonghe et al. (2016) calculate de Lerner index for the EU-28 countries between 2000 and 2015 using data from commercial banks and bank holding companies. They find a decrease in competition in the period 2000-05, followed by a substantial increase in competition, especially in the EU-15 countries, for the period 2005-08. The crisis had a detrimental effect in competition, increasing the market power between the years 2008-14, reaching the highest value of the period in 2014. Fernández de Guevara and Maudos (2017) analyze the impact that the crisis has had on the intensity of competition in the EU15 banking sectors over the period 2002-13 using both the Lerner index and the Boone indicator. The results in both cases show that competition has deteriorated. A recent study by Cruz-García et al. (2018) shows that in the period 2000-14 market power inequality (proxied by the Lerner index) has narrowed among euro area banks. This reduction is attributable to the convergence in the average levels of market power of the European banking sectors.

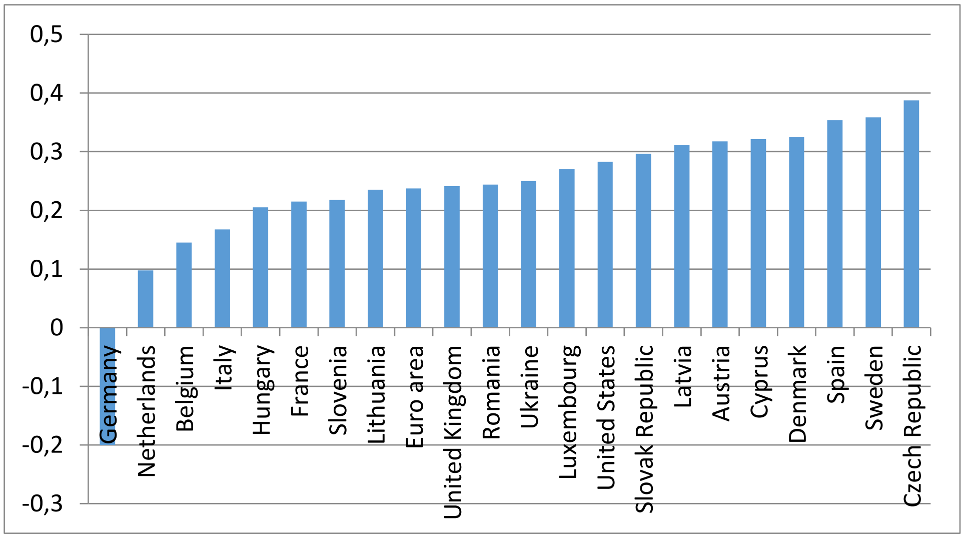
As figure 4a shows with World Bank data, in the case of the euro area, the Lerner index (in terms of assets) remained stable from 1996 until 2002, increased in subsequent years until 2006, fell up to the crisis in 2008, and with the response to the crisis it grew until reaching a maximum value in 2014, more than doubling the level in the year of creation of the EMU. This World Bank data finds that, in comparison with the US, market power at the aggregate level tends to be lower in the euro area. The information by countries for the average of the most recent period 2008-15 shows important differences within European banking (figure 4b).

Figure 4

a) Lerner index (total assets) in the euro area and the United States.



b) Average Lerner index 2008-15.



Source: World Bank

The fall in market power that took place until 2008 and the subsequent increase that emerges from the data of the World Bank coincides with the vision that emerges from the recent analysis that the ECB (2017) has made in its last report on financial integration. Thus, in all the countries of the euro area, without exception, the Lerner index increases from 2008 to 2015.

In summary, there is a wide disparity of results in the literature with regard to the evolution of competition in EU markets since 1992 although there is agreement that there is market power in the sector and that there is heterogeneity among countries, submarkets and periods (see Bikker and Spierdijk (2017)). We can assert tentatively, that from 1992 to 1999 the tendency of competition is not clear, possibly decreasing in the loan market but increasing in the deposit market. Furthermore, from 2000 to 2005 there are indications of a lessening of competition, which is reversed in the run up to the crisis in 2006-08, only to revert to attenuated competition post crisis.

3. Competition policy[16]

Competition analysis in banking is complex due to the accumulation of market failures on top of market power (mainly asymmetric information and externalities), and because of its multiproduct and multimarket character. This leads to possible pitfalls when applying standard tools. It must be taken into account also that, given the market failures present in banking, there is no guarantee that increasing competitive pressure we improve welfare unless we can fix the frictions arising from asymmetric information and external effects. In this case there is a trade-off between competition and financial stability that can be ameliorated by regulation, but not eliminated due to the imperfections of regulation.[17]

Before the liberalization process was underway in the 1970s and 1980s, the situation was far away from the optimal balance between the benefits of competition and the potential increase in instability. Regulation was intrusive, and central banks and regulators tended to be complacent with collusive agreements among banks. The costs of intrusive regulation may be high. For example, rate regulation induces overinvestment in services and excess entry, and introduces the possibility of regulatory capture. Currently the three main areas of competition policy in the EU, namely, mergers, cartels and abuse of a dominant position, as

[16] This section draws extensively from Chapters 6 and 7 of Vives (2016).
[17] See Chapter 5 in Vives (2016) for an extended discussion of the issue.

well as the control of state aid, apply fully to the banking sector. In line with the evolution at the European level, the implementation of competition policy in banking has been substantially strengthened at the national level, and many exceptions have been removed over the last two decades.[18] Despite these changes, some important specificities concerning the relationship between competition and stability remain in the institutional design of competition policy in banking.

Policy makers have been engaged in promoting competition via market liberalization of previously monopolized or heavily regulated markets from the 1990s (such as postal, airlines, telecommunication, and energy sectors), and banking has not been an exception. Authorities in the EU and the UK had expressed concern about competition problems in the banking sector in connection with the banking liberalization process.

The European Commission opened a retail banking inquiry in 2005 because of its concern for the low degree of integration and competition in the sector. The conclusion of the inquiry in 2007 highlighted several major barriers for cross-border competition. In particular, this applied to several markets for payment cards and payment systems, where entry was restricted, market power and fees were high, and efficiency low. This was so because of high concentration levels, large variations in merchant fees and in interchange fees between banks, and high and sustained profitability (in particular in card issuing), as well as divergent technical standards. With respect to retail banking product markets, the EC stressed as sources of market power over consumers and small firms and sustained high profitability: high market concentration and evidence of entry barriers, some forms of cooperation among banks (such as those taking place among savings and cooperative banks), product tying, and high switching costs. Some of the concerns expressed in the EC's inquiry were certainly legitimate, although the existence of high profits is not *per se* the symptom of lack of competition. The analysis should rather aim at the sources of market power, such as exogenous and endogenous switching costs and barriers to entry as well as account for the

[18] For example, in the Netherlands, the Competition Act of 1998 has applied to the banking sector since 2000; in Italy since December 2005 competition policy has also been enforced in the banking sector by the general competition authority rather than by the Bank of Italy (see Carletti et al. (2015)).

specificities of two-sided markets.

Since the Cruickshank study on “Competition in UK banking” in 2000, the UK regulators have conducted several inquiries related to retail banking competition. The report revealed competition problems particularly in services to personal customers and to small and medium-sized businesses (SMEs). The report found that banking services were overpriced due to price discrimination and significant switching costs, and it warned about a lack of effective competition in UK banking. The most acute problems were the result of information asymmetries—especially with respect to personal customers and SMEs—the highly concentrated market structure for SMEs and the banks’ control over the money transmission service.

The Independent Commission on Banking (ICB) also concluded in 2011 that the UK retail banking market was not working well and suggested divestitures; improving transparency and switching through a new mechanism; and making sure that the new Financial Conduct Authority (FCA) would be assigned the duty of promoting effective competition. In 2014, the recently created Competition and Markets Authority (CMA), in conjunction with the FCA, launched a thorough investigation of the personal current account (PCAs) and SMEs retail banking sectors with a preliminary study, in conjunction with the FCA.

3.1 Mergers

Within the frame of EU competition policy there is a diversity of arrangements in different countries in terms of merger control and the supervisor weighs in bank merger reviews reflecting a concern for financial stability.[19] We can distinguish between domestic

[19] In the Netherlands, the Minister for Economic Affairs can overturn a merger decision of the competition authority if this conflicts with the one of the supervisory authority. The situation is similar in Germany, where the Economics Minister may overturn a blocking decision by the Cartel Office for reasons of general welfare (upon consultation with the Monopoly Commission). In the UK, the government may approve a merger against the advice of the competition authority on financial stability grounds. In Italy, until the 2005 reform the competition authority was only requested to issue an opinion on the proposed M&A with the supervisor in charge for merger review. In France, bank merger reviews have been integrated in common competition law since 2003 and in 2008 exclusively under the Competition Authority (which is required to consult the relevant regulator). In Portugal, the banking system has been subject to merger control since 2003, although with a delay of five years relative to the other sectors. See Carletti and Hartmann (2003) and Carletti et al. (2015).

mergers and cross-border cases.

A few domestic mergers have led to significant competitive concerns or have been blocked by the competition authority of the EU, withdrawn, or subjected to remedies. In general the authorities worried more about protecting and enlarging their national champions than about possible adverse competition consequences of consolidation.[20] Lower tolerance for domestic mergers was displayed in the UK when blocking the merger between Lloyds and Abbey National, which opened the way to the takeover of the latter by Santander in 2004.

Cross-border mergers typically do not entail substantial anticompetitive effects, but they have been subject to domestic regulatory and supervisory obstacles (through the provisions of art. 21 of the merger regulation). Factors other than competition and stability considerations have played an important role with some Member States using the merger regulation to fend off foreign entry in the name of financial stability.[21] The EC has intervened in checking the misuse of national supervisory powers to prevent cross-border mergers when trying to protect national champions. The new prudential supervision framework in the EU established in 2013, consistent with banking union, designates the ECB, in close cooperation with competent national authorities, the role of assessing the applications for the acquisition and disposal of qualifying holdings. The removal of artificial obstacles to mergers, and the single supervisory framework in the euro area, should pave the way for consolidation in the sector going beyond domestic mergers, and moving in the natural pecking order of consolidation with regional (geographically or by cultural affinity) mergers first, and then unrestricted international mergers. The completion of banking union in the euro area should contribute decisively to integrate and enlarge the banking market increasing competition.

There is a diversity of practices, but, in general, stability and public interest concerns may

[20] See Vives (2005).

[21] The EC can request all relevant information from the national supervisory authorities in mergers in the banking sector of Community dimension, but according to the European Merger Regulation (Article 21(3)) Member States may block a merger to protect financial stability (considered a “legitimate interest”) in the domestic market. This was the case, for example, in Portugal (case Banco Santander/Champalimaud group in 1999), and Italy (cases BNL/BBVA in 2005; ABN AMRO/Antonveneta in 2005; Unicredito/HVB in 2006), and contrasts with the attitude of the UK in the merger Santander/Abbey or of the Netherlands with the three-way acquisition and split of ABN AMRO. See Carletti and Vives (2009).

override competition concerns in the different jurisdictions, and the final word is typically in the hands of the government. Tensions between the supervisor and the competition authority with regard to mergers are usual. The authority in merger cases is split into parallel reviews by the supervisor and the competition authority, with the latter gaining more prominence, and with the supervisor getting the upper hand again in the 2007–09 crisis.

There is a delicate balancing act between the preservation of financial stability and the maintenance of a competitive market structure. In the crisis of 2007–09, and the follow-up in the EU with the sovereign debt crisis, this balancing act did not put much weight on the competition concerns, and the crisis forced mergers of institutions, some backed by government subsidies and/or guarantees, without much regard to the consequences for competition. In the UK, the merger of HBOS and Lloyds in 2009 was approved against the OFT's opinion (with partial nationalization) in the name of financial stability despite a 30% market share of the merged entity in PCA and competition problems in SME banking services in Scotland, and that it would eliminate the main challenger to the four established banks (Lloyds, RBS, Barclays, and HSBC). It is worth recalling that Lloyds was not allowed to take over Abbey in 2001 because it would have led to a market share in PCA of up to 27%.

3.2 Cartels

Cartels in banking were condoned by central banks and regulators in the name of keeping a stable system. Nowadays, they are prosecuted with the usual competition policy tools with penalties and leniency programs. Due the secret and opaque nature of the agreements these are normally difficult to detect and even more difficult to prove. A strategy that has been proven useful against cartels is to design leniency programs that break the collusion equilibrium by providing incentives to the participants in the cartel to break the agreement. In order to do so, the United States since 1978 and the EU since 1996 have applied different types of redemptions to those companies collaborating in the investigation.

The Austrian Lombard Club is a classical cartel case which involved the eight largest Austrian banks in the period between 1994 and June 1998. The cartel consisted of a institutionalized price-fixing scheme covering Austrian territory in a detailed way; including the fixing of interest rates for loans and savings for households and for commercial customers and of fees charged on consumers for some services. The EC declared that the cartel represented a serious infringement of art. 81 (now 101) of the EU Treaty, and fines were imposed for close to 125 million euros on the cartel members. The fines were reduced by 10% under the leniency program given the high co-operation that the banks offered during the investigation.

The fight against cartels in banking is central in the enforcement of competition policy in the sector. The recent and highly visible international cases of market manipulation in interest rate and foreign exchange benchmarks and exclusionary behavior in the CDS market mark a new impulse to this fight. The cases have ended up in large fines and settlements. The saga of credit card price-fixing cases, with a succession of proposals by the payment systems associations to limit fees in response to antitrust scrutiny, highlight the difficulties in the analysis of two-sided markets. Indeed, in a two-sided market for a practice to be anticompetitive it must constitute a barrier to entry to the system and not only to one side of the market (since a barrier on one side may encourage entry on the other side). In general, the regulation of the fee structures of card payment systems has to address a well-defined market failure, otherwise it runs the risk of inducing undesired side effects that may impair efficiency.

3.3 Competition policy and state aid

In the EU, the competition authority has the capability to control state aid.[22] The lender-of-last-resort activity of central banks may also result in state support if the loans are not recovered. The commitment of the EC to control aid to the banking sector shows in two landmark cases, Credit Lyonnais in France and Landesbanken in Germany, with both receiving capital transfers during the 1990s, the former due for solvency problems and the latter to increase minimum capital requirements. The EC had to reach an appropriate balance with the preservation of financial stability, and doubt remains whether the granted aids were the least costly method of preserving competition. Those issues that would come back in full force during the crisis when the EC had to present a set of temporary rules and exceptions to

[22] See Kapsis (2012) for a survey on this issue.

accommodate the assistance to the banking sector.

The regulatory tools used during the crisis were structural (with balance sheet reductions and divestitures) and behavioral (with restrictions on pricing, publicity, or compensation for employees). Across Europe, many banks that relied on state aid were forced to divest assets. The rationalization and restructuring also severely affected the Landesbanken in Germany, the Danish banks, and the Spanish savings banks sector. Quite a few of the restructurings implied large balance sheet reductions as well as behavioral commitments. One example is the recapitalization of the Dutch bank ING that was forced to shrink its balance by almost half by selling its insurance business and ING Direct US.

Temporal legislation was followed by the establishment of a set of rules and instruments with the approval of the Directive on Bank Recovery and Resolution (BRRD), which applies to all EU banking institutions, and the Single Resolution Mechanism (SRM), which, in principle, only concerns Member States participating in the banking union. The BRRD specifies under what conditions a public restructuring process can be undertaken.[23]

The state aid cases raise the question of how much large-scale government interventions as the ones in the recent crisis distort banking competition. Gropp et al. (2011) show that bailouts and guarantees reduce the refinancing costs for the banks that have been helped, make them more aggressive, and induce the competitors of the protected banks to be also more aggressive. Interestingly, protected banks only increase risk-taking if they are state owned (because then they are not concerned in protecting their charter value). Calderon and Schaeck (2016) suggest that government interventions such as emergency loans for liquidity support, recapitalizations, and nationalizations raise banking competition, mainly via increased competition in loan markets due to the fact that failed banks do not exit the market.[24] The authors also find evidence that the market shares of zombie banks in crisis countries increase with the interventions, with a higher frequency of interventions going

[23] Three basic conditions are required: the bank must be failing or be likely to fail (the decision upon this matter is taken by the ECB), no alternative private solutions can exist, and it must be necessary to the public interest (the SRB has power to decide when these two last conditions are met).

[24] Reductions of market power are measured by the Lerner Index and net interest margins in a dataset of 124 countries with 41 of them experiencing banking crisis between 1996 and 2010.

together with greater zombie bank presence, and with larger increases in competition when zombie banks have larger market shares. According to those authors, borrowers are the main beneficiaries, and depositors are harmed by government interventions (although the latter effect is driven by government ownership).[25] There is evidence also of excessive competition for deposits by weak banks taking advantage of deposit insurance to raise funds in Spain and Portugal.

3.4 Competition policy and too-big-to-fail (TBTF)

Some of the measures taken in Europe can be understood in order to minimize competitive distortions of the aid, others in terms of checking moral hazard in the future. In principle, the mission of the competition authority is to preserve competition and not to limit moral hazard, which is the role of the regulator. However, the restrictions on lines of activity outside the regulated core banking business imposed by the competition authority in a restructuring procedure make sense although they go beyond the standard competition concern. This is so since even the measures purely aimed at competitive distortions will have an impact on ex ante incentives because the management of a bank will know that help in case of trouble will come with restrictions. The concept of competitive distortion encompasses competition based on the advantage of being under the TBTF umbrella (TBTF policies effectively constitute state aid because there is an implicit guarantee of help). Competition policy may avoid the consolidation of an anticompetitive market structure with entities that are TBTF and therefore cannot exit the market. That is, competition policy is part of the solution of the TBTF problem, and in Europe the competition policy authority has basically been the only authority that has taken effective action after the 2007–09 crisis in relation to the TBTF issue.

Mergers under the pressure of stabilizing the banking system may consolidate an anticompetitive market structure with institutions that are TBTF. Merger control should also intervene when a consolidation leads to the formation of a TBTF entity since it will distort competition later on. However, the takeover of a failed bank may reward an incumbent with

[25] Berger and Roman (2015) show that TARP in the United States enhanced both the market shares and market power (according to the Lerner index) of protected banks because they were perceived to be safer.

temporary monopoly rents, inducing monopoly inefficiency but also prudent behavior. This is optimal only if subsequent entry is facilitated.[26] The danger is that incumbents increase their market power and are protected from entry since they are TBTF. Merger policy must have a long horizon and, even in a crisis situation, must consider the optimal degree of concentration in the industry, dynamic incentives for prudence of incumbents, and the ease of entry. The competition authority may allow a *temporary* increase in market power in order to reduce excess capacity or rebuild charter values of prudent banks. When the merger consolidates an anticompetitive structure with TBTF entities, a better alternative is to nationalize the bank in trouble with subsequent privatization as a viable competitor.

3.5 Regulatory architecture and the competition authority

In the EU, as an outcome of instability in the euro area because of the European sovereign debt crisis, the first steps toward banking union were taken in 2012 with the agreement to create a Single Supervisory Mechanism (SSM) at the ECB, and a Single Resolution Mechanism (SRM). The aim of banking union is to break the feedback between sovereigns and banks at the root of the debt crisis, provide unified supervision and rules for euro area banks, increasing the distance between banks and regulators, as well as a establishing a backstop in case of a crisis.[27] In parallel the Bank Recovery and Resolution Directive (BRRD) of 2014 aims to limit the exposure of taxpayers to bank bailouts. A common European deposit insurance fund is still pending.

The EU has integrated supervision in the central bank, and kept separate competition policy enforcement and prudential supervision, with a “federal” system in both domains with responsibility, respectively, of the EC and the ECB. The system is complex because of its federal structure, which needs to incentivize information sharing among national regulators and the central coordinating regulator (as well as the interaction with the countries outside the euro area). The move toward supervision at the ECB will represent a toughening of enforcement since national regulators had incentives to be more lenient with their national banks in the same way that the enforcement of competition policy by the EC is perceived to

[26] See Perotti and Suarez (2002).
[27] See Vives (1992) for an early proposal of the elements of a banking union for Europe.

be tougher than enforcement by national authorities.

The consumer protection agency should be separated from the agency in charge of stability for the same reasons that the competition and stability agencies should stand separate because, on occasion, their objectives may be in conflict. In the United States, Dodd-Frank created an independent Consumer Financial Protection Bureau while in the UK the new independent Financial Conduct Authority also has consumer protection as its remit. However, in the EU the prudential supervisor is typically responsible for consumer protection. Furthermore, since both competition policy and consumer protection have consumer welfare as an objective, there are strong reasons to integrate the functions in the same agency (as in the UK).

The problems of coordination among decentralized regulators/supervisors are acute.[28] Indeed, a foreign supervisor will not consider the consequences (systemic or not) for domestic residents of failure, or restructuring of a local branch or subsidiary, but only the consequences in terms of systemic stability at home.[29] For example, a consequence of the 2007–09 crisis is that national regulators limit or even forbid banks from transferring liquidity across jurisdictions. In the EU, the second banking directive of 1989 established a "single-passport," according to which a bank chartered in one EU country could operate in another (with the home country control principle for supervision, so that the domestic supervisor would also oversee the foreign branches). For example, in the run up to the EU sovereign debt crisis that started in 2010, a domestic regulator in a country with large international expansion (e.g., Iceland) did not consider the externalities that lax domestic supervision would impose in Europe.

Cross-border resolution is problematic when burden sharing has not been agreed upon ex ante. This was made evident in the failure and uncoordinated resolution of Fortis, which happened despite the tradition of cooperation and information sharing between the Belgian and Dutch supervisors. In the EU, before banking union, rescue money for a bank had to

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[28] See Chiappori et al. (1991), Danthine et al. (1999), and Dell'Ariccia and Marquez (2006).

[29] The example of the forced closure of BCCI (Bank of Credit and Commerce International) in 1991 illustrates this point, since it was authorized in Luxembourg but many of its customers were abroad with the bank present in seventy-eight countries.

come in principle from the taxpayers of the country where the bank was headquartered. This principle was parallel to the "home country principle" according to which the supervisor of the home country is the lead supervisor of a bank.

4. Conclusion

Regulatory and technological developments in a frame of market integration since 1992 have driven the evolution of competition in banking in the EU. Competition trends are hard to assess but there seems to be consensus that competition decreased after the introduction of the euro to pick up before the 2007-09 crisis, and slack post crisis.

Competition policy started to be applied to banking only in the 1980s and its increasing application to all areas, from cartels to mergers and abuse of dominance, run into the wall of the crisis of 2007-09. Then it had to cope with limiting the competitive distortions introduced by massive state aid (equivalent to 4.4% of EU28 GDP from 2008 to 2016 in terms of recapitalization and impaired asset measures[30]) to stem a systemic crisis. Competition policy is unique in dealing with a sector, which is fragile and prone to systemic crises, and has to work in a coordinated way with financial regulation and supervision. In a financial crisis, it has to strive to avoid distortions in competition and the consolidation of anti-competitive market structures. In the EU, and in contrast to the US, competition policy played an important role, given its state aid control remit, in helping check TBTF incentives.

There is ample room to improve both competition and stability in banking by refining regulation. Society will benefit from additional competitive pressure in banking provided only that the sector is better regulated. Competition in banking has advanced since 1992 but in the euro area, we cannot expect further integration of retail banking, the emergence of pan-euro banks, and consolidation of wholesale banking integration without the completion of banking union with a common deposit insurance fund and backstop to resolve banks in trouble.

[30] See European Commission (2017).

The outlook for competition policy in banking in the EU is to keep rivalry vigorous on the face of the restructuring post crisis; learn the lessons of the crisis taking into account that banking is a systemic sector; and face the challenge to accommodate digital disruption. The latter promises to increase competition but will deliver consumer benefits only if regulation maintains a level playing field between old and new competitors, which include both bank and non-bank institutions (shadow banks).

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