

Should Competition Policy in Banking Be Amended during Crises? Lessons from the EU¹

Iftekhar Hasan²

Fordham University and Bank of Finland

Matej Marinč³

University of Ljubljana and ACLE

Abstract

This article investigates the nexus of competition and stability in European banking. It analyzes the European legal framework for competition policy in banking and several cases that pertain to anti-cartel policy, merger policy, and state-aid control. It discusses whether and how competition policy should be amended in order to preserve the stability of the banking system during crises. The article argues for increased cooperation between prudential regulators and competition authorities, as well as an enhanced framework for bank regulation, supervision, and resolution that could mitigate the need to change competition policy in crisis times.

Keywords: Banking, Competition Policy, Financial Crisis

JEL classification: G21, G28, K21, L40

¹ Special thanks to Arnoud Boot, Iwan Bos, Igor Lončarski, Maarten Pieter Schinkel, Razvan Vlahu, and an anonymous referee for their invaluable comments. Usual caveats apply.

² Fordham University, 1790 Broadway, 11th floor, New York, NY 10019, E-mail: ihasan@fordham.edu.

³ Corresponding author. Faculty of Economics, University of Ljubljana, Kardeljeva ploščad 17, 1000 Ljubljana, Slovenia, email: matej.marinc@ef.uni-lj.si, and Amsterdam Center for Law & Economics (ACLE), Faculty of Economics and Business, University of Amsterdam, Roetersstraat 11, 1018WB Amsterdam, The Netherlands, email: m.marinc@uva.nl.

*“Competition is a sin.”*¹

1. Introduction

Historically, the banking industry has been exempt from strict application of competition policy. Competition was undesirable, the thinking goes, given its responsibility for instabilities in the banking system. However, in recent years, this perception has somewhat reversed. According to former Federal Reserve head Alan Greenspan, competitive forces in banking are actually so strong that it is futile and counterproductive to resist them: “[t]oday’s competitive markets, whether we seek to recognize it or not, are driven by an international version of Adam Smith’s ‘invisible hand’ that is unredeemably opaque” (Greenspan, 2011). That said, the global financial crisis of 2008 has proven that the “invisible hand” may indeed go too far.

The key issue with the nexus of competition and stability in banking relates to how competition policy interferes with banking during bad economic periods when bank failures may have repercussions for an entire economy. Stability in banking during bad times is a paramount concern, and government/regulatory interventions understandably become indispensable in resolving bank failures. However, they also distort competition at least in the short term. A better approach to competition policy is to allow competition to suffer in the short term if doing so safeguards financial stability and if competition authorities intend to restore competition in the long term.

To evaluate the implications of this approach to competition policy in normal and distressed economies, we evaluate the three pillars of competition policy in European banking (anti-cartel policy, merger policy, and state-aid control). Unlike Reynolds, Macrory, and Chowdhury (2011), who discuss EU competition policy at large, we focus on banking competition, where stability concerns play a dominant role. We also evaluate several antitrust cases (including a recent case of LIBOR and EURIBOR rigging), state aid to BAWAG P.S.K. before and during the global financial crisis, and several merger cases (the Lloyds TSB\HBOS merger and the BNP Paribas\Fortis merger).

During the global financial crisis, bank supervisors lacked the tools to restructure failing banks successfully (Marinč and Razvan, 2011). The fragmented supervisory structure aggravated the problem, and the pressure on financial stability mounted, triggering intervention by national governments, which supported failing banks mainly through a wide framework of state aid.

Competition policy in European banking was lenient during this time, although not absent. To avoid further fragmenting European banking, the European Commission acted as the European competition authority during the crisis, engaging in bank restructuring processes at the European level

¹ The saying is often attributed to John D. Rockefeller, although evidence is inconclusive. http://www.barrypopik.com/index.php/new_york_city/entry/competition_is_a_sin_rockefeller/

in cooperation with heavy state aid from national governments. The European Commission applied a lenient framework of state-aid control but enforced strict merger and anti-cartel policy, arguing that long-term competitive distortions could further fragment European banking systems.

Two improvements to this approach are necessary. First, an enhanced framework for bank regulation, supervision, and resolution could mitigate the need to alter competition policy during crises. In times of crisis, the competition authority may get surprisingly close to taking on the role of prudential regulator/supervisor because concerns about systemic stability may outweigh concerns about competition. However, bank regulators may have more knowledge and information than the competition authority when it comes to safeguarding the stability of a banking system. This calls for enhancing the roles of European bank regulators and supervisors (e.g., the EBA and ECB), establishing an EU bank-reconstruction authority, and increasing communication with the competition authority (the European Commission).

Second, the EU must streamline the roles and objectives of its competition authority. Currently, the multiple objectives of the EU's competition policy allow for substantial discretion. Discretion may be warranted in unprecedented events (e.g., a severe financial crisis), but it may also spur lobbying for the benefit of stronger players—whether they are countries or banks.

This paper is organized as follows. Section 2 briefly reviews theoretical and empirical literature to analyze what makes competition special in banking. Section 3 analyzes competition policy in European banking in times of financial stability, including the legal environment for cartel prevention, merger control, and state-aid control. Section 4 focuses on the role of competition policy in a banking crisis and discusses several EU competition cases. Section 5 assesses European competition policy. Section 6 concludes the paper.

2. The benefits and drawbacks of competition in banking

The following brief literature review shows that competition increases efficiency, but its impact on stability in banking is inconclusive.

2.1. The benefits of competition

An efficient financial system allocates resources with as little costs as possible. Competition helps achieve this efficiency, particularly cost efficiency (including productive efficiency) and allocative efficiency (the optimal allocation of resources).

Many studies find that competition among banks is good for the industry and the economy. For example, Stiroh and Strahan (2003) investigate the interdependence between performance and growth in the banking industry after deregulation in the U.S. in the 1980s. They find that deregulation spurred a shift in market share from less efficient to more efficient banks. Carlson and Mitchener

(2006) show that competition also positively affects stability. They find that the expansion of bank branching in the U.S. increased competition in the 1920s. The higher competition weeded out inefficient banks, which effectively made the banking system more stable (see also Berger and Hannan, 1998). Similarly, Mester (1987) finds that greater multimarket contact among competing banks (an outcome of relaxed interstate branching) increases competition and benefits consumers.

It is clear that higher competition positively affects not only the efficiency of the banking industry, but also the productivity of the real economy. Jayaratne and Strahan (1998) investigate increased competition in the U.S. triggered by the removal of bank-branching restrictions. They find that per capita growth in output and income increases significantly following deregulation of the banking industry. Evanoff and Ors (2008) evaluate the changes in cost efficiency after new bank competitors enter local markets. They show that incumbent banks adjust to the entry of a new bank by improving their cost efficiencies.

Several studies also predict that competition enhances bank monitoring and, consequently, credit allocation. Boot and Thakor (2000) argue, for example, that competition forces banks to focus on activities that are less prone to price competition, such as relationship banking. Dell’Ariccia and Marquez (2004) show that competition also increases sector specialization. Sector specialization helps banks escape price competition by investing in activities that allow them to get to know their borrowers better and offer tailor-made services. Degryse and Ongena (2007) provide empirical evidence that competition not only lowers interest rates for borrowers but also improves access to credit for informationally opaque borrowers.² They show that bank branches strengthen their relationships with borrowers when they face stronger competition.³

2.2. Competition and stability

Contradicting this notion that competition is good for the banking industry and the economy are several theoretical contributions showing that competition may expose banks to risk and therefore actually decrease stability in banking. For instance, Vives (2010) shows that higher competition

² In an opposing view, Petersen and Rajan (1995) show that competition might hamper the intrinsic role of banks as monitors of borrowers. In particular, banks may invest less in relationship-building if a more competitive environment reduces the financial significance of those relationships.

³ This effect is stronger if local non-hierarchical banks are in the financial system (Presbitero and Zazzaro, 2011). In this case, higher competition forces banks to enhance their lending technology, which resides in relationship lending. However, higher competition between large and hierarchical banks forces banks to improve their main lending technology (i.e., transaction lending), which may derail relationship lending. For the interaction between competition, IT, and relationship banking, see Marinč (2013).

increases the probability of a bank run. If competition among banks is fierce, the study argues, banks have less of a cushion to mitigate excessive withdrawals. Vives suggests that regulators should strengthen banks' capital requirements when competition increases.

Competition could also increase risk-taking. Keeley (1990), for example, argues that competition erodes the franchise value of a bank. A bank with little to lose is therefore encouraged to make big bets and search for profits through pronounced risk-taking.⁴ Several empirical studies support this argument. Using data for the Spanish banking system, for instance, Jiménez, Lopez, and Saurina Salas (2010) find that higher market power (using the Lerner index) decreases bank risk-taking (measured by nonperforming commercial loan ratios). Beck, Jonghe, and Schepens (2010) find that this effect is strongest in countries with unconcentrated banking markets, stricter activity restrictions, and pronounced herding in revenue structure.

However, competition is not solely responsible for bank instability. Panic-based bank runs can occur in monopolistic banking environments, too (Chang and Velasco, 2001; Diamond and Dybvig, 1983; Boyd, De Nicolo, and Smith, 2004). Recent theoretical studies even anticipate a positive relationship between competition and stability. Boyd and De Nicolo (2005) argue that competition lowers interest rates for bank loans, for example, which mitigates borrowers' moral-hazard behavior and makes lending safer.⁵ Another argument is that competition helps strong banks gain market share (see Boot and Marinč, 2009), and strong banks lead to a more stable banking system.

Empirical evidence also supports the positive relation between competition and stability. In a cross-country study, Berger, Klapper, and Turk-Ariss (2009) find that, for banks, reductions in market power (measured by the Lerner index and HHI) are associated with lower risk exposure. Controlling for risk-taking, Schaeck and Čihák (2010) show that banks also hold higher levels of capital when competition (measured by Panzar and Rosse H-statistics) is strong. Conversely, they also show that limiting banking competition hampers banks' financial stability. Furthermore, Schaeck, Čihák, and Wolfe (2009) show that reducing competitive activity (measured by Panzar and Rosse H-statistics) increases the probability of crises. Similarly, Beck, Demirgüç-Kunt, and Levine (2006) find that economic crises are less likely in concentrated banking systems with fewer restrictions on bank

⁴ Dell'Ariccia and Marquez (2006) argue that deregulation and consequent higher competition encourage banks to loosen credit standards in order to fight for additional market share. This might result in a lending boom and (potentially) a banking crisis. Rice and Strahan (2010) empirically mitigate that concern. They find that relaxed intrastate branching in the U.S. increased competition; however, total lending to SMEs remained unchanged.

⁵ Wagner (2010) shows that Boyd and De Nicolo's (2005) effect overlooks the fact that banks can adjust their loan portfolios toward riskier borrowers.

competition (e.g., lower barriers to entry) and banking activities. These findings suggest that when national institutions encourage competition, they lower the probability of bank failure.

Overall, however, the relationship between competition and stability is inconclusive. Three main explanations exist. First, different studies use different proxies for competition. Concentration indexes such as the HHI index may not measure the competitive conduct of banks (see Carbó-Valverde, Rodríguez-Fernández, and Udell, 2009), for example. Competition between a few large banks may be fierce, whereas competition among many geographically separated small banks may be limited. The Lerner index and Panzar and Rosse H-statistics may therefore be better proxies to measure competitive bank activity.

Second, as Beck (2010) identified, most empirical studies evaluate periods of relative financial stability with pronounced consolidation trends. This jeopardizes the validity of those findings in times of global recession. That is, the positive effects of competition may prevail in normal times, but not necessarily in times of financial crisis.

Third, competition may strengthen the banking system more in the long run than in the short run. In the short run, changes in the competitive environment might cause instabilities because banks have not yet adjusted to their new environments and the path to a new equilibrium entails risks (see also Vives, 2001 and Boot and Marinč, 2007). In particular, Demirgüç-Kunt and Detragiache (2001) show that liberalization negatively affects the stability of the banking system. They provide an important insight: the negative relation between liberalization and stability is weaker in countries with strong institutional environments. Countries with high corruption, low respect for the rule of law, and weak contract enforcement should therefore carefully introduce financial liberalization.

In summary, competition increases efficiency but not necessarily banking stability. Competition authorities should apply competition policies relentlessly in times of financial stability; however, the EU should also strengthen its regulatory and legal environment to prevent evolutionary dynamics in banking from threatening economic fragility. In other words, stability in banking is preserved only if a strong institutional setting (e.g., low corruption, strong contract enforcement, and respect for the rule of law) supports competition.

3. Competition policy in banking: The EU approach

This section reviews the EU approach to competition policy in banking in times of financial stability, including cartel prevention, merger policy, and state-aid control.

3.1. Structural measures to enhance competition

Competition policy should move beyond blind implementation of rigid rules and instead focus on structural measures that enhance competition. Concentration indexes are not a perfect proxy for

competitive conduct, for example, and so competition policy cannot solely rely on cut-offs in concentration indexes. These normal tools are also imprecise because banks have difficult-to-define production functions, sell bundles of services, and are riddled with network externalities (Claessens, 2009).

Structural configurations are a better way to define the level of competitive conduct in banking. In the EU, competition policy focuses on leveling the playing field, ensuring free entry and exit, and establishing a contestable institutional environment with equal access to common services for all banks. However, Europe still does not have a common market for financial services. Regulatory practices and legal frameworks across the EU countries need to be further harmonized. The biggest challenges lie in coordinating its national supervisory bodies and governments, bank-closure mechanisms, deposit-insurance schemes, tax systems, and extensive government guarantees.

The European Commission has evaluated competitive concerns in the retail banking sector's markets for payment systems, payment cards, and retail banking products (EC, 2007). The evaluation found highly concentrated markets for payment systems and payment cards in several EU countries, as well as large variations in merchant fees and interchange fees, and high and sustained profitability in card issuing. The study also identified several practices that create barriers to entry in retail-banking product markets, particularly exclusions from existing credit registries and from cooperation among banks. Banks also engaged in product tying and deterred customer mobility (e.g., costs to switch accounts).

Banking regulators and competition authorities should work to lower these barriers to entry in the EU banking system. In particular, they should reduce customers' switching costs. One way may be through account-number portability (Independent Commission on Banking, 2011). This used to be prohibitively expensive, but the costs may substantially decline due to IT and payment-system developments. For example, large and small banks could share information through information exchanges. Banks could also share risk-management systems, cash handling, and payment-system products (Independent Commission on Banking, 2011). These actions may lower the barriers to entry for small banks in particular.⁶

3.2. *Anti-cartel policy*

⁶ Size heterogeneity among banks may induce large banks into collusive behavior. Bos and Harrington (2010) show that if firms are heterogeneous in their capacities, large firms may form stable cartels.

Banks compete and cooperate in multiple markets and business segments. They should also cooperate to establish common services (e.g., payment and processing infrastructure⁷), exchange information through credit bureaus, and strengthen public confidence in the financial system—all important for quality bank operations and smooth operation of the entire economy. Some banks may still attempt to collude and engage in other practices with the sole purpose of limiting competition. Frequent cooperation across several activities may facilitate anti-competitive behavior due to the enhanced threat of retaliation in multiple markets (Bernheim and Whinston, 1990) and better detection of defecting firms (Matsushima, 2001; Greve, 2008).

The EU's legal framework to prevent cartels is based on Articles 101, 102, and 106 of the TFEU and further refined by framework legislation,⁸ implementing legislation, notices and guidelines, and block exemptions (see EC, 2011b). Article 101(1) of the TFEU (ex article 81 TEC) prohibits “all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market.” Article 101(1) explicitly prohibits (a) fixing prices or other trading conditions, (b) restricting production, markets, technical development, or investment, (c) sharing markets or sources of supply, (d) putting other trading parties at a disadvantage in equivalent transactions, and (e) subjecting the conclusion of contracts to other nonrelated obligations.

If an agreement limits competition according to Article 101 of the TFEU, a bank can invoke Article 101(3) of the TFEU as a defense. In such a case, the competition authority weighs the procompetitive effects of an agreement as defined by Article 101(3) of the TFEU against the anticompetitive impact of the agreement—but only if four cumulative conditions hold: the agreement must lead to efficiency gains, the restrictions must be indispensable for the efficiency gains, the resulting benefits are largely passed on to consumers, and the agreement should not “afford such undertakings the possibility of eliminating competition for a substantial part of the products in

⁷ The SEPA case highlights the fine line between cooperation and collusion among banks when introducing common standards into payment and processing business. The European Commission opened an investigation into e-payment standardization processes that allegedly restrict competition (see IP/11/1076, 26.9.2011). It also proposed a regulation to foster the transition to the SEPA-compliant credit transfer and direct debit transactions (see OJ 94, 30.3.2012, p.22-37).

⁸ Council Regulation 1/2003/EC of December 16, 2002, on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (OJ L 1/1, 4.1.2003) amended by Council Regulation (EC) No 411/2004 of February 26, 2004, (OJ L 68/1, 6.3.2004) and Council Regulation (EC) No 1419/2006 of September 25, 2006 (OJ L 269/1 28.9.2006)—Consolidated version of October 18, 2006.

question” (see Article 101(3) of the TFEU). If the agreement fails the test, Article 101(2) of the TFEU makes it automatically void.

EU banking has experienced several cases of collusive practices. For example, eight Austrian banks formed arguably the biggest EU banking cartel, called the “Lombard Club.” It started before 1994, lasted until June 1998, and involved the entire Austrian banking system. Banks engaged in fixing deposit, lending, and other interest rates through numerous committees, and included several layers of bank management. In a surprise inspection, the European Commission collected enough evidence of collusion to prove an infringement of Article 101 of the TFEU (at the time Article 81 TEC). Banks cooperated in the investigation, and the fines totaled €124.26 million (EC, IP/02/844). In another cartel case, which occurred in 1997 among German and Dutch banks, the European Commission imposed a total of €100.8 million in fines. There, colluding banks engaged in price fixing for currency exchange (they reached an agreement on a 3% commission on buying and selling euro-zone currencies; see EC, IP/01/1796).

Recent cases include Visa International and MasterCard setting multilaterally agreed interchange fees—also violations of Article 101 of the TFEU (at the time Article 81 TEC). Pressured by the investigation of the European Commission, Visa proposed reforms that lowered the costs of an average debit card transaction by more than 50%. The European Commission granted an exemption under Article 101 of the TFEU (at the time Article 81(3) TEC). On April 3, 2009, however, the European Commission concluded that Visa Europe’s multilateral interchange fees infringed Article 101 of the TFEU. In negotiations with the European Commission, Visa Europe agreed to cap its yearly cross-border multilateral interchange fees (see OJ 2011/C 79/05).

In the case of MasterCard, the European Commission issued a decision on December 19, 2007, requiring MasterCard to repeal any multilateral interchange fees (such as its intra-EEA fallback interchange fee and SEPA/intra-Eurozone fallback interchange fees). The European Commission stated that such fees act as a floor on the price merchants paid for accepting payment cards, and that in the absence of the multilateral interchange fees, the price would be lower.⁹

In October 2007, the European Commission investigated violations by Groupment des Cartes Bancaires under Article 101 of the TFEU (at the time Article 81 TEC) and found that Groupment had increased the cost of cards issued by new banks entering the market. This in effect helped the large

⁹ The European Commission also rejected the application of exemption through Article 81(3) TEC because of the missing empirically proven link among the MIF, system output, and related efficiencies (see OJ 2009/C 264/04). MasterCard applied under Article 230 TEC for the annulment of the European Commission's Decision (see OJ 2008/C 116/47), but the court dismissed it (Judgment of the General court in Case T-111/08, 24.5.2012).

French banks that controlled Groupment. The European Commission did not impose any fines but ordered Groupment to stop its anticompetitive activity (see OJ 2009/C 183/07).

Article 102 of the TFEU prevents banks from abusing their market dominance. Specifically, it states that any abuse “of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.” Article 102 prohibits price fixing, output restrictions, putting other trading parties at a disadvantage in equivalent transactions, and subjecting the conclusion of contracts to other nonrelated obligations.

Violations of Article 102 are relatively rare, and only two stand out. On November 16, 2009, the European Commission sent a Statement of Objections to Standard and Poor's (S&P) regarding its potential abuse of dominant position. S&P as the sole-appointed National Numbering Agency for U.S. securities, financial institutions, and information service providers charges a licensing fee for the use of International Securities Identification Numbers (ISINs). The charges were excessive and constituted an infringement of Article 102 of the TFEU (at the time Article 82 TEC), according to the European Commission. S&P agreed to stop charging licensing fees to banks for the use of ISINs within the European Economic Area. The European Commission rendered the commitment legally binding (see OJ C 31, 4.2.2012, p.8-9).

The European Commission also investigated Thomson Reuters to determine whether the company abused its dominant market position (infringement of Article 102 of the TFEU) in real-time market data feeds. Thomson Reuters subsequently agreed to create a new license that would help customers switch to competing data providers more easily. The European Commission made the commitment legally binding (see IP/12/1433, 20.12.2012).

3.3. Merger policy

Merger control in the EU also resides mainly in Articles 101, 102, and 106 of the TFEU (ex Articles 81 TEC, 82 TEC, and 86 TEC). A large framework of notices, guidelines, best practices, and other practical information (see EC, 2010) supplement the basic legislative texts that define merger control in the EU—the EC merger regulation (ECMR)¹⁰ and the implementing regulation.¹¹

¹⁰ Council Regulation (EC) No 139/2004 of January 20, 2004 on the control of concentrations between undertakings (OJ L 24, 29.1.2004, p.1).

¹¹ Commission Regulation (EC) No 802/2004 of 7 April 2004 implementing Council Regulation (EC) No 139/2004 (published in OJ L 133, 30.04.2004, p.1) amended by Commission Regulation (EC) No 1033/2008 of 20 October 2008 (published in OJ L 279, 22.10.2008, p. 3) – Consolidated version of 23 October 2008.

According to Article 2(2) of the ECMR, “[a] concentration which would not significantly impede effective competition, in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position, shall be declared compatible with the common market.” If a joint venture is established, its compatibility with the EU common market needs to be determined (see Article 2(4) of the ECMR). According to Article 2(5) of the ECMR, the European Commission determines compatibility according to “whether two or more parent companies retain, to a significant extent, activities in the same market as the joint venture [...]” and “whether the coordination [...] affords the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the products or services in question.” The European Commission also evaluates mergers at the community level.¹² National competition authorities evaluate other mergers.

Merger control involves certain basic procedures. In Phase I, the European Commission examines the concentration with the community dimension and makes a decision according to Article 6 of the ECMR. The European Commission decides whether the concentration falls within merger regulation (Article 6(1)a), “does not raise serious doubts as to its compatibility with the common market” (Article 6(1)b), or “raises serious doubts as to its compatibility with the common market” (Article 6(1)c). If the concentration falls within Article 6(1)c, the process proceeds to Phase II. In Phase II, the European Commission performs a detailed appraisal and issues a final decision according to Article 8 of the ECMR. In particular, the European Commission can approve the merger with conditions and obligations if “a notified concentration fulfills the criterion laid down in Article 2(2) and, in the cases referred to in Article 2(4), the criteria laid down in Article 81(3) of the Treaty.” Otherwise, the European Commission can prohibit or dissolve the merger.

Referrals to “the interest of the intermediate and ultimate consumers, and the development of technical and economic progress” in Article 2(1)b of the ECMR and to Article 101(3) of the TFEU (ex Article 81 TEC) demonstrate the need to assess efficiency improvements from mergers. Paragraphs 76–88 of the horizontal merger guidelines (OJ C 31, 05.02.2004, p.5-18) further define that efficiencies have to benefit consumers, be merger-specific, and be verifiable. Put simply, the European Commission may approve a merger if the merger-related efficiencies improve competition and benefit consumers, counteracting the adverse impact of the merger on competition.

Several countries also have special “failing-firm defense” clauses in their jurisdictions. These clauses allow an otherwise anticompetitive merger to get the green light if one of the merging companies is inevitably heading toward insolvency and an exit from the market (OECD, 2009). In the

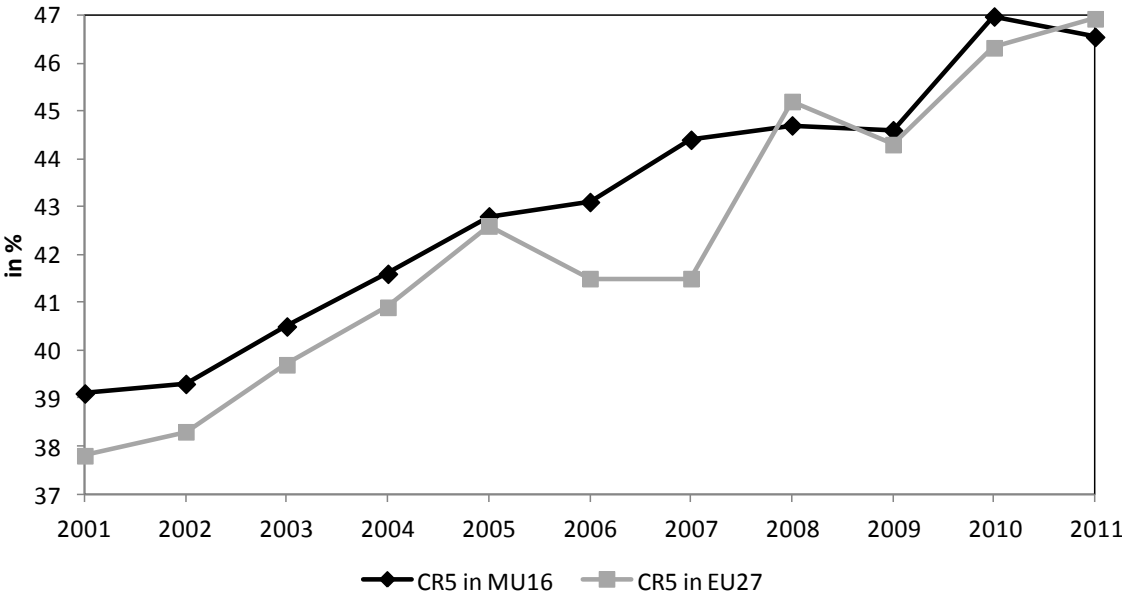
¹² The community dimension of the concentration is established if certain thresholds in terms of worldwide and community-wide annual turnover of the undertakings concerned are surpassed (see Article 1 of the ECMR). Special rules are applicable for financial institutions (see Article 5(3) of the ECMR).

EU, in paragraph 89 of the horizontal merger guidelines, the European Commission endorses the failing-firm defense if “the deterioration of the competitive structure that follows the merger cannot be said to be caused by the merger.” Mergers of this nature are further evaluated using three criteria from Paragraph 90: whether the firm would be forced out of the market if the merger does not occur, whether the merger is the least anti-competitive option, and whether the assets of the failing firm would exit the market in the absence of a merger.

In the last decade, we have witnessed a consolidation wave in European banking (see Figure 1). Initially, mergers predominantly occurred between domestic banks, pointing to economic nationalism among governments. Dinç and Erel (2010) provide empirical evidence that EU governments may have indeed supported domestic mergers and opposed foreign acquirers. However, in a few cases, the European Commission took a tough stance and cross-border mergers took place.

For example, in 2001 the European Commission rejected the Lloyds TSB Group takeover of Abbey National due to the merger's severe anticompetitive effects. The merged bank would have held 27% of the market for personal current accounts and 17% of the SME banking market. The European Commission argued that even merger remedies could not restore the level of competition and blocked the merger. Carletti and Vives (2009) argue that this decision indicated the end of domestic consolidation in the UK, and this effectively opened up the market for cross-border consolidation (in 2004, Banco Santander of Spain took over Abbey National). Finally, domestic mergers reoccurred during the financial crisis (see Section 4.3).

Figure 1: The average share of total assets of the five largest credit institutions across the euro monetary union (MU) and EU



Source: ECB (2006), ECB (2008), ECB (2010), and authors' computation based on ECB Statistical Data Warehouse. The averages are asset weighted. For 2003 and 2004, data is for the MU13. For 2001 and 2002, data is for the MU12 and EU25.

However, several cases exist in which EU countries have tried to abuse the exemptions in merger control in order to defend national champions (see Gerard, 2008). For example, in 1999, Banco Santander wanted to acquire several Portuguese banks, but the Portuguese minister of finance blocked the deal due to alleged prudential concerns. The European Commission ordered the withdrawal of the decision. In the end, the Portuguese finance ministry and Banco Santander negotiated the merger conditions (see Case IV/M.1616 – BSCH/A, 20.6.1999).

Another case pertains to Unicredit's acquisition of Bayerische Hypo-und Vereinsbank (HVB). Although the European Commission approved the acquisition (see Case No COMP/M.3894 – Unicredito/HVB, 18.10.2005), the Polish government interfered and imposed further conditions on Unicredit with the alleged objective of promoting competition in Polish banking. Even though the European Commission took action against Poland (see IP/06/277, 8.3.2006), Unicredit still agreed to several concessions from Polish authorities, including divesting the brand and several branches of Polish bank BPH.

3.4. State-aid control

Multiple arguments point to the drawbacks of state aid and the need for state-aid control when it comes to the health of the EU banking industry. Direct or indirect state aid (such as implicit government guarantees for too-big-to-fail banks) may push banks to undertake otherwise unprofitable activities. As Ben Bernanke stated, “[h]aving institutions that are too big to fail also creates competitive inequities that may prevent our most productive and innovative firms from prospering. [...] firms that do not make the grade should exit, freeing up resources for other uses” (Bernanke, 2010). State-aid control then allows for a Schumpeterian creative-destruction process in banking.

State aid may also enhance banks' risk-taking. If banks anticipate government bailouts, for example, they may undertake excessive risk (Cheng and Van Cayseele, 2009). In this view, regulators should closely monitor beneficiary banks to prevent excessive risk-taking. However, Gropp, Hakenes, and Schnabel (2010) show that state aid through government guarantees increases risk-taking in competing banks but not in beneficiary banks (except for banks with outright public ownership). They argue that beneficiary banks can compete more aggressively because they receive state aid, and, to cope with the pressure, competing banks become riskier. Distortionary-designed state aid may therefore increase risk-taking in the entire banking system. The findings of Gropp, Hakenes, and Schnabel (2010) therefore indicate that beneficiary banks and their competitors need intense prudential supervision.

According to Spector (2009), state-aid control may help governments resist the lobbying pressure for bailouts, which is particularly strong given the adverse political consequences of bank failure (Brown and Dinç, 2005). This calls for strong state-aid control in banking, shielded from political pressure. In the EU, a supranational authority may be better shielded from local political pressures and may therefore allocate state aid as well as apply stringent state-aid control better than national governments or local authorities. Notably, state aid in the EU is generally prohibited. The main intention of a state-aid control in the EU is to preserve competition and foster trade in the EU common market despite potential government intervention.

State-aid control should preserve a level playing field among the EU countries (Kroes, 2010). State-aid control serves to increase cross-border competition and enhance common markets for financial services among the EU. Without state-aid control, fragmentation along national borders may increase because state aid artificially strengthens (inefficient) domestic banks.

Articles 107-109 of the TFEU provide the main legal basis for state-aid control. Article 107(1) of the TFEU defines state aid as “any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.”

Article 108 of the TFEU gives the European Commission the authority to apply state-aid control in Europe. Thus, if the European Commission finds that state aid is not compatible with the internal market per Article 107, the European Commission can abolish, alter, or recover the state aid. However, the Council of the European Union may unanimously override the European Commission and allow the state aid in derogation of Article 107 if exceptional circumstances exist. Article 109 of the TFEU allows the council, on a proposal from the European Commission and after consulting the European Parliament, to accept regulations for the application of state-aid control.

Though this state-aid control is crucial to establish common rules in EU countries and thereby foster competition and trade, sometimes government intervention is required to prevent market failures and ensure equitable economies. Thus, exemptions exist in Article 107(2) of the TFEU. In particular, state aid is compatible with the internal market if it has (a) “a social character, granted to individual consumers, provided that such aid is granted without discrimination to the origin of the products concerned;” if (b) the state aid is intended to repair “the damage caused by natural disasters or exceptional occurrences;” or (c) if the state aid is intended to overcome the economic disadvantages caused by the division of Germany.

Article 107(3) of the TFEU defines further potential exemptions, including (a) state aid that promotes the economic development of underdeveloped regions, (b) state aid that promotes “the execution of an important project of common European interest or to remedy a serious disturbances in

the economy of a Member State,” (c) aid to facilitate the development of certain economic activities, (d) “aid to promote culture and heritage conservation [...]” and (e) other aid decided by the Council on a proposal by the European Commission. The European Commission refined these rules with a series of legislative acts (see EC, 2012b) that allow for monitoring and assessment of state aid across the EU.

The state-aid control in banking applies to schemes as well as to ad hoc cases. For example, in 2001 and 2008 the European Commission made negative decisions with recovery in illegal state-aid schemes in Italy. From 1998 to 2000, banks in Italy that merged or engaged in similar restructuring obtained reductions in their income tax rates. The Italian authorities justified the tax advantages as necessary for consolidating and modernizing the banking sector. However, the European Commission decided that the tax advantages discriminated between foreign and Italian banks and between banks of different sizes. It found that the tax advantages were illegal state aid that needed to be recovered (see OJ L 184, 13.7.2002, p.27-36). Also in 2008, the European Commission decided that Italy’s 2004 finance law favored selected Italian banks by giving them tax benefits. The European Commission sought to recover an estimated €123 million in aid associated with nine beneficiary banks (see OJ C 154, 7.7.2007, p. 15-22).

Another example of illegal state aid is BAWAG P.S.K. bank in Austria. From 1995 to 2004, BAWAG P.S.K. was pursuing a risky investment strategy that resulted in severe losses and hampered its solvency. As a result, BAWAG P.S.K. experienced a severe bank run in 2006. To mitigate liquidity crisis, the Austrian Parliament provided a €900 million guarantee to BAWAG P.S.K. through a special law. The European Commission decided that the guarantee constituted illegal state aid. It argued that the guarantee could not be justified with an aim “to remedy a serious disturbances in the economy of a Member State” (by Article 107(3)b of the TFEU) because Austria failed to prove the systemic impact of potential insolvency of BAWAG P.S.K. (see OJ L 83, 26.3.2008, p. 7-34). Rather, the state aid was an “aid to facilitate the development of certain economic activities” (on the basis of current Article 107(3)c of the TFEU and further defined in community guidelines on state aid for rescuing and restructuring firms in difficulty, OJ C 244, 1.10.2004, p. 2-16).

Although the European Commission conditionally approved the state aid, the compensatory measures were restrictive, involved asset divestment, and limited commercial activities (e.g., commitment not to act as a “primary dealer” for Austrian government bonds).

4. Competition policy in times of a financial crisis

Banking crises are costly events with repercussions for the economy at large, and several intervention mechanisms attempt to mitigate those consequences: central banks may act as lenders of last resort and provide liquidity support to illiquid banks; governments may grant substantial state aid to weak

banks; and regulators may unwind failed banks through liquidation, purchase and assumption agreements, or nationalization (see Marinč and Razvan, 2011). These attempts to create financial stability, however, may create structural inefficiencies that damage competition and, therefore, conflict with competition policy.

4.1. Arguments for lax competition policy in times of a financial crisis

In times of a financial crisis, competition policy needs to deviate from the standard case scenario and support interventions necessary for the stability of the financial system. The task of competition policy, however, is to devise interventions that minimize long-term distortions of competition. Liquidity support and state aid, for example, may conflict with state-aid control measures. Purchase and assumption agreements conflict with merger-control policies. Nationalizing a bank may create implicit government guarantees. General subsidy schemes may create barriers to entry. In some instances, therefore, competition policy in banking needs to be more lenient in a financial crisis than in times of financial stability.

In this regard, competition authorities should closely cooperate with prudential regulators. Competition authorities also need to consider the positive externalities that bank stability brings (Fingleton, 2009). For example, state aid to a weak bank may positively affect competing banks through increased public confidence and a strengthened banking system. Hence, competition authorities should relax competition policy when the positive externalities of state aid may mitigate its anticompetitive effects.

A note of caution is warranted, of course. The positive spillovers of relaxed competition policy diminish during economic booms, but the structural problems it creates persist.¹³ For these reasons, lax competition policy, if allowed, should only be temporary and should contain phase-out conditions. In addition, competition policy should distinguish between single bank failures and systemwide instability. When systemic stability is endangered, competition authorities could relax competition policy if short-term stability concerns outweigh long-term competition concerns.¹⁴

Obviously, public confidence is crucial to safeguarding stability in banking. Illiquidity (e.g., due to bank run) may create short-term severe strains on banks that result in insolvency. Hence,

¹³ Cordella and Yeyati (2003) support conditioning bailout policies on economic downturns. Such conditioning decreases bank risk-taking by increasing the franchise value of banks.

¹⁴ In the long term, restricting banking competition during crises hurts consumers as well as the real economy. Peek and Rosengren (2005) and Caballero, Hoshi, and Kashyap (2008) show that forbearance of weak Japanese banks in the 1990s restricted interbank and interfirm competition and postponed economic recovery.

interventions may supply liquidity. An example would be the central bank's intervention as lender of last resort so that short-term, liquidity-based interventions do not hurt long-term competition. However, the argument presumes that it is easy to separate illiquid banks from insolvent banks. In reality, such a distinction is difficult to make. The competition authority should closely cooperate with the prudential regulator (or lender of last resort), which has more information/knowledge to determine whether the problem is illiquidity or insolvency.

4.2. Antitrust Enforcement and Crisis cartels

The European Commission took a stand against cartels during the global financial crisis and did not relax its antitrust enforcement in banking (EC, 2012).

In October 2011, the European Commission raided several financial institutions holding financial derivatives linked to EURIBOR. The concern was that the institutions had colluded and infringed Article 101 of the TFEU (see MEMO/11/711, 19.10.2011). In June 2012, Barclays Bank was fined \$360 million by U.S. authorities and £59.5 million by UK authorities for manipulating LIBOR and EURIBOR benchmark rates either by making false submissions during the rate-setting process or by seeking to change the EURIBOR submissions of other banks involved in the rate-setting process.¹⁵

In December 2012, Swiss bank UBS agreed to pay \$1.2 billion to the U.S. Department of Justice and the Commodities Futures Trading Commission, £160 million to the UK's Financial Services Authority, and CHF59 million to the Swiss Financial Market Supervisory Authority in fines and disgorgement. The conduct included UBS traders colluding with interdealer brokers and with other banks directly to manipulate benchmark rates (including LIBOR, EURIBOR) and thereby increase their trading profits.¹⁶ The European Commission's decision in the investigation is still pending, but the case already shows the importance of cooperation between financial regulators and competition authorities within and across countries. In response, the European Commission amended its proposals for regulation on market abuse and for directives on criminal sanctions for market abuse to ensure that direct manipulation of benchmarks is a criminal offense (see IP/12/846, 25.7.2012).

¹⁵ See U.S. CFTC's press release: PR6289-12 on 27 June, 2012; see also Non-prosecution agreement, 26 June, 2012, between the United States Department of Justice, Criminal Division, Fraud Section, and Barclays Bank PLC available at <http://www.justice.gov/opa/pr/2012/June/12-crm-815.html>; see also FSA, Final notice to Barclays Bank Plc, 27 June, 2012, <http://www.fsa.gov.uk/static/pubs/final/barclays-jun12.pdf>

¹⁶ FSA, Final notice to UBS AG, 19 December 2012, <http://www.fsa.gov.uk/static/pubs/final/ubs.pdf>; See also Case USA v. UBS Securities Japan Co, LTD, No. 12-00268, D. Conn.

In 2011, the European Commission also investigated the credit default swaps (CDS) information market and the CDS clearing market. In the CDS information market, the European Commission examined whether 16 CDS dealer banks in the CDS market colluded by providing data on pricing and indices only to Markit, which gathers information on the CDS market. In the CDS clearing market, the European Commission examined whether a number of agreements among nine CDS dealers favored clearinghouse ICE Clear Europe (see IP/11/509, 29.4.2011).

In some industries, the competition authority could also relax its antitrust enforcement by allowing for crisis cartels, which are cartels in which firms reduce overcapacity in a coordinated way over a limited time interval (see OECD, 2011, p. 109). The rationale is that, during crises, overcapacity may force firms to engage in costly price wars that may lead to massive exits from the industry. When the economy recovers, only a few firms are left and the market is less competitive than before. A temporary cartel may prevent the social problems associated with industry collapse and yields a more competitive market after the crisis. Unfortunately, this argument is easily abused (the prime reason the U.S. prohibits crisis cartels).

Several arguments raise doubt that crisis cartels help contain banking crises. First, the notion that crisis cartels reconstruct overcapacity does not hold in banking. In particular, in a crisis, banks do not engage in price wars to employ their lending overcapacities and force competitors to exit the market. In contrast, banks curtail lending, and competition for borrowers generally weakens because of enhanced information asymmetries on the market. State subsidies may even need to support bank lending (especially to informationally opaque borrowers, such as SMEs).

Second, it is hard to argue that banks engage in price wars in order to attract investors (e.g., depositors) and drive competitors out of the market. A war of attrition is common in stable, transparent, and symmetric market structures. In crisis times, however, banks avoid forcing competitors into bankruptcy, because the contagion of bank runs may lead to their own demise. For this reason, it is doubtful that a crisis cartel will contain widespread panic in the banking system.

During the global financial crisis, the European Commission took a clear stance against crisis cartels, arguing that in the short-term they harm consumers and in the long-term they do not benefit consumers or corporations (Kroes, 2010). Banks involved in crisis cartels, after all, may coordinate to increase entry barriers and create structural distortions on a long-term basis.

Even though crisis cartels are explicitly prohibited, implicit crisis cartels may have occurred. For example, the competition authority has prevented banks that obtain state aid from increasing their market share by engaging in price wars or price leadership. The aim is to prevent unfair competition via government support. However, conduct constraints such as price caps and market-share restrictions could impede competition. In particular, competing banks may respond by increasing prices themselves, thereby forming an implicit crisis cartel.

For example, in the Dutch mortgage market, Mulder and Lengton (2011) find a positive relationship between mortgage interest rates and the degree to which state-supported banks pursue price leadership. The European Commission's restriction on price leadership may therefore have led to higher mortgage interest rates. This shows that competition authorities should consider the dynamic behavior of banks instead of relying on a static picture.

Country schemes for state aid create another danger: preventing foreign expansion, which may appear as if a bank is exploiting a subsidy. The unintentional consequence is that banks anticipate no threat of entry, and competitive behavior is limited.

Another problem may occur in the most crisis-hit EU countries (so-called Programme countries). In these countries, banks may already be close to insolvency and if they are caught colluding, they may not be able to pay the fines.

The European Commission may consider this inability to pay an exceptional economic situation.¹⁷ The purpose of the concept of the inability to pay is to prevent fines from driving a bank out of the market and causing adverse social and economic consequences. However, such concept may lower the ex-ante deterrent effect of antitrust legislation and may relax antitrust enforcement. Despite this concern, the number of requests for fine reductions due to the inability to pay actually decreased in 2011 (see EC, 2012c). In addition, competition authorities can impose other measures (e.g., behavioral measures) on colluding banks.

In summary, the European commission vigilantly enforced anti-cartel policies during the global financial crisis, but banks may now have higher incentives to engage in collusive practices.

4.3. Relaxed merger control

The European Commission kept its merger-control policies unchanged during the global financial crisis, but it also acknowledged that competition authorities can apply the rules flexibly in a deteriorated economic environment (Kroes, 2010).

For example, the European Commission argues that during a financial crisis the criteria for the failing-firm defense should be applied flexibly to deal with rapidly evolving market conditions. In particular, a bank failure during a crisis may create a systemic collapse of the banking system. Thus, it might be easier to prove that the competitive conditions resulting from a rescue merger will not be worse than the competitive conditions resulting from a systemic failure in the absence of the merger (see OECD, 2009, p. 188). The European Commission, however, demands that even in a financial

¹⁷ See the reduction of the fine due to the inability to pay under the Case COMP/39.600 – Refrigeration compressors, OJ C 122, 27.4.2012, p.6-7.

crisis a rescue merger must lead to efficiency gains in comparison to other means of restructuring failing banks. In this sense, the distinction between long-term viable and nonviable banks is crucial and the need to merge one or more nonviable banks is questionable from an efficiency point of view.

For example, the European Commission applied merger control to Fortis bank during the global financial crisis. Fortis, as a member of an international consortium, acquired Dutch bank ABN AMRO in October 2007. The European Commission imposed several conditions, the so-called EU Remedy, on Fortis to maintain competition in the Dutch banking system. In particular, Fortis agreed to divest a corporate banking business, two corporate client departments, and 13 district offices to a large international bank (Case No COMP/M.4844 – Fortis/ ABN AMRO Assets, 3.10.2007). In 2008, the financial crisis loomed, forcing Fortis into nationalization by the Benelux governments. The Belgian and Luxemburg subsidiaries of Fortis Holdings (i.e., Fortis Bank Belgium, Fortis Banque Luxembourg, and Fortis Insurance Belgium) were then sold to BNP Paribas.

The European Commission has cleared the merger, but not without conditions: a commitment from BNP Paribas to divest BNP Paribas Personal Finance Belgium (PFB). The divestiture reduces the concentration of the merged entity in card-issuing and related provisions of credit in Belgium and Luxembourg (Case No COMP/M. 5384 – BNP PARIBAS/FORTIS, 3.12.2008).

Despite the clear stance of the European Commission toward the strict application of merger control, the EU may have nonetheless partially relaxed its merger policy on national grounds. For example, stability considerations during the global financial crisis forced the merger between Lloyds TSB and the HBOS even though the UK competition authority, the OFT, expressed clear anti-competitive concerns: “the OFT does not believe that there are possible remedies that would be sufficient to address the competition concerns identified. [...] The OFT believes that [...] the creation of that merger situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services, including personal current accounts, banking services to small and medium enterprises, and mortgage” (OFT, 2008, p. 96).

In particular, the merged entity would have held 33% of the market share of personal current accounts and the [20-30]% (increment of [0-10]) market share of the SME banking market. Despite these concerns, the Secretary of State for Business and Enterprise allowed the merger to go through by adding a new public-interest consideration to the law (Smith, 2008).

Even with the merger, the newly created Lloyds Banking Group (LBG) needed additional capital. The UK government provided £17 billion in return for 43.5% of LBG’s shares. The European Commission approved this recapitalization under several conditions: the bank had to reduce its assets by £181 billion by December 31, 2014; divest 600 branches in England and Wales (4.6% of personal current accounts); divest the TSB brand; and halt its dividend (EC, 2009e).

Vickers (2008) argues that the case of Lloyds and HBOS was not a liquidity crisis, but rather a solvency crisis, and that overriding competitive concerns by allowing the merger was probably a policy mistake. Instead, government recapitalization measures should extend to individual banking groups separately. The Independent Commission on Banking (2011) agrees, arguing that the divestiture will not restore the level of competition and proposing additional divestitures.

The Lloyds TSB/HBOS and BNP Paribas/Fortis merger cases highlight the crucial distinction between national and supranational mergers in EU banking. That is, the degree to which merger control is strict depends on which authority oversees a merger. Examples show, for instance, that regulators may especially weigh the antitrust aspects of a merger against stability considerations in national mergers. In the Netherlands and Switzerland, regulators may overturn a competition authority's merger decision in the name of systemic stability (see Carletti and Vives, 2009 and Carletti, 2009). Similarly, Article 21(4) of the ECMR stipulates: "Member States may take appropriate measures to protect legitimate interests other than those taken into consideration by this Regulation [...] Public security, plurality of the media and prudential rules shall be regarded as legitimate interests."

Carletti and Vives (2009) argue that referring to "prudential rules" could indicate the possibility of incorporating stability considerations into merger policy. However, regulators have only used Article 21(4) in banking before the global financial crisis, and then mainly to protect national champions from foreign acquirers (see Section 3.3 and Gerard, 2008).

Merger-control rules might also become relaxed if several failing banks in a crisis-hit country fall under government control. Up until now, the European Commission has carefully scrutinized such mergers. It approved two cases: Hypo Real Estate Holding, acquired by Germany's state-owned Financial Market Stabilisation Fund (SoFFin), and Hypo Group Alpe Adia, acquired by the Austrian Ministry of Finance. The European Commission found that neither transaction would significantly impede competition (see Case No COMP/M.5508 – SOFFIN/HYPO REAL ESTATE, 14.5.2009 and Case No COMP/M. 5861 – REPUBLIC OF AUSTRIA/HYPO GROUP ALPE ADRIA, 4.8.2010).

Government acquisitions of banks may continue, especially in the most crisis-hit countries (so-called Programme countries). Corporate governance in state-controlled banks may also administer agreements among state-controlled banks that could hamper competition. For example, the European Commission expressed concerns that the corporate governance in state-aided Piraeus Bank does not limit coordination among several state-controlled banks through the Hellenic Financial Stability Fund and may lead to "an infringement of the EU rules in mergers and antitrust" (see OJ C359, 21.11.2012, p.28). In such cases, the EU countries could evoke an exemption according to Article 5(b) of the ECMR, which clears the control "acquired by an office-holder according to the law of a Member State relating to liquidation, winding up, insolvency, cessation of payments, competitions or analogous

proceedings.” In the future, the European Commission may face even more pressure to soften the rules on merger and antitrust control in such cases.

4.4. Relaxed state-aid control

During the global financial crisis, the European Commission took a more lenient stance toward state aid. In particular, it used Article 107(3)(b) of the TFEU to allow state aid in order “to remedy a serious disturbances in the economy of a Member State.” The European Commission used provisions in Article 107(3)(b) for both schemes and ad hoc interventions. The argument was that a financial institution's failure may derail systemic stability in the banking system and have negative repercussions for the real economy. Article 107(3)b allowed governments to apply exceptional rescue measures, protect the rights of creditors, and extend the length of government support (EC, 2008).

Alternatively, the European Commission could lean on Article 107(3)(c) and the community guidelines on state aid (A&R guidelines; see OJ C 244, 1.19.2004, p.2), which are normally used to assess the viability of state aid to a firm in difficulty. A&R guidelines are, however, quite strict regarding beneficiaries. For example, BAWAG P.S.K. obtained a state aid in 2007 (see Section 3.4) and, according to the “one time, last time” principle in the A&R guidelines, could not receive further support for the next ten years. However, given the extraordinary circumstances of the global financial crisis, the European Commission authorized further state aid in 2009 (a €550 million capital injection and a €400 million asset guarantee). The decision was based on Article 107(3)b of the TFEU (see OJ C 55, 5.3.2010, p.3; see also State aid N 640/2009 – Austria, 22.12.2009).

To mitigate the repercussions of the global financial crisis and to ensure higher legal certainty, the European Commission has issued several communications to provide further guidance regarding the rules of state aid. This Banking Communication (EC, 2008) details the rules for ad hoc state aid interventions and for general schemes for state aid. It argues that ad hoc state aid to individual banks is more likely to raise concerns and should therefore be accompanied by additional restrictions. The aided bank should propose a restructuring/liquidation plan detailing the resolution of the underlying problem, its long-term viability, how it will minimize state aid and obtain private funding for restructuring, and how it will minimize the distortion of competition, especially across borders (EC, 2008).

The Banking Communication (EC, 2008) also imposes more restrictive state-aid control over insolvent banks versus illiquid banks. The rule argues that restrictions in state-aid control should increase with the size of bank distress. In other words, it should feel like a penalty in order to prevent a subsidy race among the EU countries and to mitigate competitive distortions. The rule also allows a lender of last resort to lend to a distressed bank if the beneficiary financial institution is solvent, if the

lending at a penal interest rate is secured by collateral, and if the lending is an initiative of the central bank.

The Banking Communication rules also set forth behavioral restraints to mitigate competitive distortions of state aid and any expansion of state aid (EC, 2008). First, setting market-share ceilings prevents an aided bank from advertising its guarantee status, pricing, or business expansion. Second, the European Commission could impose balance-sheet limitations, such as divestment packages. Third are prohibitions on share repurchases, acquisitions, and new stock options for management. Member states should be able to invoke guarantees and impose sanctions on banks that do not comply.

The Recapitalization Communication (EC, 2009a) allows a government to recapitalize a bank either to promote financial stability or to spur lending to the real economy (see also EC, 2009c). The price of capital should reflect the borrower's risk and align with market prices. The competition authority should review recapitalizations every six months and should direct state aid to lending to the real economy and not to bank expansion.

The Impaired Assets Communication (EC, 2009b) aligns several resolution methods (e.g., guarantees, bad bank/good bank schemes, nationalization) with the rules of state-aid control. First, asset pricing should follow the common methodology of the state-aid control framework. Second, the basket of eligible assets should be identified. Third, the private sector must carry a part of the burden. Fourth, the restructuring should be transparent and limited in time. Fifth, behavioral constraints could be included.

The Restructuring Communication (EC, 2009d) provides the details on how the bank receiving state aid prepares a restructuring plan. In particular, the restructuring plan needs to analyze the beneficiary bank's problems, secure the viability of restructuring (through structural or behavioral measures), design appropriate burden sharing, and limit distortion of competition due to state aid. Any additional aid during the restructuring process should be limited to the minimum necessary to ensure financial stability.

The European Commission took an active approach toward state-aid control. By December 20, 2012, it adopted 160 decisions not to raise objections on state aid. Only in eight cases (i.e., those that involved ABN Amro Group, Dexia, IKB, KBC, Landesbank Baden Württemberg, Northern Rock, Sachsen LB, and WestLB) did the European Commission issue final conditional decisions after formal investigations (EC, 2012a). In eight cases (Hypo Real Estate, Österreichische Volksbank, Porex Banka, restructuring of ING in 2009 and in 2012, split-up of WestLB, resolution of Anglo Irish Bank and Irish Nationwide Building Society, and Banco Portugues de Negócios), it issued a final positive decision, and in one case (Banco Privado Português), it issued a negative decision with recovery. It was still investigating 14 other state-aid cases.

The European Commission applied state-aid control in complex cases such as ABN AMRO. In 2008, the Dutch government bought the Fortis stake in ABN AMRO, the Dutch business of Fortis Bank, and the Fortis insurance business with an aim to integrate them into the new ABN AMRO Group. However, to finance the merger (Fortis and ABN AMRO) and to create the new ABN AMRO Group, the Dutch government needed to recapitalize ABN AMRO Group. The European Commission approved the restructuring, subject to conditions that included a ban on price leadership in setting interest rates in retail markets, a ban on acquisitions, and a minimum profit margin. The aim was to ensure that state aid did not finance an aggressive business strategy to the detriment of competitors that did not receive state aid (OJ L333,15.12.2011, p.1-46).

From October 1, 2008, to October 1, 2010, the total volume of state aid amounted to 39% of the EU27 2009 GDP (EC, 2010b). The majority of that state aid was concentrated in schemes with unlimited participation; less went to ad hoc interventions in individual financial institutions. The aid consisted mainly of guarantees, and to a lesser extent recapitalization measures, asset-relief interventions, and liquidity measures (guarantees excluded). The maximum approved volumes were higher than the actual use of aid (see Figure 2).

The problem may be that high concentrations in retail banking markets, substantial government ownership, and implicit bailout guarantees may distort competition on a long-term basis. The competition authority must phase out state aid in a way that diminishes excessive government involvement in banking.

Figure 3 shows the development of cross-border deposits. Cross-border deposits in euro-area financial institutions grew substantially in the period 2001-2008 but then declined. By 2011, these deposits had fallen to 2006 levels. However, the decline was confined to monetary financial institutions; it did not occur in nonmonetary financial institutions. This indicates the banking industry became more fragmented, possibly due to the heavy use of state aid.

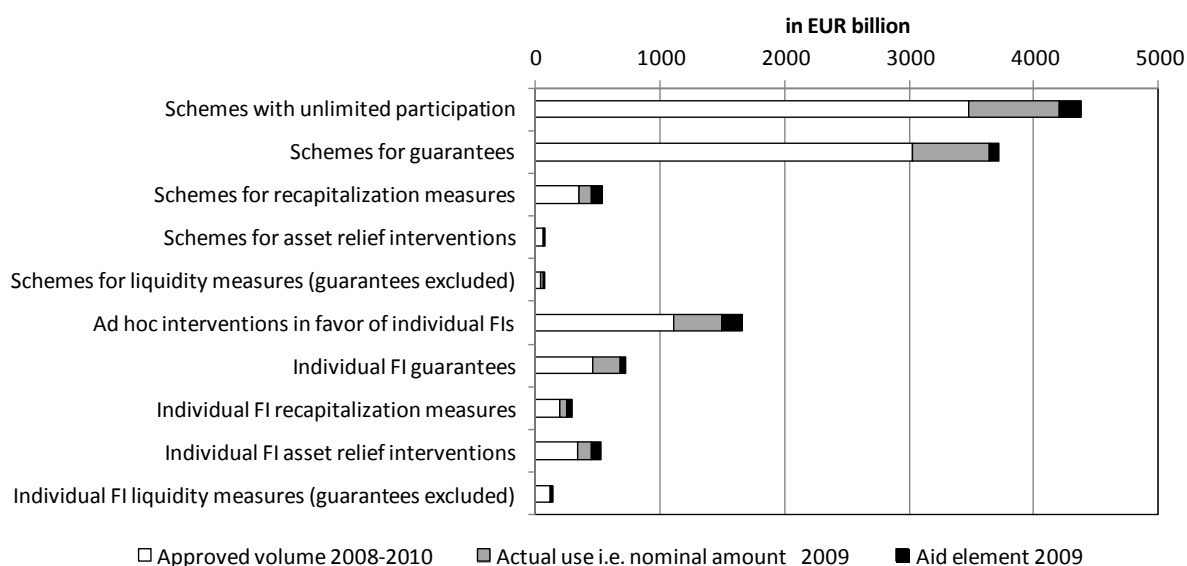
Through EC (2009d) and EC (2010a), the European Commission has accepted guidance with respect to gradually phasing out temporary state-aid rules due to weakening of the financial crisis. To induce timely exit, EC (2009a) calls for step-up repayment clauses that make state aid more expensive over time. However, the European Commission gives a relatively long five-year period over which beneficiaries must execute their restructurings and divestitures (EC, 2009d). In addition, the financial crisis persisted, prompting the European Commission to twice postpone phasing out the rules (EC, 2010a, EC, 2011a). This highlights the dichotomy between short-term stability and long-term competition concerns.

4.5. Relaxed state-aid control vs. relaxed merger control: What is best for the EU?

One argument for lax merger policy, predominantly used in the U.S., is that competition in banking is not associated with size, but rather with competitive conduct. White (2009) argues that too-big-to-fail (TBTF) is thus an issue for prudential regulation. This thinking may be valid in the U.S., with its established common market for financial services, but size still plays a role in fragmented European banking. De Jonghe and Vennet (2008) provide some evidence, for example, that only large EU banks are able to extract market-power rents. Large banks that are TBTF also benefit the most from higher concentration.

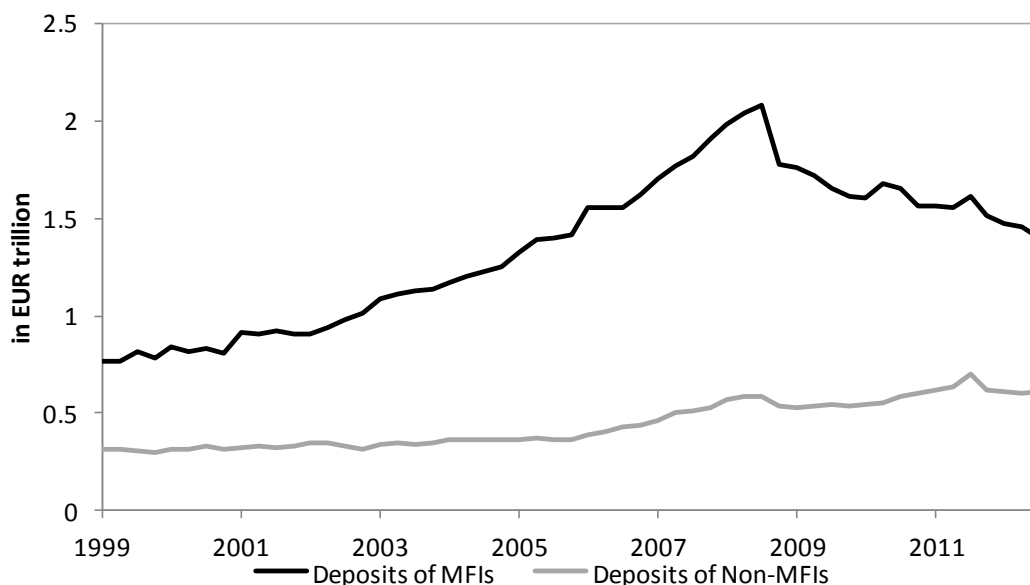
When two banks merge and create a new TBTF bank, distortion to competition arises for two reasons. First, a TBTF bank implicitly obtains state subsidies because of its better borrowing rate. Second, a TBTF bank is now a larger bank that can better exploit market-power rents. These results indicate that the too-big-to-fail issue cannot be completely disentangled from antitrust or competition policy. These results also point to the importance of merger control in EU banking.

Figure 2: The maximum approved volumes, actual use, and aid element of aid measures



Source: EC (2010b); schemes for organizations with unlimited participation include guarantees, recapitalization measures, asset-relief interventions, and liquidity measures. Ad hoc interventions in favor of individual financial institutions (FIs) consist of the sum of individual FI guarantees, recapitalization measures, asset-relief interventions, and liquidity measures.

Figure 3: Cross-border positions of euro area monetary financial institutions (MFIs) and nonmonetary financial institutions (Non-MFIs)



Source: ECB (2012).

State aid may be superior to relaxed merger control in the EU for several other reasons. First, a merger may deliver limited efficiency gains. Recent research suggests that the most value-enhancing mergers are ones with both a geographic and activity focus. In the fragmented EU banking system, the efficiency gains may thus be more limited. A merger is also an (almost) irreversible process and may distort competition in the long term. This is particularly worrisome in the EU, where only mergers within national markets may be viable in a crisis. This may lead to the creation of national champions and may further aggravate fragmentation in European banking.

State aid can and should be designed with an exit option in mind (Maes and Kiljanski, 2009). State aid should also coordinate with financial and corporate restructuring. Bailout provisions should ensure that shareholders, junior bondholders, and managers share the losses, thereby limiting taxpayer losses. Corporate restructuring may enhance the long-term viability of a beneficiary bank. Forced divestments also mitigate the TBTF problem (Vives, 2011). In contrast, lax merger control by definition gives the competition authority only limited control over the merged entity.

5. The interaction between competition policy and regulatory and supervisory framework in EU banking

The key to successful crisis resolution may not reside in stricter or more relaxed competition policy. Instead, it may rest in a strengthened regulatory and supervisory framework. With this point in mind, we assess EU competition policy.

In the absence of a common EU framework for bank restructuring and resolution, it was necessary to relax competition policy and to strengthen the stability of banking systems through infusions of state aid during the global economic crisis. However, we argue that competition authorities cannot overtake the functions of bank regulators and bank supervisors. An overhaul of the EU framework for bank regulation and supervision is necessary (and is already being implemented). The new EU banking union will consist of the Single Supervisory Mechanism (which confers supervisory tasks to the ECB). The Single Supervisory Mechanism will enable the European Stability Mechanism to recapitalize banks directly.¹⁸

In addition, the common EU regulatory framework should improve its capital regulation (CDR 4 proposal), harmonization of deposit-guarantee strategies, and create a common EU framework for bank resolution and restructuring, including establishing a single resolution authority. In these areas, the EU is lagging significantly behind the U.S. (see Bliss and Kaufman, 2011 for the U.S. approach toward resolving insolvent large, complex financial institutions).

We acknowledge that competition authorities have several advantages over regulators in ensuring competitive conduct (see Hellwig, 2009). The competition authority can make interindustry comparisons, for example, as well as invoke equal-treatment arguments and better establish a level playing field. The competition authority can resist political and industry pressures better than the prudential regulator, which regulates the core banking business and is consequently under heavy lobbying pressure.

Regulators can even abuse their powers and limit competition by preventing foreign entry. For example, pressure from the European Commission helped overcome a domestic regulator's intrusion into the takeover of two Italian banks, Banco Nazionale del Lavoro and Banca Antonveneta, by the Spanish bank BBVA and the Dutch bank ABN-AMRO, respectively. The mergers ultimately occurred, and competition policy was separated from the Bank of Italy, Italy's central bank. Such concerns show that competition policy should be separate from prudential regulation.¹⁹

During the global financial crisis, the European Commission undertook mitigatory actions to reinvigorate competition. However, remedies to restore competition are not always efficient. Forced divestitures may not be big enough to operate on their own, for example, and carving out integrated assets may dissipate their value if they go to less suitable purchasers (Lyons, 2009). In short,

¹⁸ See press release 17739/12 of the Council on 13.12.2012, "Council agrees position on bank supervision."

¹⁹ Carletti, Ongena, and Hartmann (2009) further support the separation. They provide evidence that competition policy is valuable for banks as it acts as a controlling mechanism for prudential regulation.

divestments may restore market structure, but not the level of competition (Davies and Lyons, 2007). In particular, the acquirers of divested assets may not be willing to invest in the divested business.²⁰

In these situations, competition authorities should use behavioral rules such as price or market-share restrictions, or restrictions on bankers' salaries and bonuses. However, this may bring further inefficiencies. Restrictions on salaries may limit a weak bank's ability to attract the best employees, for example (Beck et al., 2010). Optimally, remedies and restrictions should address the reasons a bank became troubled in the first place. For example, state aid to a state-owned bank does not resolve the bank's underlying problem. If the state-owned bank has governance problems, competition policy may mitigate them by demanding (partial) privatization. If the state-owned bank excessively expanded, demanding divestitures may be optimal. Measures that resolve the underlying problem would make a weak bank viable in the long run and, in this way, restore competition in the banking system.

European rules for state-aid control acknowledge the aims of competition policy: preserve competition, prevent moral hazard, preserve financial stability, and successfully restructure weak banks. Having such a broad scope gives substantial powers to competition authorities. For example, the size and scope of divestitures and behavioral constraints may preserve competition, financial stability, or prevent moral hazard—sometimes yielding different outcomes.

The European Commission can decide on the measure and use the underlying rationale for justification, giving it substantial discretion. Certain levels of discretion may be positive. In the unprecedented global financial crisis, for example, large-scale governmental interventions preserved financial stability. However, discretion may also put lobbying and political pressure on the competition authority. For example, Lannoo, Napoli, and Sutton (2010) argue that some countries (e.g., large ones, such as France) and banks were better aware of the EU's state-aid control rules and were thus able to obtain better treatment than were other countries and banks. The different abilities among EU countries may have magnified this inequality.

Competition authorities may also lack sufficient knowledge to achieve all the objectives in place, making cooperation with prudential regulators necessary. Lannoo, Napoli, and Sutton (2010) are concerned, for instance, that the European Commission favored industrial policy in its competition control. For example, the European Commission agreed on large state aid to ING despite the company's strong position in the Dutch retail banking market. The rationale was that divestments of noncore assets were sufficient to compensate for rather small divestments in core operations.

²⁰ Sometimes forced divestment may preclude a merger from occurring. In a large cross-country merger, the parties could divest despite a low purchase price, but such divestment would not guarantee competition. Small divestments may not be attractive to foreign banks, and this may increase regional/national fragmentation.

Such a decision goes to the heart of the question, which business model is correct in banking? In this view, the European Commission has made industrial-policy decisions that might have better been made by prudential regulators with more specialized knowledge about banking. In particular, the prudential regulator could better design remedies that increase the long-term efficiency of the banking industry. The prudential regulator also has better knowledge and timely information about systemic risk. This indicates that the EU could have managed its financial crisis better by stipulating more communication between competition authorities and bank regulators.

EU law gives decision-making authority regarding state-aid control solely to the European Commission. This does not mean that decision-making and cooperation cannot expand to other EU bodies (e.g., the ECB, ECOFIN Council, and Parliament). Although consultations between the European Commission and other EU bodies about state-aid control were scarce at the beginning of the global financial crisis (Lannoo, Napoli, and Sutton, 2010), this may have changed lately. For example, there is more coordination now regarding restructuring banking systems in crisis-hit countries (see the case of recapitalization of Spanish banks; MEMO/12/918, 28.11.2012).

Unification of these actions under the umbrella of the European Commission may have been justifiable in the absence of the EU-wide regulatory body during the global financial crisis. However, there is no time for complacency. It may be wise to limit the objective of competition policy to preserving competition, whereas other objectives (e.g., moral-hazard control, stability of the financial system) should be the responsibility of the EU bank regulators and supervisors, such as EBA and ECB. However, this can only be successful if the regulatory and supervisory frameworks in EU banking are enhanced.

Prudential regulation and supervision in banking are also substantially intertwined with competition policy during noncrisis times. Without the prudential regulator, banks can ride on implicit and explicit guarantees (e.g., deposit insurance, bailout policies) and engage in unfair competition by undertaking excessive risks.²¹ Prudential regulation should remove fly-by-night operators from the banking system and, by doing so, restore a level playing field and harness fair competition. In this way, stronger regulatory frameworks foster competition among banks. All in all, bank regulators and competition authorities must cooperate in crisis and non-crisis times.

²¹ For example, before its collapse the Icelandic bank Landsbanki raised €1.7b in approximately 130,000 accounts after five months of doing business in the Netherlands (de Moor, du Perron, and Krop, 2009, pp. 54, 56).

6. Conclusions

Competition policy in banking should become more lenient during severe financial crises if doing so preserves financial stability. Competition authorities should support interventions that safeguard stability of frail banking systems, even if doing so temporarily worsens competition. The main responsibility for bank stability, however, falls to bank regulators. In this light, the framework for bank regulation, supervision, and resolution needs to improve and become more coordinated across the EU countries. Banking regulatory and supervisory authorities (e.g., the EBA and ECB) and the European Commission should closely cooperate to safeguard stability and simultaneously prevent protectionism in European banking.

In the face of financial crisis, competition policy must also mitigate long-term competitive distortions. Competition authorities should avoid encouraging crisis cartels but apply state-aid control more leniently in a widespread banking crisis. Despite its higher public costs, state aid may be less damaging to long-term competition in the EU than relaxed merger control and may therefore be a better option. In particular, relaxed merger control could help create national champions, which further divide an already fragmented European banking market.

In the last global financial crisis, the European Commission preserved its anti-cartel policy and applied merger policy, but it pursued lenient state-aid control. This permitted EU countries to intervene in and safeguard the stability of their banking systems. State-aid control applied to a number of state-aid cases, largely preserving a competitive, level playing field between banks and banking systems. Although massive state-aid interventions encouraged more relaxed competition policy, competition in banking was—and still is—not a sin. Enhanced regulatory and supervisory frameworks can facilitate the application of competition policy in banking, and, as we have seen, the cooperation among bank regulators, supervisors, and competition authority has become indispensable.

Bibliography

- Beck, T. (2010), Bank Competition and Financial Stability: A Fresh Look after the Crisis, Prepared for OECD Roundtable on Competition, Concentration and Stability in the Banking Sector, DAF/COMP(2010)9, p. 267–276.
- Beck, T., D. Coyle, M. Dewatripont, X. Freixas, and P. Seabright (2010), Bailing out the Banks: Reconciling Stability and Competition, CEPR, London.
- Beck, T., A. Demirgüç-Kunt, and R. Levine (2006), Bank Concentration, Competition, and Crises: First Results, *Journal of Banking & Finance*, Vol. 30(5), p. 1581–1603.
- Beck, T., De Jonghe, O. and G. Schepens (2010), Bank Competition and Stability: Reconciling Conflicting Empirical Evidence (November 16, 2010). Available at SSRN: <http://ssrn.com/abstract=1711165>
- Berger, A.N., and T. Hannan (1998), The Efficiency Cost of Market Power in the Banking Industry: A Test of the 'Quiet Life' and Related Hypotheses, *The Review of Economics and Statistics*, Vol. 80 (3), p. 454–465.
- Berger, A., L. Klapper, and R. Turk-Ariss (2009), Bank Competition and Financial Stability, *Journal of Financial Services Research*, Vol. 35(2), p. 99–118.
- Bernanke, B.S. (2010), Preserving a Central Role for Community Banking, speech at the Independent Community Bankers of America National Convention, Orlando, Florida, March 20, 2010.
- Bernheim, B.D., M.D. Whinston (1990), Multimarket Contact and Collusive Behavior, *RAND Journal of Economics*, Vol. 21, p. 1–26.
- Bliss, R.R., and G.G. Kaufman (2011), Resolving Insolvent Large Complex Financial Institutions: A Better Way, *Banking Law Journal*, Vol. 128(4), p. 339–363.
- Boot, A.W.A., and M. Marinč (2007), The Evolving Landscape of Banking, *Industrial and Corporate Change*, Vol. 17(6), p. 1173–1203.
- Boot, A.W.A., and M. Marinč (2009), Competition and Entry in Banking: Implications for Capital Regulation, ACLE Working Paper.
- Boot, A.W.A., and A.V. Thakor (2000), Can Relationship Banking Survive Competition?, *Journal of Finance*, Vol. 55 (2), p. 679–713.
- Bos, I., and J.E. Harrington, Jr., (2010), Endogenous Cartel Formation with Heterogeneous Firms, *RAND Journal of Economics*, Vol. 41(1), p. 92–117.
- Boyd, J.H., and G. De Nicolo (2005), Bank Risk Taking and Competition Revisited, *Journal of Finance*, Vol. 60 (3), p. 1329–1343.
- Boyd, J.H., G. De Nicolo, and B.D. Smith (2004), Crises in Competitive versus Monopolistic Banking Systems, *Journal of Money, Credit, and Banking*, Vol. 36 (3), p. 487–506.
- Brown, C. O., and I. S. Dinç (2005), The Politics of Bank Failures: Evidence from Emerging Markets, *The Quarterly Journal of Economics* 120(4), 1413–1444.
- Caballero, R.J., T. Hoshi, and A.K. Kashyap (2008), Zombie Lending and Depressed Restructuring in Japan, *American Economic Review* 98(5), 1943–1977.
- Carbó-Valverde, S., F. Rodríguez-Fernández, and G.F. Udell (2009), Bank Market Power and SME Financing Constraints, *Review of Finance*, Vol. 13(2), p. 309–340.

- Carletti, E. (2009), Competition and Financial Markets, in OECD, *The Failing Firm Defence, Policy Roundtables: Competition Law & Policy*.
- Carletti, E., and X. Vives (2009), Regulation and Competition Policy in the Banking Sector, in *Competition Policy in Europe, Fifty Years of the Treaty of Rome*, X. Vives (ed.), Oxford University Press, p. 260–283.
- Carletti, E., P. Hartmann, and S. Ongena (2009), The Economic Impact of Merger Control Legislation, Working paper, May 15, 2009.
- Carlson, M., and K.J. Mitchener (2006), Bank Branching, Bank Competition, and Financial Stability, *Journal of Money, Credit, and Banking*, Vol. 38 (5), p. 1293–1328.
- Claessens, S. (2009), Competition in the Financial Sector: Overview of Competition Policies, *World Bank Research Observer*, Vol. 24(1), p. 83–118.
- Chang, R., and A. Velasco (2001), A Model Of Financial Crises In Emerging Markets, *The Quarterly Journal of Economics*, Vol. 116(2), p. 489–517.
- Cheng, X., and P. Van Cayseele (2009), State Aid and Competition in Banking: The Case of China in the Late Nineties, LICOS Discussion Paper 250/2009, November 2009.
- Cordella, T., E.L. Yeyati (2003), Bank Bailouts: Moral Hazard vs. Value Effect, *Journal of Financial Intermediation*, Vol. 12(4), p. 300–330.
- Davies, S., and B. Lyons (2007), Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition (Cheltenham: Edward Elgar).
- de Moor, A.J.C., du Perron, C.E., and P.J. Krop (2009), De bevoegdheden van De Nederlandsche Bank inzake Icesave, Ordered by the Ministry of Finance in The Netherlands, 11 June, 2009. <http://www.minfin.nl/dsresource?objectid=71520&type=org>
- De Jonghe, O., and R.V. Vennet (2008), Competition versus Efficiency: What Drives Franchise Values in European Banking?, *Journal of Banking & Finance*, Vol. 32(9), p. 1820–1835.
- Degryse, H., and S. Ongena (2007), The Impact of Competition on Bank Orientation, *Journal of Financial Intermediation*, Vol. 16(3), p. 399–424.
- Dell’Ariccia, G., and R. Marquez (2004), Information and Bank Credit Allocation, *Journal of Financial Economics*, Vol. 72(1), p. 185–214.
- Dell’Ariccia, G., and R. Marquez (2006), Lending Booms and Lending Standards, *Journal of Finance*, Vol. 61(5), p. 2511–2546.
- Demirgüç-Kunt, A., and E. Detragiache (2001), Financial Liberalization and Financial Fragility, in G. Caprio, P. Honohan, and E. J. Stiglitz, eds., *Financial Liberalization: How Far, How Fast?* Cambridge: Cambridge University Press, 96–122.
- Diamond, D.W., and P.H. Dybvig (1983), Bank Runs, Deposit Insurance, and Liquidity, *Journal of Political Economy*, Vol. 91, p. 401–419.
- Dinç, S.I., and I. Erel (2010), Economic Nationalism in Mergers & Acquisitions, Working paper, June 28.
- European Central Bank (2006), EU Banking Structures, October 2006.
- European Central Bank (2008), EU Banking Structures, October 2008.
- European Central Bank (2010), EU Banking Structures, September 2010.

European Central Bank (2012), Cross-Border Positions, Monetary Statistics, <http://www.ecb.int/stats/money/aggregates/cross/html/index.en.html>

European Commission (2007), Communication from the Commission: Sector Inquiry under Article 17 of Regulation (EC) No 1/2003 on retail banking (Final Report), Brussels, 31 January 2007, COM(2007) 33 final.

European Commission (2008), The Application of State Aid Rules to Measures Taken in Relation to Financial Institutions in the Context of the Current Global Financial Crisis, OJ, C 270/02, 25.10.2008.

European Commission (2009a), The Recapitalisation of Financial Institutions in the Current Financial Crisis: Limitation of Aid to the Minimum Necessary and Safeguards against Undue Distortions of Competition, OJ, C 10/03, 15.1.2009.

European Commission (2009b), The Treatment of Impaired Assets in the Community Banking Sector, OJ, C 72/01, 26.3.2009.

European Commission (2009c), Temporary Community Framework for State Aid Measures to Support Access to Finance in the Current Financial and Economic Crisis, OJ, C 83/01, 7.4.2009.

European Commission (2009d), The Return to Viability and the Assessment of Restructuring Measures in the Financial Sector in the Current Crisis under the State Aid Rules, OJ, C 195/04, 19.8.2009.

European Commission (2009e), State aid No. N 428/2009 – United Kingdom – Restructuring of Lloyds Banking Group, Brussels, 18.11.2009, C(2009)9087 final.

European Commission (2010a), On the Application, from 1 January 2011, of State Aid Rules to Support Measures in Favour of Banks in the Context of the Financial Crisis, OJ, C 329/07, 7.12.2010.

European Commission (2010b), Facts and Figures on State Aid in the Member States, Commission Staff Working Document SEC (2010)1462, Brussels, 1 December.

European Commission (2010c), EU Competition Law, Rules Applicable to Merger Control, Situation as at 1 April 2010. http://ec.europa.eu/competition/mergers/legislation/merger_compilation.pdf

European Commission (2011a), Communication from the Commission on the Application, from 1 January 2012, of State Aid Rules to Support Measures in Favour of Banks in the Context of the Financial Crisis, OJ C 356, 6.12.2011, p. 7–10.

European Commission (2011b), EU Competition Law, Rules Applicable to Antitrust Enforcement, Situation as at 1.12.2011, http://ec.europa.eu/competition/antitrust/legislation/handbook_vol_1.pdf

European Commission (2012a), State Aid: Overview of Decisions and On-Going In-Depth Investigations in the Context of the Financial Crisis, 20 December 2012, MEMO/12/1018.

European Commission (2012b), EU Competition Law, Rules Applicable to State Aid, Situation at Oct. 2012. http://ec.europa.eu/competition/state_aid/legislation/compilation/state_aid_02_10_12_en.pdf

European Commission (2012c), Commission Staff Working Paper Accompanying the Report From the Commission on Competition Policy 2011, 30.5.2012, COM(2012) 253 final.

Evanoff, D.D., and E. Ors (2008), The Competitive Dynamics of Geographic Deregulation in Banking: Implications for Productive Efficiency, *Journal of Money, Credit and Banking*, Vol. 40(5), p. 897–928.

Fingleton, J. (2009), Competition Policy in Troubled Times, Working paper, 20 January 2009, available at www.oft.gov.uk/shared_of/speeches/2009/spe0109.pdf.

- Gerard, D.M.B. (2008), Protectionist Threats Against Cross-Border Mergers: Unexplored Avenues to Strengthen the Effectiveness of Article 21 ECMR, *Common Market Law Review*, Vol. 45(4), p. 987–1026.
- Greenspan, A. (2011), Dodd-Frank Fails to Meet Test of Our Times, *Financial Times*, March 29, 2011.
- Greve, H.R. (2008), Multimarket Contact and Sales Growth: Evidence from Insurance, *Strategic Management Journal*, Vol. 29, p. 229–249.
- Gropp, R., H. Hakenes, and I. Schnabel (2010), Competition, Risk-shifting, and Public Bail-out Policies, *Review of Financial Studies*, forthcoming.
- Hellwig, M. (2009), Competition Policy and Sector-Specific Regulation for Network Industries, in: *Competition Policy in the EU*, X. Vives (ed.), Oxford 2009, Oxford University Press, p. 203–235.
- Independent Commission on Banking (2011), Interim Report: Consultation on Reform Options, April 2011, London.
- Jayaratne, J., and P.E. Strahan (1998), Entry Restrictions, Industry Evolution, and Dynamic Efficiency: Evidence from Commercial Banking, *Journal of Law & Economics*, Vol. 41(1), p. 239–273.
- Jiménez, G., J.A. Lopez, and J. Saurina Salas (2010), How Does Competition Impact Bank Risk-Taking?, Banco de Espana Working Paper No. 1005.
- Keeley, M.C. (1990), Deposit Insurance, Risk, and Market Power in Banking, *American Economic Review*, Vol. 80(5), p. 1183–1200.
- Kroes, N. (2010), Competition Policy and the Crisis – the Commission’s Approach to Banking and Beyond, *Competition Policy Newsletter*, Vol. 1, p. 3–7.
- Lannoo, K., C. Napoli, and A. Sutton (2010), Centre for European Policy Studies, Bank State Aid in the Financial Crisis: Fragmentation or Level Playing Field?, CEPS Task Force Report, October, 2010, CEPS, Brussels.
- Lyons, B. (2009), An Economic Assessment of European Commission Merger Control: 1958–2007, in X. Vives (ed.), *Competition Policy in the EU*, Oxford University Press, Oxford, p. 135–175.
- Maes, S., and K. Kiljanski (2009), Competition and the Financial Markets: Financial Sector Conditions and Competition Policy, *Competition Policy Newsletter*, Vol. 1, p. 12–16.
- Marinč, M. (2013), Banks and Information Technology: Marketability vs. Relationships, *Electronic Commerce Research*, Vol. 13(1), p. 71–101.
- Marinč, M., and V. Razvan (2011), *The Economics of Bank Bankruptcy Law*, Springer, 2011.
- Matsushima, H. (2001), Multimarket Contact, Imperfect Monitoring, and Implicit Collusion, *Journal of Economic Theory*, Vol. 98, p. 158–178.
- Mester, L.J. (1987), Multiple Market Contact between Savings and Loans, *Journal of Money, Credit, and Banking*, Vol. 19, p. 538–549.
- Mulder, M., and M. Lengton (2011), Competition and Interest Rates in the Dutch Mortgage Market, NMA Working Paper No. 5, May, 2011,
- Office of Fair Trading (2008), Anticipated acquisition by Lloyds TSB plc of HBOS plc, Report to the Secretary of State for Business Enterprise and Regulatory Reform, 24 October 2008.

- OECD (2009), The Failing Firm Defence, Policy Roundtables: Competition Law & Policy, <http://www.oecd.org/dataoecd/16/27/45810821.pdf>.
- OECD (2010), Competition, Concentration and Stability in the Banking Sector, Policy Roundtables: Competition Law & Policy.
- OECD (2011), Crisis Cartels, Policy Roundtables, Competition Law & Policy, <http://www.oecd.org/dataoecd/26/61/48948847.pdf>
- Peek, J., and E. Rosengren (2005), Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan, *American Economic Review*, Vol. 95(4), p. 1144–1166.
- Petersen, M.A., and R.G. Rajan (1995), The Effect of Credit Market Competition on Lending Relationships, *Quarterly Journal of Economics*, Vol. 110(2), p. 407–443.
- Presbitero, A.F., and A. Zazzaro (2011), Competition and Relationship Lending: Friends or Foes?, *Journal of Financial Intermediation*, Vol. 20(3), p. 387–413.
- Reynolds, M., S. Macrory, and M. Chowdhury (2011), EU Competition Policy in the Financial Crisis: Extraordinary Measures, *Fordham International Law Journal*, Vol. 33(6), p. 1668–1737.
- Rice, T. and P.E. Strahan (2010), Does Credit Competition Affect Small-Firm Finance?, *Journal of Finance*, Vol. 65(3), p. 861–889.
- Schaeck, K., and M. Čihák (2010), Banking Competition and Capital Ratios, *European Financial Management*, Forthcoming.
- Schaeck, K., M. Čihák, and S. Wolfe (2009), Are Competitive Banking Systems More Stable?, *Journal of Money, Credit and Banking*, Vol. 41, p. 711–734.
- Smith, L. (2008), The Lloyds-TSB and HBOS Merger: Competition Issues, Standard Note: SN/BT/4907, Business and Transport Section, 15 December 2008.
- Spector, D. (2009), State Aids: Economic Analysis and Practices in the European Union, in X. Vives, *Competition Policy in the EU*, Oxford University Press, Oxford, p.176–202.
- Stiroh, K. J., and P. E. Strahan (2003), Competitive Dynamics of Deregulation: Evidence from U.S. Banking, *Journal of Money, Credit, and Banking*, Vol. 35(5), p. 801–828.
- Vickers, J. (2008), The Financial Crisis and Competition Policy: Some Economics, *Global Competition Policy*, Vol. 1, p. 1–10.
- Vives, X. (2001), Competition in the Changing World of Banking, *Oxford Review of Economic Policy*, Vol. 17(4), p. 535–547.
- Vives, X. (2010), Competition and Stability in Banking, CESifo Working Paper Series 3050, CESifo Group Munich.
- Vives, X. (2011), Competition Policy in Banking, *Oxford Review of Economic Policy*, Vol. 27(3), p. 476–497.
- Wagner, W. (2010), Loan Market Competition and Bank Risk-Taking, *Journal of Financial Services Research*, Vol. 37, p. 71–81.
- White, L.J. (2009), Financial Regulation and the Current Crisis: A Guide for the Antitrust Community, Working paper.