



Response to Independent Banking Commission Issues Paper

by

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Response to Call for Evidence by the Independent Banking Commission

Our evidence relates primarily to **Question 1.1** (on the *harmony of stability and competition* as two primary objectives), but also bears on **Question 3.2** (on *economies of scale* in banking).

This evidence draws on our research on understanding the recent crisis and its relation to market structure and competition in retail banking. We then highlight some wider evidence on stability and competition before concluding that there is no fundamental disharmony.

a) Market concentration, competition and the recent banking crisis

In the following paragraphs, we begin by providing a framework to examine the relationship between competition and market structure in European retail banking. With this perspective, we show that the incidence of crisis across Europe was empirically unrelated to market concentration. Furthermore, the evidence provides no support for a positive relationship between competition and the crisis.

Competition is not easily calibrated, but competition authorities across the world usually start with a structural measure of market concentration as a directly measurable, competition-relevant variable. Economic research reveals that care is required in interpreting such measures because there are two directions of causation. First, high concentration is positively associated with market power (limited competition) at any moment in time. Second, there are other determinants of how tough competition is. For example, some markets may be collusive or price regulated while others exhibit more aggressive price competition. In the presence of economies of scale, markets characterised by tougher price competition, and so lower margins, will be able to support fewer firms and so be more concentrated.

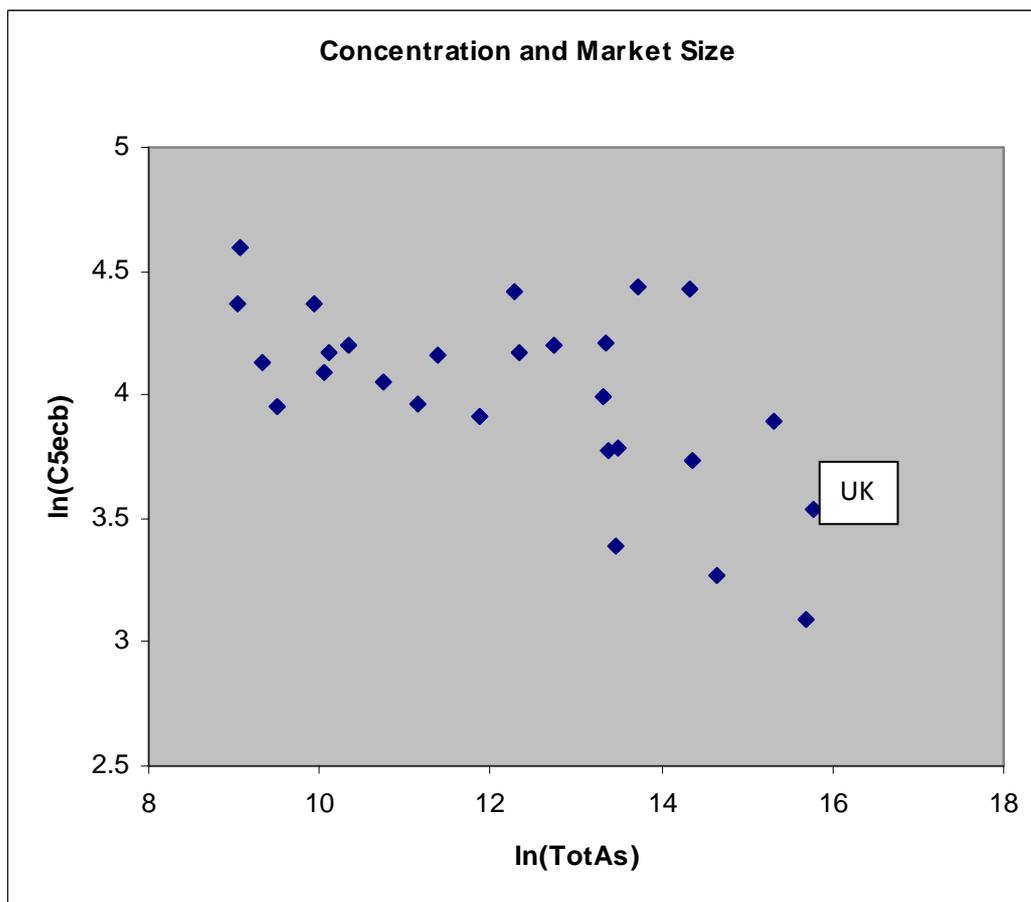
A simple way to help distinguish these forces is to examine the relationship between concentration and market size.¹ Consider a product sold in two markets of similar size and produced locally by similar production technologies. If both are close to equilibrium in terms of entry and exit, the inherently more competitive market will be more concentrated. However, in larger markets, concentration will be lower for any given toughness of competition. As discussed below, other factors may also influence concentration at any given market size so caution is required in interpretation, but an examination of the empirical relationship between concentration and market size can be revealing.

Figure 1 shows the relationship between the five-firm retail banking concentration ratio and the size of the market measured by total assets of the banking sector in EU member states.² Consistent with most competition inquiries involving retail banking, the geographic market is assumed to be national. Each observation represents one of the 27 EU member states in 2004, a year chosen to be relatively recent but prior to the worst excesses leading up to the 2008 crisis.

¹ See Sutton (1991, 1998). See also Lyons, Matraives and Moffatt (2001).

² Note that total assets include non-retail banking. We have not been able reliably to untangle retail from other assets. Concentration data is taken from EC (2007).

Figure 1 EU Banking Concentration and Market Size



Sources: European Commission sector inquiry on retail banking 2007 (data based on retail banking income)

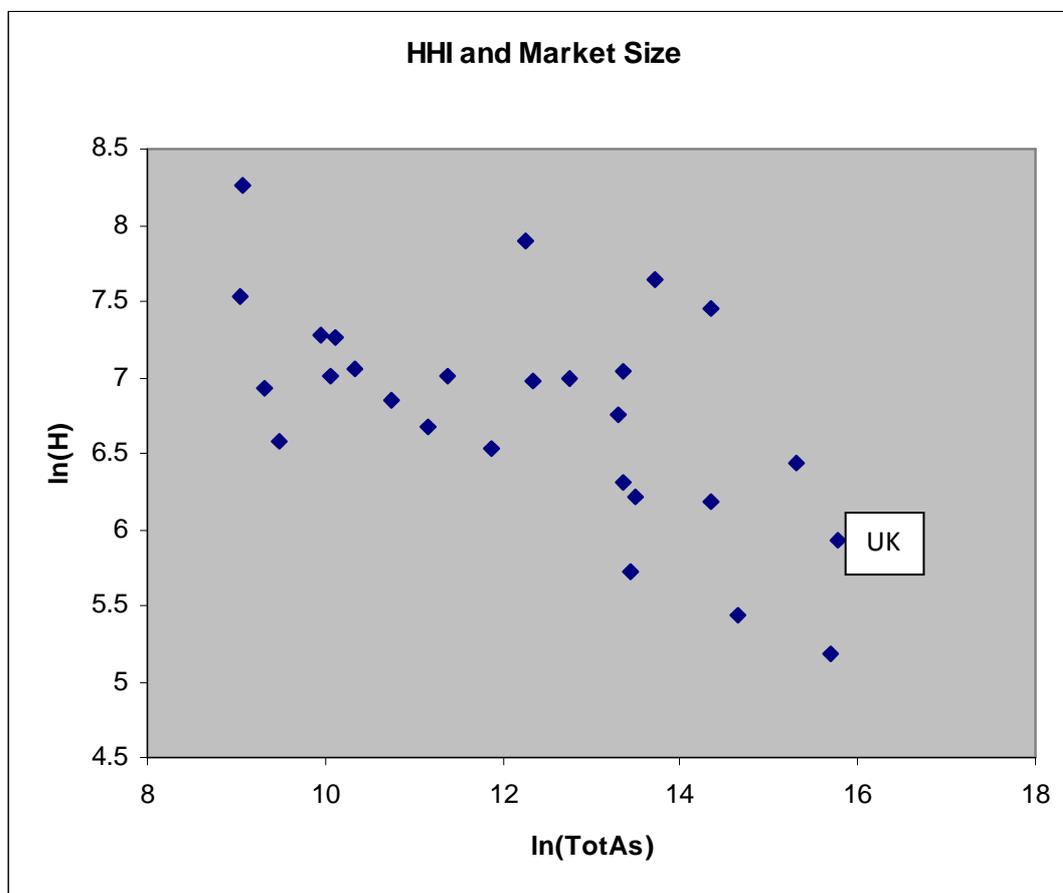
The scatter of observations is similar to that found in many other industries that fall into a category identified by Sutton (1991) as 'exogenous sunk cost' industries. These are industries where the primary form of competition is in price and where competition in quality-enhancing expenditures affects marginal cost more than overheads. Economies of scale (e.g. cost spreading for an IT system) mean that more entry is possible in larger markets, so concentration falls. Inasmuch as a fall in concentration results in more price competition, the scale of individual banks must rise in order to cover costs, so the number of firms is less than proportional to market size. 'Exogenous sunk cost' industries contrast with a pattern found in 'endogenous sunk cost' industries, where advertising and certain types of R&D convey a decisive advantage to the biggest spender. A scatter of observations in endogenous sunk cost markets would not display the pronounced downward slope of observations seen in Figure 1, particularly at large market sizes.³

³ Lyons, Mataves and Moffatt (2001) illustrates this for the two types of industry in European manufacturing markets.

Figure 1 is also revealing in the dispersion of concentration ratios it shows for a given market size. Observations above the lower bound may be due to multiple factors apart from tough price competition, including: barriers to entry; national regulations; national preferences; and disequilibrium. Of these supplementary factors, national regulations are probably the most important difference across EU markets. We must therefore be cautious in interpreting the simple presentation of data in Figure 1. With this caution in mind, we can provisionally interpret vertical slices of the figure as follows. Markets of a given size that are more concentrated may be the result of tougher competition than is present in less concentrated markets.

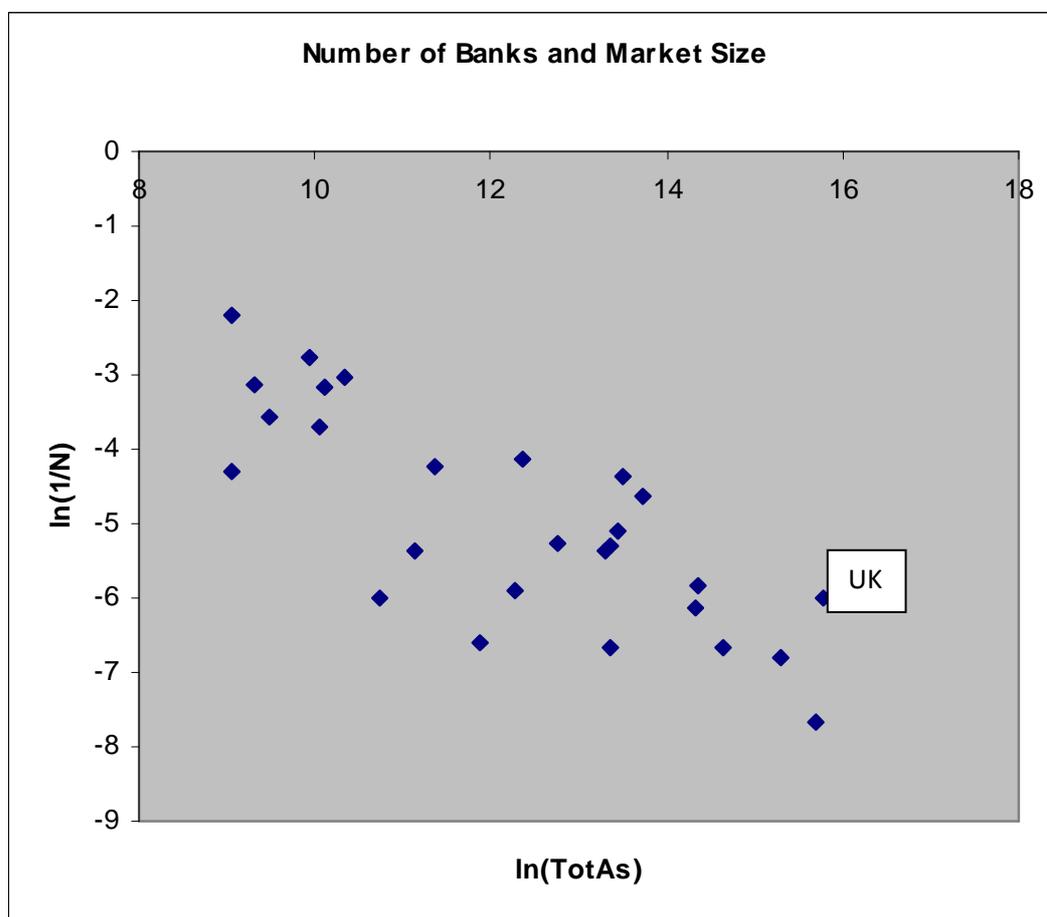
Figure 1 identifies the UK, which had the largest banking sector by assets, just ahead of Germany. Thus, while the UK market is less concentrated than most other member states, it still appears at the higher end of concentration having adjusted for the size of market. The upper bound of concentration in the largest European markets (in increasing order of market size) is Belgium, the Netherlands, France and the UK. Austria, Ireland and Spain are in the middle of the scatter. The lower bound of concentration includes (in order of market size) Luxembourg, Italy and Germany. We return to the recent bank crisis below, but as a preliminary observation, each of these three groups of countries includes those with banking sectors that experienced severe crisis and those that were less affected. The degree of crisis, measured by either total bailout required or the number of individual banks in serious difficulty, does not appear to have been uniquely greater in any one of these groups over the others (see Appendix). There is no simple relationship between crisis and concentration standardised for market size.

Figure 2 HHI and Market Size



These findings do not depend on the chosen index of concentration. Figures 2 and 3 provide a similar scatter using alternative measures of concentration: the HHI index (which is often used by competition agencies); and the (inverse) number of banks. A very similar pattern is observed for each measure.

Figure 3 Number of banks and Market Size



Next, we construct two simple indices to measure the extent to which each Member State's banks were unstable during the 2008 crisis. Both measures are based on State aid required. Although problems in the recent crisis do not equate directly to inherent instability, this evidence does provide a useful context. Of course, some inherently unstable banks may have been 'lucky' in the recent crisis and *vice versa*, but the extent of difficulty observed does provide an objective, if imperfect, measure of instability.

In Figures 4 and 5, aid is measured by the amount that the European Commission identified as the net aid element of any support granted by the State.⁴ We standardise this by total assets. Latvia

⁴ Data from the State Aid Scoreboard and relate to 2008

http://ec.europa.eu/competition/state_aid/studies_reports/expenditure.html#3. No data was available for countries with small, less developed banking sectors, which are therefore excluded (e.g. Lithuania, Malta, Slovakia). More recent figures published by the European Commission do not distinguish the aid element of State funding.

(8.6%) and Ireland (4.9%) stand out, but with or without these observations, there is no obvious relationship between State aid for banking during the crisis and market structure in banking across Europe.

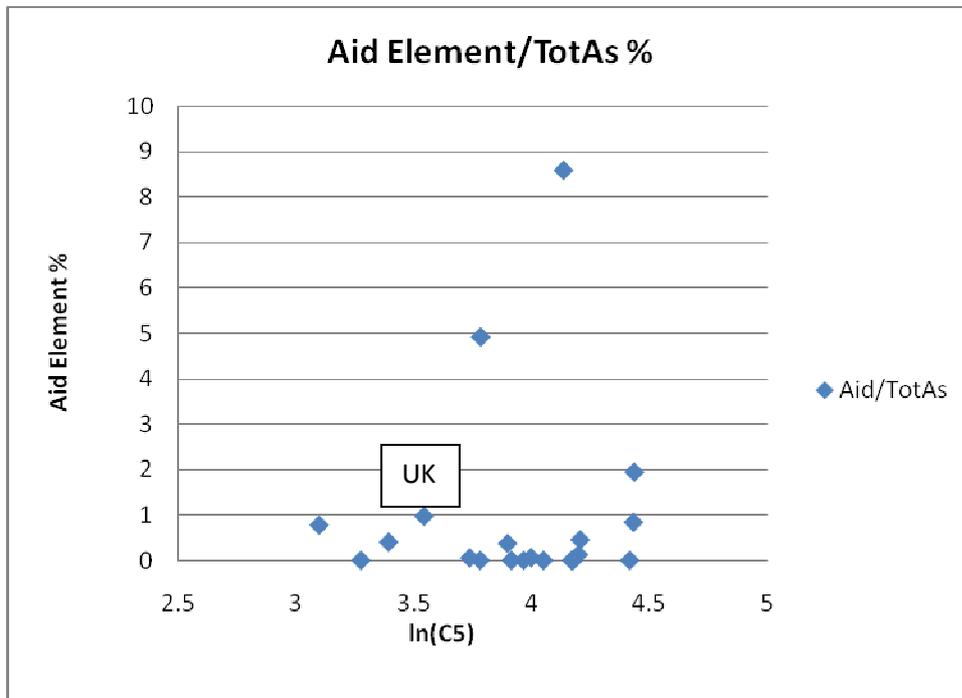


Figure 4 State aid element and concentration

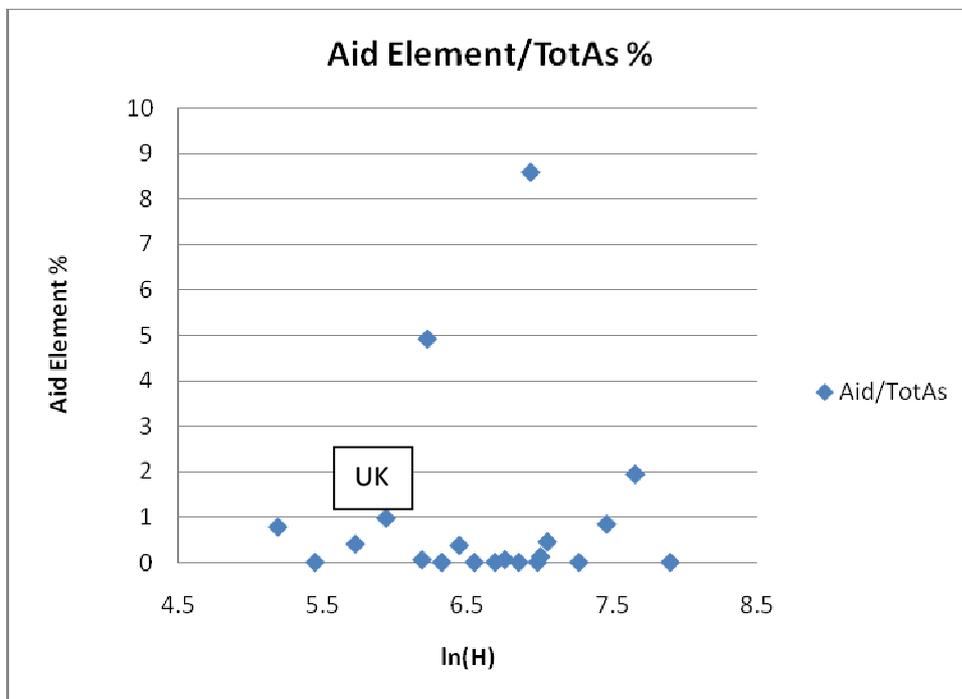


Figure 5 State aid element and HHI

b) Context of wider evidence on competition and instability in banking

The theoretical and empirical evidence has been reviewed extensively elsewhere and this is unnecessary to repeat.⁶ However, it is worth highlighting and contextualising some particularly relevant findings.

There is no unambiguous theoretical link between competition and instability (Boyd and de Nicolo, 2005). The empirical link is equally fragile. Keeley (1990) provides evidence linking bank failures to the enhanced competition following deregulation of US banks in the 1980s; but Jayaratne and Strahan (1998) use a larger sample to show that loan losses fell over a similar period. Other studies find that larger banks are more diversified and so have less variable income streams. In interpreting the evidence, it is important to note that most studies are based on the US experience, and US bank structure is much more fragmented and regional than in the UK. Much of the evidence also relates to the situation before the major trading innovations and increased leverage seen in the last 10-20 years. More recent and wider based evidence does not support the view that competition undermines stability. De Nicolo et al (2004) find for a large cross-section of countries that: a) large conglomerate banks by 2000 were adopting higher levels of risk taking than smaller, specialist banks; and b) highly concentrated banking systems exhibited higher systemic risk than less concentrated sectors. Further evidence for Group of Ten (2001) shows that returns for large and complex banks grew increasingly correlated 1988-99, suggesting increasing interdependencies and/or convergence of business models. Banks have used the cushion afforded to them by market power to adopt riskier strategies, including high leverage and proprietary trading, such that their risk of failure (or of needing to be bailed out) is not reduced.

c) Conclusion

Market concentration does not equate directly to competition, but it reveals relevant insights particularly when related to market size. It is also of very direct relevance when reforms are envisaged that are related to the structure of the industry. In particular, the evidence suggests there would be no increase in instability if reform leading to the horizontal fragmentation of banking was found desirable.⁷

⁶ E.g. Carletti and Hartmann (2002), Cruickshank (2000).

⁷ Recall that the current restructuring of Lloyds and RBS was the minimum required under State aid rules (Article 107 of the Treaty for European Union), and was not a purposeful redesign of market structure. In fact, the modest restructuring required of Lloyds leaves retail markets significantly more concentrated than pre-crisis as it acquired. For example, It increased market share by 14% in personal current accounts with its acquisition of HBOS (OFT 2008, #106) but has been required by the European Commission to divest only 4.6% (EC 2009, #185) in return for the State aid that was essential to it being able to complete the merger. In March 2010, Lloyds had a (pre-divestment) market share of 30% in PCA (OFT 2010, Table 7.2), which is 88% more than its nearest rival (RBS which is also in the process of a divestment to Santander). There is much less switching between current accounts than between other 'utility' products (Chang and Waddams, 2008), the crisis has made customers even less likely to switch (OFT 2010, Fig. 7.2), and cross-selling means market share can be leveraged into related products such as savings accounts, credit cards, unsecured personal loans, ISAs and mortgages (OFT 2010, Table 7.1). It appears that UK taxpayers have ended up sponsoring a substantial lessening of bank competition.

There is no robust link between competition and instability either across Europe or more widely. Stability depends on the effectiveness of regulation, the unbiasedness of incentives, corporate governance,⁸ the degree of interconnectedness between banks, and the diversity of strategies they adopt. In particular, the stability of an appropriately regulated banking system will benefit from the range of competing business models that can be offered only in a competitive market structure.⁹

We do not have specific evidence on investment banking but see no reason for that to be any different in this respect. The IBC's work should be less on whether competition and stability were in 'fundamental harmony' going into the crisis, and more on how the regulatory framework can be designed to harness competition going forward, particularly given the biased incentives (moral hazard) created by the expectation of bailouts.

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⁸ Unfortunately, banks could not be trusted to assess their own strategic risks in the years running up to the crisis. Paul Moore, former head of group regulatory risk at HBOS was dismissed (with a reputed £0.5m gagging payment) for pointing out in 2003 and 2004 that the bank was taking on too much risk in relation to excessive growth in lending (evidence to the House of Commons Treasury Committee; February 10, 2009). It is unlikely that this overruling of risk managers was unique to HBOS or to concern over lending growth. The Icelandic bank Kaupthing, Singer & Friedlander dismissed its heads of both risk and compliance when they complained about risky practices (Channel 4 News, February 24, 2009). In both the HBOS and Kaupthing cases, the concerns were also reported to the FSA (the U.K. financial regulator) but neither bank was reprimanded. In 2003, Ron den Braber warned his bosses at RBS that their models were underestimating risk (FINANCIAL TIMES, March 10, 2009). Other similar, sometimes anonymous, stories have been reported in newspapers in relation to excessive risks in the trading of complex derivatives (e.g. SUNDAY TIMES, February 22, 2009). The systemic problem is a failure to balance upside risk with the downside.

⁹ See, for example, Lyons (2009).

Appendix

Figure 8 EU Member States with higher than average crisis aid relative to GDP

	Total crisis aid granted as % of GDP	Share of banking sector as % of total economy
	%	%
Ireland	19.2	10.9
Luxembourg	7.6	29.1
Belgium	5.2	5.4
Latvia	4.2	6.2
United Kingdom	3.8	7.6
Netherlands	2.4	5.6
Germany	2.1	3.6
Total EU-27	1.7	-

Source: State Aid Scoreboard http://ec.europa.eu/competition/state_aid/studies_reports/expenditure.html#3

Figure 9 Number of individual banks requiring restructuring decisions by the European Commission

A	B	Dk	Fin	Fr	Ger	Ire	Lat	Lux	Ne	Por	Sp	Sw	UK
3	4	2	1	3	11	3	2	3	6	1	1	1	5

Note: includes some double counting for banks jointly rescued by more than one government.

Source: 41 decisions adopted by the EC 1st January 2008 to 29th June 2010, published on DG Competition website

References

- Boyd, John H. and Gianni De Nicoló (2005) 'The Theory of Bank Risk Taking and Competition Revisited' *Journal of Finance*, Vol. 60, No. 3, 1329-1343
- Carletti, E and P Hartmann, (2002) 'Competition and stability: what's special about banking?' ECB working paper No.146
- Chang Y T and Waddams C (2008) 'Gain or Pain: Does Consumer Activity Reflect Utility Maximisation?' *CCP Working Paper 08-15* available at CCP website
- Cruickshank, D (2000) 'Review of Banking Services in the UK,' (London: HM Treasury)
- De Nicoló, Gianni, Philip Bartholomew, Jahanara Zaman, and Mary Zephirin, (2004) 'Bank consolidation, conglomeration and internationalization: Trends and implications for financial risk', *Financial Markets, Institutions and Instruments* 13, 173-217
- EC (2007) 'Report on the retail banking sector inquiry' Commission Staff Working Document accompanying the Communication from the Commission – *Sector Inquiry on retail banking* (Final Report) [COM(2007) 33 final] SEC(2007) 106
- EC (2009) 'State aid No. N 428/2009 – UK restructuring of Lloyds Banking Group' C(2009)9087 final
- Group of Ten (2001) 'Report on Consolidation of the Financial Sector' BIS, IMF, OECD
- Jayarathne and Strahan (1998) 'Entry restrictions, industry evolution and dynamic efficiency: evidence from commercial banking' *Journal of Law and Economics*, XLI, 239-275
- Keeley, M (1990) 'Deposit insurance, risk and market power in banking' *American Economic Review*, 80, 1183-1200
- Lyons, B, C Matras and P Moffatt (2001) 'Industrial Concentration and Market Integration in the European Union' *Economica*, Vol.68, no.269, 1-26
- Lyons, B (2009) 'Competition Policy, Bailouts and the Economic Crisis' *Competition Policy International*, Vol.5.2, 25-48
- OFT (2008) 'Anticipated acquisition by Lloyds TSB plc of HBOS plc' Report to the Secretary of State
- OFT (2010) 'Review of barriers to entry, expansion and exit in retail banking' OFT 1282
- Sutton, J (1991) *Sunk Costs and Market Structure: Price Competition, Advertising and the Evolution of Concentration*, MIT Press
- Sutton, J (1998) *Technology and Market Structure: Theory and History*, MIT Press