Int. Fin. Markets, Inst. and Money 20 (2010) 68–90

Contents lists available at ScienceDirect

Journal of International Financial Markets, Institutions & Money

journal homepage: www.elsevier.com/locate/intfin

Evaluating the state of competition of the Greek banking industry

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A R T I C L E I N F O

Article history:
Received 22 March 2009
Accepted 2 October 2009
Available online 13 October 2009

JEL classification:
G21
G34

Keywords:
Panzar–Rosse
Bresnahan–Lau
Hall–Roeger
Banking
Competition

A B S T R A C T

The present paper uses three different New Empirical Industrial Organization (NEIO) approaches (Panzar–Rosse, Bresnahan–Lau and Hall–Roeger models) to investigate competitive conditions in the Greek banking sector over the period 1995–2004. One important event which has taken place in the Greek banking industry, especially after 1998, is a wave of mergers and acquisitions. This study also measures and compares the degree of banking competition in two sub-periods, 1995–1998 and 1999–2004, in order to investigate the effect of mergers and acquisitions on the competitive structure of Greek banking. The empirical results of the three models indicate a shift from competitive to non-competitive conditions when moving from the first to the second sub-period. This finding suggests that mergers and acquisitions have affected the level of completion of Greek banking, rendering the industry less competitive. Furthermore, taking into consideration the negative effects of mergers and acquisitions on technical efficiency and the total factor productivity of Greek banking (Rezitis, 2008), the empirical findings of the present study provide some indications that one of the outcomes of the Greek banks' merging activities, at least in the short run, might be to attain market power and thus higher profits, rather than higher efficiency and lower costs.

1. Introduction

The Greek banking industry operated in an environment heavily controlled and regulated by the Bank of Greece until the mid-1980s. The Bank of Greece and two major state-owned banks, namely the

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doi:10.1016/j.intfin.2009.10.001

National Bank of Greece and the Commercial Bank of Greece, almost completely dominated the banking industry. Towards the end of the 1980s, the industry gradually moved towards a more deregulated system due to international developments and the need to participate in the Single European Market and European Monetary Union (EMU). Since the beginning of the 1990s, the Greek banking industry has undergone unprecedented changes, caused by the deregulation of international financial markets, the establishment of the economic and monetary union (EMU), and the introduction and advancement of information technology. Some of the main consequences of these changes include the continuously decreasing market share of public banks accompanied by the increasing share of private banks and the recent wave of mergers and acquisitions (M&As) which have taken place in the Greek banking industry (Rezitis, 2008). These events may have vast effects on the competitive structure of the Greek banking industry. Thus, in order to evaluate the implications of these events regarding the competitive structure of the Greek banking industry, the industry's market structure needs to be investigated in order to determine the degree of competition and examine the impact the M&As are likely to have on the market structure and the behavior of banks.

The purpose of this paper is to examine the degree of competition within the Greek banking industry during the period 1995–2004. The dataset used covers almost all Greek banks of the period 1995–2004 and has been compiled from the annual bank reports. It should be stated that two important events took place in the Greek banking industry during the study period. The first was the continuously decreasing market share of the state-controlled banks, while the second was the wave of M&As, with the most significant ones occurring after 1998. Thus, the present study aims to shed light on the effect of the M&As activity on the degree of competition in the Greek banking industry by investigating and comparing the degree of competition within it in the two sub-periods: 1995–1998 and 1999–2005. The results of this study will provide some indications to policymakers about the effects of M&As regarding the competitive structure of Greek banking. This information is particularly important in case additional measures are needed to ensure sufficient competition and financial stability in the Greek banking industry, especially in the current financial crisis, which has been affecting the Greek economy since 2008.

Early empirical studies on the measurement of banking competition are based on the identification of an inverse relationship between market concentration and competition. Two paradigms, i.e. the structure–contact–performance (SCP) paradigm and the relative efficiency (RE) paradigm, are usually provided to support this relationship (Bain, 1951; Gilbert, 1984). The SCP paradigm examines whether a highly concentrated market causes collusive behavior among larger banks resulting in market power increase and therefore higher market performance (higher prices and bank profitability), whereas the RE paradigm investigates whether it is the efficiency of larger banks that enables them to earn relatively higher profits because of lower costs and therefore increase their market share in the process. A large number of recent empirical studies still use banking concentration to evaluate the degree of banking competition (see Cetorelli, 1999). Other studies, e.g. Claessens and Laeven (2004), however, indicate that empirical evidence does not support the expected increasing monotonic relationship between market concentration and market power. Furthermore, according to Bikker (2004), concentration indices are increasingly unreliable when the number of banks is small and tend to exaggerate the level of competition in small countries. As a result, the reliance on concentration indices to measure bank competition can lead to measurement problems and misleading inferences.

A more recent empirical framework for measuring bank competition is the New Empirical Industrial Organization (NEIO) methodology, which utilizes profit-maximizing comparative static conditions (see the survey of Bresnahan, 1989). Some basic features of NEIO are: (i) firms' price-cost margins and marginal costs (MC) cannot be directly observed. Consequently, MC is either inferred from firm behavior or it is not measured at all; (ii) individual industries are taken to have important idiosyncrasies. Institutional detail at the industry level is deemed important and comparative statics of variation across industries or markets is seen as immaterial, unless the markets are closely related; (iii) firm and industry conduct are considered as unknown parameters to be estimated and then directly linked to analytical perceptions of firm and industry conduct; and finally (iv) the nature of market power is determined among a set of alternative hypotheses which are considered explicitly, thus the perfect competitive hypothesis is one of the alternatives between which the data can choose (Bresnahan, 1989: 1012).