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Exploring the nexus between banking sector reform and performance: Evidence from newly acceded EU countries

Sophocles N. Brissimis [a,b], Manthos D. Delis [c,*], Nikolaos I. Papanikolaou [d]

[a] Economic Research Department, Bank of Greece, 21 E. Venizelos Avenue, Athens 10250, Greece
[b] Department of Economics, University of Piraeus, 80 Karaoli and Dimitriou Street, Piraeus 18534, Greece
[c] Department of Economics, University of Ioannina, Ioannina 45110, Greece
[d] Department of International and European Economic Studies, Athens University of Economics and Business, 76 Patission Street, Athens 10434, Greece

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ABSTRACT

The aim of this study is to examine the relationship between banking sector reform and bank performance – measured in terms of efficiency, total factor productivity growth and net interest margin – accounting for the effects through competition and bank risk-taking. To this end, we develop an empirical model of bank performance, which is consistently estimated using recent econometric techniques. The model is applied to bank panel data from ten newly acceded EU countries. The results indicate that both banking sector reform and competition exert a positive impact on bank efficiency, while the effect of reform on total factor productivity growth is significant only toward the end of the reform process. Finally, the effect of capital and credit risk on bank performance is in most cases negative, while it seems that higher liquid assets reduce the efficiency and productivity of banks.

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1. Introduction

Three interrelated determinants of bank performance standout prominently in the current theoretical and empirical debate, namely the financial reform process, the degree of competition and the risk-taking behavior of banks. At least two groups of studies involve these determinants, each aiming at different objectives. Both draw on an important paper by Keeley (1990), who argued that the deregulation of the US banking sector in the 1970s and 1980s increased competition and led to a reduction in monopoly rents and thus, through worsened performance, to a higher equilibrium risk of failure. The first group of studies followed Keeley's paradigm in examining the relationship between deregulation, bank risk-taking and competition, yielding however rather conflicting results (e.g. Matutes and Vives, 2000; Bolt and Tieman, 2004; Allen and Gale, 2004). The second approach, which is mainly empirical in nature, attempts to analyze directly whether deregulation has an impact on bank performance; yet, the findings of this group of studies too are rather contentious. Some conclude that deregulation boosts efficiency through operational savings, thus leading to a surge in productivity growth (e.g. Kumbhakar et al., 2001; Isik and Hassan, 2003). Others, however, find that deregulation has a negative effect on the performance of banks, as it stimulates a decline in productive efficiency and/or total factor productivity growth (see e.g. Wheelock and Wilson, 1999).

In the present paper we combine these two approaches by focusing on how bank performance is affected by reforms in the banking sector, and the associated changes in the industry structure and the risk-taking behavior of banks. Differently phrased, we examine the relationship between performance, reform, competition and risk-taking, where, given the sequence of the effects discussed above, bank performance may be interrelated with the risk-taking behavior of banks. To carry out such an analysis, we develop a two-stage empirical model that involves estimating bank performance in the first stage and assessing its determinants in the second.

Our model draws on the recent econometric contributions of Simar and Wilson (2007) and Khan and Lewbel (2007). In particular, bank performance, measured in terms of productive efficiency (PE) and total factor productivity (TFP) growth, is derived via nonparametric techniques and then the scores obtained are linked to reform,[1] competition and bank risk-taking using bootstrapping

* Corresponding author. Tel.: +30 210 3202388; fax: +30 210 3233025.
E-mail addresses: sbrissimis@bankofgreece.gr (S.N. Brissimis), delis@aueb.gr (M.D. Delis), nickpap@aueb.gr (N.I. Papanikolaou).

[1] We shall use the term "bank reform", rather than "deregulation", to describe the full set of developments in the banking sectors of these countries.

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