Does market structure matter on banks' profitability and stability? Emerging vs. advanced economies

Ali Mirzaei, Tomoe Moore *, Guy Liu

Department of Economics and Finance, Brunel University, Uxbridge, Middlesex UB8 3PH, UK

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ABSTRACT

We empirically investigate the effects of market structure on profitability and stability for 1929 banks in 40 emerging and advanced economies over 1999–2008 by incorporating the traditional structure-conduct-performance (SCP) and relative-market-power (RMP) hypotheses. We observe that a greater market share leads to higher bank profitability being biased toward the RMP hypothesis in advanced economies, yet neither of the hypotheses is supported for profitability in emerging economies. The SCP appears to exert a destabilising effect on advanced banks, suggesting that a more concentrated banking system may be vulnerable to financial instability, however, the RMP seems to perform a stabilising effect in both economies. Evidence also highlights that profitability and stability increase with an increased interest-margin revenues in a less competitive environment for emerging markets. Overall, these results suggest that although policy measures to promote competition may dampen economic rent, excessive implementation may have an undesired destabilising impact on banks.

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1. Introduction

It is argued that the market structure matters for banks' power in setting interest rates that can directly affect their performance. A positive statistical relationship between measures of market structure, such as concentration or market share and profitability has been reported by many banking studies (e.g. Molyneux and Thornton, 1992; Berger, 1995). Berger (1995) advocates two hypotheses from such a relationship. One of them is the structure-conduct-performance (SCP) paradigm, where, in highly concentrated markets, firms can set prices that are less favourable to consumers as a result of imperfectly competitive markets. In a concentrated banking system, a bank can set higher spreads by imposing higher lending rates and lower deposit rates. The other hypothesis is the relative-market-power (RMP) paradigm where firms with well-differentiated products can increase market share and exercise their market power in pricing products, thus earning supernormal profits. With respect to the impact of market structure on banking stability, both economic theory and empirical evidence are inconclusive. In the literature, there are two contrasting views on the relationship between concentration and stability, namely the 'concentration-stability' and the 'concentration-fragility' views. According to the former, more of a concentrated banking system may decrease risk through increasing franchise value, whilst the latter suggests that market power gained through concentration increases risk through the setting of higher interest rates. While there is a large literature that banks rationally choose more risky portfolios when confronted with increased competition (less concentration), new studies find risk-incentive mechanisms that banks take on more risk when they become more concentrated.

This paper empirically re-examines the effect of market structure on both profitability and stability in banking sectors. We utilise data from 23 emerging economies (10 Eastern European and 13 Middle Eastern countries) and 17 Western European countries, containing relatively large panel data for a total of 1929 banks over the period 1999–2008. Incorporating both the traditional structure-conduct-performance (SCP) and the relative-market-power (RMP) hypotheses, the market structure analyses are performed by regressing bank performance indicators on measures of market power together with bank-specific characters, financial structure variables and macroeconomic conditions. We make an allowance for the differences between banks operated in emerging and developed countries. We aim to address some fundamental questions. Firstly, can the hypotheses of RMP and SCP be applied to the emerging market banking system in terms of profitability and stability? Secondly, why are banks operated in the emerging economies more profitable than their counterparts in advanced economies?[1] Thirdly, to what extent are discrepancies in

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* Corresponding author. Tel.: +44 1895274000; fax: +44 1895269770.
  E-mail addresses: ali.mirzaei@brunel.ac.uk. (A. Mirzaei), tomoe.moore@brunel.ac.uk (T. Moore), guy.liu@brunel.ac.uk (G. Liu).

[1] We statistically verify this in Section 2.

determinants of bank risk and returns due to variations in factors under the control of bank management and/or factors relating to financial structures? We systematically compare the emerging market banking systems with their counterparts in advanced markets. In particular, identifying the factors that lead to the differences may explain the effectiveness of financial institutions and also help us better understand the banking industry in emerging economies.

The main contributions of our paper are largely twofold. Firstly, this is a joint analysis of profitability and stability. The international banking industry has undergone substantial structural reforms over the last two decades. There have been fundamental changes in the behaviour of banks with emphasis not only on profitability, but also on stability with comprehensive asset management in recent periods. It is particularly important for emerging countries to ensure that the banking system is stable. Such a banking development should lead to private and infrastructural projects being financed effectively and funds allocated efficiently. As Albertazzi and Gambacorta (2009) argue, because of phenomena such as globalisation, growing international financial markets, deregulation and advances in technology, identifying the determinants of bank performance is an important predictor of unstable economic conditions. Athanasoglou et al. (2008) also point out that a profitable banking system is likely to absorb negative shocks, thus maintaining the stability of the financial system. On the other hand, an inadequate regulatory bank environment with a higher degree of information asymmetry may lead to high profitability, but it is indicative of high risk premia, and these can cause financial instability (Hellmann et al., 2000). The investigation of such a joint effect on both profitability and stability of market structure is, to the best of our knowledge, extremely limited. In this paper, we can analyse whether the relatively high returns of banks are accompanied by increased stability by exerting market power due to less competitive market conditions. If this is the case, the excessive implementation of measures to promote competition may have destabilising effects on banks. Since there is a wider interest in the effect of augmented competition and deregulation on banking systems, our empirical results may provide useful policy implications.

The second contribution is the behaviour of emerging market. In the new global economy, there has been an increasing interest in measuring profitability in emerging markets. However, studies of the profitability-market power relationship in emerging markets have been limited, being considerably less rigorous, lacking in detailed accounts of the determinants of bank profitability. This paper fills the gap by widening the scope of explanatory variables, not only in terms of market structure, but also with a wider range of other control factors, without which the model would suffer from the omitted variables.

The importance of our comparative study lies in the development and improvement of the banking sector in emerging economies. The Middle East and the Eastern Europe would appear to be one of the appropriate choices for the study of emerging economies, since each has its unique points of difference. The Middle Eastern banking system is fairly concentrated being dominated by Islamic banks and, at least until the late 1990s, was tightly regulated and protected from foreign competition. Hence, the improvement of the banking environment in this region would provide more opportunities to enter into the international markets. Eastern Europe formerly dominated by state-owned banks has recently converged with the European Union and follows European banking rules. It follows that legal and financial infrastructures need to be established in order to penetrate the major EU markets. The Western banking system is a good benchmark in which banks operate under a highly competitive environment. Indeed, in the preliminary data analysis in Section 2,

we have found distinctive features in profitability and market structure between these emerging markets and developed EU markets, providing the meaningfulness of our study.

Different determinants call for different policy actions. If profitability and stability determinants can be effectively identified in relation to the market structure, fundamental reform could be undertaken by policy makers. If, on the other hand, determinants were dominated by bank-level variables, promoting more stakeholder power would be desirable. If determinants are clearly identified macroeconomic variables, actions in terms of bank reform could be undertaken by macroeconomic policy makers.

The main empirical findings are as follows. As in many studies presented in banking literature, we find a positive relationship between profitability and market share in advanced economies: banking systems in developed countries are generally biased toward the RMP hypothesis. However, the data do not seem to support the hypothesis on the profitability in emerging market banking systems. The results also show that the more concentrated the banking system in advanced economies is, the more vulnerable it is to systemic risk, supporting the concentration-fragility hypothesis, yet a higher market share seems to exert a stabilisation effect in both economies. Bank-specific variables and financial structures seem to exert a significant effect on both types of banks, in particular, higher interest rate spreads increase profitability and stability. For emerging banks this seems to be one of the key factors to increase their profitability.

The remainder of this paper is structured as follows. In Section 2 we compare the state of market structure and profitability for both emerging and advanced banking systems, which reinforces the importance of our study. Section 3 presents a literature review of related studies. Section 4 specifies the model for estimation and describes the variables used for this study. Section 5 summarises the data descriptive statistics. The empirical results are reported in Section 6. Section 7 concludes and provides a number of policy implications.

2. Market structure and profitability for emerging and advanced banks

In order to elaborate the level of profitability and market structure, we measure return on assets for 308 selected banks[2] located in emerging countries (Eastern Europe and Middle East) and 1621 selected banks in developed countries (Western Europe) over the sample period. Fig. 1a illustrates the trend of returns on average assets (ROAA in %) during the period 1999–2008. Bank profitability in the emerging economies, which has an upward trend till 2007, is extremely high as compared to that observed for developed economies, where ROAA is relatively constant, being around 0.5%. The main question one might want to address is what explains such differences in bank profitability between two different markets.

One possible answer could be the market structure in these economies. We have computed a market share for each bank and market concentration for different countries where these banks are located. Fig. 1b displays the Lorenz Curve for market share.[3] The horizontal and vertical axes show the proportion of banks and market share respectively. It shows that 10% of emerging banks, accounting for 23 banks, holds nearly 40% of the market share,[4] whereas the same 10% of advanced banks accounting for 116 banks

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[2] See Section 5 for the bank selecting procedure.

[3] In generating the Lorenz Curve, some banks were dropped due to missing observation.

[4] Market share is measured as a percentage of a bank's assets to total assets of banks in the country.