Competition, concentration and their relationship: An empirical analysis of the banking industry

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Abstract

This article examines competitive conditions and market structure in the banking industry, and investigates their interrelationship. Competition is measured using the Panzar–Rosse model. In order to distinguish competitive behaviour on local, national and international markets, for each country, three subsamples are taken: small or local banks, medium-sized banks and large or international banks. For all 23 countries considered, estimations indicate monopolistic competition, competition being weaker in local markets and stronger in international markets. Subsequently, a relationship for the impact of the market structure on competition is derived and tested empirically, providing support for the conventional view that concentration impairs competitiveness.
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1. Introduction

European banking markets are undergoing unprecedented changes, caused by the deregulation of financial services, the establishment of the economic and monetary union (EMU) and developments in information technology, which may well turn

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out to be dramatic. Many of these changes will have vast implications for competition and concentration in the banking and financial sectors. One of the consequences is already apparent in the recent wave of mergers in the European banking industry. This process of concentration may affect competition, in particular on local markets for retail banking services. Questions may arise such as: Should concentration be slowed down? or Are additional measures needed to ensure sufficient competition in local retail markets? Besides, increased concentration and the size of the new global players may cause concerns about financial stability. In order to judge the implications of these developments, one has to examine the banking industry's current market structure, to determine the degree of competition, and to investigate the impact the consolidation is likely to have on the market structure and the behaviour of banks. In recent years, however, relatively few empirical studies have examined competition and concentration in European banking markets. This article seeks to measure the degree of competition in the European banking markets, and to investigate the impact of concentration on competition. Moreover, it attempts to compare the situation in Europe with that in the US and other countries.

The literature on the measurement of competition may be divided into two mainstreams, called the structural and the non-structural approach. [1] The structural approach to model competition includes the structure–conduct–performance (SCP) paradigm and the efficiency hypothesis, as well as a number of formal approaches with roots in industrial organisation theory. The SCP paradigm investigates whether a highly concentrated market causes collusive behaviour among larger banks resulting in superior market performance; whereas the efficiency hypothesis tests whether it is the efficiency of larger banks that makes for enhanced performance. In reaction to the theoretical and empirical deficiencies of the structural models, non-structural models of competitive behaviour have been developed namely the Iwata model, the Bresnahan model, and the Panzar and Rosse (P–R) model. These New Empirical Industrial Organisation approaches measure competition and emphasise the analysis of the competitive conduct of banks without using explicit information about the structure of the market. In this article we will use one of these non-structural models, the P–R model, to assess the degree of competition in a large number of countries. One of the structural approaches, the SCP paradigm, provides a theoretical relationship between market structure (concentration) and conduct (competition) which, in the empirical banking literature, is ignored. This article fills in this gap by using the P–R model's measure of competition to test this relationship empirically.

Ideally, an evaluation of competitive conditions and the degree of concentration in the banking industry should begin by rigorously defining the market under consideration. The relevant market consists of all suppliers of a particular banking service, including actual or potential competitors, and it has a product dimension and a geographical dimension. The product definition of a market is based on the equality of the products as regards their ability to fulfil specific consumer wants. The geographical boundaries of a market are determined by actual and potential contacts

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[1] For an overview, see Bikker and Haaf (2001).