Bank Market Power on Firm Performance

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The term “Banking relationship” stems from the informational dynamics established between banks and companies, especially when the latter are credit customers. It can also be understood as a close and continuous interaction between a bank and a company that allows the former to reduce the information asymmetry inherent in this relationship.

Keywords: bank market power ; bank concentration ; relative power of banks ; performance

1. Introduction

The volume of credit granted by the banking system to Portuguese companies has positively evolved over these last few years (Banco de Portugal 2022). Concurrently, small- and medium-sized enterprises (SMEs) have played a pivotal role in the Portuguese economy, representing approximately 99.9% of all businesses, generating 63.4% of the wealth produced, and accounting for 77.4% of employment in 2019 (PORDATA 2021).

In this context and considering that bank financing constitutes the main external funding source for SMEs (Meslier et al. 2020), assessing how bank concentration and the relative power of banks may condition the operations of Portuguese companies is of utmost importance, namely in terms of firm profitability, cost of debt, and capital structure. Banking markets in Germany, the Netherlands, and Portugal are overall more competitive compared to other EU nations, as observed by Wang et al. (2020). Despite the numerous studies conducted, an integrative theory capable of comprehensively explaining the intricate field of corporate finance is yet to be formulated.

Building on the hypothesis of perfect capital markets, numerous works argue that financial decisions exert a major impact on business performance (Abdullah and Tursoy 2021). However, contemporary studies recognize the existence of several market imperfections, such as bank concentration, the market power of banks, information asymmetry, and conflicts of interest inherent to corporate finance.

Therefore, the analysis should adopt a collaborative and interconnected approach. The predominance of studies focusing on large companies and markets highlights the importance of delving deeper into how these aforementioned issues specifically impact smaller companies.

Previous studies have successfully examined the specific impact of banking relationships on firm profitability (Agostino and Trivieri 2010; Chauvet and Jacolin 2017; Delis et al. 2017), financing costs (Bonini et al. 2016; Hasan et al. 2017; Wang et al. 2020), and capital structure (González and González 2008; Degryse et al. 2012; Bikker and Spierdijk 2017). Given the lack of studies on the Portuguese business ecosystem, the current investigation offers relevant information on the impact of bank market power on the different dimensions of business activity. The motivation for the present study stems from the significant gap in the existing literature focusing on the specific and nuanced impact of bank market power concentration on individual firms.

Much of the current research tends to focus on macroeconomic trends, often overlooking the microeconomic dynamics that can significantly influence firm-level outcomes. However, further studies are required to further understand this relationship.

The research also addresses the need for size specificity in the current literature, particularly in a small market like Portugal. Understanding that the impact of bank power concentration may vary depending on the size of the companies is crucial for small countries. By including companies of different sizes operating within small geographical contexts, this study aims to uncover nuanced patterns and provide valuable insights to be used for both academic and practical applications in corporate finance. Overall, the research is driven by the need to address these critical gaps and provide a more robust understanding of the implications of bank power concentration on firm-level financial dynamics.

The study makes a timely and relevant contribution to the existing literature, by providing empirical evidence on the significance of bank concentration and the relative power of banks—Bank-Related Power—, for each of the different companies, particularly in terms of firm profitability, cost of debt, and capital structure. The work contributes, therefore, to a better understanding of the impact of the banking system on small business activity. Banking relationships affect value creation and provide both current and potential shareholders with analytical tools that enable them to shape future relationships.

Certain limitations regarding access to the database provided by Banco de Portugal emerged during this research, mainly due to the imperative to comply with the General Data Protection Regulation.

The analysis of the results, sorted by business size and year, was conducted using a fixed-effects regression model and the ordinary least squares model (pooled OLS) (Hedges and Vevea 1998; Bell et al. 2019). The fixed-effects model with Driscoll–Kraay standard errors is employed when evidence suggests that one of the assumptions of the fixed-effects estimator needs to be addressed (Topcu and Gulal 2020).

2. General Framework

The term "Banking relationship" stems from the informational dynamics established between banks and companies, especially when the latter are credit customers (Boot 2000; Chu and Li 2022). It can also be understood as a close and continuous interaction between a bank and a company that allows the former to reduce the information asymmetry inherent in this relationship (Degryse and Ongena 2001; Chu and Li 2022). When the intensity of the relationship cannot be observed directly, a set of proxies, such as duration, amplitude, and number of banking relationships, is employed to measure the strength of the relationship (Pinto 2013).

The literature has shown a growing interest in investigating how banking market structure impacts access to corporate finance. Bank competition is currently considered a particularly relevant dimension within the market structure (Berger et al. 2004; Carbo-Valverde et al. 2009). The traditional vision of the bank market power hypothesis suggests that less competitive banking markets are associated with less credit availability and higher costs. However, an alternative current of thought, known as the information hypothesis, states that increased competition may lead to higher levels of asymmetric information (Dell'Ariccia 2001). Competitive banking markets weaken relationships by depriving banks of the incentive to invest in soft information. Therefore, greater credit availability may be associated with less bank competition (Petersen and Rajan 1995).

The structure of the banking market and the conditions for accessing credit hold particular significance for smaller companies. When SMEs resort to bank credit, they face increased difficulties compared to larger enterprises, insofar as the following: (i) they are more informationally opaque due to the existence of information asymmetries (Han et al. 2015; Chauvet and Jacolin 2017), (ii) they encounter more demanding requirements for implicit guarantees (Wang et al. 2020; Yoshino and Taghizadeh-Hesary 2018), and (iii) they are heavily dependent on the banking system (Petersen and Rajan 1995; Carbo-Valverde et al. 2009). In such circumstances, banks play a crucial role in reducing the financial constraints experienced by SMEs by strengthening banking relationships (Meslier et al. 2020).

In their study, Agoraki et al. (2021) examined the impact that a set of bank-specific and industry-specific determinants, along with the regulatory framework developed under the three main tenets of the Basel II accord, has on credit supply. They conclude that a significant part of the performance of the banking sector is explained by bank-specific determinants, namely portfolio performance, default risk, and leverage. According to the authors, public policies should strive to create an environment of financial stability. In the relationships it establishes with companies, the banking system must bear in mind a set of determinants that includes components like the balance sheet, the quality of the loan portfolio, and the financial services and product portfolio.

A study conducted by Banco de Portugal in the third quarter of 2021 on the conditions required for extending credit to Portuguese companies reveals a slight increase in restrictions and credit maturity across the entire business sector. The study also notes that companies with a higher risk profile are required to provide a greater volume of guarantees and are subjected to higher commissions and fees. These conditions reflect the prevailing risk perception and tolerance levels. On the other hand, when companies exhibit a moderate credit risk, bank competition helps alleviate the restrictions they may face (Banco de Portugal 2021).

Banks' behavior and market power can be assessed through bank concentration and competition. Bank concentration leads to an increase in the size of the major banks in the market (Carbo-Valverde et al. 2009), while bank competition is characterized by the presence of competitiveness/rivalry among banks that will foster the emergence of competitive advantages (Vives 2019).

Bank concentration is commonly measured using the Herfindahl–Hirschman index (HHI), while bank competition is assessed through the Lerner index and Friedman's H statistic (Bolt and Humphrey 2015). The HHI measures the level of bank concentration, showing the size of banks in the system and the degree of bank concentration in the market, and expressing the market power of each of those variables (Giroud and Mueller 2010; Sulaiman et al. 2019). A high HHI value suggests the presence of a small number of banks with substantial market shares and low competition (Lapteacru 2014; Sulaiman et al. 2019). The Lerner index measures the percentage mark-up of prices over marginal cost, which means that, in a perfectly competitive market, the price of the product equals marginal cost. A Lerner index value close to zero indicates high competition within the banking system and a positive value suggests the prevalence of bank market power (Lapteacru 2014; Spierdijk and Zaouras 2017).

The standard Lerner index is arguably the most commonly employed measure of bank competition; however, it presents some limitations, since it relies on an estimation of the bank's marginal cost, in other words, the marginal cost used is merely an approximation, which limits the capacity of that method to accurately represent real bank market power. For that reason, Koetter et al. (2012) proposed the adjusted Lerner index. Friedman's H statistic is also commonly employed for assessing competition when similar factors are considered (Spierdijk and Zaouras 2017; Wang et al. 2020).

The literature review conducted reveals a reduced body of work that has already explored the impact of bank market power on business activity, particularly in terms of profitability, financing costs, and capital structure. Access to financing conditions emerges as a decisive factor in business growth and performance.

3. The Impact of Bank Market Power on Firm Performance

Leverage has different impacts on corporate profitability: (i) an increase in financial expenses can negatively affect corporate profitability, and (ii) greater financial leverage has the potential to reduce agency costs generated by conflicts of interest between shareholders and managers, thereby positively impacting profitability. The control exercised by credit institutions improves business performance, as managers are held responsible for servicing the debt and, as a consequence, generating a greater volume of cash flows. However, leverage may generate an increase in costs due to the conflicts of interest between shareholders and creditors (Nickell and Nicolitsas 1999; Agostino and Trivieri 2010).

Another analytical perspective emphasizes the importance of the information acquired by the creditor throughout the course of a relationship, as this information will be critical to improving business profitability and value creation (Boot and Thakor 2000; Freixas 2005). Greater bank competition increases banking relationships and allows the provision of a wide range of services. Simultaneously, greater competition reduces the follow-up effort required for each relationship (Pinto 2013). The structure–conduct–performance (SCP) paradigm (Berger 1995) and the bank relative market power hypothesis (RMP) (Smirlock 1985) are two basic models commonly used to assess the impact of market structure on profitability.

A study conducted by Beck et al. (2005) involving more than 4000 companies across 54 countries concludes that small companies are particularly exposed to financial and legal constraints that can have a negative impact on their performance. However, Agostino and Trivieri (2010) assert that SMEs have a strongly concentrated ownership structure, making agency costs irrelevant. These costs are frequently caused by conflicts of interest between ownership and managers and are largely negligible for SMEs where those two entities are often the same person. They also conclude that the negative impact of bank debt on company performance is lower when bank relationships occur in more competitive markets where better credit conditions are offered.

The degree of monopoly within the banking system can pose a challenge to the survival and growth of business activities due to the generated costs. However, the amount of credit has proved to be adequate (Wang et al. 2020). In an analysis of Portuguese companies, Pinto (2013) states that as bank relationships intensify and the services provided increase, the number of banks that hold information about the company also increases, leading to a decrease in information asymmetry. Consequently, business performance improves to the extent that financing costs, guarantees required by the bank, and supervision and follow-up costs decrease.

The literature (e.g., Chauvet and Jacolin 2017; Wang et al. 2020) further argues that business growth and performance are positively related to financial inclusion—the adequate, timely, and affordable access to a wide range of regulated financial products and services that are crucial to increase financial well-being (Banco de Portugal 2017); however, high bank concentration levels can reduce the effects of financial inclusion. Its impact on business performance depends on the conditions of access to credit and is not necessarily linked to the business dimension (Beck et al. 2005; Chauvet and Jacolin 2017).

In a study conducted on SMEs, Agostino and Trivieri (2010) and Delis et al. (2017) conclude that using bank credit in uncompetitive and concentrated markets negatively impacts business performance. Conversely, for most companies, bank concentration tends to have a positive effect on business performance.

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