ARTICLE IN PRESS

Journal of Business Research xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Journal of Business Research

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

Earnings and capital management in European banks – Combining a multivariate regression with a qualitative comparative analysis☆

Inês Pinto*, Winnie Ng Picoto[1]

ISEG, Lisbon School of Economics & Management, Universidade de Lisboa, Portugal

A R T I C L E I N F O

Keywords:
Earnings and capital management
Sovereign debt crisis
Financial assistance
Banking industry
Multivariate regression
fsQCA

A B S T R A C T

In this paper, we analyze the effects of the 2008 financial crisis and the ensuing sovereign debt crisis on the quality of financial reporting in European banks by investigating the existence of earnings and capital management. The sample comprises countries for which the debt crisis was more severe (Greece, Portugal, Ireland, and Italy) and two major European economies (France and Germany) for which the crisis was not as severe. The data analysis consists of a multivariate regression to examine the correlation between operating income and banks' regulatory capital via loan loss provisions. Further, we use a fuzzy-set qualitative comparative analysis (fsQCA) that indicates causal paths for the loan loss provisions. The multivariate results indicate that bank managers use loan loss provisions to manage earnings and regulatory capital during the sample period. The findings do not provide clear evidence of a decrease in managerial discretion after the 2008 financial crisis. Nevertheless, in the severely affected countries, the results indicate that the level of earnings and capital management decreases. Further, fsQCA shows that loan loss provisions exist and that a bank's size and its nonperforming loans can play key roles in their existence.

1. Introduction

The shock of the 2008 financial crisis and the ensuing sovereign debt crisis in Europe created a major public debate on the regulation and supervision of the financial system. This debate focuses on the transparency and quality of financial reporting. Several papers identify the use of loan loss provisions (LLPs) in the banking industry to manage earnings and regulatory capital ratios to reduce income volatility and to avoid the costs from violations of capital requirements (Anandarajan, Hasan, & McCarthy, 2007; Curcio & Hasan, 2015; Leventis, Dimitropoulos, & Anandarajan, 2011).

While a consensus exists in the research that LLPs are a tool for managing earnings, the empirical results do not always support the capital management hypothesis (Leventis et al., 2011). The recent research finds that the effect of the 2008 financial crisis on the quality of financial reporting in general and earnings management in particular has decreased financial misrepresentation (Cimini, 2015; Filip & Raffournier, 2014). Nevertheless, the literature about the effect of the crisis on earnings and capital management in the European banking industry is still scarce and unclear.

Our aim in this paper is twofold: First, we investigate the existence of earnings and capital management in European banks. Second, we analyze whether and how the financial crisis and the ensuing sovereign debt crisis affected this type of misrepresentation in financial reporting.

This paper extends the literature as we investigate the existence of earnings and capital management in the banking industry after the 2008 financial crisis. According to Lobo (2017), the crisis provides an ideal setting to study bank managers' discretion regarding reporting choices for risk taking and financial stability. In this context, we analyze a sample of listed and non-listed European banks during the period from 2007 to 2014. The sample consists of banks from two groups of countries: Greece, Portugal, Ireland, and Italy; and France and Germany. This grouping gives a better understanding of the effects of the debt crisis on different countries.

To accomplish the research objectives, we apply a multivariate regression to investigate the correlation between the banks' operating income and regulatory capital and their use of LLPs. Then, we apply the fuzzy-set qualitative comparative analysis (fsQCA) to uncover more causal paths behind the occurrence of LLPs. Because fsQCA considers all causal conditions together to explain the outcome of interest, several

☆ The authors are grateful to financial support from FCT-Fundação para a Ciência e Tecnologia (Portugal), national funding through research grant (UID/SOC/04521/2013) and to Marina Castilho for her assistance with data collection. The author gratefully acknowledges the helpful comments and suggestions provided by the editors, two anonymous reviewers, and theparticipants of Gika 2017 conference.

* Corresponding author at: Rua Miguel Lupi, 20, 1249-078 Lisbon, Portugal.
E-mail addresses: inespinto@iseg.ulisboa.pt (I. Pinto), w.picoto@iseg.ulisboa.pt (W. Ng Picoto).
[1] Rua Miguel Lupi, 20, 1249-078 Lisbon, Portugal.

https://doi.org/10.1016/j.jbusres.2017.12.034
Received 18 June 2017; Received in revised form 15 December 2017; Accepted 18 December 2017
0148-2963/

Please cite this article as: Pinto, I., Journal of Business Research (2017), https://doi.org/10.1016/j.jbusres.2017.12.034

alternative configurations of sufficient conditions gives a better understanding of managerial discretion.

The results from the multivariate regression indicate the use of LLPs for the purposes of managing earnings and capital during the sample period. The findings do not provide clear evidence of a decrease in managerial discretion after the period of financial distress. Nevertheless, in the severely affected countries, the results indicate that the level of earnings and capital management decreases.

In support of these results, fsQCA has similar findings. This analysis indicates that the existence of nonperforming loans is a core condition for the presence of LLPs in the post-crisis period, and they overlap the existence of operating income and regulatory capital. On the other hand, fsQCA's results also highlight that the bank's size can be an important variable for the presence of LLPs in countries that received financial assistance. The findings show that market forces cause more conservative earnings for smaller banks with higher litigation risk in countries under financial assistance, which in turn justifies an increase in LLPs.

This paper contributes to the research on earnings and capital management in the banking industry in several ways. First, we analyze the effect of the sovereign debt crisis on a sample of European banks. In fact, the literature is still scarce regarding the effect of a recession on financial reporting, particularly for financial entities. In this paper, we aim to contribute to a better understanding of this issue because the banking industry is critical to all economies. Second, we compare the differences in financial reporting between countries that faced greater economic difficulties during the crisis and those that did not. Third, we combine a multivariate regression's results with those from fsQCA, which is new in the field of earnings management. FsQCA's methods find different configurations that lead to the presence of LLPs. This finding supports the importance of economic crises and financial assistance in causing earnings management.

Following the introduction, Section 2 presents the theoretical background. Next, in Section 3 we explain the multivariate regression and fsQCA analysis. Section 4 presents the data analysis and results, and in Section 5 we discuss these results and present the conclusions and limitations.

2. Literature review and hypotheses

Because of the primary role that banks play in the allocation of capital and because of their inherent lack of transparency, the study of managerial discretion in the banking industry is of justifiable interest (Beatty & Liao, 2014; Bushman, 2014). The literature on how bank officers manage earnings examines this accounting issue through the analysis of loan loss provisions (LLPs).

Beatty and Liao (2014) use LLPs to investigate the existence of earnings and capital management. They justify the use of LLPs because these provisions represent a bank's specific accruals and can be more easily isolated and individually modeled. The empirical foundation of this model is based on relating bank's LLPs to earnings and the Tier I capital disclosed in financial information (Leventis et al., 2011).

The literature finds that banks use LLPs to manage earnings and regulatory capital to reduce income volatility, avoid the costs associated with the violation of capital requirements, or as a signal to investors about future earnings (Ahmed, Takeda, & Thomas, 1999; Anandarajan et al., 2007; Azzali, Fornaciari, & Mazza, 2014; Leventis et al., 2011). While the results for capital management are conflicting, the majority of the studies provide evidence of earnings management through LLPs for the purpose of income smoothing (Leventis et al., 2011).

Indeed, the empirical results for capital management were even inconclusive before Basel I came into effect in 1988 when greater incentives existed for managing LLPs to improve the capital adequacy ratio. While Scholes, Wilson, and Wolfson (1990) and Beatty, Chamberlain, and Magliolo (1995) provide evidence that banks use LLPs to manage regulatory capital, Collins, Shackelford, and Wahlen (1995) find no evidence of capital management. After changes in the regulation on capital adequacy, some authors find no association between LLPs and capital management (Curcio & Hasan, 2015; Leventis et al., 2011; Pérez, Salas-Fumás, & Saurina, 2008), while others find that bank managers use LLPs in an opportunistic way (Ahmed et al., 1999; Anandarajan et al., 2007).

The research generally finds that bank managers use LLPs as a tool for earnings management. Using a sample of Australian banks, Anandarajan et al. (2007) show that listed commercial banks engage more aggressively in earnings management than non-listed banks. Leventis et al. (2011) provide evidence that risky banks registered higher earnings management via LLPs than less risky banks but that bank managers reduced this opportunistic behavior in the post-IFRS period. Curcio and Hasan (2015) conclude that banks in the Eurozone use LLPs to smooth earnings in a more aggressive way than banks not in the Eurozone.

Grounded in this literature, we state the following hypothesis:

H_1. Bank managers use LLPs to manage earnings and capital.

More recently, research has emerged with conflicting results on the effect of the 2008 financial crisis on earnings management. Some authors find that in periods of economic stress, managers have higher incentives to manage earnings upwards to meet or beat thresholds or to give a better image of the firm's performance to investors (Ahmad-Zaluki, Campbell, & Goodacre, 2011; Filip & Raffournier, 2014).

Furthermore, in troubled times, managers are more likely to perform income-reducing earnings management because it may be favorable in the contexts of debt restructuring, labor union renegotiations, and when obtaining government support in times of financial distress (DeAngelo, DeAngelo, & Skinner, 1994; Filip & Raffournier, 2014).

In contrast, another strand of literature finds that in recession periods, firms are subject to higher monitoring from different stakeholders that increases the demands for conservative earnings and higher quality in financial reports (Francis, Hasan, & Wu, 2013). By using a sample of listed European firms, Filip and Raffournier (2014) find a decrease in earnings management over the crisis years (2008–2009). Similarly, but using a different approach (event study), Cimini (2015) also finds a decrease in misrepresentation by a large majority of European firms after the 2008 financial crisis.

Regarding financial entities, less research exists about the impact of financial crises on earnings management. Balasubramanyan, Zaman, and Thomson (2014) find no evidence of income smoothing during the financial crisis. Using a sample of listed Italian banks, Azzali et al. (2014) conclude that the financial crisis led to a decrease in the earnings and capital management of riskier banks.

The literature regarding the effect of the recent financial crisis on earnings management is unclear. Therefore, by using a sample that includes countries that faced the financial crisis differently, we aim to contribute to this strand of the literature by analyzing the impact of the financial crisis on managers' discretion in the European banking sector.

Considering that the recent research suggests that the increases in regulation and monitoring lead to an increase in the quality of financial reporting, we put forward the following hypothesis:

H_2. In the banking industry, earnings and capital management via LLPs decrease after the financial crisis.

Finally, in line with the literature about the impact of recession periods on the quality of financial reporting, the third hypothesis states:

H_3. Countries that have faced higher economic difficulties during the debt crisis present lower levels of earnings and capital management via LLPs.