OWNERSHIP CONCENTRATION AND EARNINGS QUALITY OF BANKS: RESULTS FROM A CROSS-COUNTRY ANALYSIS

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Abstract

This research investigates the impact of ownership concentration on earnings quality of banks. Previous literature shows that ownership concentration reduces agency costs between property and management, resulting in higher quality and transparency of information, and thus on earnings quality. The reason why we focus on banks lies on the specific constraints and regulations to which financial institutions are subjected, and as well as the different incentives to earnings management activities from management and property. Thus, the main issue of our research is to understand whether ownership concentration has an impact on banks earnings quality. We used a sample of 6,323 bank-year observations, across 35 countries, over the period 2001-2016. In the paper three different regression models are adopted to measure earnings quality according to the existing literature: (1) earnings persistence, (2) cash flow predictability and (3) earnings management to just-meet-or-beat the prior year's earnings. We used OLS and random effects estimations for model (1) and (2) and logistic estimations for the model (3). Our results show that ownership concentration improves earnings quality of banks; this is true for all three estimated models. Our findings support the idea that the higher the ownership control on management activity, the higher the quality of earnings.

Keywords: Earnings Quality, Corporate Governance, Ownership Concentration, Banks

1. INTRODUCTION

The separation between ownership and control is not a new topic. One hand, several studies have been done to explore the property incentives and controlling systems that ownership has in order to pursue their own interests (e.g. among others: Jensen and Meckling, 1976; Fama and Jensen, 1983). On the other hand, previous literature investigated the role of management, on its discretionary power, and on its implications on managerial activities (e.g. among others: Watts and Zimmerman, 1978; Zmijewski and Hagerman, 1981).

Due to the complexity and rapid succession of strategic decisions and management problems, managerial decisions must be taken by specialized practitioners whom generally are different people from the owners (Zazzaro, 2001).

Attention from researcher and practitioners to the several governance models is a consequence of the idea that efficient corporate governance practices can increase reliability, transparency, and integrity of firm activities (Abdul Rahman and Haneem Mohamed Ali, 2006; Patelli and Prencipe, 2007; Hashim and Devi, 2008; Huang *et al.*, 2013; González and García-Meca, 2014; Bao and Lewellyn,

2017). Efficient corporate governance models result in a higher firm value, lower cost of capital and in higher competitive advantage (Carretta et al., 2007).

The conceptual framework to which we refer is the Agency Theory. According to this theory, one subject (*principal*) delegates to another one (*agent*) the power to use resources and to do specific activities (Jensen and Meckling, 1976). The assumptions underlying this theory are that both, the principal and the agent, maximize their utility and that it is impossible for the agent to act only in the interest of the principal. Thus, the principal can minimize agent's opportunistic behaviours through controlling activity and incentive systems.

As stated by Jensen and Meckling (1976), divergence in interests and information asymmetries represent the agency problem and they result in different agency costs: monitoring costs, linked to the principal controlling activity over the management activity; bonding costs, incurred by the agent in order to persuade the principal of his/her good activity; residual costs, that are costs incurred from divergent principal and agent interests despite the use of monitoring and bonding.

Banks add even more complexity into the agency conflict between principal and agent. In fact,

financial institutions are subjected to rigid regulations and to supervisory systems in order to defend some specific groups of shareholders that are not usually involved in the firm activity: depositors and investors. As highlighted by Allen and Herring (2001), regulators establish tests for financial firms to affirm their quality and strict enforcement of conduct of business rules in order to deter financial firms from too risky and dangerous behaviours. The aim of those rules is to protect depositors and investors. A similar function is accomplished by the provision of insurance. In fact, the rationale of deposit insurance is to protect depositors against asymmetric information over bank's activity since they would find it extremely costly to monitor their bank (Allen and Herring, 2001).

Recent events and the latest financial crisis lead to a renewed interest in financial institutions' corporate governance mechanisms. The ambition is to find a proper and adequate equilibrium among shareholders and managers that are able to align their interests and to ensure stability and solidity of the financial system through a healthy and cautious bank management (Lossani, 2016). This concept leads to a reconsideration of property assets, of management mechanisms, and of controlling and supervision organisms' powers (Colombo and Piccolo, 2016).

Economic theory considers firm property structure as one of the most important corporate governance determinants (Shleifer and Vishny, 1997). Several studies focus on ownership concentration and debate whether the presence of block shareholders has an impact on the manager-property conflict of interests. Thus, property assets structure is pivotal to deeply understand the agency problem. According to the specific property configuration, we can observe different transaction costs and asymmetry information. Broadly speaking, there is a direct relationship between the separation of property and control and the agency costs. We can observe high agency costs when there is a low level of ownership concentration, while those costs are lower when the ownership concentration level is high (Jensen and Meckling, 1976).

Consequently, the monitoring activity over management is strictly linked to the extent of ownership concentration. The higher the level of ownership concentration, the higher is the incentive for investors to collect information and to monitor management activity (Bianchi *et al.*, 1998).

The presence of large-shareholders (Shleifer and Vishny, 1986), represented by a single majority shareholder or a group of shareholders, is associated with higher efficiency in voting rights and thus, in monitoring management activity, reducing agency costs. Moreover, a shareholder holding large shares of the firm has the power to pressurize the management in order to act in the shareholders' interest. This power consists in the right to dismiss the management (Man and Wong, 2013).

Surprisingly, given the relevance of the topic, there are only very few studies investigating financial institutions (Kanagaretnam *et al.*, 2004; Kanagaretnam *et al.*, 2011, 2014b). Even rarer are research investigating the possible linkages between bank property asset configurations and managerial discretions on accounting numbers (e.g. Shehzad, de Haan and Scholtens, 2010).

It is beneficial to investigate whether the presence of a single majority shareholder or a strong group of shareholders can influence earnings management activity and the quality of information resulting from the balance sheet.

This research focuses on banks and on earnings quality for two reasons. First, since financial institutions are subjected to specific regulations, they might manipulate accounting numbers in order to comply with the financial and capital requirements. Second, surveillance organisms operate in the financial market reducing any earnings management incentive to manipulate earnings, protecting two categories of stakeholders that are not common in the non-financial market: depositors and investors.

The aim of this paper is to empirically investigate whether the presence of a relevant stakeholder can increase the earnings quality of banks, due to the higher property monitoring on management activity. We test our hypothesis using a sample of banks across 35 countries spanning over the period 2001-2016.

Our paper is structured as follows. In Section 2 we review the existing literature discussing the role of ownership concentration on earnings management activity, we then provide our hypothesis. In Section 3, we illustrate the methodology we used while in Section 4 we illustrate the sample we analysed, we report some descriptive statistics and the results we get. In Section 5, we provide our conclusions, the limits of our research and suggestions for future developments.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Previous literature proved that the presence of a majority shareholder can have opposite effects on earnings quality.

Looking at founding families, Wang (2005) suggests two theories able to explain those effects: the *entrenchment effect* and the *alignment effect.*

According to the first theory, ownership concentration creates an incentive for the majority shareholder to expropriate wealth from the other stakeholders (Fama and Jensen, 1983; Morck *et al.*, 1988; Shleifer and Vishny, 1997; Wang, 2005), in order to get a private benefit consequent to the lower earnings quality. For example, management might be interested to report lower earnings in order to avoid a hostile takeover. However, the entrenchment effect can be mitigated by the demand of earnings quality from the multiplicity of stakeholders. In fact, other stakeholders can ask for specific contractual forms that lead management (and property) to give better financial information (Wang, 2005).

The second theory is based on the concept that those shareholders who operate with a long-term view are not interested in opportunistic earnings management activities. In fact, they could lose wealth in terms of reputation. Consequently, majority shareholders exercise their monitoring role on management activity and thus, they can give better earnings representation. However, the alignment effect can be mitigated by the loss of demand for high earnings quality from the other stakeholders (Wang, 2005).

More broadly, previous literature is not

univocal about the impact of a controlling shareholder over earnings quality. Fan and Wong (2002), focusing on East Asian firms, argue that property concentration and the divergence degree between the ultimate owner's control and owned equity are associated with lower level of earnings informativeness. The reasons underlying their results are the entrenchment argument and the information argument. According to the first argument, the controlling owner has the power to control the information provided through accounting numbers and, thus, outside investors may not trust on this information. According to the second argument, when ownership is concentrated there are only a few people holding information. In this situation it is easier to trade favours with politicians and bureaucrats, reducing transparency. Thus, it results in lower earnings informativeness.

Warfield *et al.*, (1995) prove that earnings informativeness is higher when shares are owned by managers and that the discretionary accruals are inversely correlated with managerial ownership. Thus, the higher the managerial ownership, the lower the discretionary accruals and the higher the earnings informativeness.

Jung and Kwon (2002), studying South Korean firms, agreed on the positive relationship between earnings informativeness and the presence of majority shareholders. Plus, they prove that the presence of an institutional investor or block-holder implies higher earnings informativeness due to their active monitoring role on management's actions.

Huang *et al.* (2013) focus on the effect of shareholder rights – and their interplay with insider ownership – on earnings management. They find that stronger shareholder rights are associated with lower level of earnings management activity. Particularly, stronger shareholder rights are associated with a lower level of income-increasing discretionary accruals. More interestingly, they find that this relationship becomes insignificant for higher levels of insider ownership and it holds only for low levels of CEO's holdings and all executive officers and directors' holdings.

De Bos and Donker (2004) state that in order to monitor accounting decisions taken by management, a good corporate governance mechanism is to increase ownership. This mechanism could result in higher earnings quality. On the same line, González and García-Meca (2014) point out that a greater ownership concentration level can lead to less opportunistic behaviors, resulting in a higher earnings informativeness level. Looking at Latin American firms, the authors find that the absolute value of discretionary accruals decrease when ownership concentration is high. However, they also find a non-linear relation between ownership concentration and earnings management. In fact, they observe an increase in the use of discretionary accruals when ownership concentration is above 35.1%.

A new branch of research is now looking at earnings management (Li *et al.*, 2014) and at ownership structure (Gaur and Delios, 2015) in emerging markets. Particularly, Bao and Lewellyn (2017) support the idea that in emerging markets the agency problem consists in a conflict of interests between controlling shareholders and minority shareholders instead of in the conflict between outside investors and managers. In their analysis,

they find that controlling ownership generally increases earnings management activity but this relationship is weakened by minority shareholder protection.

Looking at banks and at their ownership structure, Shehzad *et al.* (2010) find that there is a negative relationship between ownership concentration and bank's non-performing loans ratio. This result means that the higher the ownership concentration the lower the bank riskiness. However, those results are conditional on supervisory control and shareholders' protection rights. The second result they find is the positive relationship between ownership concentration and the capital adequacy ratio, conditional on shareholder protection. In fact, when the levels of shareholder protection rights and supervisory control are low, the ownership concentration reduces bank riskiness.

On one hand, in previous literature, there is a wide investigation about the relationship between ownership structure and its impact on accounting numbers (e.g. on earnings quality) (e.g. Fan and Wong, 2002; Jung and Kwon, 2002; González and García-Meca, 2014; Bao and Lewellyn, 2017). However, there is a lack of studies on bank's accounting numbers. On the other hand, previous literature studied the relationship between bank ownership concentration on one side and bank riskiness, bank performance, and bank firm value on the other side (e.g. Bianchi *et al.*, 1998; Shehzad *et al.*, 2010). Nevertheless, studies on the impacts on earnings quality are missing.

Based on previous literature and considering bank peculiarities, as the strict rules to which they are subjected, and the possible incentive to manage earnings in order to reach capital requirements, we think that ownership concentration can have a relevant impact on banks earnings quality. Thus, our hypothesis follows:

H1: The presence of controlling shareholders has an impact on banks earnings quality.

3. METHODOLOGY

To measure banks earnings quality, we followed existing literature (Altamuro and Beatty, 2010, Beatty *et al.* 2002; Kanagaretnam *et al.* 2004; Kanagaretnam *et al.* 2010, 2011, 2014a, 2014b) and we estimated three different models: (1) *earnings persistence*, (2) *cash flow predictability* and (3) *earnings management to just-meet-or-beat the prior year's earnings*.

Regarding the first two models, we estimate earnings persistence and cash flow predictability through two different models that control whether the presence of a controlling shareholder (at least one shareholder that owns, directly or indirectly, at least the 25% of ownership) can increase those two proxies of earnings quality. The underlying idea is that the higher the bank earnings quality, the higher is the capability of ETB_t to forecast ETB_{t+1} (1) and the $EBTLLP_{t+1}$ (2)[16], respectively. The models we estimate are the following:

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[16] See appendix for detailed definition of institutional and accounting variables.

$$EBT_{t+1} = \beta_0 + \beta_1 CONTROL + \beta_2 EBT_t + \beta_3 CONTROL\ xEBT_t + \beta_4 SIZE_t + \beta_5 DEPOSIT + \beta_6 GROSS\_LOANS_t$$
$$+ \beta_7 LISTING + \beta_8 COMMERCIAL + \beta_9 BANK + \beta_{10} BANKREG + \beta_{11} OFFICIAL + \beta_{12} MONITOR \quad (1)$$
$$+ \beta_{13} FINDEV + \beta_{14} CR\_RIGHT + \beta_{15} DISC + \beta_{16} IFRS + < Year\_Controls > + \varepsilon_t$$

$$EBTLLP_{t+1} = \beta_0 + \beta_1 CONTROL + \beta_2 EBT_t + \beta_3 CONTROL\ xEBT_t + \beta_4 SIZE_t + \beta_5 DEPOSIT_t + \beta_6 GROSS\_LOANS_t$$
$$+ +\beta_7 LISTING + \beta_8 COMMERCIAL + \beta_9 BANK + \beta_{10} BANKREG + \beta_{11} OFFICIAL \quad (2)$$
$$+ \beta_{12} MONITOR + \beta_{13} FINDEV + \beta_{14} CR\_RIGHT + \beta_{15} DISC + \beta_{16} IFRS + < Year\_Controls > + \varepsilon_t$$

where, EBT_t is the earnings before taxes during year t scaled by total assets at the beginning of the year; EBT_{t+1} is the earnings before taxes during the year $t + 1$ scaled by total assets at the beginning of the year; $EBTLLP_{t+1}$ is earnings before taxes and loan loss provisions during year $t + 1$ scaled by total assets at the beginning of the year; *CONTROL* is a dummy variable equal to 1 if there is at least one shareholder that owns – directly or indirectly – at least the 25% of ownership shares, and 0 otherwise; *CONTROL x EBT_t* is our variable of interest, its coefficient measures the impact of a controlling shareholders on the capability of EBT_t to predict EBT_{t+1} and $EBTLLP_{t+1}$; $SIZE_t$ is natural logarithm of total assets at the beginning of the year; $DEPOSIT_t$ is deposits scaled by total assets at the beginning of the year; $GROSS\_LOANS_t$ is the total amount of debts scaled by total assets at the beginning of the year; *LISTING* is a dummy variable equal to 1 if the bank is listed on the stock exchange, and 0 otherwise; *COMMERCIAL* is a dummy variable equal to 1 if the bank is a commercial or bank holding company, and 0 otherwise; *BANK* is a bank system dummy variable, which equals 1 for countries whose financial system is bank-dominated, and 0 for countries whose financial system is market-oriented; *BANKREG* is restrictions on bank activities and non-financial ownership, with higher values indicating more restrictions; *OFFICIAL* is power of supervisors to take prompt corrective action, to restructure and reorganize troubled banks, and to declare a troubled bank insolvent, with higher values indicating greater power of supervisors;

MONITOR is extent of monitoring by outsiders such as certified auditors and international rating agencies, with higher values indicating greater private oversight; *FINDEV* is financial system deposits divided by country GDP; *CR_RIGHT* is an index aggregating different creditor rights for each country; *DISC* is bank disclosure index measuring the actual disclosure practices of commercial banks around the world, in relation to their assets, liabilities, funding, incomes, and risk profiles; and *IFRS* is a dummy variable equal to 1 if IFRS is adopted by the country in the year, and 0 otherwise. Our main coefficient of interest is the coefficient on the interaction variable *CONTROL x EBT* (β_3). We expect that the presence of a high degree of ownership concentration influences earnings persistence and cash flow predictability. Thus, we expect β_3 to be statistically significant.

Regarding our third measure of earnings quality, we followed existing literature and we used the "managing earnings to just-meet-or-beat the prior year's earnings" model. We use this model to test whether the presence of a controlling shareholder (as defined for the previous two models) can influence banks earnings management activity (Kanagaretnam *et al.* 2010, 2014b). A negative impact of our variable of interest on the dependent variable means that the presence of a controlling shareholder can increase bank earnings quality reducing opportunistic earnings management behaviour and, thus, it means higher earnings quality. The model we estimate is the following:

$$SMALL\_POS\Delta t = \beta_0 + \beta_1 + CONTROL + \beta_2 SIZE_t + \beta_3 GROWTH_t + \beta_4 LOANS_t + \beta_5 LEV_t + \beta_6\ \Delta\ CASH\_FLOW_t$$
$$+ \beta_7 ALLOW_t + \beta_8 LISTING + \beta_9 COMMERCIAL + \beta_{10} BANK + \beta_{11} BANKREG + \beta_{12} OFFICIAL \quad (3)$$
$$+ \beta_{13} MONITOR + \beta_{14} FINDEV + \beta_{15} CR\_RIGHT + \beta_{16} DISC + \beta_{17} IFRS + < Year\_Controls > + \varepsilon_t$$

where, *SMALL_POSΔt* is a dummy variable equal to 1 if the bank has a change in ROA (income before taxes scaled by total assets) from year $t – 1$ to year t in the interval between 0 and 0.001, and 0 otherwise; $GROWTH_t$ is the growth in total assets from the beginning to the end of year; $LOANS_t$ is total loans scaled by total assets at the beginning of year; LEV_t is total equity divided by total assets at the beginning of year; $\Delta CASH\_FLOW_t$ is change in cash flows (earnings before taxes and loan loss provisions) from the beginning to the end of the year scaled by total assets at the beginning of year; and $ALLOW_t$ is allowance for loan losses at the end of year, scaled by total assets at the beginning of year; and all other variables are as previously defined for model (1) and (2).

Our main coefficient of interest is the coefficient on the variable *CONTROL* (β_1). We expect that the presence of a high degree of ownership concentration influences earnings quality of banks. Thus, we expect β_1 to be statistically significant.

4. EMPIRICAL ANALYSIS

4.1. Sample and Descriptive Statistics

We used a cross-country sample of 6,323 bank-year observations over the period 2001-2016. Financial

data are obtained from Orbis Bank Focus – Bureau Van Dijk database. In Table 1a we report a sample breakdown by bank specialization activity.

About 60 % of our observations are represented by commercial and saving banks. We first select the 48 countries analysed in La Porta *et al.* (1998). We dropped 10 countries (Ecuador, Hong Kong, Indonesia, Jordan, Kenya, Pakistan, South Korea, Taiwan, Venezuela, and Zimbabwe) due to missing institutional data. We dropped 3 more countries (Egypt, Nigeria, and Uruguay) due to missing financial data. We finally dropped the USA in order to avoid possible estimation bias due to the overrepresentation of this country in the final sample (Fonseca and Gonzalez, 2008; Kanagaretnam *et al.,* 2014b). Thus, our final sample is composed of 35 countries. Japan and Italy are characterized by fragmented bank system, while Austria, Germany, and the UK represent the countries with the most observations. In Table 1b we report a breakdown of the sample by countries and by estimation model.

Table 1a. Sample breakdown by bank specialisation

Specialisation	Freq.	Percent.	Cum.
Bank holdings & Holding companies	501	7.92	7.92
Clearing & Custody institution	20	0.32	8.24
Commercial banks	3,295	52.11	60.35
Finance companies	594	9.39	69.75
Group finance companies	7	0.11	69.86
Investment & Trust corporations	170	2.69	72.54
Investment banks	388	6.14	78.68
Micro-financing institutions	19	0.3	78.98
Other non-banking credit institutions	32	0.51	79.49
Private banking / Asset management co.	211	3.34	82.82
Real Estate & Mortgage banks	269	4.25	87.08
Savings banks	649	10.26	97.34
Securities firms	168	2.66	100
Total	*6,323*	*100.00*	*100.00*

Table 1b. Sample breakdown by country and estimation model

Country	Model 1		Model 2		Model 3	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
Argentina	155	2.45	149	2.90	218	3.59
Australia	75	1.19	69	1.35	100	1.65
Austria	408	6.45	375	7.31	105	1.73
Belgium	80	1.27	50	0.97	35	0.58
Brazil	169	2.67	154	3.00	256	4.21
Canada	430	6.80	68	1.33	91	1.50
Chile	78	1.23	59	1.15	77	1.27
Colombia	52	0.82	47	0.92	65	1.07
Denmark	90	1.42	88	1.72	118	1.94
Finland	33	0.52	27	0.53	31	0.51
France	294	4.65	258	5.03	366	6.02
Germany	382	6.04	355	6.92	332	5.46
Greece	24	0.38	24	0.47	33	0.54
India	146	2.31	79	1.54	101	1.66
Ireland	51	0.81	44	0.86	60	0.99
Israel	34	0.54	34	0.66	43	0.71
Italy	430	6.80	416	8.11	559	9.20
Japan	1,158	18.31	862	16.80	914	15.04
Malaysia	109	1.72	109	2.12	158	2.60
Mexico	207	3.27	196	3.82	282	4.64
Netherlands	103	1.63	74	1.44	101	1.66
New Zealand	19	0.30	19	0.37	31	0.51
Norway	184	2.91	159	3.10	204	3.36
Peru	237	3.75	235	4.58	284	4.67
Philippines	68	1.08	68	1.33	90	1.48
Portugal	52	0.82	50	0.97	67	1.10
Singapore	37	0.59	34	0.66	41	0.67
South Africa	80	1.27	75	1.46	102	1.68
Spain	110	1.74	107	2.09	97	1.60
Sri Lanka	80	1.27	80	1.56	107	1.76
Sweden	72	1.14	69	1.35	89	1.46
Switzerland	248	3.92	189	3.68	229	3.77
Thailand	94	1.49	83	1.62	115	1.89
Turkey	158	2.50	143	2.79	195	3.21
United Kingdom	376	5.95	282	5.50	382	6.28
Total	*6,323*	*100.00*	*5,130*	*100.00*	*6,078*	*100.00*

Table 2. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Q1	Q2	Q3	Max
EBT_{t+1}	6323	0.0130	0.0388	-0.5560	0.0028	0.0064	0.0156	0.9580
$EBTLLP_{t+1}$	5130	0.0186	0.0380	-0.5247	0.0050	0.0096	0.0207	0.9588
EBT_t	6323	0.0122	0.5032	-1.8439	0.0027	0.0064	0.0159	0.8739
$SIZE_t$	6323	15.3169	2.5437	6.1506	13.5490	15.4093	17.2136	20.0653
$DEPOSIT_t$	6323	0.7289	0.7273	0	0.5564	0.7538	0.8970	40.8441
$GROSS\_LOANS_t$	6323	0.5829	0.5169	0.0000	0.3928	0.6111	0.7594	27.2713
LISTING	6323	0.3765	0.4845	0	0	0	1	1
COMMERCIAL	6323	0.6003	0.4898	0	0	1	1	1
BANK	6323	0.5839	0.4929	0	0	1	1	1
BANKREG	6323	8.5965	2.9443	4	6	8	12	13
OFFICIAL	6323	10.8103	2.7307	3	9	11	13	15
MONITOR	6323	3.9799	0.8852	2	4	4	5	6
FINDEV	6323	0.9952	0.5716	0.2100	0.5100	0.8400	1.5200	1.9000
CR_RIGHT	6323	1.9373	1.1666	0	1	2	3	4
DISC	6323	6.7376	2.3526	0	6	7	8	10
IFRS	6323	0.5306	0.4991	0	0	1	1	1

Tables 2, 3a, and 3b report descriptive statistics and correlation matrix of accounting and institutional variables.

Table 3a. Correlation matrix – financial variables

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
(1) EBT_{t+1}	1.00							
(2) $EBTLLP_{t+1}$	0.86*	1.00						
(3) EBT_t	0.55*	0.45*	1.00					
(4) $SIZE_t$	-0.13*	-0.21*	-0.05*	1.00				
(5) $DEPOSIT_t$	-0.06*	-0.05*	-0.36*	-0.03*	1.00			
(6) $GROSS\_LOANS_t$	0.00	0.06*	-0.26*	-0.06*	0.7*	1.00		
(7) LISTING	0.00	-0.03*	0.00	0.33*	0.01	0.03*	1.00	
(8) COMMERCIAL	-0.10*	-0.15*	-0.07*	0.34*	0.09*	0.03*	0.25*	1.00

*Note: * statistically significant at 10%*

Table 3b. Correlation matrix – institutional variables

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
(1) BANK	1.00							
(2) BANKREG	0.18*	1.00						
(3) OFFICIAL	0.85*	0.12*	1.00					
(4) MONITOR	-0.15*	-0.10*	-0.32*	1.00				
(5) FINDEV	1.11*	0.27*	0.26*	0.25*	1.00			
(6) CR_RIGHT	0.13*	-0.13*	0.02*	0.11*	0.19*	1.00		
(7) DISC	-0.14*	0.25*	-0.3*	0.34*	-0.04*	0.02*	1.00	
(8) IFRS	0.05*	-0.61*	-0.25*	0.00*	-0.29*	0.02*	-0.23*	1.00

4.2. Results

To estimate the regression models we used OLS and random effects estimations (models 1 and 2) or logistic estimations (model 3). In order to assess for serial and cross-sectional correlation, standard errors are clustered and year dummies are used (Petersen, 2009). Our database is composed by a number of observed banks higher than the number of observed years for each bank. Thus, we used year dummies and standard errors are clustered by bank because a higher number of clusters determines less biased errors (Kanagaretnam *et al.*, 2014).

In the three estimated models, we refer to the variable *CONTROL*. This variable is our proxy to estimate the existence of a controlling shareholder. It is a dummy equal to 1 when there is at least one shareholder holding – directly or indirectly – more than 25 % of shares, and 0 otherwise.

Results obtained from the estimation of model 1 are reported in Table 4. Our coefficient of interest is β_3 that is the coefficient on the interaction variable *CONTROL x EBT_t*. Our estimations provide a positive and statistically significant coefficient at 1 %. Consistent with our hypothesis, the presence of a controlling shareholder has an impact on banks earnings persistence. Thus, β_3 supports the idea that the higher the control on management activity, the higher the earnings persistence.

Table 4. Results regression model (1)

	OLS		**Random Effects**	
Dep: EBT_{t+1}	*Coeff.*	*S.E.*	*Coeff.*	*S.E.*
Intercept	0.0633**	0.0289	0.0922***	0.0214
CONTROL	-0.0041**	0.0023	-0.0030	0.0036
EBT_t	0.1802**	0.0857	0.0672	0.0492
CONTROL x EBT_t	**0.3468***	**0.1154**	**0.2121***	**0.0775**
$SIZE_t$	-0.0011**	0.0004	-0.0029***	0.0008
$DEPOSIT_t$	0.0010	0.0023	-0.0001	0.0017
$GROSS\_LOANS_t$	0.0026	0.0032	-0.0007	0.0025
LISTING	0.0029**	0.0012	0.0059***	0.0018
COMMERCIAL	-0.0042***	0.0011	-0.0061***	0.0013
BANK	0.0015*	0.0009	0.0032**	0.0013
BANKREG	-0.0005**	0.0002	-0.0008**	0.0003
OFFICIAL	0.0000	0.0002	-0.0002	0.0003
MONITOR	0.0005	0.0007	0.0015	0.0009
FINDEV	-0.0022*	0.0012	-0.0037**	0.0015
CR_RIGHT	-0.0003	0.0004	-0.0001	0.0005
DISC	0.0003*	0.0002	0.0002	0.0003
IFRS	-0.0049***	0.0015	-0.0072***	0.0021
Year controls	YES		YES	
N. of Countries	35		35	
N	2,376		2,376	
Adj. R^2	0.3856		-	

Note: Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Results obtained from the estimation of model 2 are reported in Table 5. Our coefficient of interest is β_3 that is the coefficient on the interaction variable *CONTROL x EBT$_t$*. Our estimations provide a positive and statistically significant coefficient at 1%. Consistent with our hypothesis, the presence of a controlling shareholder has an impact on the ability of current earnings to predict future banks cash flows. Thus, β_3 supports the idea that the higher the control on management activity, the higher the predictability of future cash flows.

Table 5. Results regression model (2)

Dep: EBTLLP$_{t+1}$	OLS		Random Effects	
	Coeff.	*S.E.*	*Coeff.*	*S.E.*
Intercept	0.0906***	0.0121	0.1278***	0.0171
CONTROL	-0.0043*	0.0024	-0.0037	0.0041
EBT$_t$	0.0832	0.0764	0.0243	0.0586
CONTROL x EBT$_t$	**0.4529***	**0.1205**	**0.2992***	**0.0762**
SIZE$_t$	-0.0018***	0.0004	-0.0029***	0.0008
DEPOSIT$_t$	-0.0051**	0.0022	-0.0065**	0.0028
GROSS_LOANS$_t$	0.0096***	0.0031	0.0065**	0.0029
LISTING	0.0017	0.0015	0.0043**	0.0020
COMMERCIAL	-0.0043***	0.0012	-0.0068***	0.0015
BANK	-0.0029***	0.0011	-0.0020	0.0015
BANKREG	-0.0007***	0.0002	-0.0011***	0.0003
OFFICIAL	-0.0000	0.0002	0.0001	0.0003
MONITOR	-0.0010	0.0008	-0.0004	0.0010
FINDEV	-0.0071***	0.0014	-0.0093***	0.0018
CR_RIGHT	-0.0017***	0.0004	-0.0015***	0.0006
DISC	0.0005**	0.0002	0.0003	0.0003
IFRS	-0.0105***	0.0016	-0.0128***	0.0018
Year controls	YES		YES	
N. of Countries	35		35	
N	2,023		2,023	
Adj. R²	0.3836		-	

Note: Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

The coefficient on the variable *EBT$_t$* is positive and statistically significant at 1% only for the first model, proving a positive persistence of earnings at time *t* compared to the earnings at time *t + 1*. However, the same coefficient is positive and statistically significant when we regress on *EBT$_{t+1}$* only *EBT$_t$* and the year dummies[17] (Fan and Wong, 2002). Those results confirm the informativeness of earnings at time *t* compared to the earnings at time *t + 1*. Those results are in line with previous studies (Altamuro and Beatty, 2010; Kanagaretnam *et al.*, 2014).

According to the results, we can state that the presence of controlling shareholders reduces earnings management activity because earnings result to be more persistent and future cash flows result to be more predictable through current earnings.

Results obtained from the estimation of model 3 are reported in Table 6. Our coefficient of interest is β_1 that is the coefficient on the variable *CONTROL*. Our estimations provide a negative and statistically significant coefficient at 1 %. Consistent with our hypothesis, the presence of a controlling shareholder has an impact on the meeting or beating prior year's earnings activity. Thus, β_1 supports the idea that the higher the control on management activity, the lower the earnings management activity.

Table 6. Results regression model (3)

Dep: SMALL_POSΔt	Logit	
	Coeff.	*S.E.*
Intercept	-5.2894***	(0.7271)
CONTROL	**-0.3684***	**(0.1269)**
SIZE$_t$	0.2442***	(0.0284)
GROWTH$_t$	0.2254	(0.2200)
LOANS$_t$	0.0034	(0.0022)
LEV$_t$	-3.2891***	(1.0521)
ΔCASH_FLOW$_t$	1.3133	(1.4108)
ALLOW$_t$	-10.8941***	(2.5143)
LISTING	-0.1498	(0.1193)
COMMERCIAL	0.0137	(0.1046)
BANK	-0.0428	(0.1007)
BANKREG	0.0186	(0.0233)
OFFICIAL	-0.0267	(0.0221)
MONITOR	-0.0572	(0.0763)
FINDEV	0.6214***	(0.1187)
CR_RIGHT	-0.1795***	(0.0413)
DISC	0.0214	(0.0207)
IFRS	0.3070**	(0.1368)
Year controls	YES	
N. of Countries	35	
N	1,857	
Pseudo R²	0.1349	

Note: Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

5. CONCLUSIONS

This research investigated the impact of bank property structure on earnings quality. We focused on the effect of ownership concentration measured as the presence of at least one shareholder that owns – directly or indirectly – at least 25% of voting rights.

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[17] Results available upon request.

This topic is of great interest since there are opposite opinions in the literature about the impact of ownership concentration on earnings quality. Moreover, banks represent an interesting sample for several reasons: (1) banks are subjected to specific capital requirements, and thus they can have the incentive to adopt an opportunistic behaviour through earnings management activity in order to reach those requirements; (2) banks act under the supervision of national and international organisms, who limit their discretional behaviour avoiding opportunistic earnings management activity; (3) since there is a necessity to protect investors and depositors, banks should be addressed to provide the most informative and representative business situation.

Our results provide a significant and relevant positive impact of ownership concentration on earnings quality of banks. This is true for all three estimated models.

We think that our results can be explained looking at three different reading levels. First, according to the agency theory, the controlling shareholder has more power and information that allows the investor to better monitor management activity, reducing managerial discretion and their likelihood to manipulate earnings to reach private gains (Klein, 2002). Second, we think that reputational reasons drive the controlling shareholder to avoid opportunistic earnings management behaviour (Wang, 2005), especially when different interests are involved and the role of investors and depositors is pivotal. Third, a strong shareholder has the power to dismiss the management. Thus, a controlling shareholder can pressurize the management in order to act in the shareholders' interest (Man and Wong, 2013).

Thus, our preliminary results are useful to analysts and investors because they can have a clearer understanding of banks earnings quality and its determinants. Our results are useful also for regulators because they can address their resources and activities towards those banks that do not have incentives to report high-quality earnings.

Several aspects of this research deserve further investigation. Future research should look into the different controlling shareholder typologies and at their long or short orientation terms. In fact, shareholders with long-term orientations are less prone to opportunistic earnings management, while shareholders with short-term orientations might have incentives to manage earnings. In addition, a differentiation between pre/post-crisis periods can be of interest in order to investigate whether the financial crisis induced controlling shareholders to better monitor management activity pursuing higher earnings quality.

In conclusion, it is possible to identify some limitations in this study. First, our analysis does not consider USA banks due to the overrepresentation of this country in our sample. However, a research focused on the USA could be of interest due to the specific characteristics of the USA financial market. Second, our research only estimates the impact of ownership structure on earnings quality of banks without considering the potentially jointly effect of other corporate governance characteristics as board and auditing committee composition. Third, in the paper, we used only one measure of ownership concentration while the adoption of different measures could lead us to more detailed conclusions.

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APPENDIX

Institutional variables

Variables	Description	Source
CONTROL	1 if there is at least one shareholder that owns - directly or indirectly - at least the 25% of shares, 0 otherwise.	Independence Indicator Bureau Van Dick
BANK	1 for countries whose financial system is bank-dominated, and 0 for countries whose financial system is market-oriented.	Demirguc-Kunt and Levine. (1999)
BANK REGULATION (BANKREG)	Official Supervisory Power: whether the supervisory authorities have the authority to take specific actions to prevent and correct problems (Survey 3rd - *Average Scaled Index*).	Barth *et al.* (2001)
OFFICIAL	Is power of supervisors to prompt corrective action, to restructure and reorganize troubled banks, and to declare a troubled bank insolvent, with higher values indicating the greater power of supervisors.	Barth *et al.* (2001)
MONITOR	Is extent of monitoring by outsiders such as certified auditors and international rating agencies, with higher values indicating greater private oversight?	Barth *et al.* (2001)
FINDEV	Is Financial system deposits divided by GDP?	Beck and Levine (2002)
CREDITOR RIGHTS (CR_RIGHT)	Index aggregating the following creditor rights: absence of automatic stay in reorganization, requirement for creditors' consent or minimum dividends for a debtor to file for reorganization, secured creditors are ranked first in reorganization and removal of incumbent management upon filing for reorganization. The index ranges from 0 to 4.	La Porta *et al.* (1998)
DISCLOSURE INDEX (DISC)	Index that measures the actual disclosure practices of commercial banks around the world, in relation to their assets, liabilities, funding, incomes, and risk profiles.	Huang (2006)
IFRS	1 if IFRS is adopted by the country in the year	Christensen *et al.* (2012)

Financial variables

Variables	Description
EBT_t	$Profit\_before\_tax_t / Total\_assets_{t-1}$
EBT_{t+1}	$Profit\_before\_tax_{t+1} / Total\_assets_t$
$EBTLLP_{t+1}$	$(Profit\_before\_tax_{t+1} + Loan\_Loss\_Provvision_{t+1}) / Total\_assets_t$
$SIZE_t$	$Ln\ (Total\_assets_{t-1})$
$DEPOSIT_t$	$Total\_deposits_t / Total\_assets_{t-1}$
$GROWTH_t$	$(Total\_assets_t / Total\_assets_{t-1}) - 1$
$GROSS\_LOANS_t$	$Gross\_loanst_t / Total\_assets_{t-1}$
$LOANS_t$	$Net\ loans_t / Total\_assets_{t-1}$
LEV_t	$Equity_t / Total\_assets_{t-1}$
$\Delta CASH\_FLOW_t$	$(Cash\_flow_t - Cash\_flow_{t-1}) / Total\_assets_{t-1}$
$ALLOW_t$	$Loan\_loss\_reserve_{t-1} / Total\_assets_{t-1}$
ROA_t	$Profit\_before\_tax_t / Total\_assets_t$
CHANGE_ROA	$ROA_t - ROA_{t-1}$
$SMALL\_POS\Delta t$	1 if 0 <= CHANGE_ROA <= 0.001, 0 otherwise