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# GOVERNANCE CONTROL MECHANISMS IN PORTUGUESE AGRICULTURAL CREDIT COOPERATIVES

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# GOVERNANCE CONTROL MECHANISMS IN PORTUGUESE AGRICULTURAL CREDIT COOPERATIVES

## Abstract

Over the last decade Portuguese Agricultural Credit Cooperatives (ACCs) have increasingly face survival challenges related to their difficulty in gathering equity. The main source of ACCs equity is the net benefit; thus, understanding how ACCs governance can work on correcting bad economic performance is of crucial importance to overcome this constraint. The main objective of this paper is to describe the governance control mechanisms in the ACCs. Five governance mechanisms are identified: board and chairman change (internal mechanisms), central ACC intervention by an agent or by management board replacement and merger. Empirical analysis proved that the internal governance mechanisms activity is not related to the ACC performance. Additionally: (a) ACCs with a central ACC agent and merged ACCs hold a weaker credit management and a heavy administrative costs structure and profitability problems; and (b) ACCs with a management board replacement by the central ACC hold a weaker credit management and present solvency problems.

*Keywords: cooperatives, credit, governance, multinomial logit.*

*JEL Classification: D23 - Organizational Behavior; Transaction Costs; Property Rights; L29 - Other*

## 1. Introduction

The Portuguese Agricultural Credit Cooperatives (ACCs) have their origins in the 16th century. However, until 1976, the ACCs played a minor role in the Portuguese banking activity, with a share of only 1% of total deposits and credit. Moreover, with the democratization of the country in 1974, ACCs were placed in the framework of a financing strategy for the development of the agricultural sector. So, during the eighties of the last century the ACCs activity showed a spectacular development, expressed in annual growth rates for deposits and credits of, on average, 40 per cent and 32 per cent, respectively. Nowadays, this group of agricultural credit cooperatives is the second largest national banking network with a standalone brand, with 120 ACCs, 400,000 members, almost 600 branches and over 1.5 million customers.

However, ACCs have been developed in a top-down process, i. e., given the prevailing economic environment at that time, public entities considered ACCs the most appropriate form of financial organization which reduce or eliminate market failures, namely, farmers' accessibility to credit. In fact, agriculture was (and still is) considered a risky economic activity. This makes the availability and cost of agricultural credit an enormous constraint to farmers, especially the smaller ones, who form the basis of Portuguese agriculture. We can say that ACCs are the way to oil the wheels of the Portuguese rural economy.

In relation to the governance, the ACCs are regulated by the Portuguese legislation on cooperatives and in their banking activity they are subject to similar regulations applied to the banking system as a whole. But ACCs differ from banks in two important aspects: they are non-profit enterprises (therefore ACCs do not remunerate equity); and they do not have access to publicly raised capital. The ACCs capital base growth is supported by their retained profits. Thus understanding how ACCs governance can work on correcting bad economic performance is a matter of crucial importance to overcome this constraint and ensure the economic and financial survival of ACCs.

The main aim of the paper is to analyse the determinant factors of ACCs governance control mechanisms. To achieve this purpose, the remainder of this paper consists of four sections. Section 2 presents a review of the literature of governance on cooperatives. Section 3 provides a summary of some issues related to the governance of the ACCs. Section 4 describes the model, sample and results. Section 5 offers some concluding remarks.

## 2. Governance on cooperatives: a literature review

The governance structure of an organization allocates income rights and decision rights, i.e., it determines who receives income from the use of the organization's assets and who may decide over these assets (Hansmann, 1996). Other governance attributes are the supply of equity capital, the assignment of ownership title, and the owners' control of the management. Taking the investor-owned-firm (IOF) as the standard, a cooperative has a deviant ownership structure and a deviant control structure. These differences result from the organization goal: to give its owners the highest return on investment (IOF), while a cooperative want to provide the best service to its members (Bijman, 2002).

Because a cooperative is a voluntary organization all members participate in strategic decision-making. All members elect, in general assembly, the board of directors. Democratic decision-making costs rise as membership becomes more heterogeneous, which reduces the commitment and increases the free rider problem (Bijman, 2002; Spøgaard, 1994). Although collective decision-making has the advantage of keeping all members committed and making implementation of policies relatively easy, it has several disadvantages, namely, inflexibility, inertia, and a reluctance to start new business activities (Bijman, 2002; Hendrikse, 1998; Reynolds, 1997). Subsequently, decision-related incentive problems may occur.

These incentive problems are related more directly to the decision mechanisms in cooperatives and are derived from agency<sup>1</sup> control issues. There is some evidence that the main problem will be more

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<sup>1</sup> An agency problem occur if an organization is not being managed so as to maximize the owners' welfare; that is, if residual claims are not being allocated solely to the benefit of owners. According to the Palgrave Dictionary of

severe in a cooperative than in an orthodox firm since the ability of members to monitor management seems more limited (Gorton and Schmid, 1999). More specifically, a number of intimately related decision problems are commonly found in cooperative organizations, such as the monitoring problem, the follow-up problem, the influence cost problem and the decision problem (van Bekkum, 2001; Borgen, 2004).

The particular agency problem in the cooperative organizations emanates from the rigidity of the ownership structure, consequence of two main constraints (Gorton and Schmid, 1999): first, equity can only be traded at face value and only between the cooperative and the members; second, the cooperative usually follow the rule of one-member-one-vote regardless of the amount of equity held. Thus, votes cannot be accumulated into blocks and there can be no monitoring by block shareholders (as suggested by Becht et al. (2002)). Consequently, the cost of changing control over these banks are high.

Additionally, because of the one-member-one-vote governance structure in cooperatives, each member can feel disempowered as the institution adds members: many members no longer exercise their ownership rights and responsibilities in overseeing management. According to a recent survey (Credit Union National Association, 1999) voter participation rates in board elections decline as credit unions become larger. For extremely small credit unions (under 200,000 USD of assets), the participation rate is 26.1%, voter turnout drops to a low of 6.2% for credit unions with 200 million USD of assets.

Nilsson (2001) emphasized that incentive problems in cooperatives are linked to the heterogeneity of the membership body, the amount of financial contribution from members, the degree of contingency between members goals and cooperative goals, as well as the degree of members' involvement with their cooperative.

There is no doubt that the membership homogeneity is vital to explain high levels of transaction costs associated with decision problems. But also, there are advantages of the cooperative form that should be explored further. For instance, the cooperative board and management are expected to be highly sensitive to members' interests - qua users (Hansmann, 1996). Decision processes in cooperatives may be slow, but they tend to be transparent and invite to active participation. Subsequently, they may be followed by substantial discipline when it comes to implementation. A member is more loyal to decisions in which he has participated actively than to decisions that are imposed on him (Borgen, 2004).

Some research has been made on the extent to which management serves its own interest instead of those of members/patrons in a cooperative organization. Fama and Jensen (1983 a, b) theorized that management's authority is restrained by the ability of cooperative shareholders as a group to liquidate their claims even without engaging in a proxy battle or tender offer.

Staatz (1987) presented three reasons why management and member goals can diverge in a cooperative organization: (1) management performance cannot be monitored through market values nor challenged by a threat of a hostile takeover; (2) lack of a secondary market for cooperatives restricts the ability of members/patrons to diversify their portfolios and consequently, they may be more risk-averse than management; (3) members/patrons have a claim on residual earnings only as long as they actively participate in the organization.

Rasmusen (1988) and Fama and Jensen (1983 a, b) argued that cooperative members/patrons may be less likely than stockholders to exercise control over management by participating in board meetings or voting. They also argued that the boards of directors for cooperatives are less likely than the boards of stock corporations to monitor or replace management. Kane and Hendershott (1996) argued that the field of membership and cooperative structure of a credit union encourages management to align its objectives with those of membership, curbing managerial excesses.

Mester (1991) found that mutually owned thrift institutions operate less efficiently than their stockholder-owned counterparts; she interpreted the results to be evidence of self-serving management. Stewart (1997) observed the existence of higher management perquisites at credit unions, when compared to mutual savings banks. Gorton and Schmid (1999) found that the performance of Austrian cooperative

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Money and Finance, "Agency problems arise when a principal hires an agent to perform certain tasks, yet the does not share the principal's objective" (Reichestein, 1992: 23).

banks tends to deteriorate as the number of members increases, suggesting separation of ownership and control. Leggett and Strand (1999) found evidence that management has served its interests by adding membership groups at federal credit unions.

### **3. Governance of Portuguese Agricultural Credit Cooperatives: Some issues**

The agricultural credit cooperative system in Portugal is made up of an integrated system of two types of cooperatives: the central and the singles. Being the main institution of the Agricultural Credit Cooperative Integrated System (ACCIS)<sup>2</sup> the central ACC is the top responsible and guardian for the running of the whole ACCs system.

In terms of the governance, the central is responsible for the coordination and the control of all the affiliated<sup>3</sup> singles' operational processes, i. e., it is the guardian of the system with a high capacity to interfere in the management of the ACCs and even replace their board of management.

On the banking activity, through the singles, the central ACC, beside deposits and loans, offers a wide range of financial services, including, for instance, insurance operations, financial advice, exchange foreign currency. Acting as central ACC agent, single ACCs can perform various operations out of their product market<sup>4</sup> and “services to members only” restrictions.

Decisions in the central ACC generally obey the principle of democratic control (one-member-one-vote), except for some specific decisions (election of the central ACC board of directors, budget approval and profits allocation) in which the number of votes for ACC can differ according to the participation in the central ACC capital equity, to the average deposits and the solvency ratio of the ACC.

Single ACCs have three governance bodies (Figure 1): general assembly, management board<sup>5</sup> and audit board. The general assembly includes all the members of the coop and usually meets twice a year, one for the appreciation of the annual activities plan and concomitant budget, and the other for the appreciation of the annual operating activities plan and budget, and the annual activities report which includes the balance sheet and income statements.

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<sup>2</sup> The organigram of the ACCs group is shown in appendix.

<sup>3</sup> ACCs are free to stay out of the ACCIS, but in that situation they must comply with the more demanding regulations applied to the other institutions of the Portuguese banking system.

<sup>4</sup> The activity of each ACC is restricted to the county (“concelho”) where it is located, i.e., the ACCs are regional organizations and their product markets are limited.

<sup>5</sup> The common designation (in the literature) is board of directors, but considering the small scale of ACCs operations and their organizational structure, management board seems to be more appropriated to describe their role.

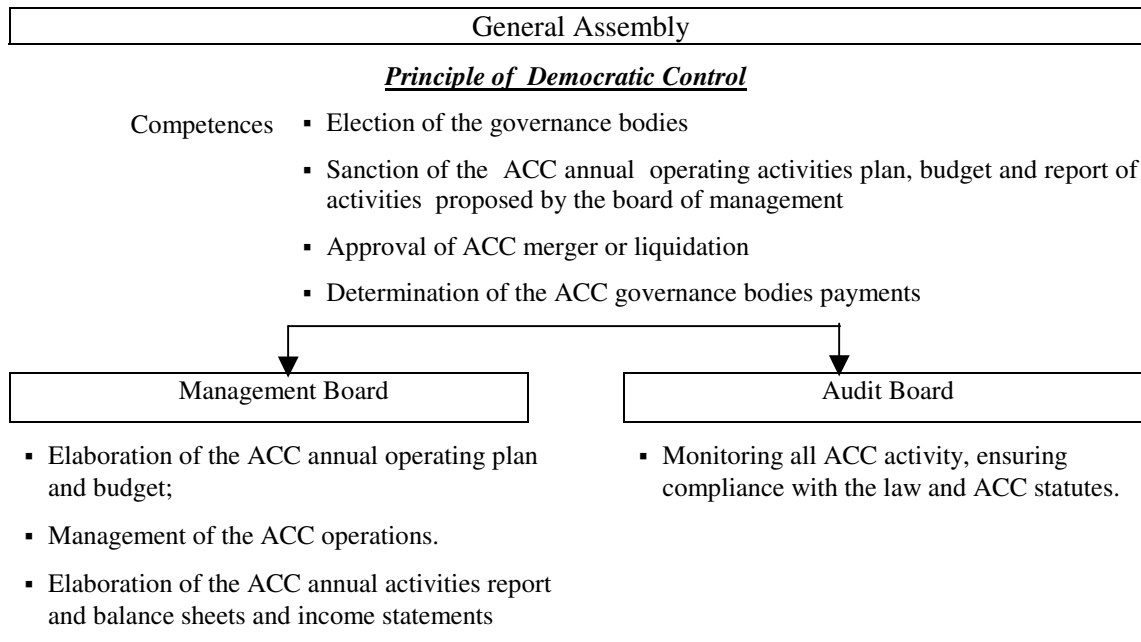


Figure 1. Governance ACCs scheme.

The ACC is run by the management board<sup>6</sup> that is elected by the general assembly and his main task is to oversee the daily operations of the cooperative. Generally, the management board can delegate some minor management tasks to qualified employees.

The audit board, also elected by the general assembly, has as main task to assure to the members that the AAC is being managed according to the cooperative principles and that annual balance sheets and income statements reflect the true economic and financial position of the cooperative.

Except concerning banking operations, the Portuguese ACCs are ruled following the traditional cooperative structure with open membership, democratic control and restricted residual claims. The strict application of these rules can promote a set of vaguely defined property rights, namely free-rider, horizon, portfolio, control problems and influence costs, with negative effects on the transaction costs (Cook and Iliopoulos, 2001). Nilsson (2001) suggests that the property rights allocation within the traditional cooperative structure does not provide members with the necessary incentives to invest, causing negative effects on the capital structure. Figure 2 contains a description of the consequences/effects of the “cooperative nature” on the financial structure of ACCs.

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<sup>6</sup> The board of management usually includes three members who must be elected among the ACC members. Management skills are required. Thus, the board of management can include two additional individuals (management experts) not members of the ACC.

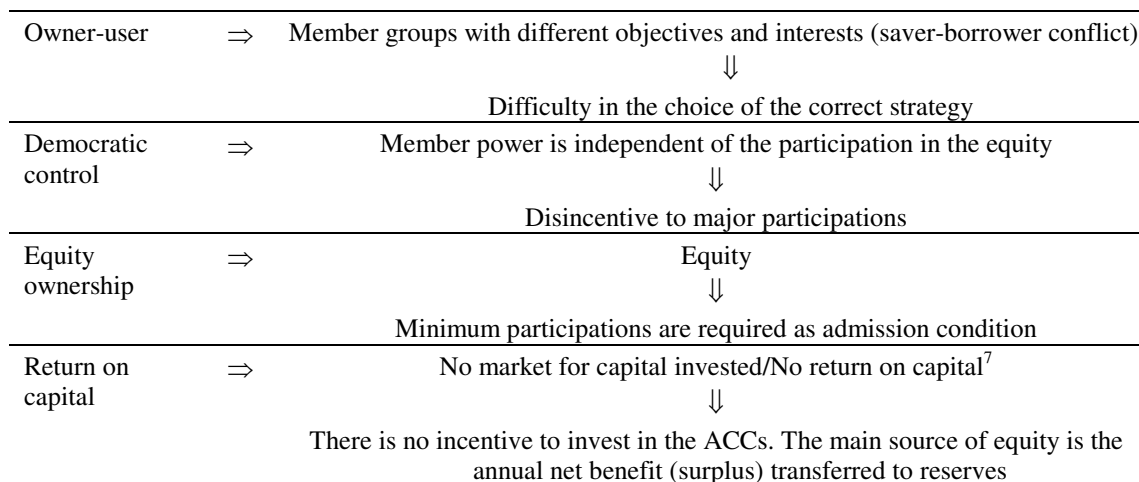


Figure 2. Cooperative principles and financial structure of ACCs.

The higher the transaction costs of changing control, the greater the inefficiency must be to trigger a change (Gorton and Schmid, 1999). In the ACCIS control changes are usually proposed by the central ACC that operates the auditing function and therefore, is the first to learn about managerial failures. In cases of gross management failure or fraud, the management can be formally discharged by the central ACC. Long-term inefficiencies can be solved through obligated mergers with more efficient ACCs. ACCs mergers act as an external control mechanism because, although mergers are friendly (they must be approved by the general assembly) the influence of central ACC is considerable, being this top institution the trigger and even the one that choose the merger partners (Cabo, 2003).

On the other hand, when an ACC gets into financial distress, the central AAC have an incentive to protect this ACC from default because it is important to maintain the whole ACCs system with high reputation and confidence to the different stakeholders (depositors, loaners, Banco of Portugal, ...).

Moreover, by distributing the control rights over the ACC equally across the cooperative members, power is actually passed to the management. Since the equity ownership structure is exogenous, it cannot adjust to eliminate managerial inefficiency (Gorton and Schmid, 1999). Moreover, because equity can only be traded with the ACC itself, a takeover by means of an equity acquisition is not possible.

As mentioned earlier, ACCs face survival challenges related to financial issues linked with equity capital deficiencies. As ACCs capital base growth is supported by retained profits, understanding how ACCs governance can work on correcting bad economic performance is of crucial importance to overcome this constraint and ensure the survival of ACCs. In the next section we analyse the determinant factors of ACCs governance control mechanisms.

<sup>7</sup> The Portuguese law requires the net benefits to be transferred into reserves, with no return on the invested equity capital, which constitutes a disincentive to invest in the ACC; therefore the participation on the equity has as an exclusive aim: the benefit from the services of the organization, mainly credit.



## 4. Model, data and results

### 4.1. Model

To analyse the determinant factors of ACCs governance control mechanisms we used a multinomial logit model. This approach has been applied by several authors for banks (Anderson and Campbell, 2000; Barro and Barro, 1990; Blackwell *et al.*, 1994; Crespi *et al.*, 2004; Prowse, 1997).

The multinomial logit is used when the dependent variable takes on more than two discrete outcomes. In our case it assumes values of 0, 1, 2, 3, 4 or 5, reflecting six different situations<sup>8</sup>, respectively: (0) no intervention; (1) board change; (2) replacement of the chairman; (3) central ACC intervention by nomination of an agent; (4) management board replacement by the central ACC; (5) and merger. The cases (1) and (2) reflect internal control mechanisms and the others, essentially external control mechanisms. The value of each event in the  $t$  period will be determined according to the behaviour of the ACC in the  $t+1$  period.

Multiple equations are estimated jointly in order to make efficient use of the available information (Greene, 2000), and the coefficients for each possible outcome are to be interpreted with respect to a reference group. In our case ACCs that did not experiencing any governance intervention in any particular year (value 0 of the dependent variable).

In the case of the merger operation it can adopt the form of a merger or a incorporation. In the last one, only the ACC merger target (incorporated) was considered in the analysis.

Central ACC intervention can take the form of the nomination of an agent, usually to decide on and manage credit risks, or taking a safeguard, strong and deeper decision, by the replacement of the board of management, which indicates that we are clearly in the presence of two different governance mechanisms.

Board of management changes can assume the form of a partial change or a complete board change. The first alternative is the most usual in our sample: there are only 13 cases of complete board change. Furthermore, only the cases for which there is evidence that the board and chairman changes are not due to retirement or death are considered.

Finally, since mergers are often followed by changes in the management board, for those ACCs that continue, changes in their management are not considered.

When different mechanisms are simultaneously present we consider the one that takes deeper effects, i. e., in a decreasing way, from the whole data sample, the AAC-year observations for which a merger has occurred are first identified and a value of 5 is assigned to these cases. With the remaining data, we proceed to search for the ACC-year observations with a central ACC intervention by a management board replacement, and a value of 4 is then assigned to them. Afterwards, we search for the ACC-year observations with a central ACC intervention by an agent, and a value of 3 is then assigned to them. Next, we check for the remaining ACC-year observations those where the chairman of the management board has been replaced and a value of 2 is assigned to them. Finally, we search for the remaining observations for those cases where the board members changed the previous year. The “board change” variable takes the value of 1. After all of this, the remaining ACC-year observations correspond to non-intervention cases, and have a 0 in our measure of governance interventions.

As explanatory variables, we used some ACCs performance measures (Cabo and Rebelo, 2005), values which are quantified in the financial statements, or annual reports:

- The management of the credit risk reflected by the bad loans variable ( $X_1$ ), measured by bad loans as percentage of gross credit;
- Operational costs efficiency by the variables labour costs ( $X_2$ ) and other administrative costs ( $X_3$ ), both as a function of turnover (interest received + fees + other operational benefits).

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<sup>8</sup> The values assigned to every governance intervention only reflect different categories, and the ordinal value has no further meaning.

- As profitability measure we use return on equity<sup>9</sup> ( $X_4$ ) measured after taxes.
- Solvency ( $X_5$ ), measured by the ratio equity to total liabilities, trying to capture the aim of ACCs to fulfil the requirements of the Bank of Portugal.

Two characteristics are used as control variables: the size of the ACC, measured by the total assets at the end of the year and the time period (Year). Size is often correlated with other unobserved variables such as asset diversification and managerial skills (Crespi *et al.*, 2004). The time period variable controls shocks common to all ACCs in a given year.

Hence, we estimate the following multinomial logit:

$$\text{Prob}(Y_i = 0, 1, 2, 3, 4, 5) = F(X_1, X_2, X_3, X_4, X_5, \text{Control variables}) \quad (1)$$

#### 4.2. Data

The analysis addresses the 1995-2003 period. Data refers to the end of the year and are all expressed in 1995 prices. The balance sheet data was collected from the ACCs annual reports and information on the mergers, board or chairman change and central ACCs intervention from “Diário da República”<sup>10</sup>. We excluded from the sample data 25 ACCs from 1998, because of data missing from their annual financial reports, plus 99 observations corresponding to different ACCs-years, as we were not able to obtain their chairman or management board configuration.

At the end of this process we had a pool of 1,239 observations from 9 years of unbalanced allocation: a) 929 observations corresponding to ACCs not experiencing any governance intervention; b) 51 corresponding to ACCs with board change; c) 61 chairman change; d) 51 ACCs with central ACC intervention by an agent; e) 79 ACCs Central ACC intervention by a management board replacement; and f) 68 ACCs participating in a merger. Summary statistics for the sample are reported in Table 1, where the behaviour of ACCs is presented according to the governance mechanism in action.

Comparing the information between groups, we can observe that, on average, over the 1995-2003 period, board change ACCs, holding on average, 41.236 million euros of total assets, and merged ACCs are the smaller ones, with 13.824 million euros of assets. Additionally, board change ACCs hold best performances: minor labour and administrative costs (13.3% and 8.7 %, respectively) and the higher returns on equity of 36.8% and solvency (8.3%). However, the lower bad loans ratio (8.8%) belongs to chairman change ACCs.

On the contrary, merged ACCs have the worst labour and administrative costs ratio (15.8% and 10.3 %, respectively) and the poorest performance on bad loans (21.9%) and return on equity (-800%). ACCs with a central ACC management board replacement have the minor solvency ratio (-17.9%).

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<sup>9</sup> An ACC’s goal is not maximizing profit but, as mentioned earlier, the key-issue for ACCs is the lack of equity.

Therefore, as the growth in equity is fuelled completely by profit retained earnings, ROE is the correct variable to express the “profitability”.

<sup>10</sup> Official legislative journal of the Portuguese government.

Table 1. Summary statistics

Not intervened ACCs				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	929	36.509	26.507	34.314
Bad Loans	929	0.092	0.074	0.073
Labour Costs/ Turnover	929	0.138	0.134	0.045
Administrative Costs/ Turnover	929	0.090	0.088	0.031
Return on Equity	929	0.230	0.175	0.541
Solvency	929	0.074	0.078	0.128
Board change ACCs				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	51	41.236	27.252	44.814
Bad Loans	51	0.092	0.078	0.072
Labour Costs/ Turnover	51	0.133	0.131	0.037
Administrative Costs/ Turnover	51	0.087	0.084	0.031
Return on Equity	51	0.368	0.205	1.135
Solvency	51	0.083	0.078	0.060
Chairman change ACCs				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	61	30.789	25.165	27.545
Bad Loans	61	0.088	0.083	0.059
Labour Costs/ Turnover	61	0.146	0.153	0.043
Administrative Costs/ Turnover	61	0.094	0.102	0.033
Return on Equity	61	0.226	0.169	0.289
Solvency	61	0.069	0.050	0.087
ACCs with a central ACC Agent				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	51	24.995	25.254	14.682
Bad Loans	51	0.173	0.168	0.101
Labour Costs/ Turnover	51	0.143	0.133	0.065
Administrative Costs/ Turnover	51	0.100	0.097	0.040
Return on Equity	51	-0.538	0.020	1.546
Solvency	51	-0.045	0.044	0.087
ACCs with a central ACC management board replacement				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	79	53.361	30.716	65.313
Bad Loans	79	0.215	0.178	0.148
Labour Costs/ Turnover	79	0.123	0.119	0.043
Administrative Costs/ Turnover	79	0.083	0.084	0.028
Return on Equity	79	-0.357	0.088	1.917
Solvency	79	-0.179	0.019	1.604
Merged ACCs				
	# Observations	Mean	Median	Std. Deviation
Total Assets*	68	13.824	8.318	16.294
Bad Loans	68	0.219	0.196	0.155
Labour Costs/ Turnover	68	0.158	0.149	0.059
Administrative Costs/ Turnover	68	0.103	0.095	0.043
Return on Equity	68	-0.800	0.046	2.731
Solvency	68	-0.038	0.002	0.145

\* Million Euros

### 4.3. Results

Table 2 reports the results of model (1) estimation. For each event, the coefficients measure the impact of each variable on the probability of each event with respect to the baseline case (no governance interventions in the following year): they are to be interpreted as affecting the odds ratio.

Table 2. Determinants of ACCs governance control mechanisms.

Variables	Board Change (Y=1)	Chairman Change (Y=2)	Central ACC Agent (Y=3)	Management Board Replacement (Y=4)	Merger (Y=5)
Constant	-2.704 * (0.740)	-2.816 * (0.673)	-5.095 * (0.753)	-6.217 * (0.731)	-4.082 * (0.682)
Year	-0.0515 (0.0732)	-0.0922 (0.067)	0.071 (0.075)	0.401 * (0.064)	0.044 (0.074)
Total Assets	-0.004 (0.004)	-0.002 (0.005)	-0.012 *** (0.008)	0.886 * (0.003)	-0.065 * (0.014)
Bad Loans (X <sub>1</sub> )	-0.621 (2.427)	-1.425 (2.224)	9.711 * (1.771)	14.838 * (1.561)	11.148 * (1.556)
Labour Costs / Turnover (X <sub>2</sub> )	-1.242 (3.961)	2.462 (3.166)	-0.229 (3.522)	-0.829 (4.087)	3.007 (2.960)
Administ.Costs / Turnover (X <sub>3</sub> )	-0.223 (6.023)	4.121 (4.879)	10.711 ** (4.993)	-7.099 (6.445)	7.455 *** (4.424)
Return on Equity (X <sub>4</sub> )	0.228 (0.177)	-0.010 (0.206)	-0.297 ** (0.120)	-0.171 (0.120)	-0.192 *** (0.111)
Solvency (X <sub>5</sub> )	0.942 (1.256)	-0.153 (1.054)	0.972 (1.014)	-0.980 *** (0.611)	-0.928 (0.644)
Chi-squared (degrees of freedom)		363.99(35)			
Significance level		0.00			

1. Standard deviation in parenthesis
2. \*, \*\*, \*\*\*: Significance level of 1%, 5% and 10% respectively.

The performance variables are not statistically significant for the board and chairman change mechanisms, i. e., they do not exercise any influence over the probability of board or chairman change. Thus, internal governance mechanisms activity is not related to ACC economic performance, which proves that these kinds of governance interventions are not linked to the ACC performance, confirming the weakness of the ACCs internal control mechanisms. These results are comparable to the ones of Prowse (1997) who finds some substitution between regulation and other governance mechanisms in banks. Gorton and Schmid (1999) argue that only mergers and proxy contests are feasible for cooperative banks as control changes. Crespi *et al.* (2004), for the Spanish banks, only observe a negative association between governance activity and economic performance in saving banks that merge, evidence of their weak internal governance mechanism.

Furthermore, Anderson and Campbell (2000), on the other hand, explain the lack of a relationship between executive change and the performance of Japanese banks as evidence of the banking sector's inefficiencies. And Blackwell *et al.* (1994) find a negative relation between accounting profitability and management turnover in the subsidiaries of Texas' multibank holdings.

Let's focus our analysis on the external governance mechanisms and the performance variables. In the management of credit risks, bad loans ratio ( $X_1$ ) affects positively the probability of an intervention by a central ACC nomination agent, or a management board replacement, and the probability of an ACC participation in a merger operation.

Regarding the operational costs, labour costs ( $X_2$ ) do not prove to have a significant effect on the probability of an ACC experiencing a central ACC intervention or being involved in a merger. However, administrative costs ( $X_3$ ) are shown to positively influence the probability of an ACC being merged or experiencing a central ACC intervention by an agent, which is coherent to the fact that the small size of the ACCs limits the rationalization<sup>11</sup> of administrative costs (Cabo, 2003) and, according to Cabo and Rebelo (2005), cuts-off in administrative costs is a determining factor leading to merger operations.

Concerning profitability, as expected, return on equity ( $X_4$ ) proved to influence negatively the probability of an ACC experience an intervention by a central ACC nomination agent or participating in a merger.

Finally, solvency ( $X_5$ ) influenced in a negative way the probability of an ACC being intervened by a management board replacement. This proves the importance of the need to satisfy the requirements of the Bank of Portugal. Considering that solvency upgrading is expected to occur due to the increase of equity via better profits<sup>12</sup>, profitability improvements are decisive. Thus, management board replacement interventions are entirely justifiable when an ACC experience solvency problems. Furthermore, considering the solidarity mechanism acting in the ACCIS it is to understand this central ACC worry with the single ACCs solvency ratio. Curiously, Jensen (1986) argues that increases in firm leverage help to reduce the inefficiencies resulting from the separation of ownership and control.

## 5. Conclusion

The internal governance mechanisms: management board or chairman change mechanisms are not related to the ACC performance, which indicates potential weakness of the ACCs internal control mechanisms. Additionally, by comparing the ACCs experiencing governance intervention to those that did not witness this experience the main conclusions are: (1) The merged ACCs and the ACCs intervened by a central ACC nomination agent are smaller and hold a weaker credit management with higher bad loans and moreover they hold a heavy administrative costs structure and profitability problems; (2) ACCs with a management board replacement by the central ACC are bigger, hold a weaker credit management and present solvency problems.

This outcome confirms the decision-related incentive problems of cooperatives, which create a potentially weak internal system of corporate governance and is similar to the empirical evidence provided

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<sup>11</sup> Partly, as a consequence of the ongoing adoption of new information and communication technologies by the ACCs, it has been difficult for the ACCs to keep operational costs under control.

<sup>12</sup> ACCs capital base growth is supported by retained profits.

by other research (Crespi et. al., 2004; Gorton and Schmid; 1999; Prowse, 1997).

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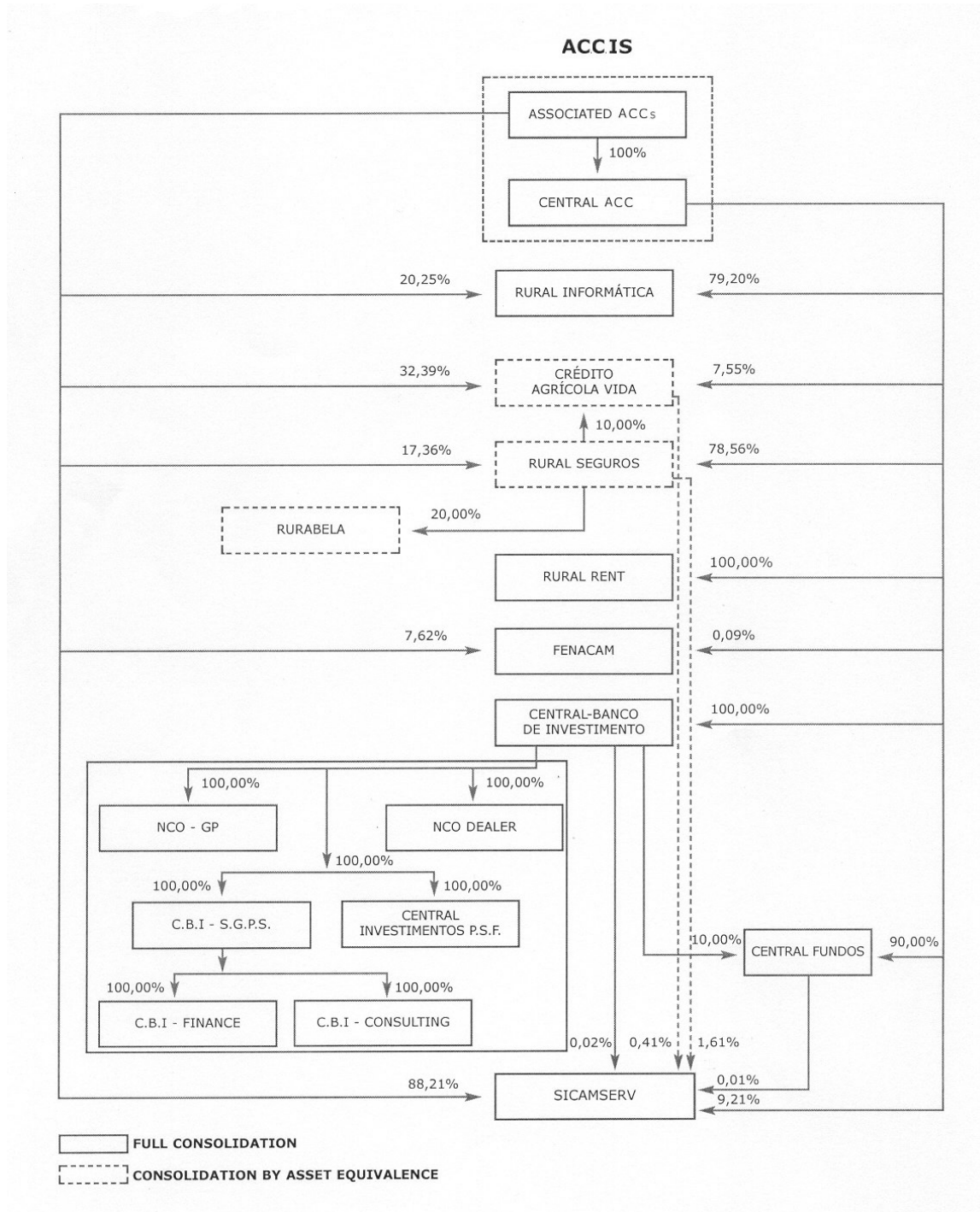


Figure A. Organigram of the ACCs Group.