WORKING PAPER

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# *The Efficiency of the Portuguese Agricultural Credit Co-operatives Governance Model*[*]

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## Abstract

*In recent years the importance of corporate governance (CG) has rising new attention, as the 2008 financial crisis illustrates. Co-operative members, staff, regulators and others stakeholders involved in the co-operative banking business became aware of the need to strengthen co-operatives governance, since this is crucial to safeguarding sound management and, ultimately, to the survival and sustainability of these organizations. With their origins rooted in the 16th century, the Portuguese Agricultural Credit Co-operatives (CCAM) have been considered central players in the economic and social development of rural regions. The goal of this paper is to determine the impact of the different governance mechanisms of co-operative banks on control management, by analysing CCAM governance and assess its efficiency in disciplining management. Hence, using data from 1995-2009 period, and multinomial logit models, the relation between CCAM performance and several control mechanisms operating within the SICAM is analysed. The results show that overall internal governance mechanisms are not related to the CCAM performance, which indicates potential weakness of the CCAM internal control mechanisms. On the other hand, external governance mechanisms are related to CCAM operational and cost efficiency indicators, demonstrating the importance of these mechanisms in disciplining CCAM management. Moreover, the results highlight the value of the supervision task of Central CCAM in the performance of the associates.*

**Keywords:** Governance, control mechanisms, co-operatives, integrated systems.

**JEL-Codes:** D23, G34 and L30.

## 1. Introduction

In recent years the importance of corporate governance (CG) has rising new attention, as the 2008 financial crisis illustrates. Co-operative members, staff, regulators and others stakeholders involved in the co-operative banking business became aware of the need to strengthen co-operatives governance, since this is crucial to safeguarding sound management and, ultimately, to the survival and sustainability of these organizations. Indeed, co-operatives, like investor-owned firms (IOFs), are subject to pressure for greater efficiency and change in CG, being important for co-operatives to consider CG within the framework of their origins and building up an effective system of internal control (Pellervo, 2000).

The dominant economic view in economic analysis is that CG deals with the relation between owners and managers, following the agency theory. Using this approach the question to solve is how to make a manager committed enough to the creation of long-term shareholder value as if it was his own money (Tirole, 2006). Even though the question of controlling managers is basically the same in both co-operatives and IOFs, the co-operative has many special features that make governance different and challenging, particularly, their ownership character, goal setting, methods of financing and profit distribution and decision making process. These differences bind not only members more effectively to the activities and running of the co-operative, but also blur the ownership role and bring the owners many other interests in addition to the success of the firm (Pellervo, 2000).

The CG mechanisms available for co-operatives to discipline management differ from those of IOFs (Staatz, 1987; Trechter *et al.*, 1997; Pellervo, 2000). Co-operatives do not have the stock market mechanism for assessing their performance (and its management), unlike stock-listed companies they are not scrutinized by the financial media. Indeed the particular features of the capital shares of co-operatives[1] inhibit it to be used as channel of information and control as in the listed companies. Also hostile takeovers or threat of hostile takeover that can lead to the change in management is not available in co-operatives and the application of the democratic principle "one member one vote" prevents the accumulation of votes into blocks and consequently the monitoring by blocks of shareholders. Finally, the alignment of managerial and members interests through executive compensation contracts is difficult, since co-operatives could not use the market share value as a performance indicator or use share options as part of the remuneration package.

[1] Co-operatives share capital: (a) varies in size (as function of the entry/exit of co-operative members); (b) is accumulated either in proportion to member purchases or investments of the same sum (members do not invest according on the basis of risk as in IOFs); (c) investment in share capital is not freely transferable (sellable) to another person as is a normal shareholding; (d) the value of an investment in co-operative share capital is not determined by the market (repayment of shares is at par value) (Pellervo, 2000).

The absence of these control mechanisms implies that for disciplining the management co-operatives rely on active and continuous monitoring by the board of directors (BoD). It can be a problematic task, since the BoD of co-operatives are less likely than the boards of IOFs to monitor or replace management (Fama and Jensen, 1983; Rasmusen, 1988) and its delegated power can be damaged by the usually low level of member participation in the co-operative life, including the exercise of voting in general assembly (Spear, 2004).

Being the critical link between members and managers, BoD key functions include over-watching co-operative operations and hire/dismiss management. Particular issues for co-operative boards derive from their elected status which provides no certainty that directors will hold the right skills mix and knowledge to effectively scrutinise management decisions. Frequently, directors do not work full-time or they lack the relevant education to exercise their functions, potentially leading managers to exploit these weaknesses for their own benefit.

Indeed, the co-operative systems of governance contribute to the development of powerful and entrenched managers who have more control than in similar IOFs[2]. Furthermore, in the context of co-operative governance structures and especially elected boards, beyond the member-manager conflict, there is also the member-board conflict to consider. Co-operative boards can pursue their own interests at the expense of members as well as be inclined to interfere with the operational responsibilities of managers. Examples of governance problems include directors becoming rent-seekers, taking steps to make sure that members cannot participate, becoming self-perpetuating groups, holding meetings without telling members and giving themselves inappropriate loans (Shaw, 2007; Cuevas and Fischer, 2009). To overcome these weaknesses and develop the co-operative model is essential an effective CG, particularly one that become larger and adopt multi-tier (e.g., management and supervisory) board structures (Commission of the European Communities, 2001).

With their origins rooted in the 16th century, the Portuguese Agricultural Credit Co-operatives (CCAM) have been considered central players in the economic and social development of rural regions. Together in association with Central CCAM (Caixa Central de Crédito Agrícola Mútuo) they form the SICAM (Sistema Integrado de Crédito Agrícola Mútuo), the heart of the Crédito Agrícola Group (CA). With 90[3] local banks and a network of 750 branches, spread throughout the country, CCAM provide financial services to less privileged customers, mainly to small-and medium-scale savers, farmers, SMEs

[2] The development of managerial dominance within co-operatives is linked with the declining of the role of membership in governance (members' apathy), the expansion of the co-operative and a growing domination of commercial values fostered by a professional management distanced from co-operative values (Meister, 1984; Aghion and Tirole, 1997; Cornforth, 2004; Malo and Vezina, 2004; Spear, 2004).

[3] 85 associated to SICAM + 5 operating outside SICAM.

and traders, located in hinterland regions. Their historical background and importance in boosting local development gives them a key role in regional economic growth, promoting the economic recovery.

CCAM are regulated by the legislation specific to co-operatives and partly covered by company law, and in their banking activity they are subject to similar regulations as those applied to the banking system as a whole. But CCAM differ from banks in two important aspects: they are non-profit firms (therefore return of profits is restricted); and they do not have access to publicly raised capital. The CCAM capital base growth is supported by their retained net benefit. Thus understanding how CCAM 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 CCAM.

The goal of this paper is to determine the impact of the different governance mechanisms of co-operative banks on controlling management, by analysing CCAM governance and assess its efficiency in disciplining management. Hence, using data from 1995-2009 period, and multinomial logit models, the relation between CCAM performance and several control mechanisms operating within the SICAM is analysed. The CCAM information was collected from CCAM Annual Reports, legislation, CCAM by-laws and other official documents, complemented by a questionnaire to CCAM managers regarding CCAM governance, including membership and governance and management bodies functioning.

The remainder of the paper consists of three sections: section 2 provides a summary of the governance structure and mechanisms operating in the CCAM associated from SICAM; section 3 describes the model, sample and results; and section 4 offers some concluding remarks.

## 2. The CCAM Governance Model

### 2.1. SICAM Governance Structure

The Crédito Agrícola Group has a three-fold structure: local member banks (CCAM), Central CCAM (the network's central bank) and the subsidiary firms.

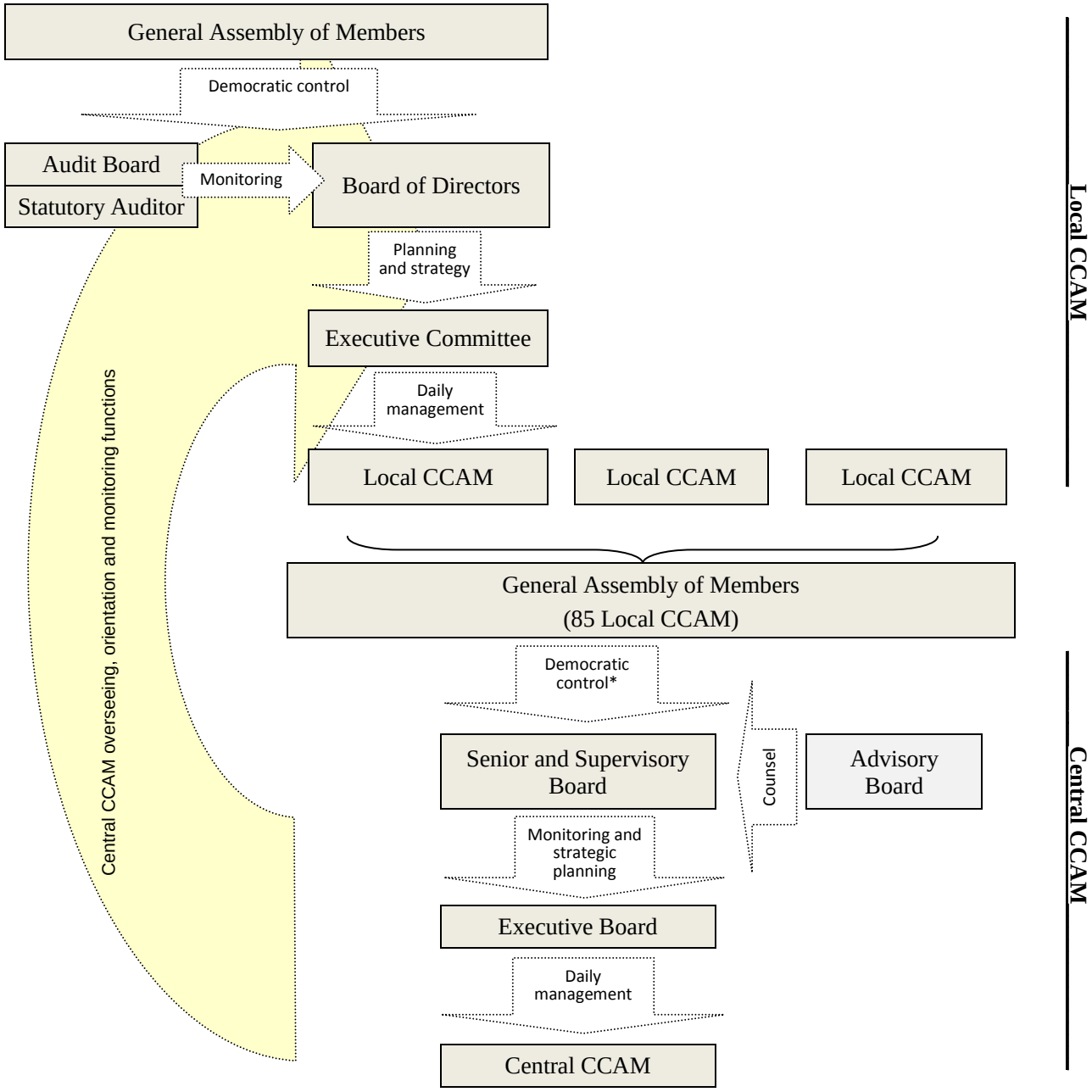
In its essence, SICAM is an integrated system of separate CCAM and the Central CCAM, a network cooperative bank model with a powerful central bank. The autonomy of the local CCAM, combined with the assistance the local CCAM receive from Central CCAM, creates a decentralized, but strongly orchestrated, bottom-to-top decision making process. Figure 1, includes a summary of the skeleton of the SICAM structure of governance, the different governance bodies and linkages between them.

Similarly to most of Portuguese IOFs, local CCAM have adopted the so called, "Reinforced" Latin Model, as stipulated in corporations' law, but maintaining the General Assembly (GA) competences deriving from the Co-operative Code. In the "Reinforced" Latin Model, the management and

supervising responsibilities are divided among the Board of Directors (BoD), the Audit Board and a Statutory Auditor (ROC - *Revisor Oficial de Contas*) independent of the Audit Board. It is this last element that provides the characteristic of "reinforced" model, since the Audit Board has the function of effective monitoring and auditing CCAM operations and the ROC the power of analysis and certification of CCAM accounts.

In most CCAM, the BoD delegates management powers in an Executive Committee or into two or more Chief-Executive Officers. The two biggest CCAM have adopted an advisory board to support the Board of Directors, being all the directors also executive directors.

**Figure 1 – Governance structure of SICAM**



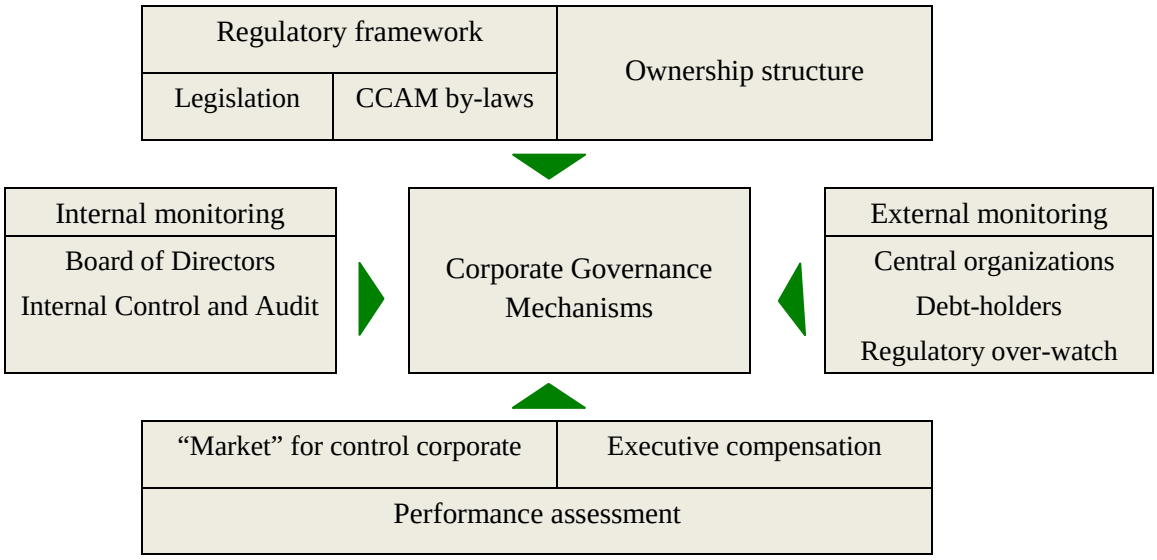

Note: * Principle of democracy, excepting for some specific decisions (election of the Central CCAM board of directors, budget approval and profits allocation) in which the voting rights can differ according to the shareholding and CCAM average deposits and the solvency ratio.

Central CCAM adopted a different governance model with an Advisory Board[4] as mandatory by RJCAM. Additionally, the BoD is also the Executive Board of Directors. According the bylaws, there are matters or category of acts that require previous approval of the General and Supervisory Board. The auditing activities are carried out by the General and Supervisory Board and Statutory Auditor.

## 2.2. SICAM Governance Control Mechanisms

In terms of CG mechanisms, the CCAM associated to SICAM present a two-tier system: the individual and the system mechanisms. The analysis of the RJCAM, CCAM Annual Reports, by-laws and other official documents and the responses of a questionnaire filled by CCAM managers[5], result in the identification of the governance mechanisms working in SICAM as illustrated in Figure 2 and briefly described in the following subsections.

**Figure 2 – CCAM governance mechanisms**




[4] The Advisory Board comprises "*… a maximum of 15 members, of which 9 correspond to CCAM elected among the associates not represented in the other social bodies, and the 6 remain to non-elected members, being the corresponding places filled up for inherence of functions or by personalities of recognized merit, external to the SICAM*". These 6 external (not CCAM) advisory members are an innovation of the 2009 alterations on Agricultural Credit and Agricultural Credit Co-operatives Legal Regime (RJCAM) and an effort to bring some independence and outside SICAM expertise to SICAM management. Additionally, contrary to former RJCAM, this RJCAM amend left open the advisory board competences to be defined by Central CCAM bylaws.

[5] A questionnaire was sent to CCAM management intending to collect data in order to characterize CCAM membership and governance. The goal was to identify the different typologies of CCAM governance and construct an econometric model to relate it with CCAM performance in order to identify the most efficient one. Despite Central CCAM collaboration in the administration of the questionnaire (the questionnaire was send directly by Central CCAM to its associates) the rate of response was slightly bellow of 30%, thus, ruining its econometric use.

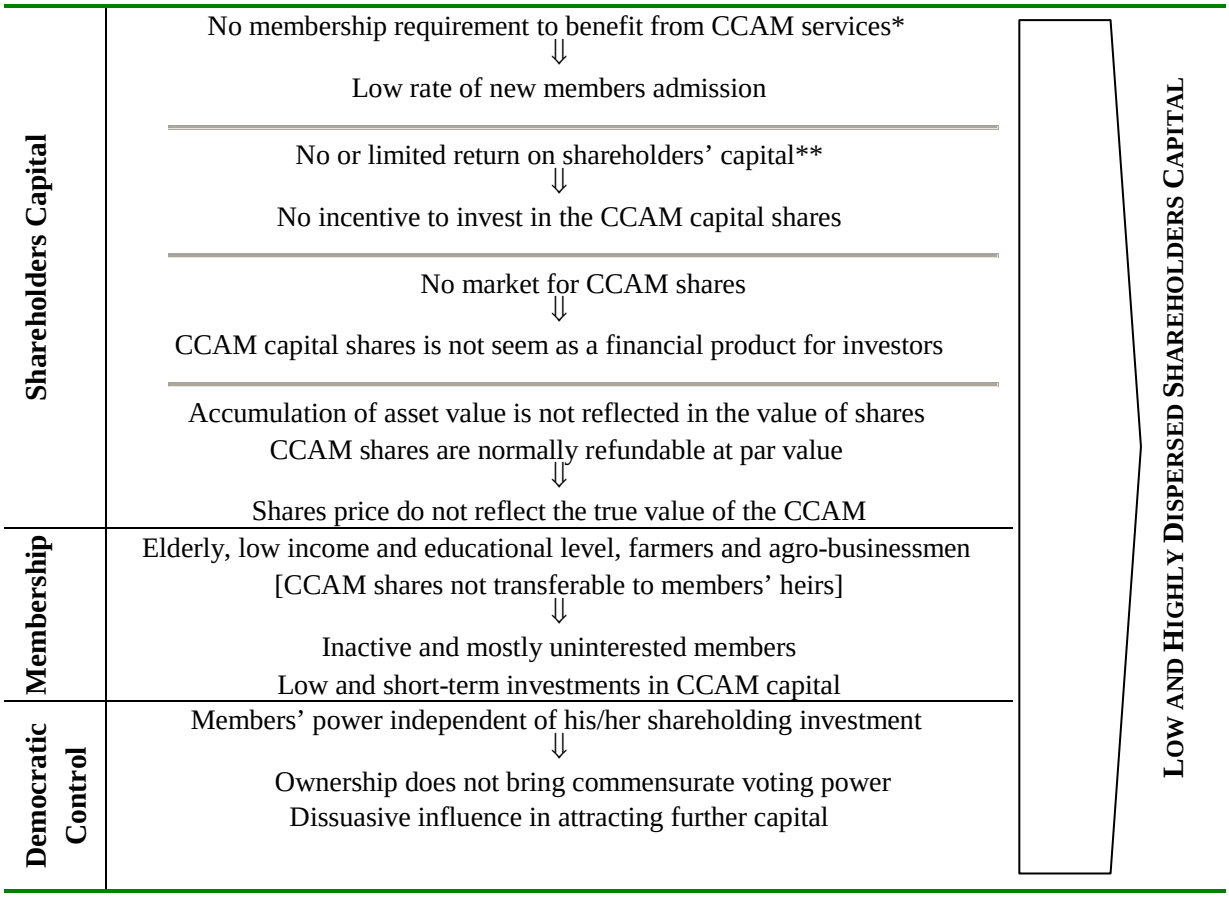
*2.2.1. Regulatory framework*

The regulatory framework, including legislation and bylaws, contains the general rules governing the firm (what governance bodies it should have and how their members are elected, what to disclose concerning the company's operations, etc.) and plays a central role in the control of the company (Pellervo, 2000). Similar to most Western European countries, Portuguese co-operatives are regulated by legislation specific to co-operatives, the Co-operative Code, complemented by each sector's particular regulations, the RJCAM for CCAM, and partly covered by company law. The Co-operative Code and the General Regime of Credit and Financial Institution are the subsidiary law. CCAM by-laws comply with them.

*2.2.2. Ownership structure*

Except for banking operations, the CCAM are ruled following the traditional co-operative structure with open membership, democratic control and restricted residual claims. Consequently, the CCAM members do not see the CCAM capital as a financial investment and the ownership structure is highly dispersed. Figure 3 includes a description of the consequences/effects of the "co-operative nature" on the ownership structure of CCAM.

**Figure 3 – Co-operative doctrine and ownership structure of CCAM**




Notes: * Since 2009 the CCAM complying, in individual basis, with prudential rules settled in the RG, can perform operations with no members until 35% of the net assets. Exceptionally, that limit can be raised to 50% by the Bank of Portugal for SICAM associates, by Central CCAM suggestion; ** The Portuguese law requires the net benefits to be transferred into reserves and limits the remuneration of capital shares to 30% of the results.

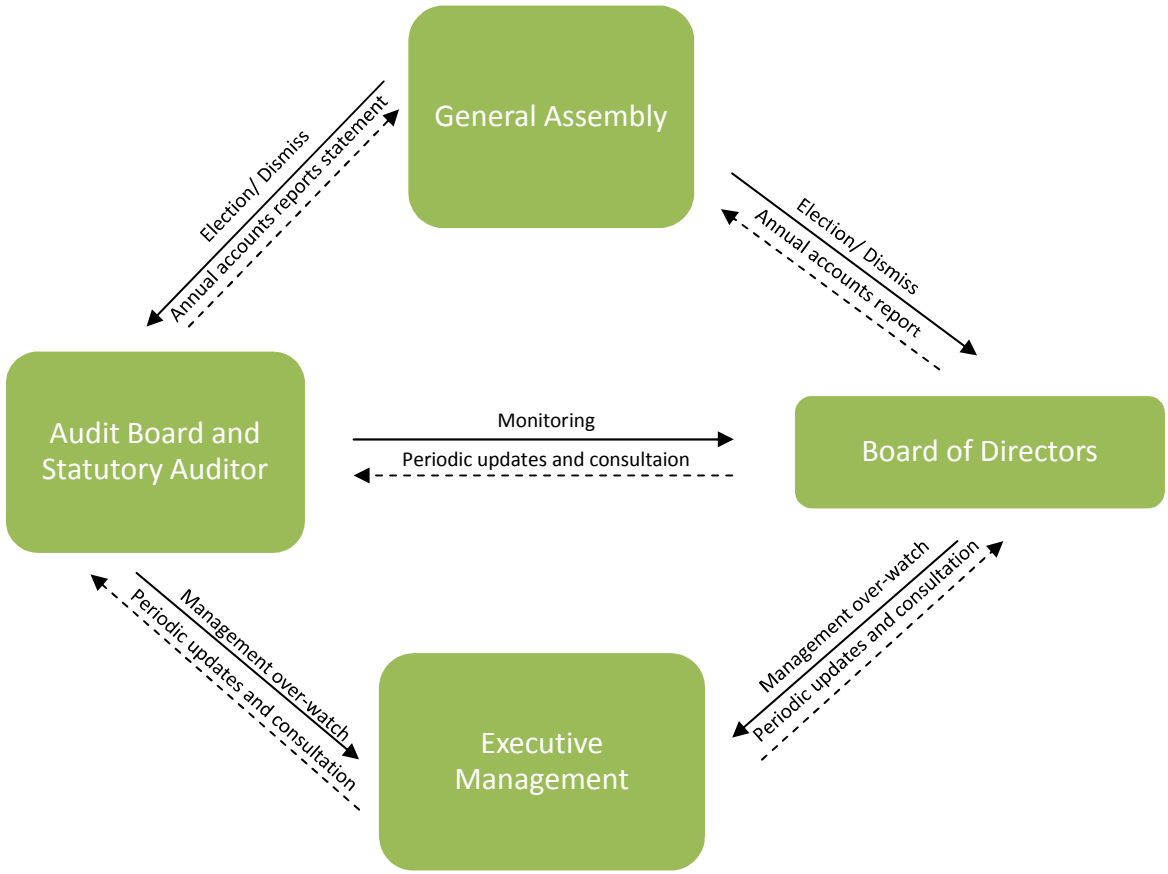
As a consequence of the CCAM dispersed ownership, they lack the control over management exercised by large (share) owners or block shareholders. Furthermore, by distributing equally the control rights over the CCAM members, power is transferred to the management. The equity ownership structure is exogenous and cannot be adjusted to eliminate managerial inefficiency (Gorton and Schmid, 1999).

### *2.2.3. Internal monitoring*

Internal monitoring includes monitoring by the BoD and internal control and audit and aims to achieve reasonable assurance of the CCAM running accordingly to members' purpose, laws and regulations.

CCAM typical governance structure preserves the co-operative nature of CCAM through the composition and competences of the General Assembly (GA), although it strengthens the CCAM management and supervising bodies' competences. It is a governance structure that reflects the respect for co-operative principles and the need to maintain a high level of monitoring and coordination, designed to promote management transparency and members' participation, and to ensure the effective operations of the organization. Figure 4 summarizes CCAM internal governance control.

**Figure 4 – CCAM internal governance control**



The GA is the supreme governing body of cooperatives, reflecting its democratic character and the guardian role of the CCAM co-operative identity. Members exercise control over CCAM activities participating and voting in GA meetings. This control is mainly done ex-post and can be damaged by members' low level of participation and the predominance of members-employees in the GA meetings.

The Audit Board and Statutory Auditor duo is the pillar of the CCAM internal control systems as it monitors, on a regular basis, its performance and activities, in accordance with the law, GA and Central CCAM deliberations, CCAM conduct code and Bank of Portugal regulations. The Audit Board supervision (or control) function is performed ex-ante. Historically, Audit Board role was neglected as its members often lack the skills and will to perform their function. The adoption of the corporations' law, following 2009 RJCAM alterations, empowered the monitoring function of the Audit Board, since one of the audit board members must have the skills required for the task (at least one of the members must hold an undergraduate degree suitable for the exercise of his/her functions and be knowledgeable in auditing and accountancy) and the Statutory Auditor is a qualified and certified auditor (ROC- *Revisor Oficial de Contas*).

The Portuguese Co-operative Code does not establish a separation between BoD and Management, being the CCAM direct administration made by its own members, elected by the GA. In these circumstances, the supervising function stays on the non-executive directors' role [who should participate in strategic decisions and have the "challenger" function (CMVM, 2006)] and on the Audit Board and Statutory Auditor.

The discussion on BoD efficiency highlights issues related with its size (by law an odd number), composition, meetings frequency, term of office and body working rules. In general, the BoD is composed by three members. However, historically, CCAM BoD post-merger (or incorporation) events can have up to five or seven members, in order to include utmost of the BoD members of the former CCAM. Since 2009, with the adoption of the corporations rules, that practice was almost discarded (extra BoD members are now part of the Advisory Board or non-existent).

Traditionally, the CCAM directors are members of the co-operative, but it is allowed, under CCAM bylaws, for non-members to be elected directors if the members lack the necessary banking expertises to perform their duties. Still, in a considerable number of CCAM, BoD members are former CCAM employees with management and banking skills and a deep knowledge of the co-operative operations, thus, having the right profile to appraise BoD operations and decisions. On the other hand, a great number of CCAM still depend on part-time directors to carry on their day-to-day activities, with the inherent negative impact of it on CCAM performance.

In CCAM there is no limit to the number of mandates and most of CCAM directors are in office for decades, until death surrenders them!

Concerning working rules, often, the BoD president (chairman) has a qualitative vote and is the one who has the functions of CEO in the Portuguese co-operatives, including personal liability. When the CEO is also the BoD president, as happens in many CCAM, that person occupies a very powerful position[6]. The flow of information between board and management is crucial to an efficient boarding working. CMVM (2007:31) recommends that "*When Directors that carry out executive duties are requested by other Board Members to supply information, the former shall do so in a timely manner and the information supplied shall adequately suffice the request made… The Chair of the Executive Committee shall send the convening notices and minutes of the meetings to the Chair of the Board of Directors and, when applicable, to the Chair of the Supervisory Board and the Audit Committee…*".

The double role of CEO and BoD chairman of most of the CCAM presidents puts them in a position to choose how closely the (non-executive) Board is kept informed of the state of the business. By rule, CCAM management reports to the boards on a monthly basis, BoDs meet on a weekly basis[7] and the Audit Board on a quarterly basis. In these circumstances, BoD is dominated by executive directors, whom often have access to better information than non-executive directors. Audit Board can consider this reporting practice adequate to its needs.

### *2.2.4. External monitoring*

Since co-operatives do not have access to publicly raised capital, in order to increase their capital base, they can normally only ask their members to increase their capital input, or increase the number of members. Furthermore, in addition to equity and retained net benefit, co-operatives can finance their operations by borrowing. The importance of debt financing, as a management control mechanism, has been emphasised as the burden of debt ties managers' hands and forces them to work efficiently in order to maintain the debt in regular intervals (Pellervo, 2000). In this way, Jensen (1986) argues that increases in firm leverage helps reducing the inefficiencies resulting from the separation of ownership and control.

[6] This circumstance where a chief executive has the dual role of being the (supervised) chief executive and the (supervising) chairman of the board is hardly conducive to being critical. [A board of directors should be able to dismiss, when necessary, the chief executive – how can this succeed if he is also the president of the board? (Pellervo, 2000)]. The most prevalent argument against this CEO duality arises from agency theory which concludes that an independent board structure improves the board's control over the management. On the other hand, stewardship theory supports CEO duality. It argues that the separation of the Chairman and CEO roles may be the cause of conflict situations (Kan and Omari, 2009).

[7] On average, CCAM BoD meets 80 times per year, between, 52 weekly ordinary meetings, 12 monthly coordination meetings, 4 quarterly general meetings, 4 quarterly of auditing report meetings, 1 annual assessment meeting and 7 extraordinary meetings (the Audit Board meets 5 times and the GA meets 2 times year).

In the CCAM case, the Insurance Fund of Agricultural Co-operative Credit (FGCAM) is an important creditor of financial distressed CCAM and it actively controls their performance. Besides securing the CCAM customer deposits, FGCAM supports SICAM solvency and liquidity. FGCAM subordinated loans are conditioned to an economic and financial restructuring process, monitored closely by FGCAM, which can interfere in the CCAM management.

Central, multi-tier structures play a special role in the supervision of co-operatives. A central co-operative is often given the power to monitor and even directly intervene in the affairs of the co-operative members (Pellervo, 2000). Within SICAM, management controls are often exercised by Central CCAM which has the function of supervising the members and consequently is usually the first to find out managerial failures.

Although Bank of Portugal is responsible for the banking sector supervision, regarding SICAM associates the law delegates great part of these functions in the Central CCAM which, in turn, is under Bank of Portugal supervision. Hence, without damaging Bank of Portugal competences, Central CCAM is empowered to control their associated CCAM administrative, technical and financing aspects and their organization and management. In cases of gross mismanagement Central CCAM can intervene in the associates, by the assignment of a representative to track CCAM management or the nomination of interim directors. Moreover, when the associated is in (risk of) financial imbalance and un-follow Central CCAM guidelines, Central CCAM can assign interim directors to them and even dismiss total or partly of the members management and supervision boards. This control function of the Central CCAM is mainly done ex-ante.

During the 1995-2010 periods Central CCAM intervened in 62 CCAM, in 11 of them the BoD was suspended and in 4 of them both the BoD and the Audit Board were suspended. Interventions have up to one year of lifetime, after which it can be renewed. In two of the biggest CCAM, it was settled a Management Board formed by Central CCAM workers (under the assistance agreements) and the intervention continues for more than a decade.

*2.2.5. "Market" for corporate control*

The traditional co-operatives are not under the effect of takeover corporate control mechanisms. Since they do not have publicly quoted shares, they cannot be taken over by acquiring a majority shareholding on the stock market and then replacing the management. However, regarding CCAM, merger activity is a very important corporate control mechanism. Long term inefficiencies are usually solved through (somewhat imposed) incorporations into (or mergers with) a more efficient CCAM. CCAM mergers act as an external control mechanism because, although mergers are friendly (they must be approved by the GA), the influence of Central CCAM is considerable, as the trigger and even the one that chooses the merger partners (Cabo, 2003).

Historically, CCAM mergers activity was part of an entrepreneurial restructuring strategy in order to solve CCAM inefficiency. Indeed, a 1992 SICAM study (see Cabo, 2003) refers that, to generate consistent returns, a typical CCAM must have a volume of deposits up to 70 million euro, a value not achieved by 96.6% of the CCAM at that time. Under Central CCAM lead, inefficient CCAM were incorporated or merged with more efficient CCAM, often after a Central CCAM intervention or lobbying action, and as a result, since the creation of SICAM the number of CCAM decreased to 2/5 of them.

Nowadays, the restrictions to internal growth imposed by the CCAM territorial feature[8] make smaller CCAM potential targets for bigger CCAM directors eager to continue their CCAM expansion plans. Hence, smaller CCAM directors are pressured to present high results in order to avoid incorporation.

*2.2.6. Executive compensation*

Management (and staff) remuneration schemes have become an important instrument of corporate governance. This is not just a desire to motivate managers to work harder or guarantee them a competitive salary (thereby obtaining the best people), but a way of getting them to work in the interests of the owners. Owners and managers should have parallel objectives and these should be reflected in the governance and remuneration mechanisms (Pellervo, 2000).

Following CMVM (2007) recommendations, the remuneration of the members of the CCAM supervising bodies consists exclusively of a fixed amount, in order to secure its objectivity and fairness. Regarding the management, CMVM (2007) recommends that the remuneration of the members of the BoD shall be aligned with the interests of the shareholders. Thus the remuneration of Directors carrying out executive duties shall be based on performance. However, the majority of CCAM does not do so and Directors remunerations are fixed. The specific nature of CCAM determines the inexistence of any type of attribution of shares or stock options for the BoD. The exceptions set a mix of fixed plus variable remuneration, usually a percentage of CCAM profits to distribute among their executive Directors limited to a given amount. One of the CCAM, for example, applies "*a variable remuneration equivalent to 2.5% of the positive net profits, with an annual overall limit of 50,000€*", to give out to three executive directors.

The fixed remuneration usually consists of a voucher of around 250€ per each meeting attended. Some CCAM differentiate between BoD and other boards meetings, remunerating the first ones with higher amounts. Others stipulate an upper limit to the number of meetings remunerated per month, independently of the actual number of meetings realized.

[8] CCAM activity is restricted to their headquarter municipality. CCAM can expand to an adjacent region if there is no other CCAM operating there, or when that results from a CCAM merger event.

Besides the remunerations referred, CCAM directors can obtain other compensations by participating in the governance bodies of other Crédito Agrícola Group companies. When CCAM BoD members are (former) CCAM employees, they maintain the salary and other benefits as long as they are in the Office, although the law stipulates that the contractual labour relationship is suspended.

Contractual remuneration chart schemes aside, a look into CCAM annual proposals for profits allocation indicates that CCAM reward BoD and staff in accordance with the profits. This practice can be assumed as *covered* variable remuneration, intending to boost up BoD and staff performance.

Considering that CCAM face survival challenges related to financial issues linked with equity capital deficiencies and that its capital base growth is supported by retained profits, understanding how CCAM governance can be used to correct low economic performance is of crucial importance.

## 3. Model, data and results

Assuming that legislation and ownership structure affect equally all the CCAM and that Central CCAM intervention, merger activity or BoD and executive compensation have different impact on individual CCAM, this section is dedicated to assess the efficiency of the different control mechanisms available to discipline CCAM management, i.e., to test if there is any relation between CCAM performance and those mechanisms. The focus is on the mechanisms that reflect direct monitoring inside SICAM;[9] the supervision function exercised by Central CCAM; the members control in GA, reflected in BoD turnover and peers' control by CCAM merger/incorporation activity.

### 3.1. Model

To analyse the determinant factors of CCAM governance control mechanisms the multinomial *logit* model is used, in line of others studies on banking (Prowse, 1997; Barro and Barro, 1990; Blackwell *et al.*, 1994; Anderson and Campbell, 2000; Crespi *et al*., 2004).

The multinomial *logit* is used, reflecting the values of the dependent variable, seven different situations (0, 1, 2, 3, 4, 5 or 6)[10], as shown in Table 1. The value of each event in the t period will be determined according to the behaviour of the CCAM 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

[9] Executive compensation and debt-holder FGCAM monitoring mechanisms were not considered. The first because data was only available to the 2010 year, and the second because, FGCAM debt-holder monitoring function was not, a priori, "present" to all CCAM.

[10] The values assigned to every governance intervention only reflect different categories, and the ordinal value has no further meaning.

reference group. In our case, the reference group represents the CCAM that did not experience 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 incorporation. In the last one, only the CCAM merger target (incorporated) was considered in the analysis.

Central CCAM 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 nomination of interim directors and eventual replacement of the full body.

BoD turnover can assume the form of a partial turnover or a total board turnover. The first alternative is the most usual in our sample, since there are only 27 cases of total board turnover. Furthermore, only the cases for which there is evidence that the board and chairman changes are not due to retirement or death are considered. Moreover, given that mergers are often followed by changes in the BoD, for those CCAM that continue, changes in their management are not considered.

**Table 1 – Values assumed by the dependent variable in the MNL models**

| Model | Dependent variable |
|---|---|
| Model 1– Aggregated Model | 0 – No intervention<br>1 – BoD turnover<br>2 – Central CCAM intervention and merger/incorporation |
| Model 2 – Extended Model | 0 – No intervention<br>1 – BoD partial turnover<br>2 – Chairman turnover<br>3 – BoD total turnover<br>4 – Central CCAM intervention by nomination of an Agent<br>5 – Central CCAM intervention by nomination of interim Directors<br>6 – Merger/incorporation |

Concerning internal control, the role of co-operative member and their responsibility for the success of the enterprise is, in actual fact, greater than in publicly quoted companies as the market continuously monitors the company and distributes information via the media (Pellervo, 2000). It is expected that CCAM performance and management turnover should be negatively related.

However, several factors, as the increasing complexity of banking activity and the decline in member participation in GA affect the efficiency of internal control governance mechanisms. Thus, is expected that CCAM external corporate governance mechanisms to be more efficient than the internal ones.

Based on the values assumed by the dependent variable two different models (Table 1) are estimated to analyse the efficiency of the different control

mechanisms. Model 1 is similar to an "internal *versus* external" governance control mechanisms model and Model 2 considerers the different mechanisms individually.

When different mechanisms are simultaneously present it was considered the one that takes deeper effects. Exemplifying, to the model 2, in a decreasing way, from the whole data sample, the CCAM-year observations for which a merger has occurred are first identified and a value of 6 is assigned to these observations. The checking process continues assigning the value correspondent to the observed situation (2nd column of Table 1).

As explanatory variables (Table 2) are used some CCAM performance measures that are independent of the business strategy implemented. Thus, indicators related to business strategy as the transformation ratio were left out.

**Table 2 – Explanatory variables and expected coefficients signals**

| Group 1 – Operational Efficiency and Growth | Expected signal |
|---|---|
| Credit Overdue $= \frac{\text{Credit Overdue}}{\text{Gross Credit}}$ | + |
| Customer Resources Growth $= \frac{\text{Customer Deposists in time t}}{\text{Customer Deposits in time t-1}} - 1$ | – |
| Group 2 – Cost Efficiency | |
| Structural Costs $= \frac{\text{Administrative and Staff Expenses*}}{\text{Financial Margin}}$ | + |
| Staff Costs $= \frac{\text{Salary and Benefits Expenses}}{\text{Financial Margin}}$ | + |
| Expenses ratio $= \frac{\text{Total Expenses}}{\text{Total Revenue}}$ | + |
| Group 3 – Capitalization and Profitability | |
| Indebtedness $= \frac{\text{Total Debt}}{\text{Total Assets}}$ | + |
| ROSC $= \frac{\text{Net Profit}}{\text{Shareholders Capital}}$ | – |

Note: * Costs of general services incurred in controlling and directing an organization, such as accounting, energy and water supply, advertising, office resources expenses, etc.

Credit overdue is an indicator of the CCAM credit risk management and is expected to have a positive influence over the probability of a CCAM governance intervention. Customer resources growth ratio is a measure of CCAM competitive strength and market share and should present a negative influence. Expenses ratio, Staff and Structural Costs ratios are measures of the CCAM cost efficiency, and should positively influence the probability of a CCAM governance intervention. Finally, Indebtedness measures CCAM level of

capitalization and ROCS[11] the return on the members' investment in CCAM equity. Indebtedness should exercise a positive influence over the probability of CCAM governance intervention, and ROCS a negative one.

Two control variables are used: the size of the CCAM expressed by the Total Assets at the end of the year and a temporal trend (Year). The total asset is often correlated with other unobserved variables such as asset diversification and managerial skills (Crespi *et al*., 2004). The trend tries to catch control shocks, like technological changes, common to all CCAM in a given year.

Hence, the multinomial logit estimated is:

$$\text{prob}(y_i = j) = \frac{\exp^{xi\beta j}}{1 + \sum_{k=1}^{j} \exp^{xi\beta k}} \qquad (4.1)$$

where: Y - dependent variable, assuming the value of j = 0, 1, 2 for model 1, and j = 0, 1, 2, …, 6 for model 2; X - column vector of p+1 dimension, where p is the number of independent variables; and β - unknown parametric vector to be estimated.

### 3.2. Data

The analysis addresses the 1995-2009 period. Data refers to the end of the year and are all expressed in 1995 prices. The financial data was obtained from CCAM annual accounting reports. Non-financial data (CCAM mergers and incorporations, board or chairman change and Central CCAM interventions) was obtained from the "Diário da República[12]", Ministry of Justice website, CCAM Annual Reports and other SICAM official statements released during the study period. It was excluded from the data sample 25 CCAM from 1998, because of data missing from their annual financial reports, plus 21 observations corresponding to different CCAM-years, as we were not able to obtain their BoD configuration. At the end of this process we had a pool of 1,806 observations from 15 years of unbalanced allocation: a) 1352 observations corresponding to CCAM not experiencing any governance intervention; b) 101 corresponding to CCAM with BoD partial turnover; c) 66 chairman turnover; d) 18 corresponding to BoD total turnover; e) 62 CCAM with Central CCAM intervention by an agent; f) 104 CCAM Central CCAM intervention by the nomination of interim directors; and g) 99 CCAM participating in a

[11] CCAM goal is not maximizing profit but, as mentioned earlier, the key-issue for CCAM is the lack of equity. Therefore, as the growth in equity is fuelled completely by net benefits retained, Return on Equity (ROE) is the correct variable to express the "profitability". The option for Shareholders Capital instead of Equity is justified by the existence of CCAM with lower equity resulting from previous years accumulated losses that can jeopardise the study results.

[12] Official Portuguese legislative journal.

merger/incorporation. Summary statistics for the sample are presented in Table 3, with the data grouped according to the governance mechanisms.

**Table 3 – Group summary statistics**

| | Variables | Max | Mean | Median | Min | Std. Dev. |
|---|---|---|---|---|---|---|
| No Intervention | Total Assets* | 352.466,002 | 44.877,260 | 32.404,210 | 726,085 | 44.659,690 |
| | Customers' resources growth | 3,6115 | 0,1017 | 0,0855 | -0,4048 | 0,1286 |
| | Credit Overdue | 0,7043 | 0,0820 | 0,0629 | 0,0000 | 0,0686 |
| | Staff Costs | 3,0879 | 0,3420 | 0,3302 | -2,7670 | 0,2021 |
| | Structural Costs | 1,8038 | 0,2318 | 0,2295 | -1,5653 | 0,1234 |
| | Expenses Ratio | 2,4544 | 0,8599 | 0,8566 | 0,3739 | 0,1348 |
| | ROSC | 5,4384 | 0,2261 | 0,1735 | -11,8300 | 0,5958 |
| | Indebtedness | 4,3984 | 0,9230 | 0,9087 | 0,2025 | 0,1819 |

Notes: * Thousands euro; Std. Dev. : Standard Deviation.

**Table 3 – Group summary statistics (Conclusion)**

| | Variables | Max | Mean | Median | Min | Std. Dev. |
|---|---|---|---|---|---|---|
| BoD Partial Turnover | Total Assets* | 239.772,378 | 49.381,660 | 32.723,530 | 839,919 | 49.921,510 |
| | Customers' resources growth | 0,4720 | 0,1334 | 0,1055 | 0,0090 | 0,0963 |
| | Credit Overdue | 0,3495 | 0,0861 | 0,0713 | 0,0024 | 0,0647 |
| | Staff Costs | 0,6952 | 0,3366 | 0,3237 | 0,1625 | 0,0890 |
| | Structural Costs | 0,5119 | 0,2317 | 0,2235 | 0,0824 | 0,0758 |
| | Expenses Ratio | 1,3484 | 0,8550 | 0,8663 | 0,4216 | 0,1076 |
| | ROSC | 7,7375 | 0,3966 | 0,2334 | -0,9495 | 0,9180 |
| | Indebtedness | 1,0689 | 0,9123 | 0,9211 | 0,4801 | 0,0717 |
| Chairman Turnover | Total Assets* | 223.352,011 | 37.985,120 | 27.298,970 | 753,808 | 38.438,230 |
| | Customers' resources growth | 0,3108 | 0,0822 | 0,0772 | -0,1757 | 0,0824 |
| | Credit Overdue | 0,3282 | 0,0853 | 0,0761 | 0,0069 | 0,0625 |
| | Staff Costs | 0,7616 | 0,3575 | 0,3415 | 0,1749 | 0,1039 |
| | Structural Costs | 0,4717 | 0,2434 | 0,2405 | 0,0616 | 0,0775 |
| | Expenses Ratio | 1,2753 | 0,8778 | 0,8647 | 0,6483 | 0,0999 |
| | ROSC | 1,3429 | 0,2529 | 0,1751 | -0,8632 | 0,3359 |
| | Indebtedness | 1,1676 | 0,9130 | 0,9191 | 0,6931 | 0,0634 |
| BoD Total Turnover | Total Assets* | 117.756,340 | 31.475,490 | 21.456,010 | 3.275,865 | 27.662,950 |
| | Customers' resources growth | 0,1976 | 0,0891 | 0,0880 | -0,0330 | 0,0824 |
| | Credit Overdue | 0,5806 | 0,1233 | 0,0838 | 0,0208 | 0,1489 |
| | Staff Costs | 0,6473 | 0,3205 | 0,3703 | -0,6186 | 0,2659 |
| | Structural Costs | 0,5438 | 0,2057 | 0,2190 | -0,2841 | 0,15961 |
| | Expenses Ratio | 1,4206 | 0,9343 | 0,8937 | 0,6828 | 0,1767 |
| | ROSC | 0,6248 | -0,1006 | 0,1117 | -3,4418 | 0,9385 |
| | Indebtedness | 4,1053 | 1,0859 | 0,8969 | 0,8006 | 0,7566 |
| | Indebtedness | 4,3030 | 1,0473 | 0,9767 | 0,8180 | 0,4311 |
| Central CCAM Agent | Total Assets* | 75.394,431 | 27.025,530 | 25.619,350 | 3.053,662 | 17.879,980 |
| | Customers' resources growth | 0,8374 | 0,0683 | 0,0597 | -0,1206 | 0,1250 |
| | Credit Overdue | 0,5790 | 0,1839 | 0,1659 | 0,0040 | 0,1086 |
| | Staff Costs | 1,1478 | 0,4099 | 0,3873 | -0,2427 | 0,2131 |
| | Structural Costs | 0,7712 | 0,3018 | 0,3010 | -0,1219 | 0,1236 |
| | Expenses Ratio | 4,1421 | 1,15786 | 0,9887 | 0,4327 | 0,5347 |
| | ROSC | 0,9433 | -0,6344 | -0,0520 | -7,0617 | 1,5299 |
| | Indebtedness | 4,3030 | 1,0473 | 0,9767 | 0,8180 | 0,4311 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Interim Directors | Total Assets* | 312.620,604 | 70.037,540 | 33.199,860 | 5.137,3510 | 81.927,560 |
| | Customers' resources growth | 0,2686 | 0,0345 | 0,0364 | -0,1802 | 0,0710 |
| | Credit Overdue | 0,6683 | 0,1879 | 0,1331 | 0,0147 | 0,1457 |
| | Staff Costs | 5,4095 | 0,2665 | 0,3878 | -22,3365 | 2,3512 |
| | Structural Costs | 3,5156 | 0,2673 | 0,2836 | -6,7920 | 0,8114 |
| | Expenses Ratio | 3,1628 | 1,0212 | 0,8965 | 0,2688 | 0,4486 |
| | ROSC | 9,3133 | -0,2105 | 0,1321 | -13,2999 | 2,6080 |
| | Indebtedness | 4,9566 | 1,1710 | 1,0255 | 0,8166 | 0,6130 |
| Merger or Incorporation | Total Assets* | 111.289,268 | 19.165,410 | 12.559,780 | 1.218,769 | 19.292,83 |
| | Customers' resources growth | 0,4453 | 0,0596 | 0,0682 | -0,7874 | 0,1307 |
| | Credit Overdue | 0,7254 | 0,2021 | 0,1732 | 0,0119 | 0,1538 |
| | Staff Costs | 13,4681 | 0,6692 | 0,4020 | -1,3229 | 1,5750 |
| | Structural Costs | 8,0206 | 0,4390 | 0,2893 | -0,6081 | 0,9209 |
| | Expenses Ratio | 4,5101 | 1,1759 | 0,9768 | 0,6239 | 0,6098 |
| | ROSC | 5,3851 | -0,6103 | 0,0544 | -12,2339 | 2,7510 |
| | Indebtedness | 2,1132 | 1,0701 | 0,9867 | 0,7570 | 0,2462 |

Notes:* Thousands euro; Std. Dev. : Standard Deviation.

## 3.3. Results

To determine which of the 7 performance indicators represent the probability of a governance intervention, a stepwise procedure combining forward and backward elimination is applied. The model starts as a baseline model without any variable on it. Then the indicators are considered one at each time and added to the model if succeeding in the selection criterion based on a p-value of 5%. When a new variable is added to the model, the variables previously included are evaluated for exclusion, at 10% significance level. The ones that fail are excluded. When no more variables can be added or removed, the algorithm stops. The application of this approach, using Likelihood ratio statistics, excludes the control variable Total Assets and the Indebtedness indicator from Model 1, and ROCS indicator from both models. Table 4 reports the results of the MNL models 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), being to be interpreted as affecting the odds ratio.

**Table 4 – MNL model results**

| Mechanisms / Performance Indicators | Model 1 | | Model 2 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Internal | External | Internal | | | External | | |
| | Board of Directors Turnover | Central CCAM intervention & Merger or incorporation | Board of Directors Turnover | | | Central CCAM intervention | | Merger or incorporation |
| | | | Partial | Chairman | Total | Agent | Interim Directors | |
| Constant | -2,027* | -5,108* | -1,005 | -1,091 | -5,823* | -6,374 | -7,132* | -5,769* |
| | (0,499) | (0,439) | (1,140) | (1,391) | (1,243) | (0,718) | (0,668) | (0,672) |
| Customers' resources growth | 0,067 | -5,451* | 0,819 | -4,901* | -2,961 | -4,530*** | -8,161* | -4,747* |
| | (0,658) | (1,074) | (0,507) | (1,747) | (2,805) | (1,641) | (1,498) | (1,420) |
| Credit overdue | -0,388 | 9,167* | -0,294 | -2,016 | 3,084 | 7,647* | 10,101* | 8,169* |
| | (1,315) | (1,031) | (1,848) | (2,274) | (3,238) | (1,574) | (1,426) | (1,358) |
| Structural costs | 1,692 | 4,913* | 2,804*** | 3,471*** | 0,150 | 4,914* | 4,849* | 5,972* |
| | (1,096) | (0,910) | (1,623) | (1,864) | (3,103) | (1,142) | (1,018) | (1,035) |
| Staff costs | -0,600 | -1,515* | -1,083 | -1,030 | 0,286 | -1,453* | -1,407* | -1,754* |
| | (0,433) | (0,360) | (0,738) | (1,018) | (1,628) | (0,489) | (0,412) | (0,453) |
| Expenses ratio | 0,450 | 2,052* | 0,172 | 0,980 | 0,842 | 2,051* | 1,227** | 2,074* |
| | (0,560) | (0,428) | (0,835) | (0,945) | (1,249) | (0,517) | (0,524) | (0,485) |
| Indebtedness | — | — | -1,709 | -1,872 | 0,997*** | 0,445 | 1,208* | 0,337 |
| | | | (1,170) | (1,460) | (0,601) | (0,534) | (0,407) | (0,504) |
| Total assets | — | — | 0,000* | 0,000 | 0,000 | 0,000** | 0,000* | 0,000* |
| | | | (0,000) | (0,000) | (0,000) | (0,000) | (0,000) | (0,000) |
| Year | -0,080* | 0,027 | -0,124* | -0,137* | -0,013 | 0,036 | 0,032 | 0,092** |
| | (0,025) | (0,024) | (0,036) | (0,045) | (0,082) | (0,044) | (0,036) | (0,039) |
| Chi-squared (degrees of freedom) | 395,272 (12) | | 552,843 (48) | | | | | |
| Significance level | 0,000 | | 0,000 | | | | | |

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

The results of **Model 1** show that the performance variables are not statistically significant for the group of internal governance mechanisms, i.e., they do not exercise any influence over the probability of BoD turnover. Thus, these governance mechanisms are not linked to the CCAM performance, confirming the weakness of CCAM internal control mechanisms. On the other side, most of the performance indicators (expect ROSC and Indebtedness) are statistically significant for the group of external governance mechanisms, i.e., they proved to have influence on the probability of a Central CCAM intervention and of a merger or incorporation. This outcome demonstrates that external governance mechanisms present greater efficiency in disciplining CCAM management than internal control mechanisms.

Overall the signals presented by the variables coefficients correspond to the expected, except for the Staff Costs variable which surprisingly present a negative signal meaning that it negatively influences the probability of an

external governance mechanism act. The smaller a value for Staff Costs the greater is the probability of a Central CCAM intervention and of a merger or incorporation, which can be understood in the context of an option for the qualification/training of the human resources and maybe as consequence of members-employees dominance of GA meetings.

The results achieved can be compared with those of other researchers. Blackwell *et al.* (1994) find a negative relation between accounting profitability and management turnover in the subsidiaries of Texas' multibank holdings. Prowse (1997) found some substitution between regulation and other governance mechanisms in banks. Gorton and Schmid (1999) argue that only mergers and proxy contests are feasible for co-operative banks as control changes. Anderson and Campbell (2000) explain the lack of a relationship between executive change and the performance of Japanese banks as evidence of the banking sector's inefficiencies. 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.

The **Model 2** allows us to check for the influence of each mechanism individually. Regarding the probability of a BoD turnover, the Structural Costs has statistically positive influence over the probabilities of a partial turnover and chairman turnover. This last one is also (statistically) negatively influenced by Customers' Resources Growth indicator. Total turnover is only negatively influenced by Indebtedness. Looking at these results we first note the real and perceived importance of Indebtedness indicator for CCAM survival, and of the BoD chairman role in detriment of other directors' role.

The probability of a Central CCAM intervention by the nomination of an agent or interim directors and the probability of a merger or incorporation are (statistically) negatively influenced by Customers' Resources Growth and Staff Costs indicators and positively influenced by Credit Overdue, Structural Costs and Expenses Ratio indicators. Moreover, the probability of a Central CCAM intervention by the nomination of interim directors is also negatively influenced by Indebtedness. The results highlight the importance of the Central CCAM supervision task in monitoring their associates, and of the merging activity on SICAM overall performance. More specifically:

- Customers' Resources Growth is a measure of the CCAM competitive strength and in a certain way of the members' commitment. "Voting with their feet" is not usual (or easy) for CCAM members as it is for IOFs shareholders. The closing of the CCAM membership status is a delayed, often financially harmful operation that needs BoD previous approval. "Voting with their deposits" is the CCAM version of it! It is the first sign of the members' disapproval of CCAM management. On the other hand, giving the saver profile of CCAM, Customers' Resources Growth is also a measure of their market share and competitive strength. This is illustrated by the

statistically significance and negative sign associated to the variable coefficient.

- The positive, statistically significant, sign of the Credit Overdue coefficient is in harmony with the importance of the management of credit risks for banks and particularly for CCAM, given that its net worth is highly dependent from financial margin results. CCAM double specialization (in customer served and products offered) reinforces this situation and strengthens the importance of an efficient (and prudential) risk management lending policy.
- Regarding operational costs, the negative, statistically significant, sign of the Staff Costs coefficient is somewhat surprising. Small CCAM have limited ability to recruit highly qualified management and to train their staff (Cabo, 2003) and usually the need of investment in qualified labour is the justification for CCAM mergers and incorporations. Labour market rigidity, CCAM policy of "no firings" (Cabo, 2003) and SICAM bet in the qualification/training of human resources can enlighten this outcome. Indeed, looking into SICAM social reports we observe positive values for job creation, with CCAM presenting, in the last decade, an annual average increase of 2%. Moreover, Crédito Agrícola puts money on internal and external training programmes for CCAM employees, providing internally more than 100,000 annual teaching hours, for 8,000 trainees, adding up to 5,000 hours of external training. This bet in the qualification is reflected in the system of promotions, being most of it based on merit. On the other hand, most of the CCAM employees are also members of it. Ordinary members invest modestly and (consequently) had moderate interest in the development of CCAM. Members-employees have a big stake on CCAM (their job for start), thus, they are deeply involved in CCAM life, actively participating in the GA, and influencing CCAM strategies and policies.
- Structural Costs and Expenses ratio present, as expected, a positive, statistically significant, sign, thus, proving to affect the probability of an external governance intervention. This is coherent to the fact that the small size of the CCAM limits the rationalization 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. Banking is a highly demanding activity, where cost efficiency is crucial for success. Literature suggests that banking industry competition is mostly based in cost efficiency neglecting revenue efficiency. Moreover, CCAM low income customers prevent CCAM from pursuing a revenue efficiency strategy, attaining high profit margins by applying superior prices in their operations. This strengthens the need for cost efficiency, justifying their positive influence over CCAM probability of governance intervention.

- Indebtedness negative, statically significant, sign for BoD total turnover and Central CCAM intervention by the nomination of interim directors' mechanisms illustrates the importance of strong capitalization for CCAM success. The importance of banking system capitalization was evident in the 2008 crisis and recently in the European sovereign debt crisis. CCAM co-operative nature makes it arduous for them to boost equity. Considering that capitalization upgrading is expected to occur due to the increase of equity via better net benefits, profitability improvements are decisive. Thus, BoD turnover or the nominations of interim directors are entirely justifiable when a CCAM suffers capitalization problems. Furthermore, considering the solidarity mechanism acting in the SICAM is understandable this Central CCAM concern with the individual CCAM indebtedness.

## 4. Conclusions

Legislation, ownership structure (control and residual claims), "market" for corporate control, board of directors, debt-holders and central organizations and executive compensation, were identified as the major CCAM governance mechanisms operating in the CCAM associated from SICAM.

The results of the MNL models to assess the efficiency of different control mechanisms in discipline CCAM management show that overall internal governance mechanisms (BoD turnover) are not related to the CCAM performance, which indicates potential weakness of the CCAM internal control mechanisms. On the other hand, external governance mechanisms are related to CCAM operational and cost efficiency indicators, demonstrating the importance of these mechanisms in disciplining CCAM management. Moreover, the results highlight the value of the supervision task of Central CCAM in the performance of the associates.

Comparing the CCAM experiencing governance intervention with those that did not witness it, the main conclusions are: (1) Merged CCAM and those target of a Central CCAM intervention present weaker operational efficiency, either in credit management, with higher bad loans, or in customer resources management, with minor deposits growth. Moreover they experience cost efficiency deficiency, particularly, they hold heavy structural costs. Unexpectedly, the costs with human resources are smaller for these CCAM. (2) The choice among a Central intervention by the nomination of an agent or interim directors is mainly due to the performance of indebtedness indicator. A bad score in this indicator motivates a deeper interference from the central organization, even with potential replacement of CCAM governing bodies, attesting for the crucial role of indebtedness for CCAM survival. (3) Both CCAM with BoD partial turnover and chairman turnover hold heavier structural costs and CCAM with chairman turnover present minor customer resources growth. (4) Indebtedness is the only trigger for total BoD turnover.

These remarks confirm the decision-related incentive problems of co-operatives, which create a potentially weak internal system of corporate governance (Crespi *et al*., 2004; Gorton and Schmid; 1999; Prowse, 1997). The robustness of the results would be improved if the effects of CCAM management and governing bodies' remuneration and of debt-holder FGCAM monitoring in CCAM performance were analysed, which is a topic for further research.

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