Influence of financial slack on earnings management among Brazilian credit unions

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Abstract

Objective: To identify the influence of financial slack in Earnings Management in Brazilian consumer credit unions as a pre-loss financial strategy.

Method: The sample comprises 626 Brazilian consumer credit unions between 2000 and 2019 (20 years). The dependent variable is dichotomous, seeking to analyze Earnings Management as a "fact" per se, inspired in the operationalization proposed by Dantas, Borges, and Fernandes (2018). Afterward, a proxy was added to reflect financial slack among Brazilian credit cooperatives based on the PEARLS system's liquidity indicator, "L2". Additionally, variables related to the profile of credit operations and the characteristics of the credit union were added for control purposes, such as size, whether they have cash deposits, the proportion of overdue operations (from B to H level), spread, and whether the cooperative is classified as a credit union that freely admits members.

Results: The results highlight that financial slack positively influences Earnings Management among Brazilian credit unions. Thus, the higher (or smaller) the financial slack available to managers, the greater (or lower) their tendency to perform Earnings Management. Hence, financial slack would cushion the interaction between uncertainty and risk aversion as a financial buffer.

Contributions: The results indicate that having financial slack favors the report of results, mitigating risk perception among the cooperates and regulatory agents, intensified due to the specific characteristics and economic, political, and social pressures on the part of stakeholders.

Keywords: Financial Slack; Earning Management; Credit Unions; Financial Unions.

1. Introduction

Cooperativism, as a movement of human association, has its landmark associated with the city of Rochdale, district of Manchester, England (Menezes, 2018). One of the fields showing the most expressive advancement is credit unions, or financial cooperativism, as it is more recently called. Through Law N°. 4,565 (Brasil, 1964), credit unions were assimilated to other financial institutions, with the Central Bank of Brazil (Bacen) being the supervisor and inspector of these institutions. Unlike the so-called "traditional" banking institutions, however, credit unions' focus is not purely on obtaining results but mainly on the social role (Maia & Bressan, 2020).

This role implies a trade-off in this relationship considering that, as practical action, the cooperative movement may not base itself on ideas or doctrines per se, but rather on the conscious actions of its managers, with specific policies and purposes intended to maximize their value, efficiency and to ensure their market position. Even though these are non-profit organizations because the remuneration from financial products they offer are higher than the costs of these products and expenses with the maintenance of the cooperative's activities, they do generate profits, or in the case of cooperatives, surpluses, which are considered a spread on the part of the institution with its associates.

In this context, surpluses are increasingly recurrent among credit unions. Surpluses are perceived as an attractive instrument for both its members and a strategy to attract new members. Hence, at the same time as its members see it favorably, managers adopt strategies, and the fact that managers have privileged information regarding the cooperative's current performance leads to information asymmetry and earnings management.

The credit unions' management strategy is based on the premise that the members see these results' dispersion as a risky measure. Hence, less variability tends to preserve the distribution of surpluses to the members and mitigate perceptions of risk, since the disclosure of negative results or with significant variability would denote a situation of inefficiency or even the entity's economic-financial insecurity, in the extreme, leading to demutualization (Maia, Bressan, Lamounier & Braga, 2013; Silva, Niyama, Rodrigues & Lourenço, 2018).

This is mitigated by the fact that credit unions do not have access to fundraising through the stock market. Coupled with the minimum capital adequacy ratio demanded by regulators, these institutions would be required to establish and keep some financial slack using resources not invested by singular cooperatives in credit operations to minimize excess or retraction of its economic performance. Therefore, this study examines the company's risk retention determined by the existence of financial slack as a passive function (Rafailov, 2017), rather than only an active source of investments or innovation. Note that in the case of credit unions, there are no motivations from the perspective of the stock market as funding comes from deposits and/or shared capital composed of its members' shares. Hence, other aspects of these institutions that possibly influence earnings management, such as cash and cash equivalents, need to be assessed.

Data from the last report of the National Cooperative Credit System (SNCC) from 2019 highlight that resources not invested by singular cooperatives in credit operations are directed to liquidity applications in the financial market by the singular cooperatives themselves or through the centralized application of resources, or financial centralization, a possibility offered by cooperative systems to their affiliates. The stock of these resources in the period above was distributed in fixed income securities, marketable securities, repo operations, and investment fund quotas, corresponding to a 33.1% share of total assets (Bacen, 2020a), which allows us to glimpse the relevance of these resources in addition to activities with these institutions' credit operations.

In this context, considering that earnings management affects a company's economic position, the decision to mitigate risks using cash and cash equivalents would precede an assessment of the ability to retain these risks as a financial buffer, leaving it in a position better (or not) than a company stuck in a single course of action. That said, we seek to verify whether having a financial slack is a motivation for these institutions to use this mechanism through earnings management and its influence, to identify evidence regarding potential positive or negative effects of this financial buffer on the performance of Brazilian credit unions. Identifying this relationship may provide simple means for managers to envision clear means to achieve their objectives and academics to conduct studies beyond this strategy.

2. Theoretical Framework

2.1 Agency Problems and Earnings Management among Credit Cooperatives

Agency problems refer to an attempt to solve two fundamental problems: the problem that emerges when a company's objectives are different from those of the agent's and situations in which it is difficult or costly for a company to verify an agent's activities (Eisenhardt, 1989). The notion that those managing other people's money cannot protect it with the same zeal as if the money was their own has proven to be correct over the years. However, the agency's theory advances when it highlights that stakeholders' relationships should reflect an efficient distribution of risk costs among the parties. Note that this statement ignores two main aspects: the first is that modern agency theorists assume that, after proper dissemination of information and allocation of risk costs, the conflict disappears. Second, they assume that the designated agent can always manage commercial concerns to create wealth perpetually, or at least, the return required by a company (Kirika, 2017).

The most crucial difference between a cooperative and a typical company may be related to its members' motivations; they commit to creating a cooperative because they seek to be provided with goods or services at cost price. Unfortunately, this may also impair its performance, considering it only functions to maximize its members' utility function (Mercer, Póvoa & Piccoli, 2019). Hence, the first idea raised in this paper arises from adverse selection. Because it is not possible for the principal (the cooperative member) to thoroughly verify the competencies or skills of managers while they are working, or when, in most cases, the members do not have sufficient commercial experience. The problems arising from these conflicts are considered a risk factor for these institutions' long-term sustainability (Menezes, 2018).

Additionally, the double function of credit unions (that of savings intermediary and that of "loan" agency) enables their members to be both creditors and debtors at the same time. Since these institutions are owned and governed by their members, their manager members are susceptible to agency conflicts between associates (directors) and managers (agents), as well as between creditor and debtor members, which reinforces the importance of observing the influence of member groups in these entities because this context is peculiar to credit unions and not found among traditional financial institutions (Fama & Jensen, 1983a; 1983b; Mercer, Póvoa & Piccoli, 2019).

Using flexible legal and accounting standards, credit unions perform earnings management, believing that investors will keep their investments and potential investors may be interested in investing in the cooperative (Li & Richie, 2016). Additionally, this strategy may also reflect the reverse moral risk of the need to respond to "powerful" clients: creditors prefer to protect themselves against the possibility of financially weak borrowers being led to financial difficulties; and large investors with concentration risk, due to high exposure to the company, favor a reduction in the volatility of their earnings.

In this context, the constitution of surpluses has been increasingly recurrent on the part of credit unions, as they perceive it to be an attractive instrument both for the members within the organization and as a strategy to attract new members. If the balance at the end of the year is positive (surplus), the distribution of surpluses is not made in the form of remuneration or proportionally to each partner's share capital. Instead, it is based on the members' participation in this result, returning it proportionally, consolidating the principle of distributive justice within cooperatives. Thus, the existence of a positive or negative result and information asymmetry between stakeholders may encourage dysfunctional behavior, such as maximizing or minimizing earnings, to show the associates the ability to generate surpluses and maintain the cooperative's stable conditions.

Previous studies' main results indicate that the managers of cooperative financial institutions (which include credit unions and cooperative banks) become involved in earnings management due to factors intrinsic to the organizations, such as to avoid disclosing losses (Bressan, Bressan & Silva Júnior, 2015; Santos & Guerra, 2018), due to variation in the loan portfolio or overdue loans (Bressan, Bressan & Silva Júnior, 2016; Kar, 2017; Naaman, 2018) because it is affected by external benchmarks, such as the sector's performance, Gross Domestic Product (GDP) or business procyclicality (Skala, 2015; Henselmann, Ditter & Lupp, 2016; Olszak, Pipień & Kowalska, 2017; Hessou & Lai, 2018; Olszak, Roszkowska & Kowalska, 2018; Dantas, Borges & Fernandes, 2018; Meriläinen, 2019), and the relationship with other attributes such as persistence of surpluses (Diniz & Girão, 2019), conservatism (Santos & Santos, 2020) or the credit cooperative's size (Diniz, 2020).

Additionally, the findings also show that the financial system regulators depend only on the quantitative interpretation of financial statements. The downside is that the principal's wishes are usually not considered in this equity equation. Furthermore, the agent's ability to create wealth for him/herself is not reflected on the financial statements, nor is his/her integrity because, an entity may protect clean audited accounts without committing any fraud, however, operating super or suboptimally from the director's perspective (Kirika, 2017).

One of the main challenges of effective management is to invest a company's available resources to minimize the impact of exogenous threats on the organization while trying to capture opportunities. In addition to considering the relative attractiveness of the financial instruments available, corporative decision-making needs to balance between the need for (future) adaptability and current and future performance. As a result, different configurations of financial resources emerge, and empirical studies verify that companies use cash issues (of cash equivalents), debt, or equity available internally in a way that can vary widely within specific sectors (Gruener & Raastad, 2018).

2.2 Financial Slack among Credit Union's Earnings Management

Financial slack has many key functions, such as shielding companies from internal and external variations, reducing organizational conflicts by providing resources for a wide variety of projects, and allowing companies to experience organizational changes and innovations, as well as negative results, considering that high levels of financial slack have been associated with ineffective management by investing in projects that do not increase shareholder value, lack of ambition, or strategic mismatch with the environment (Bradley, Wiklund& Shepherd, 2011; Dai & Kittilaksanawong, 2014; Silva, Rohenkohl & Bizatto, 2018).

Additionally, the amount of financial slack can demonstrate the board's characteristics, features, and corporative governance levels, in addition to its risk management, which includes earnings management (John, Li & Pang, 2017). From a specifically financial point of view, in the same way as excessive financial slack makes companies implement inappropriate strategic actions, scarce financial slack would also lead to negative consequences, reducing the managers' choices and leading to earnings management. It is worth mentioning that this practice will not happen if expected profit is not very different from real profit; however, in doing so, managers manage it based on the assumption that this is stable in generating profits, which, consequently, makes the disclosure of earnings information misleading, hindering decision-making on the part of the stakeholders, such as partners and creditors (Li & Richie, 2016).

Thus, this financial slack would allow a "margin of error". When resources are scarce, an organization's members spend time forming coalitions to negotiate or to justify their share of limited resources. If resources are abundant –, i.e., there is some slack – it is assumed that the need for such a practice will decrease. Researchers state that having financial slack "mitigate" conflicts, as different parties can follow their agendas (Gruener & Raastad, 2018). In both cases, possible results such as having financial slack would minimize the perception of risk on the part of those interested in information (cooperative members) and the regulatory agent (Bacen).

Limited understanding of financial slack associates the financial slack available or unabsorbed, represented by the most liquid assets and not invested in any organizational activity, in two ways: current indices and quick indices. Current indexes assume the relationship between all current assets and liabilities, while quick indexes provide a more accurate measure of liquidity, removing inventories from current assets as the less liquid element of current assets (Dai & Kittilaksanawong, 2014; Gruener & Raastad, 2018; Wieczorek-Kosmala & Błach, 2019). Liquidity can also be understood as short-term financial slack, different from the slack as "lending power", classified as long-term financial slack (Campos & Nakamura, 2015).

In this context, the idea proposed here is that the immediate ability to retain risk would be determined by the existence (or not) of linked cash reserves (high share of liquid assets in current assets), which correspond to the financial slack available. It would cushion the interaction between environmental uncertainty and risk aversion, and its absence would be a warning sign that the company may not be able to prevent a small setback from becoming a severe threat. This would show that the higher (or lower) the financial slack available to managers, the lower (or higher) the propensity to earnings management. Thus, the following hypothesis is proposed.

- **H1: Financial slack positively influences earnings management among Brazilian credit unions.**

The idea proposed in the case of Brazilian credit unions is that, in times when there are higher earnings, credit unions tend to increase their provisions, discretely creating some (economic and non-financial) reserve for times in which performance is compromised, smoothing their results "from top to bottom" and keeping a higher level of financial slack. In an opposite scenario, at times when there are lower earnings, credit unions tend to decrease the potential use of earnings management through provisions, creating, in this case, a smaller financial reserve, maintaining, in the extreme, only what is determined by the regulator (Bacen).

3. Methodological Procedures

The study sample is composed of 626 (six hundred and twenty-six) Brazilian singular credit unions with accounting information available, and which did not present negative equity between 2000 and 2019, which corresponds, at the time, to 71.7% of the total of active companies (873) in 2019 (Bacen, 2020b), totaling 12,520 observations. Two notes are necessary:

a. this project's initial period corresponds to when Resolution No. 2,682 (Bacen, 1999) began producing effects. This resolution provides for the classification criteria of credit operations and rules for the constitution of Loan Loss Provision (PCLD), used to calculate the dependent variable in this study;
b. confederations, federations, and central credit unions were excluded, assuming that all business operations with members are in charge of singular cooperatives, configuring central and confederations the function of operational support in providing services and access to financial market products (Dantas, Borges & Fernandes, 2018).

Secondary data collected from Bacen's databases were used in this study. Bacen consolidates financial information of Brazilian credit unions, namely "IF.Data – *Dados Selecionados de Entidades Supervisionadas*" [Selected Data from Supervised Entities] (Bacen, 2020b), and the analytical files of balance sheets and balance sheets (Codes 4010 and 4016) (Bacen, 2020c), categorized according to the Accounting Plan for National Financial System [Plano Cosif (Bacen, 1987)], referred only as "Cosif". It is worth noting that the data used in this study already disregard cooperatives in incorporation processes, the data of which were consolidated in the respective Extraordinary General Meetings.

Note that data concerning December of the respective period were used for the credit unions' financial information. For the information regarding results, considering Law No. 4,595 (Brasil, 1964), which requires closing these accounts in June and December, the balances of the credit and debtor accounts presented in the respective months were added to have the total balances of these accounts in the respective year.

Afterward, the dependent variable proposed here is dichotomous, called "GRCoop" and based on the operationalization proposed by Dantas, Borges, and Fernandes (2018), which used the discretionary portion of expenses with PCLD. The following procedures were performed to arrive at this variable:

a. *a priori*, we identify the book value recorded under Cosif item 1.6.9.00.00-8 (Provision for Credit Operations), rectifying account of the title "Credit Operations" (Cosif 1.6.0.00.00-1), and which in theory represent the amounts provisioned resulting from the classification of loans and financing operations at different risk levels, as established in Resolution No. 2.682 (Brasil, 1999). This first identification represents the total accruals of cooperative i in period t ($PCLD_{t,it}$);

b. afterward, we measure the PCLD portion based on weighing the amount recorded in each accounting item that reflects each of the risk levels regulated by Bacen (AA to H level) by the minimum percentage of provision regulated by Resolution No. 2.682 (Brasil, 1999). This calculation sensitizes the non-discretionary portion of PCLD, which is effectively provided by cooperative i at time t considering the aforementioned document. The levels of risk, accounting items, and respective percentages are highlighted in Table 1.

Table 1

Risk Levels and Minimum PCLD Provision

Risk Levels	Delay in Days	% Minimum Regulatory Provision	Account Item (Cosif Account)
AA	-	0.0%	3.1.1.00.00-3
A	-	0.5%	3.1.2.00.00-6
B	15 to 30	1.0%	3.1.3.00.00-9
C	31 to 60	3.0%	3.1.4.00.00-2
D	61 to 90	10.0%	3.1.5.00.00-5
E	91 to 120	30.0%	3.1.6.00.00-8
F	121 to 150	50.0%	3.1.7.00.00-1
G	151 to 180	70.0%	3.1.8.00.00-4
H	Above 180	100.0%	3.1.9.00.00-7

Once the non-discretionary portion is identified, the difference between the two balances previously found, namely $PCLD_{it}$ and $PCLD_{nd}$, to find the discretionary portion of PCLD, called $PCLD_d$, would reflect surplus (or not) in recognizing losses according to the related criteria, in addition to what is regulated by the supervisory body (Bacen), and which, would lead cooperative i at time t to perform earnings management. In other words, this balance $PCLD_d$ is consonant with Equation 2.

$$PCLD_{d,it} = PCLD_{t,it} - PCLD_{nd,it} \qquad (2)$$

Subsequently, in addition to the authors' operationalization, we sought to improve this metric by assigning the dichotomous variable ("GRCoop"). Note that earnings management on the part of credit unions has been recently operationalized by Brazilian institutions based on at least three metrics, besides the one previously presented, namely: (a) through expenses with PCLD, considering discretionary and non-discretionary portions (Maia *et al.*, 2013; Bressan, Bressan & Silva Júnior, 2016; Bressan, Souza & Bressan, 2017); (b) frequency analysis through histograms (Bressan, Bressan & Silva Júnior, 2015; Santos & Guerra, 2018); and (c) the ratio of the cooperatives' net profits to total or operational revenues, for smoothing their income using Eckel's index (IE) (Santos & Santos, 2020).

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In this sense, in a heterogeneous set, such as that of Brazilian credit unions, studies usually seek new ways to operationalize this phenomenon, considering that, in addition to occasional and intrinsic differences in financial or non-financial institutions such as size, more recent laws related to the study's object, new classifications were added to the cooperatives concerning their risk profile and different fundraising strategies (Brasil, 2015, 2017). Hence, measurements such as expenses with PCLD, as well as the reporting of financial information, are also influenced by these segmentations, which, when analyzed together, may present econometric issues, mostly related to heteroscedasticity.

Therefore, the objective is to analyze earnings management as a "fact" *per se*, that is, whether this mechanism is used or not, instead of quantifying it, even if weighting it according to the credit unions' size in a given period, as suggested in previous studies, whether based on total assets or the balance of the credit operations, which, we emphasize, would also "carry" in this weighting, the effect of these institutions potentially use earnings management or not.

Therefore, by identifying a discretionary portion based on expenditure with PCLD, we propose to assign 1 (one) to variable "GRCoop" and 0 (zero) otherwise, that is, in the absence of this discretionary portion. Hence, seeking a more objective interpretation of facts, we expect the "GRCoop" variable to be a good *proxy* to reflect earnings management practice in these institutions.

Consequently, limited understanding of financial slack associates it with available or unabsorbed slack, represented by the most liquid assets not invested in any organizational activity (Wieczorek-Kosmala & Błach, 2019). Therefore, a variable (called "FF") was added to the base model, as a *proxy*, to reflect the financial slack of Brazilian credit unions, based on one of the PEARLS[i] liquidity indicators system, "L2", which shows whether the institution is effectively managing its cash to meet deposit withdrawal requests and liquidity reserve requirements, as presented in Equation 3.

$$L2 = FF = \frac{\begin{array}{c}(\text{Cosif } 1.1.0.00.00 - 6_{it} + \text{Cosif } 1.2.0.00.00 - 5_{it} + \\ \text{Cosif } 1.3.0.00.00 - 4_{it} + 1.4.5.00.00 - 8_{it})\end{array}}{\text{Cosif } 4.1.0.00.00 - 7_{it}} \qquad (3)$$

- Where: Cosif $1.1.0.00.00 - 6_{it}$: Available funds; Cosif $1.2.0.00.00 - 5_{it}$: Interbank investments w/ immediate liquidity; Cosif $1.3.0.00.00 - 4_{it}$: Marketable Securities and Derivative Financial Instruments; : $1.4.5.00.00 - 8_{it}$: Financial Centralization – Cooperatives; and Cosif $4.1.0.00.00 - 7_{it}$: Total Deposits.

In addition to what cooperatives invest in bonds and securities, the difference between traditional liquidity indicators and the indicator proposed here is related to the transfer of resources from surplus cash to central cooperatives, resulting from the cooperative act called "financial centralization". Thus, the indicator considers the relationship between these short-term assets not invested in the credit union's operations and its total deposits (whether in cash or installments), as a *proxy* for the current liquidity of these institutions (Bressan, Braga, Bressan & Resende Filho, 2010).

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i   "PEARLS" is the acronym for a group of accounting-financial indicators deriving from the evaluation of the following key operational areas of the credit unions: Protection, Effective Financial Structure, Assets Quality, Rates of Return and Costs, Liquidity, and Signs of Growth. It is a system of the World Council of Credit Unions – WOCCU, an international agency that promotes credit cooperativism and that created the PEARLS system at the end of the 1980's, based on an adaptation of the U.S. CAMEL to the credit union environment (Bressan, Braga, Bressan & Rezende Filho, 2010).

To control the behavior between the aforementioned metrics, five variables were included to control for the relationship proposed here, namely: cooperatives are classified as "large" or "small" ("Tam"); whether the cooperative does not collect cash deposits ("CapEmp"); proportion of overdue operations ("OpVenc"); the cooperative's spread ("Spread"); and finally, whether the cooperative allows the free admission of members ("LA") or not, the description of each are presented in Table 2.

Table 2
Proposed Control Variables

Variables	Description
Tam (Size)	An administrative structure integrated by a board of directors and executive board subordinated to it is considered to be large to reflect the fact that full credit unions or with total assets above R$50 million must adopt Resolution No. 4.434 (Bacen, 2015). Diniz and Girão (2019) adopted this same classification. A dichotomous variable was added, 1 (one) was assigned when the cooperative met these criteria in the respective period and 0 (zero) otherwise.
CapEmp	It indicates the cooperatives whose funding is limited to the members' paid-in capital, without raising funds or deposits or transactions in foreign currency, based on the classification established by Resolution No. 4.434 (Bacen, 2015). The objective is to verify whether the absence of these funds influence earnings management in these institutions, with a dichotomous variable, assigning 1(one) when the cooperative does not present total deposits in the period (Cosif item 4.10.00.00-7), and 0 (zero) otherwise.
OpVenc (Overdue operations)	The National Cooperative Credit System Overview (Cooperative Guarantee Fund [FGCoop], 2020) highlighted that the portfolio of singular credit unions is mainly classified at AA, A, and B risk levels (71.3% of a total portfolio of R$145,526,063 billion). However, there was a slight deterioration between 2015 and 2019 in the portfolio's risk rating, with a drop in the proportion of operations at risk level (from 51.5% in 2015 to 38,9% in 2019), with a concomitant increase B, C, and D risk levels (from 40.4% in 2015 to 51.4% in 2019), which consequently, would lead to more frequent earnings management (or not). In this context, according to Bressan, Braga, Bressan & Resende Filho, 2011), the indicator "overdue credit operations (from level B to H) divided by the total classified portfolio" is relevant in determining the probability of insolvency of Brazilian credit unions and, in this study, in determining its influence on the dependent variable.
Spread	It is calculated by the difference between loan fees charged from borrowers and the funding fee paid to customers (Maia, Colares, Cruz & Bressan, 2019), which is interpreted as "the larger, the better". Spread= "GerOR" – "CustoCap", em que: GerOR= (Cosif 7.1.0.00.00-8 t / Cosif 1.6.0.00.00-1 t); e CustoCap = [(Cosif 8.1.0.00.00-5 - ((Cosif 8.1.8.30.30-9) + (Cosif 7.1.9.90.30-7))/ (Cosif 1.6.0.00.00-1) However, these institutions seek a balance between their economic and social performance, considering that "profits" in credit cooperatives are surpluses determined by the result of the products and services produced to the same members. Hence, the management challenge becomes to identify which rates are advantageous to the members and sufficient for the cooperative not to compromise its operational efficiency (Canassa & Costa, 2018) and, at the same time, not allowing this trade-off to compromise its earnings at the end of the period.
LA (Free admission)	In 2019, according to National Cooperative Credit System Overview (Bacen, 2020a), the sector of cooperatives accentuated the process of changing membership criteria, which increased the number of singular free admission cooperatives, a total of 413, representing an increase of approximately 10% over the previous period. On the other hand, rural producer cooperatives and mutual credit decreased by 45% and 11%, respectively. Hence, by the end of 2019, free admission cooperatives represented 47% of the singular cooperatives active in Brazil (40% in December 2018), with the participation of approximately 83% of the sector's total assets. Based on the importance of these cooperatives within the SNCC, a dichotomous variable is proposed where 1 (one) is assigned when a cooperative is classified as free admission cooperative and 0 (zero) otherwise, as proposed by Maia et al. (2013), Bressan, Bressan and Silva Júnior (2016) and Bressan, Souza and Bressan (2017).

Binary logistic regression will be used to estimate the model. It is based on maximum likelihood estimation and can be defined by a vector of explanatory variables (Fávero & Belfiore, 2017). Based on the operationalization presented, logit (Z), the parameters of which we want to estimate, is defined in Equation 1.

$$Z_{it} = \alpha + \beta_1 FF_{it} + \beta_2 TAM_{it} + \beta_3 CapEmp_{it} + \beta_4 OpVenc_{it} + \beta_5 Spread_{it} + \beta_6 LA_{it} \tag{1}$$

The estimated likelihood that a credit union will perform earnings management using discretionary expenditures with PCLD is described as follows:

$$p_i = \frac{1}{1 + e^{-(\alpha + \beta_1 FF_{it} + \beta_2 TAM_{it} + \beta_3 CapEmp_{it} + \beta_4 OpVenc_{it} + \beta_5 Spread_{it} + \beta_6 LA_{it})}} \tag{2}$$

Note that logit does not represent the dependent variable, called Y. Rather, it represents the expression of probability p_i that the event of interest will occur for each observation, according to the logit Z_i, that is, according to the parameters estimated for each explanatory variable.

4. Results

Table 3 presents information concerning the estimation proposed for this study, considering the primary interest variable (FF), measured by the indicator "L2" of the PEARLS system. The results indicate that the interest variable presented a positive and significant sign at 1% (0.004), indicating that financial slack positively influences the earnings management practice among credit unions, confirming hypothesis H1. This finding suggests that the greater (or smaller) the financial slack available to managers, the greater (or smaller) their propensity to perform earnings management, showing that the Brazilian credit unions can use financial slack as a strategy to mitigate the perception of risk among its members.

Table 3
Study results

Variables	Coefficient	Standard error	*Statistic t*	*p-value*
Constant	−0.456	0.041	−11.09	0.000 ***
FF	0.005	0.000	1.676	0.004 ***
Tam	0.912	0.052	17.44	0.000 ***
CapEmp	−0.659	0.051	−12.77	0.000 ***
OpVenc	−0.157	0.086	−1.820	0.069 *
Spread	0.009	0.012	0.732	0.463
LA	1.173	0.059	19.75	0.000 ***
Dependent variable mean	0.466949		S.D. dependent var.	0.498926
McFadden's R squared	0.139228		Adjusted R- squared	0.138418

Note: Likelihood ratio test: Chi-square (6) = 2407.15 (0.0000). Legend: FF: Financial Slack ("L2" PEARLS System); Tam: cooperative's size; CapEmp: Capital and loan cooperative; OpVenc: Overdue operations; Spread: Difference between loan rates (GerOR) and funding raising (CustoCap); and LA: Free admission cooperative.S.D.: Standard Deviation. Significance: ***: 1%, **: 5% *: 10%.

Defenders of financial slack identify four primary functions, among which, that a slack works as a buffer between organizations and external contingencies, which facilitates the company's adaptation to environmental changes and thus, improve the companies' long term performance (Wieczorek-Kosmala & Błach, 2019). Bradley, Shepherd, and Wiklund (2011) present positive biases stating that financial slack plays several key functions, such as shielding companies from internal and external variations, decreasing organizational conflicts by providing resources for a large variety of projects, and enabling companies to experience organizational changes and innovations. Note, however, that in the presence of higher slack levels, the behavior acknowledged by the agency theory prevails.

Lack of clarity, particularly regarding the role of credit cooperatives, lack of commitment to strategic drivers (vision, mission, and values), the low dominance of their doctrinal differentials, and dazzle with the market seriously compromise the preservation of a cooperative's identity, leading to severe demutualization risks (Meinen, 2016). Hence, the notion of self-sufficient coverage of financial resources of Brazilian credit cooperatives (here represented by a set of funds available, cash equivalents, and financial centralization) is considered a method of risk financing used by these institutions towards their members and supervisory bodies.

In addition to analyzing the study's primary interest variable, the control variables were also tested along with their respective relationship with earnings management ("GRCoop"). The first analysis, concerning the size variable, showed that when a credit cooperative is classified as "large", as adopted by Diniz and Girão (2019) and Diniz (2020), the largest Brazilian credit cooperatives tend to perform earnings management, which is considered a common effect of credit operations proportionally raised by these institutions.

Thus, it is essential to note that, specifically in credit cooperatives, there is no specific incentive for their partners to invest. Hence, the primary sources of capital derive from four aspects: from the deposits made by the partners, whether in current accounts (cash); savings accounts or investments (installments); from compulsory payment of quota shares, a process that cooperatives establish in the "contract" with members at the time of their admission; fundraising through central cooperatives, when so subordinated; or from reinvestments from surpluses.

Carvalho, Diaz, Bialoskorski Neto, and Kalatzis (2015) consider that funding and investments are positively related to the survival of Brazilian credit cooperatives, and the nature (type) of the credit cooperative is relevant as an explanatory factor. Thus, in the case of institutions that do not raise funds through deposits ("CapEmp"), and consequently cannot be financed by these means, this study's findings (negative and significant sign) show that these tend to perform earnings management based on discretionary criteria and therefore, do not smooth them in periods of greater volatility.

Additionally, earnings management appears reversed to a larger proportion in the Brazilian credit unions' overdue operations ("OpVenc"). Hence, cooperatives with most of their credit operations in a higher risk range because they are exposed to smaller earnings, are less prone to perform earnings management, and therefore, their members are less likely to perceive risk. This is also reinforced by the fact that smoother credit cooperatives would be less conservative than non-smoothers (Santos & Santos, 2020). Note that setbacks may occur due to a cooperative performing earnings management in a given period given extraordinary gains (non-operational revenues, for instance, called uncooperative acts) or not necessarily due to a conservative component, but by a requirement of the regulatory body in provisioning and reversing the result in the previous period to the subsequent period, according to Resolution No. 2.682 (Brasil, 1999).

Even though there is little competitive "aggressiveness" in the management of credit cooperatives, which includes spread, this characteristic's intensity could be positively related to performance. However, this study's findings do not sign that by having an "excess" between funding rate (through deposits or equity) and which was generated by operational revenues, there would be a practice (or not) of earnings management, for this "excess" to be greater or smaller.

Finally, the members of credit cooperatives can play two roles: creditors (savers) and debtors. As members can be both simultaneously, these institutions need to minimize moral risk issues (Mercer, Póvoa & Piccoli, 2019). The fact that a cooperative is classified as free admission intensifies these relationships due to the interests and priorities of a heterogeneous group of associates: while the first wants financial products at a competitive price, the second expects the greatest possible return on capital invested (Mckillop& Wilson, 2011), and this information asymmetry increases the risk of operations within these entities. Hence, the more homogeneous the members' concerns, and within this sphere, the smoother this relationship is, the lower the agency costs and democratic vote will express the majority's desire than of just of a specific group. In this context, a cooperative that freely admits members tends to perform earnings management.

5. Final Considerations

The retention of risks in an organization requires the analysis of a broad spectrum of its consequences for maintaining its financial balance, liquidity, and efficiency. These decisions can be supported by the initial assessment of a company to retain risks, defined in this paper by the existence of financial slack in its buffer role, as a pre-loss financing approach. Thus, this study's objective was to analyze the influence of financial slack in the Brazilian credit cooperatives' practice of earnings management between 2000 and 2019 (20 periods), with a total of 12,520 observations.

For that, the dependent variable proposed in this paper was dichotomous, called "GRCoop", based on the operationalization proposed by Dantas, Borges, and Fernandes (2018), which uses the discretionary portion of expenditure with PCLD, seeking to analyze earnings management as a "fact" *per se*, that is, considering whether this mechanism is adopted or not, instead of quantifying it. Consequently, a variable (called "FF") was added to the base model, as a *proxy*, to reflect the financial slack of Brazilian credit cooperatives, based on one of the PEARLS System's liquidity indicators, "L2", together with other variables related to the profile of credit operations and the characteristics of credit cooperatives, such as size, whether they collect deposits, the proportion of overdue operations (from B to H level), spread, and whether it freely admits members.

Given the trade-off presented, the results show that financial slack positively influences earnings management among Brazilian credit cooperatives, confirming the hypothesis raised here. Thus, the idea is that in times of earnings management through discretionary portions with PCLD, these institutions maintain a level of liquidity above the expected. On the other hand, in the case of not performing earnings management, the cooperatives would keep stable liquidity or below the expected, keeping in the extreme, what is determined by the regulatory body. The hypothesis confirmed would reflect a trade-off between financial slack and surpluses or losses, that is, a speech that could, among other things, reflect a "sacrifice" in profitability in the name of growth and vice-versa. This specifically happens in these situations based on the cooperatives' inherent characteristics. Two aspects pressure a cooperative society: political and social on the part of its members and economic, also on the part of its members but, more intensively on the part of regulatory bodies.

Even though the definition of slack is well established in the literature, empirical evidence shows its relevance for financial performance; however, researchers have not reached a consensus in this study's scope. A plausible explanation is that financial slack is a multi-theoretical approach and the effect of having financial slack within an organization depends on how the different theories foresee that managers will use such slack. From the point of view of corporate finance management, the activity of a company is related to the constant transformation of funds (cash) into assets by the generation of fixed assets (investments) or current assets (operating activity), followed by the transformation of assets into funds (money). For this reason, another caveat is related to the collection of an adequate amount of cash reserve and equivalents, which is time-consuming depending on the organization. Thus, there is a risk of the company facing a loss before the necessary funds are reserved. Hence, a conscious investment of financial slack would also need other methods or strategies until the necessary level of funds can be accounted for in the cooperative and safeguarded.

To pursue this line of research, we suggest that future studies analyze other planned retention strategies related to the remaining types of slack, such as remuneration or contingent financing, related to recoverable and potential slack, respectively, and analyze available slack by other metrics of liquidity or debt capacity, adapted to the context of Brazilian credit units.

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