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Governance, Reforms and Crowding out Risk in Italian CCBs

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Abstract

The Italian reform of Cooperative Banks (legislative decree 18/2016 converted into law 49/2016) was created to address the main structural and economic difficulties that the Italian cooperative credit sector is facing.

This work intends to evaluate the impact of the reform and to warn against the risk that it could intervene negatively on the fundamental values of cooperative credit (mutuality, localism and solidarity within the community to which it belongs), without taking into account the non-profit multi-stakeholder nature and of the cooperative banks (BCC: Banche di Credito Cooperativo).

In the proposed model, the study of the non-material motivational component of the subjects, which in this work is identified in conformity preferences, assumes a central importance. The emergence of "virtuous" behavior in this context can be explained as the equilibrium outcome of a game in which players do not act solely pursuing self-interest, but also and above all as individuals belonging to the same community that shares ideal principles on the equitable sharing of wealth.

However, because the intrinsic motivations are fundamental but also fragile, our study of the effects of the reform mainly focused on the risk that such intervention might alter or even oust the intrinsic motivations of the subjects (crowding-out effect), threatening the stability of the motivational system that guarantees the existence of the BCCs.

The purpose of this work is to investigate whether a large-scale legislative intervention, such as the recent reform of the BCC, could end up altering the essential characteristics of the cooperative credit system, putting its integrity and uniqueness at risk.

Starting from a descriptive model of the BCCs in a context of interaction among different stakeholders, characterized by motivations of conformity to an ideal (conformity preferences - Grimalda and Sacconi, 2005), various ways of external intervention are hypothesized and the risk of crowding out of the intrinsic motivations of individuals (Frey, 1997) is analyzed.

1. Cooperative banks in an institutional diversity framework

Cooperative banks are a particular institution that represents an alternative to investor-owned and profit-maximizing commercial banks. They are based on different motivations and their definition of success is very different.

The essential elements that define the cooperative banking institution can be identified in *i)* **mutuality**: the main purpose of the bank is to benefit the members, who are at the same time customers and owners of the bank, rather than to maximize profits; *ii)* **not-for profit**: the main source of capital is retained profits added to reserves; *iii)* **economic democracy**: the voting mechanism is based on the principle "one head one vote" rather than votes proportional to the owned shares; *iv)* **localism**: their focus is on long-term relationships, with a strong link (of mutual trust) with the local area (see Birchall, 2013; Boscia and Di Salvo, 2009).

These characteristics led cooperative banks to play a well-defined role on the banking scene: thanks to a low propensity to invest in complex financial instruments, motivated by the bank's attention to supporting the real economy of their communities, combined with a long-term perspective that guides their business strategies (not constrained by the obligation to maximize profit for the benefit of speculative shareholders), cooperative banks have played an important role in the economic and social development of the regions in which they operate and contributed to the stability of the financial system as a whole, especially during the financial and economic crisis.

Empirical studies (see Ayadi et al., 2010; Birchall and Ketilson, 2009) indicate that during the recent economic crisis, cooperative banks have had very few losses on investments and very few have needed government help; they have experienced an increase in assets and deposits, volume of lending, membership; have offered a better rate of interest; and they displayed greater stability (measured by capital adequacy ratios, and loan default rates).

It has been argued (Ayadi, 2015) that this success provides a vivid argument in support of the merits of institutional diversity in the context of banking systems, since the coexistence of different institutional forms, objective functions and business models enhances resilience, thereby improving the ability to adapt to an environment hit by major crises. Nonetheless, external forces are pushing financial cooperatives to demutualize or restructure which may cast doubt on their future as cooperatives. (Ayadi, 2015)

However, cooperative banks also have structural weaknesses, which have been highlighted by the persistence of the recession and by international phenomena such as globalisation, deregulation and the disintermediation of financial markets (see Boscia et al., 2010).

Although cooperative banks have proved to be resilient to the financial crisis, the subsequent recession has led to a significant increase in deteriorated loans, also due to substantial credit exposure and poor diversification of the credit portfolio. Cooperative banks have played a very important counter-cyclical role: in the first phase of the crisis, the cooperative credit system continued to provide loans, proving to be a stabilising factor in the financial sector and maintaining greater contact with the real economy. Moreover, when the crisis took on a more real than just financial, cooperative banks did not significantly reduce their lending, even in the face of a continuous deterioration in credit quality. Another weakness is represented by the low level of diversification in which these institutions operate, firmly rooted in the region to which they belong. (See Arnone, 2015 for a rather effective analysis of this phenomenon in Italy).

The evolution of the regulation of the banking sector is accompanied by an ever-increasing demand for compliance of credit institutions. The so-called "one size fits all" approach pursued by Europe in issuing banking rules and regulations is detrimental to small banks, as it imposes severe regulatory costs (Masera, 2016).

In addition, the value adjustments made in financial statements absorbed a large part of the management result, which was already weakened by the contraction in credit demand and by the compression of interest rates that reduced the interest margin. Considering that self-financing through the retention of profits is the primary type of capitalisation for a cooperative bank, there is a clear difficulty in adapting the capital to the (increasingly higher) standards required by regulations.

Finally, there are weaknesses associated with the governance structure: the small-scale of the territorial areas in which the cooperative banks operate according to a pure decentralised system has often led to a low turnover of the management body members, who are therefore more exposed to the risk of groupthinks or, at least, to limited internal dialogue and discussion. It may be the case that, in a market context that is undoubtedly more insidious than in the past, the competent bodies are not able to properly assess the risks of capital employment. In the most severe cases, situations occur of genuine conflicts of interest and exposure to conditioning of choices.

Some of these problems are mitigated by the presence of centralized systems, although the literature has also highlighted how groups may represent a risk if they threaten the cooperative identity of the system, diverge from the customer-owned business model and pursue other objectives, damage the autonomy of other banks, or compromise their ability to respond to local needs (Desroches and Fischer, 2005; Ayadi et al., 2010; Birchall, 2013).

2. The Italian Reform: potential and risks of banking groups

An interesting case of institutional change is given by the recent reform of Cooperative Credit Banks in Italy (Italian Legislative Decree 18/2016 converted into Law 49/2016), that was created to address the main structural and economic difficulties that the Italian cooperative credit sector is facing.

Following the example of other countries (notably Germany, Austria and France), the reform aims to intervene with the creation of one (or more) banking groups. The legislator hopes that its size should allow economies of scale to be achieved by cutting costs (e.g., by sharing resources for regulatory fitness checks), and the identification of a shared group strategy should strengthen its competitiveness and encourage a process of modernisation. The parent company will also be able to raise capital on the market, and in case of problematic situations, to actively intervene in credit policies and in the composition of boards of director.[1]

The obligation to join a "Cooperative Banking Group" is certainly the main innovation introduced by the reform. The group will be formed by cooperative banks (owning more than 60% of its capital), non-cooperative banks controlled by the parent company, as well as financial and instrumental companies.

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[1] Before dealing more effectively with the changes introduced by the reform, it may be useful to remember that Article 35 of the Consolidated Law on Banking in any case establishes the prevalence of operations of BCCs towards their members, and the obligation to allocate 70% of the annual net profits to reserves and another share to the mutual funds for the promotion and development of cooperation remains unchanged. In order to strengthen the capital base of the BCCs, the reform increases the minimum number of members from 200 to 500, while the maximum allowed shareholding of each single member doubles to € 100,000, while the principle of per capita voting remains valid.

The parent company of the group must be incorporated as a joint-stock company with registered office and general management in Italy. The parent company's legal form as a joint-stock company is thought as a tool to combat the problem of recapitalisation, but it is not clear what impact will the participation of speculative investors in the capital have, in particular there is a potential conflict between the cooperative and mutual principles of the controlled cooperative banks and the objective of profit maximization for the shareholders of the group (Costi, 2017).

In order to join the banking group, cooperative banks shall have to sign a *cohesion contract*, agreeing to submit to the management and coordination powers of the parent company. These powers will be exercised in proportion to the riskiness of the affiliated banks, which will be monitored through close supervision and a system of early warning indicators. Nevertheless, the parent company's powers of intervention are proportional, but not limited to exceptional cases. In order to safeguard the group's stability, the parent company has the right to determine common strategic guidelines and goals, and for this reason it can influence the composition of the management bodies and define credit policies, independently of substantive assessments. In exerting its powers, the parent company shall issue binding provisions and monitor compliance to them, and for this purpose it also has sanctioning powers (measures ranging from restrictions on operations, to the prohibition of new operations and, in the most critical cases, the exclusion of the single banks from the group).

With regard to corporate governance, the cohesion agreement must indicate how the link between the bodies of the companies belonging to the group and those of the parent company will be structured. As a rule, the appointment of management and control bodies is the responsibility of the shareholders' meeting; however, in the event that the parent company considers the persons thus chosen not fit for the task, it may revoke their appointment (giving reasons for its decision) and appoint directors and statutory auditors directly. The parent company may exercise this right *"unconditionally with respect to each affiliated bank, regardless of its riskiness"*.

Internal audit and second-level supervisory functions are outsourced to the parent company, which has sole responsibility for prudential supervision and therefore has full power to intervene in these areas. In addition, all operations of significant strategic interest need prior approval from the parent company.

The cohesion contract provides for a joint and several guarantee between the parent company and the affiliated cooperative banks, which is a necessary condition for the bank to become a member of the group. This guarantee is reciprocal and is referred to as a *cross-guarantee*: the parent company guarantees all the participating banks, and each individual bank guarantees the parent company and the other affiliates for the obligations assumed. The main tool of the joint and several guarantee is represented by refinancing shares, issued by the bank in distress, which the parent company may subscribe to at the same time as implementing a shared plan (approved by the parent company) listing the measures to be implemented. As an exception to the principle of per capita voting, in this case the parent company shall hold a number of votes at the shareholders' meeting in proportion to the subscribed capital, in order to protect the participating investment.

The purpose of the following work is to investigate whether such a large-scale legislative intervention, could end up altering the essential characteristics of the cooperative credit system, putting its integrity and uniqueness at risk.

In order to evaluate this risk, we start from a descriptive model of the cooperative bank in a context of interaction among different stakeholders, characterized by motivations of conformity to an ideal, and then we hypothesize various ways of intervention by the parent company to understand the possible effects in terms of equilibria.

3. Cooperation in banks: a model

We describe the strategic interaction taking place within a Cooperative Bank as a game between three representative players: a member/customer *(player M)*, a manager/administrator *(player A)* and an influential member *(player I)*.

Player M represents the potential members of a cooperative bank. When they choose the strategy *entry*, they become at the same time customers and owners of the bank, and they delegate control to managers and the board. Although they are owners, their control over operations and strategic choices is limited, because of the *one head-one vote* principle and because ownership is dispersed; members have heterogeneous interests and face high costs in trying to influence decision-making (see Birchall, 2013, ch. 9; Fonteyne, 2007; Groenveld and Llewellyn, 2012). Typically, they expect administrators to manage the bank in the interest of members, with a correct and prudent behaviour; but once they entered, they cannot play an active role and their payoff depends on the choices by other players.

If their expectations are not fulfilled, they can "vote with their feet" by choosing the strategy *exit* (Hirschman, 1970). As highlighted by Groeneveld and Llewellyn (2012), "the exit route by members (who are also customers) is a particularly powerful disciplinary tool in the case of cooperative banks": if they choose to turn to a competitor bank, they reduce the capacity of the cooperative bank and consequently also managers and other members cannot gain high payoffs[2].

While ownership of the bank is held by members/customers, control is delegated to the board and the managers who have the concrete power to make discretionary decisions. Any abuse in the performance of their duties could remain hidden from the eyes of members who suffer of asymmetric information.

Player A represents the administrators of the bank (the board and the managers), who should act in the interests of members, of the local community and, in opposition to the administrators of an investor-owned banks, should maximise customer value rather than profits (EACB, 2005). If they comply with these duties, they choose the cooperative strategy (strategy C_A) and their payoff corresponds to a fair remuneration of their work.

But they can also choose to defect (strategy D_A) from the compliance with their duty of care, by extracting private benefits or colluding to protect their interests (D'Amato and Gallo, 2017). In the first case, they can exploit cooperative resources in their own interests: for example, managers may set higher wages for themselves; board members may press for loans in their favour or that of their friends. By acting in this way, they can secure a higher payoff ($w_H > w_F$). In the second case, they

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[2] Groeneveld and Llewellyn (2012) note that "Withdrawing deposits thus exerts a powerful discipline on cooperative banks and constitutes, in some senses, a more direct threat to managers. This is because when a depositor withdraws funds, the capacity of the cooperative bank is immediately reduced". See also: Stefancic, Goglio, Catturani (2017).
"Exit or voting with their feet by members diminishes the volume of deposits available to the business, and can consequently be a more powerful discipline on management than the sale of shares in a SHV bank. Although customers of SHV banks have similar options at their disposal to signal their discontent by, for instance, withdrawing deposits, the crucial distinction is that they are not owners of the bank. The exit route by members (who are also customers) is a particularly powerful disciplinary tool in the case of cooperative banks, as it removes resources from the bank, whereas the sale of shares in an SHV bank does not". (Groenveld, 2015).

can manage the bank in favour of specific constituencies (Fonteyne, 2007), supporting the requests of particular groups of interest instead of the larger group of members and stakeholders.

Finally, player *I* represents a class of influential members with special interests. In fact, in the context of dispersed ownership with low incentives for members to actively participate and monitor the management, there may be some groups who have bigger incentives to participate and capture the administrators, trying to control the bank for pursuing their own goals. Such groups might be formed by member-employees, large borrowers, or local politicians (Fonteyne, 2007).

When the influence group behaves in accordance to the cooperative principles (strategy C_I), they have no detrimental impact on the other stakeholders; while when they act in an opportunistic way (strategy D_I), they can distort the allocation of the assets in their own interest at the expenses of other members.
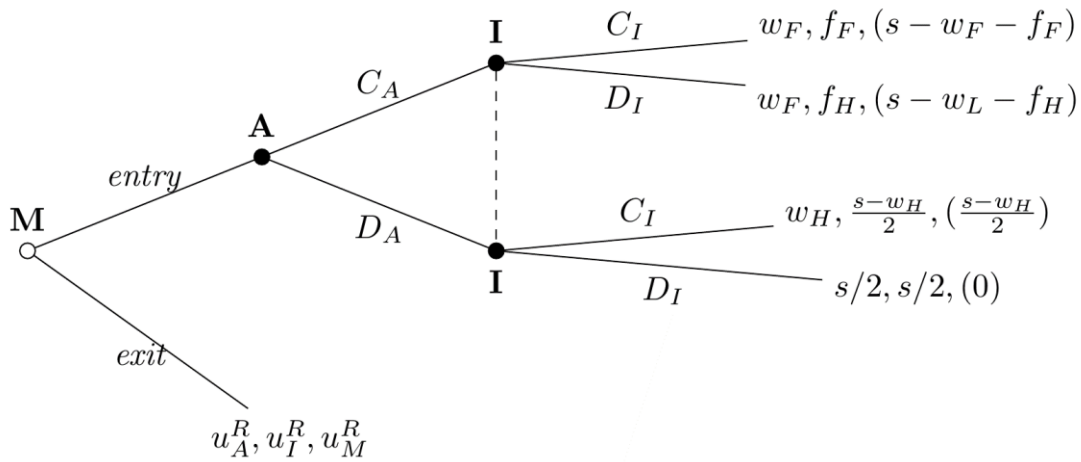

Figure 1 – The Cooperative Bank game in extensive form.

The resulting game is represented in extensive form in *Figure 1*: first, potential members choose whether to enter/remain in a Cooperative Credit Bank or to turn to a competitor bank, as in a standard *Trust Game* (Kreps, 1990; Berg et al., 1995).

If they exit, each player *i* will receive a *reservation utility u^R_i*, which is lower than the potential gains within a cooperative bank. Note that this might differ across different members, since they are several and not necessarily identical, while in the model we over-simplify by assuming that all of them can be represented by a single player.

If they enter, a surplus *S* is produced (which does not indicate the corporate accounting profit but the wealth created by the bank). A part of this surplus is allocated to reserves (*R*) and the remaining part (*s=S-R*) is distributed among players, depending on the simultaneous choice of behavior by players *A* and *I*.

If *M* enters, the subsequent subgame is played only by *A* and *I*, and can be represented in normal form (see *Figure 2*) as an *Exclusion Game*, where two strong players (*A* and *I*) and a weak player (*M*) interact making a social surplus affordable, but only the strong players have decision influence over the allocation and distribution of the social surplus (Sacconi and Faillo, 2010). In particular, the active players can choose between two alternative strategies: first, asking for a small share of the surplus,

compatible with a fair distribution of the surplus (cooperative strategy), or second, asking for a large share of surplus (defection strategy), leaving a smaller – or even null – part to the dummy player M.

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		C_I			D_I		
A	C_A	$w_F,$	$f_F,$	$(s - w_F - f_F)$	$w_F,$	$f_H,$	$(s - w_L - f_H)$
	D_A	$w_H,$	$\frac{s-w_H}{2},$	$\left(\frac{s-w_H}{2}\right)$	$s/2,$	$s/2,$	(0)

Figure 2 – Payoff matrix for the subgame if M *chooses* entry *(Exclusion Game).*

If both A and I choose the cooperative strategy (C_A, C_I), in accordance with the cooperative bank's founding principle, the surplus is used for the benefit of the members and the community, regardless of whether they are influential or not (e.g., by offering more advantageous conditions on funding and deposits, or by providing more support for local initiatives/associations for the benefit of the community, by providing funding to local businesses to support local development, etc.); this after having fairly remunerated the directors and the general manager. In this case, the surplus is fairly distributed between the capital reserves (R) and the three players: A receives a fair wage w_F, I receives a creditworthy financing f_F, M receives the remaining part, which is higher than his reservation utility ($s - w_F - f_F > u^R{}_M$).

Otherwise, if player I chooses to unilaterally deviate from cooperation (C_A, D_I), he can ensure a higher payoff for himself ($f_H > f_F$), leaving a smaller part of wealth to the other member; the administrator still receives his fair wage w_F. This can happen, for example, when influential members decide to lie about their conditions in order to obtain financing that they know they cannot repay, which the directors grant them acting in good faith (driven by the desire to support local development), but under conditions of information asymmetry. Since these members are important individuals within the community, the granting of credit to them without sufficient guarantees could expose the bank to instability, even serious, which would fall on the shoulders of the other members.

Another case involves the possibility that part of the surplus is appropriated by the managers or board members through high remuneration and benefits (D_A, C_I): in this case, A subtracts part of the surplus from the other two players (he earns $w_H > w_F$, while the payoff for I and M is an equal share of the remaining part of the surplus).

The last case (D_A, D_I) is the one in which, driven by opportunism, the administrators collude with influential members who therefore have the opportunity to enjoy privileged treatment over others, on which the costs of collusion fall. For example, a director could abuse his or her position of authority to grant favors to certain members for personal gain. Regardless of how it is done, what matters is that there is a surplus share that is not equally distributed among stakeholders, but which is appropriated by A and I to the detriment of the membership base. In the event of collusion, both opportunistic players succeed in appropriating a greater share of the surplus than in the previous cases (A and I get $s/2$, M gets 0).

The dominant strategy for both players is defection, where the two players collude and appropriate the surplus at the expense of the remaining (non-influential) members[3]. This determines the member's expectations: given this uniquely determined solution of the subgame, by backward induction we may go back to the M player's choice at the beginning of the whole game and since he expects collusive behavior, he has no interest in choosing a cooperative bank over another bank. This is the equilibrium of the game in the case of behavior driven exclusively by self-interest: influential members and administrators collude, therefore members will consider it more convenient to turn to another bank.

How do we then explain the existence of cooperative banks? D'Amato and Gallo (2017) review some motivations that might push administrators to perform their jobs well: directors are often also members (Shaw, 2006) with a longterm interest in the bank (Ferri, Masciandaro, & Messori, 2001); social sanctions are effective in restricted contexts where cooperative banks operate (Hansmann, 1996); reputation is a strong incentive for cooperative directors to carry out their work well (Staatz, 1983); banking regulations constrain managers to prudent behavior.

Nonetheless, these are partial incentives that cannot explain how it is possible for cooperative banks to exist without collusive phenomena, distributing the wealth produced to their community of reference, and having a large number of members who choose this type of bank.

As Birchall (2013, ch. 10) clarifies, if we start from the model of a rational, self-interested man that seeks to maximize his own utility, we cannot understand the existence of cooperatives in general. To explain the emergence and stability of a cooperative bank, it is necessary to refer to the founding values of cooperative credit: mutuality, localism and solidarity within the local community. These principles place the members at the center, as representatives of the local community where the bank operates, who implement the said principles and verify their application through self-governance.

The existence of cooperative behavior in this context can be explained as the equilibrium outcome of a game in which players do not act solely in the pursuit of self-interest, but also and above all as individuals belonging to the same community that shares ideal principles on the fair distribution of wealth. It can also be supposed that the capacity for self-determination and participation (Deci and Gagné, 2005) in the process of choice reinforces the intrinsic motivational drive, which is the decisive component for the emergence and existence of a non-profit institution such as the cooperative bank.

A comprehensive theory that can provide an explanation of why the actors involved in this kind of institution behave in a cooperative manner is the theory of **conformity preferences** (Grimalda and Sacconi, 2005)[4], based on a contractarian approach inspired by John Rawls' (1971) theory of justice, also applied in the concept of extended governance (Sacconi, 2005), according to which the company is created by the social contract that is stipulated between stakeholders around a distribution of benefits that is unanimously considered fair.

The starting point is a founding agreement between stakeholders belonging to the local community. With this, they reach an agreement behind a veil of ignorance (Rawls, 1971), i.e., regardless of their roles, on a fair principle that regulates the division of the surplus. It is reasonable to assume that in this "ideal" ex-ante bargaining phase, the fair and impartial agreement defines a principle (T) that

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[3] Provided that $(s/2) > w_F$.
[4] Extended in Cecchini Manara and Sacconi (forthcoming) and applied by Sacconi and Ottone (2015) to the cooperative governance of local public services.

corresponds to the symmetric Nash Bargaining Product[5], which requires that the surplus generated by the bank be equally distributed between administrators, influence groups and members, after deducting the portion allocated to reserve, which also represents an endowment for future generations. Members receive their surplus share not through dividends, but by benefiting from more funding or improved funding conditions (and also through support for local initiatives etc.). In addition to being remunerated, administrators can also obtain benefits. The reserve allocation reinforces the bank's strength both to deal with any difficulties and to benefit future generations.

The creation of the cooperative bank is made possible by the fact that agents attribute an intrinsic value to the fair distribution of the surplus. Whenever the surplus is divided into different shares, we move away from the ideal distribution, putting the stability of the motivational system that guarantees the existence of the bank at risk.

The values of the Nash social welfare function T vary for each strategy combination chosen by

I

		C_I	D_I
A	C_A	$4, 4, (4)$	$4, 5, (3)$
	D_A	$5, 3.5, (3.5)$	$\mathbf{6, 6, (0)}$

players. The exit strategy by M defines the *status quo*, or disagreement point, from which the other alternatives are evaluated.

For the sake of simplicity, we will hereafter consider a numerical example of the model presented above, where: total surplus $S = 16$, reserves $R = 4$, fair wage $w_F = 4$, inflated (high) wage $w_H = 5$, creditworthy financing $f_F = 4$, undue (high) financing $f_H = 5$. The subgame is described in *Figure 3*.

Figure 3 – Payoff matrix for the Exclusion Game with numerical payoffs.

The highest value of T is reached when material utilities are distributed fairly across players, and it is a basis for measuring the correspondence between the outcomes generated by players' interaction and the agreed principle (for example, no outcome will have a positive T value if even one of the players obtains zero welfare). *Figure 4* shows the Nash bargaining product calculated for each pure strategy combination needed to measure the consistency of each state with respect to the principle T.

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		C_I	D_I
A	C_A	$T = 27$	$T = 24$
	D_A	$T = 25$	$T = -25$

Figure 4 – T values for each combination strategy of the Exclusion Game.

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[5] Which requires maximizing the product of individual surpluses net of the *status quo* (the disagreement point d): $T(\sigma) = \prod_{i=1}^{n} U_i(\sigma) - d_i$ (Nash, 1950; 1953). Assuming the case of a symmetrical space of outcomes, this solution is consistent with the rules of the cooperative that assumes a symmetry between the rights of the various participants.

Following the agreement, an intrinsic component develops in the utility function of the community members that depends on the first and second order expectations on compliance with the agreed principle: the overall utility function (Vi) for a player is given by the addition of material utility (Ui) and psychological utility (Ψi). Psychological utility derives from conformity with the agreed principle (T) in the following sense: it involves a measure of the responsibility of the first player for generating a fair allocation of the surplus, given what (he expects that) the other player will do, and a measure of the responsibility of the other player, given what he (is believed to) believes. For combinations of strategies where both measures of conformity to the agreed principle are positive, a psychological component λ is added to the correspondent outcome.

The notion of equilibrium suited to this context is the "Nash psychological equilibrium"[6], which is obtained when each player maximizes their utility and at the same time the beliefs of the various orders are confirmed.[7]

The desire for compliance with the founding agreement of the bank is here considered as an intrinsic motivation (Frey, 1997): when individuals behave in accordance with the principle that they have independently deliberated (and they expect others to do so too), they draw a psychological benefit that can go so far as to counterbalance the gap in terms of material utility with respect to a choice that does not conform to T but that would allow them to obtain higher payoffs.

Conformity preferences therefore give the ideal agreement the power to impose itself in a context where there is no enforcement mechanism to ensure that the parties will cooperate. Several experimental works (Sacconi and Faillo, 2010; Sacconi et al., 2011; Faillo et al., 2015), which replicate the Exclusion Game, provide empirical evidence on the effectiveness of the agreement reached in the pre-play communication phase behind a veil of ignorance. That is, the majority of those who participate in this initial phase (in which they agree on a principle of fair distribution of the surplus without knowing what role they will then assume), in the next phase behave in accordance with this principle, although there is no external imposition.

In the following discussion, we will limit our attention to the second part of the game (once the member has decided to enter) and consider how the Exclusion Game changes for the addition of a psychological component in the overall utilities of the two active players (A and I).

Although in this way we do not consider the impact of conformity preferences of the initial player (M), the result is valid insofar it reflects an agreement among all the relevant stakeholders, that lays at the basis of the Cooperative Bank. In fact, when the potential member is not fairly treated, he can refuse to enter and by doing this he also has the power to hurt the others players, since they are not able to produce the same amount of surplus without members' participation. Moreover, a member characterized by conformity preferences might decide to stay out even when his material payoffs would be higher in case of entrance, if he feels aggrieved by the unfair behavior of the other players (see Sacconi, 2010; Cecchini Manara and Sacconi, forthcoming).

Figure 5 displays the overall payoffs resulting from the addition of the psychological conformity preference weight λ to the material payoffs where this addition is appropriate.

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[6] Geneakoplos, Pearce and Stacchetti (1989), see also Rabin (1993).
[7] In other words, in a situation of equilibrium, the expectations/beliefs of the players must be consistent with the strategies actually used.

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\begin{array}{c}
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& \begin{array}{cc} C_I & \quad D_I \end{array}
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		C_I	D_I
A	C_A	$4+\lambda, 4+\lambda, (4)$	$4, 5, (3)$
	D_A	$5, 3.5, (3.5)$	$6, 6, (0)$

Figure 5

In the case where $4 + \lambda > 5$ and therefore $\lambda > 1$, the strategy combination (C_A, C_I) becomes a psychological equilibrium. This shows that for values of the λ parameter that are high enough to counterbalance the loss in terms of material utility, then even a strategy that does not provide for opportunism can become an equilibrium.

However, it is not certain that it will actually be implemented, as there is a *multiplicity problem*: the collusive outcome (D_A, D_I) remains an equilibrium (which if reached allows no exit). However, if a player chooses a cooperative strategy, the other player's optimal response will be non-opportunistic behaviour.

The role of expectations and beliefs at the root of the ideal motivation becomes crucial at this point: the mutual expectation of conformity to the founding principle of the cooperative bank, which arises from belonging to the community and which makes it preferable for *A* and *I* to opt for the strategy of cooperative behaviour, makes it possible for *M* to consider this outcome to be more probable than the opportunist strategy. Therefore, even in the first move, the potential member decides to enter.

4. External intervention

As we have seen, collusion is a serious risk, and one might be tempted to solve the situation through an external intervention giving incentives not to behave opportunistically. Nonetheless, if agents were only motivated by material reasons, the phenomenon of cooperative credit would not be explained. What counts, we have suggested, is the incidence of intrinsic motivations and endogenous preferences for conformity following the constitutive pact of the cooperative bank.

Therefore, when evaluating external interventions, we must also take into account the effect these would have on the ideal motivations that justify the existence of this institutional form. We know from the Motivation Crowding Theory (Frey, 1997) that intrinsic motivations can be excluded or crowded out (crowding out effect) due to external interventions which are perceived as acts of control, both in the form of monetary remuneration and regulations accompanied by negative sanctions.

We introduce in the following sections some possible forms of external interventions within the context described above, in which conformity preferences provide an equilibrium of cooperative strategies, to verify whether such intervention could compromise the psychological equilibria that are created thanks to the intrinsic motivations.

This part gives interesting insights in understanding the interplay between intrinsic motives and external control. In particular, we believe it is useful for (but not limited to) the evaluation of the possible effects of the Italian reform of cooperative banks, since it was designed as an attempt to ensure greater stability to the cooperative credit system and to avoid situations of mismanagement due to incompetence or opportunism, giving the parent company the power to intervene decisively whenever it believes there are risks in this respect. The reform therefore determines a shift in control, which becomes external and whose intensity depends on the discretionary power of intervention granted to the parent company: the more direct interventions are limited to exceptional situations, the lower the impact will be; on the contrary, if the cohesion contract makes this power of intervention wider and less bound to the occurrence of particular circumstances, the shift in control will be perceived in a clearer and more generalized manner.

As the impact of the reform is clearly commensurate with the size and operating methods of the intervention powers granted to the parent company, we will have to wait for the content of the cohesion contract in order to formulate plausible hypotheses; in the meantime, three different structures can be imagined for the parent company's intervention: an intervention with greater withdrawals of resources, one characterized by monetary remuneration aimed at encouraging cooperative behavior by the directors, and lastly, an intervention in which negative sanctions are provided for in cases of mismanagement.

a. Intervention with withdrawal

The most immediate way to ensure greater stability for banks could be to retain more resources within the system, by applying a higher R withdrawal on the surplus produced. In this context, the increase in the R withdrawal should not be understood only as a greater percentage of the accounting profit for the year that is set aside as a reserve (which is already high in the cooperative banks): the greater withdrawal can in fact take place upstream, which means that the bank applies less favorable conditions and/or provides less financing so as to retain more resources for itself that it can employ in various alternative ways other than redistribution to the community. This decision may depend on

two different orders of motivations: prudential (the intervention is substantially aimed at reducing the bank's exposure and strengthening its solidity), or higher profitability and performance, in contrast with the non-profit purpose of the bank (the board of directors of the parent company, which is a joint-stock company that could have among its shareholders other than cooperative banks that are part of the group, could use the undistributed resources to make investments in financial products or to acquire strategic shareholdings in other companies and so on).

Let us therefore assume that the withdrawal made goes from $R=4$ in the initial case to $R=8$: then there is a residual surplus of $s=8$ (compared to 12 in the initial case) which must be divided between the three players (member, administrator and influential member). In other words, with the same wealth produced by the bank, the amount to be shared between the three players is diminished due to the restrictive policy imposed by the parent company.

For an intervention with withdrawal $R=8$, the players' payoffs and the values of the social welfare function T are shown in *Figure 6*.

$$\textbf{I}$$

		C_I	D_I
A	C_A	$4, 2, (2)$	$4, 3, (1)$
	D_A	$4.5, 1.75, (1.75)$	$\mathbf{5, 3, (0)}$

Figure 6 - Intervention with withdrawal:
Players payoffs (S=16, R=4).

In this scenario, it is seen that following the intervention, the administrator can distribute less to the members, but his remuneration remains fixed at *4* (and increases in the case of defection strategy D_A, further penalizing the members); the unique equilibrium solution of this game without psychological utility is (D_A, D_I).

As shown in *Figure 7*, the withdrawal involves a reduction in T: now, even for cooperative behavior by both active players, the maximum social welfare that can be reached is *3* (compared to *27* without intervention). This decrease, which can be interpreted as the "cost of the parent company's intervention" in terms of social welfare, is due in part to the fact that the surplus divided between players is now lower and in part to the fact that the intervention makes the payoffs unbalanced (towards the administrator). Finally, the only case in which the value of T improves with respect to the initial case is that which provides for opportunistic strategies: this can be interpreted in light of the fact that since the amount to be divided has been reduced, now the opportunist players can take possession of a lower share of wealth at the expense of the remaining members.

$$\textbf{I}$$

		C_I	D_I
A	C_A	$T = 3$	$T = 0$
	D_A	$T = 1.75$	$T = 0$

Figure 7 Intervention with withdrawal: values of T.

After calculating the psychological benefits related to conformist preferences, the game between administrators and influential members with the overall utilities is shown in *Figure 8:*

$$
\begin{array}{cc}
 & \mathbf{I} \\
 & \begin{array}{cc} C_I & D_I \end{array} \\
\mathbf{A} \quad \begin{array}{c} C_A \\ D_A \end{array} &
\begin{array}{|c|c|}
\hline
\mathbf{4 + \lambda, 2 + \lambda, (2)} & 4, 3, (1) \\
\hline
4.5, 1.75, (1.75) & \mathbf{5, 3, (0)} \\
\hline
\end{array}
\end{array}
$$

Figure 8 - Intervention with withdrawal: psychological utilities

Therefore, as in the initial case prior to the intervention, the λ necessary to achieve an equilibrium in cooperative strategies must be greater than *1*. The conformist utility even now enters the function of overall utility only for the combination of cooperative behaviors. Such a structured intervention - although reducing the maximum value of *T* attainable - would therefore not have an impact on the intrinsic motivations: since the withdrawal imposed by the outside takes place upstream, before the strategic interaction of players, the situation is similar to the initial case but with a lower product surplus.

Assuming that the legislator or the parent company does not ignore the existence of conformity preferences, an intervention of this type would not prevent opportunistic behaviour but would reduce the surplus share appropriated by the players, keeping more resources within the bank.

b. Intervention with incentive

The second type of intervention envisages the introduction of a *reward* in terms of remuneration for directors, where they can demonstrate that they are behaving correctly. The parent company, therefore, in order to encourage cooperative behavior, rewards player *A* when they do not give in to opportunism. However, it cannot intervene directly on the incentives of influential members.

$$
\begin{array}{cc}
 & \mathbf{I} \\
 & \begin{array}{cc} C_I & D_I \end{array} \\
\mathbf{A} \quad \begin{array}{c} C_A \\ D_A \end{array} &
\begin{array}{|c|c|}
\hline
\mathbf{10, 1, (1)} & \mathbf{10, 1, (1)} \\
\hline
5, 3.5, (3.5) & 6, 6, (0) \\
\hline
\end{array}
\end{array}
$$

Figure 9

In *Figure 9* the new payoffs are shown: it can be seen that, compared with the initial case, in case of defection by player *A* (strategy D_A), the payoffs remain unchanged; instead, when *A* chooses strategy C_A, they are awarded a reward of *6*, but the members are paid less (it is as if the surplus were taken from the members - both influential and not - and was given to the administrators). In order to be able to imagine this case, let us think of a bank that pays more to its directors and general manager when they show that they have behaved honestly, using part of the wealth that was previously redistributed to the local community for this purpose. This withdrawal of resources in favor of player *A* can also take place as an investment in more effective internal control systems and in training programs to improve the skills of directors and important managerial figures. A better prepared manager can more

easily identify a member who tries to lie about their creditworthiness situation. This phenomenon is captured by the payoffs related to the strategy combination *(C_A, D_I)* which are now equal to the case *(C_A, C_I)*: the influential member is no more able to steal benefits from the bank if he unilaterally deviates.

Such an intervention transforms C_A in the dominant action for player *A*, and thus succeeds in its purpose of incentivizing the administrators to behave correctly, although this action requires the use of a part of the surplus that was previously distributed to the community.

I

		C_I	D_I
A	C_A	$T = 0$	$T = 0$
	D_A	$T = 25$	$T = -25$

Figure 10

Let us now look at what happens to the social welfare function (*Figure 10*) following an intervention of this kind. The *T* function is void when the director is rewarded, because the members get a payoff equal to their reservation utility; this means that the strategy combination that allows to achieve a higher *T* is *(D_A, C_I)*, because paradoxically it ensures a fairer distribution of the surplus (the surplus that the opportunist director appropriated is still lower than the reward they now receive).

I

		C_I	D_I
A	C_A	$10, 1, (1)$	$\mathbf{10 + \lambda, 1 + \lambda, (1)}$
	D_A	$\mathbf{5 + \lambda, 3.5 + \lambda, (3.5)}$	$6, 6, (0)$

Figure 11

The consequence is that by considering overall utilities (*Figure 11*), the conformity preferences will support the strategy combinations that require at least one of the two players to behave in an opportunistic way. In other words, intrinsic motivations are crowded out; in the psychological game therefore, *(C_A , C_I)* is no longer an equilibrium because the director incentive makes the payoffs too unbalanced. In particular: for any value of *λ > 0* the combination of virtuous strategies ceases to be an equilibrium and the only equilibrium is *(C_A, D_I)*; for values of *λ > 5*, also *(D_A, C_I)* becomes an equilibrium.

c. Intervention with guidelines and sanctions

The third type of intervention hypothesized attempts to be more likely, but for this reason it is more complex from an analytical point of view. The two previous cases are also preparatory to this in a certain sense.

In order to ensure greater solidity to the individual banks and since cases in which administrators behave opportunistically cannot be identified, assume that the parent company promotes a management of the bank that results in higher retention of resources within the bank, with a greater

R withdrawal from the surplus produced and reduced distribution to the local community. This would enable the parent company to detect instances of mismanagement, or at least to limit the consequences. In this case, however, the parent company does not have the power to impose such a policy. What it can do is threaten administrators with sanctions for mismanagement.

As well as choosing between cooperation (C_A) and defection (D_A), administrators can now also choose whether to follow the parent company's guidelines, which promote a more restrictive policy (and lower the risk of incurring a sanction) or continue to consistently finance the local economy.

i) The parent company can see policy application and defection

Administrators are more likely to be sanctioned when they defect rather than when they act cooperatively (sanction for C_A > sanction for D_A). When they follow the parent company's guidelines, by withdrawing from the surplus to be distributed (restrictive policy: R_A) sanctions are lower than when they enact an expansive policy (E_A) (because, for example, they believe that the parent company will concentrate checks on the BCCs that provide the most funding in the local area).

For each strategy combination (now there are 8, since *A* has a further possibility to choose between expansive and restrictive policy), the payoffs are shown in the following tables, taking into account the risk of sanctions for administrators as expected losses.[8]

Under expansive policy (E_A): R=4
sanction for C_A=1.5, sanction for D_A=4

		I	
		C	*D*
A	*C*	4-**1.5**, 4, *(4)*	4-**1.5**, 5, *(3)*
	D	5-**4**, 3.5, *(3.5)*	6-**4**, 6, *(0)*

Under restrictive policy (R_A): R=8
sanction for C_A=0, sanction for D_A=2.5

		I	
		C	*D*
A	*C*	4-**0**, 2, *(2)*	4-**0**, 3, *(1)*
	D	4.5-**2.5**, 1.75, *(1.75)*	5-**2.5**, 3, *(0)*

As part of the usual strategic interaction between player *A* and player *I*, influential members always have to decide between behaving honestly or trying to lie or collude. The directors now have a total of 4 strategy combinations to choose from. The subgame therefore now looks as follows:

		I	
		C	*D*
	EC	2.5, 4, *(4)*	2.5, 5, *(3)*
	ED	1, 3.5, *(3.5)*	2, 6, *(0)*
A	*RC*	4, 2, *(2)*	**4, 3, *(1)***
	RD	2, 1.75, *(1.75)*	2.5, 3, *(0)*

---

[8] In line with that which has been stated above, the case of a higher expected sanction occurs when the administrator does not conform to the parent company's guidelines, continuing to implement an expansive credit policy, and chooses opportunistic behaviour (expected sanction = 4). The likelihood of the sanction expected by player *A* for opportunistic behaviour is higher than if he decides not to apply a higher withdrawal from the surplus but behaves correctly (the expected sanction is in fact 2.5 in the first case and 1.5 in the second). If they conform to the restrictive guidelines of the parent company and behave honestly, administrators will feel that they will not receive any sanctions (in fact, the expected sanctions for these strategy combinations are null). The payoffs for influential members and other members are quite similar to those in the initial case and the withdrawal example.

The equilibrium in the subgame without psychological utilities is [RC_A, D_I]. In a rather likely way, the external intervention with the threat of sanctions causes the director to behave cooperatively and to favour a more restrictive policy (it is the choice that reduces the expected sanction). On the other hand, this intervention cannot influence the behaviour of the influential member, who will always try to appropriate the largest possible share of the surplus by acting opportunistically. It should also be noted that for the combination of equilibrium strategies, the members receive a benefit equal to their reserve utility (i.e., that which they would receive from another bank).

Let us now look at what happens to the social welfare function T and to the psychological benefits in case of interventions. Even in this case, the intervention has an obvious cost in terms of maximum social welfare that can be achieved (now at *13.5*). Moreover, in the equilibrium of the game without psychological utilities, T is null as the utility of the members is equal to their reserve utility. The external intervention that alters the expected payoff distributions causes the crowding out of the intrinsic motivations that also support an outcome characterised by the opportunistic behaviour of player *A*.

Psychological subgame:

		I	
		C	*D*
	EC	2.5+λ, 4+λ, *(4)*	2.5, 5, *(3)*
	ED	1, 3.5, *(3.5)*	2, 6, *(0)*
A	*RC*	4+λ*0.22, 2+λ*0.22, *(2)*	4, 3, *(1)*
	RD	2+λ*0.04, 1.75+λ*0.04, *(1.75)*	2.5, 3, *(0)*

The first point to make is that for achieving an equilibrium of cooperative strategies on the part of both players, a higher λ is now required (almost double: previously 1 and now 1.92). If the parent company believes that the λ of the players is less than 1, or acts without attaching importance to the intrinsic motivations, then from its point of view the intervention can make at least one of the players desist from behaving opportunistically (and therefore there is an improvement, even in terms of *T*).

However, if we had a *1<λ<1.92*, then an equilibrium of cooperative strategies could be achieved before the intervention, but now this is no longer possible. In other words, the risk of collusion has been eliminated because now player *A* fears the sanction, but to convince the influential member to behave in a cooperative way in the event *A* applies a high withdrawal would require a very high λ (4.55). The cooperative equilibrium can be achieved through the conformity preferences of the director: if *λ>1.92*, they lead the director to choose the EC_A strategy, in response to which *I* will find it optimal to play C_I.

The crucial factor determining the outcome of the strategic interaction in this context is the probability attributed by the agents to the sanction in the different situations. In this example, the director considered it more likely that the parent company would sanction them in the case of opportunistic behaviour than in the case of a more "generous" credit policy; therefore, even if with a higher λ required, they could still decide to behave honestly and without making excessive and indiscriminate cuts to the financing granted.

ii) The monitor can only see if restrictive policy is implemented

However, let us see what happens if, in extremis, they believe that they can completely avoid the risk of sanctions by reducing capital use in the local area and keeping more resources within the bank. In this case, A expects to be sanctioned every time they choose an expansive policy (expected sanction 2.5), while the expected sanction for behaving opportunistically is null.

This case can be interpreted in the light of incompleteness of information, which makes the parent company unable to better identify cases of opportunism and thus leads it to use the type of credit granting policy as the only parameter of discrimination, deeming collusion more likely to occur in the case of an expansionary policy. Another way of interpreting this example may be that the parent company is simply interested in encouraging restrictive credit policies, voluntarily sanctioning those who do not apply such policies, regardless of any other assessment on the possible opportunism of their behaviour.

Original subgame:

		I	
		C	*D*
A	*EC*	1.5, 4, *(4)*	1.5, 5, *(3)*
	ED	2.5, 3.5, *(3.5)*	3.5, 6, *(0)*
	RC	4, 2, *(2)*	4, 3, *(1)*
	RD	4.5, 1.75, *(1.75)*	**5, 3, *(0)***

The subgame is modified in the following way.

		I	
		C	*D*
A	*EC*	1.5+λ*(0.34), 4+λ*(0.34), *(4)*	1.5, 5, *(3)*
	ED	2.5+λ, 3.5+λ, *(3.5)*	3.5, 6, *(0)*
	RC	4+λ*(0.14), 2+λ*(0.14), *(2)*	4, 3, *(1)*
	RD	4.5, 1.75, *(1.75)*	**5, 3, *(0)***

Above are the values assumed by T and the psychological game in this case, which allow to obtain the following results:

- if $\lambda < 2.5$: the equilibrium involves the use of a restrictive policy with opportunistic strategies. In fact the likelihood of a sanction is now "distorted": A expects to be sanctioned when he provides many loans and not when he acts opportunistically. In other words, they believe they can avoid the sanction simply by maintaining a restrictive credit policy. If in this case they then collude with an influential member, they consider the risk of sanctions null;
- if $\lambda > 2.5$: the strategy that provides for an expansive credit policy with opportunistic behavior of the director and cooperative behavior of the influential member also becomes attainable in this case. The intervention, once again, alters the distribution of payoffs so that the intrinsic motivations support an equilibrium involving the defection of player A. This is due to the fact that, as a result of the threat of sanctions, this strategy combination makes it possible to

achieve greater social welfare than in the case in which both players chose cooperative behavior.

From these examples, it can be deduced that the greater the expectation for the parent company not to limit itself to only intervening in exceptional cases (when it identifies collusive and/or opportunistic behavior), but sanctioning all the banks that have provided substantial financing to support the local area, the greater the risk of becoming stuck in a collusive equilibrium, "covered" by the restrictive policy that avoids the parent company's checks. All this happens at the expense of the remaining members who see their payoff cancelled. To avoid this situation, the λ weight attributed to the intrinsic motivations must be much higher than in the initial case (2.5>1) and nevertheless, even in the case of a very high λ, it is no longer possible to achieve an equilibrium in which both players choose virtuous strategies.

5. Removal and crowding out of intrinsic motivations

The common element among all the above examples of model application is the parent company's intention to prevent mismanagement that could jeopardise the solidity of the bank and therefore of the banking group. When it intervenes, regardless of how it does it (be it a limitation, a reward or a sanction), the parent company changes the surplus distribution. This clearly also involves an alteration in the level of social welfare T that can be achieved for each combination of players' strategies and consequently also in the "form" of conformity preferences and their impact on the possible psychological equilibria.

The results obtained in the third type of intervention, which might be the most likely, suggest that there is a range of values for the λ parameter (which measures the weight attributed by individuals to the ideal of fair distribution across players) whereby the intervention can no longer lead to an equilibrium of cooperative strategies by both players[9].

For example, assume that $\lambda=1.5$. In the initial case (before the reform), the intrinsic motivations allowed to achieve a psychological equilibrium in virtuous strategies, compensating for the gap in terms of material utility. However, after the intervention, in the best of both cases, the threat of sanctions succeeds in making cooperative behavior the optimal choice for the administrator in a context of a restrictive credit policy; however, this is no longer because he is intrinsically motivated to do so, but simply because he now fears the sanction. The influential member, on the other hand, will choose an opportunistic behaviour in response.

In the worst case (the one in which the risk of sanction is only linked to the type of credit granting policy applied) the outcome for $\lambda=1.5$ is even collusive with a restrictive policy. Therefore, in the psychological equilibrium for both players, the intrinsic motivations are removed[10]. Moreover, in this case, the outcome of the game is a zero payoff for Members, and because they expect this equilibrium, they will now be inclined to turn to another bank (where they obtain a reserve utility equal to 1). In this case, the intervention that began was aimed at limiting opportunistic and mismanaged behavior by administrators risks favouring them instead. This happens as there will always be a margin of discretion for the amount of constraints imposed, which depends solely on the will of the individual. Therefore, the more or less opportunistic nature of the individual's behavior will be ultimately

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[9] In the first case for $1<\lambda<1.92$. In the second case for $1<\lambda<2.5$ the equilibrium is collusive, and even with $\lambda>2.5$ it would no longer be possible to achieve an equilibrium of cooperative strategies.

[10] This applies to all cases where $\lambda<2.5$.

determined their motivations. If the intrinsic motivations are damaged, or even crowded out, the individual will always try to find a loophole to behave in a self-interested way.

6. Conclusions

The opinion of the authors is that even today, the Cooperative Credit Bank can continue to play a well-defined role on the banking scene, thanks to the characteristics that distinguish it from other banks. The low propensity to invest in complex financial instruments, motivated by the attention of cooperative banks to supporting the real economy of their communities, combined with the long-term perspective that guides their business strategies (not constrained by the obligation to maximise profit for the benefit of speculative shareholders), make Cooperative Credit Banks an important tool to guarantee the stability of the system. According to the authors of this paper, weaknesses are less relevant than strengths and can be addressed and resolved.

With regard to the weaknesses of the governance structure linked to mismanagement, much can be done (and in part is already being done) through more careful training of administrators with training programs aimed to improve their skills and by introducing measures to limit conflicts of interest.

Recent merger processes aim to overcome the problems linked to the local and frequently excessively small size of cooperative banks, which imposes high costs on them. The threat of low membership participation remains and becomes more insidious as the membership base grows. This issue can be tackled by thinking once again about the governance of the bank. The traditional model has weaknesses where there is a broad membership base, so it needs to be corrected. Alternatively, an attempt can be made to work on the potential of a dual model whereby more power is entrusted to a supervisory board elected by the members' meeting, which - acting as a selected and restricted assembly - can represent the interests of the members with greater competence and knowledge.

Finally, Birchall's (2013) observation on the 'federation' or 'association' of cooperative banks can be applied to the banking groups created by the recent reform: there are clear advantages of joining this group (such as risk diversification and cost containment related to services that can be managed jointly) but attention must be paid once again to the risk represented by the loss of autonomy. This would probably "deprive" the single banks of their decision-making powers, resulting in a disincentive for members to participate, who would feel less decisive in the bank's choices and would distance themselves from it.

This paper has highlighted that in the cooperative credit context, the crowding out effect following external control results in damage the intrinsic component, regardless of the imposition's content. In the example proposed, this means that even where external intervention attempts to favor the cooperative behavior of administrators, it would still damage the intrinsic motivations to some extent.

In part, this effect is captured in the second example (the one with the incentive). The reward granted to administrators when they acted cooperatively altered the distribution of payoffs, thus crowding out the intrinsic motivations, which ended up supporting the game equilibrium that required one of the two players to follow the defection strategy. Returning to Frey (1997), in this case the directors would feel "over-justified" to behave in a cooperative way, given that they have a financial incentive to do so at the expense of the welfare of the remaining players, and would reduce the weight of the motivational component under their control, i.e., the intrinsic component (which in the example

proposed herein even supports equilibria that provide for opportunistic behaviour by one of the two players).

Regardless of its possible forms, the risk of altering and crowding out (or even removing) the intrinsic motivations of individuals through external intervention in the case of a cooperative and non-profit bank proves particularly insidious, since the very creation of the bank depends on the intrinsic motivational component (it was only after the introduction of an intrinsic component in the utility function of the individuals that it has been possible to demonstrate the emergence of an equilibrium of strategies that is an alternative to the equilibrium of opportunistic strategies.). In other words, if the intrinsic motivations that allow the creation of non-profit businesses such as cooperative banks are compromised, it is the survival of the bank as a non-profit cooperative company that is at risk.

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