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The impact of the reform of Italian cooperative credit banks on the mitigation of NPLs: the case of Mediocrati

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ABSTRACT - SOMMARIO

This study explores how the 2016 reform of Italian cooperative credit banks (CCBs) impacted the management and reduction of non-performing loans (NPLs), with an in-depth focus on Mediocrati CCB. Set against the backdrop of increased credit risk following global financial crises, the research applies a difference-in-differences approach and longitudinal internal data analysis to assess the transition to group structures and the role of multi-originator NPL securitization, particularly through the Iccrea-led GACS scheme. Findings show that the centralized governance and risk management strategies of the reform substantially reduced NPL volumes and improved key bank ratios. The Mediocrati case highlights that group membership provided significant benefits in asset quality and financial reputation, enabling even small local banks to access economies of scale and specialized technical support. These results suggest that the Italian cooperative banking model offers an effective template for advanced NPL mitigation, combining centralization and local engagement. The study concludes that such reforms strengthen both the resilience of cooperative banking networks and the economic sustainability of individual institutions, supporting them through more industrialized, yet socially anchored, risk management approaches.

Questo studio esplora come la riforma del 2016 delle banche cooperative di credito italiane (BCC; CCB in inglese) abbia influenzato la gestione e la riduzione dei prestiti non performanti (NPL), con un'attenzione approfondita su Mediocrati CCB. Ambientata sullo sfondo dell'aumento del rischio creditizio a seguito di crisi finanziarie globali, la ricerca applica un “approccio difference-in-differences” e un'analisi longitudinale interna dei dati per valutare la transizione verso strutture di gruppo e il ruolo della cartolarizzazione NPL multi-originator, in particolare attraverso il sistema GACS guidato da Iccrea. I risultati mostrano che le strategie di governance centralizzata e gestione del rischio della riforma hanno sostanzialmente ridotto i volumi dei NPL e migliorato i rapporti delle banche chiave. Il caso Mediocrati evidenzia che l'appartenenza al gruppo ha fornito benefici significativi in termini di qualità degli asset e reputazione finanziaria, permettendo anche alle piccole banche locali di accedere a economie di scala e supporto tecnico specializzato. Questi risultati suggeriscono che il modello bancario cooperativo italiano offre un modello efficace per una mitigazione avanzata dei NPL, combinando centralizzazione e coinvolgimento locale. Lo studio conclude che tali riforme rafforzano sia la resilienza delle reti bancarie cooperative sia la sostenibilità economica delle singole istituzioni, supportandole attraverso approcci di gestione del rischio più industrializzati, ma socialmente ancorati.

Keywords: Performing Loans (NPLs), Cooperative Credit Banks (CCBs), CCBs reform, GACS, asset quality.

1 – Introduction

The global financial crises of 2007–2008 and 2010–2011, combined with ongoing recessionary trends, heavily affected households and businesses in advanced economies, leading to major changes in how credit risk is managed (Beck, Jakubik & Piloiu, 2013; Naili & Lahrichi, 2022). This period saw a significant build-up of non-performing loans (NPLs), which severely reduced the quality of bank assets, impacting profitability and financial stability. The impact varied by country: for example, Latvia and the Baltic states experienced a sharp increase in NPLs due to economic shocks and volatile Gross Domestic Product (GDP), while countries like Germany were more resilient despite recession (Beck *et al.*, 2013).

Studies show that cooperative banks were generally more stable and resilient than traditional commercial banks during this time (Bazot, Jeffers & Ouyahia, 2019; Billiet, Dufays, Friedel & Staessens, 2021; Chiaramonte, Poli & Oriani, 2015). This strength is attributed to their mutualistic principles, strong local connections, and a focus on value creation for multiple stakeholders, not just profit maximization (Costa, Pesci, Andreaus & Taufer, 2019; Relano & Paulet, 2012).

In Italy, however, the Cooperative Credit Banks (CCBs) faced particularly severe challenges. The sector's high exposure to local families and SMEs created a strong procyclical effect, causing NPL levels to rise more than in commercial banks during downturns, worsening vulnerabilities especially in rural areas (Coccorese & Shaffer, 2021; Arnone, 2015).

To counter these issues, the Italian government reformed the sector with Law 49/2016, creating two cooperative banking groups—ICCREA and Cassa Centrale Banca—and requiring all CCBs to join one. This reform redesigned governance, risk management, and access to markets, drawing on integrated group frameworks (Beccalli, Rossi & Viola 2023; Porretta & Capolupo, 2019).

Our study examines this transformation through the case of Mediocrati CCB, a key player in southern Italy, leveraging privileged internal data and involvement. We focus on: (i) how the reform affected NPL reduction and asset quality; (ii) the role of cooperative banks in responsible local development, rooted in social mission and shared values; (iii) the Italian model as a best practice in Europe, blending public guarantees, centralized expertise, and a mutualistic identity (European Central Bank, 2022; Fiordelisi, Grimaldi, Lopez, Mazzilis & Ricci, 2023; Linaritis, 2022).

The paper is structured as follows: Section 2 reviews the literature on NPL causes; Section 3 explains the reform and the role of parent companies; Section 4 presents the conceptual framework; Section 5 details the methodology adopted in the paper; Section 6 reports panel analysis of NPL dynamics in CCBs; Section 7 discusses ICCREA's role in NPL management;

Section 8 provides the Mediocrati case study. The conclusion discusses benefits of GACS operations at group level and ICCREA's contribution to de-risking.

2 – Literature Review on the Determinants of Non-Performing Loans

The surge in non-performing loans (NPLs) following the 2007–2008 financial crisis and the resulting credit risk have become central themes in the banking literature. Most recent studies have focused on identifying the main drivers of NPLs (Barra & Ruggiero, 2021; Bischof, Rudolf & Schmundt, 2022; Cincinelli & Piatti, 2021; D'Amato & Gallo, 2019; Fiordelisi *et al.*, 2023; Gulati, Goswami & Kumar, 2019; Kryzanowski, Liu & Zhang, 2023; Kumar, Al-Romaihi & Aktan, 2023; Lee, Dato Haji Yahya, Habibullah & Mohd Ashhari, 2020; Naili & Lahrichi, 2022; Pancotto, Ap Gwilym & Williams, 2024; Swami, Nethaji & Sharma, 2022).This literature typically identifies three main sources of risk: macroeconomic factors, variables specific to the banking sector, and bank-specific (idiosyncratic) indicators (Naili & Lahrichi, 2022).

2.1 – *Macroeconomic Drivers*

Many studies focus on macroeconomic variables—such as GDP growth, public debt, inflation, losses, and exchange rates—as key determinants of NPLs. Policymakers rely on understanding these relationships to design effective strategies for controlling NPL growth.

The consensus is that adverse macroeconomic conditions sharply raise NPL levels. Economic growth lowers the risk of default by strengthening borrowers' ability to repay, while recessions have the opposite effect (Dimitrios, Helen & Mike, 2016; Kuzucu & Kuzucu, 2019). Macroeconomic instability, especially when combined with weak regulatory frameworks, can further amplify NPLs in the banking system (Bischof *et al.*, 2022).

Among macro-indicators, unemployment stands out as a strong predictor of NPLs. Higher joblessness reduces household income, directly driving loan defaults (Kuzucu & Kuzucu, 2019). Inflation effects are complex: some studies argue it exacerbates loan distress by increasing debt servicing costs, while in certain cases, it can reduce the real burden of debt. However, most evidence points to higher inflation worsening NPL trends, particularly in variable-rate lending environments (Us, 2018; Naili & Lahrichi, 2022).

The exchange rate is also important, especially in systems with significant foreign currency lending. Depreciation can increase repayment burdens and elevate NPLs, a pattern found across emerging markets and confirmed in both global and EU studies (Ghosh, 2015; Gulati *et al.*, 2019; Lee *et al.*, 2020). Table 1 reports the main studies that have investigated the impact of macroeconomic determinants on NPL levels.

2.2 – *Endogenous Drivers*

This section reviews banking sector factors that influence non-performing loans (NPLs), focusing on competition and market concentration. After the global financial crisis, studies increasingly examined how competition among banks affects loan quality. Researchers found that liberalizing banking markets too much can weaken the system, raising concerns about the effects of market concentration (Table 2).

Keeley (1990) introduced the "franchise value hypothesis," showing that greater competition can reduce banks' margins and profitability, pushing them to take higher risks. Studies in different countries support this idea, finding that more concentrated markets tend to have stronger capital positions and fewer defaults (Agoraki, Delis & Pasiouras, 2008; Berger, Klapper & Turk-Ariss, 2009; Hellmann, Murdock & Stiglitz, 2000).

Table 1 – Literature review on the macroeconomic drivers of NPLs (*Source: Authors' elaboration*)

Author(s)	Driver(s)	Period	Sample	Main findings
Kuzucu and Kuzucu (2019)	GDP growth; Unemploymen; Inflation; Exchange rate	2001-2007 2008-2015	757 banks from advanced and emerging countries	GDP growth reduces NPLs, while unemployment, inflation, and exchange rate depreciation increase them.
Dimitrios *et al.* (2016)	GDP growth	1990-2015	Banking sector of the Eurozone	GDP growth is negatively associated with NPL levels.
Bischof *et al.* (2022)	GDP growth	2007-2016	2,434 European banks	Slower GDP growth is associated with higher NPLs in the European banking sector.
Barra and Ruggiero (2021)	GDP growth; Unemployment	2001-2014	8,529 Italian banks (CCBs and non-CCBs)	GDP growth reduces NPLs, while higher unemployment increases them.
Pancotto *et al.* (2024)	GDP growth	2011-2017	Italian banking sector	NPLs decline as GDP growth improves.
D'Amato and Gallo (2019)	Economic crisis	2011-2017	Italian cooperative banking sector (CCBs)	CCBs' social mission increases their credit risk during economic downturns.
Us (2018)	Inflation	2002-2015	Turkish banking sector	Higher inflation contributes to an increase in NPLs.
Naili and Lahrichi (2022)	Inflation	2000-2019	53 banks from emerging MENA countries	Inflation deteriorates asset quality and raises NPLs in emerging markets.
Ghosh (2015)	Exchange rate	2005-2014	57 Italian banks	Exchange rate depreciation increases NPL levels.
Gulati *et al.* (2019)	Exchange rate	1998-2014	Indian banking sector	Exchange rate volatility leads to a rise in NPLs, especially during economic instability.
Lee *et al.* (2020)	Exchange rate	2007-2016	1,053 banks from 28 EU countries	Depreciation of the local currency raises NPLs, particularly in banks with foreign currency exposure.

Excessive competition may also lead to adverse selection and looser lending standards as banks try to attract customers (Broecker, 1990; Wang, 2018). Higher market concentration can, therefore, stabilize the system by reducing risk.On the other hand, the "competition–stability" hypothesis argues that increased competition improves risk management and asset quality, as banks become more disciplined (De Nicolò & Boyd, 2005; Ozili, 2019; Schaeck & Cihak, 2014).

Table 2 – Literature review on the endogenous drivers of NPLs (*Source: Authors' elaboration*)

Author(s)	Determinant (s)	Period	Sample	Main findings
Keeley (1990)	Bank concentration	1970-1986	U.S. banking sector	Higher bank concentration reduces NPLs by limiting competition risk.
Agoraki *et al.* (2008)	Bank concentration	1998-2005	Central and Eastern European banking sector	More concentrated markets show lower NPL levels.
Berger *et al.* (2009)	Bank concentration	1999-2005	8,235 banks from 23 developed countries	Bank concentration is linked to lower NPLs through better risk control.
Wang (2018)	Bank concentration	1984-2016	U.S. banking sector	Concentrated banks exhibit fewer NPLs, supporting stability hypothesis.
Boudriga *et al.* (2009)	Bank concentration	2002-2016	Banking sector of 59 countries	Bank concentration is associated with stricter lending and fewer NPLs.
Boyd and De Nicolò (2005)	Bank concentration	1971-1983	U.S. banking sector	Higher concentration raises NPLs by encouraging risky lending behavior.
De Nicolò *et al.* (2003)	Bank concentration	1995-2000	Banking sector of 115 countries	Concentration increases default risk and NPLs in large banks.
Ozili (2019)	Bank concentration	2003-2014	Banking sector of 134 countries	Bank concentration correlates positively with NPLs, indicating fragility.
Schaeck and Cihak (2014)	Bank concentration	1995-2005	Banking sector of 10 European countries	Less competitive markets show higher NPLs due to inefficiencies.

Concentrated markets, while more profitable for banks, may raise loan costs for customers and ultimately default risk. Some evidence also suggests that banking systems with less competition may be more vulnerable to external shocks (De Nicoló, Bartholomew, Jahanara & Mary, 2003).

Overall, studies highlight both benefits and risks of competition and concentration. More competitive banking environments can improve credit quality, but too much competition or concentration can undermine stability, depending on how banks respond to changing incentives and regulatory controls.

2.3 – *Bank specific drivers*

In addition to macroeconomic factors, internal bank characteristics and practices strongly influence NPL levels. Poor management and operational inefficiencies are common causes of higher NPL ratios (Table 3). Ghosh (2015) finds that banks with low-cost efficiency and weak management tend to have more NPLs. Similarly, Kuzucu and Kuzucu (2019) describe the "bad management" hypothesis, which links poor loan monitoring and management to increased NPLs. Kryzanowski, Liu and Zhang (2023) add that weak governance and risk management further escalate NPL levels, especially where regulatory oversight is lacking.

Table 3 – Literature review on the bank specific drivers of NPLs (*Source: Authors' elaboration*)

Author(s)	Determinant (s)	Period	Sample	Main findings
Ghosh (2015)	Bank inefficiency	2005-2014	57 Italian banks	Poor bank efficiency is linked to higher NPL ratios.
Kuzucu and Kuzucu (2019).	Bank inefficiency; bank size	2001-2007, 2008-2015	757 banks from advanced and emerging countries	Inefficiency increases NPLs; larger banks may face higher NPL risks due to riskier lending behavior.
Kryzanowski *et al.* (2023)	Bank inefficiency	2017-2022	Chinese banking sector	Poor management and governance raise NPL levels, especially under weak regulatory oversight.
Dimitrios *et al.* (2016)	Capital adequacy	1990-2015	EU banking sector	Higher capital adequacy reduces NPLs by strengthening banks' ability to absorb losses.
Cincinelli and Piatti (2021)	Capital adequacy	2006-2017	338 Italian banks	Well-capitalized banks show lower NPL ratios, enhancing resilience in cooperative banks.
Swami *et al.* (2022)	Capital adequacy; Bank inefficiency	2012-2017	Indian banking sector	Stronger capital and better efficiency reduce NPLs and improve asset quality.
Kumar *et al.* (2023)	Bank size	1995-2000	Banking sector of 115 countries	Larger banks tend to have higher NPLs due to scale and risk-taking behavior.
Fiordelisi *et al.* (2023)	Regulatory reforms	2010-2017	2,723 Italian banks (CCBs and non-CCBs)	Regulatory reforms impact CCBs' stability and risk, requiring balance between compliance and cooperative values.

Capital adequacy is another key factor. Well-capitalized banks can better absorb losses and control credit risk, resulting in lower NPL ratios. Banks with thinner capital buffers tend to take higher risks, risking loan quality deterioration. Studies by Dimitrios *et al*. (2016) stress maintaining strong capital levels to prevent NPL rise, especially in downturns. Cincinelli and Piatti (2021) highlight the importance of capital adequacy for cooperative banks' resilience. Swami *et al*. (2022) show that strong capital and operational efficiency improve Indian banks' asset quality and reduce NPLs.

Bank size also affects NPL dynamics. Larger banks benefit from economies of scale and better risk management, often achieving lower NPL ratios. However, Kuzucu and Kuzucu (2019) warn that big banks may take on riskier loans due to "too-big-to-fail" perceptions, which can increase NPLs long-term. Kumar, Al-Romaihi and Aktan (2023) also note that although larger banks have more resources to manage risks, they may engage in riskier lending, potentially increasing NPLs.

When it comes to Italian CCBs, the literature provides nuanced insights into how these institutions are particularly affected by both macroeconomic conditions and bank-specific factors. Studies such as those by Barra and Ruggiero (2021) and Pancotto *et al*. (2024) highlight that Italian CCBs, while deeply rooted in their local economies, are not immune to the broader macroeconomic trends that influence NPLs. The economic challenges faced by Italy, such as slow GDP growth and high unemployment, have had a direct impact on the loan portfolios of these banks, leading to an increase in NPLs.

Moreover, the unique structure of CCBs, which often emphasizes community lending and less aggressive risk management practices, can sometimes result in higher vulnerability to economic shocks. This is particularly true in periods of economic downturn, where the traditional customer base of CCBs, often small businesses and households, may be more severely affected. The study by D'Amato and Gallo (2019) specifically addresses the impact of the economic crisis on Italian CCBs, noting that their commitment to local communities, while socially valuable, may expose them to higher credit risks during economic downturns. Furthermore, the research by Fiordelisi *et al*. (2023) adds another layer of understanding by exploring how regulatory changes and reforms in the banking sector have impacted the stability and risk profiles of Italian CCBs. The study emphasizes the importance of adapting to regulatory requirements while maintaining the traditional cooperative values that define these banks. In this context, the studies focusing on Italian CCBs underscore the delicate balance these institutions must maintain between their social mission and the need to manage financial risks effectively.

3 – The Italian Cooperative Banking Model: Identity and Reform

Italian Mutual Banks (CCBs) are distinguished within the European financial landscape by their "hybrid nature," which harmonizes financial intermediation with a profound commitment to social responsibility (Ferraro, Cristiano & Veltri, 2024). Defined as "socially responsible enterprises," CCBs operate according to the principles of internal and external mutuality, territorial entrenchment, and democratic participation (Porretta & Capolupo, 2019, p. 43). This Stakeholder Value-oriented (STV) banking model aims to generate multidimensional value, integrating economic objectives with ethical and social imperatives (Gonnella & Messina, 2011).

In this context, a CCB can be characterized as an "augmented social enterprise" (Trotta, Fiorentini, Strano, Fabbri & Ioppoli, 2025, p.5): an organization that does not subordinate social goals to profit but utilizes managerial best practices to generate a measurable impact on local communities. By applying the principle of subsidiarity, CCBs harmonize the economic dimension with the anthropological aspects of business activity.

The origins of the Italian cooperative system date back to the late 19th century, emerging from the need to combat usury and guarantee credit access for small rural and urban entities (Caldarelli, Fiondella, Maffei, Spanò & Zagaria, 2012). Despite their historical resilience, the 2007 financial crisis and the evolution of European prudential requirements (EU Regulation No. 575/2013) challenged the long-term sustainability of the atomistic model of individual CCBs, necessitating the 2016 Reform.

This reform mandated a structural reorganization, requiring CCBs to join a Cooperative Banking Group (GBC) to retain their banking licenses. Consequently, two primary groups were established in 2019: the ICCREA Cooperative Banking Group (ICBG), comprising 142 mutual banks, and the Cassa Centrale Banca Banking Group (CCBG), consisting of 84 mutual banks (Cristiano & Ferraro, 2022; Beccalli, Rossi & Viola, 2023).

Both ICBG and CCBG adopted the Consolidated Cooperative Group (CCG) model. This framework allows regulatory bodies to treat the parent company and its affiliated banks as a single entity, streamlining the supervision of solvency and liquidity. This integration is reinforced through cross-guarantee mechanisms, with the parent company issuing directives on risk management, capital allocation, and liquidity oversight (Cristiano & Ferraro, 2022).

Each parent company manages its affiliates via a cohesion contract, which ensures alignment in strategic direction and control systems. Conversely, the 39 South Tyrolean Raiffeisen Banks follow an Institutional Protection Scheme (IPS). Unlike the CCG model, the IPS functions primarily as a protective mechanism, ensuring members' solvency through internal resources without the same level of centralized top-down governance (Beccalli *et al*., 2023).

The core of the reform lies in the cohesion contract, a legal instrument that defines the delicate equilibrium between the Parent Company's unified direction and the autonomy of individual banks:

A – STRATEGIC CENTRALIZATION: The Parent Company performs monitoring, risk management, capital allocation, and industrial coordination (e.g., centralized NPL management). This has granted individual CCBs access to sophisticated financial instruments, such as GACS multi-originator securitizations, which were previously inaccessible to small, independent banks (Porretta & Capolupo, 2019).

B – PROPORTIONAL AUTONOMY (Risk-based Approach): The impact on business freedom is dynamic rather than uniform. Through Early Warning Systems (EWS), the intensity of the Parent Company's control varies according to the risk profile of the specific CCB. Virtuous banks maintain significant decision-making autonomy regarding local credit policies and community relations, while parental intervention becomes stringent only upon the deterioration of capital or risk parameters (ICCREA, 2022).

The 2016 Reform has effectively transitioned CCB autonomy from a state of "operational isolation" to one of "protected freedom." Although governance is now centralized regarding prudential aspects, local business freedom has been paradoxically strengthened. The stability guaranteed by the Group allows CCBs to focus on their original mutualistic mission, unburdened by the weight of managing systemic risks in isolation (Fiordelisi *et al*., 2023).

The GBC model represents a synthesis of industrial efficiency and mutualistic specificity. Within this framework, the residual autonomy of CCBs is not a legacy of the past but a functional variable essential to the stability of the entire system.

4 – Conceptual Framework and Research Hypothesis

By linking the dynamics ties of banking sector vulnerabilities, the literature on NPL drivers, regulatory change, and observed organization we propose our conceptual framework (Figure 1) to test whether the transition towards cooperative banking groups has actually improved credit quality and overall financial performance:

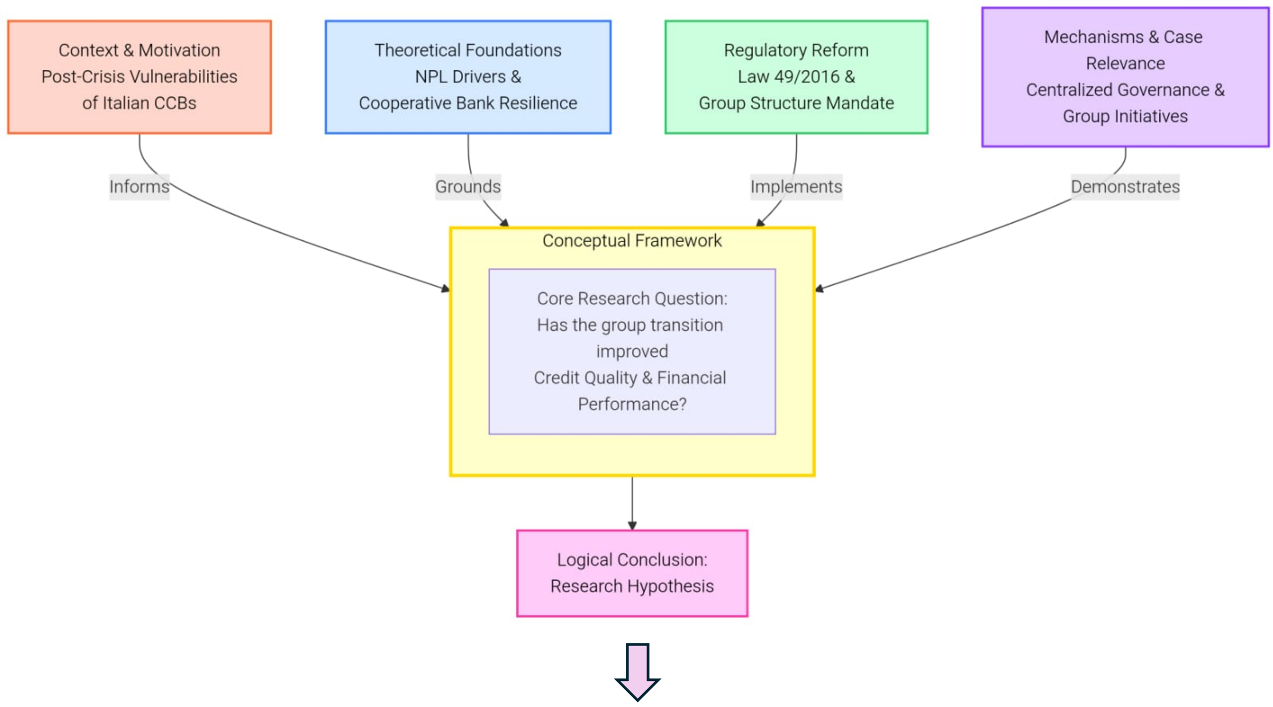
A – CONTEXT AND MOTIVATION: following the global and sovereign financial crises, Italian CCBs experienced a significant rise in non-performing loans (NPLs), which intensified the risks facing local economies and exposed structural weaknesses in credit quality management. Because CCBs are strongly rooted in their mutualistic and local missions—focusing on lending to households and small-to-medium enterprises—they were especially vulnerable in periods of economic downturn. Their small size and limited resources further restricted their ability to manage and dispose of NPLs efficiently, placing them at a disadvantage compared to larger banking institutions.

B – THEORETICAL AND LITERATURE FOUNDATIONS: the literature indicates that NPLs are mainly driven by macroeconomic factors such as GDP, employment, and inflation, along with sector-level dynamics like competition, and bank-specific elements including governance and management efficiency. CCBs, while generally resilient due to strong local roots, tend to be especially exposed during financial crises because of their credit portfolio structure and limited technical resources. Efficient NPL management is essential for both the sustainability of individual banks and for the stability of the banking system as a whole.

C – REGULATORY AND ORGANIZATIONAL REFORM: Law 49/2016 fundamentally redefined the cooperative credit banking sector in Italy. It made membership in a cooperative banking group (such as ICCREA or Cassa Centrale) compulsory for all CCBs, meaning that operating as a cooperative bank now requires belonging to one of these groups. The reform established a consolidated group structure with powers of direction and coordination held by a parent company. This model introduced a single banking license for each CCB, cross-guarantee schemes to cover group obligations, centralized risk management, and group-wide early warning systems. The new system also provides access to public de-risking mechanisms, like the GACS government guarantee. Overall, this framework enables even small and local CCBs to manage risk and dispose of non-performing loans more efficiently, using shared resources, group support, and improved market instruments.

D – MECHANISMS AND CASE RELEVANCE: Through central governance and group initiatives (e.g., multi-originator GACS securitizations), CCBs-like benefit from access to professional/technical expertise and scale economies; improved asset quality, capital and liquidity indicators; industrialization and standardization of risk management, with positive effects on the whole banking system's stability.

E – LOGICAL CONCLUSIONS: The study's Research Questions: these dimensions—grounded in theory, regulation, and organizational identity—drive the RESEARCH HYPOTHESIS H1 of our study (see Figure 1).



H1: *The inclusion of CCBs into banking groups following the reform has improved credit quality and strengthened financial statement.*

Figure 1 – Conceptual Framework

5 – Research Methodology and Data Selection

To test the research hypothesis, a mixed-methods approach was adopted and articulated in several stages (Nwakanma, 2024). First, an empirical study was carried out on a representative sample of Italian Cooperative Credit Banks (CCBs) using a panel random effects model (Random Effects Model, REM), with the aim of analyzing the overall dynamics of non-performing loans and assessing the impact of the cooperative group reform on the financial statements of affiliated banks.

Subsequently, the analysis focused on a single banking group through a longitudinal study (Islam & Kokubu, 2018) of internal policies and documentation relating to non-performing loans within the ICBG, covering from 2017 to 2022. This step made it possible to identify the role of the parent company in managing NPLs.

Finally, a single case study design was adopted (Yin, 2014), selecting Banca Mediocrati – Credito Cooperativo (CCB Mediocrati) as the unit of analysis. The single-case approach enabled an extensive and context-specific exploration of a complex phenomenon, consistent with the aim of the study to understand sustainability practices at the organizational level (Veltri & Bronzetti, 2015; Chuma, 2024).

The choice of a single case is supported by several considerations. On the one hand, it allows for a deeper and more articulated analysis that provides richer and more nuanced empirical insights—both in qualitative and quantitative terms—while contributing to a broader theoretical reflection on the phenomenon under investigation. On the other hand, the decision to focus on the ICCREA Group is particularly significant given its unique position within the Italian cooperative banking system as the largest cooperative group established following the reform introduced by Law No. 49/2016 (Previtali, 2010). Moreover, the presence of one of the authors on the board of directors of a CCB belonging to the ICCREA Group facilitated access to data and detailed information on NPL management and disposal activities. The adoption of such an "insider" perspective is supported by academic literature as a legitimate and valuable research approach, provided it is managed with the necessary methodological distance and rigor (Brannick & Coghlan, 2007).

To ensure methodological rigor and mitigate potential observer bias, specific objectivity measures were implemented, following established protocols for qualitative and case study research (Miles, Huberman & Saldaña, 2014; Gioia, Corley & Hamilton, 2012). Data triangulation was employed by cross-referencing internal board documentation with publicly available financial reports and national banking databases (Yin, 2014). Furthermore, the analysis underwent independent verification by the co-author not affiliated with the organization, who acted as external auditors of the qualitative findings to ensure that the results remained strictly grounded in empirical evidence (Eisenhardt, 1989). Finally, peer debriefing sessions were conducted throughout the research process to challenge interpretations and verify that the conclusions drawn were independent of the author's institutional role within the board.

6 – Empirical Results: Panel Analysis of NPL Dynamics in CCBs

To support the observations previously discussed, before focusing on the specific case analysis, it is appropriate to refer to the results of a study conducted on a representative sample of Italian CCBs. The analysis was carried out using a panel random effects model (Random Effects Model, REM), which allows for the estimation of individual bank effects—that is, unobservable individual differences—while accounting for temporal variation (Gujarati & Porter, 2015). The model was applied to a sample of 180 CCBs over the period 2015–2022 and enables the assessment of overall non-performing loan (NPL) dynamics and the impact of the cooperative group reform on the financial statements of affiliated banks.

The estimated equation used in the model is as follows:

$$NPLratio_{it} = \beta0 + \beta1\ln(TA)_{it} + \beta2CAR_{it} + \beta3\ln(TD)_{it} + \beta4TLTA_{it} + \beta5Tier1ratio_{it} + \\ + \beta6\,Dummy\,bank_{it} + \epsilon_{it}$$

where:

$NPLratio_{it}$ indicates the NPL ratio for bank i at time t. β_0 is the intercept. $\ln(TA)_{it}$ represents the natural logarithm of total assets for each bank at time t. CAR_{it} measures the capitalization level of each bank at time t. $\ln(TD)_{it}$ is the natural logarithm of total deposits for each bank at time t. $TLTA_{it}$ reflects the incidence of loans over total assets for each bank at time t. $Tier1ratio_{it}$ measures core equity capital relative to risk-weighted assets for each bank at time t. The Dummy Bank variable denotes membership in the Cassa Centrale Banking Group (value 0) or the ICCREA Group (value 1). t and i refer, respectively, to the observation period 2015–2022 and to the CCBs, while $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ are the coefficients, and ε is the residual error.

The study was conducted on a sample of CCBs whose data were collected from BankFocus. Initially, the sample consisted of 226 banks, but those for which data were unavailable were subsequently removed. As a result, the final analyzed sample included 180 CCBs. Table 4 reports the descriptive analysis of the dependent and independent variables in our dataset.

Table 4 – Descriptive analysis (*Source: Authors'* elaboration)

Variable	Mean	SD	Min	Max	Median
NPL ratio (%)	10.25	7.54	0.08	55.90	7.63
ln (TA)	20.34	1	17.58	23.44	20.37
ln (TD)	19.86	0.98	17.33	23.13	19.88
CAR (%)	21.96	9.30	7.44	83.21	19.44
TLTA (%)	66.36	14.90	4.94	93.08	70.05
Tier 1 ratio (%)	21.24	8.80	5.64	82.02	8.74
Dummy bank	0.63	0.48	0	1	1

With regard to the dependent variable, the results for the NPL ratio indicated a mean value of 10.25%, while the standard deviation was 7.54%, highlighting substantial variability in asset quality across banks. The maximum value of the indicator is particularly high (55.90%), suggesting that some banks have exceptionally elevated levels of non-performing loans. Concerning the independent variables, the natural logarithms of total assets ($\ln(TA)$) and total deposits ($\ln(TD)$) have mean values of approximately 20.34 and 19.86, respectively. Furthermore, the CAR and Tier 1 ratio reflect mean values of 21.96% and 21.24%, indicating that, on average, the sampled banks display good capital adequacy, albeit with standard deviations of 9.30% for CAR and 8.80% for Tier 1 ratio (highlighting considerable variability among banks). TLTA shows a mean of 66.36%, reflecting a high incidence of loans over total assets, with a standard deviation of 14.90%. Finally, the Dummy (bank) variable has a mean of 0.63, indicating that the majority of CCBs in the sample belong to the ICCREA Group, while the remaining 37% belong to the Cassa Centrale Group. This suggests that ICCREA Group is represented by a larger share of the sample compared to Cassa Centrale.

Table 5 presents the correlation matrix for the variables examined in our study.

Table 5 – Correlation Matrix (*Source: Authors'* elaboration)

Variable	NPL ratio	TA	TD	CAR	TLTA	Tier1 ratio
NPL ratio	1					
TA	-0.03	1				
TD	-0.11***	0.98***	1			1
CAR	-0.23***	-0.32***	-0.31***	1		
TLTA	-0.56***	0.3***	0.38***	-0.27***	1	
Tier1 ratio	-0.25***	-0.35***	-0.34***	0.91***	-0.19***	

Notes: *p<0.1; **p<0.05; ***p<0.01

In particular, the NPL ratio variable exhibits a negative correlation with TA (Total Assets), TD (Total Deposits), CAR (Capital Adequacy Ratio), TLTA (Total Loans to Total Assets), and the Tier 1 ratio. This indicates that Cooperative Credit Banks with higher NPL ratios tend to have lower values of TA, TD, CAR, TLTA, and Tier 1 ratio.

Table 6 summarizes the regression results based on the applied statistical model.

Table 6 – Results (*Source:* Authors' elaboration)

Independent Variable	Dependent Variable	
	NPL ratio	
	(1)	(2)
ln (TA)	-0.354 (0.275)	
Tier 1 ratio	-0.288*** (0.024)	
Constan	46.493*** (5.726)	56.550*** (5.402)
Dummy bank	0.182 (0.570)	-0.146 (0.526)
TLTA	-0.374*** (0.010)	-0.371*** (0.010)
CAR		-0.326*** (0.023)
ln (TD)		-0.796*** (0.562)
Number of observations	180	180
R^2	0.621	0.638
Adjusted R^2	0.620	0.637
Notes: *p<0.1; **p<0.05; ***p<0.01		

The analysis of the estimated coefficients allows for an assessment of the impact of each independent variable on the dependent variable, thereby facilitating an understanding of the nature of these relationships. With reference to model (1), the explanatory variable ln(TA) is not significant, suggesting it does not have a substantial impact on the credit quality of banks (and thus the NPL ratio). In contrast, the Tier 1 ratio variable is statistically significant (0.288) and exhibits an inverse relationship with the NPL ratio. This means that a one-unit increase in the Tier 1 ratio corresponds to a 28.8% reduction in the NPL ratio. Similarly, the TLTA variable is highly significant and inversely correlated with the NPL ratio. The 'Dummy bank' variable, on the other hand, does not exert statistical significance in influencing the NPL ratio, highlighting an important result: membership in a Cooperative Banking Group (such as ICCREA or Cassa Centrale) does not have a significant impact on credit quality.

Examining the results of model (2), the TLTA variable is again found to be statistically significant and inversely associated with the volume of non-performing loans (NPL ratio). Additionally, the Dummy bank variable remains non-significant, confirming that group membership does not influence the NPL ratio. Model (2) also incorporates two new variables: CAR and ln(TD). The CAR variable shows a negative correlation with the NPL ratio, implying that higher bank capitalization levels are associated with lower NPL volumes on the balance sheet. Similarly, the ln(TD) variable has a negative effect on the proportion of non-performing loans; thus, a higher volume of bank deposits reduces the incidence of NPLs.

The findings discussed here provide important insights and deductions regarding the determinants of non-performing loan volume—as measured by the NPL ratio—in banks, confirming some prior literature and diverging from others. Consistent with research streams such as Boudriga, Taktak & Jellouli (2010) and Jabbouri and Naili (2019), which claim that loan growth reduces the stock of NPLs on banks' balance sheets, the present analysis arrives at the same conclusion. The estimation of a negative relationship between the CAR and the NPL ratio observed in this model confirms results demonstrated by authors such as Keeton and Morris (1987), Ghosh (2017), and Erdas and Ezanoglu (2022). Conversely, another body of literature opposes this finding, as Vatansever and Hepsen (2013) and Macit (2019) present contrary results.

Comparison with the extant literature leads to further observations regarding the effect of the TA variable on credit quality. In this study, TA is estimated to have no significant impact on the NPL ratio, diverging from studies such as Akter (2023), Haq and Heaney (2012), and Alhassan, Kyereboah-Coleman & Andoh (2014), which report a significant relationship.

The analysis confirms the effectiveness of the reform: asset quality has improved significantly, and non-performing loans (NPLs) have been substantially reduced. In line with the literature, the variables CAR, TLTA, TA, TD, and Tier 1 ratio are inversely correlated with the NPL ratio, indicating that higher capitalization, deposit volume, size, and loan-to-asset ratios are associated with better credit quality. Furthermore, membership in a Cooperative Banking Group (CBG) has been shown to exert a positive impact on NPL reduction, regardless of the specific group in question. Quantitative data confirm this improvement. In 2020, ICCREA reduced its gross NPL stock by over 50% (€8.4 billion at end-2020), also thanks to GACS operations, bringing the gross NPL ratio to 9.1% (net: 4.3%), compared to 18.9% in 2017, and increasing the coverage ratio from 46.9% to 55.7% (ICCREA, 2020). In 2023 these values improved further: 3.8% gross NPL ratio, 1.1% net NPL ratio, and a coverage ratio of 72.3% (ICCREA, 2023). Similarly, at the end of 2020, Cassa Centrale Group recorded a gross NPL ratio of 6.8% (against 9.3% in 2019), a net NPL ratio of 4.4% (compared to 2.6% in 2019), and a coverage ratio of 64% (up from 55% in 2019). By the end of 2023, these indicators reached even better levels: 4.2% gross NPL ratio, 0.7% net NPL ratio, and a coverage ratio of 85% (Cassa Centrale, 2023). The results of the general analysis provide a reference framework and identify expected behavioral patterns, constituting the methodological and interpretative foundation for an in-depth, targeted examination of the individual bank's conduct, specifically, the case of Banca di Credito Cooperativo Mediocrati within the ICCREA banking group.

7 – The Role of the ICCREA Group in NPL Strategic Management

The ICCREA Cooperative Banking Group (ICBG) has a history deeply rooted in the Italian movement of Rural and Artisan Credit Banks, which emerged at the end of the nineteenth century inspired by Pope Leo XIII's encyclical Rerum Novarum, advocating the social doctrine of the Church and values of solidarity.

Officially established in 2019, the Iccrea Cooperative Banking Group aggregates approximately 140 Cooperative Credit Banks (CCBs) under a unique governance model, directly supervised by the European Central Bank. This governance structure promotes efficiency, cohesion, and competitiveness of cooperative credit within the current market environment.

As of today, the Group comprises 112 Cooperative Credit Banks present in more than 1,700 Italian municipalities, operating nearly 2,500 branches. The Group confirms its role as a key player in local development and community support while maintaining foundational mutualistic principles alongside

This historical trajectory testifies to the important role that Iccrea has played for more than 60 years in the formation and development of the Italian cooperative banking system, supporting local economies and traditional mutualistic values in a context of increasing national and European complexity and competition.

Iccrea functions as a central infrastructure and support network that enables individual Cooperative Credit Banks (CCBs) to operate more effectively in the market, while preserving their local autonomy by leveraging the collective strength and resources of a coherent and unified banking group. It provides governance and strategic coordination by delivering a unified strategic direction that ensures compliance with European supervisory regulations, thereby fostering the overall stability and soundness of the CCB group. Operational and technological support is also furnished through centralized services offered to individual CCBs in key areas such as payment systems, securities administration, risk management, finance, and administration. The aggregation of these banks under the Iccrea group generates economies of scale, allowing CCBs to benefit from reduced costs and enhanced competitiveness through shared products, services, and technological infrastructure. Moreover, Iccrea supports CCBs in risk management and capitalization, aiding in crisis prevention and resolution, as well as credit and capital risk management, including the disposal of non-performing loans (NPLs). Innovation and commercial development are promoted by facilitating the introduction of new products, services, and digital channels to improve the commercial offerings of individual CCBs. In its role as a national aggregator, Iccrea coordinates a network of over 110 CCBs covering more than 1,700 municipalities with approximately 2,500 branches, thereby reinforcing territorial rootedness and collective capacity. Additionally, it provides advanced financial services including the management of institutional financing, securitizations, treasury operations, and investment services tailored for member CCBs.

ICBG plays a prominent role in managing and disposing of non-performing loans (NPLs) among its operative and financial activities for member Cooperative Credit Banks (CCBs), supporting securitization and sale operations aimed at improving the credit portfolio quality of these banks. Furthermore, ICBG centrally manages and disposes of both performing and non-performing loans, thereby contributing to the enhancement of the credit portfolio quality of individual CCBs and reinforcing the overall capital solidity of the group.

The group employs financial instruments such as securitizations guaranteed by public guarantees, specifically the "Garanzia sulla Cartolarizzazione delle Sofferenze" (GACS), along with covered bonds to optimize de-risking operations and secure favorable financial conditions. This framework falls within securitization operations designed to improve bank asset quality and strengthen capital adequacy through a process involving private sector actors and state support. The GACS mechanism unfolds through a sequence of phases, beginning with the credit transfer stage, where a portfolio of non-performing loans is sold on a pro-soluto basis to a Special Purpose Vehicle (SPV), thereby transferring all associated risks definitively from the bank. Subsequently, the SPV finances this purchase by issuing asset-backed securities (ABS), which are subdivided into tranches of differing risk levels (Low, Medium and High). To achieve deconsolidation, banks must sell a majority (over 50%) of the riskier Mezzanine and Junior tranches to external investors, effectively transferring substantial risk. The state intervenes by providing a guarantee on the Senior tranche, recognized as the least risky portion, conferring on it a high investment-grade rating comparable to sovereign debt, which enhances the marketability and security of these securities. The ultimate outcome for banks includes improved financial statements resulting from reduced NPL ratios and asset deconsolidation. In many cases, banks repurchase GACS-guaranteed Senior tranches to use them as collateral at the European Central Bank, thus obtaining liquidity under favorable conditions. European regulations require a 5% retention on each tranche, aligning bank incentives with prudent credit risk management. GACS securitizations provide strategic advantages including effective credit risk transfer (de-risking), balance sheet deconsolidation, improved financial indicators and reputation, and value maximization — state guarantees enable better pricing than direct disposals, increasing net recoveries by 3-4% on gross values on average.

More broadly, GACS illustrates a public-private partnership: the state does not provide direct funds but uses its credibility to guarantee securities, unlocking an otherwise paralyzed NPL market. This supports the reduction of accumulated distressed loans and reinforces the stability of the entire Italian banking system and economy.

ICBG’s multi-originator GACS securitizations have been a core strategy for de-risking. Since inception, the Group prioritized proactive NPL management, targeting reduction of its NPL ratio from 19.5% in 2017 to 10.8% by 2021 through six structured significant operations generating substantial impacts on NPL exposure reduction and capital strength reinforcement.

A summary of GACS operations by ICBG, participants, portfolio composition, cost, and main notes is presented in detail in corresponding table (Table 7).

The GACS operations undertaken by the ICBG from 2018 through 2022 are on an evolutionary trajectory characterized by increasing complexity and refinement in the management of NPLs through multi-originator securitizations with state guarantees. The initial phase, encompassing GACS I and II, established the foundation of this process by aggregating a critical mass exceeding 2.8 billion euros in both guaranteed and non-guaranteed portfolios, involving approximately 147 CCBs and other group entities. The portfolio composition was predominantly first-lien mortgage loans, accounting for over 70%, to ensure market attractiveness. This foundational phase facilitated a significant reduction in the NPL stock estimated at around 4 billion euros. Subsequent initiatives under GACS III and later iterations (IV, V, VI) introduced elements of standardization, improved efficiency, and greater operational flexibility. Notably, structuring fees were reduced from an initial cap of 5% to a fixed rate of 3.5%. Additionally, the minimum required guaranteed portfolio threshold was relaxed from 70–75% to approximately 50%, with the inclusion of recently classified Unlikely to Pay (UTP) positions broadening the securitizable base. The most recent transactions (GACS V and VI) enhanced the role of the parent company, Iccrea Banca, as the primary advisor and coordinator for communications with supervisory authorities. These transactions incorporated contractual flexibility clauses to mitigate economic risks for participant banks and expanded the subscription modalities of the guaranteed Senior tranches. This progressive evolution facilitated the transition from a reactive to a proactive and industrialized NPL management model, augmenting the group's capacity to attract investors, improve financial statements, and free resources for redeployment in core business activities. Overall, the GACS operations of Iccrea stand as a best practice within the Italian context, yielding tangible outcomes in credit risk reduction and asset quality enhancement, thereby supporting the overall stability of the cooperative banking system.

Table 7 – ICBG GACS from 2018 to 2022 (*Source:* Authors' elaboration)

GACS I	mar-18	75 CCBs + 2 GBI companies	€888.1 mln	68% first-lien, 11% second-lien or higher, 22% unsecured	Up to 5% (initial)	Not specified	2018 NPL securitization transaction; portfolio mix: 77% SME/corporate, 23% retail
GACS II	Sep 2018	72 CCBs + 2 companies	€2.0 bn	72% first-lien secured, 28% unsecured	Not indicated	Not specified	Approx. 9,500 borrowers; significant contribution to NPL stock reduction
GACS III	2019	Not specified	€2.0 bn	At least 70–75% first-lien mortgage loans	Up to 5% (initial)	At least 70–75% first-lien backing	Senior and mezzanine tranches rated; junior unrated; focus on deal size and timing
GACS IV	2020	All ICBG banks	Not specified	Not specified	3.5%	Not specified	Consolidated and standardized de-risking processes
GACS V	2021	All ICBG banks	Not specified	At least 50% substantially first-lien mortgage-backed	3.5%	At least 50% secured portfolio	Introduction of mandatory 5% retention; contractual flexibility clauses
GACS VI	2022	All ICBG banks	€650 mln	At least 50% substantially first-lien mortgage-backed	3.5%	Inclusion of reclassified UTP positions	Inclusion of UTP exposures; flexible portfolio clauses; centralized support by Iccrea Banca

The foregoing highlights how the role of ICBG has evolved from a mere coordinator to a proactive provider of advisory services, supporting cooperative credit banks (CCBs) in identifying optimal portfolio structures and centralizing communications with the European Central Bank to ensure prudential recognition of risk transfer. This evolution has reduced administrative burdens, enhanced operational efficiency, and ensured consistent alignment with supervisory authorities.

The trajectory of the GACS transactions implemented by the Group thus reflects a progression toward an industrialized model of non-performing loan (NPL) management, characterized by effectiveness, efficiency, and contractual flexibility. This evolution constitutes a competitive advantage and a repository of strategic knowledge, grounded in established practices that balance economic optimization with prudential soundness.

8 – Case Study: The Impact of Reform on Mediocrati CCB

The historical roots of Mediocrati Cooperative Credit Bank (CCB) date from a context of strong social commitment and cooperation, initiated in 1891 with the promulgation of Pope Leo XIII's encyclical "Rerum Novarum". This seminal document inspired the establishment of the first Rural Credit Banks in Italy, created to combat usury and foster the social and economic development of working-class communities.

In 1906, in the Calabria region, the first Rural Credit Bank of Bisignano was founded, largely through the efforts of Don Carlo De Cardona, secretary to the Archbishop of Cosenza. This institution was a pioneering cooperative credit entity aimed at supporting local communities through principles of mutuality and economic solidarity. Over subsequent decades, the cooperative banking movement consolidated in Calabria with the founding of the Rural Credit Banks of Rota Greca (1919) and Luzzi (1957).

A major strategic milestone occurred in 1963 with the establishment of the ICCREA Central Institute for Rural Credit Banks, to which Luzzi, Bisignano, and other rural banks contributed. This centralized institution facilitated enhanced cooperation, resource sharing, and development across the entire cooperative banking network nationally.

In 1999, a significant consolidation took place when the Cooperative Credit Banks of Bisignano, Luzzi, and Rota Greca merged to form the entity now known as Mediocrati CCB. This unification harnessed the collective strengths and competencies of the three institutions, establishing a financially sound and territorially embedded bank headquartered in Taverna di Montalto Uffugo. Subsequently, in 2011, Mediocrati expanded by acquiring the former Sibaritide CCB, and in 2013, it incorporated the former Jonio-Albidona CCB, further extending its territorial reach and service capacity.

In 2019, Mediocrati CCB integrated into ICCREA Group, the largest Italian cooperative credit group supervised directly by the European Central Bank, thereby augmenting its network capabilities and market standing. That same year, the acquisition of the Calabria branch of Banca Sviluppo reinforced the bank's regional footprint (Figure 2).

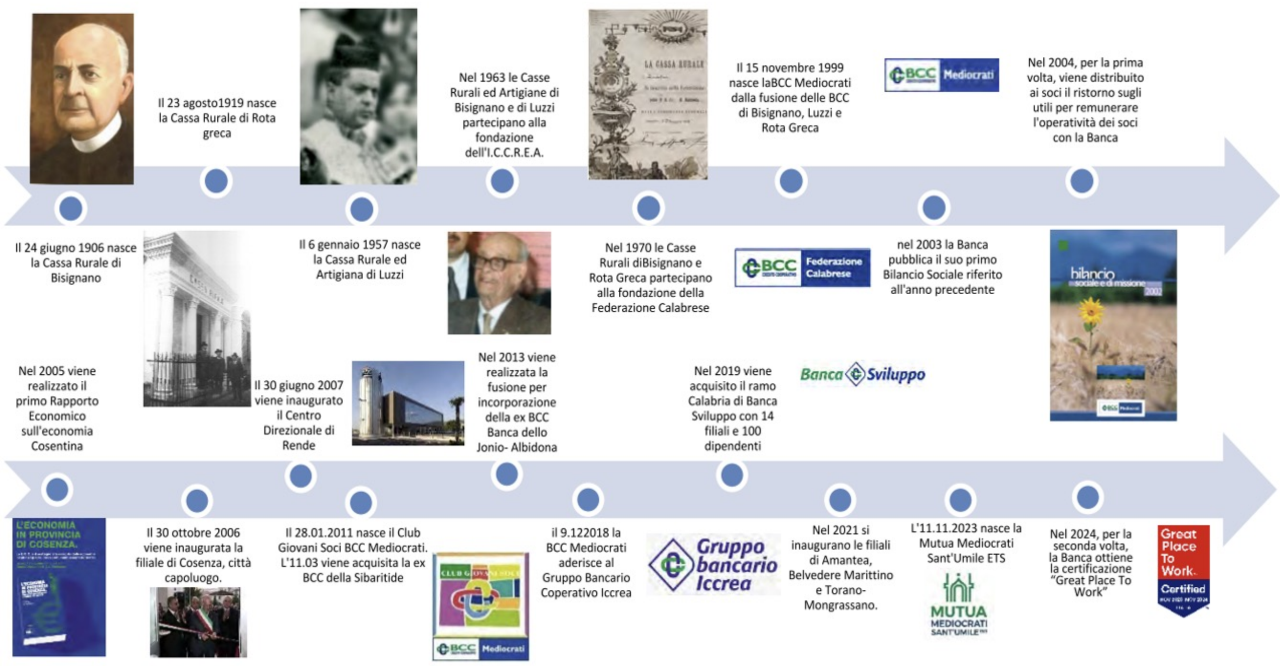


Figure 2 - The history of the Mediocrati CCB
(*Source:* Mediocrati Social Report 2024)

As of the current date, Mediocrati CCB employs 195 individuals, boasts a cooperative membership exceeding 5,700, and serves nearly 57,000 clients across a territorial span encompassing over 100 municipalities within the Province of Cosenza, accounting for a total population surpassing 600,000 inhabitants. Through its network of 25 branches, often the sole banking institution in certain localities, the bank plays a pivotal role within the local economic and social fabric.

The 2024 social report further accentuates the bank's commitment to social and environmental dimensions by integrating initiatives aimed at fostering sustainable local development and community support. Key programs include financial literacy education targeted at youths and families, backing projects geared toward social and cultural inclusion, and investments in digital technologies designed to enhance accessibility and service quality, particularly in rural or underserved areas.

Moreover, the bank has cultivated partnerships with local associations and public entities to implement interventions promoting territorial cohesion, thereby contributing to the overall well-being of both the region and its populace. This integrative approach, which balances social responsibility with economic performance, positions Mediocrati CCB as an exemplar cooperative banking institution capable of harmonizing financial growth with social sustainability.

As of 2024, Mediocrati CCB presents considerable operational and financial robustness. With a workforce of 195 employees, the bank serves a cooperative membership base of 5,707 and approximately 56,948 clients across more than 100 municipalities in the province of Cosenza, covering a population exceeding 600,000 inhabitants. The bank operates 25 branches distributed across various municipalities, in some of which it represents the sole banking institution, underscoring its crucial socio-economic role locally.

Financially, in 2023, Mediocrati CCB reported a net profit of €10.067 million, representing an increase exceeding 77% relative to the previous year. Key profitability indicators also showed significant growth, with the net interest margin rising by 19.6% and the intermediation margin increasing by 11.4%. The net equity position increased substantially from €58.22 million to €67.49 million.

Regarding capital adequacy, the bank maintains a strong and well-capitalized profile in 2024, with a Tier 1 Capital Ratio of 20.00%, a Total Capital Ratio of 23.16%, and a Common Equity Tier 1 (CET1) Ratio of 18.48%.

The evolution and current status of Mediocrati CCB demonstrate a firm adherence to cooperative principles—mutuality, community service, and social responsibility—while simultaneously achieving sound financial growth that positions the bank as a leading cooperative credit institution in Calabria and across Italy.

The decision of Mediocrati CCB to participate in GACS transactions initiated by the ICBG stands as a paradigmatic example of how aggregated membership, within the framework of cooperative banking reform, enables the valorization of group synergies. Coordinated involvement in state-guaranteed securitizations has allowed small and medium-sized cooperative banks, such as CCBs, to overcome structural and dimensional constraints that, in the absence of a qualified parent group with specialized expertise, would have precluded access to advanced instruments for the management and disposal of non-performing loans. These instruments are typically reserved for larger, more systemically relevant financial institutions.

Through the joint arranger and advisory role assumed by Iccrea, affiliated CCBs have benefitted not only from the deconsolidation of NPLs and the relief of balance sheet indicators, but also from managerial upgrading toward an industrialized risk management platform. The centralization of relationships with supervisory authorities, the sharing of specialist ratings, support in structuring the transactions, and coordination of due diligence processes have proven to be key factors for the success of these securitization initiatives.

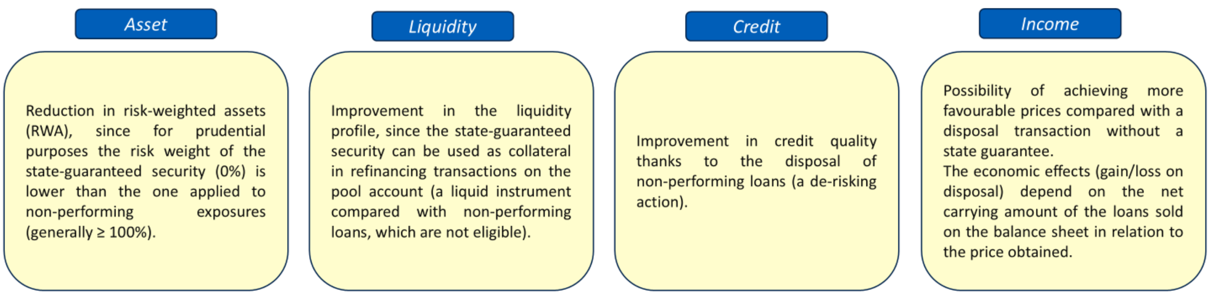
The capital benefits arising from Mediocrati CCB’s participation in GACS transactions with the Iccrea Group are especially significant in relation to key indicators of financial solidity, balance sheet quality, and the overall efficiency of impaired loan management. First and foremost, the disposal of the impaired loan portfolio through state-guaranteed securitization results in a substantial reduction of risk-weighted assets (RWA): senior notes issued with public guarantee receive a zero-risk weight, as opposed to the typical 100% applicable to impaired receivables on the balance sheet, thereby directly improving capital absorption and the regulatory capital ratios demanded by prudential supervision standards.

A tangible impact was observed on the Total Capital Ratio, which increased by approximately 5 basis points due to the reduction of RWA by about €600,000; simultaneously, the bank’s Gross NPL Ratio improved from 10.10% to 9.80%, and the Coverage Ratio reached levels near 83%, indicating a more comprehensive coverage of credit risks on the residual portfolio. The disposal also facilitated derisking actions, with corresponding reallocation of capital resources toward more productive and less risky assets.

From a liquidity perspective, holding senior state-guaranteed notes constitutes a key strategic lever: these securities are regarded as highly liquid and can be used as collateral at the Eurosystem for refinancing operations, in stark contrast to impaired loans, which are generally ineligible for such purposes. The transaction thus contributed to strengthening the bank’s liquidity position and securing greater financial stability.

Finally, through the group dimension and the synergies developed via Iccrea’s support, Mediocrati CCB was able to access favorable market conditions, obtaining more competitive disposal prices compared to transactions conducted individually and without state guarantee. This outcome enhances the valuation of assets sold and reduces the economic burden associated with the management and disposal of NPLs, leading to an overall reinforcement of the bank’s balance sheet and improved medium- to long-term profitability and capital prospects.

Figure 3 summarizes the main impacts for the Mediocrati CCB arising from disposal transactions executed with state guarantee.



Amount Transferred	GACS I 2018	GACS II 2018	GACS III 2019	GACS IV 2020	GACS V 2021	GACS VI 2022	TOTAL
Mediocrati CCB	7.633.592	17.649.984	3.563.875	6.542.675	3.641.955	1.615.466	**40.647.548**

Figure 3 - GACS Disposal Transactions by Mediocrati CCB
(*Source:* Authors’ elaboration on Mediocrati data)

Table 8 presents the evolutionary trajectory of the main indicators pertaining to the NPL (Non-Performing Loans) situation of Mediocrati CCB before and after the 2016 reform, thereby highlighting how membership in the banking group and the utilization of GACS schemes have had a transformative impact—significantly enhancing asset quality, risk coverage, and the capitalisation of Mediocrati in line with the typical pathways of structural strengthening promoted by both legislators and the Italian banking system. In particular, it is observed that following the 2016 reform, there has been a marked decline in the NPL Ratio: from 19.7% in 2015 to a progressive reduction reaching 3.7% in 2024. This trend reflects both a derisking strategy accelerated by the opportunity to use GACS for the securitization of bad debts, and a strengthening of credit risk management processes imposed by the banking group.

Table 8 - Key NPL and Capital Strength Indicators for Mediocrati: 2015–2024
(*Source:* Authors' elaboration on Mediocrati data)

Years	Npl Ratio (%)	NPL coverage (%)	Cet 1 Ratio (%)	Total Capital Ratio (%)	Net Income €	Equity €
2015	19.74%	44.40%	17.41%	19.70%	4,653,715	60,521,454
2016	18.07%	46.46%	18.15%	19.83%	1,010,817	54,961,719
2017	18.97%	47.80%	18.99%	19.69%	1,013,221	52,318,783
2018	15.52%	44.47%	18.31%	18.72%	579,686	49,126,672
2019	13.25%	41.01%	13.38%	17.41%	972,389	53,945,665
2020	12.18%	39.86%	9.96%	12.94%	698,637	4,606,313
2021	10.81%	43.01%	16.54%	21.52%	– 1,800,921	2,668,735
2022	5.78%	45.02%	17.68%	22.75%	5,676,742	8,222,499
2023	4.48%	53.50%	18.48%	23.16%	10,066,744	7,488,239
2024	3.69%	51.06%	19.85%	24.33%	8,590,136	4,866,671
sept.'25	3.26%	71.60%	21.09%	23.64%	6,056,550	4,771,458

At the same time, NPL Coverage shows a slight upward trend, reinforcing the bank's resilience to credit risk, rising from 44.4% in 2015 to 51% in 2024, with peaks of 53.5% in 2023. Capital ratios (CET1 Ratio and Total Capital Ratio) and equity levels indicate gradual stabilization and strengthening following the adjustment phase linked to the reform, demonstrating a positive impact in terms of both financial soundness and the institution's capacity to absorb potential future losses.

The dynamics of Net Income highlight a period of weakness in 2021, plausibly associated with portfolio clean-up and restructuring costs; this was, however, followed by a decisive recovery in subsequent years, with clearly positive results in 2023 and 2024. Equity shows an upward trend after 2021, confirming that the reduction of NPLs aided the restoration of the bank's capital resources.

In the specific case of Mediocrati, joining the ICBG has exemplified the post-reform benefits for business freedom and operational autonomy. Mediocrati has successfully maintained 25 unique branches in rural Calabrian areas, preserving local autonomy in credit decision-making processes (serving 56,948 clients with a strategic focus on families and SMEs), while the group framework provided the necessary economies of scale for NPL management, leading to a significant profit increase of over 77% in 2023. This synergy has expanded entrepreneurial freedom, enabling product innovations that would have been unattainable without dedicated internal resources. To further evaluate the impact on customer satisfaction, future analyses could integrate surveys or data from Federcasse Social Reports to measure retention and Net Promoter Scores (NPS) post-2019, ensuring continuity with the CCBs' historical social mission.

The capital and balance sheet effects resulting from CCB Mediocrati's disposal of NPLs via the organizational and negotiation support of the Iccrea Group provide significant insights into value creation mechanisms within the Italian cooperative banking system. First, operating as a group enables individual cooperative banks to access sophisticated market instruments—such as state-guaranteed GACS securitizations—which require technical expertise, critical mass, and institutional relationships generally unattainable by smaller institutions acting independently.

Under this model, the economies of scale stemming from centralized transaction management and the shared distribution of compliance and advisory costs across all participants lead to a substantial reduction in structural expenses. Simultaneously, risk aggregation contributes to an overall improvement in both credit quality and the capital soundness of the entire network, with positive impacts on regulatory ratios as well as on the perceived reliability by investors, rating agencies, and supervisory authorities.

Furthermore, group-mediated access to national and international funding channels enhances the bankability of each cooperative member, expanding the range of options available for active risk management and capital raising. These benefits, which strengthen the entire system's competitiveness on a systemic level, are realized without compromising the mutual character or local embeddedness that define the institutions' mission. Group governance, in fact, preserves the strategic autonomy of individual cooperative banks at the local level, while centralizing only those specialized and industrial functions required for qualified participation in advanced market instruments.

It is therefore evident that without a robust group organization, cooperative banks would be unable to access the same opportunities for derisking, capitalization, and structural cost optimization, nor could they maintain the traditional balance between mutual purpose and financial performance.

9 – Discussion and Concluding Remarks

CCBs occupy a strategic role within the European banking ecosystem, not only for their extensive geographical coverage and sheer number, but also as pivotal financiers of SMEs and households, thus underpinning regional economic development through localized financial intermediation. The maintenance of asset quality within CCBs is critical to preserving their financial stability and sustaining their socio-economic mission (Ayadi, Challita & Cucinelli, 2023). The 2016 reform of the Italian cooperative banking sector sought to address growing vulnerabilities by fostering the consolidation of CCBs into centralized cooperative banking groups (CCGs), notably ICCREA and Cassa Centrale, introducing enhanced governance, capital allocation, and risk management discipline, while safeguarding the cooperative identity rooted in territorial proximity (Porretta *et al.*, 2019). Beyond NPL reduction, the reform has significantly bolstered the business freedom of CCBs by providing centralized access to capital markets and state-backed guarantee schemes, such as GACS, while simultaneously preserving local operational autonomy through a balanced implementation of Early Warning Systems (EWS) (ICCREA, 2022). For institutions like Mediocrati, this architectural shift translates into enhanced entrepreneurial capacity without the erosion of territorial entrenchment.

The empirical analysis confirms that this structural reorganization exerted a significant positive impact on NPL dynamics. Using a panel random effects model on a representative sample of 180 Italian CCBs over 2015-2022, key financial indicators such as Capital Adequacy Ratio (CAR), Tier 1 ratio, total deposits, and loan-to-asset ratios displayed inverse correlations with NPL ratios, corroborating findings from international literature on the importance of capitalization and scale in mitigating credit risk (Ghosh, 2015; Dimitrios *et al.*, 2016). While the effect of total assets was not statistically significant in this study, the overall evidence indicates that better-capitalized and larger cooperative banks exhibited superior asset quality.

Notably, the shift to the CCG model did not produce statistically significant variations between the two groups (ICCREA vs. Cassa Centrale) in terms of credit quality, suggesting that the organizational design—embodied in the cross-guarantee mechanisms and centralized risk management practices—played a crucial role in achieving systemic improvements rather than individual group identity alone. This supports the thesis that integrated governance structures foster collective discipline and enhance resilience against credit deterioration (Beccalli *et al.*, 2023).

The case study of Mediocrati CCB within the ICCREA group illustrates the practical advantages of such integration. Mediocrati leveraged group resources to participate in state-guaranteed multi-originator securitizations (GACS), accessing economies of scale, technical expertise, and favorable market conditions unavailable to standalone institutions. This enabled substantial reductions in NPL stock, improved capital ratios, and enhanced the bank's liquidity and reputation. This industrialized approach to NPL management reflects a wider transition in the sector towards professionalized and efficient risk mitigation strategies, balancing financial optimization with mutualistic values. Furthermore, regarding customer satisfaction, the post-reform impact warrants further scholarly investigation: by preserving one-to-one relationships with local communities, the CCG model may have actually heightened the perceived reliability of these institutions, particularly in rural contexts. Future research should aim to quantify this effect through Net Promoter Score (NPS) indicators or Bankitalia/Federcasse surveys (post-2019), correlating them with customer retention and service quality to further validate the resilience of the cooperative model.

Further, the longitudinal internal analysis revealed that the advisory and coordination role played by ICCREA as the parent company was pivotal in standardizing early warning systems and aligning credit risk protocols with European supervisory expectations. These mechanisms not only reduced operational burdens on individual CCBs but also reinforced systemic stability by promoting timely identification and resolution of credit risks.

Taken together, these findings highlight the Italian cooperative banking reform as a compelling model for other cooperative banking systems facing similar challenges. The combination of localized engagement and centralization of specialized functions facilitates sustainable credit intermediation, operational efficiency, and regulatory compliance, supporting both microeconomic performance and macroprudential stability.

This research contributes to the literature by providing robust empirical evidence that the 2016 reform of the Italian cooperative credit banking sector positively influenced credit risk management and financial sustainability. The integrated governance framework of CCGs, underpinned by cross-guarantee schemes and centralized oversight, has materially diminished the burden of non-performing loans and improved financial reporting quality across affiliated CCBs.

The study confirms that effective capital adequacy, loan portfolio management, and deposit mobilization are integral to enhancing asset quality, reinforcing the necessity for cooperative banks to maintain strong capitalization and prudent risk management practices. Furthermore, the case of Mediocrati CCB exemplifies how membership in a well-organized cooperative banking group offers critical advantages, including access to sophisticated market instruments and enhanced managerial capabilities, enabling smaller institutions to overcome structural limitations inherent in their size and local focus.

It is important to note that the present analysis, centered on NPL dynamics, does not incorporate primary data regarding customer satisfaction; subsequent studies could fill this gap with empirical evidence. Firstly, the empirical focus on a single case—BCC Mediocrati—while providing rich and context-specific insight, could limit the generalizability of the findings to other banks or national contexts. The unique historical, geographical, and organizational characteristics of Mediocrati, as well as the particularities of its integration within the ICCREA group, might not fully capture the diversity of experiences across all Italian or European cooperative banks.

Moreover, the privileged access to internal data and direct involvement of one of the authors with the management of BCC Mediocrati, while enhancing data quality and interpretive depth, also introduces the potential for observer bias or conflicts of interest. Although methodological rigor and transparency have been prioritized throughout the analysis, future research would benefit from comparative multi-case designs, greater independence of data collection, and the inclusion of perspectives from additional stakeholders to further strengthen the validity and transferability of the conclusions.

10 – Conflict of Interest Statement

Olga Ferraro declares a potential conflict of interest as she serves as the Vice President of Mediocrati, the organization analyzed in this study. This leadership role involves executive responsibilities and carries financial interests associated with the board membership. However, the research was conducted independently; data collection and analysis were performed following objective scientific standards to ensure the integrity of the results.

To mitigate potential bias, the author has ensured full transparency in methodology and data interpretation. Finally, the opinions expressed in this work are those of the authors and do not necessarily reflect the official position or responsibility of Mediocrati.

Gaia Napolitano has no conflict of interest as she has no direct relationship with either ICCREA or Mediocrati

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