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Bank Credit Risk Management and Risk Culture

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15.1 Introduction

Since the financial crisis, banks have taken special measures to mitigate the forthcoming financial losses caused by mismanagement of loan allocations and credit recoveries. Thus, at present, credit risk management is a critical component of the comprehensive approach to risk management in the banking sector (Arora and Kumar 2014). To improve the consistency of correct risk management in general and of credit risk management in particular, the financial authorities and the financial organizations published numerous documents on the good practices of risk management. In recent years, risk management has become a tool for spreading risk culture. The Financial Stability Board (2014) contends that "*a sound risk culture should emphasize throughout the institution the importance of ensuring that: (a) an appropriate risk-reward balance consistent with the institution's risk appetite is achieved*

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A. Carretta et al., *Risk Culture in Banking*, Palgrave Macmillan Studies in Banking and Financial Institutions,
DOI 10.1007/978-3-319-57592-6_15

when taking on risks; (b) an effective system of controls commensurate with the scale and complexity of the financial institution is properly put in place; (c) the quality of risk models, data accuracy, capability of available tools to accurately measure risks, and justifications for risk taking can be challenged, and (d) all limit breaches, deviations from established policies, and operational incidents are thoroughly followed up with proportionate disciplinary actions when necessary".

This study aims to underscore both the role and the collocation of the credit risk management system in a sample of Italian banks and the quality of processing and information flows linked to them.

The chapter is organized as follows: Sect. 15.2 provides a brief literature review and discusses the regulations on credit risk management as well as the role of the Chief Risk Officer (CRO). Section 15.3 describes the sample and the survey, while the results of the analysis are reported in Sect. 15.4. The last section presents the study's discussion and conclusions.

15.2 Literature Review and Regulations

15.2.1 Literature Review

After the crisis of 2007, the financial authorities and the financial organizations emphasized the importance of ensuring a strong risk culture in financial institutions. In recent years, many documents have been published, emphasizing the importance of sound risk management and risk governance.

Banking is, by nature, a risky business, and because the Italian banking system is primarily focused on lending, credit risk is the most important risk that the banks must manage.

The financial crisis of 2007 and the various financial scandals of recent years, such as the Libor scandal, have highlighted the importance of a strong risk culture in the financial industry. Businesses understand the importance of a high-quality credit portfolio as evidence of a solid credit risk culture; the absence of a sound credit culture indicates that credit risk is managed inefficiently and the credit process is deficient in

a proper and rigorous credit risk analysis. In particular, the credit risk culture is the basis of credit risk management in that it is the primary driver of all lending decisions and may have a strong impact on profits resulting from the lending activities (Adje 2015). Caouette et al. (1998) defined the credit risk culture as the collection of principles, actions, deterrents and rewards within the lending organizations. However, this culture can only be developed if the principles are properly communicated throughout the organization and to all individuals within the organization.

To establish a sound credit risk culture and create the framework for such a culture, the financial intermediaries, especially banks, must communicate risk tolerance and risk appetite.[1] The Board of Directors has the primary role of promoting the credit risk culture throughout the bank structure because it is responsible for approving the credit policies that will be implemented by the management. The Board of Directors should also define the tone at the top,[2] and it has the important role of spreading the risk culture at all levels, from management to employees (management and operational structure).

In recent years, a clear and shared risk culture has become a strategic tool for the effective management of banks, which is a critical issue for the Italian banking system, given that a large portion of the industry has traditionally adopted a business model focused on lending activity. This choice has resulted in credit risk being the key risk due to its overwhelming influence on bank performance (Sinkey 1992) and bank stability (Spadaford 1988).

Supervisors have provided an extensive number of documents in recent years on risk management practices, risk governance and risk culture. Many studies have also examined the importance of integrated risk management,[3] particularly in the 1990s and 2000s (Miller 1992; Santomero 1997; Colquitt et al. 1999; Microlis and Shaw 2000; Cumming and Mirtle 2001; Nocco and Stulz 2006; Al-Tamimi and Al-Mazrooei 2007; Matthews 2013).

Miller (1992), Santomero (1997), Colquitt et al. (1999), Microlis and Shaw (2000) and Cumming and Mirtle (2001) focus on the process of risk management in the organization and define the types of risks that are considered, those that are being absorbed and the way

these risks are being managed. Moreover, they assess the characteristics and the extent of integrated risk management. The study underscores the fact that the role of the risk manager, during those years, was continuously evolving and that the pure risk manager was increasingly becoming involved in the management of a broader spectrum of risks.

More recently, Al-Tamimi and Al-Mazrooei (2007) highlight that the UAE banks are somewhat efficient in managing risk and that risk identification and risk assessment and analysis are the most influencing variables in risk management practices. In addition, they note significant differences between national and foreign banks in the UAE with respect to all aspects of risk management, i.e. assessment, analysis, risk monitoring and control. Conversely, Matthews (2013), based on a sample of 25 Chinese banks, evaluates the performance of the risk management system in terms of its contribution to bank profitability and uses qualitative data, obtained from a questionnaire, to construct an index of risk management practice and organizational risk practices.

Among others, Diamond and Rajan (2009) emphasize that errors in bank governance played an important role in explaining the bad performances of banks during the financial crisis. In addition, Kirkpatrick (2009) finds that failures or weaknesses in corporate governance processes are one of the factors that led to the financial crisis. Moreover, Acharya et al. (2009) indicate that a strong and independent risk management system is a prerequisite for allowing banks to address today's risky financial environment.

The soundness of risk governance has become one of the most important aspects in the bank management. Mongiardino and Plath (2010) contend that good risk governance should consider at least three important aspects, specifically, (a) there should be a dedicated risk committee at the board level, (b) the majority of its members should be independent and (c) the Chief Risk Officer should participate in the bank's executive committees. Despite regulatory pressures, it seems that only a small number of banks have improved their risk governance since the beginning of the financial crisis.

Hau and Thum (2010) argue that although large banks usually have a CRO, the position and line of reporting do not ensure an appropriate level of accessibility. However, before the financial crisis of 2007,

the majority of banks did not even have a CRO, but only had an individual who oversaw risk management and reported directly to the chief financial officer. In other words, this individual did not have access to or influence on the short-or long-term strategies of the bank (Aebi et al. 2012). Hau and Thum (2010) further emphasize that the last financial crisis clearly demonstrated that the business of banks entails high risks. Therefore, they suggest that perhaps the CRO should hold a more important and powerful role within the bank organization. They also indicate that during the financial turmoil, banks with a CRO who reported directly to the Board of Directors performed significantly better than banks with CROs who reported to the chief executive officer. This evidence is consistent with the hypothesis that the reporting line of the CRO is important to explain the severity of a bank's crisis as the CEO and CRO may have conflicting interests and, for example, if CRO is required to report to CEO, the risk agenda may not receive the appropriate attention.

Ellul and Yerramilli (2013) study the role of risk management in banks by creating a risk management index based on the characteristics of the CRO, such as participation on the Board, remuneration, participation in executive committees and on the characteristics of the risk committee based on the members' backgrounds and on the number of meetings held. The authors further note that banks with a stronger risk management, i.e. with a higher risk management index, in place before the onset of the financial crisis revealed, during the financial turmoil, lower risk exposure, a smaller fraction of non-performing loans, a better operating performance and higher annual returns. "Overall, findings suggest that a strong and independent risk management system can curtail tail risk exposures at banks and possibly enhance value, particularly during crisis years" (Ellul and Yerramilli 2013).

At the same time, the effects of the crisis emphasized the relevance and importance of effective credit risk management processes, especially for commercial banks whose core business is lending, because their performances are strongly affected by credit risk. Recently, the analysis of the effectiveness and evolution of credit risk management has become an increasingly popular topic in the literature. However, some of the studies also focus on the effect the new requirements of the Basel III

framework may have on the risk management profile (Fatemi and Fooladi 2006; Anbar 2006; Abdelrahim 2013; Arora and Kumar 2014; Macerinskiene and Ivaskeviciute et al. 2014).

In particular, Arora and Kumar (2014) discuss three important aspects of credit risk management, namely, organization, policies and strategy, and operations and systems. Their study suggests that banks develop two separate areas for the CRM operations and systems, one at the transaction level and a second one at the portfolio level.[4] They further note the importance of monitoring practices and the need for risk assessment at the credit portfolio level.

15.2.2 Risk Management Regulations

The 2007 turbulence stressed the crucial need for a strong governance and for effective internal control mechanisms to ensure the stability of banks. As a consequence, the actions of supervisors aimed at strengthening the framework of prudential rules have involved not only the capital adequacy profile but also a set of rules for the corporate governance system and for the internal control of banks (Basel Committee 2010; CEBS 2010; EBA 2011). Nonetheless, regulators claim that the credit risk is one of the most important risks that banks have to face.

One of the most important novelties introduced by the EBA in the field of risk management involves the primary role assigned to the internal control system. In particular, the EBA (2011) underscores the importance of a three-level line of defence.

At the first level, the risk management system has the responsibility of identifying, measuring and managing bank risks, and thus, its role is increasingly important and strategic. The internal control presides over the second line of defence via a role aimed at ensuring the efficiency and effectiveness of banking activity, especially for those businesses that may generate risks. Finally, the third line of defence is the evaluation and revision actions regarding the internal processes and the quality of the organizational design. This line of defence must be carried out by internal auditing.

With regard to risk management, the EBA (2011) stresses the advantage of a vertical structure, where the actions under the responsibility of risk management begin with the intervention of the credit committee whose members are appointed from within the Board. Thus, the activities of risk management involve the chief risk officer (CRO) and the credit risk function.

More generally, the CRO is asked to pursue a horizontal integration of all other second-level control functions (EBA 2011). The CRO thus becomes a strategic position in the bank because he is the person that must inform and train the employees and act as the conduit between the different control functions.

On 27 June 2013, Regulation (EU) n. 575/2013 (CRR) and Directive 213/36/EU (CRD IV) were published. These directives, which introduced to the European Union the rules as defined by the Basel Committee on December 2010, were intended to promote a more solid and resilient banking system.

The Directive 2013/36/EU (below CRD IV) establishes the new capital requirement for banks and specifically addresses issues regarding credit risk management and internal rating models. The CRD IV states a preference for IRB models when banks have to manage credit risks of significant level, while it suggests using the standardized model only when the credit risk is low. In the text of the CRD IV, the European Commission asks national supervisors to control lending activity, to ensure that it is based on solid and well-defined criteria and to ensure that the process for approving, amending, renewing and refinancing credit is clearly defined. In Italy, the CRD IV was implemented in the national regulations issued by Banca d'Italia, i.e. 285/2013 (4° update) and 263/2006 (15° update).

In the Appendix of the 285/2013 Regulation Banca d'Italia, the required standards for internal control and risk management are detailed. With regard to internal control, banks are required to describe their internal control system and to provide information on various aspects of it, such as the methodology and frequency of audits. With respect to risk management, and specifically credit risk management, Banca d'Italia asks banks to describe their lending processes for single transactions and their monitoring actions regarding credit portfolios.

In a more recent version, Regulation 263 details the main characteristics of the rules regarding both internal control and risk management. The regulation specifically emphasizes the responsibility of governance and management in planning and coordinating the functions as related to internal control and risk management. The main responsibility with respect to risk is assigned to the internal control team. This team is given complete oversight of the adequacy, functionality and reliability of controls to ensure that they are consistent with the bank's risk appetite framework. Internal control activities include three different and independent functions, namely, the compliance function, risk management and the internal audit. The 263 Regulation also assigns to the risk management team the role of defining the risk appetite framework and of implementing an adequate risk management system that complies with the definition provided by the Financial Stability Board (FSB), which published in 2013 the principles for an effective risk appetite framework.

Though the document focuses on the risk profile of SIFIs, the principles are also relevant for the supervision of financial institutions and financial conglomerates more generally, including insurance companies, securities firms and other non-bank financial institutions.

To ensure the effectiveness of the RAF, they also highlight the importance of adequately defining its main components, i.e. risk capacity, risk appetite, risk limits and risk profile of banks.

Considering the way the RAF may affect the risk management processes, the FSB document recognizes that a clear framework on bank risk may strengthen the risk culture of financial institutions and have a positive critical influence on the implementation of sound risk management practices.

The FSB mainly stresses the responsibilities of the Board of Directors and top management, i.e. the chief executive officer, chief financial officer and chief risk officer, in building a solid risk governance system.

From the same perspective, the Financial Stability Institute (2015) proposes the creation of a risk committee within the Board of Directors. This committee is to be independent from other committees, such as the control committee, and it is suggested that the chief risk officer (CRO) regularly attends the board meetings and be appointed to enhance the expertise of the board members regarding risk management issues.

Finally, the guidelines provided by the Basel Committee in 2015 on corporate governance principles for banks draw attention to proper risk management procedures and underscore the need for sound risk management systems to be independent and to be guided by an independent CRO who is equipped with adequate resources and able to easily access the bank's board to discuss all strategic issues regarding risk.

15.3 Sample and Survey

15.3.1 Sample

We examine a sample of 25 Italian banking groups that represent approximately 40% of the Italian banking system in terms of total assets. The respondents represent 28% of the initial sample to which the survey was addressed.

The sample includes eight commercial banks (five listed and three not listed), 13 cooperative banks (three of which are listed), two not listed saving banks, one listed investment bank and one not listed financial company (see Chart 15.1).

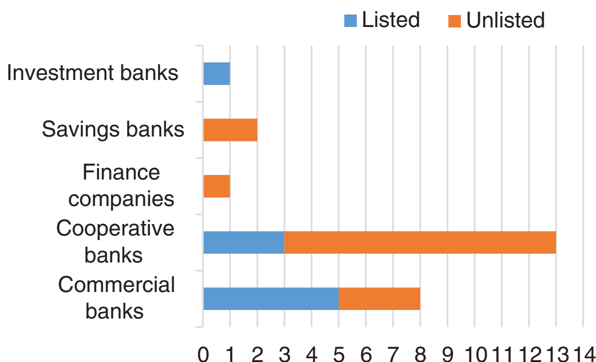

Chart 15.1 Sample composition by bank specialization

15.3.2 Survey

The survey examines a section of a questionnaire sent to the Italian banks during the first half of 2016 with respect to the organizational structure and the mode of operation regarding credit risk management and the role of the chief risk officer. The survey was conducted with the support of the AIFIRM (Italian Association of Financial Risk Manager).[5]

The entire questionnaire is divided into four sections. Section 15.1 collects information about the bank (eight questions); Sect. 15.2 analyses the organization's CRM system (13 questions); Sect. 15.3 investigates the CRM practices of the organization (36 questions) and Sect. 15.4 examines the organization's risk appetite framework (14 questions).

According to the aim of this study, the analysis is based on the issues investigated only in the first two sections. The boundaries, as stated, allow us to obtain adequate information on the credit risk management organization within the Italian banks and on the role of chief risk officer. This allows banks to highlight and consolidate their risk culture. In fact, the information serves as an important dissemination tool regarding the awareness of risk within the organization.

Moreover, through the questions proposed in these sections of our survey, the information investigated contributes to improving the effectiveness of the CRM system and guides decisions concerning risk governance in banks.

We asked four experts, two academics and two practitioners,[6] to examine and assess the questionnaire's content and completeness

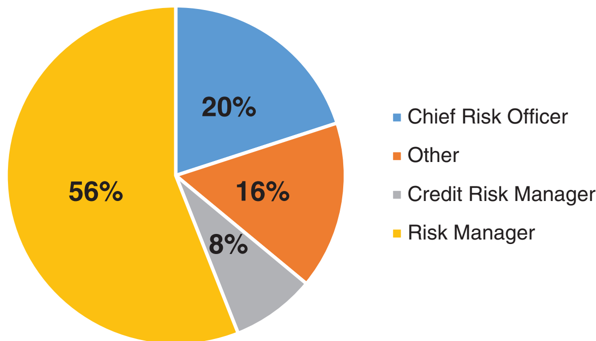

Chart 15.2 Participants on the survey

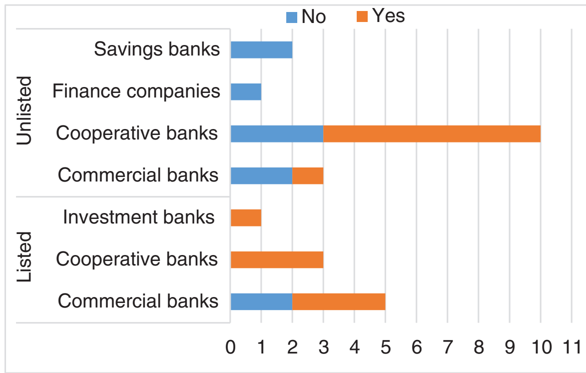

Chart 15.3 The increase in the number of CRM staff

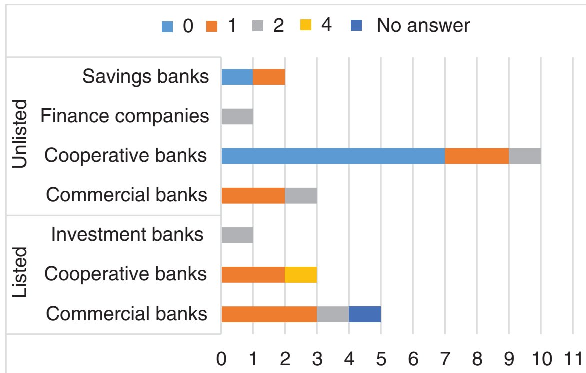

Chart 15.4 Number of credit committees in the credit risk management system

(DeVellis 1991; Al-Tamimi and Al-Mazrooei 2007; Abdelrahim 2013). All remarks and suggestions were considered to improve the quality of the survey.

The questionnaire was addressed mainly to the chief risk officer, but in some cases, the credit manager or the risk manager completed the questionnaire.

In 20% of the cases, the answers were provided by the CRO, whereas the risk manager responded in 56% of the cases, and the credit risk manager responded in 8% of the cases. The remaining surveys were completed by other individuals in the organization (Chart 15.2).

Results

The results and the findings obtained from the first and the second sections of the questionnaire are briefly discussed.

15.4.1 Credit Risk Management: Size and Organization

The number of employees involved in risk management gives evidence of the size and the relevance of the system. The average is 32 employees, with the biggest staff composed of 350 employees. On average, 45.5% of the personnel engaged in the risk management system are also involved in credit risk management.

If we consider bank specialization, banks with a larger risk management staff are commercial banks, while cooperative banks, with the exception of two large banks, have a risk management, staff of only two or three employees. When the staff is so limited, there is no real distinction between credit risk management and the wider risk management expertise and responsibilities as the personnel address primarily with credit risk issues.

According to the survey, a large percentage of the responding banks (60%) expects an increase in the number of full-time employees in the area of credit risk management (see Chart 15.3) with the employee base growing by 33%, on average, over the next year.

Eight unlisted banks (one savings bank and seven cooperative banks) do not have a credit committee external to the Board of Directors, while in all listed banks, there is at least one credit committee. One major cooperative bank has four credit committees external to the BoD (Chart 15.4). This is evidence of a more structured credit risk management system in listed banks, which are also usually the larger ones.

In banks that have committees external to the Board of Directors, the committee meetings are planned every 3 months (nine cases) or monthly (eight cases). In two listed banks, the risk committee meetings are not ruled by a stated calendar (Chart 15.5).

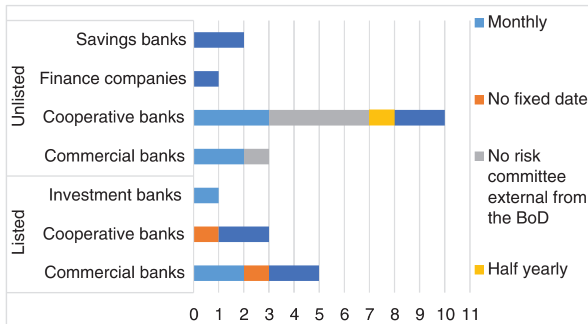

Chart 15.5 Number of meetings of risk committees external to the BoD

The frequency of the meetings provides further evidence about the growing attention given to the monitoring and management of risks. Considering the findings, it may also be concluded that the awareness of risk is independent of the size of the bank and of its status of either a listed or unlisted company.

Mogiardino and Plath (2010) argue that good risk governance includes a dedicated risk committee at the board level. Even supervisors, during the financial crisis, stressed that the control committee and the risk committee should be separate. In our sample, even in the few cases where a risk committee is in place, it is joined with the control committee. The requirements of the authorities, however, are beginning to change, though with regard to unlisted banks, the change is slow, for example, less than the 50% have a risk committee, which is separate from the control committee within the BoD (Chart 15.6). The FSB (2015) suggests that the risk committee created inside the BoD should be independent from the other committees, such as the internal control committee, and indicates that the main purpose of the committee should be to improve communications with top management with respect to awareness of risks.

The presence of the risk committee, both internal and external to the BoD, in general, should result in a stronger risk management function and an effective risk governance throughout the different corporate areas.

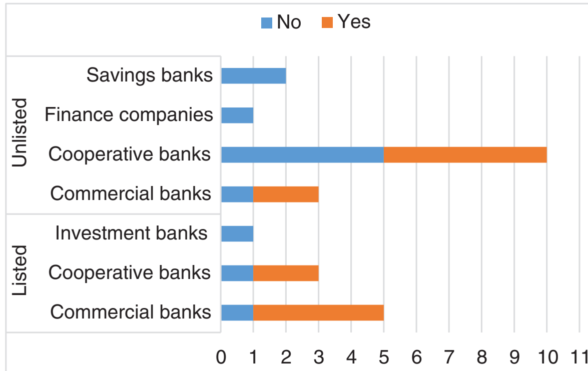

Chart 15.6 Presence of risk committee separate from the control committee inside the BoD

15.4.2 Credit Risk Model

One of the profiles under investigation concerns the adoption of internal rating models for managing credit risk. To address this issue, we must consider that the answers may depend on the timetable of the regulators with respect to validation processes.

The results indicate that while IRB models are still being used by a few banks, their use is often limited to only portions of the entire credit portfolio.

None of the banks in the sample have implemented a foundation IRB model, while five of the eight commercial banks have adopted the standardized model and three have adopted both the standardized approach and the advanced IRB for different credit portfolios. With respect to other specializations, one cooperative bank and the financial company use both the standardized approach and the advanced IRB model, while the remainder of the cooperatives, the savings bank and the investment bank have adopted the standardized approach (Chart 15.7).

The AIRB models are used primarily for assessing retail portfolios and corporate counterparties. The standardized approach is used for institutional borrowers and, in some cases, for rating portfolios of private clients.

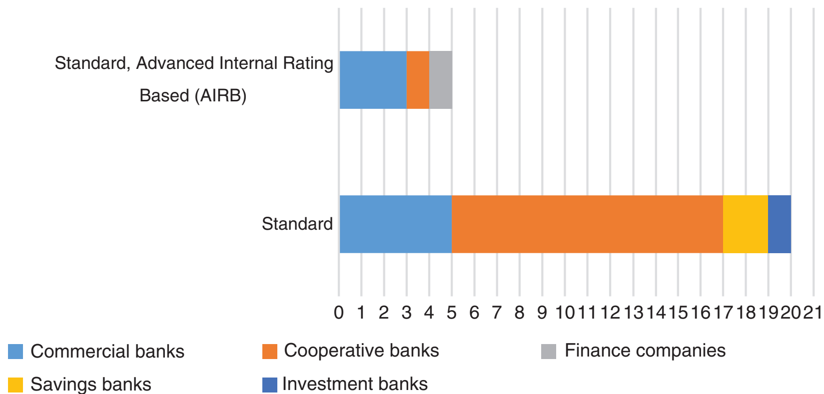

Chart 15.7 The credit risk models

15.4.3 Changing Role of Chief Risk Officer

The presence of the CRO on the Board of Directors and on the executive committees' evidence of the increasingly critical role the CRO plays in the strategic decisions of the bank. As a member of the executive committee, the CRO may have a stronger influence on Board decisions compared with the influence the CRO has when he is part of top management (Aebi et al. 2012).

The position of the CRO on the Board of Directors appears to be a widespread organizational solution that is more common in banks. For example, approximately 56% of the sample indicates that the CRO attends the BoD meetings (Chart 15.8); in two banks, the CRO serves on the executive committee compared to ten banks where he does not; finally, six banks confirm that the Board of Directors has not established an executive committee (Chart 15.9).

When both the credit risk committee and the CRO position are established within the bank's organization, the CRO is also a member of the credit risk committee in 77% of the banks in our sample (see Chart 15.10). However, even if the CRO serves on the credit risk committee, he is not usually responsible for making decisions. (Chart 15.11).

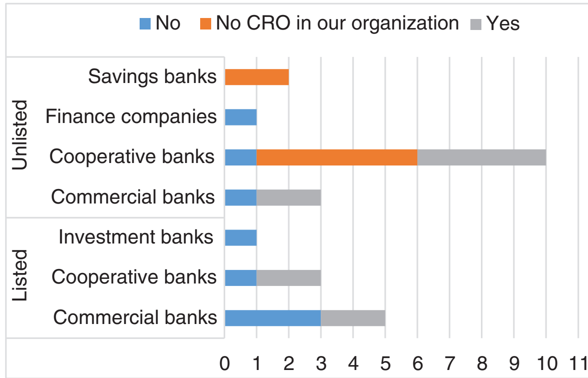

Chart 15.8 When the CRO attends the board meetings

Chart 15.9 When the CRO attends the executive committee

15.4.4 Reporting and Information Flow: An Important Tool of Credit Risk Culture

Our analysis finds that in 77% of the 25 Italian banks investigated, the CRO reports to the chief executive officer or directly to the Board of

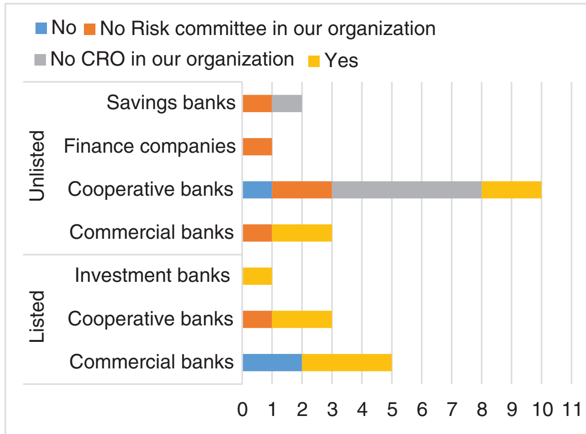

Chart 15.10 When the CRO attends the risk committee of the BoD

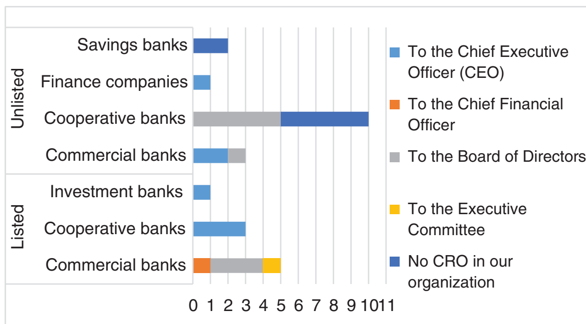

Chart 15.11 The CRO responsibilities in the risk committee

Directors. If we consider only respondents that declare the presence of a CRO in their risk management organization, the value increases to 89%. Only one listed commercial bank affirms that the CRO reports to the chief financial officer, and another indicates that the CRO reports to the executive committee (Chart 15.12). This represents a significant change occurred following the financial crisis. These changes in the reporting design must be regarded as structural improvements by banks aimed at increasing the risk culture. Moreover, they are an obvious symptom of the growing importance of the role of the CRO in the risk management process.

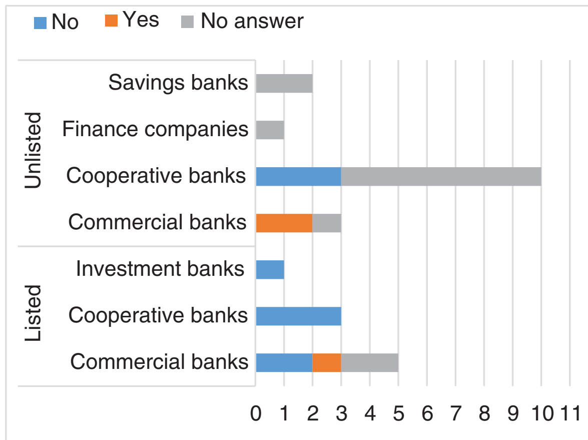

Chart 15.12 The reporting line of the CRO

These findings are consistent with the KPMG survey (2016) that investigated 20 important banks of different countries. Their survey emphasized the growing importance of the role of the chief risk officer after the financial crisis. Until that time, the CRO reported to the chief financial officer. Now, however, 80% of the total sample states that the CRO reports directly to the chief executive officer.

In most cases, the credit manager reports to the CRO; however, there are a few cases where the credit manager reports directly to the BoD, for example, if there is no CRO. There are also instances where the credit manager reports to the risk manager. This normally occurs in simplified organization structures with a small risk management staff (Chart 15.13).

The Board of Directors is informed of credit risk management activity on a quarterly basis in 15 of the cases in our study, and it is informed on a monthly basis in nine of the cases. There are no differences between listed and unlisted banks or among commercial, cooperative, investment and saving banks. Only one unlisted cooperative bank affirms that the Board of Directors is informed weekly on credit risk management issues (see Chart 15.14).

Consistent with the periodicity of the information provided to the BoD regarding credit risk management activity, the risk committee

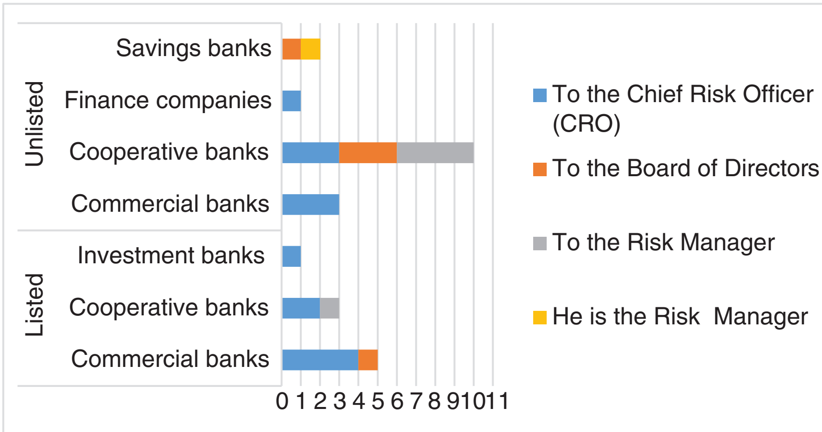

Chart 15.13 The reporting line of the credit risk manager

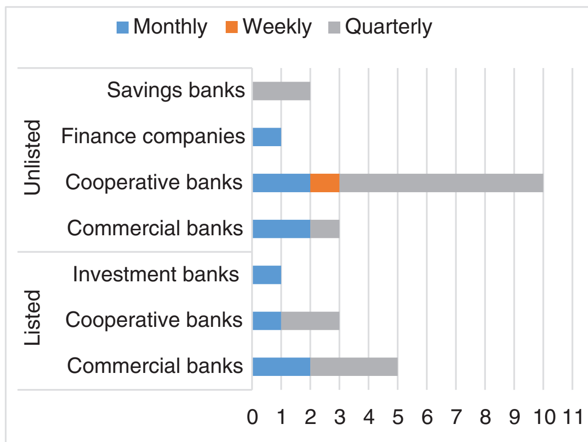

Chart 15.14 Credit risk management activity: information to the BoD

within the BoD is informed on the same issues, either quarterly or monthly, if such a committee exists. In one case, there was no established calendar for reporting to the board (Chart 15.15).

Usually, the chief risk officer is informed more frequently than the Board of Directors and the risk committee regarding credit management issues, and as a result, he is responsible for redirecting the

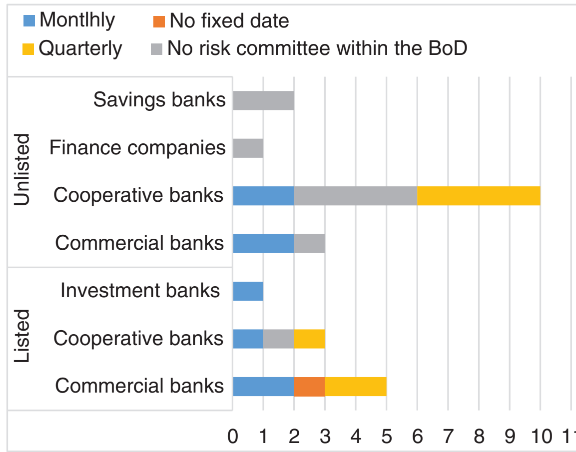

Chart 15.15 Credit risk management activity: information to the risk committee within the BoD

information to the BoD or the risk committee and discussing with these entities all relevant profiles associated with the credit risk policy.

In fact, the CRO plays the most important role in the risk management function as he represents a strategic connection between risk management as a second line of defence and both senior management and the BoD. It may be easily supposed that in recent years, the responsibilities of the CRO are continuously expanding and that the CRO is becoming the man in the middle as he aims to connect top management with risk management and to enforce better standards of governance.

Our survey finds that when the information flow involves the relationship between CRM and the CRO, the frequency is higher than in all previously addressed situations. The CRO is informed on a weekly basis regarding credit risk management activity (12 of 18 respondents claimed to have CRO positions). In some cases, the information is provided quarterly (one listed cooperative bank) and in other cases, it is provided monthly (one unlisted cooperative bank) (Chart 15.16). Only four banks stated that there is no timetable for updating the CRO.

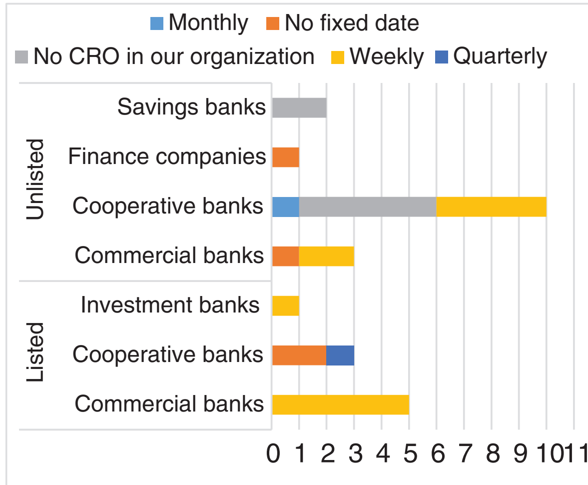

Chart 15.16 Credit risk management activity: information to the CRO

15.5 Discussion and Conclusions

The 2007 financial crisis and the recent financial scandals have highlighted the importance of a sound risk culture in the financial industry, especially for banks that consider risk management to be their primary business.

In this study, we underscored the role of credit risk management in Italian banks through a survey that included a sample of 25 domestic institutions in its investigation of credit risk management (CRM) policies and organization.

We expected that the focus on CRM may provide adequate information about the evolution of the whole risk culture in the Italian banking industry, as we still considered lending to be the core business of Italian banks and consequently considered credit risk to be the most important risk to manage.

The survey focused primarily on the structure and organization of credit risk management and on the changing role of the credit risk officer (CRO).

It is commonly accepted that a strong risk management system represents a prerequisite for promoting risk culture in banks and spreading its principles throughout the various levels of the organization.

However, our findings indicate that risk management teams are involved, for the most part, in credit risk management systems according to the assumption that credit is perceived, at least in the Italian financial market, as the primary source of risk for the banking business. This view is supported by the opinion of the majority of our respondents who expect, in the near future, an increase in the size of the credit risk management staff by, on average, 33%. Regarding the assessment of credit risk, the majority of the banks surveyed adopted the standardized approach, and only a few banks combined the standardized approach with the advanced IRB models. Our findings reveal a scenario where small banks generally use the standard approach, and only in the larger listed banks is credit risk assessment based on advanced IRB models, which, though more accurate in measuring risk, require heavy and costly investments. At the same time, we may suppose that the credit process and the assessment of credit risk have been strengthened at the transaction level, regardless of the bank size, even by improving the internal guidelines for granting credit, in order to deal with the decreasing quality of credit portfolios.

Our analysis, which focused on investigating the organizational structure of risk governance often found a formal separation between the risk committee and the control committee on the boards. This separation was likely due to the failure to distinguish the responsibilities regarding risk assessment and measurement from the responsibilities regarding the governance of risk-originating processes.

When adopted, the solution presented herein complies with the recommendations issued by regulators who suggest that the separation is an effective measure for ensuring the independence and efficient functioning of the committees.

The analysis also noted the growing and widespread roles of credit committees involved in risk management functions.

Due to the strategic position of risk management in the bank's organization, the CRO is assuming greater responsibilities that contribute to highlighting the corporate strategy and the risk appetite of the bank.

When the risk management system is vertically structured, according to the guidelines provided by EBA (2011), the responsibilities for risk management originate at the board level, the risk committee, which is then appointed by the BoD, identifies a CRO and a risk manager who share in overseeing risk management.

At the same time, the CRO is required to interact both with the second line of defence on risks and the governance of the bank. More generally, he is required to pursue the horizontal integration of all other second-level control functions (EBA 2011)

Our survey confirms that when the organizational chart provides for this position, the CRO usually directly reports to the CEO or to the Board of Directors and often attends the board and the risk committee meetings. Consequently, the CRO acts as a link between risk management and top management. This crucial role should permit the witnessing of how permeating the risk culture may be throughout the bank's organization.

Another profile of interest examined in the survey refers to the communication flow in risk assessment processes. Quality and promptness of information regarding risk must be considered essential for promoting risk culture. The FSB (2014), in its document on the guidelines for assessing risk culture, emphasizes the importance of effective communication. The risk culture should encourage transparency and open dialogue within the BoD and between management and the board on one side and between management and the personnel of all levels and at all points of the process of development on the other side to promote and identify processes and decisions that may result in an escalation of risk. Findings highlight that the CRO represents a fundamental vehicle aimed at supporting the communication flows regarding risk between the board and the team of risk management. The frequency whereby the credit manager informs the CRO of crucial credit risk issues and the information channelled by the CRO to the CEO or the BoD is evidence of the emphasis the organization has dedicated to managing credit risk.

The results indicate that the banks surveyed have established an adequate organizational design for their credit risk management system and have implemented a proper communication system. However, smaller

banks still maintain a more simplified risk management system and, consequently, a small team dedicated to credit risk management.

Nevertheless, as expected, the credit risk culture has become a core issue for many financial institutions, and as a consequence, the role of the CRO within the bank's organization is designed to bear increasing responsibilities to ensure the effectiveness of risk management and communication flows between top management and the bottom levels of the organization. Hence, the CRO is a key figure whose role is to spread and ensure a sound risk culture in banks.

Notes

1. Regulators have well defined the risk appetite framework and its components. COSO (2009) clarifies that risk tolerance reflects the acceptable variation in outcomes related to specific performance measures linked to objectives the entity seeks to achieve. The FSB (2013) defines risk appetite as the aggregate level and types of risks that a financial institution is willing to assume within its risk capacity to achieve its strategic objectives and business plan. The Institute of Risk Management (2012) declares that the board of management should consider risk appetite and risk tolerance as core elements of an enterprise risk management approach.
2. The FSB (2014) identifies the elements of a sound risk culture. Among the indicators indicative of a sound risk culture, the most important are the tone at the top, accountability, effective communication and challenge and incentives. The tone at the top is linked to the board and senior management as they "*are the starting point for setting the financial institution's core values and expectations for the risk culture of the institution, and their behavior must reflect the values being espoused. A key value that should be espoused is the expectation that staff act with integrity (doing the right thing) and promptly escalate observed non-compliance within or outside the organization (no surprises approach). The leadership of the institution promotes, monitors, and assesses the risk culture of the financial institution; considers the impact of culture on safety and soundness; and makes changes where necessary*" (FSB 2014, p. 2).
3. The integrated risk management addresses risk across a variety of levels in the organization, including strategy and tactics, and covers both opportunity and threat. Effective implementation of integrated risk management can produce numerous benefits that the organization

cannot usually obtain through a traditional risk management approach (Hillson 2006).

4. With regard to the transaction level, authors refer to the assessment, pricing, structuring of facilities, documentation, loan administration, estimation of credit risk and routine monitoring of accounts; while the operation and systems at the portfolio level include the monitoring of the portfolio at the macro level, the analysis of portfolio risk and management of problem loans.
5. The authors acknowledge AIFIRM, which provided important support in administering the survey to the member banks.
6. We acknowledge Paola Bongini (Unimib), Paola Schwizer (Unipr), Raffaele Barteselli (Banca Popolare di Milano) and Marino Ranzieri (CREDEM).

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