Comparative Analysis of Risk Management and Risk Disclosure in the Banking Sector.

Italian vs. World Practices

S. Pucci[a], M. Tutino[b*], E. Marulli[c]
University of Roma Tre, Department of Business and Law, Roma, Italy
[a]s.pucci@uniroma3.it, [b]mtutino@uniroma3.it, [c]emarulli@uniroma3.it

Abstract

The paper – that is a part of a bigger project - is based on the assumption of an important relationship between risk management principles and procedures, corporate governance and accounting. It has as aim to evaluate what are, at this stage, the theoretical approaches and the practical solutions adopted by the companies to manage the risks and to disclosure to stakeholders qualitative and quantitative elements referring to this aspect and necessary to evaluate the company profile. The paper examines the 2010 Consolidated Annual Reports of a sample of 25 Italian and worldwide listed banks on two main topics: (i) the quality of disclosure on internal organization process risk in terms of correspondence to the international best practice framework as stated in CoSo reports, (ii) the instruments adopted in the risk management process to assess corporate exposure to market risk, focusing on interest rate risk, price risk and currency risk.

1. Introduction

The importance of risk management, corporate governance and accounting information on risks has grown significantly in the banking system in the last decade. This importance is recently underlined by the financial crisis in 2008 that has shown the "*weakness*" of some corporate governance and risk management principles and of some accounting standards (OECD, 2009). The relationship between accounting, corporate governance and risk management principles is the subject of this paper. It examines financial statement policies regarding accounting standards requirements on risk exposure and evaluation, focusing on disclosure requirements for market risks and risk management of financial items in terms of objectives, policies and internal organization, as described in consolidated financial statements.

After a brief review of the literature and a short discussion of the theoretical approach, the study analyzes the banking sector data, comparing a sample of Italian listed banks with a sample of the largest world banks. The analysis follows a two step logic. The first step includes a selection of more representative Italian listed banks and provides analysis on the following aspects: (i) details on internal organizational structure in order to manage market risk exposure, as defined by each bank in its annual accounts; (ii) information about policies and tools adopted to assess and manage market risk exposure, considering compliance with specific requirements stated in IAS/IFRS principles. In the second step additional banks considered representative of the best practices in organizational processes and tools used in market risk and compliance to disclosure requirements were selected from among the world's twenty-five largest banks. Nationality was varied as much as possible. The analysis has been extended to verify the following hypotheses:

(i) are accounting standards requirements (IAS/IFRS, SFAS and other accounting practices) sufficiently standardized and homogeneous in the banking sector to permit a good level of knowledge of structures, objectives and policies adopted to manage risk?

(ii) can the instruments adopted for market risk management and evaluation be considered "*globalized*"?

(iii) how far do both previous items impact on management and policies adopted by banks referring to market risk?

2. Literature Review

Many academic contributions have recently focused on the relation between risk management, finance, corporate governance and accounting and on their techniques. In particular, some papers have analyzed, from a theoretical point of view, the relation between accounting and finance (P.E.Pope 2010) and accounting and risk management (A. Bhimani, 2009; M.Power, 2009; S.Harney, 2010); some authors have estimated, from a quantitative point of view, the relation between accounting and the measurement of risks (M. Carey, 1995; R.C. Anderson, D.R.Fraser, 2000; A.Agusman, G.S.Monroe, D.Gasbarro, J.K.Zumwalt, 2008; P.Behr, R.H.Schmidt, R.Xie, 2010; J. Wo, M. Bowe, 2010); while others have examined the link between incentives for risk reporting and discretionary disclosure (M.Dobler, 2008). Risk management is also connected to the theme of sustainability (F.H. Krysiac, 2009). The relationship between risk management, corporate governance and accounting in recent years has also been analyzed by local and international supervisory authorities, by international bodies and by groups of experts who try to find the "best" framework in which to define risk management objectives and policies and their reporting in internal documents and in financial statements. Important points of reference are the OECD Principles of Corporate Governance (2004), Enterprise Risk Management Principles defined by CoSo (2004) and subsequent guides such as Developing Key Risk Indicators to Strengthen Risk Management (2010), the AIRMIC papers (2008, 2010) and some IASB and FASB accounting principles in which information about risk evaluation and solutions are required.

3. Risk Management Function, Policies and Disclosure Rules

As AIRMIC affirms in its 2010 Report "*the risk architecture needs to be clearly defined, regardless of the risk maturity or expectations that the company has for risk management. The nature of the risk architecture should be relevant to the risk profile of the company*". As it has been previously underlined, the companies have a lot of theoretical and empirical solutions to define the risk architecture and the choice applied has a great influence on the way in which the risk is assessed, managed, reported. This is an internal choice of the company that is connected with the size, with the internal organization model, with the market in which the company acts and with the environment (laws, accounting standards, products, clients, competitors, ..).

The disclosure of risk management exposures, strategies, policies and the effects that the choices made produce on the "profile" of the company regards all stakeholders and may have an important role in the company evaluation by market investors. This represents the reason for which both IASB, FASB and other standard setters and supervisory authorities have shown a great interest in disclosure requirements regarding risk management. The requirements are often both qualitative and quantitative and, from the information combination, would be possible to have a clear idea of the risk management approach followed by the companies (managerial risk) and of the effects on the present and future cash flows (organizational risk). As an example of the qualitative requirements IFRS 7 may be remembered: par. 33 states that "*for each type of risk arising from financial instruments, an entity shall disclose:*

(a) the exposure to risks and how they arise;

(b) its objectives, policies and processes for managing the risks and the methods used to measure the risk; and

(c) *any changes in (a) or (b) from the previous period*".

4. Listed Banks: Research Methodology and Data

4.1 Focus of research

The analysis of this paper is focused on two main topics:

- the *quality of disclosure on internal organization process risk* in terms of correspondence to the international best practice framework as stated in the Coso report,
- the *instruments adopted in the risk management process* as stated in IFRS 7 in order to control for corporate exposure to market risk, focusing on interest rate risk, price risk and currency risk.

The Committee of Sponsoring Organizations of the Treadway Commission's (CoSo) Enterprise Risk Management–Integrated Framework is a model for reviewing the quality of internal control and risk management systems. According to COSO, the ERM framework facilitates four main classes of objectives:

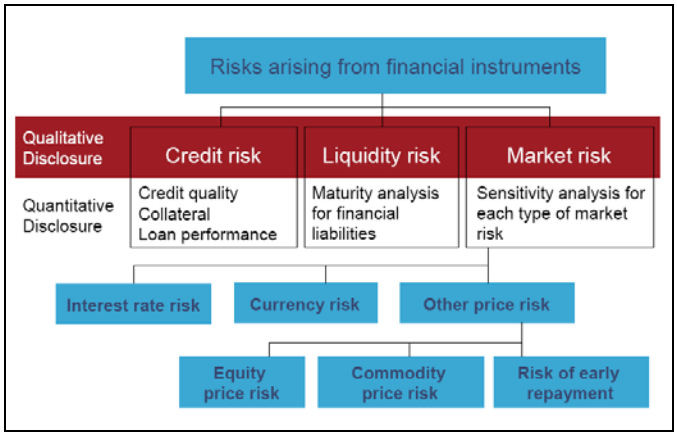
- strategic objectives: alignment of objectives with mission/vision,
- operations objectives: efficient and effective operations
- reporting objectives: reliable financial and non-financial reporting
- compliance objectives: compliance with internal procedures and external laws and regulations.

The following figure summarizes the CoSo framework.

Figure 1 – Coso Report Objectives Framework

IFRS asks for disclosure of a wide range of "*risks arising from financial instruments*". The following chart shows risk disclosure framework as stated in IFRS 7 referring to market risk:

Figure 2 – IFRS 7 Market Risk Framework



4.2 Main research questions

The main research questions, as it has been highlighted in the previous paragraphs, are:

- are accounting and non-accounting standards requirements (IAS/IFRS, SFAS, Coso Report and other accounting practices) sufficiently standardized and homogeneous in the banking sector to permit a good level of knowledge of structures, objectives and policies adopted to manage risk?
- can the instruments adopted for market risk management and evaluation be considered "*globalized*"?
- how far do both previous items impact on management and policies adopted by the banks concerning market risks?

4.3 Methodology and sample

A content analysis has been adopted in this research. This is a transparent and flexible method that can also be used for both qualitative and quantitative studies and allows comparative analysis between samples. In particular, this paper analyzes the content of consolidated annual financial reports adopting a replication logic (Eisenhardt, 1989), which allows each "analytic unit" observed to be considered as a "new experiment" useful to extend emerging theory (Yin, 1984).

We have used data from 2010 Consolidated Annual Reports and 2011 Quarterly Reports from a sample of 25 listed banks. We selected banks from the Italian market (17) and foreign markets (8) to compare disclosure. The sample was selected using different parameters. Banks were selected taking into account two main parameters.

Firstly, the substantial absence of relevant control between companies in terms of level of *autonomy in the governance process*, even if some banks included in the sample are linked with crossing participation in share capital. Each bank can be considered as a single market player relative to the others. Secondly, we selected banks all involved primarily in financial intermediation, such as *lending activity to public and private sectors* - except for two banks, Mediobanca and Banca Finnat, which were included because of their growing presence in the specific operating area and their "political weight" in the Italian banking sector - even if many banks in the sample provided a wide range of financial services. Nevertheless, most of the Total Assets of banks included in the sample is invested in lending activity. For the World sample we chose 8 top listed banks included in the FT Global 500 list, released in March 2011, considering 8 different countries.

The following table provides the whole sample investigated, ranked by Total Assets at 31 March 2011, as stated in FT Global 500. Because some Italian banks are not included in the list mentioned, the value of total assets expressed in dollars has been calculated adopting the Euro/US Dollar exchange rate at a specific date multiplied by the value released in quarterly reports by each company. The sample observed is reported in the following table.

Table 1 – Full Sample (in US$ Mln)

Sample	**Bank**	**Total Assets** (at *31.03.2011*)	**Total Assets** in %
FRA	BNP Paribas	2,662,542	15.706%
UK	HSBC	2,459,130	14.506%
JAP	Mitsubishi UFG Financial	2,177,027	12.842%
USA	JP Morgan Chase	2,117,605	12.491%
CHI	ICBC	2,042,094	12.046%
SWI	UBS	1,400,109	8.259%
ITA	Unicredit	1,244,296	7.340%
ITA	Banca Intesa-San Paolo	881,384	5.199%
BRA	Banco Brasil	488,791	2.883%
ITA	Banca Monte dei Paschi	329,781	1.945%
RUS	Sberbank	282,191	1.665%
ITA	Banco Popolare	193,371	1.141%
ITA	Unione di Banche Italiane	188,581	1.112%
ITA	Mediobanca	87,118	0.514%
ITA	Banca Popolare dell'Emilia Romagna	84,208	0.497%
ITA	Banca Popolare di Milano	78,931	0.466%
ITA	Cassa di Risparmio di Genova	57,436	0.339%
ITA	Credito Emiliano	40,700	0.240%
ITA	Credito Valtellinese	38,741	0.229%
ITA	Banca Popolare di Sondrio	37,793	0.223%
ITA	Banco di Sardegna	19,655	0.116%
ITA	Banca Popolare dell'Etruria e del Lazio	15,314	0.090%
ITA	Credito Artigiano	13,303	0.078%
ITA	Banco Desio e della Brianza	11,719	0.069%
ITA	Banca Finnat	686	0.004%
		16,952,506	**100.000%**

In order to better evaluate results obtained, the following elements must be considered:

1. Different accounting rules between countries – distinguishing EU countries, the U.S.A., China, Japan - which can lead to different levels and quality of information provided on specific aspects;
2. Supervisory rules are not considered in the analysis at this stage, however different choices of supervisory authorities may have relevant effects on the level and quality provided in financial statements relating to market risk information;
3. Principles established by the CoSo guide and ERM model principles, although they do not constitute the only model of risk management, are considered representative of best practices and are therefore an important reference for the paper;
4. Absence of a standardized form for Notes of Annual Consolidated Reports and, consequently, the non-uniformity of the information provided by the whole sample.

4.4. *Results*

The main results of the research at this stage may be summarized as follows. As it is been underlined, a lot of approaches are possible from a theoretical point of view because a lot of them are described in the literature. The first question refers to the risk management model practically

adopted by the companies in the sample. The "name" of the models, that the companies shown in the Notes, are the following:

Table 2 - Risk management models

Risk management models	***Sample***	
	Italy	**World**
Integrated Model	11.8%	12.5%
Holistic Model	0.0%	12.5%
Risk appetite framework	11.8%	37.5%
Dualistic Model	5.9%	0.0%
Risk tolerance framework	5.9%	0.0%
Not disclosed	64.6%	37.5%
Total	***100.0%***	***100.0%***

It must be notice that there are some model "name" presented in this table that may hid the same substance, but the financial statements information may not permit further aggregations.

Table above highlights the important differences between Italian and international guidelines. It is clear that the Italian sample is still far from international standards in terms of completeness of information since less than 35% of these companies produced information useful to understanding the model adopted in 2010. However it is clear from the available data for Italian banks that the integrated and risk appetite model frameworks are the commonest (both in 12% of cases). more applied models, while the model appear very widespread dualistic, holistic and Risk Tolerance . With regard to the World sample, the situation is different: the integrated model has the same rate of application as in Italian banks, but the model used by most worldwide banking companies is the risk appetite framework (found in 37.5% of cases) as well as the holistic model (in 12.5% of cases).

Referring to most Italian banks, it is relevant that they describe sufficiently broadly the structures existing to manage risk and key objectives but not define in a clear manner the theoretical framework approach. Also the relation between functions is not perfectly transparent in every report. The following exhibit shows the corporate function relation as it is described in the financial statements examined:

Table 3 - Corporate functions participating in Risk Management process

Corporate functions participating in Risk Management process	***Sample***			
	Italy		**World**	
	Yes	**No**	**Yes**	**No**
Strategy function	100.0%	0.0%	100.0%	0.0%
Consultative function	70.6%	29.4%	87.5%	12.5%
Reporting and monitoring	88.2%	11.8%	75.0%	25.0%
Asset Liability Management	35.3%	64.7%	3.5%	62.5%
Internal auditing	47.1%	52.9%	62.5%	37.5%
Legal & compliance	35.3%	64.7%	50.0%	50.0%
Anti-Money Laundering	5.9%	94.1%	0.0%	100.0%
Treasury	11.8%	88.2%	12.5%	87.5%
Capital management	11.8%	88.2%	12.5%	87.5%

The relationships between compliance, internal auditing and risk management defined in most cases by the managing body must be careful analyzed to avoid overlapping and to ensure the independence of each function.

It should be noted that the subdivision of the areas of competence of each function, although always feasible in theory, can be much less feasible in practice and could give rise to overlapping of duties and checks. If this were to occur, the overall set out controls, rather than making the company more aware at the time of their strategic and business decisions, would lead to an excess of information which certainly would not facilitate the decision-making process but would create a costly overall system that would not be fully effective and efficient. It is therefore necessary to manage possible areas of overlap, as well as collaboration between the various functions, while continuing to ensure their mutual independence. Such collaboration is necessary to prevent matters subject to controls being verified by more than one person, each having his own target, information and his own control, giving rise to partial results for each function to be assembled by the managing body.

The following tables examine the model in which risk management strategies and policies are defined. It can be easily seen from Table 3 (a) that in the sample analyzed the strategic guidelines relating to risk management are generally defined by the Board. In the case of Italian banks, the main guidelines to manage risk are, in most cases (88.2%), defined by the holding company and this solution provides groups with strategic lines referring to the same kinds of risks In the case of the World sample this percentage is lower (75%) showing a more decentralized organizational structure.

Table 3 (a) - Strategic function

Strategic function		***Sample***	
		Italy	**World**
Board of directors	***Holding***	88.2%	75.0%
	Subsidiaries	11.8%	25.0%

Table 3 (b) - Monitoring and Reporting function

Monitoring and Reporting function	***Sample***	
	Italy	**World**
Risk management area	88.2%	75.0%
Accounting Area	11.0%	0.0%

The considerations above must be read in conjunction with the contents described in Table 3(c). Approximately 60% of the chosen Italian banks have a highly centralized organizational structure, while only around 24% have a very low level of centralization. In the main world bank sample the situation is reversed and in most cases examined the parent company tends to decentralize the strategic role and to give powers to the boards of subsidiaries belonging to the group. The measurement and control of market risk for Italian banks is performed by two different bodies: the Office of Risk Management, responsible for periodic measurements of risk indicators and control limits set by steering committees, and the office of the manager responsible for preparing the social. That statement does not apply to the World sample in which the manager does not appear in any case, while the Risk Management office participates in more than 70% of the measurement activity and risk control.

Table 3 (c) - Centralization level

Centralization level	*Sample*	
	Italy	**World**
High	58.8%	12.5%
Low	23.5%	62.5%
Not disclosed	17.7%	25.0%
Total	***100.0%***	***100.0%***

Identification of specific strategies and policies adopted in order to manage and report market risks is not always identified. Evidence underlines that the level of qualitative information varies depending on risk type: more information is provided referring to price risk, limited data to currency risk.

Information on the model adopted to evaluate risk is often given as can be seen from the following data:

Table 4 - VaR Information

VaR Information	*Sample*	
	Italy	**World**
Confidence Interval	88.2%	100.0%
Holding Period	87.5%	87.5%

Table 4 (a) - Monitoring frequency

Monitoring frequency	*Sample*	
	Italy	**World**
Daily	70.6%	62.5%
Monthly	5.9%	12.5%
Not disclosed	23.5%	25.0%
Total	***100.0%***	***100.0%***

A difference in risk disclosure emerges also between large and small banks. In the case of small banks some indications about the risk management process, policies adopted and instruments used to manage risk exist but the information is limited.

5. Conclusion and Future Developments

From the analysis of the expanded sample, the following conclusions emerge:

- Approaches adopted in risk management: from an operating point of view, it is interesting to note that different approaches to risk management are used: a traditional ERM, a holistic approach and an integrated approach . The models of risk management adopted are well described especially in Annual Reports of bigger banks than smaller ones;
- Presence and "position" of risk disclosure in the full reporting system: a risk disclosure is always present but the position in the reporting system can vary: it can be found as part of the Notes, part of the Board Report or as a separate and autonomous document. This difference is not relevant if all the public documents are certified; it is relevant if only a part

of these documents is certified. It is also important to distinguish between *voluntary* and *mandatory* disclosure. In some cases these aspects are very clear: each paragraph states whether the content is revised or not, or is compulsory or not.

- Level of disclosure on management process: when the management process is built on more than one level - from the definition of the firm's overall risk appetite framework (upper level) to the definition of risk appetite for single lines of business, to the accountability of all officers in managing risks within the scope of their assigned responsibilities (lower level) – it is also well reported in disclosure in the Annual Report; in terms of autonomy in risk management of single subsidiaries, some cases show delegated power to local CFO (chief management office exists for every subsidiary). It is obviously possible to find different types of information in the case of small and big banks ;
- Form of the risk report and structure of information disclosed: form and type of structure adopted to disclose information on risk profile varies significantly, therefore it is not easy to compare the level of disclosure
- Transparency of qualitative and quantitative disclosure provided: in most cases the qualitative information is clearer than the quantitative because qualitative information is found all together, quantitative is divided into more than one part and is therefore more difficult to find.
- Impact of supervisory rules and accordance with Basel pillar 2: in some cases the impact of supervisory rules is important. It is interesting to note that in some banks Basel Pillar 2 prescriptions are applied, even if not compulsory.

Future topics of research should be addressed by:

i. Observing convergence of banks towards some specific models for the quantification of risk. The disclosure of the assumptions underlying the models adopted is sometimes not sufficient;
ii. Providing a deeper analysis of specific rules issued by Supervisory Authorities of each country on organizational structures to improve internal processes for risk management;
iii. Defining a disclosure rule that permits more information about the relation between functions in terms of duties and responsibilities related to risk management;
iv. Defining a disclosure system that is really useful for investors but avoiding excess information, which creates a lot of pages to read for stakeholders and a lot of costs for companies without any positive effects on the quality level of information provided in Annual Reports.

6. References

Agusman A., G.S. Monroe, D. Gasbarro, J.K. Zumwalt (2008), Accounting and capital market measure of risk: Evidence from Asian Banks during 1998 – 2003, *Journal of Banking and Finance*, n. 32 , pp. 480 – 488

AIRMIC (2008), Research into Benefits of Enterprise Risk management, June, available on www.airmic.com

AIRMIC (2010), Risk management roles, responsibilities, organization and arrangements, June, available on www.airmic.com

Anderson R.C., Fraser D.R. (2000), Corporate control, bank risk taking and health of the banking industry, *Journal of Banking and Finance*, n. 24, pp. 1383 – 1398

Behr P., Schmidt R.H., Xie R. (2010), Market Structure, Capital Regulation and Bank Risk Taking, *Journal of Financial Services Research*, n.37, pp. 131 – 158

Bhimani A. (2009), Risk management, corporate governance and management accounting: emerging interdependencies, *Management Accounting Research*, n. 20, pp. 2 -5

Carey M. (1995), Partial market value accounting, bank capital volatility and bank risk, *Journal of Banking and Finance*, n.19, pp. 607 – 622

CoSo - Commission of Sponsoring Organizations of the Treadway Commission (2004), Enterprise Risk Management – Integrated Framework, September, available on www.coso.org

CoSo - Commission of Sponsoring Organizations of the Treadway Commission (2010), Developing Key Risk Indicators to Strengthen Risk Management, December, available on www.coso.org

Dobler M. (2008), Incentives for risk reporting – A discretionary disclosure and cheap talk approach, *The Journal of International Accounting*, n. 43, pp. 184 – 206

Harney S. (2010), Accounting risk and revolution, *Critical Perspective on Accounting*, n. 21, pp. 14-17

Krysiak F.H. (2009), Risk Management as a tool for sustainability, *Journal of Business and Ethics*, n. 85, pp. 483 – 492

OECD - Organisation for Economic Co-operation and Development (2004), Principle of Corporate Governance, available on www.oecd.org

Pope P.F. (2010), Bridging the gap between accounting and finance, *The British accounting Review*, n.42, pp. 88-102

Power M. (2009), The risk management of nothing, *Accounting, Organizations and Society*, n. 34, pp. 849 - 855