IT Governance Implementation to the Level of Financial Institutions in Romania

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Abstract

Relatively new in Romania, IT Governance is defined as procedures and policies established in order to assure that the IT system of an organization sustains its goals and strategies. This bundle of policies and procedures, following the best practices in the area, intends to guide and control the IT function in order to add value to the organization and to minimize IT risks. The purpose of the research is to identify the measure in which the IT governance practices are implemented to the level of the financial institutions in Romania. Moreover, the paper has as goal a comparative analysis of implementing IT governance using data offered by the IT Governance Institute. This institute makes every year a study (IT Governance Global Status Report – 2006) to determine the sense of priorities and the developed actions for implementing IT governance, data which acknowledge ones more the need of any organization for tools and services to assure an efficient IT governance. In this way, the research will analyze to the level of financial institutions from Romania: • the most serious IT problems pointed out from the respondents from the last year; • the most efficient measures considered top management for resolving problems pointed out; • the best used practices in IT governance; • the most used frameworks for implementing IT governance practices.

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1. Introduction

In 2002, as a consequence of well publicized problems of Enron, World Com, in United States the Sarbanes Oxley (SOX) law was adopted, which has directed the attention, among other issues, over IT audit and its role on assuring the accuracy of the financial auditors. In Europe, the Basel II Committee on Banking Supervision recommends conditions that should be fulfilled, like the size of capital, credit exposures, improvement of the credit and operational risk management and the management information systems through clearly defined requirements. Concomitantly, another aspect which has to be taken into consideration is the continuous growth of the IT investments, which make managers from any organization to be preoccupied by those investments adding value to the bases activity in which the company is taking part.

Relatively new in Romania, IT Governance is defined as procedures and policies established in order to assure that the IT system of an organization sustains its goals and strategies. This bundle of policies and procedures, following the best practices in the area, intends to guide and control the IT function in order to add value to the organization and to minimize IT risks.

To the level of the financial institutions and banks in Romania, the European requests for Basel II implementation had also implications in the governance way of the IT component. For many information systems in banks is necessary to have an architectural rethinking which will allow a consolidate approach and, also, a flexible one, of the market and also, selling complex products and financial services adequate to the permanent changing economic environment. Basel II involves a much higher responsibility in the process of the informatics’ system of any bank both for the IT department and for the management one. Lining up to the Basel II settlements of the systems and IT services involves assigning the strategy to follow and allocating adequate resources (which can be substantially).

All these changes have had a strong impact in the governance way of the financial institutions, with great implications in the governance way of the IT component.

2. Literature review

2.1. Conceptual framework of the IT governance - What is IT governance?

Governance is a subset discipline of Corporate Governance focused on information technology (IT) systems and their performance and risk management. The rising interest in IT governance is partly due to compliance initiatives (e.g. Sarbanes-Oxley (USA) and Basel II (Europe)), as well as the acknowledgment that IT projects can easily get out of control and profoundly affect the performance of an organization.

There are narrower and broader definitions of IT Governance (ITG). Both Weill and Ross (Weill et al., 2004) focus on "Specifying the decision rights and accountability framework to encourage desirable behaviour in the use of IT."

In contrast, the IT Governance Institute (ITGI, 2001) expands the definition to include underpinning mechanisms: “IT governance is the responsibility of the board of directors and executive management. It is an integral part of enterprise governance and consists of the leadership and organizational structures and processes that ensure that the organization’s IT sustains and extends the organization’s strategies and objectives.

IT governance is the organizational capacity exercised by the board, executive management and IT management to control the formulation and implementation of IT strategy and in this way ensuring the fusion of business and IT. (Van Grembergen, 2002)
From the COBIT framework, we understood that IT governance represents “a structure of relationships and processes to direct and control the enterprise in order to achieve the enterprise’s goals by adding value while balancing risk versus return over IT and its processes.”

Figure 1 The relationship between governance, management and business concerns

The relationships between governance, management and measurement (KPI, KPIs, Balanced scorecard, etc) means having systems in place for identifying the risks and opportunities associated with the company corporate responsibility and the frameworks for managing these, monitoring progress to reach the objectives of the company, and ensuring compliance with all relevant policies and standards. (Bureau Veritas, 2008)

2.2. IT Governance - areas of focus

The developments of the IT governance practices and their growing impact have at their outset the crystallization of some IT governance principles. In ISACA view the principles of IT governance are approaching five area of interest (Board Briefing on IT Governance, ITGI): IT Strategy Alignment, IT Value Delivery, IT Resource Management, IT Risk Management and IT Performance Measurement.

2.2.1. Strategic Alignment

Strategic alignment is concerned with “whether a firm’s investment in IT is in harmony with its strategic objects (intent, current strategy and enterprise goals) and thus building the capabilities necessary to delivery business value” (ITGI, 2001).

In this way, the governance practices for strategic alignment area aim:

- ensure that IT strategy is aligned with business strategy;
- ensure that IT delivers against the strategy through clear expectations and measurement;
- allocate IT investments budgets in accord with the business objectives;
- ensure that technology investment decisions are aligned with business goals;
- provide high-level direction to create competitive advantages that parallel compliance processes;
- direct IT strategy by addressing the level and allocation of investments, balancing the investments between supporting and growing the enterprise and by making considered decisions about where IT resources should be focused;
• ensure a culture of openness and collaboration among the business, geographical and functional units of the enterprise.

2.2.2. Value Delivery

IT value delivery is defined as “delivery on time, within budget and with the benefits that were promised. In business terms, this often translates into: competitive advantage, elapsed time for order/service fulfilment, customer satisfaction, customer wait time, employee productivity and profitability” (ITGI, 2001). This critical component of ITG processes aims to confirm that IT architecture is designed to get maximum business value from IT, oversee the delivery of value by IT to business and assess return on investment.

The governance practices for IT value delivery are:
• ensure that IT plans proceed on schedule
• ensure the completeness, quality and security of IT investments
• monitor IT investments for adequate returns
• ensure bankable benefits through IT services

2.2.3. Resource Management

IT resource management is concerned with the management of IT resources and the organization of IT infrastructures within a corporation. This critical dimension of ITG processes aims to provide high level direction for sourcing and use of IT resources, to oversee the aggregate funding of IT at the enterprise level and to ensure that there is adequate IT capability and infrastructure to support current and expected future business requirements (Hardy, 2003).

Another important aspect of this dimension of ITG research is the issue of project management. Management of new IT projects must be properly governed as these projects have considerable impact on the financial position and strategic direction of the organization.

The governance practices for IT resource management are the following:
• allocate IT resources in correlation with business priorities;
• implement adequate controls which allow to identify over fulfilled IT infrastructures;
• sustain an adequate investment in staff education, development and training for IT operations and developments.

2.2.4. Risk Management

Business organizations have traditionally focused on financial risk, but have more recently become concerned with operational and systematic risk due to pressure from regulators and other governance bodies. Technology risk and information security issues form a prominent part of operational and systematic risk considerations (ITGI, 2001).

As business organizations become increasingly dependent on IT systems, the quality of information produced by these systems and the reliability of service of these systems to stakeholder groups significantly impact IT risks. To protect stakeholder groups, to provide quality information and to protect Board directors from personal litigation, it is important for the Board to focus on risk management as one of its key ITG processes.

We will underline that the governance practices for IT risk management are:
• analyze and assess IT risks;
• monitor efficiency of internal controls;
• implement necessary controls to minimize IT risks;
• put in place procedures to ascertain the transparency about the significant risks to the enterprise;
consider that a proactive risk management approach can create competitive advantage;
insist that risk management be embedded in the operation of the enterprise;
as certain that management has put processes, technology and assurance in place for information security to ensure that:
  – Business transactions can be trusted;
  – IT services are usable, can appropriately resist attacks and recover from failures;
  – Critical information is withheld from those who should not have access to it.

2.2.5. Performance Measurement

Performance measurement is concerned with determining whether IT systems have achieved the goals set for them by the Board and senior management. These measurement systems aim to assess the ability of organizations to achieve the four dimensions of ITG.

For IT performance measurement we are going to point out the followings:
  – define and monitor measures together with management to verify that objectives are achieved;
  – measure IT performances through metrics, adequate indicators.

3. Research Approach and Methodology

The purpose of the research is to identify the measure in which the IT governance practices are implemented to the level of the financial institutions in Romania. Moreover, the paper has as goal a comparative analysis of implementing IT governance using data offered by the IT Governance Institute. This institute makes every year a study (IT Governance Global Status Report – 2008) to determine the sense of priorities and the developed actions for implementing IT governance, data which acknowledge ones more the need of any organization for tools and services to assure an efficient IT governance. In this way, the research will analyze to the level of financial institutions from Romania:
  – the most serious IT problems pointed out from the respondents from the last year;
  – the most efficient measures considered top management for resolving problems pointed out;
  – the best used practices in IT governance;
  – the most used frameworks for implementing IT governance practices.

For the methodological point of view, the research started with the theoretical framework provided by the literature review and followed the next steps:
1. Designing a questionnaire of gathering data which will verify principles of IT governance established previously. In this stage will determine the target population (financial institutions in Romania – a number of 30 subjects).
2. Empirical analysis of collected data and determining a number of dependences from proposed IT governance practices.
3. Presenting the results.

3.1 Data analysis and findings

The empirical analysis of collected data underlined the following elements:

a. The most serious IT problems pointed out in the last period (the last year) at the level of the respondents from Romania (30 financial-banking institutions) were the ones connected to employees, the high costs in relation with the low ROI and the operational IT incidents. A comparative analysis of these answers in relation with the dates supplied by the IT Governance Global Status Report point out the fact that the major issues are of similar nature.
These results at the level of the institutions from Romania can be commented as follows:

- the problems related to employees, as it can be also observed at worldwide level are a problem of present interest which pertains to low level of training or of financial motivation of the employees.

- the international regulations (once the countries are integrated in EU) – Basel II, the costs related to the architectural restructuring and reorganisation of the IT system, the implementation of the new software applications, the appropriate training of the personnel were significantly higher than the benefits. On long term, however, in the following years, a significant increase of the percentage will be noticed.

b. The most efficient measures taken into consideration by the top management to resolve IT problems underline, as we can see in the Figure 3, as a rise level the associated governance practices:

- IT risks management
- Alignment between IT strategy and overall strategy
- IT resource management
- Actual performance measurement of IT
At worldwide level, we can notice that the significant percentage is considered for the practices of IT governance associated to the process of management of the IT risks. The measures which are not considered as necessary to be implemented according to the same study are the IT value delivery aiming at a higher product or service leadership or innovation.

**Figure 4 The most efficient measures for resolving IT problems at global level**

- Better management of IT risk: 63.33% Yes, 10.07% No
- Better measurement of IT performance: 80.00% Yes, 20.00% No
- Better alignment of IT with strategy: 80.00% Yes, 20.00% No
- Better management of IT resources: 80.00% Yes, 20.00% No
- Better delivery of business value through IT: 75.67% Yes, 23.33% No
- Outsourcing IT: 73.33% Yes, 26.67% No
- Better management of IT process: 70.00% Yes, 30.00% No

(Source: Governance Global Status Report, 2008)

c. The most frequently used IT governance practices have indicated the following elements:
- The board reviews IT budgets and plans on a regular basis;
- IT resource requirements are identified based on business priorities;
- Setting up the right organization structures for overseeing and directing all the organization’s IT resources.

**Figure 5** The most frequently used IT governance practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>Romania</th>
<th>IT Governance Global Status Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>A standard procedure for determining the business worth (financial and non-financial) and the risk for IT-enabled business investments</td>
<td>55.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>The IT project portfolio is managed by business departments, supported by the IT department</td>
<td>39.07%</td>
<td>63.33%</td>
</tr>
<tr>
<td>IT processes are regularly audited for effectiveness and efficiency</td>
<td>57.00%</td>
<td>63.33%</td>
</tr>
<tr>
<td>The CEO informs himself/herself on the organisation’s major IT-related risks, and mandates appropriate responses</td>
<td>70.00%</td>
<td>69.87%</td>
</tr>
<tr>
<td>Setting up the right organisation structures for overseeing and directing all the organisation's IT resources</td>
<td>71.07%</td>
<td>77.33%</td>
</tr>
<tr>
<td>The board reviews IT budgets and plans on a regular basis</td>
<td>72.00%</td>
<td>75.87%</td>
</tr>
<tr>
<td>IT resource requirements are identified based on business priorities</td>
<td>10.00%</td>
<td>80.00%</td>
</tr>
</tbody>
</table>

**d.** The most frequently used framework (standards, norms, regulations and methods) for implementing the IT governance in Romania is ITIL, together with ISO 17799 and COBIT, while at worldwide level from the date supplied the most used framework is ITIL (24 %) followed by COBIT (14 %).

**Figure 6** The most frequently used framework for implementing the IT governance in Romania
e. IT influence over the investment principles

Figure 7 IT-related Investment Principles

- IT-enabled investments for policies to assure the security and the continuity of the business
- IT-enabled investments are managed through their full economic life cycle.
- Key value metrics are monitored and deviations responded to.
- IT-enabled investments include the full scope of activities that are required to achieve business value.
- Setting up the right organisation structures exists for overseeing and directing all the organisation’s IT resources.
- Board reviews IT budgets and plans on a regular basis.
- IT resource requirements are identified based on business priorities.

Legend:
- Romania
- IT Governance Global Status Report
At the level of Romania, a rejoicing element is the fact that in 86% of the cases the allocation of the IT resources is established in correlation with the priorities of business and the investment budgets IT are considered acceptable by 73.33% from participants. Although the allocation of the IT resources is established in correlation with the business priorities it seems that the decisions of IT investments are aligned with the business objectives in less than half of cases. A serious problem is represented by the business continuity insurance though important investments in efficient solutions and plans of recovery in case of disasters.

f. The level of maturity for the IT governance

At the level of the Romanian institutions, the maturity of the process of IT governance was evaluated based on a set of questions (Figure 8), whose answers made us consider that the implementation of the IT governance didn’t reach a level of maturity, as it is a „defined” process but which needs a continuous development and monitoring.

Figure 8 The maturity of the IT governance

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controls implemented to identify an over fulfilled IT infrastructure (hardware, software)?</td>
<td>30.00%</td>
<td>70.00%</td>
</tr>
<tr>
<td>The alignment between IT strategy and business strategy?</td>
<td>40.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>IT provided services reach expected benefits?</td>
<td>40.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>The efficiency of the internal controls is monitored?</td>
<td>40.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>IT risks analysis and assessment?</td>
<td>45.33%</td>
<td>50.07%</td>
</tr>
<tr>
<td>Competitive advantages through IT strategy?</td>
<td>48.67%</td>
<td>49.33%</td>
</tr>
<tr>
<td>There is an IT strategy committee to establish IT governance practices?</td>
<td>52.33%</td>
<td>45.67%</td>
</tr>
<tr>
<td>Adequate importance for the IT component, periodically monitor and assess to the level of the organization?</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>IT services provided on time and with stipulated quality?</td>
<td>60.07%</td>
<td>39.93%</td>
</tr>
<tr>
<td>Adequate controls implemented to assure the minimization of the IT risks?</td>
<td>70.00%</td>
<td>30.00%</td>
</tr>
<tr>
<td>The management implemented processes and practices to assure IT as a certain value for the business?</td>
<td>70.00%</td>
<td>30.00%</td>
</tr>
</tbody>
</table>

The data provided by the ITGI (Figure 9) shows the level of IT governance implementation from the geographical location point of view.
This information was prepared and corroborated with the data offered by the Vice-Governor of NBR, Georgescu Florin (2007) which was specifying that in September 2007, half of the total number of credit institutions in Romania were equipped with:

- Set of policies, procedures and processes of control and diminishing the risks
- IT system of monitoring and reporting the risk exposure
- Plan of recuperation of data and recovery in case of disaster, adapted to the new tendencies.

Basel II has a significant impact over the management of information at the level of each credit institution (recording, processing, reporting, archiving). In order to answer to the new requirements, each credit institutions must ensure (without limiting itself at):

- The existence of a centralized database in order to answer efficiently the request of the management of administration in an adequate manner of the risks.
- The structuring of the database in conformity with the Basel II requirements:
  - Classes of exposure
  - Degrees of risk
  - Eligible guarantees
- The existence of an IT application for determining the capital requirements corresponding to each risk.
- The preparation of policies and procedures for ensuring the accuracy of data.
- The existence of IT application for automatic transpose of the information from the database in the new reporting forms.

These changes implied the allocation of important resources due to:

- The expenses with consultancy, training the personnel, the management of project;
- The important volume of time and work related to updating the database (in some cases the “inventory” analysis exposure with exposure) and reconfiguring the calculation algorithm of the capital requirements;
- Reorganizing the entire process (policies, procedures, applications).

**Conclusions**

**The results of the research** allowed us to identify the stage of IT governance implementation, the problems which have concurred to the present level of the governance and its practices necessary to grow the efficiency of the IT governance.

Also, this research has realized that IT governance should be on the agenda of any important financial institutions and that organizations with a mature mix of structures, processes and relational
mechanisms will achieved a higher degree of business / IT alignment maturity compared to other organizations.

In a practical way it has been demonstrated that these implementation requests of the IT component governance process have been the following:
- Technology makes new business processes possible leading to loss of control and more regulation;
- Developments in IT and business practices make corporate governance more difficult;
- Officers and management will be held accountable;
- Already major changes have occurred but pressure to continue to change remains;
- Increasing dependence on information and the systems that deliver the information;
- Increasing vulnerabilities and a wide spectrum of threats, such as cyber threats and information warfare;
- Scale and cost of the current and future investments in information and information systems;
- Potential for technologies to dramatically change organizations and business practices, create new opportunities and reduce costs.

The growth of the IT governance efficiency process, to the level of Romanian financial-banking institutions can be assured by:
- redefining an organizational structure to allow the segregation between planning and organization, acquisition and implementation, delivery and support, and monitoring functions (where is needed);
- diminishing problems regarding operational staff, through an adequate and continuous training process;
- the transparency of the operational risks through the board of each organization;
- improving IT systems of monitoring and reporting the IT risks;
- defining metrics and performance indicators to allow a true estimation of all those from above.

References