1. Introduction

In the past few years, public attention has been directed to the continuing revelations by major corporations of accounting misreporting and frauds, mismanagement, bankruptcy and excessive executives compensation.

Most of these cases have been revealed in United States, whose capital markets, corporate governance rules and accounting systems have always been considered as an efficiency and effectiveness exempla.

The wave of scandals began with the demise of Enron and Arthur Andersen. Later, the list of corporate irregularities and failures has grown every day: WorldCom, Kmart, Tyco, Global Crossing, Adelphia and many others. Some of these companies (such as Enron, WorldCom, Tyco...) have destroyed billions and billions of dollars in shareholder value while moving toward bankruptcy.

The number and the importance of American corporate scandals have raised questions about the quality of corporate governance in the United States. In fact, even if some of these scandals can be considered as a result of the market bubble burst in 2000, the broadness of corporate misconduct and misreporting suggests also a failure of the American corporate governance system.  

Furthermore, many scandals have also characterised the European scenario, showing that probably every corporate governance system in modern economies is far from preventing the risk and the damages of misleading financial information.

The structural differences between the American and the European system are basically linked to how much influence outsiders wield over a company’s operations.

In the United States there is a strong shareholder oriented norm; anyone could gain influence over a company by purchasing shares in it. Moreover, because hedge funds invest a large part of their money in stock and bond markets, even who does not own stocks directly has a vested interest in the country’s corporate health.

European situation has been different. European companies have traditionally raised capital through the typical continental banking systems or through retained earnings rather than from the securities markets. The state protects citizens from the rise and fall of the stock and bond markets but also removes most incentives to care about what is going on in the corporate world.

A common aspect characterising the main scandals is the relevance of corporate reporting failure, as shown by the willingness of corporate managers to inflate financial results, either by overstating revenues or by understating costs, or to divert company funds to private uses.

Fraudulent “earning management” or “misreporting” are indeed a leit-motif of recent corporate scandals.

Investors’ confidence in the quality of corporate financial reporting has been seriously damaged. The ever-increasing process of overstated earnings, inflated asset values and understated liabilities, suggests the possible existence of deficiencies in the accounting standards and in

1 The paper is the result of a joint activity of the authors. Nevertheless, paragraph 1, 2 and 3 have been written by Francesca di Donato and paragraph 4, 5 e 6 by Riccardo Tiscini.


3 C. RISEN, Account due, The new Republic, 29 march 2004
corporate governance rules. Both issues play a primary role in financial information by public companies\(^4\).

Accounting frauds and financial shenanigans are an increasing phenomenon in the current competitive scenario, even if nature and consequences of frauds are far from being completely understood. It is then important to investigate the nature of the fraud, what factors can motivate and provide incentives to it, what factors influence the probability of fraud detection and what corporate governance mechanisms can be effective in discovering corporate fraudulent activities.

2. Objective, scope and hypotheses

The purpose of this paper is to analyse the relation between financial frauds typologies and corporate governance systems.

We will empirically investigate, on a qualitative perspective, twenty of the recent international scandals, chosen from different countries, trying to get evidence about the relation between the corporate governance system of each firm and the characteristics of accounting frauds, defined by specific parameters.

The empirical analysis is also a base to highlight, even in future implementation of the research, the effects of contest variables, regulation and control systems on the genesis and development of accounting frauds.

In this paper we aim to demonstrate the empirical relevance of the following two hypotheses:

- hypothesis A: accounting frauds follow two main generation processes and can be tentatively distinguished in two categories: “excessive power” and “performance stress” accounting frauds;
- hypothesis B: corporate governance system has a significant influence in determining the typology of accounting fraud.

This paper provides a first empirical evidence for these hypotheses and represents a first partial step in the investigations on the relation between accounting fraud nature and incentives, corporate governance systems, with particular attention to control mechanisms, and environmental variables.

The following paragraphs, after a brief review of the literature on accounting frauds and their relation with corporate governance, will go through the definition of the two categories of accounting frauds, the methodology of the analysis and the empirical results.

3. Literature review

The worst aspect of the recent corporate misconduct has been the collective failure of corporate governance mechanisms to detect financial misreporting and to prevent sudden and surprising corporate debacles.

In fact, one of the most important issues of corporate governance systems is related to the mechanisms that provide shareholders with information about the corporate business, and the legal rules establishing responsibilities for managers and boards of directors\(^5\).

First of all, it is necessary to define accounting frauds, misreporting and manipulated earnings, in such a way as to understand what are the incentives to realise those performance and the possibility to detect them. Furthermore, it is important to focus on relevance and role of corporate governance.

---

\(^5\) F. R. EDWARDS, op. cit.
3.1. Accounting and financial fraud and manipulated earnings

Accounting and financial fraud is defined as deliberate misstatement or omission of amounts or disclosures in financial statements to deceive financial statement users, particularly investors and creditors.\(^6\)

The concept of accounting fraud can also be expressed like manipulated earnings or accounting irregularities.

Young divides financial misstatements into two categories: errors and irregularities.\(^7\)

The difference is related to the intent of people providing the incorrect numbers. Errors are defined to be accidental inaccuracies, irregularities are defined to be inaccuracies that are deliberate. When a firm finds an accounting accidental error, it does its best to fix it and it does not have generally negative consequences. On the contrary, an accounting irregularity is not an accidental mistake, that implies that someone is lying.

The concept of fraudulent earnings makes sense just if it is related to “true” earnings. What are true earnings? A true statement, for business people, is something corresponding to reality or facts.\(^8\)

Usually, earnings reported by corporations and used by investors and managers are imprecise numbers based on multiple assumptions and subjective estimates. This does not mean that financial reports are useless, but just that it is important to set a standard for useful and high-quality earnings.

External financial information is the principal tool to manage the complex relations between firms and a large group of stakeholders with different characteristics, interests and cognitive objectives.\(^9\)

But financial information depends also on external variables, related to its environment (laws, national and international accounting principles,..)\(^10\).

As matter of fact, frauds victims’ groups are broad. The victims can be insiders (like employees, audit committees, internal auditors, managers suffering a reputation loss) and/or outsiders (like investors, creditors, customers, suppliers, external auditors).

Financial fraud can be committed through the following tools:

- Falsification, alteration or manipulation of material financial records, supporting documents, or business transactions;
- Material intentional omissions or misrepresentations of events, transactions, accounts, or other significant information from which financial statements are prepared;
- Deliberate misapplication of accounting principles, policies, and procedures used to measure, recognize, report, and disclose economic events and business transactions;
- Intentional omission of disclosures or presentation of inadequate disclosures regarding accounting principles and policies and related financial amounts.

Frauds can be divided in two categories: management frauds and employee frauds.

Management frauds are maybe more difficult to detect due to collusion; if a small mistake is not rectified when it is discovered, it can become a fraud. Some of the causes that enable fraud to occur include failure to allocate responsibility for its prevention.\(^11\) The best deterrent for fraud is an effective functioning system of internal controls, so that where fraud is perpetrated by eluding security arrangements, companies are reluctant to admit accounts falsification.

3.2. Origin, causes, incentives

---


\(^{8}\) B. LEV, *op. cit.*


According to Rezaee, three variables can explain frauds accomplishment:

- conditions
- corporate structure
- choice.

This model (3Cs model)\(^{12}\) can help to explain motivations and opportunities of financial frauds.

**Conditions**

Economic pressures, such as pressure to meet analysts’ earning estimates, are one of the most relevant elements in the process of fraud committing.

Costs/benefits evaluation is fundamental in this process. Managers will compare the benefit in terms of positive effects on company’s stock price or the cost saving of preventing the negative impact on share price, with the possible cost consequences of fraud accomplishment in terms of probability of detection, prosecution and sanction.

Financial pressures, such as inability to meet analysts’ earning estimates or declines in quality and quantity of earnings, are often motivations for management commitment in financial frauds.

It is obvious that very often financial frauds are linked to conditions enabling them, such as:

- ineffective corporate boards;
- existence of management with no accountability and insufficient market’s accountability;
- lack of responsible corporate governance;
- so on.

**Corporate Structure**

The existence of an effective corporate governance mechanism (such as internal control structure and audit committees) would discourage managers from committing frauds thanks to a larger probability of detection.

The role of corporate governance devices can also be discussed in relation to other social and economic characteristics of different countries where frauds can be accomplished.

It is also important to explain to what extent an effective corporate governance system can help to prevent and detect frauds.

**Choice**

Independently of the external contest and corporate structure, managers have their own characteristics in terms of aggressiveness and lack of moral principles so that fraud is also a matter of choice regardless of environmental pressure or corporate structure. Some people could be even interested in committing fraud without any consideration for the consequences of their action and of the sanctions (they are crazy nonetheless!!).

The increasing incentives to misreporting and the large alleged accounting frauds of recent years have left legislators, regulators and academics searching for answers about the causes of irregularities. Many have suggested that the explanation lies in the incentives and opportunities for personal gain faced by executives.

Recent analyses have demonstrated that there is a strong relationship between stock-based compensation and fraud incentives\(^{13}\). The use of stock-options for executives compensation rose during the 1990s, when the compensation structure of American executives shifted towards equity-

\(^{12}\) Z. REZAAE, op cit.
\(^{13}\) M. ERICKSON, M. HANLON, E.MAYDEW, Is there a link between Executive Compensation and Accounting Fraud?: paper 24.02.2004
based compensation. The average compensation of CEOs of large U.S. companies tripled in real terms during the 15-years period from 1980 to 1994.\textsuperscript{14}

3.3. Fraud prevention and detection

Financial and accounting fraud prevention is not always possible. Anyway, the prevention is linked to some mechanisms whose main elements are:
- vigilant corporate governance;
- a corporate code conduct;
- an adequate and effective internal control structure;
- an internal audit function;
- external audit services.

These tools refer to a firm culture based on financial and economic disclosure for an effective stakeholders relations management, independently of normative rules.\textsuperscript{15}

Nevertheless, lack of responsible corporate governance and other control mechanisms does not necessarily mean that the company will commit a fraud. A company needs specific reason and incentives to engage a fraud. In fact, it finds a set of acceptable accounting alternatives to justify its actions and opportunity to commit illegal action.\textsuperscript{16}

Moreover, firm’s cost deriving from account falsification consists of reputation damages and big investors’ loss of confidence, besides legal procedures cost, functioning in case of accounting and financial frauds.\textsuperscript{17}

Corporate governance is characterised by organisational structure, which defines the standard operating procedures for the legal behaviours. When frameworks of corporate governance become established, they begin to define the corporate culture. Corporate governance that is consistent with the structure and decision-making routine of a company may be different and inconsistent with the structure of another company.

Due to the difficulty to prevent accounting fraud, the mechanisms of internal/external control, which are strictly linked to corporate governance systems, must be very effective and play anyway a primary role to detect any kind of possible fraud.

3.4. Corporate Governance

Corporate governance consists of a various set of legal and institutional mechanisms aimed of safeguarding the interests of corporate shareholders and of reducing agency costs deriving from the separation of ownership (shareholders) from control (managers and/or controlling shareholders). The most important elements in a corporate governance system are the mechanisms that provide shareholders with information about the activities and the operations of the corporation, and legal rules that establish management’s and board of directors’ responsibilities as well as the penalties for irresponsible behaviours.

A narrow definition of corporate governance, principally based on the accountability and responsibility more than on the concept of who has the power, is the one referring to the relationship between the company’s capital providers (investors and creditors) and the top management. Corporate governance, according to another definition, simply means the way a corporation is governed through a fair accountability for managerial and financial performance.

\textsuperscript{14} S. N. KAPLAN, B. HOLMSTROM, \textit{The State of U.S. Corporate Governance 2004}, Joint Center & University of Chicago, january 2004
\textsuperscript{15} On this topic V. CODA, \textit{Trasparenza dei bilanci di esercizio e principi contabili}, Rivista dei Dottori Commercialisti, n.2, 1983.
\textsuperscript{16} Z. REZAEE, op cit.
\textsuperscript{17} As italian reference: P. BASTIA, \textit{Teoria dell’agenzia e strumenti di informazione e controllo}, Biblioteca W. Bigiavi – Documenti per la discussione, Bologna, 1992.
\textsuperscript{18} F. R. EDWARDS, op. cit.
\textsuperscript{19} Z. REZAEE, op cit.
In the past few years we can notice an increasing awareness of the role of corporate governance in financial frauds prevention and detection, thanks to its impact on earnings stability and the quality of financial reporting.

A good corporate governance system can help the recovery of investors’ trust. In fact, the relation between accounting frauds and corporate governance is really strict, independently of the specific governance system, corporate bodies structure and control mechanisms.

Misreporting has been considered as whatever action that allows low-value companies to report the same earnings, or revenues, or other dimensions of corporate performance, as high-value ones.

There are mainly two kind of actions enabling this process:
- violation actions, that is actions in open contrast with accounting standards and accounting principles in general, false representation and, eventually, false documentation;
- elusion actions, that is actions not openly in contrast with accounting standards, generally referring to forced interpretations of them, but aimed of misleading investors about the prospects of the company.

Financial information represents a way to communicate with stakeholders, but the real relationship with them depends on corporate governance model.

In Anglo-Saxon countries, financial information is the main instrument for firms communications to stakeholders. It is a consequence of a “market-oriented” corporate governance model, characterised by public companies, with high split up ownership and the absence of a controlling shareholder. In these case, management is usually not subjected to effective control and has a great leadership in making actions.

In continental Europe (Germany, France, Italy) instead, stakeholders get often financial information through indirect channels.

In these countries corporate governance systems are usually defined as bank-oriented, characterised by controlling shareholders with a strong leadership, consisting of few people, such as families or banks, with a high concentration of ownership. In these cases managers are subjected to the influence of ownership interests. In this contest financial information can more easily loose its role of primary and neutral information channel because the interests of some groups of stakeholders (for instance controlling shareholders) could be privileged and they can get information through informal and private sources.

The distinction between market-oriented and bank-oriented systems has been often criticised. Rajan and Zingales show for example that financial information, in developed financial systems, plays an important role for firms with a few tangible assets. These ones can be used like a guarantee to get bank funds, so that firms with low proportion of tangible assets depend much more on the market for financing and markets require higher standards of information disclosure.

The relation between typologies of accounting frauds and characteristics of corporate governance systems is thus explained also by the corporate governance role in guaranteeing quality of financial reporting.

---

20 M. LACCHINI, Corporate Governance e bilanci d’impresa nella prospettiva della riforma, Giappichelli, Torino, 2002.
25 F. FORTUNA, op già cit.
4. Two models of accounting fraud development process

According to the hypotheses of our work, corporate governance systems have a significant influence on the characteristics of accounting irregularities.

We identify three typologies of corporate governance systems, based on differences in shareholders and board composition.

As regards shareholders and ownership structure, we distinguish three cases:

1) the “privately controlled” company, in which there is one shareholder, or one group of shareholders who strictly owns the absolute or relative majority of voting rights;

2) the “open ownership” company, in which there are some shareholders with significant influence, but none of them has got the stable control of the company;

3) the “public” company, in which no single shareholder has a significant influence.

In our model, and only for the aims of this paper, board composition is supposed to be strictly related to ownership structure. Consequently, we distinguish three cases:

1) in the “privately controlled” company, the board is strongly influenced by the controlling shareholders and the Ceo clashes to the controlling shareholder or is a person who strongly depends on him; the executive members of the board are therefore, when not coincident, strictly linked to the controlling shareholder; they have a great decisional power and controlling bodies (i.e. independent directors, supervisory board, collegio sindacale, …) are not effective in limiting it;

2) in the “open ownership” company, the board is representative of shareholders with significant influence, but it is not dominated by a controlling shareholder (this case also refers to voting agreements and voting trust as a device for co-ordination between significant shareholders); the executive members and the Ceo are quite independent in formulating strategies and in managing the company to implement them, but they are effectively controlled (through controlling bodies or through other informal mechanisms, such as moral suasion) by the shareholders with significant influence;

3) in the “public” company, the board is elected by the shareholders’ meeting, but it is completely independent of shareholders; the executive members have a strong decisional power and they are substantially independent in formulating strategies and in managing the company to implement them; furthermore, neither shareholders nor controlling bodies effectively control the actions of top managers.

Our hypothesis is that it is possible to identify two main typologies and development processes of accounting fraud and that the typology and development process of accounting fraud (from here on, for simplicity, the “accounting fraud models”) depends on the corporate governance system of the company.

The two main models we are going to define, based on the different causes, incentives and environmental circumstances that generate or help the birth of a fraud, are:

- the “excessive power” accounting fraud;
- the “performance stress” accounting fraud.

In the “excessive power” case, the fraud arises from the action of powerful, but also unscrupulous, entrepreneurs or managers. They actually are not subject to only effective controls, and thus deliberately act to deceive other parties in order to gain a private benefit (different from result-based compensation, such as cash distraction). In this case, the accounting irregularity is generally well identifiable, often referred to specific deals or operations and generally it reaches very soon a large extent in value.

---

27 From here on the term “accounting fraud” will be used indifferently with “accounting irregularity” and is considered to have the same meaning, even if literature assign to the first a stronger meaning.
In the “performance stress” case, the fraud is generated by the pressure on results that competitive and business environment exercise on top and middle management. We refer, in particular, to the pressure exercised by the financial markets through analyst’s expectations or bank’s requirements, but also to the pressure exercised by the internal budgeting procedures. In this case, the irregularity does not generally arise from an intent to gain private benefit (in the narrow sense, described above) nor with a full awareness of the fraudulent behaviour. That is the result of the intent to meet expected interim results (even on a monthly or quarterly base) and with the hope to compensate very soon the irregularity in the following periods. Accounting frauds of this kind are at the beginning very little in value, but they grow progressively over time (the more the competitive environment is complex the faster they grow) up to become of relevant dimensions.

Obviously, this is a not clear-cut distinction, as in each case of fraud there could be features of both models, but we will try to demonstrate that, depending on some environmental and context variables, and in particular on the corporate governance systems, it is possible to find a significant congruence between each case of fraud and one of the presented models.

The “performance stress” case of fraud is typical of companies with a strong results-oriented culture, characterised by very challenging budgets and high-growth expectations from external analysts.

In the growth phases of a business life-cycle, the market itself helps to improve results and targets are fixed in a more and more challenging way. But when the business comes to maturity, budgeted or expected growth becomes unbearable; nevertheless, company’s culture still asks for high-demanding performance. In this situation, missing the expectation becomes very likely, but also very costly for top and middle management in terms of compensation and career.

Often, even for a scrupulous and honest manager, earnings management is too easy to give up. He will find a way to meet monthly or quarterly targets, conscious he is postponing a problem to the future, but also with the sincere hope that, as it has been in the past, the recovery of better market conditions and the implementation of new strategic or tactical measures will help to reabsorb results overestimate. If the case would not be, the manager will find himself to choose between declaring an even bigger targets missing or to implement somewhat bigger artifice for earnings management. If market or strategies would not, as it is indeed very likely, help to reabsorb past overestimate and to reach satisfying current results, the process becomes self-feeding and dangerously irreversible. It becomes, in other words, a hard to defuse mine.

It is not surprising that many frauds of this kind have emerged in recent years in a slump, when not recession, situation, when the concealment of financial shenanigans becomes quite impossible. When it emerges, the dimension of the fraud is much bigger than expected at its beginning.

Financial chronicles in recent years have also known many accounting frauds of a different kind: intentional, generated by lucid dishonesty or avidity. These accounting frauds are more likely to be big since their origin.

According to our hypotheses, these are favoured by corporate governance systems in which one or very few key people have a very big decisional power and in which control bodies are very weak.

Ambition, avidity, unscrupulosity, sensation of almightiness and lack of sensibility for business ethics could be a dangerous recipe, which pushes powerful entrepreneurs or managers to act in a border-line or illegal way, covering their actions with false financial representations.

In the worst cases the accounting fraud is aimed to hide losses or risks related to specific operations generating private benefits (in the narrow sense) for the powerful key figure. In other cases, it only covers intrinsic weaknesses of the company and it is perpetrated to prosecute the dominion of the key decisional figure over the company (continuing to grant, in this way, the consequent private benefits).
In any case and in any kind of process, when the fraud emerges, it suddenly shows problems generated for a (more or less) long period of time; damages for stakeholders, who took decisions based on wrong information, are consequently always relevant.

Before going analytically through our methodology of analysis, we now summarize the most important features of each accounting fraud model.

The principal characteristics of “performance stress” accounting fraud can be summarized below:

- it generally doesn’t origin from conscious dishonesty;
- it origins from pressure on results, in companies with a strong culture on performance and challenging targets;
- the fraud starts with little alterations of results; people don’t deliberately meet to start a fraud, but they often begin it without a full consciousness to be violating law;
- irregularities often regard the more discretionary items of financial information (revenues recognition in presence of particular selling clauses, reserves and provisions, depreciation and impairment, …), where it is possible to maintain that accounting standards have been respected also with very different estimates;
- the dimension of irregularity grows over time, as new alterations sum to the old ones, not reabsorbed;
- there quite never exists a way out different from disclosing the fraud; the authors hope the future will help them, but the passing of time only makes the fraud bigger.

The main features of “excessive power” fraud, on the other side, can be highlighted like that:

- the origin is attributable to a well-defined unscrupulous action, known to be dishonest and unethical, aimed to hide the real conditions of the company or, worse, the effects of specific operations which caused damages to the company and, often, private benefits for the powerful key figure (in a narrow sense);
- the fraud is favoured by personified and authoritative governance style, in which the entrepreneur or the top manager have absolute and undisputed decisional power and in which, consequently, control bodies are not effective because, in fact, “controlled” by the leader;
- the fraud can have big dimensions from the beginning; anyway it tends to grow for the cumulative effect of loss deferment;
- it is likely that, as in the “performance stress” model, the irregularity regards most discretionary items, but it can be as well a clear violation of accounting laws and standards;
- also in this case there is a hardly way out different from disclosing the fraud; the disclosure time being now dependent on how long is the dominion position of the leader.

5. Models variables definition and methodology of analysis

This paragraph will:
1) define the variables of the two models of accounting fraud here presented;
2) state the expected relation between corporate governance systems and accounting fraud models;
3) illustrate the methodology of the analysis.

5.1. Variables of accounting fraud models definition

We define and distinguish each of the two models of accounting fraud according to four variables, that we are here going to discuss:

1. Incentives and causes;
2. Development process;
3. People involved;
4. Accounting standards.

Incentives and causes

Incentives and causes regard the motivations to perpetrate a fraud and the interests pursued with it.

In the “excessive power” model, the interests pursued with the fraud are both to present a better situation of the company to investors (shareholders, bondholders, banks, other creditors, …) and to obtain specific private/personal benefits, different from what represented by bonuses related to results or stock options (or other similar compensation instruments).

On the other side, in the “performance stress” model, the interests pursued are exclusively results improvements to present a better situation to investors, while no specific private/personal benefits (different from compensation instruments) are pursued.

We define these two incentives as:
- Private benefits;
- Performance improvements.

In the “excessive power” model both incentives are present. In the “performance stress” model only the “performance improvements” incentive is present.

“Performance improvements” incentive regards presenting a better company situation either to investors, through external financial information, or to top management, in the internal information flows for budgeting process. In our analysis, which only includes listed companies, we have focused on external information, but in many of the observed cases the improvement of performance for internal management accounting is supposed to be a fraud incentive as well.

Development process

Development process regards the way in which the fraud evolves. We refer, in particular to the duration of the fraud and to the way it grows over time.

The duration of the fraud is the number of years for which the company has restated its earnings or anyway the number of years for which a misreporting has been ascertained by authorities, gatekeepers or controlling bodies.

The way the fraud has grown over time is only observed from a qualitative point of view, distinguishing, when possible, irregularities that have grown over time from irregularities born, more or less, with the same dimension they had at the time of the disclosure.

In the “excessive power” model we assume the duration is longer than in the “performance stress” model. This is because in the second case control systems are more effective and should discover the fraud sooner.

For the aim of our analysis we distinguish:
- frauds lasting up to 2 years;
- frauds lasting more than two years.

We expect that frauds of the “excessive power” model are more likely to last more than two years while frauds of the “performance stress” model are more likely to last up to two years.

People involved

The variable “people involved” refers to the persons involved in the fraud, that is the persons that, from the ascertainment of authorities, gatekeepers or controlling bodies result to be the authors or the inspirers of the fraud.

In the “excessive power” model we assume that the fraud stems from the top management or from the entrepreneur (in the entrepreneurial companies).

In the “performance stress” model we assume that, besides that in the top, the fraud could also be generated in the periphery of the company.
We distinguish then:
- the cases in which middle or peripheral management is involved in the fraud, that, according to our hypotheses, should pertain to “performance stress” model;
- the cases in which only the entrepreneur or top management is involved in the fraud, that, according to our hypotheses, could indifferently pertain to both models.

Top management is defined as the Ceo and the executives reporting directly to him. Entrepreneur, when identifiable, is the person who has the controlling ownership of the company.

Accounting standards

The variable “accounting standards” regards the way in which the fraud is implemented from a technical point of view and, consequently, the way it is contrary to accounting regulation.

We distinguish:
- the “violation” of accounting standards;
- the “elusion” of accounting standards.

We define “violation” of accounting standards an accounting behaviour which is clearly contrary to accounting regulation, because it gives a representation not coherent with facts, operations or contractual relations and with the documentation which proves and disciplines these facts, operations or contractual relations. In this sense, there is a violation of accounting standards when the accounting behaviour openly and clearly doesn’t follow accounting standards in representing the facts, operations or contractual relations.

We can have two typologies of “violation”:
- accounting doesn’t fairly represent the facts and the documentation;
- accounting corresponds to the formal documentation, but it doesn’t fairly represent the facts.

We define “elusion” of accounting standards an accounting behaviour which is not contrary to accounting regulation in a clear and straightforward way, but which forces it in order to give an altered representation of the economic and financial situation of the company.

We can have two main typologies of “elusion”:
- irregularity resides in the most discretionary items of a financial statement, so that the presentation of the company situation could be altered through unfair estimates (for instance about provisions) or interpretations matters (for instance about the revenue recognition criteria), without openly violating accounting standards, but in facts not respecting them;\(^\text{28}\);
- irregularity resides in doing actions without economic convenience (and often with negative consequences on earnings of following years) and whose only justification is the improvement of current results (for instance anticipating deliveries or producing for the warehouse).

Our hypothesis is that the “excessive power” accounting frauds are more likely perpetrated with “violation” of accounting standards, while the “performance stress” accounting frauds are more likely perpetrated with “elusion” of accounting standards.

Obviously, many frauds are perpetrated with more than one implementation tool (i.e. accounting principles manipulation) so that “elusion” and “violation” can be both present.

Summarizing

For the aim of this paper and necessarily simplifying a more complex reality, the two kind of accounting frauds can be briefly defined in the following way:
- the “excessive power” accounting fraud is committed with the purpose to improve reported performance, but also to get private benefits different from performance

\(^{28}\) This kind of “elusion” of accounting standards requires, as the “violation”, the need to restate financial statements.
compensation, involves directly the top management, lasts more than two years and is perpetrated also through open violation of accounting standards;
- the “performance stress” accounting fraud is committed only with the purpose to improve reported performance, can start from the periphery of the organization, lasts two years or less and is perpetrated through the elusion of accounting principles.

It is important to underline that the distinction of the two models is never, in reality, clear-cut. These definitions are then useful only for the purpose of this paper, as showed hereinafter.

5.2. Expected relation between corporate governance system and accounting fraud model

According to the proposition stated in the first paragraph, we expect that companies with corporate governance systems in which a single or very few executives have an absolute decisional power and in which controlling bodies are less effective, are more likely to develop an “excessive power” fraud, while companies with corporate governance systems in which executives are significantly controlled by influent shareholders and in which controlling bodies are more effective, are more likely to develop a “performance stress” fraud.

For the sole purpose of this paper, the definition of corporate governance systems is the following:
- “public” company, if there aren’t shareholders holding more than 10% of voting rights;
- “open ownership” company, if there are shareholders holding more than 10% of voting rights, but nobody holds more than 30% of voting rights;
- “privately controlled” company if there is at least one shareholder who holds more than 30% of voting rights.

Referring to our simplifying classification of corporate governance systems, our proposition is that:
- the “privately controlled” and the “public” companies are more likely to develop an “excessive power” accounting fraud;
- the “open ownership” companies are more likely to develop a “performance stress” accounting fraud.

5.3. Methodology of the analysis

The methodology of the analysis presents the following steps:
1) Classification of the 20 case-studies according to the corporate governance model;
2) Analysis of the relevant variables for each case of accounting fraud or irregularity;
3) Analysis of coherence of the logic actual values of variables with the expected values of variables according to our hypotheses;

Classification of the 20 case-studies according to the corporate governance model

The case-studies analyzed in this paper are listed in the following schedule:
Companies are classified, according to their corporate governance systems, in this way:

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>Country</th>
<th>Sector</th>
<th>Corporate Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adecco</td>
<td>Switzerland</td>
<td>Employment Agency</td>
<td>Open ownership</td>
</tr>
<tr>
<td>Adelphia</td>
<td>USA</td>
<td>Cable company</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Ahold</td>
<td>Netherlands</td>
<td>Food service - supermarket group</td>
<td>Open ownership</td>
</tr>
<tr>
<td>AOL</td>
<td>USA</td>
<td>Mass media</td>
<td>Public</td>
</tr>
<tr>
<td>Bipop</td>
<td>Italy</td>
<td>Financial services</td>
<td>Public</td>
</tr>
<tr>
<td>Bristol Myers</td>
<td>USA</td>
<td>Pharmaceutical industries</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Cirio</td>
<td>Italy</td>
<td>Food industries</td>
<td>Public</td>
</tr>
<tr>
<td>Enron</td>
<td>USA</td>
<td>Energy Trading</td>
<td>Public</td>
</tr>
<tr>
<td>Finmatica</td>
<td>Italy</td>
<td>Software development</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Freedomland</td>
<td>Italy</td>
<td>Internet- Tv</td>
<td>Public</td>
</tr>
<tr>
<td>Giacomelli</td>
<td>Italy</td>
<td>Sportswear trade</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Global Crossing</td>
<td>USA</td>
<td>Broad band wire telecom services</td>
<td>Open ownership</td>
</tr>
<tr>
<td>Kmart</td>
<td>USA</td>
<td>Distribution</td>
<td>Public</td>
</tr>
<tr>
<td>Nortel</td>
<td>Canada</td>
<td>Telecom equipment</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Parmalat</td>
<td>Italy</td>
<td>Food industries</td>
<td>Public</td>
</tr>
<tr>
<td>Royal Dutch Shell's</td>
<td>Netherlands</td>
<td>Oil - Natural Gas</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Tyco</td>
<td>USA</td>
<td>Industrial and financial conglomerate</td>
<td>Privately controlled</td>
</tr>
<tr>
<td>Vivendi</td>
<td>Francia</td>
<td>Multimedia</td>
<td>Public</td>
</tr>
<tr>
<td>Worldcom</td>
<td>USA</td>
<td>Telecom services</td>
<td>Public</td>
</tr>
<tr>
<td>Xerox</td>
<td>USA</td>
<td>Photocopier</td>
<td>Open ownership</td>
</tr>
</tbody>
</table>
Analysis of the relevant variables for each case of accounting fraud or irregularity

This analysis was conducted through public information contained in sources like annual reports, information and filings to authorities and gatekeepers (when public), information from newspapers, journals, magazines, internet website and other public sources.

For each case of accounting fraud it has been determined:
- if the incentives and interests pursued included also private benefits or not;
- if the development process of the fraud, as understandable from public sources, lasted more than two financial years or not;
- if the fraud started from the top or the periphery of the company;
- if the fraud consisted of an open violation of accounting standard or not.

Analysis of coherence between actual values and expected values of variables

The analysis of coherence between actual values of variables and expected, according to our hypotheses, values of variables has been conducted on two levels:
- coherence with the hypothesis of relevance of the distinction of two models of accounting fraud;
- coherence with the hypothesis of the relation between corporate governance systems and accounting fraud model.

On the first level, we have calculated, for each case-study, the number of observations which are coherent with the model of “excessive power” and the ones coherent with the model of “performance stress”. We define “maximum” coherence the case in which all four variables are coherent with the same model of accounting fraud, “good” coherence if three variables are coherent with the same model of accounting fraud, “absent” coherence if two variables are coherent with one model and the others two with the other model.

In some cases in which we hadn’t enough information to classify the variable, we have classified it in order to diminish total coherence.

As regards the variable “people involved”, a fraud which starts from the top could be coherent with both models of “accounting frauds”.

On the second level, we have calculated the number of observations which are coherent with the model of corporate governance and the ones which are not, according to our hypothesis that “privately controlled companies” and “public companies” are more likely to put in place an “excessive power” accounting fraud, where “open ownership” companies are more likely to put in place “performance stress” one.

We then have calculated the total number of coherent observations and the total number of non coherent ones.

In some cases in which we hadn’t enough information to classify the variable, we have classified it in order to diminish total coherence.

6. Results and conclusions

The above mentioned analysis has conducted to the following results:

- Hypothesis A: the distinction of the two models of accounting fraud (“excessive power” and “performance stress”) seems to be quite relevant because in the 60% of cases (12 on 20) coherence has been “maximum”, in the 25% (5 on 20) “good” and in the 15% (3 on 20) “absent”.
- Hypothesis B: the relation of accounting fraud model with corporate governance system seems to be quite relevant because in the 70% of total observations (56 on 80) coherence has been “existent”, in the 30% (24 on 80) “absent”.

Detailed observations and results are shown in the annex A.
This analysis has given us a first confirmation on empirical relevance of the distinction between a model of “excessive power” accounting fraud and a model of “performance stress” accounting fraud, which was intuitively hypothesized.

This analysis has also given us a first confirmation on empirical relevance of the hypothesis that corporate governance systems influence the way in which accounting frauds are perpetrated.

The principal limits of the analysis are the number of the cases, which could be increased, the time horizon of the analysis, which could be extended, and the number of relevant variables which define each model of accounting fraud, which surely could be sophisticated. In particular, the fraud should be also studied with reference to the behaviour of controlling bodies (independent directors, audit committees, external auditors, gatekeepers and so on) to infer the relationship between accounting fraud models, corporate governance systems and the prevention and detection of accounting frauds.

Further implementations of our analysis could then related:
- to the extension of the analysis to more cases in an extended time horizon;
- to a more detailed definition of the characteristics of the accounting fraud models;
- to the use of a more sophisticated quantitative methodology of treating the available data;
- to a deep analysis of the role of controlling bodies, regulation and context variables.
## Annex A

### Variables

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enron</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Worldcom</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Nortel</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Tyco</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ahold</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bipop</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Global Crossing</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Freedomland</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Vivendi</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Kmart</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Finmatica</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Royal Dutch Shell</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Adecco</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Adelphia</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>AOL</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Xerox</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bristol Myers</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cirio</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Parmalat</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Giacomelli</td>
<td>Power abuse</td>
<td>X</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Max</th>
<th>Good</th>
<th>Absent</th>
<th>Existent</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enron</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Worldcom</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Nortel</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Tyco</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Ahold</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Bipop</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Global Crossing</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Freedomland</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Vivendi</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Kmart</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Finmatica</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Royal Dutch Shell</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Adecco</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Adelphia</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>AOL</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Xerox</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Bristol Myers</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cirio</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Parmalat</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Giacomelli</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

|                | 12  | 5    | 3      | 56       | 24     |

|                | 60.0% | 25.0% | 15.0% | 70.0% | 30.0% |